Annex A (normative): RRM test configurations

A.1 Reference measurement channels

A.1.0 General

This clause contains the Reference Measurement Channels (RMC) to be used for the RRM test scenarios in Clauses 4 to 7 of this document.

A.1.1 PDSCH

A.1.1.1 FDD

Table A.1.1.1-1: PDSCH Reference Measurement Channels for SCS = 15 kHz for FDD

Parameter	Unit	Value
Reference channel		SR.1.1 FDD
Channel bandwidth	MHz	Defined in test case
Number of transmitter antennas		1
Allocated resource blocks for PDSCH Note 1		24
Allocated slots per Radio Frame		10
Radio frame containing SSB	slots	Note 5
Radio frame not containing SSB	slots	10
MCS index		4
Modulation		QPSK
Target Coding Rate		1/3
Number of control symbols		2
PDSCH mapping type		Type A
Information Bit Payload		
For slots with RMSI Note 2	Bits	1608
For slots without RMSI	Bits	1864
Number of Code Blocks per slot		1
Binary Channel Bits Per slot		
For slots with RMSI Note 2, 4	Bits	5184
For slots without RMSI Note 6	Bits	6048
NOTE 1: Allocated outside the SMTC duration in time and in resource blocks which do not overlap with the resource blocks allocated for SS/PBCH block. NOTE 2: PDSCH is scheduled on the slots with RMSI. NOTE 3: If necessary, the information bit payload size can be adjusted to facilitate the test implementation. The payload sizes are defined in 3GPP TS 38.213 [8]. NOTE 4: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditonalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 2. NOTE 5: PDSCH is not scheduled in slots containing SSB according to the SSB configuration used in the test. SSB configurations are defined in clause A.3. NOTE 6: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditonalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 1. NOTE 7: When DRX is configured, PDCCH can be scheduled both for downlink assignment and/or UL grant only during ([10ms] – drx-InactivityTimer) from timingwhen *drx-onDurationTimer* starts, unless otherwise specified in the test case.		

A.1.1.2 TDD

Table A.1.1.2-1: PDSCH Reference Measurement Channels for SCS = 15 kHz for TDD

Parameter	Unit	Value	Value
Reference channel		SR.1.1 TDD	SR.1.2 TDD
Channel bandwidth	MHz	Defined in test case	Defined in test case
Number of transmitter antennas		1	1
Allocated resource blocks for PDSCH Note 1		24	24
Allocated slots per Radio Frame			
Radio frame containing SSB	slots	Note 5	Note 5
Radio frame not containing SSB	slots	4	6
MCS table		64QAM	64QAM
MCS index		4	4
Modulation		QPSK	QPSK
Target Coding Rate		1/3	1/3
Number of control symbols		2	2
PDSCH mapping type		Type A	Type A
Information Bit Payload			
For slots with RMSI Note 2	Bits	1608	1608
For slots without RMSI	Bits	1864	1864
For special slots	Bits	N/A	1128
Number of Code Blocks per slot		1	
Binary Channel Bits Per slot			
For slots with RMSI Note 2, 4	Bits	5184	5184
For slots without RMSI Note 6	Bits	6048	6048
For special slots Note 6	Bits	-	3744

NOTE 1: Allocated outside the SMTC duration in time and in resource blocks which do not overlap with the resource blocks allocated for SS/PBCH block.
NOTE 2: PDSCH is scheduled on the slots with RMSI.
NOTE 3: If necessary, the information bit payload size can be adjusted to facilitate the test implementation. The payload sizes are defined in 3GPP TS 38.213 [8].
NOTE 4: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditonalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 2.
NOTE 5: PDSCH is not scheduled in slots containing SSB according to the SSB configuration used in the test. SSB configurations are defined in clause A.3.10.
NOTE 6: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditonalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 1.
NOTE 7: When DRX is configured, PDCCH can be scheduled both for downlink assignment and/or UL grant only during ([10]ms – drx-InactivityTimer) from timing when *drx-onDurationTimer* starts, unless otherwise specified in the test case.

Table A.1.1.2-2: PDSCH Reference Measurement Channels for SCS = 30 kHz for TDD

Parameter	Unit	Value
Reference channel		SR.2.1 TDD
Channel bandwidth	MHz	Defined in test case
Number of transmitter antennas		1
Allocated resource blocks for PDSCH Note 1		24
Allocated slots per Radio Frame		
Radio frame containing SSB	slots	Note 5
Radio frame not containing SSB	slots	10
MCS table		64QAM
MCS index		4
Modulation		QPSK
Target Coding Rate		1/3
Number of control symbols		2
PDSCH mapping type		Type A
Information Bit Payload		
For slots with RMSI Note 2	Bits	1608
For slots without RMSI	Bits	1864
Number of Code Blocks per slot		1
Binary Channel Bits Per slot		
For slots with RMSI Note 2, 4	Bits	5184
For slots without RMSI Note 6	Bits	6048
NOTE 1: Allocated outside the SMTC duration in time and in resource blocks which do not overlap with the resource blocks allocated for SS/PBCH block. NOTE 2: PDSCH is scheduled on the slots with RMSI. NOTE 3: If necessary, the information bit payload size can be adjusted to facilitate the test implementation. The payload sizes are defined in 3GPP TS 38.213 [8]. NOTE 4: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditonalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 2. NOTE 5: PDSCH is not scheduled in slots containing SSB according to the SSB configuration used in the test. SSB configurations are defined in clause A.3.10. NOTE 6: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditonalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 1. NOTE 7: When DRX is configured, PDCCH can be scheduled both for downlink assignment and/or UL grant only during ([10]ms – drxInactivityTimer) from timing when *drx-onDurationTimer* starts, unless otherwise specified in the test case.		

Table A.1.1.2-3: PDSCH Reference Measurement Channels for SCS = 120 kHz for TDD

Parameter	Unit	Value		
Reference channel		SR.3.1 TDD	SR.3.2 TDD	SR.3.3 TDD
Channel bandwidth	MHz	100	100	100
Number of transmitter antennas		1	1	1
Allocated resource blocks for PDSCH		24 Note 1	24 Note 7	48 Note 7
Allocated slots per Radio Frame				
Radio frame containing SSB	slots	Note 5	Note 8	Note 5
Radio frame not containing SSB	slots	48	48	48
MCS table		64QAM	64QAM	64QAM
MCS index		4	4	4
Modulation		QPSK	QPSK	QPSK
Target Coding Rate		1/3	1/3	1/3
Number of control symbols		2	2	2
PDSCH mapping type		Type A	Type A	Type A
Information Bit Payload				
For slots with RMSI	Bits	1608	1608	3104
For slots without RMSI	Bits	1864	1864	3624
Number of Code Blocks per slot		1	1	1
Binary Channel Bits Per slot				
For slots with RMSI Note 4	Bits	5184	5184	10368
For slots without RMSI Note 6	Bits	6048	6048	12096

NOTE 1: Allocated in resource blocks which do not overlap with the resource blocks allocated for SS/PBCH block.
NOTE 2: Void
NOTE 3: If necessary, the information bit payload size can be adjusted to facilitate the test implementation. The payload sizes are defined in 3GPP TS 38.213 [8].
NOTE 4: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditonalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 2.
NOTE 5: PDSCH is not scheduled in slots containing SSB according to the SSB configuration used in the test. SSB configurations are defined in clause A.3.10.
NOTE 6: Derived based on the PDSCH DMRS assumption: dmrs-TypeA-Position=2, dmrs-Type=1, dmrs-AdditionalPositions=2, maxLength=1, Antenna port index: 1000, and Number of PDSCH DMRS CDM group(s) without data: 1.
NOTE 7: Allocated in the same resource blocks as the CORESET.
NOTE 8: When DRX is configured, PDSCH is scheduled only while *drx-onDurationTimer* is running, unless otherwise specified in the test case.

A.1.2 CORESET for RMSI scheduling

A.1.2.1 FDD

Table A.1.2.1-1: RMSI CORESET Reference Measurement Channels for SCS = 15 kHz for FDD

Parameter	Unit	Value
Reference channel		CR.1.1 FDD
Channel bandwidth	MHz	Defined in test case
Subcarrier spacing for RMSI CORESET	kHz	15
Allocated resource blocks for RMSI CORESET Note 7		24
Subcarrier spacing for SSB	kHz	15
SSB and RMSI CORESET multiplexing configuration		Pattern 1
Offset between SSB and RMSI CORESET Note 3, 7	RB	0 (Note 8)
Configuration of PDCCH monitoring occasions for RMSI CORESET Note 4		Index 4
Number of transmitter antennas		1
Duration of RMSI CORESET Note 7	symbols	2
DCI Format Note 1		Note 2
Aggregation level	CCE	8
DMRS precoder granularity		6
REG bundle size		6
Mapping from REG to CCE		Distributed
Cell ID		Note 5
Payload (without CRC)	Bits	Note 6
NOTE 1: DCI formats are defined in TS 38.212 [31]. NOTE 2: DCI format shall depend upon the test configuration. NOTE 3: The offset is defined with respect to the subcarrier spacing of the CORESET from the smallest RB index of RMSI CORESET to the smallest RB index of the common RB overlapping with the first RB of the SS/PBCH block. NOTE 4: The configuration of PDCCH monitoring occasions for RMSI CORESET is defined in Table 13-11 in TS 38.213 [8]. NOTE 5: Cell ID shall depend upon the test configuration. NOTE 6: Payload size shall depend upon the test configuration. NOTE 7: The configuration of set of resource blocks and slot symbols of control resource set for Type0-PDCCH search space corresponds to index 0 in Table 13-1 in TS 38.213 [8]. NOTE 8: Other values can be used to align with GSCN as long as SSB does not overlap the RMC		

A.1.2.2 TDD

Table A.1.2.2-1: RMSI CORESET Reference Measurement Channels for SCS = 15 kHz for TDD

Parameter	Unit	Value
Reference channel		CR.1.1 TDD
Channel bandwidth	MHz	Defined in test case
Subcarrier spacing for RMSI CORESET	kHz	15
Allocated resource blocks for RMSI CORESET Note 7		24
SSB and RMSI CORESET multiplexing configuration		Pattern 1
Offset between SSB and RMSI CORESET Note 3, 7	RB	0 (Note 8)
Configuration of PDCCH monitoring occasions for RMSI CORESET Note 4		Index 4
Number of transmitter antennas		1
Duration of RMSI CORESET Note 7	symbols	2
DCI Format Note 1		Note 2
Aggregation level	CCE	8
DMRS precoder granularity		6
REG bundle size		6
Mapping from REG to CCE		Distributed
Cell ID		Note 5
Payload (without CRC)	Bits	Note 6
NOTE 1: DCI formats are defined in TS 38.212 [31]. NOTE 2: DCI format shall depend upon the test configuration. NOTE 3: The offset is defined with respect to the subcarrier spacing of the CORESET from the smallest RB index of RMSI CORESET to the smallest RB index of the common RB overlapping with the first RB of the SS/PBCH block. NOTE 4: The configuration of PDCCH monitoring occasions for RMSI CORESET is defined in Table 13-11 in TS 38.213 [8]. NOTE 5: Cell ID shall depend upon the test configuration. NOTE 6: Payload size shall depend upon the test configuration. NOTE 7: The configuration of set of resource blocks and slot symbols of control resource set for Type0-PDCCH search space corresponds to index 0 in Table 13-1 in TS 38.213 [8]. NOTE 8: Other values can be used to align with GSCN as long as SSB does not overlap the RMC		

Table A.1.2.2-2: RMSI CORESET Reference Measurement Channels for SCS = 30 kHz for TDD

Parameter	Unit	Value
Reference channel		CR.2.1 TDD
Channel bandwidth	MHz	Defined in test case
Subcarrier spacing for RMSI CORESET	kHz	30
Allocated resource blocks for RMSI CORESET Note 7		24
SSB and RMSI CORESET multiplexing configuration		Pattern 1
Offset between SSB and RMSI CORESET Note 3, 7	RB	0 (Note 8)
Configuration of PDCCH monitoring occasions for RMSI CORESET Note 4		Index 4
Number of transmitter antennas		1
Duration of RMSI CORESET Note 7	symbols	2
DCI Format Note 1		Note 2
Aggregation level	CCE	8
DMRS precoder granularity		6
REG bundle size		6
Mapping from REG to CCE		Distributed
Cell ID		Note 5
Payload (without CRC)	Bits	Note 6
NOTE 1: DCI formats are defined in TS 38.212 [31]. NOTE 2: DCI format shall depend upon the test configuration. NOTE 3: The offset is defined with respect to the subcarrier spacing of the CORESET from the smallest RB index of RMSI CORESET to the smallest RB index of the common RB overlapping with the first RB of the SS/PBCH block. NOTE 4: The configuration of PDCCH monitoring occasions for RMSI CORESET is defined in Table 13-11 in TS 38.213 [8]. NOTE 5: Cell ID shall depend upon the test configuration. NOTE 6: Payload size shall depend upon the test configuration. NOTE 7: The configuration of set of resource blocks and slot symbols of control resource set for Type0-PDCCH search space corresponds to index 0 in Table 13-6 in TS 38.213 [8]. NOTE 8: Other values can be used to align with GSCN as long as SSB does not overlap the RMC		

Table A.1.2.2-3: RMSI CORESET Reference Measurement Channels for SCS = 120 kHz for TDD

Parameter	Unit	Value	
Reference channel		CR.3.1 TDD	CR.3.2 TDD
Channel bandwidth	MHz	100	100
Subcarrier spacing for RMSI CORESET	kHz	120	120
Allocated resource blocks for RMSI CORESET		24 Note 7	48 Note 9
Subcarrier spacing for SSB	kHz	120	120
SSB and RMSI CORESET multiplexing configuration		Pattern 1 Note 7	Pattern 1 Note 9
Offset between SSB and RMSI CORESET Note 3	RB	0 (Note 8) Note 7	0 (Note 8) Note 9
Configuration of PDCCH monitoring occasions for RMSI CORESET Note 4		Index 4	Index 4
Number of transmitter antennas		1	1
Duration of RMSI CORESET	symbols	2 Note 7	2 Note 9
DCI Format Note 1		Note 2	Note 2
Aggregation level	CCE	8	8
DMRS precoder granularity		6	6
REG bundle size		6	6
Mapping from REG to CCE		Distributed	Distributed
Cell ID		Note 5	Note 5
Payload (without CRC)	Bits	Note 6	Note 6

NOTE 1: DCI formats are defined in TS 38.212 [31].
NOTE 2: DCI format shall depend upon the test configuration.
NOTE 3: The offset is defined with respect to the subcarrier spacing of the CORESET from the smallest RB index of RMSI CORESET to the smallest RB index of the common RB overlapping with the first RB of the SS/PBCH block.
NOTE 4: The configuration of PDCCH monitoring occasions for RMSI CORESET is defined in Table 13-11 in TS 38.213 [8].
NOTE 5: Cell ID shall depend upon the test configuration.
NOTE 6: Payload size shall depend upon the test configuration.
NOTE 7: The configuration of set of resource blocks and slot symbols of control resource set for Type0-PDCCH search space corresponds to index 0 in Table 13-8 in TS 38.213 [8].
NOTE 8: Other values can be used to align with GSCN as long as SSB does not overlap the RMC
NOTE 9: The configuration of set of resource blocks and slot symbols of control resource set for Type0-PDCCH search space corresponds to index 2 in Table 13-10 in TS 38.213 [8].

A.1.3 CORESET for RMC scheduling

A.1.3.1 FDD

Table A.1.3.1-1: Control Channel RMC for SCS = 15 kHz for FDD

Parameter	Unit	Value			
Reference channel		**CCR.1.1 FDD**	**CCR.1.2 FDD**	**CCR.1.3 FDD**	**CCR.1.4 FDD**
Channel bandwidth	MHz	Defined in test case	Defined in test case	Defined in test case	Defined in test case
Subcarrier spacing for RMSI CORESET	kHz	15	15	15	15
Allocated resource blocks for CORESET		24	18	24	18
Number of transmitter antenna		1	1	1	1
Duration of CORESET	symbols	2	2	2	2
REG bundle size		6	6	6	6
DMRS precoder granularity		Same as REG bundle size	Same as REG bundle size	Same as REG bundle size	Same as REG bundle size
CCE to REG mapping		Interleaved	Interleaved	Interleaved	Interleaved
Interleave n_shift		0	0	0	0
Interleave size		2	2	2	2
Beamforming Pre-Coder		N/A	N/A	N/A	N/A
Aggregation level	CCE	4	2	8	4
DCI formats		Note 1	Note 1	Note 1	Note 1
Payload size (without CRC)	bits	Note 2	Note 2	Note 2	Note 2
NOTE 1: DCI format shall depend upon the test configuration. NOTE 2: Payload size shall depend upon the test configuration NOTE 3: Allocated in the resource blocks where the associated RMC is scheduled.					

A.1.3.2 TDD

Table A.1.3.2-1: Control Channel RMC for SCS = 15 kHz for TDD

Parameter	Unit	Value			
Reference channel		CCR.1.1 TDD	CCR.1.2 TDD	CCR.1.3 TDD	CCR.1.4 TDD
Channel bandwidth	MHz	Defined in test case	Defined in test case	Defined in test case	Defined in test case
Subcarrier spacing	kHz	15	15	15	15
Allocated resource blocks for CORESET Note3		24	18	24	18
Number of transmitter antennas		1	1	1	1
Duration of CORESET	symbols	2	2	2	2
REG bundle size		6	6	6	6
DMRS precoder granularity		Same as REG bundle size	Same as REG bundle size	Same as REG bundle size	Same as REG bundle size
CCE to REG mapping		Interleaved	Interleaved	Interleaved	Interleaved
Interleave n_shift		0	0	0	0
Interleave size		2	2	2	2
Beamforming Pre-Coder		N/A	N/A	N/A	N/A
Aggregation level	CCE	4	2	8	4
DCI formats		Note 1	Note 1	Note 1	Note 1
Payload size (without CRC)	bits	Note 2	Note 2	Note 2	Note 2
NOTE 1: DCI format shall depend upon the test configuration. NOTE 2: Payload size shall depend upon the test configuration NOTE 3: Allocated in the resource blocks where the associated RMC is scheduled.					

Table A.1.3.2-2: Control Channel RMC for SCS = 30 kHz for TDD

Parameter	Unit	Value			
Reference channel		CCR.2.1 TDD	CCR.2.2 TDD	CCR.2.3 TDD	CCR.2.4 TDD
Channel bandwidth	MHz	40	40	40	40
Subcarrier spacing for RMSI CORESET	kHz	30	30	30	30
Allocated resource blocks for CORESET[3]		24	24	18	18
Number of transmitter antenna		1	1	1	1
Duration of CORESET	symbols	2	2	2	2
REG bundle size		6	6	6	6
DMRS precoder granularity		Same as REG bundle size	Same as REG bundle size	Same as REG bundle size	Same as REG bundle size
CCE to REG mapping		Interleaved	Interleaved	Interleaved	Interleaved
Interleave n_shift		0	0	0	0
Interleave size		2	2	2	2
Beamforming Pre-Coder		N/A	N/A	N/A	N/A
Aggregation level	CCE	4	8	4	2
DCI formats		Note 1	Note 1	Note 1	Note 1
Payload size (without CRC)	bits	Note 2	Note 2	Note 2	Note 2
Note 1: DCI format shall depend upon the test configuration. Note 2: Payload size shall depend upon the test configuration. Note 3: Allocated in the same resource blocks where the associated RMC is scheduled.					

Table A.1.3.2-3: Control Channel RMC for SCS = 120 kHz for TDD

Parameter	Unit	Value						
Reference channel		CCR.3.1 TDD	CCR.3.2 TDD	CCR.3.3 TDD	CCR.3.4 TDD	CCR.3.5 TDD	CCR.3.6 TDD	CCR.3.7 TDD
Channel bandwidth	MHz	100	100	100	100	100	100	100
Subcarrier spacing for RMSI CORESET	kHz	120	120	120	120	120	120	120
Allocated resource blocks for CORESET[Note 3]		24	24	24	24	24	24	48
Number of transmitter antenna		1	1	1	1	1	1	1
monitoringSlotPeriodicityAndOffset[Note 4]		sl160 0	sl160 0	sl160 80	sl160 0	sl160 0	sl160 80	sl160 0
monitoringSymbolsWithinSlot		1100000 0000000	0011000 0000000	1100000 0000000	1100000 0000000	0011000 0000000	1100000 0000000	1100000 0000000
Duration of CORESET	symbols	1	1	1	1	1	1	1
REG bundle size		6	6	6	6	6	6	6
DMRS precoder granularity		Same as REG bundle size	Same as REG bundle size	Same as REG bundle size	Same as REG bundle size	Same as REG bundle size	Same as REG bundle size	Same as REG bundle size
CCE to REG mapping		Interleaved	Interleaved	Interleaved	Interleaved	Interleaved	Interleaved	Interleaved
Interleave n_shift		0	0	0	0	0	0	0
Interleave size		2	2	2	2	2	2	2
Beamforming Pre-Coder		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aggregation level	CCE	4	4	4	8	8	8	4
DCI formats		Note 1	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Payload size (without CRC)	bits	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2
NOTE 1: DCI format shall depend upon the test configuration. NOTE 2: Payload size shall depend upon the test configuration NOTE 3: Allocated in the same resource blocks where the associated PDSCH RMC is scheduled. NOTE 4: *monitoringSlotPeriodicityAndOffet* can be set to other values depending on test purpose of respective test cases, as needed, e.g. *monitoringSlotPeriodicityAndOffet* is set to "sl1 0" if it is specifically stated that cell(s) configured with one of the control channel RMCs above shall transmit PDCCHs continuously.								

A.1.4 CSI-RS

A.1.4.1 FDD

Table A.1.4.1-1: CSI-RS Reference Measurement Channels for SCS = 15 kHz for FDD

	CSI-RS.1.1 FDD	**CSI-RS.1.2 FDD**	**CSI-RS.1.3 FDD**	**CSI-RS.1.4 FDD**
Resource Type	periodic	periodic	aperiodic	aperiodic
Resource Set Config				
nzp-CSI-ResourceSetId	0	0	0	0
repetition	N/A	off	off	on
aperiodicTriggeringOffset	N/A	N/A	4	4
trs-Info	N/A	N/A	N/A	N/A
Resource Config				
nzp-CSI-RS-ResourceId	0 for resource #0	0 for resource #0 1 for resource #1	0 for resource #0 1 for resource #1	0 for resource #0 1 for resource #1 2 for resource #2 3 for resource #3 4 for resource #4 5 for resource #5 6 for resource #6 7 for resource #7
powerControlOffset	0	0	0	0
powerControlOffsetSS	db0	db0	db0	db0
scramblingID	0	0	0	0
Period (slots)	slot5	slot10	N/A	N/A
Offset	1	1	N/A	N/A
qcl-InfoPeriodicCSI-RS	TCI.State.0	TCI.State.0 TCI.State.1	N/A	N/A
frequencyDomainAllocation	000001	0001	0001	0001
nrofPorts	2	1	1	1
firstOFDMSymbolInTimeDomain	4 for resource #0	6 for resource #0 10 for resource #1	6 for resource #0 10 for resource #1	0 for resource #0 1 for resource #1 2 for resource #2 3 for resource #3 4 for resource #4 5 for resource #5 6 for resource #6 7 for resource #7
cdm-Type	FD-CDM2	noCDM	noCDM	noCDM
density	1	3	3	3
startingRB	0	0	0	0
nrofRBs	276	276	276	276

Table A.1.4.1-1A: CSI-RS Reference Measurement Channels for SCS=15 kHz for FDD

	CSI-RS.1.1A FDD	CSI-RS.1.2A FDD	CSI-RS.1.3A FDD
Resource Type	**periodic**	**aperiodic**	**periodic**
Resource Set Config			
nzp-CSI-ResourceSetId	1	1	1
repetition	off	off	off
aperiodicTriggeringOffset	n.a.	6	n.a.
trs-Info	n.a.	n.a.	n.a.
Resource Config			
nzp-CSI-RS-ResourceId	12 for resource #0	22 for resource #0	14 for resource #0
	13 for resource #1	23 for resource #1	15 for resource #1
powerControlOffset	0	0	0
powerControlOffsetSS	db0	db0	db0
scramblingID	0	0	0
Period (slots)	slot20	n.a.	slot10
Offset	1	n.a.	2
qcl-InfoPeriodicCSI-RS	n.a.	n.a.	n.a.
frequencyDomainAllocation	0001	0001	0001
nrofPorts	1	1	1
firstOFDMSymbolInTimeDomain	6 for resource #0	7 for resource #0	6 for resource #0
	10 for resource #1	11 for resource #1	10 for resource #1
cdm-Type	noCDM	noCDM	noCDM
density	3	3	3
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the Test Equipment shall implement CSI-RS only in the width of that BWP.			

A.1.4.2 TDD

Table A.1.4.2-1: CSI-RS Reference Measurement Channels for SCS = 15 kHz for TDD

	CSI-RS.1.1 TDD	CSI-RS.1.2 TDD	CSI-RS.1.3 TDD	CSI-RS.1.4 TDD
Resource Type	periodic	periodic	aperiodic	aperiodic
Resource Set Config				
nzp-CSI-ResourceSetId	0	0	0	0
repetition	N/A	off	off	on
aperiodicTriggeringOffset	N/A	N/A	4	4
trs-Info	N/A	N/A	N/A	N/A
Resource Config				
nzp-CSI-RS-ResourceId	0 for resource #0	0 for resource #0	0 for resource #0	0 for resource #0 1 for resource #1 2 for resource #2 3 for resource #3
		1 for resource #1	1 for resource #1	4 for resource #4 5 for resource #5 6 for resource #6 7 for resource #7
powerControlOffset	0	0	0	0
powerControlOffsetSS	db0	db0	db0	db0
scramblingID	0	0	0	0
Period (slots)	slot5	slot10	N/A	N/A
Offset	1	1	N/A	N/A
qcl-InfoPeriodicCSI-RS	TCI.State.0	TCI.State.0 TCI.State.1	N/A	N/A
frequencyDomainAllocation	000001	0001	0001	0001
nrofPorts	2	1	1	1
firstOFDMSymbolInTimeDomain	4 for resource #0	6 for resource #0	6 for resource #0	0 for resource #0 1 for resource #1

				2 for resource #2 3 for resource #3
		10 for resource #1	10 for resource #1	4 for resource #4 5 for resource #5 6 for resource #6 7 for resource #7
cdm-Type	FD-CDM2	noCDM	noCDM	noCDM
density	1	3	3	3
startingRB	0	0	0	0
nrofRBs	276	276	276	276

Table A.1.4.2-1A: CSI-RS Reference Measurement Channels for SCS=15 kHz for TDD

	CSI-RS.1.1A TDD	CSI-RS.1.2A TDD	CSI-RS.1.3A TDD
Resource Type	**periodic**	**aperiodic**	**periodic**
Resource Set Config			
nzp-CSI-ResourceSetId	1	1	1
repetition	off	off	off
aperiodicTriggeringOffset	n.a.	6	n.a.
trs-Info	n.a.	n.a.	n.a.
Resource Config			
nzp-CSI-RS-ResourceId	12 for resource #0 13 for resource #1	22 for resource #0 23 for resource #1	14 for resource #0 15 for resource #1
powerControlOffset	0	0	0
powerControlOffsetSS	db0	db0	db0
scramblingID	0	0	0
Period (slots)	slot20	n.a.	slot10
Offset	1	n.a.	2
qcl-InfoPeriodicCSI-RS	n.a.	n.a.	n.a.
frequencyDomainAllocation	0001	0001	0001
nrofPorts	1	1	1
firstOFDMSymbolInTimeDomain	6 for resource #0 10 for resource #1	7 for resource #0 11 for resource #1	6 for resource #0 10 for resource #1
cdm-Type	noCDM	noCDM	noCDM
density	3	3	3
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the Test Equipment shall implement CSI-RS only in the width of that BWP.			

Table A.1.4.2-2: CSI-RS Reference Measurement Channels for SCS = 30 kHz for TDD

	CSI-RS.2.1 TDD	CSI-RS.2.2 TDD	CSI-RS.2.3 TDD	CSI-RS.2.4 TDD
Resource Type	periodic	periodic	aperiodic	aperiodic
Resource Set Config				
nzp-CSI-ResourceSetId	0	0	0	0
repetition	N/A	off	off	on
aperiodicTriggeringOffset	N/A	N/A	4	4
trs-Info	N/A	N/A	N/A	N/A
Resource Config				
nzp-CSI-RS-ResourceId	0 for resource #0	0 for resource #0 1 for resource #1	0 for resource #0 1 for resource #1	0 for resource #0 1 for resource #1 2 for resource #2 3 for resource #3 4 for resource #4 5 for resource #5 6 for resource #6 7 for resource #7

powerControlOffset	0	0	0	0
powerControlOffsetSS	db0	db0	db0	db0
scramblingID	0	0	0	0
Period (slots)	slot10	slot20	N/A	N/A
Offset	2	2	N/A	N/A
qcl-InfoPeriodicCSI-RS	TCI.State.0	TCI.State.0	N/A	N/A
		TCI.State.1		
frequencyDomainAllocation	000001	0001	0001	0001
nrofPorts	2	1	1	1
firstOFDMSymbolInTimeDomain	5 for resource #0	6 for resource #0	6 for resource #0	0 for resource #0
				1 for resource #1
				2 for resource #2
				3 for resource #3
		10 for resource #1	10 for resource #1	4 for resource #4
				5 for resource #5
				6 for resource #6
				7 for resource #7
cdm-Type	FD-CDM2	noCDM	noCDM	noCDM
density	1	3	3	3
startingRB	0	0	0	0
nrofRBs	276	276	276	276

Table A.1.4.2-2A: CSI-RS Reference Measurement Channels for SCS=30 kHz for TDD

Resource Type	CSI-RS.2.1A TDD periodic	CSI-RS.2.2A TDD aperiodic	CSI-RS.2.3A TDD periodic
Resource Set Config			
nzp-CSI-ResourceSetId	1	1	1
repetition	off	off	off
aperiodicTriggeringOffset	n.a.	6	n.a.
trs-Info	n.a.	n.a.	n.a.
Resource Config			
nzp-CSI-RS-ResourceId	12 for resource #0	22 for resource #0	14 for resource #0
	13 for resource #1	23 for resource #1	15 for resource #1
powerControlOffset	0	0	0
powerControlOffsetSS	db0	db0	db0
scramblingID	0	0	0
Period (slots)	slot40	n.a.	slot20
Offset	2	n.a.	4
qcl-InfoPeriodicCSI-RS	n.a.	n.a.	n.a.
frequencyDomainAllocation	0001	0001	0001
nrofPorts	1	1	1
firstOFDMSymbolInTimeDomain	6 for resource #0	7 for resource #0	6 for resource #0
	10 for resource #1	11 for resource #1	10 for resource #1
cdm-Type	noCDM	noCDM	noCDM
density	3	3	3
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the Test Equipment shall implement CSI-RS only in the width of that BWP.			

Table A.1.4.2-3: CSI-RS Reference Measurement Channels for SCS = 120 kHz for TDD

	CSI-RS.3.1 TDD	CSI-RS.3.2 TDD	CSI-RS.3.3 TDD	CSI-RS.3.4 TDD
Resource Type	periodic	periodic	aperiodic	aperiodic
Resource Set Config				
nzp-CSI-ResourceSetId	0	0	0	0
repetition	N/A	off	off	on
aperiodicTriggeringOffset	N/A	N/A	4	4
trs-Info	N/A	N/A	N/A	N/A
Resource Config				
nzp-CSI-RS-ResourceId	0 for resource #0	0 for resource #0 1 for resource #1	0 for resource #0 1 for resource #1	0 for resource #0 1 for resource #1 2 for resource #2 3 for resource #3 4 for resource #4 5 for resource #5 6 for resource #6 7 for resource #7
powerControlOffset	0	0	0	0
powerControlOffsetSS	db0	db0	db0	db0
scramblingID	0	0	0	0
Period (slots)	slot40	slot80	N/A	N/A
Offset	8	16	N/A	N/A
qcl-InfoPeriodicCSI-RS	TCI.State.0	TCI.State.0 TCI.State.1	N/A	N/A
frequencyDomainAllocation	000001	0001	0001	0001
nrofPorts	2	1	1	1
firstOFDMSymbolInTimeDomain	5 for resource #0	6 for resource #0 10 for resource #1	6 for resource #0 10 for resource #1	0 for resource #0 1 for resource #1 2 for resource #2 3 for resource #3 4 for resource #4 5 for resource #5 6 for resource #6 7 for resource #7
cdm-Type	FD-CDM2	noCDM	noCDM	noCDM
density	1	3	3	3
startingRB	0	0	0	0
nrofRBs	276	276	276	276

Table A.1.4.2-3A: CSI-RS Reference Measurement Channels for SCS=120 kHz for TDD

Resource Type	CSI-RS.3.1A TDD periodic	CSI-RS.3.2A TDD aperiodic	CSI-RS.3.3A TDD periodic
Resource Set Config			
nzp-CSI-ResourceSetId	1	1	1
repetition	off	off	off
aperiodicTriggeringOffset	n.a.	6	n.a.
trs-Info	n.a.	n.a.	n.a.
Resource Config			
nzp-CSI-RS-ResourceId	12 for resource #0 13 for resource #1	22 for resource #0 23 for resource #1	14 for resource #0 15 for resource #1
powerControlOffset	0	0	0
powerControlOffsetSS	db0	db0	db0
scramblingID	0	0	0
Period (slots)	slot160	n.a.	slot80
Offset	8	n.a.	16
qcl-InfoPeriodicCSI-RS	n.a.	n.a.	n.a.
frequencyDomainAllocation	0001	0001	0001
nrofPorts	1	1	1
firstOFDMSymbolInTimeDomain	6 for resource #0 10 for resource #1	7 for resource #0 11 for resource #1	6 for resource #0 10 for resource #1
cdm-Type	noCDM	noCDM	noCDM
density	3	3	3
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the Test Equipment shall implement CSI-RS only in the width of that BWP.			

A.1.4A CSI-RS for tracking

A.1.4A.1 FR1

A.1.4A.1.1 FDD

Table A.1.4A.1.1-1: CSI-RS for tracking FDD

Parameter	**Unit**	**Value**	
Reference channel		TRS.1.1 FDD	TRS.1.2 FDD
Bandwidth		BW of Active BWP[1]	BW of Active BWP[1]
SCS	kHz	15	30
First subcarrier index in the PRB used for CSI-RS		k_0=0 for CSI-RS resource 1,2,3,4	k_0=0 for CSI-RS resource 1,2,3,4
First OFDM symbol in the slot used for CSI-RS		l_0 = 5 for CSI-RS resource 1 and 3 l_0 = 9 for CSI-RS resource 2 and 4	l_0 = 5 for CSI-RS resource 1 and 3 l_0 = 9 for CSI-RS resource 2 and 4
Number of CSI-RS ports (X)		1 for CSI-RS resource 1,2,3,4	1 for CSI-RS resource 1,2,3,4
CDM Type		'No CDM' for CSI-RS resource 1,2,3,4	'No CDM' for CSI-RS resource 1,2,3,4
Density (ρ)		3 for CSI-RS resource 1,2,3,4	3 for CSI-RS resource 1,2,3,4
CSI-RS periodicity	slots	20 for CSI-RS resource 1,2,3,4	40 for CSI-RS resource 1,2,3,4
CSI-RS offset	slots	10 for CSI-RS resource 1 and 2 11 for CSI-RS resource 3 and 4	20 for CSI-RS resource 1 and 2 21 for CSI-RS resource 3 and 4
EPRE ratio to SSS	dB	0	0
TCI state		TCI.State.0	TCI.State.0
NOTE 1: BW of TRS is configured same as the BW size of UE active BWP in the RRM test cases			

A.1.4A.1.2 TDD

Table A.1.4A.1.2-1: CSI-RS for TDD

Parameter	Unit	Value	
Reference channel		TRS.1.1 TDD	TRS.1.2 TDD
Bandwidth		BW of Active BWP[1]	BW of Active BWP[1]
SCS	kHz	15	30
First subcarrier index in the PRB used for CSI-RS		k_0=0 for CSI-RS resource 1,2,3,4	k_0=0 for CSI-RS resource 1,2,3,4
First OFDM symbol in the slot used for CSI-RS		l_0 = 5 for CSI-RS resource 1 and 3 l_0 = 9 for CSI-RS resource 2 and 4	l_0 = 5 for CSI-RS resource 1 and 3 l_0 = 9 for CSI-RS resource 2 and 4
Number of CSI-RS ports (X)		1 for CSI-RS resource 1,2,3,4	1 for CSI-RS resource 1,2,3,4
CDM Type		'No CDM' for CSI-RS resource 1,2,3,4	'No CDM' for CSI-RS resource 1,2,3,4
Density (ρ)		3 for CSI-RS resource 1,2,3,4	3 for CSI-RS resource 1,2,3,4
CSI-RS periodicity	slots	20 for CSI-RS resource 1,2,3,4	40 for CSI-RS resource 1,2,3,4
CSI-RS offset	slots	10 for CSI-RS resource 1 and 2 11 for CSI-RS resource 3 and 4	20 for CSI-RS resource 1 and 2 21 for CSI-RS resource 3 and 4
EPRE ratio to SSS	dB	0	0
TCI state		TCI.State.0	TCI.State.0
NOTE 1: BW of TRS is configured same as the BW size of UE active BWP in the RRM test cases			

A.1.4A.2 FR2

A.1.4A.2.1 TDD

Table A.1.4A.2.1-1: CSI-RS for tracking for TDD FR2

Parameter	Unit	Value	
Reference channel		TRS.2.1 TDD	TRS.2.2 TDD
Bandwidth		BW of Active BWP[Note 1, 2]	BW of Active BWP[Note 1,2]
SCS	kHz	120	120
First subcarrier index in the PRB used for CSI-RS		k_0=0 for CSI-RS resource 1,2,3,4	k_0=0 for CSI-RS resource 1,2,3,4
First OFDM symbol in the slot used for CSI-RS		l_0 = 1 for CSI-RS resource 1 and 3 l_0 = 5 for CSI-RS resource 2 and 4	l_0 = 2 for CSI-RS resource 1 and 3 l_0 = 6 for CSI-RS resource 2 and 4
Number of CSI-RS ports (X)		1 for CSI-RS resource 1,2,3,4	1 for CSI-RS resource 1,2,3,4
CDM Type		'No CDM' for CSI-RS resource 1,2,3,4	'No CDM' for CSI-RS resource 1,2,3,4
Density (ρ)		3 for CSI-RS resource 1,2,3,4	3 for CSI-RS resource 1,2,3,4
CSI-RS periodicity	slots	80 for CSI-RS resource 1,2,3,4	80 for CSI-RS resource 1,2,3,4
CSI-RS offset	slots	40 for CSI-RS resource 1 and 2 41 for CSI-RS resource 3 and 4	40 for CSI-RS resource 1 and 2 41 for CSI-RS resource 3 and 4
EPRE ratio to SSS	dB	0	0
TCI state		TCI.State.0	TCI.State.1
NOTE 1: BW of TRS is configured same as the BW size of UE active BWP in the RRM test cases NOTE 2: If active BWP is larger than 52RBs, BW of TRS is configured as 52RBs. Otherwise, same as active BWP size.			

A.1.4B CSI-IM configurations

A.1.4B.1 FDD

Table A.1.4B.1-1: CSI-IM Reference Measurement Channels for SCS=15kHz

	CSI-IM.1.1 FDD	CSI-IM.1.2 FDD	CSI-IM.1.3 FDD

Resource Type	periodic	aperiodic	periodic
Resource Set Config			
csi-IM-ResourceSetId	0	0	0
Resource Config			
csi-IM-ResourceId	0 for resource #0	10 for resource #0	2 for resource #0
	1 for resource #1	11 for resource #1	3 for resource #1
csi-IM-ResourceElementPattern	pattern1	pattern1	pattern1
subcarrierLocation-p1	s0	s0	s0
symbolLocation-p1	6 for resource #0	7 for resource #0	6 for resource #0
	10 for resource #1	11 for resource #1	10 for resource #1
Period (slots)	slot20	n.a.	slot10
Offset	1	n.a.	2
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the test Equipment shall implement CSI-RS only in the width of that BWP.			

A.1.4B.2 TDD

Table A.1.4B.2-1: CSI-IM Reference Measurement Channels for SCS=15kHz

	CSI-IM.1.1 TDD	CSI-IM.1.2 TDD	CSI-IM.1.3 TDD
Resource Type	**periodic**	**aperiodic**	**periodic**
Resource Set Config			
csi-IM-ResourceSetId	0	0	0
Resource Config			
csi-IM-ResourceId	0 for resource #0	10 for resource #0	2 for resource #0
	1 for resource #1	11 for resource #1	3 for resource #1
csi-IM-ResourceElementPattern	pattern1	pattern1	pattern1
subcarrierLocation-p1	s0	s0	s0
symbolLocation-p1	6 for resource #0	7 for resource #0	6 for resource #0
	10 for resource #1	11 for resource #1	10 for resource #1
Period (slots)	slot20	n.a.	slot10
Offset	1	n.a.	2
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the test Equipment shall implement CSI-RS only in the width of that BWP.			

Table A.1.4B.2-2: CSI-IM Reference Measurement Channels for SCS=30kHz

	CSI-IM.2.1 TDD	CSI-IM.2.2 TDD	CSI-IM.2.3 TDD
Resource Type	**periodic**	**aperiodic**	**periodic**
Resource Set Config			
csi-IM-ResourceSetId	0	0	0
Resource Config			

csi-IM-ResourceId	0 for resource #0	10 for resource #0	2 for resource #0
	1 for resource #1	11 for resource #1	3 for resource #1
csi-IM-ResourceElementPattern	pattern1	pattern1	pattern1
subcarrierLocation-p1	s0	s0	s0
symbolLocation-p1	6 for resource #0	7 for resource #0	6 for resource #0
	10 for resource #1	11 for resource #1	10 for resource #1
Period (slots)	slot40	n.a.	slot40
Offset	2	n.a.	4
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the test Equipment shall implement CSI-RS only in the width of that BWP.			

Table A.1.4B.2-3: CSI-RS Reference Measurement Channels for SCS=120kHz

	CSI-IM.3.1 TDD	**CSI-IM.3.2 TDD**	**CSI-IM.3.3 TDD**
Resource Type	**periodic**	**aperiodic**	**periodic**
Resource Set Config			
csi-IM-ResourceSetId	0	0	0
Resource Config			
csi-IM-ResourceId	0 for resource #0	10 for resource #0	2 for resource #0
	1 for resource #1	11 for resource #1	3 for resource #1
csi-IM-ResourceElementPattern	pattern1	pattern1	pattern1
subcarrierLocation-p1	s0	s0	s0
symbolLocation-p1	6 for resource #0	7 for resource #0	6 for resource #0
	10 for resource #1	11 for resource #1	10 for resource #1
Period (slots)	slot160	n.a.	slot80
Offset	8	n.a.	16
startingRB	0	0	0
nrofRBs	276 (Note 1)	276 (Note 1)	276 (Note 1)
Note 1: If the configured value of PRBs is larger than the width of the corresponding BWP relevant for the test case, the test Equipment shall implement CSI-RS only in the width of that BWP.			

A.1.5 TDD UL/DL configuration

Table A.1.5-1: TDD UL/DL configuration for SCS=15kHz

Parameter	Unit	Value		
Reference channel		TDDConf.1.1		
referenceSubcarrierSpacing	kHz	15		
TDD UL/DL pattern 1 Note 2		'DSUU' S='10DL:2GP:2UL'		
dl-UL-TransmissionPeriodicity	ms	4		
nrofDownlinkSlots		1		
nrofDownlinkSymbols		10		
nrofUplinkSlot		2		
nrofUplinkSymbols		2		
TDD UL/DL pattern 2 Note 2		'D'		
dl-UL-TransmissionPeriodicity	ms	1		
nrofDownlinkSlots		1		
nrofDownlinkSymbols		0		
nrofUplinkSlot		0		
nrofUplinkSymbols		0		
NOTE 1: As specified in TS 38.213 [8] and TS 38.331 [13]. NOTE 2: For information				

Table A.1.5-2: TDD UL/DL configuration for SCS=30kHz

Parameter	Unit	Value		
Reference channel		TDDConf.2.1		
referenceSubcarrierSpacing	kHz	30		
TDD UL/DL pattern 1 Note 2		'3D1S4U' S='6DL:4GP:4UL'		
dl-UL-TransmissionPeriodicity	ms	4		
nrofDownlinkSlots		3		
nrofDownlinkSymbols		6		
nrofUplinkSlot		4		
nrofUplinkSymbols		4		
TDD UL/DL pattern 2 Note 2		'DD'		
dl-UL-TransmissionPeriodicity	ms	1		
nrofDownlinkSlots		2		
nrofDownlinkSymbols		0		
nrofUplinkSlot		0		
nrofUplinkSymbols		0		
NOTE 1: As specified in TS 38.213 [8] and TS 38.331 [13]. NOTE 2: For information				

Table A.1.5-3: TDD UL/DL configuration for SCS=120kHz

Parameter	Unit	Value		
Reference channel		TDDConf.3.1		
referenceSubcarrierSpacing	kHz	120		
TDD UL/DL pattern 1 Note 2		'DDDSU' S='10DL:2GP:2UL'		
dl-UL-TransmissionPeriodicity	ms	0.625		
nrofDownlinkSlots		3		
nrofDownlinkSymbols		10		
nrofUplinkSlot		1		
nrofUplinkSymbols		2		
TDD UL/DL pattern 2 Note 2		Not configured		
dl-UL-TransmissionPeriodicity	ms	Not configured		
nrofDownlinkSlots		Not configured		
nrofDownlinkSymbols		Not configured		
nrofUplinkSlot		Not configured		
nrofUplinkSymbols		Not configured		
NOTE 1: As specified in TS 38.213 [8] and TS 38.331 [13]. NOTE 2: For information				

A.1.6 PUSCH

This rule applies to NR cell(s), which the UE is connected to. The UE is in RRC_CONNECTED mode.

When signalling or data payloads are expected to be sent on the PUSCH, the UE may be provided in advance with PUSCH resources by the SS. For sake of simplicity, the PUSCH scheduling may also occur continuously over many consecutive subframes. These options shall not be used if:
1) stated otherwise in the test description, or
2) the transmission of PUSCH and UL scheduling information affects the test purpose (e.g. DRX, PUCCH reception etc.)

A.2 Reference OCGN configuration

A.2.1 Generic OFDMA channel noise generator (OCNG)

The OCNGpattern is used in a test for modelling the allocation of unused resourced in the channel bandwidth to virtual UEs (UEs that are not under test). The OCNG pattern simulates both PDCCH and PDSCH transmissions to the virtual UEs.

Table A.2.1-1: OP.1: Generic OCNG pattern for all unused REs

OCNG Parameters	Control Region	Data Region
Resource allocation	Unused REs (Note 1)	Unused REs (Note 2)
Channel	PDCCH	PDSCH
Contents	Virtual UE IDs	Uncorrelated pseudo random QPSK modulated data
Antenna transmission scheme	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Subcarrier spacing	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Aggregation level	Same as used in PDCCH RMC	N/A
Code rate	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Transmit Power	Same as used in PDCCH RMC	Same as used in PDSCH RMC
CP length	Same as used in PDCCH RMC	Same as used in PDSCH RMC
NOTE 1: REs not used in the active CORESETs where PDCCH is scheduled for the UE under test. NOTE 2: REs not allocated to any physical channels, CORESET, SSB or any other reference signal within the channel bandwidth of the cell, confined to $BW_{occupied}$ where specified in the test case.		

Table A.2.1-2: OP.2: Generic OCNG pattern for all unused REs for 2AoA setup

OCNG Parameters	Control Region	Data Region
Probe	Transmitting the serving beam	
Resource allocation	Unused REs (Note 1) in the symbols where SSB/CSI-RS are not transmitted from both the serving beam probe and non-serving beam probe.	Unused REs (Note 2) in the symbols where SSB/CSI-RS are not transmitted from both the serving beam probe and non-serving beam probe.
Channel	PDCCH	PDSCH
Contents	Virtual UE IDs	Uncorrelated pseudo random QPSK modulated data
Antenna transmission scheme	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Subcarrier spacing	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Aggregation level	Same as used in PDCCH RMC	N/A
Code rate	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Transmit Power	Same as used in PDCCH RMC	Same as used in PDSCH RMC
CP length	Same as used in PDCCH RMC	Same as used in PDSCH RMC
NOTE 1: REs not used in the active CORESETs where PDCCH is scheduled for the UE under test. NOTE 2: REs not allocated to any physical channels, CORESET, SSB or any other reference signal within the channel bandwidth of the cell, confined to $BW_{occupied}$ where specified in the test case. NOTE 3: No OCNG is transmitted from the probe transmitting non-serving beam.		

Table A.2.1-3: OP.3: Generic OCNG pattern for unused REs in the same BW as CORESET

OCNG Parameters	Control Region	Data Region
Resource allocation	Unused REs (Note 1)	Unused REs (Note 2)
Channel	PDCCH	PDSCH
Contents	Virtual UE IDs	Uncorrelated pseudo random QPSK modulated data
Antenna transmission scheme	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Subcarrier spacing	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Aggregation level	Same as used in PDCCH RMC	N/A
Code rate	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Transmit Power	Same as used in PDCCH RMC	Same as used in PDSCH RMC
CP length	Same as used in PDCCH RMC	Same as used in PDSCH RMC
NOTE 1: REs not used in the active CORESETs where PDCCH is scheduled for the UE under test. REs for OCNG shall not be allocated outside the allocated bandwidth of the CORESET of the serving cell. NOTE 2: REs not allocated to any physical channels, CORESET, SSB or any other reference signal within the allocated bandwidth of the CORESET of the serving cell. REs for OCNG shall not be allocated outside the allocated bandwidth of the CORESET of the serving cell.		

Table A.2.1-4: OP.4: Generic OCNG pattern for all unused REs outside SSB slot(s)

OCNG Parameters	Control Region	Data Region
Resource allocation	Unused REs (Note 1)	Unused REs (Note 2)
Channel	PDCCH	PDSCH
Contents	Virtual UE IDs	Uncorrelated pseudo random QPSK modulated data
Antenna transmission scheme	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Subcarrier spacing	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Aggregation level	Same as used in PDCCH RMC	N/A
Code rate	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Transmit Power	Same as used in PDCCH RMC	Same as used in PDSCH RMC
CP length	Same as used in PDCCH RMC	Same as used in PDSCH RMC
NOTE 1: REs not used in the active CORESETs where PDCCH is scheduled for the UE under test. REs for OCNG shall not be allocated in the slot(s) containing SSB of the respective cell. NOTE 2: REs not allocated to any physical channels, CORESET, SSB or any other reference signal within the channel bandwidth of the cell. REs for OCNG shall not be allocated in the slot(s) containing SSB of the respective cell.		

Table A.2.1-5: OP.5: Generic OCNG pattern for unused REs in the same BW as CORESET for 2AoA setup

OCNG Parameters	Control Region	Data Region
Probe	Transmitting the serving beam	
Resource allocation	Unused REs (Note 1) in the symbols where SSB/CSI-RS are not transmitted from both the serving beam probe and non-serving beam probe.	Unused REs (Note 2) in the symbols where SSB/CSI-RS are not transmitted from both the serving beam probe and non-serving beam probe.
Channel	PDCCH	PDSCH
Contents	Virtual UE IDs	Uncorrelated pseudo random QPSK modulated data
Antenna transmission scheme	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Subcarrier spacing	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Aggregation level	Same as used in PDCCH RMC	N/A
Code rate	Same as used in PDCCH RMC	Same as used in PDSCH RMC
Transmit Power	Same as used in PDCCH RMC	Same as used in PDSCH RMC
CP length	Same as used in PDCCH RMC	Same as used in PDSCH RMC
NOTE 1: REs not used in the active CORESETs where PDCCH is scheduled for the UE under test. REs for OCNG shall not be allocated outside the allocated bandwidth of the CORESET of the serving cell. NOTE 2: REs not allocated to any physical channels, CORESET, SSB or any other reference signal within the allocated bandwidth of the CORESET of the serving cell. REs for OCNG shall not be allocated outside the allocated bandwidth of the CORESET of the serving cell. NOTE 3: No OCNG is transmitted from the probe transmitting non-serving beam.		

A.3 Reference SSB configuration

A.3.1 SSB configuration for FR1

Table A.3.1-1: SSB allocation for FR1

SSB Parameters	Unit	Value							
SSB Pattern		SSB.1 FR1	SSB.2 FR1	SSB.3 FR1		SSB.4 FR1		SSB.5 FR1	SSB.6 FR1
Channel bandwidth	MHz	10	40	10		40		10	40
SSB SCS	kHz	15	30	15		30		15	30
SSB periodicity (T_{SSB})	ms	20							
Number of SSBs per SS-burst		1	1	2		2		1	1
SS/PBCH block index		0	0	0	1	0	1	0	0
Indices of symbols containing SSB		2-5	4-7 or 2-5 Note 2	2-5	8-11	4-7 or 2-5 Note 2	8-11	2-5	4-7 or 2-5 Note 2
Indices of slots containing SSB		0							
Indices of SFN containing SSB		SFN mod (max(T_{SSB},10ms)/10ms) = 0						SFN mod (max(T_{SSB},10ms)/10ms) = 1	
RB numbers containing SSB within channel BW		(RB_J, RB_{J+1},…., RB_{J+19})Note 1							

NOTE 1: RBs containing SSB can be configured in any frequency location within the cell bandwidth according to the allowed synchronization raster defined in TS 38.104 [28].
NOTE 2: Symbols 4-7 are chosen if the SSB pattern Case B should be used for the current band as indicated by Table 5.4.3.3-1 of TS 38.104 [28]; Otherwise, symbols 2-5 are chosen.

A.3.2 SSB configuration for FR2

Table A.3.2-1: SSB allocation for FR2

SSB Parameters	Unit	Value											
SSB Pattern		SSB.1 FR2		SSB.2 FR2		SSB.3 FR2	SSB.4 FR2	SSB.5 FR2		SSB.6 FR2		SSB.7 FR2	SSB.8 FR2
Channel bandwidth	MHz	100											
SSB SCS	kHz	120		240		120	240	120		240		120	240
SSB periodicity (T_{SSB})	ms	20											
Number of SSBs per SS-burst		2		2		1	1	2		2		1	1
SS/PBCH block index		0	1	0	1	0	0	2	3	2	3	1	1
Indices of symbols containing SSB		4-7	8-11	8-11	12-13, 0-1	4-7	8-11	2-5	6-9	2-5	6-9	8-11	12-13, 0-1
Indices of slots containing SSB		0		0	0-1	0	0	1	1	1	1	0	0-1
Indices of SFN containing SSB		SFN mod (max(T_{SSB},10ms)/10ms) = 0											
RB numbers containing SSB within channel BW		(RB_J, RB_{J+1},…., RB_{J+19})Note 1											

NOTE 1: RBs containing SSB can be configured in any frequency location within the cell bandwidth according to the allowed synchronization raster defined in TS 38.104 [28].

A.4 Reference SMTC configuration

Table A.4-1: SMTC configurations

SMTC Parameters	Unit	Value					
SMTC Pattern		SMTC.1	SMTC.2	SMTC.3	SMTC.4	SMTC.5	SMTC.6
SMTC periodicity	ms	20	20	160	20	20	20
SMTC offset	ms	0	0	0	10	10	17
SMTC duration	ms	1	5	1	1	5	5

A.5 Reference DRX configurations

The reference DRX configurations for the NR serving cell are captured in Table A.5-1. The reference DRX configurations for the E-UTRA serving cell for EN-DC and inter-RAT test cases are captured in Table A.5-2.

Table A.5-1: DRX configurations for NR serving cell

Parameter	Unit	Value						
DRX Configuration		DRX.1	DRX.2	DRX.3	DRX.6	DRX.7	DRX.8	DRX.11
drx-onDurationTimer	ms	1	1	6	1	6	6	6
drx-InactivityTimer	ms	1	1	1	1	1	1	1
drx-RetransmissionTimerDL	slot	1	1	1	1	1	1	1
drx-RetransmissionTimerUL	slot	1	1	1	1	1	1	1
drx-LongCycleStartOffset	ms	40	640	40	320	640	320	20
shortDRX	-	disabled	disabled	disabled	disabled	disabled	disabled	disabled
TimeAlignmentTimer	ms	500	500	Infinity	500	Infinity	Infinity	Infinity
NOTE 1: The DRX cycle and time alignment timer parameters are specified in clause 6.3.2 in TS 38.331 [13].								

Table A.5-2: DRX configurations for E-UTRA serving cell

Parameter	Unit	Value				
DRX Configuration		DRX.4	DRX.5	DRX.9	DRX.10	DRX.12
drx-onDurationTimer	ms	psf2	psf6	psf2	psf6	psf6
drx-InactivityTimer	ms	psf2	psf1920	psf100	psf1920	psf2
drx-RetransmissionTimerDL	slot	psf16	psf16	psf16	psf16	psf16
drx-LongCycleStartOffset	ms	sf160, 0	sf320. 0	sf40, 0	sf640. 0	sf640, 0
shortDRX	-	disabled	disabled	disabled	disabled	disabled
TimeAlignmentTimer	ms	Infinity	Infinity	500	500	Infinity
NOTE 1: The DRX cycle and time alignment timer parameters are specified in clause 6.3.2 in TS 36.331 [29]						

A.6 EN-DC test setup

The purpose of this Annex is to specify the EN-DC configuration for the test cases in Chapters 4 and 5 of this test specification.

A.6.1 E-UTRA serving cell parameters

This clause defines the cell power levels and other specific cell parameters of the E-UTRA serving cell for EN-DC.

A.6.1.1 E-UTRA serving cell parameters for EN-DC tests with NR FR1

Table A.6.1.1-1 defines the E-UTRA serving cell parameters for EN-DC tests with NR FR1 cell(s), defined in Chapter 4 of this test specification and for iRAT tests with E-UTRA serving cell and NR FR1 cell(s) defined in Chapter 8 of this test specification. Unless otherwise stated within the test, all measurements in Clauses 4 and 5 are performed only on the NR carrier. The E-UTRA PCell shall configured to not interfere with NR operation and the E-UTRA PCell signal power shall not be critical to the test purpose.

Table A.6.1.1-1: E-UTRAN cell specific test parameters for EN-DC tests with NR FR1

Parameter	Unit	E-UTRAN Cell1
E-UTRA RF Channel Number		1
Duplex mode		FDD or TDD
TDD special subframe configuration[Note1]		6
TDD uplink-downlink configuration[Note1]		1
$BW_{channel}$ [Note 6]		5MHz: $N_{RB,c}$ = 25 10MHz: $N_{RB,c}$ = 50 20MHz: $N_{RB,c}$ = 100
PDSCH parameters: DL Reference Measurement Channel[Note2, Note 6]		5MHz: R.7 FDD 10MHz: R.3 FDD 20MHz: R.6 FDD 5MHz: R.4 TDD 10MHz: R.0 TDD 20MHz: R.3 TDD
PCFICH/PDCCH/PHICH parameters: DL Reference Measurement Channel[Note2, Note 6]		5MHz: R.11 FDD 10MHz: R.6 FDD 20MHz: R.10 FDD 5MHz: R.11 TDD 10MHz: R.6 TDD 20MHz: R.10 TDD
OCNG Patterns[Note 2]		5MHz: OP.20 FDD 10MHz: OP.10 FDD 20MHz: OP.17 FDD 5MHz: OP.9 TDD 10MHz: OP.1 TDD 20MHz: OP.7 TDD
PBCH_RA	dB	0
PBCH_RB	dB	
PSS_RA	dB	
SSS_RA	dB	
PCFICH_RB	dB	
PHICH_RA	dB	
PHICH_RB	dB	
PDCCH_RA	dB	
PDCCH_RB	dB	
PDSCH_RA	dB	
PDSCH_RB	dB	
OCNG_RA[Note 3]	dB	
OCNG_RB[Note 3]	dB	
N_{oc} [Note 4]	dBm/15 kHz	-104
$\hat{E}_s/N_{oc}$	dB	17
$\hat{E}_s/I_{ot}$	dB	17
RSRP [Note 5]	dBm/15 kHz	-87
SCH_RP [Note 5]	dBm/15 kHz	-87
Io [Note 5]	dBm/Ch BW	-59.13 + 10log($N_{RB,c}$ /50)
Propagation Condition		AWGN
Antenna Configuration		1x2
NOTE 1: Special subframe and uplink-downlink configurations are specified in table 4.2-1 in TS 36.211 [24]. NOTE 2: DL RMCs and OCNG patterns are specified in clauses A.1, A.2 and D.1 of TS 36.521-3 [26]. NOTE 3: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols. NOTE 4: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled. NOTE 5: Es/Iot, RSRP, SCH_RP and Io levels have been derived from other parameters for information purposes. They are not settable parameters themselves. NOTE 6: For E-UTRA anchor configuration, pick 5 MHz as default channel bandwidth setting in the tests as it is supported by all E-UTRA bands. If none of the UE supported EN-DC band combos support 5MHz E-UTRA carrier, pick 20 MHz channel BW or 10 MHz channel BW, in that order,		

Table A.6.1.1-2: *CQI-ReportConfig-DEFAULT:* Additional E-UTRA Anchor Configuration

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-2 CQI-ReportConfig-DEFAULT			
Information Element	**Value/remark**	**Comment**	**Condition**
CQI-ReportConfig-DEFAULT ::= SEQUENCE {			
cqi-ReportModeAperiodic	NOT PRESENT		
cqi-ReportPeriodic	NOT PRESENT		
}			

Table A.6.1.1-3:*PhysicalConfigDedicated-DEFAULT:* Additional E-UTRA Anchor Configuration

Derivation Path: TS 36.508 [7] clause 4.8.2, Table 4.8.2.1.6-1 PhysicalConfigDedicated-DEFAULT			
Information Element	**Value/remark**	**Comment**	**Condition**
PhysicalConfigDedicated-DEFAULT ::= SEQUENCE {			
soundingRS-UL-ConfigDedicated	Not present		RBC
}			

Table A.6.1.1-4:*MAC-MainConfig-RBC*: Additional E-UTRA Anchor Configuration

Derivation Path: TS 36.508 [7] clause 4.8.2.1.5, Table 4.8.2.1.5-1 MAC-MainConfig-RBC			
Information Element	**Value/remark**	**Comment**	**Condition**
timeAlignmentTimerDedicated	Infinity		

A.6.1.2 E-UTRA serving cell parameters for EN-DC tests with NR FR2

Table A.6.1.2-1 defines the E-UTRA serving cell parameters for EN-DC tests with NR FR2 cell(s), defined in Chapter 5 of this test specification and for iRAT tests with E-UTRA serving cell and NR FR1 cell(s) defined in Chapter 8 of this test specification. Unless otherwise stated within the test, all measurements in Clauses 5 and 7 are performed only on the NR carrier. The E-UTRA PCell shall configured to not interfere with NR operation and the E-UTRA PCell signal power shall not be critical to the test purpose.

Table A.6.1.2-1: E-UTRAN cell specific test parameters for EN-DC tests with NR FR2

Parameter	Unit	E-UTRAN Cell1
E-UTRA RF Channel Number		1
Duplex mode		FDD or TDD
TDD special subframe configuration Note1		6
TDD uplink-downlink configuration Note1		1
$BW_{channel}$ Note 5	MHz	5MHz: $N_{RB,c}$ = 25 10MHz: $N_{RB,c}$ = 50 20MHz: $N_{RB,c}$ = 100
PDSCH parameters: DL Reference Measurement Channel Note2, Note 5		5MHz: R.7 FDD 10MHz: R.3 FDD 20MHz: R.6 FDD 5MHz: R.4 TDD 10MHz: R.0 TDD 20MHz: R.3 TDD
PCFICH/PDCCH/PHICH parameters: DL Reference Measurement Channel Note2, Note 5		5MHz: R.11 FDD 10MHz: R.6 FDD 20MHz: R.10 FDD 5MHz: R.11 TDD 10MHz: R.6 TDD 20MHz: R.10 TDD
OCNG Patterns Note2, Note 5		5MHz: OP.20 FDD 10MHz: OP.10 FDD 20MHz: OP.17 FDD 5MHz: OP.9 TDD 10MHz: OP.1 TDD 20MHz: OP.7 TDD
PBCH_RA	dB	0
PBCH_RB	dB	
PSS_RA	dB	
SSS_RA	dB	
PCFICH_RB	dB	
PHICH_RA	dB	
PHICH_RB	dB	
PDCCH_RA	dB	
PDCCH_RB	dB	
PDSCH_RA	dB	
PDSCH_RB	dB	
OCNG_RA Note3	dB	
OCNG_RB Note3	dB	
NOTE 1: Special subframe and uplink-downlink configurations are specified in table 4.2-1 in TS 36.211 [24]. NOTE 2: DL RMCs and OCNG patterns are specified in clauses A 1, A.2 and D.1 of TS 36.521-3 [26]. NOTE 3: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols. NOTE 4: The E-UTRA signal is required only to ensure the E-UTRA link to the DUT in the EN-DC operation. The Test System shall provide a stable and noise-free E-UTRA signal without need of precise propagation modelling, path loss and polarization control. Further details of the E-UTRA signal configuration are not defined as part of the cell specific test parameters, since the E-UTRA link is not under performance verification and is not expected to influence the NR FR2 requirement. NOTE 5: The For E-UTRA anchor configuration, pick 5 MHz as default channel bandwidth setting in the tests as it is supported by all E-UTRA bands. If none of the UE supported EN-DC band combos support 5MHz E-UTRA carrier, pick 20 MHz channel BW or 10 MHz channel BW, in that order,		

Table A.6.1.2-2: *CQI-ReportConfig-DEFAULT:* Additional E-UTRA Anchor Configuration

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-2 CQI-ReportConfig-DEFAULT			
Information Element	**Value/remark**	**Comment**	**Condition**
CQI-ReportConfig-DEFAULT ::= SEQUENCE {			
cqi-ReportModeAperiodic	NOT PRESENT		
cqi-ReportPeriodic	NOT PRESENT		
}			

Table A.6.1.2-3:*PhysicalConfigDedicated-DEFAULT:* Additional E-UTRA Anchor Configuration

Derivation Path: TS 36.508 [7] clause 4.8.2, Table 4.8.2.1.6-1 PhysicalConfigDedicated-DEFAULT			
Information Element	**Value/remark**	**Comment**	**Condition**
PhysicalConfigDedicated-DEFAULT ::= SEQUENCE {			
soundingRS-UL-ConfigDedicated	Not present		RBC
}			

Table A.6.1.2-4:*MAC-MainConfig-RBC*: Additional E-UTRA Anchor Configuration

Derivation Path: TS 36.508 [7] clause 4.8.2.1.5, Table 4.8.2.1.5-1 MAC-MainConfig-RBC			
Information Element	**Value/remark**	**Comment**	**Condition**
timeAlignmentTimerDedicated	Infinity		

A.6A NR FR1-FR2 test setup

Some test cases in clause 7 have NR cells in both FR1 and FR2. Unless otherwise stated within the test, the NR FR1 Cell signal is required only to provide a link to the UE under test. The Test Equipment shall provide a stable and noise-free NR FR1 signal without need of precise propagation modelling, path loss and polarization control. Further details of the NR FR1 signal configuration are not defined as part of the cell specific test parameters, since the NR FR1 link is not under performance verification and is not expected to influence the test purpose.

A.7 Reference PRACH configurations

This clause provides the typical PRACH configurations used for all RRM test cases defined in this test specification. Parameters not listed in this clause can be derived from the configuration of each test.

A.7.1 PRACH configurations for FR1

Table A.7.1-1 defines the PRACH configurations for FR1. Each of the PRACH configurations defined in Table A.7.1-1 have different applicabilities:

- PRACH.1 FR1 for SSB-based contention based random access in FR1.
- PRACH.2 FR1 for SSB-based non-contention based random access in FR1.
- PRACH.3 FR1 for CSI-RS based non-contention based random access in FR1.
- PRACH.4 FR1 for CSI-RS based non-contention based random access in FR1 to convey BFR.

Table A.7.1-1 Parameters for PRACH Configurations for FR1

Field	Value				Comment
PRACH Configuration	PRACH.1 FR1	PRACH.2 FR1	PRACH.3 FR1	PRACH.4 FR1	
prach-ConfigurationIndex	102	102	102	102	10ms PRACH periodicity and other detailed configuration defined in table 6.3.3.2-2 in TS 38.211 [7].
msg1-SubcarrierSpacing	Same as UL carrier SCS	Same as UL carrier SCS	Same as UL carrier SCS	Same as UL carrier SCS	
totalNumberOfRA-Preambles	48	48	48	48	Total number of preambles used for contention based and contention free random access
numberOfRA-PreamblesGroupA	48	48	48	48	No group B.
prach-RootSequenceIndex	0	0	0	0	Logic sequence index = 0, resulting in root sequence = 1.
ssb-perRACH-OccasionAndCB-PreamblesPerSSB	oneFourth, n48	-	-	-	OneFourth: 1 SSB associated with 4 RACH occasions n48: 48 contention based preambles per SSB
ssb-perRACH-Occasion	-	oneFourth	oneFourth	oneFourth	OneFourth: 1 SSB associated with 4 RACH occasions
msg1-FDM	One	One	One	One	One PRACH transmission occasions FDMed in one time instance.
rsrp-ThresholdSSB	RSRP_51	RSRP_51	N/A	RSRP_51	The actual value of the threshold is -105dBm, as defined in TS 38.331 [13].
rsrp-ThresholdCSI-RS	N/A	N/A	RSRP_51	N/A	
ra-ContentionResolutionTimer	sf48	-	-	-	48 sub-frames
powerRampingStep	dB2	dB2	dB2	dB2	
preambleReceivedTargetPower	dBm-120	dBm-120	dBm-120	dBm-120	
preambleTransMax	n6	n6	n6	n200	Max number of RA preamble transmission performed before declaring a failure is 6
ra-ResponseWindow	sl10	sl10	sl10	sl1	10 slots
zeroCorrelationZoneConfig	11	11	11	11	N-CS configuration, N_{CS} = 23
Backoff Parameter Index	2	2	2	2	20ms, as defined in table 7.2-1 in TS 38.321 [12].
ssb-ResourceList	-	present	N/A	N/A	Associated with SSB index 0
ra-PreambleIndex	-	50	N/A	N/A	Associated with SSB index 0. UE doesn't use ssb-ResourceList and BFR-SSB-Resource IEs at the same time. UE doesn't use this field if is transmitting CFRA to convey BFR.
BFR-SSB-Resource	-	present	N/A	N/A	Associated with SSB index 0
ra-PreambleIndex	-	50	N/A	N/A	Associated with SSB index 0. UE doesn't use ssb-ResourceList and BFR-SSB-Resource IEs at the same time. UE uses this field only if is transmitting CFRA to convey BFR
csirs-ResourceList	N/A	N/A	present	presnt	Associated with CSI-RS configured
ra-PreambleIndex	N/A	N/A	50	50	Associated with CSI-RS configured
ra-OccasionList	-	-	1	1	RA occasions allowed corresponding to CSI-RS
ra-ssb-OccasionMaskIndex	-	1	N/A	N/A	PRACH occasion index 1 is allowed
NOTE: For further information see Clause 6.3.2 in TS 38.331 [13].					

A.7.2 PRACH configurations for FR2

Table A.7.2-1 defines the PRACH configurations for FR2. Each of the PRACH configurations defined in Table A.7.2-1 have different applicabilities:

- PRACH.1 FR2 for SSB-based contention based random access in FR2.
- PRACH.2 FR2 for SSB-based non-contention based random access in FR2.
- PRACH.3 FR2 for CSI-RS based non-contention based random access in FR2.
- PRACH.4 FR2 for CSI-RS based non-contention based random access in FR2 to convey BFR.

Table A.7.2-1 Parameters for PRACH Configurations for FR2

Field	Value				Comment
PRACH Configuration	PRACH.1 FR2	PRACH.2 FR2	PRACH.3 FR2	PRACH.4 FR2	
prach-ConfigurationIndex	190	190	190	190	Preamble format C2, 10ms PRACH periodicity and other detailed configuration defined in table 6.3.3.2-4 in TS 38.211 [7].
msg1-SubcarrierSpacing	Same as UL carrier SCS	Same as UL carrier SCS	Same as UL carrier SCS	Same as UL carrier SCS	
totalNumberOfRA-Preambles	48	48	48	48	Total number of preambles used for contention based and contention free random access
numberOfRA-PreamblesGroupA	48	48	48	48	No group B.
prach-RootSequenceIndex	0	0	0	0	Logic sequence index = 0, resulting in root sequence = 1.
ssb-perRACH-OccasionAndCB-PreamblesPerSSB	oneFourth, n48	N/A	N/A	N/A	OneFourth: 1 SSB associated with 4 RACH occasions n48: 48 contention based preambles per SSB
ssb-perRACH-Occasion	N/A	oneFourth	oneFourth	oneFourth	OneFourth: 1 SSB associated with 4 RACH occasions
msg1-FDM	One	One	One	One	One PRACH transmission occasions FDMed in one time instance.
rsrp-ThresholdSSB	RSRP_51	RSRP_51	N/A	RSRP_51	The actual value of the threshold is -105dBm, as defined in TS 38.331 [13].
rsrp-ThresholdCSI-RS	N/A	N/A	RSRP_51	N/A	
ra-ContentionResolutionTimer	sf48	N/A	N/A	N/A	48 sub-frames
powerRampingStep	dB2	dB2	dB2	dB2	
preambleReceivedTargetPower	dBm-120	dBm-120	dBm-120	dBm-120	
preambleTransMax	n6	n6	n6	n200	Max number of RA preamble transmission performed before declaring a failure
ra-ResponseWindow	sl10	sl10	sl10	sl40	
zeroCorrelationZoneConfig	11	11	11	11	N-CS configuration, N_{CS} = 23
Backoff Parameter Index	2	2	2	2	20ms, as defined in table 7.2-1 in TS 38.321 [12].
ssb-ResourceList	-	present	N/A	N/A	Associated with SSB index 0
ra-PreambleIndex	-	50	N/A	N/A	Associated with SSB index 0
csirs-ResourceList	N/A	present	present	present	Associated with CSI-RS configured
ra-PreambleIndex	N/A	50	50	50	Associated with CSI-RS configured
ra-OccasionList	-	-	1	1	RA occasions allowed corresponding to CSI-RS
ra-ssb-OccasionMaskIndex	-	1	N/A	N/A	PRACH occasion index 1 is allowed
NOTE: For further information see Clause 6.3.2 in TS 38.331 [13].					

A.7A Reference MsgA configurations

This clause provides the typical PRACH and PUSCH configurations for MsgA used for all RRM test cases defined in this test specification. Parameters not listed in this clause can be derived from the configuration of each test.

A.7A.1 MsgA configurations for FR1

Table A.7A.1-1 defines the MsgA configurations for FR1. Each of the MsgA configurations defined in Table A.7A.1-1 have different applicabilities:

- MsgA.1 FR1 for SSB-based 2-step contention based random access in FR1.
- MsgA.2 FR1 for SSB-based 2-step non-contention based random access in FR1.

Table A.7A.1-1 Parameters for MsgA Configurations for FR1

Field	Value		Comment
MsgA Configuration	MsgA.1 FR1	MsgA.2 FR1	
msgA-prach-ConfigurationIndex	102	102	10ms PRACH periodicity and other detailed configuration defined in table 6.3.3.2-2 in TS 38.211 [7].
msgA-SubcarrierSpacing	Same as UL carrier SCS	Same as UL carrier SCS	
msgA-totalNumberOfRA-Preambles	48	48	Total number of preambles used for contention based and contention free random access
numberOfRA-PreamblesGroupA	48	48	No group B.
msgA-PRACH-RootSequenceIndex	0	0	Logic sequence index = 0, resulting in root sequence = 1.
msgA-SSB-perRACH-OccasionAndCB-PreamblesPerSSB	oneFourth, n48	oneFourth	OneFourth: 1 SSB associated with 4 RACH occasions
msgA-RO-FDM	One	One	One PRACH transmission occasions FDMed in one time instance.
ra-ContentionResolutionTimer	sf48	-	48 sub-frames
msgA-PreamblePowerRampingStep	dB2	dB2	
msgA-PreambleReceivedTargetPower	dBm-120	dBm-120	
preambleTransMax	n6	n6	Max number of RA preamble transmission performed before declaring a failure is 6
msgB-ResponseWindow	sl10	sl10	10 slots
msgA-ZeroCorrelationZoneConfig	11	11	N-CS configuration, N_{CS} = 23
Backoff Parameter Index	2	2	20ms, as defined in table 7.2-1 in TS 38.321 [7].
ssb-ResourceList	-	ra-PreambleIndex = 50	Associated with SSB index 0. UE doesn't use ssb-ResourceList and BFR-SSB-Resource IEs at the same time. UE doesn't use this field if is transmitting CFRA to convey BFR.
BFR-SSB-Resource	-	ra-PreambleIndex = 50	Associated with SSB index 0. UE doesn't use ssb-ResourceList and BFR-SSB-Resource IEs at the same time. UE uses this field only if is transmitting CFRA to convey BFR
ra-ssb-OccasionMaskIndex	-	1	PRACH occasion index 1 is allowed
msgA-MCS	1	1	MCS index for MsgA PUSCH
nrofSlotsMsgA-PUSCH	1	1	Number of slots containing one or multiple PUSCH occasions
nrofMsgA-PO-PerSlot	1	1	Number of time domain PUSCH occasions in each slot
msgA-PUSCH-TimeDomainOffset	1	1	A single time offset with respect to the start of each PRACH slot, counted as the number of slots
PUSCH start symbol	0	0	
PUSCH allocation length	14	14	
mappingTypeMsgA-PUSCH	typeA	typeA	
nrofPRBs-PerMsgA-PO	2	2	Number of RBs per PUSCH occasion
nrofMsgA-PO-FDM	One	One	The number of MsgA PUSCH occasions FDMed in one time instance
msgA-DMRS-AdditionalPosition	pos1	pos1	Position for additional DM-RS
msgA-PUSCH-NrofPorts	1	1	Configure 1 port per CDM group
msgA-DeltaPreamble	3	3	Power offset of msgA PUSCH relative to the preamble received target power
msgA-Alpha	alpha1	alpha1	Alpha value for MsgA PUSCH. Set 1
deltaMCS	Disabled	Disabled	Whether to apply delta MCS
NOTE: For further information see clause 6.3.2 in TS 38.331 [13].			

A.7A.2 MsgA configurations for FR2

Table A.7A.2-1 defines the MsgA configurations for FR2. Each of the MsgA configurations defined in Table A.7A.2-1 have different applicabilities:

- MsgA.1 FR2 for SSB-based contention based random access in FR2.
- MsgA.2 FR2 for SSB-based non-contention based random access in FR2.

Table A.7A.2-1 Parameters for MsgA Configurations for FR2

Field	Value		Comment
MsgA Configuration	MsgA.1 FR2	MsgA.2 FR2	
msgA-prach-ConfigurationIndex	190	190	Preamble Format C2, 10ms PRACH periodicity and other detailed configuration defined in table 6.3.3.2-2 in TS 38.211 [7].
msgA-SubcarrierSpacing	Same as UL carrier SCS	Same as UL carrier SCS	
msgA-totalNumberOfRA-Preambles	48	48	Total number of preambles used for contention based and contention free random access
numberOfRA-PreamblesGroupA	48	48	No group B.
msgA-PRACH-RootSequenceIndex	0	0	Logic sequence index = 0, resulting in root sequence = 1.
msgA-SSB-perRACH-OccasionAndCB-PreamblesPerSSB	oneFourth, n48	oneFourth	OneFourth: 1 SSB associated with 4 RACH occasions
msgA-RO-FDM	One	One	One PRACH transmission occasions FDMed in one time instance.
ra-ContentionResolutionTimer	sf48	-	48 sub-frames
msgA-PreamblePowerRampingStep	dB2	dB2	
msgA-PreambleReceivedTargetPower	dBm-120	dBm-120	
preambleTransMax	n6	n6	Max number of RA preamble transmission performed before declaring a failure is 6
msgB-ResponseWindow	sl10	sl10	10 slots
msgA-ZeroCorrelationZoneConfig	11	11	N-CS configuration, N_{CS} = 23
Backoff Parameter Index	2	2	20ms, as defined in table 7.2-1 in TS 38.321 [7].
ssb-ResourceList	-	ra-PreambleIndex = 50	Associated with SSB index 0. UE doesn't use ssb-ResourceList and BFR-SSB-Resource IEs at the same time. UE doesn't use this field if is transmitting CFRA to convey BFR.
BFR-SSB-Resource	-	ra-PreambleIndex = 50	Associated with SSB index 0. UE doesn't use ssb-ResourceList and BFR-SSB-Resource IEs at the same time. UE uses this field only if is transmitting CFRA to convey BFR
ra-ssb-OccasionMaskIndex	-	1	PRACH occasion index 1 is allowed
msgA-MCS	1	1	MCS index for MsgA PUSCH
nrofSlotsMsgA-PUSCH	1	1	Number of slots containing one or multiple PUSCH occasions
nrofMsgA-PO-PerSlot	1	1	Number of time domain PUSCH occasions in each slot
msgA-PUSCH-TimeDomainOffset	1	1	A single time offset with respect to the start of each PRACH slot, counted as the number of slots
PUSCH start symbol	0	0	
PUSCH allocation length	10	10	
mappingTypeMsgA-PUSCH	typeA	typeA	
nrofPRBs-PerMsgA-PO	2	2	Number of RBs per PUSCH occasion
nrofMsgA-PO-FDM	One	One	The number of MsgA PUSCH occasions FDMed in one time instance
msgA-DMRS-AdditionalPosition	pos1	pos1	Position for additional DM-RS
msgA-PUSCH-NrofPorts	1	1	Configure 1 port per CDM group
msgA-DeltaPreamble	3	3	Power offset of msgA PUSCH relative to the preamble received target power
msgA-Alpha	alpha1	alpha1	Alpha value for MsgA PUSCH. Set 1
deltaMCS	Disabled	Disabled	Whether to apply delta MCS
NOTE: For further information see clause 6.3.2 in TS 38.331 [13].			

A.8 Reference BWP configurations

This clause provides the typical BWP configurations used for RRM test cases defined in this test specification. For downlink BWP, both initial BWP and dedicated BWP configurations are specified in clause A.8.1 and for uplink BWP, dedicated BWP configurations are specified in clause A.8.2. Parameters not listed in this clause can be derived from the configuration of each test.

A.8.1 Downlink BWP configurations

Table A.8.1-1 defines the different downlink initial BWP configurations. Table A.8.1-2 defines the different downlink dedicated BWP configurations.

Table A.8.1-1: Downlink BWP patterns for initial BWP configuration

BWP Parameters	Unit	Values		
DL BWP		DLBWP.0.1	DLBWP.0.2	
Starting PRB index		0	RB_c Note 1	
Bandwidth		Same as RF channel defined in each test	same as RMSI CORSET(CORESET #0) defined in each test	
NOTE 1: RB_c is the lowest PRB index to guarantee the BWP including CORESET #0 which is defined in Clause A.1.2.				

Table A.8.1-2: Downlink BWP patterns for dedicated BWP configuration

BWP Parameters	Unit	Values										
DL BWP		DLBWP.1.1	DLBWP.1.2				DLBWP.1.3				DLBWP.1.4	
Starting PRB index		0	RB_b Note 1				RB_a Note 2				0	
SSB SCS	kHz		15	30	120	240	15	30	120	240	120	240
Bandwidth	RB	Same as RF channel defined for the serving cell in each test	25	51	32	48	25	51	32	48	24	24
NOTE 1: RB_b is the lowest PRB index to guarantee the BWP not fully overlapped with SSB PRB index (RBJ, RBJ+1,…., RBJ+19) which is defined in Clause A.3. NOTE 2: RB_a is the lowest PRB index to guarantee the BWP including SSB PRB index (RBJ, RBJ+1,…., RBJ+19) which is defined in Clause A.3.												

A.8.2 Uplink BWP configurations

Table A.8.2-1 defines the uplink initial BWP configurations. Table A.8.2-2 defines the uplink dedicated BWP configurations.

Table A.8.2-1: Uplink BWP patterns for initial BWP configurations

BWP Parameters	Values	
UL BWP	ULBWP.0.1	ULBWP.0.2
Staring PRB index	0	RB_c Note 1
Bandwidth	Same as RF channel defined in each test	same as RMSI CORESET(CORSET #0) defined in each test
NOTE 1: RBc is the lowest PRB index to guarantee the BWP including CORESET #0 which is defined in Clause A.1.2.		

Table A.8.2-2: Uplink BWP patterns for dedicated BWP configurations

BWP Parameters	Unit	Values										
UL BWP		**ULBWP.1.1**	**ULBWP.1.2**				**ULBWP.1.3**				**ULBWP.1.4**	
Staring PRB index		0	RB_b Note 1				RB_a Note 2				0	
SSB SCS	kHz		15	30	120	240	15	30	120	240	120	240
Bandwidth	RB	Same as RF channel defined for the serving cell in each test	25	51	32	48	25	51	32	48	24	24
NOTE 1: RB_b is the lowest PRB index to guarantee the BWP not fully overlapped with SSB PRB index (RBJ, RBJ+1,…., RBJ+19) which is defined in Clause A.3. NOTE 2: RB_a is the lowest PRB index to guarantee the BWP including SSB PRB index (RBJ, RBJ+1,…., RBJ+19) which is defined in Clause A.3.												

A.9 Angle of Arrival (AoA) for FR2 RRM test cases

This clause specifies the AoA setups for FR2 RRM test cases in clause 5 and 7. The applicable AoA setup is defined in each test case in clause 5 and 7.

A.9.1 Setup 1: Single AoA in Rx beam peak direction

There is only one active probe in the test. The DL signals, and noise if applicable, transmitted from the probe, are aligned to the UE Rx beam peak direction (as defined in TS 38.101-2 [3]).

A.9.2 Setup 2: Single AoA in non Rx beam peak direction

A.9.2.1 Setup 2a: Single AoA in non Rx beam peak direction without change in direction

There is only one active probe in the test. The DL signals, and noise if applicable, transmitted from the probe, align to a direction (AoA) which is from the set of directions corresponding to the EIS spherical coverage percentile of the DUT as defined in clause 7.3.4 of TS 38.101-2 [3] for each UE power class. The direction (AoA) of the signals shall not be changed between test iterations.

A.9.2.2 Setup 2b: Single AoA in non Rx beam peak direction with change in direction

There is only one active probe in the test. The DL signals, and noise if applicable, transmitted from the probe, align to a direction (AoA) which is from the set of directions corresponding to the EIS spherical coverage percentile of the DUT as defined in clause 7.3.4 of TS 38.101-2 [3] for each UE power class. For UE power class 3, the direction (AoA) of the signals shall be changed for each test iteration (for UE power classes other than 3, this is FFS). Unless otherwise specified by the test case, the TE shall alternate between a minimum of 33 different AoAs. The minimum separation between AoAs used in consecutive iterations shall be 30° in great-circle distance.

NOTE: if it is not possible to find at least 33 different test points meeting the required criteria (FFS), the test shall alternate between all the available test points.

A.9.3 Setup 3: 2 AoAs

There are 2 active probes in the test. The DL signals, and noise if applicable, transmitted from the two active probes, align to directions (AoAs) which are from the set of directions corresponding to the EIS spherical coverage percentile of the DUT as defined in clause 7.3.4 of TS 38.101-2 [3] for each UE power class. The relative angular offset between the directions (AoAs) of the 2 active probes, shall be changed for each test iteration. Unless otherwise specified by the test case, the TE shall alternate between a minimum of 33 different test points. A test point comprehends the relative angular offset between the active probes, and the AoA of each of the signals from the UE point of view. The relative angular offset between the active probes shall change for consecutive test points.

Commented [AvT1]: Could you please rephrase the sentence in order to avoid the use of must (highlighted within the text) or any other wording which would imply a requirement (i.e. "has to", "have to" and "required to")?

The applicable set of relative angular offsets between the 2 active probes is given in Table A.9.3-1 for each UE power class.

Table A.9.3-1: Set of relative angular offsets between active probes for each power class

UE Power class	Relative angular offset between active probes
1	FFS
2	FFS
3	30°, 60°, 90°, 120° and 150°
4	FFS

NOTE: if it is not possible to find at least 33 different test points meeting the required criteria (that is, the two AoAs are from the set of directions corresponding to the EIS spherical coverage percentile of the DUT as defined in clause 7.3.4 of TS 38.101-2 [3] and the angular offset between them corresponds to one of the offsets in Table A.9.3-1 for the corresponding UE power class), the test shall alternate between all the available test points.

A.9.4 Setup 4: 2 AoAs, 1 AoA in Rx beam peak direction, 1 in non Rx beam peak

A.9.4.1 Setup 4a: 2 AoAs, 1 AoA in Rx beam peak direction, 1 in non Rx beam peak without change in direction

There are 2 active probes in the test. The DL signals, and noise if applicable, are transmitted from the two active probes. One probe is aligned to the UE Rx beam peak direction as defined in TS 38.101-2 [3]. The second is aligned to a direction (AoA) which is from the set of directions corresponding to the EIS spherical coverage percentile of the DUT as defined in clause 7.3.4 of TS 38.101-2 [3] for each UE power class. The direction (AoA) of the non Rx beam peak signal shall not be changed between test iterations.

A.9.4.2 Setup 4b: 2 AoAs, 1 AoA in Rx beam peak direction, 1 in non Rx beam peak with change in direction

There are 2 active probes in the test. The DL signals, and noise if applicable, are transmitted from the two active probes. One probe is aligned to the UE Rx beam peak direction as defined in TS 38.101-2 [3]. The second is aligned to a direction (AoA) which is from the set of directions corresponding to the EIS spherical coverage percentile of the DUT as defined in clause 7.3.4 of TS 38.101-2 [3] for each UE power class.

For UE power class 3, the relative angular offset between the directions (AoAs) of the 2 active probes shall be changed for each test iteration, within the probe alignment described above. The applicable set of relative angular offsets between the 2 active probes is given in Table A.9.3-1 for each UE power class. Unless otherwise specified by the test case, the TE shall alternate between a minimum of 5 different test points. A test point comprehends the relative angular offset between the active probes, and the AoA of each of the signals from the UE point of view, one of them being the Rx beam peak direction. The relative angular offset between the active probes shall change for consecutive test points.

Commented [AvT2]: Could you please rephrase the sentence in order to avoid the use of must (highlighted within the text) or any other wording which would imply a requirement (i.e. "has to", "have to" and "required to")?

NOTE: if it is not possible to find at least 5 different test points meeting the required criteria (that is, the two AoAs are from the set of directions corresponding to the EIS spherical coverage percentile of the DUT as defined in clause 7.3.4 of TS 38.101-2 [3] and the angular offset between them corresponds to one of the offsets in Table A.9.3-1 for the corresponding UE power class), the test shall alternate between all the available test points.

A.10 TCI State Configuration

A.10.1 Introduction

This clause provides the configurations for TCI states towards either SSB or CSI-RS. The TCI states defined in this clause are configured in each test when applicable to indicate that certain DL signals are quasi-collocated with the referenceSignal configured in the TCI states.

A.10.2 TCI states

Table A.10.2-1: TCI States

Parameter	TCI.State.0	TCI.State.1	TCI.State.2	TCI.State.3
tci-StateId	Id0	Id1	Id2	Id3
qcl-Type1	typeC	typeC	typeA	typeA
qcl-Type2 Note1	typeD	typeD	typeD	typeD
referenceSignal	SSB0	SSB1	Resource #4 in TRS resource set 1 Note3	Resource #4 in TRS resource set 2 Note3
NOTE 1: qcl-Type2 of typeD only where applicable. For RRM test cases, this will be only in FR2 NOTE 2: referenceSignal configurations towards which the TCI states are configured are defined in a test-specific manner. NOTE 3: Reference TRS resource sets are defined in A.3.17, and the applicable TRS resource set(s) are specified in each test case. When a single TRS resource set is configured in a test case, it is considered as resource set 1.				

A.11 NR sidelink communication

A.11.1 Introduction

This clause also defines the principle and the reference configurations that are applicable to test cases verifying RRM core requirements for V2X sidelink communication.

A.11.2 Reference resource pool configurations for NR Sidelink Communication

Table A.11.2-1: NR sidelink SL-BWP configuration

Field	Value	Comment
SL-BWP-ConfigCommon-r16		
sl-BWP-Generic-r16		
sl-LengthSymbols-r16	sym14	All 14 symbols in a slot without S-SSB are used for sidelink
sl-StartSymbol-r16	sym0	Symbol #0 is the starting symbol used for sidelink in a slot without S-SSB
sl-BWP-PoolConfigCommon-r16		
sl-RxPool-r16		Indicates the resource pool for reception on the configured BWP. 1 entry
SL-ResourcePool-r16[1]	Set according to Table A.11.2-2	Entry 1
sl-TxPoolSelectedNormal-r16		Indicates the resources pool for mode 2 sidelink communication on the configured BWP. 1 entry
SL-ResourcePoolConfig-r16[1]		Entry 1
sl-ResourcePool-r16	Set according to Table A.11.2-3	
sl-TxPoolExceptional-r16	Not present	

Table A.11.2-2:NR sidelink resource pool configuration

Field	Value	Comment
SL-ResourcePool-r16		
sl-PSCCH-Config-r16	Set according to Table A.11.3-1	
sl-PSSCH-Config-r16	Set according to Table A.11.3-2	
sl-PSFCH-Config-r16	Not present	
sl-SyncAllowed-r16		Indicates the allowed synchronization reference(s) which is (are) allowed to use the configured resource pool.
gnss-Sync-r16	true	
gnbEnb-Sync-r16	true	
ue-Sync-r16	true	
sl-SubchannelSize-r16	n10	Subchannel bandwidth is 10 RB
sl-StartRB-Subchannel-r16	0	The offset of lowest RB index of the subchannel with the lowest index in the resource pool with respect to the lowest RB index of a SL BWP
sl-NumSubchannel-r16	1	Number of subchannels for SL transmission
sl-UE-SelectedConfigRP-r16		
sl-Thres-RSRP-List-r16	Set according to the specific test configuration	Indicates a list of 64 thresholds, and the threshold should be selected based on the priority in the decoded SCI and the priority in the SCI to be transmitted. A resource is excluded if it is indicated or reserved by a decoded SCI and PSSCH RSRP in the associated data resource is above a threshold.
sl-MultiReserveResource-r16	Not present	
sl-MaxNumPerReserve-r16	n2	At most 2 PSCCH/PSSCH resources can be reserved by a single SCI.
sl-SensingWindow-r16	ms100	Length of resource sensing window specified in TS 38.214 [9] subclause 8.1.4. which is 100ms.
sl-SelectionWindowList-r16		Parameter that determines the end of the selection window for each priority level 8 entries
SL-SelectionWindowConfig-r16[k,k=1..8]		entry k
sl-Priority-r16	k	priority k
sl-SelectionWindow-r16	n20	Length of resource selection window specified in TS 38.214 [9] subclause 8.1.4. which is $20 \cdot 2^{\mu}$slots, where μ=0,1,2,3 refers to SCS 15,30,60,120 kHz respectively
sl-ResourceReservePeriodList-r16	Not present	
sl-RS-ForSensing-r16	pssch	PSSCH-RSRP measurement is used in the sensing operation.
sl-RxParametersNcell	Not present	
sl-ZoneConfigMCR-List-r16	Not present	
sl-PreemptionEnable-r16	enabled	
sl-MinMaxMCS-List-r16		1 entry
SL-MinMaxMCS-Config-r16[1]		Entry 1
sl-MCS-Table-r16	qam64	TS 38.214 [9] Table 5.1.3.1-1 is the MCS table used in the resource pool.
sl-TimeResource-r16	11111111111111 111111	Every slot in a period of 20 slots during a SFN or DFN cycle can be used for sidelink

Table A.11.3-3: NR sidelink UE autonomous resource selection configuration

Field	Value	Comment
SL-UE-SelectedConfig-r16		
sl-PSSCH-TxConfigList-r16		1 entry
SL-PSSCH-TxConfig-r16[1]		Entry 1
sl-TypeTxSync-r16	Not present	When this filed is absent, the configuration is applicable for all synchronization reference types.
sl-ThresUE-Speed-r16	kmph200	UE shall apply the parameters in sl-ParametersAboveThres-r16 if UE absolute speed is higher than 200 km/h, otherwise UE shall apply the parameters in sl-ParametersBelowThres-r16
sl-ParametersAboveThres-r16		
sl-MinMCS-PSSCH-r16	0	The minimum MCS index value can be used for PSSCH transmission.
sl-MaxMCS-PSSCH-r16	15	The maximum MCS index value can be used for PSSCH transmission.
sl-MinSubChannelNumPSSCH-r16	1	The minimum number of subchannels can be used for PSSCH transmission.
sl-MaxSubchannelNumPSSCH-r16	1	The maximum number of subchannels can be used for PSSCH transmission.
sl-MaxTxTransNumPSSCH-r16	1	The maximum transmission number for PSSCH (including new transmission and retransmission).
sl-MaxTxPower-r16	Not present	Not applicable
sl-ParametersBelowThres-r16		
sl-MinMCS-PSSCH-r16	4	Same as above
sl-MaxMCS-PSSCH-r16	25	Same as above
sl-MinSubChannelNumPSSCH-r16	1	Same as above
sl-MaxSubchannelNumPSSCH-r16	1	Same as above
sl-MaxTxTransNumPSSCH-r16	1	Same as above
sl-MaxTxPower-r16	Not present	Same as above
sl-ProbResourceKeep-r16	v0dot8	The probability of UE keeping current resource is 80% when the resource reselection counter reaches 0 (see TS 38.321 [12]).
sl-ReselectAfter-r16	n1	Resource reselection is triggered after 1 sidelink transmission is skipped (see TS 38.321 [12]).

A.11.3 Reference measurement channels for NR Sidelink Communication

Table A.11.3-1: PSCCH Reference Measurement Channels

Parameter		Unit	Value
Reference channel			CC.1A HD
Channel bandwidth		MHz	Note2
Number of PSCCH symbols per slot			2
Number of PSCCH RB			10
Modulation			QPSK
Information Bit Payload (without CRC)		Bits	26
Information Bit	Number of DMRS ports		0 (1 port)
	Priority		As set by higher layers
	Resource reservation period		N/A
	Modulation and coding scheme		Set as the PSSCH MCS specified in the test
	DMRS pattern		0 (2 DMRS)
	2nd stage SCI format		00 (SCI format 2-A)
	Beta offset indicator		Set as specified in the test
	Frequency resource assignment		Set as per PSSCH RB allocation specific in the test
	Time resource assignment		Set as per PSSCH slot allocation specific in the test
	Reserved bits		Set all these bits to 0
Transport block CRC		Bits	24
Binary Channel Bits (Note 1)		Bits	360
Note 1: Binary channel bits calculated under assumption of 2 CP-OFDM symbols per subframe. Note 2: Channel bandwidth depends on test configuration.			

Table A.11.3-2: PSSCH Reference Measurement Channels

Parameter	Unit	Value
Reference channel		CD.1A HD
Sidelink transmission mode		2
Channel bandwidth	MHz	Note1
Allocated PSSCH resource blocks		10
Number of PSSCH symbols per slot		10
Modulation		QPSK
Target Code Rate		1/3
Information Bit Payload (Transport block size)	Bits	672
Transport block CRC	Bits	24
Number of PSSCH HARQ retransmissions		0
Binary Channel Bits	Bits	2160
Note 1: Channel bandwidth depends on test configuration. Note 2: 2nd state SCI and PSFCH are not allocated per slot.		

Annex B (normative): Conditions for RRM requirements applicability for operating bands

B.1 Conditions for NR RRC_IDLE state mobility

B.1.1 Introduction

In Annex B.1, the following conditions are specified:

- UE conditions which shall apply for UE intra-frequency idle state mobility test cases in clauses 6.1 and 7.1,
- UE conditions which shall apply for UE inter-frequency idle state mobility test cases in clauses 6.1 and 7.1.

B.1.2 Conditions for measurements on NR intra-frequency cells for cell re-selection

Editor's notes for Table B.1.2-2 (RAN4 dependant):

- The value of Y for Power classes 1 and 4 is FFS, where Y_1 and Y_4 are the rough/fine beam gain differences in Rx beam peak direction for Power classes 1 and 4 respectively

- The value of Z for Power classes 1 and 4 is FFS, where Z_1 and Z_4 are the rough/fine beam gain differences in spherical coverage directions for Power classes 1 and 4 respectively

This clause defines the following conditions for NR intra-frequency measurements performed based on SSBs for cell re-selection: SSB_RP and SSB Ês/Iot, applicable for a corresponding operating band.

The conditions are defined in Table B.1.2-1 for FR1 NR cells.

The conditions are defined in Table B.1.2-2 for FR2 NR cells.

Table B.1.2-1: Conditions for intra-frequency cell re-selection in FR1

Parameter	NR operating band groups Note1	Minimum SSB_RP dBm / SCS_{SSB}		SSB Ês/Iot dB
		SCS_{SSB} = 15 kHz	SCS_{SSB} = 30 kHz	
Conditions	NR_FDD_FR1_A, NR_TDD_FR1_A	-124	-121	≥ -4
	NR_FDD_FR1_B	-123.5	-120.5	
	NR_TDD_FR1_C	-123	-120	
	NR_FDD_FR1_D, NR_TDD_FR1_D	-122.5	-119.5	
	NR_FDD_FR1_E, NR_TDD_FR1_E	-122	-119	
	NR_FDD_FR1_G	-121	-118	
	NR_FDD_FR1_H	-120.5	-117.5	
NOTE 1: NR operating band groups are defined in Clause 3A.4.				

Table B.1.2-2: Conditions for intra-frequency cell re-selection in FR2

Parameter	Angle of arrival	NR operating bands	Minimum SSB_RP Note 2, Note 3					SSB Ês/Iot
			dBm / SCS_{SSB}					dB
			SCS_{SSB} = 120 kHz				SCS_{SSB} = 240 kHz	
			UE Power class				UE Power class	
			1	2	3	4	1, 2, 3, 4	
Conditions	Rx Beam Peak	n257	$-125.3+Y_1$	-110.8	-109.1	$-124.8+Y_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-4
		n258	$-125.3+Y_1$	-110.8	-109.1	$-124.8+Y_4$		
		n259			-105.5			
		n260	$-122.3+Y_1$		-106.5	$-122.8+Y_4$		
		n261	$-125.3+Y_1$	-110.8	-109.1	$-124.8+Y_4$		
	Spherical coverage Note 1	n257	$-117.3+Z_1$	-99.8	-98.2	$-115.8+Z_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-4
		n258	$-117.3+Z_1$	-99.8	-98.2	$-115.8+Z_4$		
		n259			-92.7			
		n260	$-114.3+Z_1$		-93.9	$-110.8+Z_4$		
		n261	$-117.3+Z_1$	-99.8	-98.2	$-115.8+Z_4$		

NOTE 1: Values based on EIS spherical coverage as defined in clause 7.3.4 of TS 38.101-2 [19]. Side condition applies for directions in which EIS spherical coverage requirement is met.
NOTE 2: Values specified at the Reference point to give minimum SSB Ês/Iot, with no applied noise.
NOTE 3: For UEs that support multiple FR2 bands, Rx Beam Peak values are increased by $\Delta MB_{P,n}$ and Spherical coverage values are increased by $\Delta MB_{S,n}$, the UE multi-band relaxation factor in dB specified in clause 6.2.1 of TS 38.101-2 [19].

B.1.3 Conditions for measurements on NR inter-frequency cells for cell re-selection

This clause defines the following conditions for NR inter-frequency measurements performed based on SSBs for cell re-selection: SSB_RP and SSB Ês/Iot, applicable for a corresponding operating band.

The conditions defined in Table B.1.2-1 for FR1 NR intra-frequency cell re-selection shall also apply for FR1 NR inter-frequency cells in this clause.

The conditions defined in Table B.1.2-2 for FR2 NR intra-frequency cell re-selection shall also apply for FR2 NR inter-frequency cells in this clause.

B.2 Conditions for NR RRC_CONNECTED state

B.2.1 Introduction

In Annex B.2, the following conditions are specified:

- UE conditions which shall apply for UE intra-frequency measurement procedures and measurement performance tests in clauses 4.6, 4.7, 5.6, 5.7, 6.6, 6.7, 7.6 and 7.7, UE conditions which shall apply for UE inter-frequency measurements procedures and requirements in Clause 9,

- UE conditions which shall apply for UE intra-frequency measurements performance requirements in Clause 10,
- UE conditions which shall apply for UE inter-frequency measurements performance requirements in Clause 10.

B.2.2 Conditions for NR intra-frequency measurements

Editor's notes for Table B.2.2-2 (RAN4 dependant):

- The value of Y for power classes 1 and 4 is FFS, where Y_1 and Y_4 are the rough/fine beam gain differences in Rx beam peak direction for power classes 1 and 4 respectively

- The value of Z for power classes 1 and 4 is FFS, where Z_1 and Z_4 are the rough/fine beam gain differences in spherical coverage directions for power classes 1 and 4 respectively

This clause defines the following conditions for NR intra-frequency measurements and corresponding procedures performed based on SSBs: SSB_RP and SSB Ês/Iot, applicable for a corresponding operating band.

The conditions are defined in Table B.2.2-1 for FR1 NR cells.

The conditions are defined in Table B.2.2-2 for FR2 NR cells.

Table B.2.2-1: Conditions for intra-frequency measurements in FR1

Parameter	NR operating band groups [Note1]	Minimum SSB_RP dBm / SCS_{SSB}		SSB Ês/Iot dB
		SCS_{SSB} = 15 kHz	SCS_{SSB} = 30 kHz	
Conditions	NR_FDD_FR1_A, NR_TDD_FR1_A	-127	-124	≥ -6
	NR_FDD_FR1_B	-126.5	-123.5	
	NR_TDD_FR1_C	-126	-123	
	NR_FDD_FR1_D, NR_TDD_FR1_D	-125.5	-122.5	
	NR_FDD_FR1_E, NR_TDD_FR1_E	-125	-122	
	NR_FDD_FR1_G	-124	-121	
	NR_FDD_FR1_H	-123.5	-120.5	
NOTE 1: NR operating band groups are defined in Clause 3A.4.				

Table B.2.2-2: Conditions for intra-frequency measurements in FR2

Parameter	Angle of arrival	NR operating bands	Minimum SSB_RP [Note 2, Note 3] dBm / SCS_{SSB}					SSB Ês/Iot dB
			SCS_{SSB} = 120 kHz				SCS_{SSB} = 240 kHz	
			UE power class				UE power class	
			1	2	3	4	1, 2, 3, 4	
Conditions	Rx Beam Peak	n257	-128.3+Y_1	-113.8	-112.1	-127.8+Y_4	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-6
		n258	-128.3+Y_1	-113.8	-112.1	-127.8+Y_4		
		n259			-108.5			
		n260	-125.3+Y_1		-109.5	-125.8+Y_4		
		n261	-128.3+Y_1	-113.8	-112.1	-127.8+Y_4		
	Spherical coverage [Note 1]	n257	-120.3+Z_1	-102.8	-101.2	-118.8+Z_4	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-6
		n258	-120.3+Z_1	-102.8	-101.2	-118.8+Z_4		
		n259			-95.7			
		n260	-117.3+Z_1		-96.9	-113.8+Z_4		
		n261	-120.3+Z_1	-102.8	-101.2	-118.8+Z_4		
NOTE 1: Values based on EIS spherical coverage as defined in clause 7.3.4 of TS 38.101-2 [19]. Side condition applies for directions in which EIS spherical coverage requirement is met. NOTE 2: Values specified at the Reference point to give minimum SSB Ês/Iot, with no applied noise. NOTE 3: For UEs that support multiple FR2 bands, Rx Beam Peak values are increased by $\Delta MB_{P,n}$ and spherical coverage values are increased by $\Delta MB_{S,n}$ the UE multi-band relaxation factor in dB specified in clause 6.2.1 of TS 38.101-2 [19].								

B.2.3 Conditions for NR inter-frequency measurements

Editor's notes for Table B.2.3-2 (RAN4 dependant):

- The value of Y for power classes 1 and 4 is FFS, where Y_1 and Y_4 are the rough/fine beam gain differences in Rx beam peak direction for power classes 1 and 4 respectively

- The value of Z for power classes 1 and 4 is FFS, where Z_1, and Z_4 are the rough/fine beam gain differences in spherical coverage directions for power classes 1 and 4 respectively

This clause defines the following conditions for NR inter-frequency measurements and corresponding procedures performed based on SSBs: SSB_RP and SSB Ês/Iot, applicable for a corresponding operating band.

The conditions are defined in Table B.2.3-1 for FR1 NR cells.

The conditions are defined in Table B.2.3-2 for FR2 NR cells.

Table B.2.3-1: Conditions for inter-frequency measurements in FR1

Parameter	NR operating band groups Note1	Minimum SSB_RP dBm / SCS_{SSB}		SSB Ês/Iot
		SCS_{SSB} = 15 kHz	SCS_{SSB} = 30 kHz	dB
Conditions	NR_FDD_FR1_A, NR_TDD_FR1_A	-125	-122	≥ -4
	NR_FDD_FR1_B	-124.5	-121.5	
	NR_TDD_FR1_C	-124	-121	
	NR_FDD_FR1_D, NR_TDD_FR1_D	-124.5	-120.5	
	NR_FDD_FR1_E, NR_TDD_FR1_E	-123	-120	
	NR_FDD_FR1_G	-122	-119	
	NR_FDD_FR1_H	-121.5	-118.5	
NOTE 1: NR operating band groups are defined in Clause 3A.4.				

Table B.2.3-2: Conditions for inter-frequency measurements in FR2

Parameter	Angle of arrival	NR operating bands	Minimum SSB_RP Note 2, Note 3 dBm / SCS_{SSB}					SSB Ês/Iot
			SCS_{SSB} = 120 kHz				SCS_{SSB} = 240 kHz	dB
			UE power class				UE power class	
			1	2	3	4	1, 2, 3, 4	
Conditions	Rx Beam Peak	n257	$-126.3+Y_1$	-111.8	-110.1	$-125.8+Y_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-4
		n258	$-126.3+Y_1$	-111.8	-110.1	$-125.8+Y_4$		
		n259			-106.5			
		n260	$-123.3+Y_1$		-107.5	$-123.8+Y_4$		
		n261	$-126.3+Y_1$	-111.8	-110.1	$-125.8+Y_4$		
	Spherical coverage Note 1	n257	$-118.3+Z_1$	-100.8	-99.2	$-116.8+Z_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-4
		n258	$-118.3+Z_1$	-100.8	-99.2	$-116.8+Z_4$		
		n259			-93.7			
		n260	$-115.3+Z_1$		-94.9	$-111.8+Z_4$		
		n261	$-118.3+Z_1$	-100.8	-99.2	$-116.8+Z_4$		
NOTE 1: Values based on EIS spherical coverage as defined in clause 7.3.4 of TS 38.101-2 [19]. Side condition applies for directions in which EIS spherical coverage requirement is met. NOTE 2: Values specified at the Reference point to give minimum SSB Ês/Iot, with no applied noise. NOTE 3: For UEs that support multiple FR2 bands, Rx Beam Peak values are increased by $\Delta MB_{P,n}$ and Spherical coverage values are increased by $\Delta MB_{S,n}$, the UE multi-band relaxation factor in dB specified in clause 6.2.1 of TS 38.101-2 [19].								

B.2.4 Conditions for NR L1-RSRP reporting

B.2.4.1 Conditions for SSB based L1-RSRP reporting

Editor's notes for Table B.2.4.1-2 (RAN4 dependant):

- The value of Y for power classes 1 and 4 is FFS, where Y_1 and Y_4 are the rough/fine beam gain differences in Rx beam peak direction for power classes 1 and 4 respectively

- The value of Z for power classes 1 and 4 is FFS, where Z_1 and Z_4 are the rough/fine beam gain differences in spherical coverage directions for power classes 1 and 4 respectively

This clause defines the following conditions for NR L1-RSRP measurement reporting and corresponding procedures performed based on SSBs: SSB_RP and SSB Ês/Iot, applicable for a corresponding operating band.

The conditions are defined in Table B.2.4.1-1 for FR1 NR cells.

The conditions are defined in Table B.2.4.1-2 for FR2 NR cells.

Table B.2.4.1-1: Conditions for SSB based L1-RSRP measurements in FR1

Parameter	NR operating band groups Note1	Minimum SSB_RP dBm / SCS_{SSB}		SSB Ês/Iot
		SCS_{SSB} = 15 kHz	SCS_{SSB} = 30 kHz	dB
Conditions	NR_FDD_FR1_A, NR_TDD_FR1_A, NR_SDL_FR1_A	-124	-121	≥ -3
	NR_FDD_FR1_B	-123.5	-120.5	
	NR_TDD_FR1_C	-123	-120	
	NR_FDD_FR1_D, NR_TDD_FR1_D	-122.5	-119.5	
	NR_FDD_FR1_E, NR_TDD_FR1_E	-122	-119	
	NR_FDD_FR1_G	-121	-118	
	NR_FDD_FR1_H	-120.5	-117.5	

NOTE 1: NR operating band groups are defined in clause 3A.4

Table B.2.4.1-2: Conditions for SSB based L1-RSRP measurements in FR2

Parameter	Angle of arrival	NR operating bands	Minimum SSB_RP Note 2, Note 3 dBm / SCS_{SSB}					SSB Ês/Iot
			SCS_{SSB} = 120 kHz				SCS_{SSB} = 240 kHz	dB
			UE power class				UE power class	
			1	2	3	4	1, 2, 3, 4	
Conditions	Rx Beam Peak	n257	$-125.3+Y_1$	-110.8	-109.1	$-124.8+Y_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-3
		n258	$-125.3+Y_1$	-110.8	-109.1	$-124.8+Y_4$		
		n259			-105			
		n260	$-122.3+Y_1$		-106.5	$-122.8+Y_4$		
		n261	$-125.3+Y_1$	-110.8	-109.1	$-124.8+Y_4$		
	Spherical coverage Note 1	n257	$-117.3+Z_1$	-99.8	-98.2	$-115.8+Z_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-3
		n258	$-117.3+Z_1$	-99.8	-98.2	$-115.8+Z_4$		
		n259			-92.3			
		n260	$-114.3+Z_1$		-93.9	$-110.8+Z_4$		
		n261	$-117.3+Z_1$	-99.8	-98.2	$-115.8+Z_4$		

NOTE 1: Values based on EIS spherical coverage as defined in clause 7.3.4 of TS 38.101-2 [19]. Side condition applies for directions in which EIS spherical coverage requirement is met.
NOTE 2: Values specified at the Reference point to give minimum SSB Ês/Iot, with no applied noise.
NOTE 3: For UEs that support multiple FR2 bands, Rx Beam Peak values are increased by $\Delta MB_{P,n}$ and Spherical coverage values are increased by $\Delta MB_{S,n}$, the UE multi-band relaxation factor in dB specified in clause 6.2.1 of TS 38.101-2 [19].

B.2.4.2 Conditions for CSI-RS based L1-RSRP reporting

Editor's notes for Table B.2.4.2-2 (RAN4 dependant):

- The value of Y for power classes 1 and 4 is FFS, where Y_1 and Y_4 are the rough/fine beam gain differences in Rx beam peak direction for power classes 1 and 4 respectively

- The value of Z for power classes 1 and 4 is FFS, where Z_1 and Z_4 are the rough/fine beam gain differences in spherical coverage directions for power classes 1 and 4 respectively

This clause defines the following conditions for NR L1-RSRP measurement reporting and corresponding procedures performed based on CSI-RS: CSI-RS_RP and CSI-RS Ês/Iot, applicable for a corresponding operating band.

The conditions are defined in Table B.2.4.2-1 for FR1 NR cells.

The conditions are defined in Table B.2.4.2-2 for FR2 NR cells.

Table B.2.4.2-1: Conditions for CSI-RS based L1-RSRP measurements in FR1

Parameter	NR operating band groups Note1	Minimum CSI-RS_RP dBm / SCS_{CSI-RS}			CSI-RS Ês/Iot dB
		SCS_{CSI-RS} = 15 kHz	SCS_{CSI-RS} = 30 kHz	SCS_{CSI-RS} = 60 kHz	
Conditions	NR_FDD_FR1_A, NR_TDD_FR1_A, NR_SDL_FR1_A	-124	-121	-118	≥ -3
	NR_FDD_FR1_B	-123.5	-120.5	-117.5	
	NR_TDD_FR1_C	-123	-120	-117	
	NR_FDD_FR1_D, NR_TDD_FR1_D	-122.5	-119.5	-116.5	
	NR_FDD_FR1_E, NR_TDD_FR1_E	-122	-119	-116	
	NR_FDD_FR1_G	-121	-118	-115	
	NR_FDD_FR1_H	-120.5	-117.5	-114.5	
NOTE 1: NR operating band groups are defined in clause 3.5.2.					

Table B.2.4.2-2: Conditions for CSI-RS based L1-RSRP measurements in FR2

Parameter	Angle of arrival	NR operating bands	Minimum CSI-RS_RP Note 2, Note 3 dBm / SCS_{CSI-RS}					CSI-RS Ês/Iot dB
			SCS_{CSI-RS} = 60 kHz				SCS_{CSI-RS} = 120 kHz	
			UE power class				UE power class	
			1	2	3	4	1, 2, 3, 4	
Conditions	Rx Beam Peak	n257	$-128.3+Y_1$	-113.8	-112.1	$-127.8+Y_4$	(Value for SCS_{CSI-RS} = 60 kHz) +3dB	≥-3
		n258	$-128.3+Y_1$	-113.8	-112.1	$-127.8+Y_4$		
		n259			-108.5			
		n260	$-125.3+Y_1$		-109.5	$-125.8+Y_4$		
		n261	$-128.3+Y_1$	-113.8	-112.1	$-127.8+Y_4$		
	Spherical coverage Note 1	n257	$-120.3+Z_1$	-102.8	-101.2	$-118.8+Z_4$	(Value for SCS_{CSI-RS} = 60 kHz) +3dB	≥-3
		n258	$-120.3+Z_1$	-102.8	-101.2	$-118.8+Z_4$		
		n259			-95.7			
		n260	$-117.3+Z_1$		-96.9	$-113.8+Z_4$		
		n261	$-120.3+Z_1$	-102.8	-101.2	$-118.8+Z_4$		
NOTE 1: Values based on EIS spherical coverage as defined in clause 7.3.4 of TS 38.101-2 [19]. Side condition applies for directions in which EIS spherical coverage requirement is met. NOTE 2: Values specified at the Reference point to give minimum CSI-RS Ês/Iot, with no applied noise. NOTE 3: For UEs that support multiple FR2 bands, Rx Beam Peak values are increased by $\Delta MB_{P,n}$ and Spherical coverage values are increased by $\Delta MB_{S,n}$, the UE multi-band relaxation factor in dB specified in clause 6.2.1 of TS 38.101-2 [19].								

B.2.5 Conditions for RRC connection release with redirection to NR

Editor's notes for Table B.2.5.2-2:

- The value of Y for power classes 1 and 4 is FFS, where Y_1 and Y_4 are the rough/fine beam gain differences in Rx beam peak direction for power classes 1 and 4 respectively

- The value of Z for power classes 1 and 4 is FFS, where Z_1 and Z_4 are the rough/fine

This clause defines the following conditions for RRC connection release with redirection to NR: SSB_RP and SSB Ês/Iot, applicable for a corresponding operating band.

The conditions are defined in Table B.2.5-1 for FR1 NR cells.

The conditions are defined in Table B.2.5-2 for FR2 NR cells.

Table B.2.5-1: Conditions for RRC connection release with redirection to NR in FR1

Parameter	NR operating band groups Note1	Minimum SSB_RP dBm / SCS_{SSB}		SSB Ês/Iot
		SCS_{SSB} = 15 kHz	SCS_{SSB} = 30 kHz	dB
Conditions	NR_FDD_FR1_A, NR_TDD_FR1_A	-125	-122	≥ -4
	NR_FDD_FR1_B	-124.5	-121.5	
	NR_TDD_FR1_C	-124	-121	
	NR_FDD_FR1_D, NR_TDD_FR1_D	-124.5	-120.5	
	NR_FDD_FR1_E, NR_TDD_FR1_E	-123	-120	
	NR_FDD_FR1_G	-122	-119	
	NR_FDD_FR1_H	-121.5	-118.5	
NOTE 1: NR operating band groups are defined in clause 3.5.2.				

Table B.2.5-2: Conditions for RRC connection release with redirection to NR in FR2

Parameter	Angle of arrival	NR operating bands	Minimum SSB_RP Note 2, Note 3 dBm / SCS_{SSB}					SSB Ês/Iot
			SCS_{SSB} = 120 kHz UE power class				SCS_{SSB} = 240 kHz UE power class	dB
			1	2	3	4	1, 2, 3, 4	
Conditions	Rx Beam Peak	n257	$-126.3+Y_1$	-111.8	-110.1	$-125.8+Y_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-4
		n258	$-126.3+Y_1$	-111.8	-110.1	$-125.8+Y_4$		
		n259			-106.5			
		n260	$-123.3+Y_1$		-107.5	$-123.8+Y_4$		
		n261	$-126.3+Y_1$	-111.8	-110.1	$-125.8+Y_4$		
	Spherical coverage Note 1	n257	$-118.3+Z_1$	-100.8	-99.2	$-116.8+Z_4$	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-4
		n258	$-118.3+Z_1$	-100.8	-99.2	$-116.8+Z_4$		
		n259			-93.7			
		n260	$-115.3+Z_1$		-94.9	$-111.8+Z_4$		
		n261	-114.3	-100.8	-99.2	$-116.8+Z_4$		
NOTE 1: Values based on EIS spherical coverage as defined in clause 7.3.4 of TS 38.101-2 [19]. Side condition applies for directions in which EIS spherical coverage requirement is met. NOTE 2: Values specified at the Reference point to give minimum SSB Ês/Iot, with no applied noise. NOTE 3: For UEs that support multiple FR2 bands, Rx Beam Peak values are increased by $\Delta MB_{P,n}$ and spherical coverage values are increased by $\Delta MB_{S,n}$, the UE multi-band relaxation factor in dB specified in clause 6.2.1 of TS 38.101-2 [19].								

B.2.6 Conditions for UE transmit timing

B.2.6.1 Conditions for SSB based UE transmit timing

Editor's notes for Table B.2.6.1-2:

- The value of Y for power classes 1 and 4 is FFS, where Y_1 and Y_4 are the rough/fine beam gain differences in Rx beam peak direction for power classes 1 and 4 respectively

- The value of Z for power classes 1 and 4 is FFS, where Z_1 and Z_4 are the rough/fine beam gain differences in spherical coverage directions for power classes 1 and 4 respectively

This clause defines the following conditions for UE transmit timing adjustment performed based on SSBs: SSB_RP and SSB Ês/Iot and applicable for a corresponding operating band.

The conditions are defined in Table B.2.6.1-1 for FR1 SSB.

Table B.2.6.1-1: Conditions for SSB based UE transmit timing in FR1

Parameter	NR operating band groups Note1	Minimum SSB_RP		SSB Ês/Iot
		dBm / SCS_{SSB}		dB
		SCS_{SSB}=15 kHz	SCS_{SSB}=30 kHz	
Conditions	NR_FDD_FR1_A, NR_TDD_FR1_A, NR_SDL_FR1_A	-124	-121	≥ -3
	NR_FDD_FR1_B	-123.5	-120.5	
	NR_TDD_FR1_C	-123	-120	
	NR_FDD_FR1_D, NR_TDD_FR1_D	-122.5	-119.5	
	NR_FDD_FR1_E, NR_TDD_FR1_E	-122	-119	
	NR_FDD_FR1_G	-121	-118	
	NR_FDD_FR1_H	-120.5	-117.5	
NOTE 1: NR operating band groups are defined in clause 3.5.2.				

The conditions are defined in Table B.2.6.1-2 for FR2 SSB.

Table B.2.6.1-2: Conditions for SSB based UE transmit timing in FR2

Parameter	Angle of arrival	NR operating bands	Minimum SSB_RP Note 2, Note 3					SSB Ês/Iot
			dBm / SCS_{SSB}					dB
			SCS_{SSB} = 120 kHz				SCS_{SSB} = 240 kHz	
			UE power class				UE power class	
			1	2	3	4	1, 2, 3, 4	
Conditions	Rx Beam Peak	n257	-125.3+Y_1	-110.8	-109.1	-124.8+Y_4	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-3
		n258	-125.3+Y_1	-110.8	-109.1	-124.8+Y_4		
		n259			-105.5			
		n260	-122.3+Y_1		-106.5	-122.8+Y_4		
		n261	-125.3+Y_1	-110.8	-109.1	-124.8+Y_4		
	Spherical coverage Note 1	n257	-117.3+Z_1	-99.8	-98.2	-115.8+Z_4	(Value for SCS_{SSB} = 120 kHz) +3dB	≥-3
		n258	-117.3+Z_1	-99.8	-98.2	-115.8+Z_4		
		n259			-92.7			
		n260	-114.3+Z_1		-93.9	-110.8+Z_4		
		n261	-117.3+Z_1	-99.8	-98.2	-115.8+Z_4		
NOTE 1: Values based on EIS spherical coverage as defined in clause 7.3.4 of TS 38.101-2 [19]. Side condition applies for directions in which EIS spherical coverage requirement is met. NOTE 2: Values specified at the Reference point to give minimum SSB Ês/Iot, with no applied noise. NOET 3: For UEs that support multiple FR2 bands, Rx Beam Peak values are increased by $\Delta MB_{P,n}$ and Spherical coverage values are increased by $\Delta MB_{S,n}$, the UE multi-band relaxation factor in dB specified in clause 6.2.1 of TS 38.101-2 [19].								

B.3 RRM requirement exceptions

B.3.1 Introduction

Annex B.3 covers exceptions for the side conditions based on receiver sensitivity for CA, DC, and SUL.

B.3.2 Receiver sensitivity relaxation for CA

B.3.2.1 Receiver sensitivity relaxation for UE supporting CA in FR1

For a UE supporting inter-band carrier aggregation configuration with uplink in NR band, if there is a relaxation of receiver sensitivity $\Delta R_{IB,c}$>0 dB as defined in TS 38.101-1 [18, Clause 7.3A.3], the relevant side conditions specifying received power levels (SSB_RP and Io) shall be increased by the amount $\Delta=\Delta R_{IB,c}$ defined for the corresponding downlink NR bands.

For a UE supporting CA configuration in FR1, the requirement in this clause applies for both SC and CA operation.

B.3.2.2 Receiver sensitivity relaxation for UE configured with CA in FR1

B.3.2.2.1 Inter-band carrier aggregation

For a UE configured with inter-band carrier aggregation with active uplink in NR band, if there is a relaxation of receiver sensitivity $\Delta R_{IB,c}$>0 dB as defined in TS 38.101-1, Clause 7.3A.3 [2], the relevant side conditions specifying received power levels (SSB_RP and Io) shall be increased by the amount $\Delta=\Delta R_{IB,c}$ defined for the corresponding downlink NR bands.

If the relaxation Δ specified in this clause applies, then the relaxation specified in Clause B.3.2.1 should not be applied.

B.3.2.2.2 Reference sensitivity exceptions due to UL harmonic interference for CA

In this clause, requirements exceptions are described for the UE configured with a band in FR1 when it is impacted by UL harmonic interference from another band in FR1 of the same CA configuration.

A relevant side condition (SSB_RP and Io) in a requirement shall be increased by the amount Δ=L2-L1, where L1 is the reference sensitivity level specified in TS 38.101-1 [2], Clause 7.3.2, and L2 is the reference sensitivity level based on the requirements in TS 38.101-1 [2], Clause 7.3A.4, when the following conditions are fulfilled,

- corresponding downlink component carriers on different NR bands are configured with CA and active,
- the uplink is configured in the NR low operating band and is active,
- the uplink configuration is as specified in TS 38.101-1 [2], Clause 7.3A.4, and
- the exception requirements specified in TS 38.101-1 [2], Clause 7.3A.4 apply.

If the relaxation Δ specified in this clause applies, then the relaxation specified in Clause B.3.2.1 should not be applied.

B.3.2.2.3 Reference sensitivity exceptions due to intermodulation interference due to 2UL CA

In this clause, requirements exceptions are described for the UE with an inter-band carrier aggregation with uplink assigned to two NR bands.

A relevant side condition (SSB_RP and Io) in a requirement shall be increased by the amount Δ=L2-L1, where L1 is the reference sensitivity level specified in TS 38.101-1 [2], Clause 7.3.2, and L2 is the reference sensitivity level based on the requirements in TS 38.101-1 [2], Clause 7.3A.5, when the following conditions are fulfilled,

- corresponding downlink component carriers on different bands are configured with CA and active,
- uplinks are assigned to two NR bands,
- the exception requirements specified in TS 38.101-1 [2], Clause 7.3A.5 apply.

If the relaxation Δ specified in this clause applies, then the relaxation specified in Clause B.3.2.1 should not be applied.

B.3.2.3 Receiver sensitivity relaxation for UE supporting CA in FR2

Editor’s note: TBD

B.3.2.4 Receiver sensitivity relaxation for UE configured with CA in FR2

B.3.2.4.1 Intra-band contiguous carrier aggregation

For a UE configured with intra-band contiguous carrier aggregation in NR band in FR2, if there is a relaxation of receiver sensitivity ΔR_{IB}>0 dB as defined in TS 38.101-2 [3], Clause 7.3A.2.1 depending on the aggregated channel bandwidth, the relevant side conditions specifying received power levels (SSB_RP and Io) shall be increased by the amount $\Delta=\Delta R_{IB}$ defined for the corresponding downlink NR bands.

B.3.2.4.2 Intra-band non-contiguous carrier aggregation

For a UE configured with intra-band non-contiguous carrier aggregation in NR band in FR2, if there is a relaxation of receiver sensitivity ΔR_{IB}>0 dB as defined in TS 38.101-2 [3], Clause 7.3A.2.1 depending on the aggregated channel bandwidth, the relevant side conditions specifying received power levels (SSB_RP and Io) shall be increased by the amount $\Delta=\Delta R_{IB}$ defined for the corresponding downlink NR bands.

B.3.3 Receiver sensitivity relaxation for DC

Editor's note: TBD

B.3.4 Receiver sensitivity relaxation for SUL

B.3.4.1 Receiver sensitivity relaxation for UE supporting SUL in FR1

For a UE supporting a SUL configuration in FR1, if there is a relaxation of receiver sensitivity $\Delta R_{IB,c}$>0 dB as defined in TS 38.101-1 [2], Clause 7.3C.3, the relevant side conditions specifying received power levels (SSB_RP and Io) shall be increased by the amount $\Delta=\Delta R_{IB,c}$ defined for the corresponding downlink NR bands.

For a UE supporting a SUL configuration in FR1, the requirement in this clause applies for both SC and SUL operation.

B.3.4.2 Receiver sensitivity relaxation for UE configured with SUL in FR1

B.3.4.2.1 Reference sensitivity exceptions due to UL harmonic interference for SUL

In this clause, requirements exceptions are described for the UE with a band in FR1 when it is impacted by UL harmonic interference from another band in FR1 of the same SUL configuration.

A relevant side condition (SSB_RP and Io) in a requirement shall be increased by the amount Δ=L2-L1, where L1 is the reference sensitivity level specified in TS 38.101-1 [2], Clause 7.3.2, and L2 is the reference sensitivity level based on the requirements in TS 38.101-1 [2], Clause 7.3C.2, when the following conditions are fulfilled,

- a downlink component carrier is configured in NR band and is active,
- the uplink is configured in the NR low operating band and is active,
- the uplink configuration is as specified in TS 38.101-1 [2], Clause 7.3C.2, and
- the exception requirements specified in TS 38.101-1 [2], Clause 7.3C.2 apply.

If the relaxation Δ specified in this clause applies, then the relaxation specified in Clause B.3.4.1 should not be applied.

B.4 Conditions for NR sidelink

B.4.1 Test parameters for GNSS signals

This clause defines the reference signal power levels of generated satellites for a corresponding GNSS, which will be used in NR sidelink test cases.

Table B.4.1-1: GNSS Reference Signal Power Parameters

System	Parameters	Unit	Value
	Number of generated satellites per system	-	6
GPS[Note 1]	Reference signal power level for all satellites	dBm	-128.5
Galileo	Reference signal power level for all satellites	dBm	-127
GLONASS	Reference signal power level for all satellites	dBm	-131
BDS	Reference signal power level for all satellites	dBm	-133
NOTE 1: "GPS" here means GPS L1 C/A, Modernized GPS, or both, dependent on UE capabilities. NOTE 2: The DUT UE does not need to support all systems. The DUT UE shall support at least one system and will be test for the supported systems.			

B.4.2 Conditions for PSBCH-RSRP Accuracy Requirements

This clause defines the following conditions for PSBCH-RSRP measurement accuracy requirements applicable for a corresponding operating band.

The conditions are defined in Table B.4.2-1 for FR1.

Table B.4.2-1: Conditions for PSBCH-RSRP measurements in FR1

<table>
<tr><th rowspan="5">Parameter</th><th rowspan="3">NR sidelink operating band groups Note1</th><th colspan="3">Minimum S-SSB_RP</th><th>S-SSB Ês/Iot</th></tr>
<tr><th colspan="3">dBm/SCS_{S-SSB}</th><th rowspan="2">dB</th></tr>
<tr><th>SCS_{S-SSB} = 15kHz</th><th>SCS_{S-SSB} = 30kHz</th><th>SCS_{S-SSB} = 60kHz</th></tr>
<tr><td>NR_TDD_FR1_B</td><td>-126.5</td><td>-123.5</td><td>-120.5</td><td rowspan="2">≥ -6</td></tr>
<tr><td>NR_TDD_FR1_J</td><td>-122.5</td><td>-119.5</td><td>-116.5</td></tr>
<tr><td colspan="6">NOTE 1: NR sidelink operating band groups are as defined in Section 3A.4 for the corresponding NR operating bands.</td></tr>
</table>

B.4.3 Conditions for Selection/Reselection to Intra-frequency SyncRef UE

This clause defines the S-SSB_RP and S-SSB Ês/Iot applicable for a corresponding operating band.

The conditions for selection/reselection to intra-frequency SyncRef UE are defined in Table B.4.3-1 for FR1.

Table B.4.3-1: NR sidelink synchronization measurements in FR1

<table>
<tr><th rowspan="5">Parameter</th><th rowspan="3">NR sidelink operating band groups Note1</th><th colspan="3">Minimum S-SSB_RP</th><th>S-SSB Ês/Iot</th></tr>
<tr><th colspan="3">dBm/SCS_{S-SSB}</th><th rowspan="2">dB</th></tr>
<tr><th>SCS_{S-SSB} = 15kHz</th><th>SCS_{S-SSB} = 30kHz</th><th>SCS_{S-SSB} = 60kHz</th></tr>
<tr><td>NR_TDD_FR1_B</td><td>-120.5</td><td>-117.5</td><td>-114.5</td><td>≥ 0</td></tr>
<tr><td>NR_TDD_FR1_J</td><td>-116.5</td><td>-113.5</td><td>-110.5</td><td>≥ 0</td></tr>
<tr><td colspan="6">NOTE 1: NR sidelink operating band groups are as defined in Section 3A.4 for the corresponding NR operating bands.</td></tr>
</table>

B.4.4 Conditions for L1 SL-RSRP Accuracy Requirements

This clause defines the following conditions for L1 SL-RSRP measurement accuracy requirements applicable for a corresponding operating band.

The conditions are defined in Table B.4.4-1 for FR1.

Table B.4.4-1: Conditions for L1 SL-RSRP measurements in FR1

<table>
<tr><th rowspan="5">Parameter</th><th rowspan="3">NR sidelink operating band groups Note1</th><th colspan="3">Minimum L1 SL-RSRP</th><th>Ês/Iot</th></tr>
<tr><th colspan="3">dBm/SCS</th><th rowspan="2">dB</th></tr>
<tr><th>SCS= 15kHz</th><th>SCS= 30kHz</th><th>SCS = 60kHz</th></tr>
<tr><td>NR_TDD_FR1_B</td><td>-120.5</td><td>-117.5</td><td>-114.5</td><td rowspan="2">≥ 0</td></tr>
<tr><td>NR_TDD_FR1_J</td><td>-116.5</td><td>-113.5</td><td>-110.5</td></tr>
<tr><td colspan="6">NOTE 1: NR sidelink operating band groups are as defined in Section 3A.4 for the corresponding NR operating bands.
NOTE 2: The parameter Ês/Iot is the Ês/Iot of PSCCH-DMRS and/or PSSCH-DMRS.
NOTE 3: The SCS is for PSCCH and/or PSSCH.</td></tr>
</table>

Annex C (normative): Downlink physical channels and propagation conditions

C.1 Downlink physical channels

C.1.1 General

The following clauses describe the downlink physical channels that are needed for setting a connection and channels that are needed during a connection.

C.1.2 Default downlink signal levels

The downlink power settings in Table C.1.2-1 and Table C.1.2-2 are used unless otherwise specified in a test case for FR1 cell and FR2 cell, respectively. The downlink power settings in Table C.1.2-1 and Table C.1.2-2 are also used for the initial registration for NR /5GC test cases in clauses 6 and 7. For EN-DC test cases in clauses 4 and 5, the E-UTRA power settings used for initial registration are defined in Annex A.6.

For FR1, if the UE has more than one Rx antenna, the downlink signal is applied to each one. All UE Rx antennas shall be connected.

Table C.1.2-1: Default Downlink power levels for NR (FR1)

SCS (kHz)	Parameter	Unit	Value											
	Channel bandwidth	**MHz**	**5**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**60**	**80**	**90**	**100**
15	Number of RBs		25	50	75	100	128	160	215	270	N/A	N/A	N/A	N/A
	Channel BW power	dBm	-60	-57	-55	-54	-53	-52	-51	-50	N/A	N/A	N/A	N/A
30	Number of RBs		10	24	36	50	64	75	100	128	162	216	243	270
	Channel BW power	dBm	-61	-57	-55	-54	-53	-52	-51	-50	-49	-48	-47	-47
60	Number of RBs		N/A	10	18	24	30	36	50	64	75	100	120	135
	Channel BW power	dBm	N/A	-58	-56	-54	-53	-52	-51	-50	-49	-48	-47	-47
	RS EPRE	dBm/ 15kHz	-85	-85	-85	-85	-85	-85	-85	-85	-85	-85	-85	-85

NOTE 1: The channel bandwidth powers are informative, based on -85dBm/15kHz SS/PBCH SSS EPRE, then scaled according to the number of RBs and rounded to the nearest integer dBm value. Full RE allocation with no boost or deboost is assumed.
NOTE 2: The power level is specified at each UE Rx antenna.
NOTE 3: DL level is applied for any of the Subcarrier Spacing configuration ( ) with the same power spectrum density of -85dBm/15kHz.

Table C.1.2-2: Default Downlink power levels for NR (FR2)

SCS (kHz)		Unit	Channel Bandwidth			
			50 MHz	**100 MHz**	**200 MHz**	**400 MHz**
60	Number of RBs		66	132	264	N/A
	Channel BW power	dBm	-70	-67	-64	N/A
120	Number of RBs		32	66	132	264
	Channel BW power	dBm	-70	-67	-64	-61
	SS/PBCH SSS EPRE	dBm/60kHz	-99	-99	-99	-99
NOTE 1: The channel bandwidth powers are informative, based on -99dBm/60kHz SS/PBCH SSS EPRE, then scaled according to the number of RBs and rounded to the nearest integer dBm value. Full RE allocation with no boost or deboost is assumed. NOTE 2: The power level is specified at the centre of quiet zone. NOTE 3: DL level is applied for any of the Subcarrier Spacing configuration (μ) with the same power spectrum density of –99dBm/60kHz.						

The default signal level uncertainty for FR1 is +/-3dB at each test port, for any level specified. The default signal level uncertainty for FR2 is +/-6dB at centre of quiet zone, for any level specified. If the uncertainty value is critical for the Test purpose, a tighter uncertainty is specified for the related test case in Annex F

C.1.3 Default connection setup

Table C.1.3-1 describes the downlink physical channels that are required for NR connection setup. For EN-DC test cases in clauses 4 and 5, the required E-UTRA downlink physical channels are defined in TS 36.521-3 [26] Annex C.2.

Table C.1.3-1: Downlink physical channels required for NR connection set-up

Physical Channel	EPRE Ratio	Note
PBCH	PBCH_RA = 0 dB	
	PBCH_RB = 0 dB	
PSS	PSS_RA = 0 dB	
SSS	SSS_RA = 0 dB	
PDCCH	PDCCH_RA = 0 dB	
	PDCCH_RB = 0 dB	
	MPDCCH_RB = 0 dB	
PDSCH	PDSCH_RA = 0 dB	
	PDSCH_RB = 0 dB	
DMRS	TBD	
CSI-RS	TBD	
NOTE 1: No boosting is applied		

As common PDSCH and PDCCH configuration parameters the parameters in Table A.1 and C.1.3-2 shall be used to bring up the connection setup for FR1 and FR2 NR cell.

Table C.1.3-2: PDSCH and PDCCH configuration

Parameter	Unit	Value
Number of HARQ processes		8 (TDD) 16 (FDD)
Maximum number of HARQ transmission		5

C.2 Propagation conditions

C.2.0 General

The propagation conditions and channel models for various environments are specified. For each environment a propagation model is used to evaluate the propagation pathless due to the distance. Channel models are formed by combining delay profiles with a Doppler spectrum, with the addition of correlation properties in the case of a multi-antenna scenario.

C.2.1 No interference

The downlink connection between the SS and the UE is without AWGN, and has no fading or multipath effects.

C.2.2 Static propagation conditions

C.2.2.0 General

The downlink connection between the SS and the UE is an AWGN environment (unless otherwise stated) with no fading or multipath effects.

C.2.2.1 UE receiver with 2Rx antenna connectors

For 1 port transmission to UE receiver with 2Rx the channel matrix is defined in the frequency domain by

$$\mathbf{H} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}.$$

For 2 port transmission to UE Receiver with 2Rx the channel matrix is defined in the frequency domain by

$$\mathbf{H} = \begin{pmatrix} 1 & j \\ 1 & -j \end{pmatrix}$$

For 4 port transmission to UE Receiver with 2Rx the channel matrix is defined in the frequency domain by

$$\mathbf{H} = \begin{bmatrix} 1 & 1 & j & j \\ 1 & 1 & -j & -j \end{bmatrix}$$

C.2.2.2 UE receiver with 4Rx antenna connectors

For 1 port transmission to UE receiver with 4Rx the channel matrix is defined in the frequency domain by

$$\mathbf{H} = \begin{bmatrix} 1 \\ 1 \\ 1 \\ 1 \end{bmatrix}.$$

For 2 port transmission to UE Receiver with 4Rx the channel matrix is defined in the frequency domain by

$$\mathbf{H} = \begin{bmatrix} 1 & j \\ 1 & -j \\ 1 & j \\ 1 & -j \end{bmatrix}.$$

For 4 port transmission to UE Receiver with 4Rx the channel matrix is defined in the frequency domain by

$$\mathbf{H} = \begin{bmatrix} 1 & 1 & j & j \\ 1 & 1 & -j & -j \\ 1 & -1 & j & -j \\ 1 & -1 & -j & j \end{bmatrix}.$$

C.2.3 Multi-path fading propagation conditions

Same as defined in TS 38.521-4 [20] clause B.2.

Annex D (normative): Deviations from standard test configuration

D.1 Test cases with different numerologies

TBD

D.2 EN-DC test cases with different EN-DC configurations

D.2.0 General

In clauses 4 and 5, EN-DC test cases may be defined for two component carriers (CCs) as well as for more than two CCs to verify the same RRM requirement.

D.2.1 Principle of testing

If multiple EN-DC test cases are defined for two CCs as well as for more than two CCs to verify the same type of RRM requirement, and this requirement is dependent on the number of CCs, then from the UE performance point of view the test coverage can be considered fulfilled by executing only the EN-DC test cases with the maximum number of CCs in EN-DC supported by the UE. Otherwise if the same type of RRM requirement is independent of the number of CCs then from the UE performance point of view the test coverage can be considered fulfilled by executing only the EN-DC test cases with two CCs in EN-DC supported by the UE.

Editor's Note: The maximum number of CCs that can be used in FR2 tests in EN-DC would depend on the test equipment capability.

D.3 Carrier aggregation test cases with different CA configurations

D.3.0 General

In clauses 6 and 7, carrier aggregation test cases may be defined for two CCs as well as for more than two CCs to verify the same RRM requirement.

D.3.1 Principle of testing

If multiple carrier aggregation test cases are defined for two CCs as well as for more than two CCs to verify the same RRM requirement, and the test requirement is dependent on the number of CCs, then from the UE performance point of view the test coverage can be considered fulfilled by executing only the CA test cases with the maximum number of CCs in CA supported by the UE. Otherwise if the same type of RRM requirement is independent of the number of CCs then from the UE performance point of view the test coverage can be considered fulfilled by executing only the CA test cases with at least two CCs in CA supported by the UE.

Editor's Note: The maximum number of CCs that can be used in FR2 tests in CA would depend on the test equipment capability.

D.4 Antenna connection for 4Rx capable UEs

D.4.0 General

All the tests in this test specification are defined for UEs supporting 2Rx. This clause explains how to apply the 2Rx tests in clauses 4 and 6 to UEs supporting 4Rx antenna ports. No tests are currently specified in clauses 4 or 6 which are applicable only to 4Rx antenna ports, so 4Rx capable UEs are always tested by reusing tests which were originally specified for 2Rx UEs. Please notice that 4Rx is in general not supported for the test cases in clauses 5 and 7.

D.4.1 Principle of testing

D.4.1.1 Single carrier tests

For 4Rx capable UEs supporting at least one band where 2Rx is supported and 4Rx is not supported, all single carrier tests specified in clauses 4 and 6, except 4.7 and 6.7 shall be tested with 2Rx on any band where 2Rx is supported and 4Rx is not supported, with the antenna connection defined in D.4.2.1. Single carrier tests specified clauses 4.7 and 6.7 are band dependent and shall be tested in all bands supported by the UE, using 2Rx and the antenna connection defined in D.4.2.1 for the bands where 2Rx is supported and 4Rx is not supported, and the antenna connection defined in D.4.2.2 for the bands where 2Rx is not supported.

For 4Rx capable UEs that do not support any band where 2Rx is supported and 4Rx is not supported, all single carrier tests in clauses 4 and 6 shall be tested with 4Rx using the antenna configuration defined in D.4.2.2.For radio link monitoring tests, the SNR levels are modified according to table D.4.1.1-1 and table D.4.1.1-2

Table D.4.1.1-1: Modified parameters for RLM out of sync testing with 4 RX antenna connection

Test case	SNR during T3 (dB)			
	Test 1	Test 2	Test 3	Test 4
4.5.1.1	-18	N/A	N/A	N/A
4.5.1.3	-18	N/A	N/A	N/A
4.5.1.5	-18	N/A	N/A	N/A
4.5.1.7	-18	N/A	N/A	N/A
5.5.1.1	-18	N/A	N/A	N/A
5.5.1.3	-18	N/A	N/A	N/A
5.5.1.5	-18	N/A	N/A	N/A
5.5.1.7	-18	N/A	N/A	N/A
6.5.1.1	-18	N/A	N/A	N/A
6.5.1.3	-18	N/A	N/A	N/A
6.5.1.5	-18	N/A	N/A	N/A
6.5.1.7	-18	N/A	N/A	N/A
7.5.1.1	-18	N/A	N/A	N/A
7.5.1.3	-18	N/A	N/A	N/A
7.5.1.5	-18	N/A	N/A	N/A
7.5.1.7	-18	N/A	N/A	N/A

Table D.4.1.1-2: Modified parameters for RLM in sync single carrier testing with 4 RX antenna connection

Test case	SNR during T3 (dB)		SNR during T4 (dB)	
	Test 1	Test 2	Test 1	Test 2
4.5.1.2	-18	N/A	-8	N/A
4.5.1.4	-18	N/A	-8	N/A
4.5.1.6	-18	N/A	-8	N/A
4.5.1.8	-18	N/A	-8	N/A
5.5.1.2	-18	N/A	-8	N/A
5.5.1.4	-18	N/A	-8	N/A
5.5.1.6	-18	N/A	-8	N/A
5.5.1.8	-18	N/A	-8	N/A
6.5.1.2	-18	N/A	-8	N/A
6.5.1.4	-18	N/A	-8	N/A
6.5.1.6	-18	N/A	-8	N/A
6.5.1.8	-18	N/A	-8	N/A
7.5.1.2	-18	N/A	-8	N/A
7.5.1.4	-18	N/A	-8	N/A
7.5.1.6	-18	N/A	-8	N/A
7.5.1.8	-18	N/A	-8	N/A

Table D.4.1.1-3: Modified parameters for Beam Failure Detection and Link Recovery testing with 4 RX antenna connection

Test case	SNR for RS in set q_0 during T3, T4 and T5.(dB)
	Test 1
4.5.5.1	-15
4.5.5.2	-15
4.5.5.3	-15
4.5.5.4	-15
5.5.5.1	-15
5.5.5.2	-15
5.5.5.3	-15
5.5.5.4	-15
6.5.5.1	-15
6.5.5.2	-15
6.5.5.3	-15
6.5.5.4	-15
7.5.5.1	-15
7.5.5.2	-15
7.5.5.3	-15
7.5.5.4	-15

D.4.1.2 Carrier aggregation tests

For carrier aggregation tests, the antenna connection is selected independently for each cell, the PCell and the SCell(s). If a cell (either PCell or any of the SCell(s)) is on a band where 2Rx is supported and 4Rx is not supported, antenna connection in Clause D.4.2.1 shall be used for this cell. If the cell is on a band where 2Rx is not supported, antenna connection in clause D.4.2.2 shall be used for this cell.

D.4.1.3 EN-DC tests

For all EN-DC tests, the antenna connection is selected independently for each cell. For the E-UTRA PCell, the antenna connection specified in D.4.2.3 shall be used if the PCell is on an E-UTRA band where 2Rx is supported and 4Rx is not supported, and the antenna connection specified in D.4.2.4 shall be used if the PCell is on an E-UTRA band not supporting 2Rx.

For the NR PSCell and SCell(s), the principle of testing is the same as in D.4.1.2.

D.4.2 Antenna connection

D.4.2.1 Antenna connection for NR bands where 2Rx is supported

For NR bands where 2Rx is supported and 4Rx is not supported, the UE shall decide via manufacturer declaration and antenna port configuration which 2 of the 4 antenna ports shall be connected with the downlink signal from the SS. The remaining 2 antenna ports shall be connected to zero input. The parameters and test requirements remain unmodified.

D.4.2.2 Antenna connection for NR bands where only 4Rx is supported

For NR bands where only 4Rx is supported, all 4Rx antenna ports shall be connected to the downlink signal from the SS. The system simulator shall provide independent noise and fading (low correlation) for each antenna port. Except for the modifications to radio link monitoring tests specified in D.4.1.1 and D.4.1.2, the parameters and test requirements remain unmodified.

D.4.2.3 Antenna connection for E-UTRA bands where 2Rx is supported

For E-UTRAN bands where 2Rx is supported and 4Rx is not supported, the UE shall decide via manufacturer declaration and antenna port configuration which 2 of the 4 antenna ports shall be connected with the downlink signal from the SS. The remaining 2Rx antenna ports shall be connected to zero input. The parameters and test requirements remain unmodified.

D.4.2.4 Antenna connection for E-UTRA bands where only 4Rx is supported

For E-UTRAN bands where only 4Rx is supported, all 4Rx antenna ports shall be connected to the downlink signal from the SS. The system simulator shall provide independent noise and fading (low correlation) for each antenna port. Except for the modifications to radio link monitoring tests specified in TS36.521-1 [26] clause 3A.4.1.2.1 and 3A.4.1.2.2, the parameters and test requirements remain unmodified.

D.5 Test Cases with Different Channel Bandwidths

D.5.1 Test Cases with Different E-UTRA Channel Bandwidths

D.5.1.1 Introduction

Test cases involving E-UTRA cell(s) may be defined with different E-UTRA channel bandwidths to verify the same type of RRM requirement.

D.5.1.2 Principle of testing

If multiple test cases involving E-UTRA cell(s) are defined with different E-UTRA channel bandwidths to verify the same type of RRM requirement that is E-UTRA channel bandwidth independent, then the UE needs to be tested with only one channel bandwidth in each E-UTRA cell and with the same bandwidth in all the E-UTRA cells used in the test case.

D.6 Test Cases for Synchronous and Asynchronous DC Operations

D.6.1 EN-DC Test Cases for Synchronous and Asynchronous EN-DC Operations

D.6.1.1 Introduction

This clause defines a principle, which is applicable to test cases verifying RRM requirements for EN-DC operation in synchronous and asynchronous scenarios.

Test cases may be defined in both synchronous EN-DC and asynchronous EN-DC scenarios to verify the same type of RRM requirement.

D.6.1.2 Principle of Testing

If EN-DC test cases are defined in both synchronous and asynchronous EN-DC scenarios to verify the same type of RRM requirement then the UE capable of both synchronous and asynchronous EN-DC operations needs to be tested with one of the tests in either synchronous or asynchronous EN-DC scenarios.

Annex E (normative): Cell configuration mapping

E.0 General

The cells used in TS 38.533 do not correspond to the cells defined in TS 38.508-1 [14] clause 4.4.2. This annex describes the mapping between the test cases in TS 38.533 and the cells defined in TS 38.508-1 [14]. The test case shall apply the RF parameters as defined in TS 38.533 according to the column heading.

NOTE: For example if the second cell in a test case is an inter-frequency cell then Cell3 from TS 38.508-1 [14] clause 4.4.2 is used with the radio parameters as defined for Cell2 in TS 38.533.

E.1 Test frequency selection

E.1.0 General

The requirements defined in this test specification comprise EN-DC and NR/5GC test cases. The test cases are defined with a single NR cell or with multiple NR cells. The multi-cell test cases can be either intra-frequency, i.e. the NR cells defined by the test are overlapping in the frequency domain, or inter-frequency, i.e. the NR cells defined by the test have different centre frequencies, separated from each other by a frequency value bigger than the respective cell bandwidths. This clause describes the general rule on how to select the test frequencies for the NR RRM test cases in this test specification.

E.1.1 E-UTRA PCell for EN-DC test cases

Unless otherwise stated, the E-UTRA PCell for EN-DC test cases shall be configured using the test frequency “Mid” as defined in TS 36.508 [25] for the corresponding E-UTRA band.

In case that the “Mid” test frequency overlaps with any of the NR test frequencies required by the test case, the E-UTRA PCell shall be shifted to an additional frequency within the E-UTRA same band. If the E-UTRA band channel bandwidth is not sufficient to allocate a non-overlapping E-UTRA PCell, the auxiliary band as defined in TS 36.521-3 [26] clause 3 shall be used.

E.1.2 Test cases with one NR cell

Unless otherwise stated, for NR test cases with one NR cell, this cell shall be configured using the test frequency “Mid” as defined in TS 38.508-1 [14] for the corresponding band under test.

E.1.3 Test cases with more than one NR cell

E.1.3.1 Intra-frequency test cases

Unless otherwise stated, multi-cell intra-frequency test cases shall be tested using the test frequency “Mid” as defined in TS 38.508-1 [14] for the corresponding NR band under test.

E.1.3.2 Inter-frequency test cases

For NR/5GC and EN-DC multi-cell inter-frequency test cases in FR1, unless otherwise stated, the serving cell shall be configured using the test frequency “Low” as defined in TS 38.508-1 [14] for the corresponding band under test. Any inter-frequency neighbour cell shall be configured using the test frequency “High” as defined in TS 38.508-1 [14] for the corresponding band under test.

For NR/5GC multi-cell inter-frequency test cases in FR2, unless otherwise stated, the serving cell (and any other neighbour cell in the same frequency carrier) shall be configured using the test frequency “Mid” as defined in TS 38.508-1 [14], clause 7.2.3.2 for the corresponding band under test. Any inter-frequency neighbour cell shall be configured using a non-overlapping test frequency adjacent to the serving cell frequency, as defined in TS 38.508-1 [14], clause 7.2.3.2.

For EN-DC multi-cell inter-frequency test cases in FR2, unless otherwise stated, the PSCell (and any other neighbour cell in the same frequency carrier) shall be configured using the test frequency “Mid” as defined in TS 38.508-1 [14] , clause 7.2.3.2 for the corresponding band under test. Any inter-frequency neighbour cell shall be configured using a non-overlapping test frequency adjacent to the PSCell frequency, as defined in TS 38.508-1 [14] , clause 7.2.3.2.

E.1.4 Carrier aggregation test cases

E.1.4.1 Inter-band carrier aggregation

For inter-band carrier aggregation test cases, each of the component carriers and their respective neighbour cells shall be configured following the same principles defined in E.1.2 and E.1.3.

E.1.4.2 Intra-band contiguous carrier aggregation

For intra-band contiguous carrier aggregation with 2 CCs in FR1, unless otherwise specified, the serving cells (and any other neighbour cell(s) in the same frequency carriers) shall be configured using the test frequency “Low” as defined in TS 38.508-1 [14], subclause 4.3.1.1.3 for the corresponding band under test (SpCC = CC1 and SCC = CC2).

For intra-band contiguous carrier aggregation with 2 CCs in FR2, unless otherwise specified, the serving cells (and any other neighbour cell(s) in the same frequency carriers) shall be configured using the test frequency “Mid” as defined in TS 38.508-1 [14], subclause 4.3.1.2.3 for the corresponding band under test (SpCC = CC1 and SCC = CC2).

E.1.4.3 Intra-band non-contiguous carrier aggregation

For intra-band non-contiguous carrier aggregation in FR1, unless otherwise specified, the test frequency selection shall be done following the maximum Wgap principle, i.e. selecting the test frequencies (of the test frequencies defined in TS 38.508-1 [14]) with the widest frequency separation within the band under test.

For intra-band non-contiguous carrier aggregation in FR2, the test frequency selection is TBD.

E.1.5 E-UTRA – NR inter RAT test cases

Unless otherwise stated, the E-UTRA serving/neighbour cell for E-UTRA – NR inter-RAT test cases shall be configured using the test frequency “Mid” as defined in TS 36.508 [25] for the corresponding E-UTRA band.

In case that the “Mid” test frequency overlaps with any of the NR test frequencies required by the test case, the E-UTRA cell shall be shifted to an additional frequency within the E-UTRA same band. If the E-UTRA band channel bandwidth is not sufficient to allocate a non-overlapping E-UTRA cell, the auxiliary band as defined in TS 36.521-3 [26] clause 3 shall be used.

E.1.6 Intra-band EN-DC test cases

E.1.6.1 Intra-band non-contiguous EN-DC

For intra-band non-contiguous EN-DC in FR1, unless otherwise specified, the test frequency selection shall be done following the maximum Wgap principle, i.e. selecting the test frequencies (of the test frequencies defined in TS 38.508-1 [14]) with the widest frequency separation within the band under test.

E.1.6.1.1 Inter frequency neighbour cell

Unless otherwise stated, any inter-frequency neighbour cell shall be configured using the test frequency “Mid” as defined in TS 38.508-1 [14] for the corresponding NR band under test. If the NR band channel bandwidth is not sufficient to allocate a non-overlapping the neighbour cell, the auxiliary band as defined in TBD shall be used.

E.1.6.2 Intra-band contiguous EN-DC

E.1.6.1.1 E-UTRA PCell

Unless otherwise stated, the E-UTRA PCell for intra-band contiguous EN-DC test cases shall be configured using same test frequency, e.g., “Mid” as for NR PSCell as defined in TS 38.508-1 [14].

E.1.7 NR sidelink test cases

Unless otherwise stated, for NR sidelink test cases the NR sidelink carrier shall be configured using the test frequency "Mid" as defined in TS 38.508-1 [14] for the corresponding band under test.

For con-current operation, unless otherwise stated, each of the NR Uu carriers and their respective cells shall be configured following the sample principles defined in E.1.2 and E.1.3.

E.2 Cell configuration mapping for EN-DC FR1 test cases in Chapter 4

Table E.2-1 defines the cell configuration mapping for EN-DC FR1 test cases in chapter 4 of this test specification.

Table E.2-1: Cell configuration mapping for EN-DC FR1 RRM testing

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
4.3.2.2.1	EN-DC FR1 contention based random access	LTE Cell 1	NR Cell 1			
4.3.2.2.2	EN-DC FR1 non-contention based random access	LTE Cell 1	NR Cell 1			
4.3.2.2.3	EN-DC FR1 2-step contention based random access	LTE Cell 1	NR Cell 1			
4.3.2.2.4	EN-DC FR1 2-step non-contention based random access	LTE Cell 1	NR Cell 1			
4.4.1.1	EN-DC FR1 UE transmit timing accuracy	LTE Cell 1	NR Cell 1			
4.4.3.1	EN-DC FR1 timing advance adjustment accuracy	LTE Cell 1	NR Cell 1			
4.5.1.1	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 1			
4.5.1.2	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 1			
4.5.1.3	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	LTE Cell 1	NR Cell 1			
4.5.1.4	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	LTE Cell 1	NR Cell 1			
4.5.1.5	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 1			
4.5.1.6	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 1			
4.5.1.7	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	LTE Cell 1	NR Cell 1			
4.5.1.8	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	LTE Cell 1	NR Cell 1			
4.5.2.1	EN-DC FR1 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	LTE Cell 1	NR Cell 1			
4.5.2.2	EN-DC FR1 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	LTE Cell 1	NR Cell 1			
4.5.2.3	EN-DC FR1 interruptions during measurements on deactivated NR SCC in synchronous EN-DC	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
				NR Cell 10		inter-band
4.5.2.4	EN-DC FR1 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
				NR Cell 10		inter-band

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
4.5.2.5	EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC	LTE Cell 6	NR Cell 1	LTE Cell 3		
4.5.2.6	EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	LTE Cell 6	NR Cell 1	LTE Cell 3		
4.5.3.1	EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
				NR Cell 10		inter-band
4.5.3.2	EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 640ms SCell measurement cycle	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
				NR Cell 10		inter-band
4.5.3.3	EN-DC FR1 SCell activation and deactivation of unknown SCell in non-DRX	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
				NR Cell 10		inter-band
4.5.4.1	EN-DC FR1 UE UL carrier RRC reconfiguration delay	LTE Cell 1	NR Cell 6	NR Cell 3		
4.5.5.1	EN-DC FR1 SSB-based beam failure detection and link recovery in non-DRX	LTE Cell 1	NR Cell 1			
4.5.5.2	EN-DC FR1 SSB-based beam failure detection and link recovery in DRX	LTE Cell 1	NR Cell 1			
4.5.5.3	EN-DC FR1 CSI-RS-based beam failure detection and link recovery in non-DRX	LTE Cell 1	NR Cell 1			
4.5.5.4	EN-DC FR1 CSI-RS-based beam failure detection and link recovery in DRX	LTE Cell 1	NR Cell 1			
4.5.5.5	EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in non-DRX	LTE Cell 1	NR Cell 1			
4.5.5.6	EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in DRX	LTE Cell 1	NR Cell 1			
4.5.6.1.1	EN-DC FR1 DCI-based DL active BWP switch in non-DRX in synchronous EN-DC	LTE Cell 1	NR Cell 1			
4.5.6.1.2	EN-DC FR1 DCI-based DL active BWP switch with SCell in non-DRX in synchronous EN-DC	LTE Cell 1	NR Cell 6	NR Cell 3		
4.5.6.2.1	EN-DC FR1 RRC-based DL active BWP switch in non-DRX in synchronous EN-DC	LTE Cell 1	NR Cell 1			
4.5.7.1	EN-DC FR1 addition and release delay of known PSCell	LTE Cell 1	NR Cell 1			
4.5.8.1	EN-DC FR1 interruptions at switching between two uplink carriers	LTE Cell 1	NR Cell 1			
4.6.1.1	EN-DC FR1 event-triggered reporting without gap in non-DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
4.6.1.2	EN-DC FR1 event-triggered reporting without gap in DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
4.6.1.3	EN-DC FR1 event-triggered reporting with gap in non-DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
4.6.1.4	EN-DC FR1 event-triggered reporting with gap in DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
4.6.1.5	EN-DC FR1 event-triggered reporting without gap in non-DRX with SSB time index detection	LTE Cell 1	NR Cell 1	NR Cell 2		
4.6.1.6	EN-DC FR1 event-triggered reporting with gap in non-DRX with SSB time index detection	LTE Cell 1	NR Cell 1	NR Cell 2		
4.6.1.7	EN-DC FR1 event-triggered reporting without gap in DRX for UE configured with highSpeedMeasFlag-r16	LTE Cell 1	NR Cell 1	NR Cell 2		
4.6.2.1	EN-DC FR1-FR1 event-triggered reporting in non-DRX	LTE Cell 1	NR Cell 6	NR Cell 3		
4.6.2.2	EN-DC FR1-FR1 event-triggered reporting in DRX	LTE Cell 1	NR Cell 6	NR Cell 3		
4.6.2.5	EN-DC FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	LTE Cell 1	NR Cell 6	NR Cell 3		

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
4.6.2.6	EN-DC FR1-FR1 event-triggered reporting in DRX with SSB time index detection	LTE Cell 1	NR Cell 6	NR Cell 3		
4.6.4.1	EN-DC FR1 SSB-based L1-RSRP measurement in non-DRX	LTE Cell 1	NR Cell 1			
4.6.4.2	EN-DC FR1 SSB-based L1-RSRP measurement in DRX	LTE Cell 1	NR Cell 1			
4.6.4.3	EN-DC FR1 CSI-RS-based L1-RSRP measurement in non-DRX	LTE Cell 1	NR Cell 1			
4.6.4.4	EN-DC FR1 CSI-RS-based L1-RSRP measurement in DRX	LTE Cell 1	NR Cell 1			
4.6.7.1	EN-DC FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in non-DRX	LTE Cell 1	NR Cell 1			
4.6.7.2	EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR measurement in DRX	LTE Cell 1	NR Cell 1			
4.6.7.3	EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in DRX	LTE Cell 1	NR Cell 1			
4.7.1.1.1	EN-DC FR1 SS-RSRP absolute measurement accuracy	LTE Cell 1	NR Cell 489	NR Cell 1		
4.7.1.1.2	EN-DC FR1 SS-RSRP relative measurement accuracy	LTE Cell 1	NR Cell 489	NR Cell 1		
4.7.1.2.1	EN-DC FR1-FR1 SS-RSRP absolute measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
4.7.1.2.2	EN-DC FR1-FR1 SS-RSRP relative measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
4.7.2.1	EN-DC FR1 SS-RSRQ measurement accuracy	LTE Cell 1	NR Cell 1	NR Cell 2		
4.7.2.2.1	EN-DC FR1-FR1 SS-RSRQ absolute measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
4.7.2.2.2	EN-DC FR1-FR1 SS-RSRQ relative measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
4.7.3.1	EN-DC FR1 SS-SINR measurement accuracy	LTE Cell 1	NR Cell 1	NR Cell 2		
4.7.3.2.1	EN-DC FR1-FR1 SS-SINR absolute measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
4.7.3.2.2	EN-DC FR1-FR1 SS-SINR relative measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
4.7.4.1.1	EN-DC FR1 SSB based L1-RSRP absolute measurement accuracy	LTE Cell 1	NR Cell 1			
4.7.4.1.2	EN-DC FR1 SSB based L1-RSRP relative measurement accuracy	LTE Cell 1	NR Cell 1			
4.7.4.2.1	EN-DC FR1 CSI-RS based L1-RSRP absolute measurement accuracy	LTE Cell 1	NR Cell 1			
4.7.4.2.2	EN-DC FR1 CSI-RS based L1-RSRP relative measurement accuracy	LTE Cell 1	NR Cell 1			
4.7.5.1	EN-DC FR1 SFTD measurement accuracy	LTE Cell 1	NR Cell 1			
4.7.7.1	EN-DC FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	LTE Cell 1	NR Cell 1			
4.7.7.2	EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	LTE Cell 1	NR Cell 1			
4.7.7.3	EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	LTE Cell 1	NR Cell 1			

E.3 Cell configuration mapping for EN-DC FR2 test cases in Chapter 5

Table E.3-1 defines the cell configuration mapping for EN-DC FR2 test cases in chapter 5 of this test specification.

Table E.3-1: Cell configuration mapping for EN-DC FR2 RRM testing

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
5.3.2.2.1	EN-DC FR2 contention based random access	LTE Cell 1	NR Cell 1			
5.3.2.2.2	EN-DC FR2 non-contention based random access	LTE Cell 1	NR Cell 1			
5.3.2.2.3	EN-DC FR2 2-step contention based random access	LTE Cell 1	NR Cell 1			
5.3.2.2.4	EN-DC FR2 2-step non-contention based random access	LTE Cell 1	NR Cell 1			
5.4.1.1	EN-DC FR2 UE transmit timing accuracy	LTE Cell 1	NR Cell 1			
5.4.3.1	EN-DC FR2 timing advance adjustment accuracy	LTE Cell 1	NR Cell 1			
5.5.1.1	EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 6			
5.5.1.2	EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 6			
5.5.1.3	EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	LTE Cell 1	NR Cell 6			
5.5.1.4	EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	LTE Cell 1	NR Cell 6			
5.5.1.5	EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 1			
5.5.1.6	EN-DC FR2 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	LTE Cell 1	NR Cell 1			
5.5.1.7	EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	LTE Cell 1	NR Cell 1			
5.5.1.8	EN-DC FR2 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	LTE Cell 1	NR Cell 1			
5.5.1.9	EN-DC FR2 radio link monitoring UE scheduling restrictions	LTE Cell 1	NR Cell 1			
5.5.2.1	EN-DC FR2 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	LTE Cell 1	NR Cell 1			
5.5.2.2	EN-DC FR2 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	LTE Cell 1	NR Cell 1			
5.5.2.3	EN-DC FR2 interruptions during measurements on deactivated NR SCC in synchronous EN-DC	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
				NR Cell 10		inter-band
5.5.2.4	EN-DC FR2 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
				NR Cell 10		inter-band
5.5.2.5	EN-DC FR2 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC	LTE Cell 6	NR Cell 1	LTE Cell 3		
5.5.2.6	EN-DC FR2 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	LTE Cell 6	NR Cell 1	LTE Cell 3		
5.5.3.1	EN-DC FR2 SCell activation and deactivation intra-band in non-DRX	LTE Cell 1	NR Cell 1	NR Cell 6		intra-band
5.5.5.1	EN-DC FR2 SSB-based beam failure detection and link recovery in non-DRX	LTE Cell 1	NR Cell 1			
5.5.5.2	EN-DC FR2 SSB-based beam failure detection and link recovery in DRX	LTE Cell 1	NR Cell 1			
5.5.5.3	EN-DC FR2 CSI-RS-based beam failure detection and link recovery in non-DRX	LTE Cell 1	NR Cell 1			
5.5.5.4	EN-DC FR2 CSI-RS-based beam failure detection and link recovery in DRX	LTE Cell 1	NR Cell 1			

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
5.5.5.5	EN-DC FR2 scheduling available restriction during SSB-based beam failure detection and link recovery in non-DRX	LTE Cell 1	NR Cell 1			
5.5.5.6	EN-DC FR2 SCell CSI-RS-based beam failure detection and link recovery in non-DRX	LTE Cell 1	NR Cell 1	NR Cell 6		
5.5.5.7	EN-DC FR2 SCell CSI-RS-based beam failure detection and link recovery in DRX	LTE Cell 1	NR Cell 1	NR Cell 6		
5.5.8.1	EN-DC FR2 MAC-CE based active TCI state switch	LTE Cell 1	NR Cell 1			
5.5.8.2	EN-DC FR2 RRC based active TCI state switch	LTE Cell 1	NR Cell 1			
5.6.1.1	EN-DC FR2 event-triggered reporting without gap in non-DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
5.6.1.2	EN-DC FR2 event-triggered reporting without gap in DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
5.6.1.3	EN-DC FR2 event-triggered reporting with gap in non-DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
5.6.1.4	EN-DC FR2 event-triggered reporting with gap in DRX	LTE Cell 1	NR Cell 1	NR Cell 2		
5.6.2.1	EN-DC FR2-FR2 event-triggered reporting in non-DRX	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.2.2	EN-DC FR2-FR2 event-triggered reporting in DRX	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.2.3	EN-DC FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.2.4	EN-DC FR2-FR2 event-triggered reporting in DRX with SSB time index detection	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.2.5	EN-DC FR1-FR2 event-triggered reporting in non-DRX	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.2.6	EN-DC FR1-FR2 event-triggered reporting in DRX	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.2.7	EN-DC FR1-FR2 event-triggered reporting in non-DRX with SSB time index detection	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.2.8	EN-DC FR1-FR2 event-triggered reporting in DRX with SSB time index detection	LTE Cell 1	NR Cell 6	NR Cell 3		
5.6.3.1	EN-DC FR2 SSB-based L1-RSRP measurement in non-DRX	LTE Cell 1	NR Cell 1			
5.6.3.2	EN-DC FR2 SSB-based L1-RSRP measurement in DRX	LTE Cell 1	NR Cell 1			
5.6.3.3	EN-DC FR2 CSI-RS-based L1-RSRP measurement in non-DRX	LTE Cell 1	NR Cell 1			
5.6.3.4	EN-DC FR2 CSI-RS-based L1-RSRP measurement in DRX	LTE Cell 1	NR Cell 1			
5.6.6.1	EN-DC FR2 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	LTE Cell 1	NR Cell 1			
5.6.6.2	EN-DC FR2 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	LTE Cell 1	NR Cell 1			
5.6.6.3	EN-DC FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	LTE Cell 1	NR Cell 1			
5.7.1.1	EN-DC FR2 SS-RSRP measurement accuracy	LTE Cell 1	NR Cell 489	NR Cell 1		
5.7.1.2	EN-DC FR2-FR2 SS-RSRP measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
5.7.1.3	EN-DC FR1-FR2 SS-RSRP measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
5.7.2.1	EN-DC FR2 SS-RSRQ measurement accuracy	LTE Cell 1	NR Cell 1	NR Cell 2		
5.7.2.2	EN-DC FR2-FR2 SS-RSRQ measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
5.7.3.1	EN-DC FR2 SS-SINR measurement accuracy	LTE Cell 1	NR Cell 1	NR Cell 2		

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
5.7.3.2	EN-DC FR2-FR2 SS-SINR measurement accuracy	LTE Cell 1	NR Cell 6	NR Cell 3		
5.7.6.1	EN-DC FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	LTE Cell 1	NR Cell 1			
5.7.6.2	EN-DC FR2 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	LTE Cell 1	NR Cell 1			
5.7.6.3	EN-DC FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	LTE Cell 1	NR Cell 1			

E.4 Cell configuration mapping for SA FR1 test cases in Chapter 6

Table E.4-1 defines the cell configuration mapping for NR/5GC FR1 test cases in chapter 6 of this test specification.

Table E.4-1: Cell configuration mapping for SA FR1 RRM testing

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
6.1.1.1	NR SA FR1 cell re-selection	NR Cell 1	NR Cell 11			
6.1.1.2	NR SA FR1-FR1 cell re-selection	NR Cell 6	NR Cell 23			
6.1.1.3	NR SA FR1 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	NR Cell 1	NR Cell 11			
6.1.1.4	NR SA FR1 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	NR Cell 1	NR Cell 11			
6.1.1.5	NR SA FR1-FR1 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	NR Cell 1	NR Cell 23			
6.1.1.6	NR SA FR1-FR1 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	NR Cell 1	NR Cell 23			
6.1.1.7	NR SA FR1 cell re-selection for UE configured with highSpeedMeasFlag-r16	NR Cell 1	NR Cell 11			
6.3.1.1	NR SA FR1 handover with known target cell	NR Cell 1	NR Cell 2			
6.3.1.2	NR SA FR1 handover with unknown target cell	NR Cell 1	NR Cell 2			
6.3.1.3	NR SA FR1-FR1 Handover with unknown Target Cell	NR Cell 6	NR Cell 3			
6.3.1.7	NR SA FR1 synchronous DAPS handover	NR Cell 1	NR Cell 2			
6.3.1.8	NR SA FR1 asynchronous DAPS handover	NR Cell 1	NR Cell 2			
6.3.1.9	NR SA FR1 Intra-band inter-frequency synchronous DAPS handover	NR Cell 6	NR Cell 3			
6.3.1.10	NR SA FR1 Intra-band inter-frequency asynchronous DAPS handover	NR Cell 6	NR Cell 3			
6.3.1.11	NR SA FR1 Inter-band inter-frequency synchronous DAPS handover	NR Cell 1	NR Cell 10			
6.3.1.12	NR SA FR1 Inter-band inter-frequency asynchronous DAPS handover	NR Cell 1	NR Cell 10			
6.3.2.1.1	NR SA FR1 RRC re-establishment	NR Cell 1	NR Cell 2			
6.3.2.1.2	NR SA FR1 - FR1 RRC re-establishment	NR Cell 6	NR Cell 3			
6.3.2.1.3	NR SA FR1 RRC re-establishment without serving cell timing	NR Cell 1	NR Cell 2			
6.3.2.2.1	NR SA FR1 contention based random access	NR Cell 1				
6.3.2.2.2	NR SA FR1 non-contention based random access	NR Cell 1				
6.3.2.2.3	NR SA FR1 2-step contention based random access	NR Cell 1				

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
6.3.2.2.4	NR SA FR1 2-step non-contention based random access	NR Cell 1				
6.3.2.3.1	NR SA FR1 RRC connection release with redirection	NR Cell 6	NR Cell 2			
6.3.3.1	NR SA FR1 conditional handover	NR Cell 1	NR Cell 2			
6.3.3.2	NR SA FR1-FR1 conditional handover	NR Cell 1	NR Cell 6			
6.4.3.1	NR SA FR1 timing advance adjustment accuracy	NR Cell 1				
6.5.1.1	NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	NR Cell 1				
6.5.1.2	NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	NR Cell 1				
6.5.1.3	NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in DRX mode	NR Cell 1				
6.5.1.4	NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in DRX mode	NR Cell 1				
6.5.1.5	NR SA FR1 radio link monitoring out-of-sync test for PCell configured with CSI-RS-based RLM RS in non-DRX mode	NR Cell 1				
6.5.1.6	NR SA FR1 radio link monitoring in-sync test for PCell configured with CSI-RS-based RLM RS in non-DRX mode	NR Cell 1				
6.5.1.7	NR SA FR1 radio link monitoring out-of-sync test for PCell configured with CSI-RS-based RLM RS in DRX mode	NR Cell 1				
6.5.1.8	NR SA FR1 radio link monitoring in-sync test for PCell configured with CSI-RS-based RLM RS in DRX mode	NR Cell 1				
6.5.2.1	NR SA FR1 interruptions during measurements on deactivated NR SCC	NR Cell 1	NR Cell 6			intra-band
			NR Cell 10			inter-band
6.5.3.1	NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	NR Cell 1	NR Cell 6			intra-band
			NR Cell 10			inter-band
6.5.3.2	NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 640ms SCell measurement cycle	NR Cell 1	NR Cell 6			intra-band
			NR Cell 10			inter-band
6.5.3.3	NR SA FR1 SCell activation and deactivation of unknown SCell in non-DRX	NR Cell 1	NR Cell 6			intra-band
			NR Cell 10			inter-band
6.5.4.1	NR SA FR1 UE UL carrier RRC reconfiguration delay	NR Cell 1	NR Cell 33			
6.5.5.1	NR SA FR1 SSB-based beam failure detection and link recovery in non-DRX	NR Cell 1				
6.5.5.2	NR SA FR1 SSB-based beam failure detection and link recovery in DRX	NR Cell 1				
6.5.5.3	NR SA FR1 CSI-RS-based beam failure detection and link recovery in non-DRX	NR Cell 1				
6.5.5.4	NR SA FR1 CSI-RS-based beam failure detection and link recovery in DRX	NR Cell 1				
6.5.5.5	NR SA FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in non-DRX	NR Cell 1	NR Cell 10			
6.5.5.6	NR SA FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in DRX	NR Cell 1	NR Cell 10			
6.5.6.1.1	NR SA FR1-FR1 DCI-based DL active BWP switch in non-DRX	NR Cell 6	NR Cell 3			
6.5.6.1.2	NR SA FR1 DCI-based DL active BWP switch in non-DRX	NR Cell 1				
6.5.6.2.1	NR SA FR1 RRC-based DL active BWP switch in non-DRX	NR Cell 1				

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
6.5.7.1	NR SA FR1 DL Interruptions at switching between two uplink carriers in FDD-TDD CA	NR Cell 1	NR Cell 10			inter-band
6.5.7.2	NR SA FR1 DL Interruptions at switching between two uplink carriers in TDD-TDD CA	NR Cell 1	NR Cell 10			inter-band
6.6.1.1	SA event triggered reporting tests without gap under non-DRX	NR Cell 1	NR Cell 2			
6.6.1.2	SA event triggered reporting tests without gap under DRX	NR Cell 1	NR Cell 2			
6.6.1.3	SA event triggered reporting tests with per-UE gaps under non-DRX	NR Cell 1	NR Cell 2			
6.6.1.4	SA event triggered reporting tests with per-UE gaps under DRX	NR Cell 1	NR Cell 2			
6.6.1.5	SA event triggered reporting tests without gap under non-DRX with SSB index reading	NR Cell 1	NR Cell 2			
6.6.1.6	SA event triggered reporting tests with per-UE gaps under non-DRX with SSB index reading	NR Cell 1	NR Cell 2			
6.6.1.7	NR SA FR1 event-triggered reporting without gap in DRX for UE configured with highSpeedMeasFlag-r16	NR Cell 1	NR Cell 2			
6.6.2.1	NR SA FR1-FR1 event-triggered reporting in non-DRX	NR Cell 6	NR Cell 3			
6.6.2.2	NR SA FR1-FR1 event-triggered reporting in DRX	NR Cell 6	NR Cell 3			
6.6.2.5	NR SA FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	NR Cell 6	NR Cell 3			
6.6.2.6	NR SA FR1-FR1 event-triggered reporting in DRX with SSB time index detection	NR Cell 6	NR Cell 3			
6.6.4.1	NR SA FR1 SSB-based L1-RSRP measurement in non-DRX	NR Cell 1				
6.6.4.2	NR SA FR1 SSB-based L1-RSRP measurement in DRX	NR Cell 1				
6.6.4.3	NR SA FR1 CSI-RS-based L1-RSRP measurement in non-DRX	NR Cell 1				
6.6.4.4	NR SA FR1 CSI-RS-based L1-RSRP measurement in DRX	NR Cell 1				
6.6.4.5	NR SA FR1 SSB-based L1-RSRP measurement in DRX for UE configured with highSpeedMeasFlag-r16	NR Cell 1				
6.6.8.1	NR SA FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	NR Cell 1				
6.6.8.2	NR SA FR1 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	NR Cell 1				
6.6.8.3	NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	NR Cell 1				
6.7.1.3.1	NR SA FR1-FR2 SS-RSRP absolute measurement accuracy	NR Cell 1	NR Cell 2			
6.7.1.3.2	NR SA FR1-FR2 SS-RSRP relative measurement accuracy	NR Cell 1	NR Cell 2			
6.7.1.1.1	NR SA FR1 SS-RSRP absolute measurement accuracy	NR Cell 489	NR Cell 1			
6.7.1.1.2	NR SA FR1 SS-RSRP relative measurement accuracy	NR Cell 489	NR Cell 1			
6.7.1.2.1	NR SA FR1-FR1 SS-RSRP absolute measurement accuracy	NR Cell 6	NR Cell 3			
6.7.1.2.2	NR SA FR1-FR1 SS-RSRP relative measurement accuracy	NR Cell 6	NR Cell 3			
6.7.2.1	NR SA FR1 SS-RSRQ measurement accuracy	NR Cell 1	NR Cell 2			
6.7.2.2.1	NR SA FR1-FR1 SS-RSRQ absolute measurement accuracy	NR Cell 6	NR Cell 3			
6.7.2.2.2	NR SA FR1-FR1 SS-RSRQ relative measurement accuracy	NR Cell 6	NR Cell 3			

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
6.7.3.1	NR SA FR1 SS-SINR measurement accuracy	NR Cell 1	NR Cell 2			
6.7.3.2.1	NR SA FR1-FR1 SS-SINR absolute measurement accuracy	NR Cell 6	NR Cell 3			
6.7.3.2.2	NR SA FR1-FR1 SS-SINR relative measurement accuracy	NR Cell 6	NR Cell 3			
6.7.4.1.1	NR SA FR1 SSB based L1-RSRP absolute measurement accuracy	NR Cell 1				
6.7.4.1.2	NR SA FR1 SSB based L1-RSRP relative measurement accuracy	NR Cell 1				
6.7.4.2.1	NR SA FR1 CSI-RS based L1-RSRP absolute measurement accuracy	NR Cell 1				
6.7.4.2.2	NR SA FR1 CSI-RS based L1-RSRP relative measurement accuracy	NR Cell 1				
6.7.9.1	NR SA FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	NR Cell 1				
6.7.9.2	NR SA FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	NR Cell 1				
6.7.9.3	NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	NR Cell 1				

Table E.4-2 defines the cell configuration mapping for NR/5GC FR1 – E-UTRA Inter-RAT test cases (serving cell in NR) in chapter 6 of this test specification.

Table E.4-2: Cell configuration mapping for SA FR1 – E-UTRA Inter-RAT RRM testing

TC	Description	38.533 NR Cell1	38.533 LTE Cell2	38.533 LTE Cell3	38.533 LTE Cell4	CA Type
6.1.2.1	NR SA FR1 – E-UTRA cell re-selection to higher priority E-UTRA	NR Cell 1	LTE Cell 1			
6.1.2.2	NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRA	NR Cell 1	LTE Cell 1			
6.1.2.3	NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRAN for UE fulfilling low mobility relaxed measurement criterion	NR Cell 1	LTE Cell 1			
6.1.2.4	NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRAN for UE fulfilling not-at-cell edge relaxed measurement criterion	NR Cell 1	LTE Cell 1			
6.1.2.5	NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRA for UE configured with highSpeedMeasFlag-r16	NR Cell 1	LTE Cell 11			
6.3.1.4	NR SA FR1 – E-UTRA handover with known target cell	NR Cell 1	LTE Cell 1			
6.3.1.5	NR SA FR1 – E-UTRA handover with unknown target cell	NR Cell 1	LTE Cell 1			
6.3.2.3.2	NR SA FR1 – E-UTRA RRC connection release with redirection	NR Cell 1	LTE Cell 1			
6.6.3.1	NR SA FR1 – E-UTRAN event-triggered reporting in non-DRX	NR Cell 1	LTE Cell 1			
6.6.3.2	NR SA FR1 – E-UTRAN event-triggered reporting in DRX	NR Cell 1	LTE Cell 1			
6.6.3.3	NR SA FR1 – E-UTRAN event-triggered reporting in DRX for UE configured with highSpeedMeasFlag-r16	NR Cell 1	LTE Cell 1			
6.7.5.1	NR SA FR1 – E-UTRAN RSRP absolute measurement accuracy	NR Cell 1	LTE Cell 1			
6.7.6.1	NR SA FR1 – E-UTRAN RSRQ absolute measurement accuracy	NR Cell 1	LTE Cell 1			
6.7.7.1	NR SA FR1 – E-UTRAN RS-SINR absolute measurement accuracy	NR Cell 1	LTE Cell 1			

Table E.4-3: Cell configuration mapping for SA FR1 – UTRA FDD Inter-RAT RRM testing

TC	Description	38.533 NR Cell1	38.533 UTRA Cell2	38.533 UTRA Cell3	38.533 UTRA Cell4	CA Type
6.3.1.6	NR SA FR1 – UTRA cell re-selection to higher priority UTRA	NR Cell 1	UTRA Cell 1			
6.6.5.1	NR SA FR1 – UTRAN event-triggered reporting in non-DRX	NR Cell 1	UTRA Cell 1			

E.5 Cell configuration mapping for SA FR2 test cases in Chapter 7

Table E.5-1 defines the cell configuration mapping for NR/5GC FR2 test cases in chapter 7 of this test specification.

Table E.5-1: Cell configuration mapping for SA FR2 RRM testing

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
7.1.1.1	NR SA FR2 cell re-selection	NR Cell 1	NR Cell 11			
7.1.1.2	NR SA FR2-FR2 cell re-selection	NR Cell 1	NR Cell 23			
7.1.1.3	NR SA FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	NR Cell 1	NR Cell 2			
7.1.1.4	NR SA FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	NR Cell 1	NR Cell 2			
7.1.1.5	NR SA FR2-FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	NR Cell 1	NR Cell 2			
7.1.1.6	NR SA FR2-FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	NR Cell 1	NR Cell 2			
7.3.1.4	NR SA FR1-FR2 synchronous DAPS handover	NR Cell 1	NR Cell 10			
7.3.1.5	NR SA FR1-FR2 asynchronous DAPS handover	NR Cell 1	NR Cell 10			
7.3.2.1.1	NR SA FR2 RRC re-establishment	NR Cell 1				
7.3.2.1.2	NR SA FR2-FR2 re-establishment	NR Cell 1				
7.3.2.1.3	NR SA FR2 RRC re-establishment without serving cell timing	NR Cell 1	NR Cell 2			
7.3.2.2.1	NR SA FR2 contention based random access	NR Cell 1				
7.3.2.2.2	NR SA FR2 non-contention based random access	NR Cell 1				
7.3.2.2.4	NR SA FR2 2-step non-contention based random access	NR Cell 1				
7.3.3.1	NR SA FR2 conditional handover	NR Cell 1	NR Cell 2			
7.3.3.2	NR SA FR2-FR2 conditional handover	NR Cell 1	NR Cell 6			
7.5.1.1	Radio Link Monitoring Out-of-sync Test for FR2 PCell configured with SSB-based RLM RS in non-DRX mode	NR Cell 1				
7.5.1.2	Radio Link Monitoring In-sync Test for FR2 PCell configured with SSB-based RLM RS in non-DRX mode	NR Cell 1				
7.5.1.3	Radio Link Monitoring Out-of-sync Test for FR2 PCell configured with SSB-based RLM RS in DRX mode	NR Cell 1				
7.5.1.4	Radio Link Monitoring In-sync Test for FR2 PCell configured with SSB-based RLM RS in DRX mode	NR Cell 1				
7.5.1.9	NR SA FR2 radio link monitoring UE scheduling restrictions	NR Cell 1				

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
7.5.5.1	NR SA FR2 SSB-based beam failure detection and link recovery in non-DRX	NR Cell 1				
7.5.5.2	NR SA FR2 SSB-based beam failure detection and link recovery in DRX	NR Cell 1				
7.5.5.3	NR SA FR2 CSI-RS-based beam failure detection and link recovery in non-DRX	NR Cell 1				
7.5.5.4	NR SA FR2 CSI-RS-based beam failure detection and link recovery in DRX	NR Cell 1				
7.5.5.6	NR SA FR2 Scell CSI-RS-based beam failure detection and link recovery in non-DRX	NR Cell 1	NR Cell 6			
7.5.5.7	NR SA FR2 Scell CSI-RS-based beam failure detection and link recovery in DRX	NR Cell 1	NR Cell 6			
7.5.6.1	NR SA FR2 DCI-based DL active BWP switch in non-DRX	NR Cell 1				
7.6.1.1	NR SA FR2 event-triggered reporting without gap in non-DRX	NR Cell 1	NR Cell 2			
7.6.1.2	NR SA FR2 event-triggered reporting without gap in DRX	NR Cell 1	NR Cell 2			
7.6.1.3	NR SA FR2 event-triggered reporting with gap in non-DRX	NR Cell 1	NR Cell 2			
7.6.1.4	NR SA FR2 event-triggered reporting with gap in DRX	NR Cell 1	NR Cell 2			
7.6.2.1	NR SA FR2-FR2 event-triggered reporting in non-DRX	NR Cell 6	NR Cell 3			
7.6.2.2	NR SA FR2-FR2 event-triggered reporting in DRX	NR Cell 6	NR Cell 3			
7.6.2.3	NR SA FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	NR Cell 6	NR Cell 3			
7.6.2.4	NR SA FR2-FR2 event-triggered reporting in DRX with SSB time index detection	NR Cell 6	NR Cell 3			
7.6.2.5	NR SA FR1-FR2 event-triggered reporting in non-DRX	NR Cell 6	NR Cell 3			
7.6.2.6	NR SA FR1-FR2 event-triggered reporting in DRX	NR Cell 6	NR Cell 3			
7.6.2.7	NR SA FR1-FR2 event-triggered reporting in non-DRX with SSB time index detection	NR Cell 6	NR Cell 3			
7.6.2.8	NR SA FR1-FR2 event-triggered reporting in DRX with SSB time index detection	NR Cell 6	NR Cell 3			
7.6.3.1	NR SA FR2 SSB-based L1-RSRP measurement in non-DRX	NR Cell 1				
7.6.3.2	NR SA FR2 SSB-based L1-RSRP measurement in DRX	NR Cell 1				
7.6.3.3	NR SA FR2 CSI-RS-based L1-RSRP measurement in non-DRX	NR Cell 1				
7.6.3.4	NR SA FR2 CSI-RS-based L1-RSRP measurement in DRX	NR Cell 1				
7.6.6.1	NR SA FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	NR Cell 1				
7.6.6.2	NR SA FR2 SSB based CMR and dedicated IMR L1-SINR measurement accuracy	NR Cell 1				
7.6.6.3	NR SA FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	NR Cell 1				
7.7.1.1	NR SA FR2 SS-RSRP measurement accuracy	NR Cell 489	NR Cell 1			
7.7.1.2	NR SA FR2-FR2 SS-RSRP measurement accuracy	NR Cell 6	NR Cell 3			
7.7.1.3.1	NR SA FR1-FR2 SS-RSRP absolute measurement accuracy	NR Cell 1	NR Cell 10			
7.7.1.3.2	Void					
7.7.2.1	NR SA FR2 SS-RSRQ measurement accuracy	NR Cell 1	NR Cell 2			

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
7.7.2.2	NR SA FR2-FR2 SS-RSRQ measurement accuracy	NR Cell 6	NR Cell 3			
7.7.3.1	NR SA FR2 SS-SINR measurement accuracy	NR Cell 1	NR Cell 2			
7.7.3.2	NR SA FR2-FR2 SS-SINR measurement accuracy	NR Cell 6	NR Cell 3			
7.7.6.1	NR SA FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	NR Cell 1				
7.7.6.2	NR SA FR2 SSB based CMR and dedicated IMR L1-SINR measurement accuracy	NR Cell 1				
7.7.6.3	NR SA FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	NR Cell 1				

E.6 Cell configuration mapping for E-UTRAN – SA test cases in Chapter 8

Table E.6-1 defines the cell configuration mapping for E-UTRAN - NR/5GC FR1 Inter-RAT test cases (serving cell in LTE) in chapter 8 of this test specification.

Table E.6-1: Cell configuration mapping for E-UTRA – SA FR1 Inter-RAT RRM testing

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
8.2.1.1	E-UTRA – NR FR1 cell re-selection to higher priority NR target cell	LTE Cell 1	NR Cell 1			
8.2.1.2	E-UTRA – NR FR1 Cell reselection to lower priority NR target Cell in FR1 for UE configured with highSpeedInterRAT-NR-r16	LTE Cell 1	NR Cell 1			
8.3.1.1	E-UTRA – NR FR1 handover with unknown target cell	LTE Cell 1	NR Cell 1			
8.4.1.1	E-UTRA – NR FR1 SFTD measurement delay in non-DRX	LTE Cell 1	NR Cell 1			
8.4.1.2	E-UTRA – NR FR1 SFTD measurement delay in DRX	LTE Cell 1	NR Cell 1			
8.4.2.1	E-UTRA event-triggered reporting of a NR FR1 neighbour cell without SSB time index detection in non-DRX	LTE Cell 1	NR Cell 1			
8.4.2.2	E-UTRA event-triggered reporting of a NR FR1 neighbour cell without SSB time index detection in DRX	LTE Cell 1	NR Cell 1			
8.4.2.3	E-UTRA event-triggered reporting of a NR FR1 neighbour cell with SSB time index detection in non-DRX	LTE Cell 1	NR Cell 1			
8.4.2.4	E-UTRA event-triggered reporting of a NR FR1 neighbour cell with SSB time index detection in DRX	LTE Cell 1	NR Cell 1			
8.4.2.9	E-UTRA – NR Inter-RAT event triggered reporting tests for FR1 with SSB time index detection in DRX for UE configured with highSpeedInterRAT-NR-r16	LTE Cell 1	NR Cell 1			
8.5.1.1	E-UTRA – NR FR1 SFTD measurement accuracy	LTE Cell 1	NR Cell 1			
8.5.2.1.1.1	E-UTRA SS-RSRP absolute measurement accuracy of a NR FR1 neighbour cell	LTE Cell 1	NR Cell 1			
8.5.2.2.1	Void	LTE Cell 1	NR Cell 1			
8.5.2.3.1	E-UTRA SS-RSRP absolute measurement accuracy of a NR FR2 neighbour cell	LTE Cell 1	NR Cell 1			

Table E.6-2 defines the cell configuration mapping for E-UTRAN - NR/5GC FR2 Inter-RAT test cases (serving cell in LTE) in chapter 8 of this test specification.

Table E.6-2: Cell configuration mapping for E-UTRA – SA FR2 Inter-RAT RRM testing

TC	Description	38.533 LTE Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
8.4.2.5	E-UTRA event-triggered reporting of a NR FR2 neighbour cell without SSB time index detection in non-DRX	LTE Cell 1	NR Cell 1			
8.4.2.6	E-UTRA event-triggered reporting of a NR FR2 neighbour cell without SSB time index detection in DRX	LTE Cell 1	NR Cell 1			
8.4.2.7	E-UTRA event-triggered reporting of a NR FR2 neighbour cell with SSB time index detection in non-DRX	LTE Cell 1	NR Cell 1			
8.4.2.8	E-UTRA event-triggered reporting of a NR FR2 neighbour cell with SSB time index detection in DRX	LTE Cell 1	NR Cell 1			
8.5.2.1.2	E-UTRA SS-RSRP absolute measurement accuracy of a NR FR2 neighbour cell	LTE Cell 1	NR Cell 1			
8.5.2.2.2	SS-RSRQ	LTE Cell 1	NR Cell 1			
8.5.2.3.2	E-UTRA SS-RSRQ absolute measurement accuracy of a NR FR1 neighbour cell	LTE Cell 1	NR Cell 1			

E.7 Cell configuration mapping for NR sidelink test cases in Chapter 9

Table E.7-1 defines the cell configuration mapping for NR PC5 – NR SA FR1 Uu con-current test cases (serving cell in FR1) in chapter 9 of this test specification.

Table E.7-1: Cell configuration mapping for NR PC5 – NR SA FR1 Uu con-current RRM testing

TC	Description	38.533 NR Cell1	38.533 NR Cell2	38.533 NR Cell3	38.533 NR Cell4	CA Type
9.1.1.3	NR SA FR1 UE transmit timing accuracy for FR1 NR cell as synchronization reference source	NR Cell 1				
9.1.2.1	NR SA FR1 initiation/cease of S-SSB transmission for FR1 NR cell as synchronization reference source	NR Cell 1				
9.1.5.1	NR SA FR1 congestion control measurement for concurrent operation	NR Cell 1				
9.1.6.1	NR SA FR1 interruption to WAN due to NR sidelink communication	NR Cell 1				

Table E.7-2 defines the cell configuration mapping for NR PC5 – NR SA FR2 Uu con-current test cases (serving cell in FR2) in chapter 9 of this test specification.

Table E.7-2: Cell configuration mapping for NR PC5 – SA FR2 con-current RRM testing

FFS

Annex F (normative): Measurement uncertainties and test tolerances

The requirements of this clause apply to all tests in the present document.

F.1 Measurement uncertainties and test tolerances for FR1 and FR2

F.1.1 Acceptable uncertainty of test system (normative)

See TS 38.521-1 [17] annex F.1.

F.1.1.1 Measurement of test environments

See TS 38.521-1 [17] Annex F1.1.

F.1.1.2 Measurement of RRM requirements

This clause defines the maximum test system uncertainty for the RRM requirements. The maximum uncertainty values allowed for the typical RRM measurement uncertainty contributors is defined in Table F.1.1.2-1 and Table F.1.1.2-2. Unless explicitly stated for a particular test case, these maximum uncertainty values should be used as starting point to perform the test tolerance analysis in TR 38.903 [22] for each of the test cases. Specific test cases might require a tighter measurement uncertainty value for some of the contributors. Exceptions to the general values in Table F.1.1.2-1 and Table F.1.1.2-2 shall be handled case by case.

Table F.1.1.2-1: Maximum allowed measurement uncertainty values for the test system for FR1 (up to 6 GHz) and Cell BW ≤ 40 MHz

MU contributor	Unit	Value	Comment
AWGN absolute power, N_{oc} averaged over BW_{Config}	dB	±1.5	
AWGN absolute power, N_{oc} for Measurement PRB	dB	±1.5	Measurement PRB may be for example #RB_J to RB_{J+19} for SSB-based, or selected RBs in the range #RB_0 to RB_{105} for CSI-RS-based
Ratio of cell X signal / AWGN, $Ês_X$ / N_{oc} averaged over BW_{Config}	dB	±0.3	Same as in LTE
Ratio of cell X signal / AWGN, $Ês_X$ / N_{oc} for Measurement PRB	dB	±0.3	Measurement PRB may be for example #RB_J to RB_{J+19} for SSB-based, or selected RBs in the range #RB_0 to RB_{105} for CSI-RS-based
Fading profile uncertainty	dB	±0.5 for 1 Tx ±0.7 for 2 Tx	Depends on fading profile, can be referenced from TS 38.101-4 [20]
AWGN and signal flatness*	dB	±2.0	Same as in LTE, can be referenced from TS 38.101-4 [20]
Uplink absolute power measurement	dB	±1.5	Same as in TS 38.521-1 [17]
Uplink relative power measurement	dB	±0.7	Same as in TS 38.521-1 [17]
Uplink signal transmit timing relative to downlink	Tc	±112	
Relative transmit timing accuracy during UE timing adjustment	Tc	±88	
Timing Advance Adjustment accuracy	Tc	±88	

MU contributor	Unit	Value	Comment
Note 1: The values in this table are specified per cell. Multi-cell test cases need to combined these values in the TT analysis in TR 38.903 Note 2:These values apply for cell BW ≤ 40 MHz. The maximum allowed measurement uncertainty for higher cell BW is FFS. Note 3: Void			

Table F.1.1.2-2: Maximum allowed measurement uncertainty values for the test system for FR2 (up to 40GHz) and Cell BW ≤ 400 MHz

MU contributor	Unit	Value	Comment
AWGN absolute power, N_{oc} averaged over BW_{Config}	dB	PC3: ±5.65[4,5] PC1: FFS	
AWGN absolute power, N_{oc} for Measurement PRB	dB	PC3: ±5.65[4,5] PC1: FFS	Measurement PRB may be for example $\#RB_J$ to RB_{J+19} for SSB-based, or selected RBs in the range $\#RB_0$ to RB_{274} for CSI-RS-based
Ratio of cell X signal / AWGN, $Ês_x$ / N_{oc} averaged over BW_{Config}	dB	±0.3	
Ratio of cell X signal / AWGN, $Ês_x$ / N_{oc} for Measurement PRB	dB	±0.3	Measurement PRB may be for example $\#RB_J$ to RB_{J+19} for SSB-based, or selected RBs in the range $\#RB_0$ to RB_{274} for CSI-RS-based
$Ês_x^{Note\ 3}$ absolute power, N_{oc} averaged over BW_{Config}	dB	PC3: ±5.65[4,5] PC1: FFS	
$Ês_x^{Note\ 3}$ absolute power, N_{oc} for Measurement PRB	dB	PC3: ±5.65[4,5] PC1: FFS	Measurement PRB may be for example $\#RB_J$ to RB_{J+19} for SSB-based, or selected RBs in the range $\#RB_0$ to RB_{274} for CSI-RS-based
Relative power between any two Ês levels at the same frequency	dB	±2.0	
Fading profile uncertainty	dB	±0.5 for 1 Tx ±0.7 for 2 Tx	
Uplink absolute power measurement	dB	TBD	
Uplink relative power measurement	dB	TBD	
Uplink signal transmit timing relative to downlink	Tc	±48	
Relative transmit timing during UE timing adjustment	Tc	±40	
Timing Advance Adjustment	Tc	±40	
NOTE 1: The values in this table are specified per cell. Multi-cell test cases need to combine these values in the TT analysis in TR 38.903 NOTE 2: These values apply for cell BW ≤ 400 MHz. The maximum allowed measurement uncertainty for higher cell BW is FFS. NOTE 3: Applies for test cases that use Ês without AWGN NOTE 4: Total Expanded MU for IFF for Max device size ≤ 30cm in TR 38.903 [22] Table E.3.1.1-2 for PC3 UEs and in Table FFS for PC1 UEs. NOTE 5: If the TT analysis for a specific test case based on this MU value results in an unsolvable conflict, making the test case untestable, even after the alternative solutions listed in TR 38.903 [22] clause A.4 have been considered for the test case in TS 38.133 [6] Annex A, the TT analysis shall be repeated using a lower MU value, taking into account the values defined in clause E.3.1 TR 38.903 [22]. The test case will be applicable for the subset of the test systems meeting this reduced MU Threshold.			

The maximum test system uncertainty for the EN-DC FR1 test cases in chapter 4 is defined in Table F.1.1.2-3.

The maximum test system uncertainty for the NR/5GC FR1 test cases in chapter 6 is defined in Table F.1.1.2-4.

The maximum test system uncertainty for the EN-DC FR2 test cases in chapter 5 is defined in Table F.1.1.2-5.

The maximum test system uncertainty for the NR/5GC FR2 test cases in chapter 7 is defined in Table F.1.1.2-6.

The maximum test system uncertainty for the E-UTRA – NR inter-RAT with E-UTRA serving cell test cases in chapter 8 is defined in Table F.1.1.2-7.

The maximum test system uncertainty for the FR1 NR sidelink test cases in chapter 9 is defined in Table F.1.1.2-8.

Table F.1.1.2-3: Maximum test system uncertainty for RRM requirements for EN-DC FR1 test cases

Subclause	Maximum Test System Uncertainty[1]	Derivation of Test System Uncertainty
4.3.2.2.1 Contention based random access test in FR1 for PSCell in EN-DC	Noc ±1.5 dB $\hat{E}s_2$ / Noc ±0.3 dB Uplink absolute power measurement ±1.5 dB Uplink relative power measurement ±0.7 dB ±112T_c Uplink signal transmit timing relative to downlink	$\hat{E}s_2$ / N_{oc} is the ratio of cell 2 signal / AWGN T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
4.3.2.2.2 Non-contention based random access test in FR1 for PSCell in EN-DC	Same as 4.3.2.2.1	Same as 4.3.2.2.1
4.3.2.2.3 EN-DC FR1 2-step contention based random access	Same as 4.3.2.2.1	Same as 4.3.2.2.1
4.3.2.2.4 EN-DC FR1 2-step non-contention based random access	Same as 4.3.2.2.1	Same as 4.3.2.2.1
4.4.1.1 EN-DC FR1 UE transmit timing accuracy	Noc ±1.5 dB $\hat{E}s_2$ / N_{oc} ±0.3 dB ±112Tc Uplink signal transmit timing relative to downlink	$\hat{E}s_2$ / Noc is the ratio of cell 2 signal / AWGN Tc = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
4.4.3.1 EN-DC FR1 timing advance adjustment accuracy	Noc ±1.5 dB $\hat{E}s_2$ / N_{oc} ±0.3 dB ±88T_c Timing Advance Adjustment accuracy	$\hat{E}s_2$ / N_{oc} is the ratio of cell 2 signal / AWGN T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
4.5.1.1 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	Average Noc_2 ±1.5 dB Average $\hat{E}s_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $\hat{E}s_2$ / Noc_2 ±0.3 dB Fading profile ±0.7 dB	Note: Noc_2 is the AWGN on cell 2 frequency $\hat{E}s_2$ / Noc_2 is the SNR Meas PRB are the measurement PRB for SSB-based RLM #RB_J to RB_{J+19}
4.5.1.2 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.3 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.4 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.5 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.6 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.7 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.8 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Same as 4.5.1.1	Same as 4.5.1.1

4.5.2.1 EN-DC FR1 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	± 0.6dB (AWGN conditions)	Overall system uncertainty for AWGN condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Effect of AWGN flatness and signal flatness Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: AWGN flatness and signal flatness has x 0.25 effect on the required SNR, so use sensitivity factor of x 0.25 for the uncertainty contribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty 2 + (0.25 x AWGN flatness and signal flatness) 2) Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB
4.5.2.2 EN-DC FR1 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	Same as 4.5.2.1	Same as 4.5.2.1
4.5.2.3 EN-DC FR1 interruptions during measurements on deactivated NR SCC in synchronous EN-DC	Noc_2 ±1.5 dB Noc_3 ±1.5 dB $Ês_2$ / Noc_2 ±0.3 dB $Ês_3$ / Noc_3 ±0.3 dB	Note: $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN $Ês_3$ / Noc_3 is the ratio of cell 3 signal / AWGN
4.5.2.4 EN-DC FR1 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC	Same as 4.5.2.3	Same as 4.5.2.3
4.5.2.5 EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC	Noc_1 ±1.5 dB Noc_2 ±1.5 dB Noc_3 ±1.5 dB $Ês_1$ / Noc ±0.3 dB $Ês_2$ / Noc ±0.3 dB $Ês_3$ / Noc ±0.3 dB	Note: Noc_1 is the AWGN on E-UTRAN cell 1 frequency $Ês_1$ / Noc_1 is the ratio of E-UTRAN cell 1 signal / AWGN Noc_2 is the AWGN on NR cell 2 frequency $Ês_2$ / Noc_2 is the ratio of NR cell 2 signal / AWGN Noc_3 is the AWGN on E-UTRAN cell 3 frequency $Ês_3$ / Noc_3 is the ratio of E-UTRAN cell 3 signal / AWGN
4.5.2.6 EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	Same as 4.5.2.5	Same as 4.5.2.5
4.5.3.1 EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	Average Noc_2 ±1.5 dB Average Noc_3 ±1.5 dB Average $Ês_2$ / Noc_2 ±0.3 dB Average $Ês_3$ / Noc_3 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB Noc_3 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB Meas PRB $Ês_3$ / Noc_3 ±0.3 dB	Note: Noc_2 is the AWGN on cell 2 frequency $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Noc_3 is the AWGN on cell 3 frequency $Ês_3$ / Noc_3 is the ratio of cell 3 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
4.5.3.2 EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 640ms SCell measurement cycle	Same as 4.5.3.1	Same as 4.5.3.1
4.5.3.3 EN-DC FR1 SCell activation and deactivation of unknown SCell in non-DRX	Same as 4.5.3.1	Same as 4.5.3.1
4.5.4.1 EN-DC FR1 UE UL carrier RRC reconfiguration delay	Noc2 ±1.5 dB Ês2 / Noc2 ±0.3 dB Noc3 ±1.5 dB Ês3 / Noc3 ±0.3 dB	Note: Noc2 is the AWGN on cell 2 frequency Ês2 / Noc2 is the ratio of cell 2 signal / AWGN Noc3 is the AWGN on cell 3 frequency Ês3 / Noc3 is the ratio of cell 3 signal / AWGN
4.5.5.1 EN-DC FR1 SSB-based beam failure detection and link recovery in non-DRX	Average Noc_2 ±1.5 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB Fading profile ±0.7 dB	Note: Noc_2 is the AWGN on cell 2 frequency $Ês_2$ / Noc_2 is the SNR for the SSB Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}

4.5.5.2 EN-DC FR1 SSB-based beam failure detection and link recovery in DRX	Same as 4.5.5.1	Same as 4.5.5.1
4.5.5.3 EN-DC FR1 CSI-RS-based beam failure detection and link recovery in non-DRX	Average Noc_2 ±1.5 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB Fading profile ±0.7 dB	Note: Noc_2 is the AWGN on cell 2 frequency $Ês_2$ / Noc_2 is the SNR for the CSI-RS Meas PRB is the measurement PRB for CSI-RSRP #RB_0 to RB_{274}
4.5.5.4 EN-DC FR1 CSI-RS-based beam failure detection and link recovery in DRX	Same as 4.5.5.3	Same as 4.5.5.3
4.5.5.5 EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in non-DRX	Average Noc_2 ±1.5 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB Fading profile ±0.7 dB	Note: Noc_2 is the AWGN on cell 2 frequency $Ês_2$ / Noc_2 is the SNR for the SSB Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19} Noc_2 is the AWGN on cell 2 frequency $Ês_2$ / Noc_2 is the SNR for the CSI-RS Meas PRB is the measurement PRB for CSI-RSRP #RB_0 to RB_{274}
4.5.5.6 EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in DRX	Same as 4.5.5.5	Same as 4.5.5.5
4.5.6.1.1 EN-DC FR1 DCI-based DL active BWP switch in non-DRX in synchronous EN-DC	±0.6 dB	Overall system uncertainty for fading conditions comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Effect of AWGN flatness and signal flatness Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: AWGN flatness and signal flatness has x 0.25 effect on the required SNR, so use sensitivity factor of x 0.25 for the uncertainty contribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty^2 + (0.25 x AWGN flatness and signal flatness)^2) Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB
4.5.6.1.2 EN-DC FR1 DCI-based DL active BWP switch with SCell in non-DRX in synchronous EN-DC	Same as 4.5.6.1.1	Same as 4.5.6.1.1
4.5.6.2.1 EN-DC FR1 RRC-based DL active BWP switch in non-DRX in synchronous EN-DC	±0.6 dB	Overall system uncertainty for fading conditions comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Effect of AWGN flatness and signal flatness Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: AWGN flatness and signal flatness has x 0.25 effect on the required SNR, so use sensitivity factor of x 0.25 for the uncertainty contribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty^2 + (0.25 x AWGN flatness and signal flatness)^2) Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB

4.5.7.1 EN-DC FR1 addition and release delay of known PSCell	Average Noc_1 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Meas PRB Noc_1 ±1.5 dB Meas PRB $Ês_1$ / Noc_1 ±0.3 dB	Noc_1 is the AWGN on NR freq1 $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
4.5.8.1 EN-DC FR1 interruptions at switching between two uplink carriers	Average Noc ±1.5 dB Average Ês / Noc ±0.3 dB	Noc is the AWGN on cell 2 frequency Ês / Noc is the ratio of cell 2 signal / AWGN
4.6.1.1 EN-DC FR1 event-triggered reporting without gap in non-DRX	Noc ±1.5 dB $Ês_2$ / Noc ±0.3 dB $Ês_3$ / Noc ±0.3 dB	Note: $Ês_2$ / Noc is the ratio of cell 2 signal / AWGN $Ês_3$ / Noc is the ratio of cell 3 signal / AWGN
4.6.1.2 EN-DC FR1 event-triggered reporting without gap in DRX	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.3 EN-DC FR1 event-triggered reporting with gap in non-DRX	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.4 EN-DC FR1 event-triggered reporting with gap in DRX	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.5 EN-DC FR1 event-triggered reporting without gap in non-DRX with SSB time index detection	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.6 EN-DC FR1 event-triggered reporting with gap in non-DRX with SSB time index detection	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.7 EN-DC FR1 event-triggered reporting without gap in DRX for UE configured with highSpeedMeasFlag-r16	Same as 4.6.1.1	Same as 4.6.1.1
4.6.2.1 EN-DC FR1-FR1 event-triggered reporting in non-DRX	Average Noc_2 ±1.5 dB Average Noc_3 ±1.5 dB Average $Ês_2$ / Noc_2 ±0.3 dB Average $Ês_3$ / Noc_3 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB Noc_3 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB Meas PRB $Ês_3$ / Noc_3 ±0.3 dB	Noc_2 is the AWGN on NR freq2 Noc_3 is the AWGN on NR freq3 $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN $Ês_3$ / Noc_3 is the ratio of cell 3 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
4.6.2.2 EN-DC FR1-FR1 event-triggered reporting in DRX	Same as 4.6.2.1	Same as 4.6.2.1
4.6.2.5 EN-DC FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	Same as 4.6.2.1	Same as 4.6.2.1
4.6.2.6 EN-DC FR1-FR1 event-triggered reporting in DRX with SSB time index detection	Same as 4.6.2.1	Same as 4.6.2.1
4.6.4.1 EN-DC FR1 SSB-based L1-RSRP measurement in non-DRX	Average Noc ±1.5 dB Average $Ês_0$ / Noc ±0.3 dB Average $Ês_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_0$ / Noc ±0.3 dB Meas PRB $Ês_1$ / Noc ±0.3 dB	Noc is the AWGN on NR freq1 $Ês_0$ / Noc is the SNR for the SSB#0 $Ês_1$ / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
4.6.4.2 EN-DC FR1 SSB-based L1-RSRP measurement in DRX	Same as 4.6.4.1	Same as 4.6.4.1
4.6.4.3 EN-DC FR1 CSI-RS-based L1-RSRP measurement in non-DRX	Average Noc ±1.5 dB Average $Ês_0$ / Noc ±0.3 dB Average $Ês_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_0$ / N_{oc} ±0.3 dB Meas PRB $Ês_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on NR freq1 $Ês_0$ / Noc is the SNR for the CSI-RS#0 $Ês_1$ / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-RSRP #RB_0 to RB_{274}
4.6.4.4 EN-DC FR1 CSI-RS-based L1-RSRP measurement in DRX	Same as 4.6.4.3	Same as 4.6.4.3
4.6.4.5 EN-DC FR1 SSB-based L1-RSRP measurement in DRX for UE configured with highSpeedMeasFlag-r16	Same as 4.6.4.1	Same as 4.6.4.1
4.6.5.2 EN-DC FR1 CLI-RSSI measurement with non-DRX	Noc2 ±1.5 dB Ês2 / Noc2 ±0.3 dB	Note: Noc2 is the AWGN on cell 2 (NR) frequency Ês2 / Noc2 is the ratio of cell 2 signal / AWGN

4.6.7.1 EN-DC FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in non-DRX	Average Noc ±1.5 dB Average $\hat{E}s_0$ / Noc ±0.3 dB Average $\hat{E}s_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $\hat{E}s_0$ / N_{oc} ±0.3 dB Meas PRB $\hat{E}s_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on Cell 2 frequency $\hat{E}s_0$ / Noc is the SNR for the CSI-RS#0 $\hat{E}s_1$ / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-SINR #RB_0 to RB_{275}
4.6.7.2 EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR measurement in DRX	Average Noc ±1.5 dB Average $\hat{E}s_0$ / Noc ±0.3 dB Average $\hat{E}s_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $\hat{E}s_0$ / N_{oc} ±0.3 dB Meas PRB $\hat{E}s_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on Cell 2 frequency $\hat{E}s_0$ / Noc is the SNR for the SSB#0 $\hat{E}s_1$ / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-SINR #RB_J to RB_{J+19}
4.6.7.3 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in DRX	Average Noc ±1.5 dB Average $\hat{E}s_0$ / Noc ±0.3 dB Average $\hat{E}s_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $\hat{E}s_0$ / N_{oc} ±0.3 dB Meas PRB $\hat{E}s_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on Cell 2 frequency $\hat{E}s_0$ / Noc is the SNR for the CSI-RS#0 $\hat{E}s_1$ / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-SINR #RB_0 to RB_{275}
4.7.1.1.1 EN-DC FR1 SS-RSRP absolute measurement accuracy	Average Noc ±1.5 dB Average $\hat{E}s_2$ / Noc ±0.3 dB Average $\hat{E}s_3$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $\hat{E}s_2$ / Noc ±0.3 dB Meas PRB $\hat{E}s_3$ / Noc ±0.3 dB	Noc is the AWGN on NR freq1 $\hat{E}s_2$ / Noc is the cell 2 SNR $\hat{E}s_3$ / Noc is the cell 3 SNR Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
4.7.1.1.2 EN-DC FR1 SS-RSRP relative measurement accuracy	Same as 4.7.1.1.1	Same as 4.7.1.1.1
4.7.1.2.1 EN-DC FR1-FR1 SS-RSRP absolute measurement accuracy	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $\hat{E}s_2$ / Noc_1 ±0.3 dB Average $\hat{E}s_3$ / Noc_2 ±0.3 dB Meas PRB Noc_1 ±1.5 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $\hat{E}s_2$ / Noc_1 ±0.3 dB Meas PRB $\hat{E}s_3$ / Noc_2 ±0.3 dB	Noc_1 is the AWGN on NR freq1 Noc_2 is the AWGN on NR freq2 $\hat{E}s_2$ / Noc_1 is the cell 2 SNR $\hat{E}s_3$ / Noc_2 is the cell 3 SNR Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
4.7.1.2.2 EN-DC FR1-FR1 SS-RSRP relative measurement accuracy	Same as 4.7.1.2.1	Same as 4.7.1.2.1
4.7.2.1 EN-DC FR1 SS-RSRQ measurement accuracy	Same as 4.7.1.1.1	Same as 4.7.1.1.1
4.7.2.2.1 EN-DC FR1-FR1 SS-RSRQ absolute measurement accuracy	Same as 4.7.1.2.1	Same as 4.7.1.2.1
4.7.2.2.2 EN-DC FR1-FR1 SS-RSRQ relative measurement accuracy	Same as 4.7.1.2.1	Same as 4.7.1.2.1
4.7.3.1 EN-DC FR1 SS-SINR measurement accuracy	Same as 4.7.1.1.1	Same as 4.7.1.1.1
4.7.3.2.1 EN-DC FR1-FR1 SS-SINR absolute measurement accuracy	Same as 4.7.1.2.1	Same as 4.7.1.2.1
4.7.3.2.2 EN-DC FR1-FR1 SS-SINR relative measurement accuracy	Same as 4.7.1.2.1	Same as 4.7.1.2.1
4.7.4.1.1 EN-DC FR1 SSB based L1-RSRP absolute measurement accuracy	Average Noc ±1.5 dB Average $\hat{E}s_2$ / Noc ±0.3 dB Meas PRB $\hat{E}s_2$ / Noc ±0.8 dB	Noc is the AWGN on NR freq1 $\hat{E}s_2$ / Noc is the cell 2 SNR Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
4.7.4.1.2 EN-DC FR1 SSB based L1-RSRP relative measurement accuracy	Same as 4.7.4.1.1	Same as 4.7.4.1.1
4.7.4.2.1 EN-DC FR1 CSI-RS based L1-RSRP absolute measurement accuracy	Same as 4.7.4.1.1	Same as 4.7.4.1.1
4.7.4.2.2 EN-DC FR1 CSI-RS based L1-RSRP relative measurement accuracy	Same as 4.7.4.1.1	Same as 4.7.4.1.1

4.7.5.1 EN-DC FR1 SFTD measurement accuracy	Average Noc_1 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Meas PRB Noc_1 ±1.5 dB Meas PRB $Ês_1$ / Noc_1 ±0.3 dB Average Noc_2 ±1.5 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.8 dB	Noc_1 is the AWGN on NR freq1 $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_J to RB_{J+19} Noc_2 is the AWGN on E-UTRA freq2 $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_{22} to RB_{27}
4.7.7.1.1 EN-DC FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR absolute measurement accuracy	Average Noc ±1.5 dB Average $Ês_2$ / Noc ±0.3 dB Meas PRB $Ês_2$ / Noc ±0.8 dB	Noc is the AWGN on NR freq1 $Ês_2$ / Noc is the SNR for the CSI-RS#0 & CSI-RS#1 Meas PRB is the measurement PRB for CSI-SINR #RB_0 to RB_{275}
4.7.7.1.2 EN-DC FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR relative measurement accuracy	Same as 4.7.7.1.1	Same as 4.7.7.1.1
4.7.7.2 EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	Average Noc ±1.5 dB Average $Ês_2$ / Noc ±0.3 dB Meas PRB $Ês_2$ / Noc ±0.8 dB	Noc is the AWGN on NR freq1 $Ês_2$ / Noc is the SNR for the SSB#0 & SSB#1 Meas PRB is the measurement PRB for SS-SINR #RB_J to RB_{J+19}
4.7.7.3.1 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR absolute measurement accuracy	Same as 4.7.7.1.1	Same as 4.7.7.1.1
4.7.7.3.2 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR relative measurement accuracy	Same as 4.7.7.1.1	Same as 4.7.7.1.1

Table F.1.1.2-4 Maximum test system uncertainty for RRM requirements for SA FR1 test cases

Subclause	Maximum Test System Uncertainty[1]	Derivation of Test System Uncertainty
6.1.1.1 NR SA FR1 cell re-selection	Noc ±1.5 dB Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB	Note: Ês1 / Noc is the ratio of cell 1 signal / AWGN Ês2 / Noc is the ratio of cell 2 signal / AWGN
6.1.1.2 NR SA FR1-FR1 cell re-selection	Noc1 ±1.5 dB Ês1 / Noc1 ±0.3 dB Noc2 ±1.5 dB Ês2 / Noc2 ±0.3 dB	Note: Noc1 is the AWGN on cell 1 frequency Ês1 / Noc1 is the ratio of cell 1 signal / AWGN Noc2 is the AWGN on cell 2 frequency Ês2 / Noc2 is the ratio of cell 2 signal / AWGN
6.1.1.3 NR SA FR1 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	Same as 6.1.1.1	Same as 6.1.1.1
6.1.1.4 NR SA FR1 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	Same as 6.1.1.1	Same as 6.1.1.1
6.1.1.5 NR SA FR1-FR1 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	Same as 6.1.1.2	Same as 6.1.1.2
6.1.1.6 NR SA FR1-FR1 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	Same as 6.1.1.2	Same as 6.1.1.2
6.1.1.7 NR SA FR1 cell re-selection for UE configured with highSpeedMeasFlag-r16	Same as 6.1.1.1	Same as 6.1.1.1
6.1.2.1 NR SA FR1 – E-UTRA cell re-selection to higher priority E-UTRA	Noc1 ±1.5 dB Ês1 / Noc1 ±0.3 dB Noc2 ±1.5 dB Ês2 / Noc2 ±0.3 dB	Note: Noc1 is the AWGN on cell 1 (NR) frequency Ês1 / Noc1 is the ratio of cell 1 signal / AWGN Noc2 is the AWGN on cell 2 (E-UTRAN) frequency Ês2 / Noc2 is the ratio of cell 2 signal / AWGN
6.1.2.2 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRA	Same as 6.1.2.1	Same as 6.1.2.1
6.1.2.3 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRAN for UE fulfilling low mobility relaxed measurement criterion	Same as 6.1.2.1	Same as 6.1.2.1
6.1.2.4 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRAN for UE fulfilling not-at-cell edge relaxed measurement criterion	Same as 6.1.2.1	Same as 6.1.2.1
6.1.2.5 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRA for UE configured with highSpeedMeasFlag-r16	Same as 6.1.2.1	Same as 6.1.2.1
6.3.1.1 NR SA FR1 handover with known target cell	Average Noc ±1.5 dB Average Ês1 / Noc ±0.3 dB Average Ês2 / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_1$ / Noc ±0.3 dB Meas PRB $Ês_2$ / Noc ±0.3 dB	Note: Ês1 / Noc is the ratio of cell 1 signal / AWGN Ês2 / Noc is the ratio of cell 2 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
6.3.1.2 NR SA FR1 handover with unknown target cell	Same as 6.3.1.1	Same as 6.3.1.1
6.3.1.3 NR SA FR1-FR1 Handover with unknown Target Cell	Noc1 ±1.5 dB Ês1 / Noc1 ±0.3 dB Noc2 ±1.5 dB Ês2 / Noc2 ±0.3 dB	Note: Noc1 is the AWGN on cell 1 frequency Ês1 / Noc1 is the ratio of cell 1 signal / AWGN Noc2 is the AWGN on cell 2 frequency Ês2 / Noc2 is the ratio of cell 2 signal / AWGN
6.3.1.4 NR SA FR1 – E-UTRA handover with known target cell	Same as 6.1.2.1	Same as 6.1.2.1
6.3.1.5 NR SA FR1 – E-UTRA handover with unknown target cell	Same as 6.1.2.1	Same as 6.1.2.1

6.3.1.6 NR SA FR1 – UTRAN FDD handover with known target cell	Noc ±1.5 dB Ês / Noc ±0.3 dB Ioc ±0.7 dB Îor / Ioc ± 0.3dB CPICH Ec / Ior ± 0.1dB SCH Ec / Ior ± 0.1dB	Note: Noc is the AWGN on cell 1 frequency Ês / Noc is the ratio of cell 1 signal / AWGN Ioc is the AWGN on cell 2 frequency Îor / Ioc is the ratio of cell 2 signal / AWGN CPICH Ec / Ior is the ratio of cell 2 CPICH code level / Ior SCH Ec / Ior is the ratio of cell 2 SCH code level / Ior
6.3.1.7 NR SA FR1 synchronous DAPS handover	Same as 6.3.1.1	Same as 6.3.1.1
6.3.1.8 NR SA FR1 asynchronous DAPS handover	Same as 6.3.1.1	Same as 6.3.1.1
6.3.1.9 NR SA FR1 Intra-band inter-frequency synchronous DAPS handover	Same as 6.3.1.3	Same as 6.3.1.3
6.3.1.10 NR SA FR1 Intra-band inter-frequency asynchronous DAPS handover	Same as 6.3.1.3	Same as 6.3.1.3
6.3.1.11 NR SA FR1 Inter-band inter-frequency synchronous DAPS handover	Same as 6.3.1.3	Same as 6.3.1.3
6.3.1.12 NR SA FR1 Inter-band inter-frequency asynchronous DAPS handover	Same as 6.3.1.3	Same as 6.3.1.3
6.3.2.1.1 NR SA FR1 RRC re-establishment	Same as 6.1.1.1	Same as 6.1.1.1
6.3.2.1.2 NR SA FR1 – FR1 RRC re-establishment	Same as 6.1.1.2	Same as 6.1.1.2
6.3.2.1.3 NR SA FR1 RRC re-establishment without serving cell timing	Average Noc ±1.5 dB Average $\hat{E}s_1$ / Noc ±0.3 dB Average $\hat{E}s_2$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $\hat{E}s_1$ / Noc ±0.3 dB Meas PRB $\hat{E}s_2$ / Noc ±0.3 dB	Note: $\hat{E}s_1$ / Noc is the ratio of cell 1 signal / AWGN $\hat{E}s_2$ / Noc is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
6.3.2.2.1	N_{oc} ±1.5 dB Ês / N_{oc} ±0.3 dB Uplink absolute power measurement ±1.5 dB Uplink relative power measurement ±0.7 dB ±112Tc Uplink signal transmit timing relative to downlink	$\hat{E}s_1$ / N_{oc} is the ratio of cell 1 signal / AWGN T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
6.3.2.2.2	Same as 6.3.2.2.1	Same as 6.3.2.2.1
6.3.2.2.3	Same as 6.3.2.2.1	Same as 6.3.2.2.1
6.3.2.2.4	Same as 6.3.2.2.1	Same as 6.3.2.2.1
6.3.2.3.1 NR SA FR1 RRC connection release with redirection	Same as 6.1.1.2	Same as 6.1.1.2
6.3.2.3.2 NR SA FR1 – E-UTRA RRC connection release with redirection	Same as 6.1.2.1	Same as 6.1.2.1
6.3.3.1 NR SA FR1 conditional handover	Same as 6.3.1.1	Same as 6.3.1.1
6.3.3.2 NR SA FR1-FR1 conditional handover	Same as 6.3.1.3	Same as 6.3.1.3
6.4.1.1 EN-DC FR1 UE transmit timing accuracy	Noc ±1.5 dB $\hat{E}s_1$ / N_{oc} ±0.3 dB ±112Tc Uplink signal transmit timing relative to downlink	$\hat{E}s_1$ / Noc is the ratio of cell 1 signal / AWGN Tc = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]

6.4.3.1 NR SA FR1 timing advance adjustment accuracy	Noc ±1.5 dB $Ês_1$ / N_{oc} ±0.3 dB ±88T_c Timing Advance Adjustment accuracy	$Ês_1$ / N_{oc} is the ratio of cell 1 signal / AWGN T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
6.5.1.1 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	Average Noc ±1.5 dB Average Ês / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB Ês / Noc ±0.3 dB Fading profile ±0.7 dB	Noc is the AWGN on cell 1 frequency Ês / Noc is the SNR Meas PRB are the measurement PRB for SSB-based RLM #RB_J to RB_{J+19}
6.5.1.2 NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.3 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in DRX mode	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.4 NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in DRX mode	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.5 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.6 NR SA FR1 radio link monitoring in-sync test for PCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.7 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with CSI-RS-based RLM RS in DRX mode	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.8 NR SA FR1 radio link monitoring in-sync test for PCell configured with CSI-RS-based RLM RS in DRX mode	Same as 6.5.1.1	Same as 6.5.1.1
6.5.2.1 NR SA FR1 interruptions during measurements on deactivated NR SCC	Noc_1 ±1.5 dB Noc_2 ±1.5 dB $Ês_1$ / Noc_1 ±0.3 dB $Ês_2$ / Noc_2 ±0.3 dB	Note: $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN
6.5.3.1 NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_1 ±1.5 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_1$ / Noc_1 ±0.3 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	Note: Noc_1 is the AWGN on cell 1 frequency Noc_2 is the AWGN on cell 2 frequency $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
6.5.3.2 NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 640ms SCell measurement cycle	Same as 6.5.3.1	Same as 6.5.3.1
6.5.3.3 NR SA FR1 SCell activation and deactivation of unknown SCell in non-DRX	Same as 6.5.3.1	Same as 6.5.3.1
6.5.5.1 NR SA FR1 SSB-based beam failure detection and link recovery in non-DRX	Average Noc_1 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Meas PRB Noc_1 ±1.5 dB Meas PRB $Ês_1$ / Noc_1 ±0.3 dB Fading profile ±0.7 dB	Note: Noc_1 is the AWGN on cell 1 frequency $Ês_1$ / Noc_1 is the SNR for the SSB Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
6.5.5.2 NR SA FR1 SSB-based beam failure detection and link recovery in DRX	Same as 6.5.5.1	Same as 6.5.5.1

6.5.5.3 NR SA FR1 CSI-RS-based beam failure detection and link recovery in non-DRX	Average Noc_1 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Meas PRB Noc_1 ±1.5 dB Meas PRB $Ês_1$ / Noc_1 ±0.3 dB Fading profile ±0.7 dB	Note: Noc_1 is the AWGN on cell 1 frequency $Ês_1$ / Noc_1 is the SNR for the CSI-RS Meas PRB is the measurement PRB for CSI-RSRP #RB_0 to RB_{274}
6.5.5.4 NR SA FR1 CSI-RS-based beam failure detection and link recovery in DRX	Same as 6.5.5.3	Same as 6.5.5.3
6.5.5.5 NR SA FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in non-DRX	Average Noc_2 ±1.5 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB Fading profile ±0.7 dB	Note: Noc_2 is the AWGN on cell 2 frequency $Ês_2$ / Noc_2 is the SNR for the SSB and CSI-RS Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
6.5.5.6 NR SA FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in DRX	Same as 6.5.5.5	Same as 6.5.5.5
6.5.6.1.1 NR SA FR1-FR1 DCI-based DL active BWP switch in non-DRX	±0.6 dB	Overall system uncertainty for fading conditions comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Effect of AWGN flatness and signal flatness Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: AWGN flatness and signal flatness has x 0.25 effect on the required SNR, so use sensitivity factor of x 0.25 for the uncertainty contribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty^2 + (0.25 x AWGN flatness and signal flatness)^2) Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB
6.5.6.1.2 NR SA FR1 DCI-based DL active BWP switch in non-DRX	Same as 6.5.6.1.1	Same as 6.5.6.1.1
6.5.6.2.1 NR SA FR1 RRC-based DL active BWP switch in non-DRX	±0.6 dB	Overall system uncertainty for fading conditions comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Effect of AWGN flatness and signal flatness Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: AWGN flatness and signal flatness has x 0.25 effect on the required SNR, so use sensitivity factor of x 0.25 for the uncertainty contribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty^2 + (0.25 x AWGN flatness and signal flatness)^2) Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB
6.5.7.1 NR SA FR1 DL Interruptions at switching between two uplink carriers in FDD-TDD CA	Noc1 ±1.5 dB Noc2 ±1.5 dB Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB	Note: Ês1 / Noc1 is the ratio of cell 1 signal / AWGN Ês2 / Noc2 is the ratio of cell 2 signal / AWGN
6.5.7.2 NR SA FR1 DL Interruptions at switching between two uplink carriers in TDD-TDD CA	Same as 6.5.7.1	Same as 6.5.7.1
6.6.1.1 SA event triggered reporting tests without gap under non-DRX	Noc ±1.5 dB $Ês_1$ / Noc ±0.3 dB $Ês_2$ / Noc ±0.3 dB	Note: $Ês_1$ / Noc is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc is the ratio of cell 2 signal / AWGN
6.6.1.2 SA event triggered reporting tests without gap under DRX	Same as 6.6.1.1	Same as 6.6.1.1

6.6.1.3 SA event triggered reporting tests with per-UE gaps under non-DRX	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.4 SA event triggered reporting tests with per-UE gaps under DRX	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.5 SA event triggered reporting tests without gap under non-DRX with SSB index reading	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.6 SA event triggered reporting tests with per-UE gaps under non-DRX with SSB index reading	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.7 NR SA FR1 event-triggered reporting without gap in DRX for UE configured with highSpeedMeasFlag-r16	Same as 6.6.1.1	Same as 6.6.1.1
6.6.2.1 NR SA FR1-FR1 event-triggered reporting in non-DRX	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_1 ±1.5 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_1$ / Noc_1 ±0.3 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	Noc_1 is the AWGN on NR freq1 Noc_2 is the AWGN on NR freq2 $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
6.6.2.2 NR SA FR1-FR1 event-triggered reporting in DRX	Same as 6.6.2.1	Same as 6.6.2.1
6.6.2.5 NR SA FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	Same as 6.6.2.1	Same as 6.6.2.1
6.6.2.6 NR SA FR1-FR1 event-triggered reporting in DRX with SSB time index detection	Same as 6.6.2.1	Same as 6.6.2.1
6.6.3.1 NR SA FR1 – E-UTRAN event-triggered reporting in non-DRX	Freq 1 Noc ±1.5 dB Freq 2 Noc ±1.5 dB Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB Fading ±0.5 dB	Note: Ês1 / Noc is the ratio of cell 1 signal / AWGN Ês2 / Noc is the ratio of cell 2 signal / AWGN
6.6.3.2 NR SA FR1 – E-UTRAN event-triggered reporting in DRX	Same as 6.6.3.1	Same as 6.6.3.1
6.6.3.3 NR SA FR1 – E-UTRAN event-triggered reporting in DRX for UE configured with highSpeedMeasFlag-r16	Freq 1 Noc ±1.5 dB Freq 2 Noc ±1.5 dB Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB	Note: Ês1 / Noc is the ratio of cell 1 signal / AWGN Ês2 / Noc is the ratio of cell 2 signal / AWGN
6.6.4.1 NR SA FR1 SSB-based L1-RSRP measurement in non-DRX	Average Noc ±1.5 dB Average $Ês_0$ / Noc ±0.3 dB Average $Ês_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_0$ / Noc ±0.3 dB Meas PRB $Ês_1$ / Noc ±0.3 dB	Noc is the AWGN on NR freq1 $Ês_0$ / Noc is the SNR for the SSB#0 $Ês_1$ / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
6.6.4.2 NR SA FR1 SSB-based L1-RSRP measurement in DRX	Same as 6.6.4.1	Same as 6.6.4.1
6.6.4.3 NR SA FR1 CSI-RS-based L1-RSRP measurement in non-DRX	Average Noc ±1.5 dB Average $Ês_0$ / Noc ±0.3 dB Average $Ês_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_0$ / N_{oc} ±0.3 dB Meas PRB $Ês_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on NR freq1 $Ês_0$ / Noc is the SNR for the CSI-RS#0 $Ês_1$ / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-RSRP #RB_0 to RB_{274}
6.6.4.4 NR SA FR1 CSI-RS-based L1-RSRP measurement in DRX	Same as 6.6.4.3	Same as 6.6.4.3
6.6.4.5 NR SA FR1 SSB-based L1-RSRP measurement in DRX for UE configured with highSpeedMeasFlag-r16	Same as 6.6.4.1	Same as 6.6.4.1

6.6.5.1 NR SA FR1 – UTRAN event-triggered reporting in non-DRX	Noc ±1.5 dB Ês / Noc ±0.3 dB Ioc ±0.7 dB Îor / Ioc ± 0.3dB CPICH Ec / Ior ± 0.1dB SCH Ec / Ior ± 0.1dB	Note: Noc is the AWGN on cell 1 frequency Ês / Noc is the ratio of cell 1 signal / AWGN Ioc is the AWGN on cell 2 frequency Îor / Ioc is the ratio of cell 2 signal / AWGN CPICH Ec / Ior is the ratio of cell 2 CPICH code level / Ior SCH Ec / Ior is the ratio of cell 2 SCH code level / Ior
6.6.8.1 NR SA FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	Average Noc ±1.5 dB Average $Ês_0$ / Noc ±0.3 dB Average $Ês_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_0$ / N_{oc} ±0.3 dB Meas PRB $Ês_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on Cell 1 frequency $Ês_0$ / Noc is the SNR for the CSI-RS#0 $Ês_1$ / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-SINR #RB_0 to RB_{275}
6.6.8.2 NR SA FR1 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	Average Noc ±1.5 dB Average $Ês_0$ / Noc ±0.3 dB Average $Ês_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_0$ / N_{oc} ±0.3 dB Meas PRB $Ês_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on Cell 1 frequency $Ês_0$ / Noc is the SNR for the SSB#0 $Ês_1$ / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-SINR #RB_J to RB_{J+19}
6.6.8.3 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	Average Noc ±1.5 dB Average $Ês_0$ / Noc ±0.3 dB Average $Ês_1$ / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB $Ês_0$ / N_{oc} ±0.3 dB Meas PRB $Ês_1$ / N_{oc} ±0.3 dB	Noc is the AWGN on Cell 1 frequency $Ês_0$ / Noc is the SNR for the CSI-RS#0 $Ês_1$ / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-SINR #RB_0 to RB_{275}
6.7.1.1.1 NR SA FR1 SS-RSRP absolute measurement accuracy	Average Noc ±1.5 dB Average Ês1 / Noc ±0.3 dB Average Ês2 / Noc ±0.3 dB meas PRB Ês1 / Noc ±0.3 dB meas PRB Ês2 / Noc ±0.3 dB	Noc is the AWGN on NR freq1 Ês1 / Noc is the cell 1 SNR Ês2 / Noc is the cell 2 SNR meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
6.7.1.1.2 NR SA FR1 SS-RSRP relative measurement accuracy	Same as 6.7.1.1.1	Same as 6.7.1.1.1
6.7.1.2.1 NR SA FR1-FR1 SS-RSRP absolute measurement accuracy	Average Noc1 ±1.5 dB Average Noc2 ±1.5 dB Average Ês1 / Noc1 ±0.3 dB Average Ês2 / Noc2 ±0.3 dB meas PRB Ês1 / Noc1 ±0.3 dB meas PRB Ês2 / Noc2 ±0.3 dB	Noc1 is the AWGN on NR freq1 Noc2 is the AWGN on NR freq2 Ês1 / Noc1 is the cell 2 SNR Ês2 / Noc2 is the cell 3 SNR meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
6.7.1.2.2 NR SA FR1-FR1 SS-RSRP relative measurement accuracy	Same as 6.7.1.2.1	Same as 6.7.1.2.1
6.7.2.1 NR SA FR1 SS-RSRQ measurement accuracy	Same as 6.7.1.1.1	Same as 6.7.1.1.1
6.7.2.2.1 NR SA FR1-FR1 SS-RSRQ absolute measurement accuracy	Same as 6.7.1.2.1	Same as 6.7.1.2.1
6.7.2.2.2 NR SA FR1-FR1 SS-RSRQ relative measurement accuracy	Same as 6.7.1.2.1	Same as 6.7.1.2.1
6.7.3.1 NR SA FR1 SS-SINR measurement accuracy	Same as 6.7.1.1.1	Same as 6.7.1.1.1
6.7.3.2.1 NR SA FR1-FR1 SS-SINR absolute measurement accuracy	Same as 6.7.1.2.1	Same as 6.7.1.2.1
6.7.3.2.2 NR SA FR1-FR1 SS-SINR relative measurement accuracy	Same as 6.7.1.2.1	Same as 6.7.1.2.1
6.7.4.1.1 NR SA FR1 SSB based L1-RSRP absolute measurement accuracy	Average Noc ±1.5 dB Average Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.8 dB	Noc is the AWGN on NR freq1 Ês2 / Noc is the cell 1 SNR Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
6.7.4.1.2 NR SA FR1 SSB based L1-RSRP relative measurement accuracy	Same as 6.7.4.1.1	Same as 6.7.4.1.1
6.7.4.2.1 NR SA FR1 CSI-RS based L1-RSRP absolute measurement accuracy	Same as 6.7.4.1.1	Same as 6.7.4.1.1

6.7.4.2.2 NR SA FR1 CSI-RS based L1-RSRP relative measurement accuracy	Same as 6.7.4.1.1	Same as 6.7.4.1.1
6.7.5.1 NR SA FR1 – E-UTRAN RSRP absolute measurement accuracy	Average Noc ±1.5 dB Average Ês / Noc ±0.3 dB Meas PRB Noc ±1.5 dB Meas PRB Ês / Noc ±0.8 dB	Noc is the AWGN on E-UTRA freq1 Ês / Noc is the ratio of cell 1 signal / AWGN Meas PRB are the measurement PRB for RSRP #RB_{22} to RB_{27}
6.7.6.1 NR SA FR1 – E-UTRAN RSRQ absolute measurement accuracy	Same as 6.7.5.1	Same as 6.7.5.1
6.7.7.1 NR SA FR1 – E-UTRAN RS-SINR absolute measurement accuracy	Same as 6.7.5.1	Same as 6.7.5.1
6.7.9.1.1 NR SA FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR absolute measurement accuracy	Average Noc ±1.5 dB Average Ês2 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.8 dB	Noc is the AWGN on NR freq1 Ês2 / Noc is the SNR for the CSI-RS#0 & CSI-RS#1 Meas PRB is the measurement PRB for CSI-SINR #RB0 to RB275
6.7.9.1.2 NR SA FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR relative measurement accuracy	Same as 6.7.9.1.1	Same as 6.7.9.1.1
6.7.9.2 NR SA FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	Average Noc ±1.5 dB Average Ês2 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.8 dB	Noc is the AWGN on NR freq1 Ês2 / Noc is the SNR for the SSB#0 & SSB#1 Meas PRB is the measurement PRB for SS-SINR #RBJ to RBJ+19
6.7.9.3.1 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR absolute measurement accuracy	Same as 6.7.9.1.1	Same as 6.7.9.1.1
6.7.9.3.2 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR relative measurement accuracy	Same as 6.7.9.1.1	Same as 6.7.9.1.1

Table F.1.1.2-5: Maximum test system uncertainty for RRM requirements for EN-DC FR2 test cases

Subclause	Maximum Test System Uncertainty[1]	Derivation of Test System Uncertainty
5.3.2.2.1 EN-DC FR2 contention based random access	Average Ês ±6.0 dB Meas PRB Ês ±6.0 dB Uplink absolute power measurement ±6.0 dB Uplink relative power measurement ±FFS dB ±[48]T_c Uplink signal transmit timing relative to downlink	Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19} T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
5.3.2.2.2 EN-DC FR2 non-contention based random access	Same as 5.3.2.2.1	Same as 5.3.2.2.1
5.4.1.1 EN-DC FR2 UE transmit timing accuracy	Noc ±5.65 dB, f<=40.8 GHz $Ês_2$ / N_{oc} ±0.3 dB ±48T_c Uplink signal transmit timing relative to downlink ±40T_c Relative during UE timing adjustment	 $Ês_2$ / Noc is the ratio of cell 2 signal / AWGN T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
5.4.3.1 EN-DC FR2 UE timing advance adjustment accuracy	Noc ±5.65 dB, f<=40.8 GHz Ês1 / Noc ±0.3 dB ±40Tc timing advance adjustment	 Ês1 / Noc is the ratio of cell 1 signal / AWGN Tc = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
5.5.1.1 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	Average Noc ±5.65 dB, f<=40.8 GHz Average Ês1 / Noc ±0.3 dB Average Ês2 / Noc ±0.3 dB Fading profile ±0.5 dB for 1Tx	Ês1 / Noc is the SNR of RLM-RS1 Ês2 / Noc is the SNR of RLM-RS2
5.5.1.2 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	Same as 5.5.1.1	Same as 5.5.1.1
5.5.1.3 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Same as 5.5.1.1	Same as 5.5.1.1
5.5.1.4 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Same as 5.5.1.1	Same as 5.5.1.1
5.5.1.5 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Average Noc ±5.65 dB, f<=40.8 GHz Average Ês1 / Noc ±0.3 dB Average Ês2 / Noc ±0.3 dB Fading profile ±0.5 dB for 1Tx	 Ês1 / Noc is the SNR of RLM-RS1 Ês2 / Noc is the SNR of RLM-RS2
5.5.1.6 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 5.5.1.5	Same as 5.5.1.5
5.5.1.7 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Same as 5.5.1.5	Same as 5.5.1.5
5.5.1.8 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Same as 5.5.1.5	Same as 5.5.1.5

5.5.2.1 EN-DC FR2 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	Noc ±5.65 dB, f<=40.8 GHz $Ês_2$ / N_{oc} ±0.3 dB	 $Ês_2$ / Noc is the ratio of cell 2 signal / AWGN
5.5.2.2 EN-DC FR2 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	Same as 5.5.2.1	Same as 5.5.2.1
5.5.5.1 EN-DC FR2 SSB-based beam failure detection and link recovery in non-DRX	Noc averaged over BW_{Config}, ±5.65 dB, f<=40.8 GHz Noc averaged over measured PRBs, ±5.65 dB, f<=40.8 GHz Ês / N_{oc} averaged over BW_{Config}: ±0.3 dB Ês / N_{oc} averaged over measured PRBs: ±0.3 dB Fading profile ±0.7 dB, 2Tx	Noc averaged over BW_{Config} is the AWGN absolute power averaged over BW_{Config} Noc averaged over measured PRBs is the AWGN absolute power averaged over measured PRBs Ês / N_{oc} averaged over BW_{Config} is the Ratio of cell signal / AWGN averaged over BW_{Config} Ês / N_{oc} averaged over measured PRBs is the Ratio of cell signal / AWGN averaged over measured PRBs
5.5.5.2 EN-DC FR2 SSB-based beam failure detection and link recovery in DRX	Same as 5.5.5.1	Same as 5.5.5.1
5.5.5.3 EN-DC FR2 CSI-RS-based beam failure detection and link recovery in non-DRX	Noc ±5.65 dB, f<=40.8 GHz $Ês_2$ / N_{oc} ±0.3 dB Fading profile ±0.7 dB for 2Tx	Note: Noc is the AWGN on cell 2 frequency $Ês_2$ / Noc is the SNR for the CSI-RS
5.5.5.4 EN-DC FR2 CSI-RS-based beam failure detection and link recovery in DRX	Same as 5.5.5.3	Same as 5.5.5.3
5.5.5.5 EN-DC FR2 scheduling available restriction during SSB-based beam failure detection and link recovery in non-DRX	Same as 5.5.5.1	Same as 5.5.5.1
5.5.5.6 EN-DC FR2 SCell CSI-RS-based beam failure detection and link recovery in non-DRX	Noc ±5.65 dB, f<=40.8 GHz $Ês_3$ / N_{oc} ±0.3 dB Fading profile ±0.7 dB for 2Tx	Note: Noc is the AWGN on cell 3 frequency $Ês_3$ / Noc is the SNR for the CSI-RS
5.5.5.7 EN-DC FR2 SCell CSI-RS-based beam failure detection and link recovery in DRX	Same as 5.5.5.6	Same as 5.5.5.6
5.6.1.1 EN-DC FR2 event-triggered reporting without gap in non-DRX	$Ês_2$ averaged over BW ±5.65 dB, f <= 40.8 GHz $Ês_2$ averaged over measured PRB ±5.65 dB, f <= 40.8 GHz $Ês_3$ averaged over BW ±5.65 dB, f <= 40.8 GHz $Ês_3$ averaged over measured PRB ±5.65 dB, f <= 40.8 GHz	$Ês_2$ averaged over BW is the absolute power of cell 2 signal averaged over BW $Ês_2$ averaged over measured PRB is the absolute power of cell 2 signal averaged over measured PRB $Ês_3$ averaged over BW is the absolute power of cell 3 signal averaged over BW $Ês_3$ averaged over measured PRB is the absolute power of cell 3 signal averaged over measured PRB
5.6.1.2 EN-DC FR2 event-triggered reporting without gap in DRX	Noc ±5.65 dB Ês2 / Noc ±0.3 dB Ês3 / Noc ±0.3 dB	 Ês2 / Noc is the ratio of cell 2 signal / AWGN Ês3 / Noc is the ratio of cell 3 signal / AWGN
5.6.1.3 EN-DC FR2 event-triggered reporting without gap in non-DRX	Same as 5.6.1.1	Same as 5.6.1.1
5.6.1.4 EN-DC FR2 event-triggered reporting with gap in DRX	Same as 5.6.1.2	Same as 5.6.1.2
5.6.2.1 EN-DC FR2-FR2 event-triggered reporting in non-DRX	Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz Average Ês2 ±5.65 dB Meas PRB Ês2 ±5.65 dB	Ês1 is NR cell 2 signal Ês2 is NR cell 3 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19

5.6.2.2 EN-DC FR2-FR2 event-triggered reporting in DRX	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB Average Ês2 / Noc ±0.3 dB Ês2 / Noc over meas PRBs ±0.3 dB	Ês1 is NR cell 2 signal Ês2 is NR cell 3 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
5.6.2.3 EN-DC FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	Same as 5.6.2.1	Same as 5.6.2.1
5.6.2.4 EN-DC FR2-FR2 event-triggered reporting in DRX with SSB time index detection	Same as 5.6.2.2	Same as 5.6.2.2
5.6.2.5 EN-DC FR1-FR2 event-triggered reporting in non-DRX	Average Ês2 ±5.65, f <= 40.8 GHz	Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
5.6.2.6 EN-DC FR1-FR2 event-triggered reporting in DRX	Noc ±5.65 dB, f <= 40.8 GHz Ês2 / Noc ±0.3 dB	Ês2 / Noc is the ratio of cell 2 signal / AWGN
5.6.2.7 EN-DC FR1-FR2 event-triggered reporting in non-DRX with SSB time index detection	Same as 5.6.2.5	Same as 5.6.2.5
5.6.2.8 EN-DC FR1-FR2 event-triggered reporting in DRX with SSB time index detection	Same as 5.6.2.6	Same as 5.6.2.6
5.6.3.1 EN-DC FR2 SSB-based L1-RSRP measurement in non-DRX	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the SSB#0 Ês1 / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
5.6.3.2 EN-DC FR2 SSB-based L1-RSRP measurement in DRX	Same as 5.6.3.1	Same as 5.6.3.1
5.6.3.3 EN-DC FR2 CSI-RS-based L1-RSRP measurement in non-DRX	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the CSI-RS#0 Ês1 / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-RS-RSRP
5.6.3.4 EN-DC FR2 CSI-RS-based L1-RSRP measurement in DRX	Same as 5.6.3.3	Same as 5.6.3.3
5.6.6.1 EN-DC FR2 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the CSI-RS#0 Ês1 / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-RS-SINR #RBJ to RBJ+275

5.6.6.2 EN-DC FR2 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the SSB#0 Ês1 / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-SINR#RBJ to RBJ+19
5.6.6.3 EN-DC FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	Same as 5.6.6.1	Same as 5.6.6.1
5.7.1.1 EN-DC FR2 SS-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.3 dB Test 2 Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz Average Ês2 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês2 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 2 signal / AWGN Ês2 / Noc is the ratio of cell 3 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19 Test 2 Ês1 is NR cell 2 signal Ês2 is NR cell 3 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
5.7.1.2 EN-DC FR2-FR2 SS-RSRP measurement accuracy	Noc1 ±5.65 dB, f <= 40.8 GHz Noc1 over measPRBs ±5.65 dB, f <= 40.8 GHz Noc2 ±5.65 dB, f <= 40.8 GHz Noc2 over measPRBs ±5.65 dB, f <= 40.8 GHz Ês1 / Noc1 ±0.3 dB Ês2 / Noc2 ±0.3 dB Meas PRB Ês1 / Noc1 ±0.3 dB Meas PRB Ês2 / Noc2 ±0.3 dB	Noc1 is the AWGN on the NR freq 1 Noc2 is the AWGN on the NR freq 2 Ês1 / Noc1 is the ratio of cell 2 signal / AWGN Ês2 / Noc2 is the ratio of cell 3 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
5.7.1.3 EN-DC FR1-FR2 SS-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês2 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.3 dB Test 2 Average Ês2 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês2 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês2 / Noc is the ratio of cell 3 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19 Test 2 Ês2 is NR cell 3 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
5.7.2.1 EN-DC FR2 SS-RSRQ measurement accuracy	Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB, f <= 40.8 GHz Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.3 dB	Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 2 signal / AWGN Ês2 / Noc is the ratio of cell 3 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19

5.7.2.2 EN-DC FR2-FR2 SS-RSRQ measurement accuracy	Same as 5.7.1.2	Same as 5.7.1.2
5.7.3.1 EN-DC FR2 SS-SINR measurement accuracy	Same as 5.7.2.1	Same as 5.7.2.1
5.7.3.2 EN-DC FR2-FR2 SS-SINR measurement accuracy	Same as 5.7.1.2	Same as 5.7.1.2
5.7.4.1 EN-DC FR2 SSB based L1-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Test 2 Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19 Test 2 Ês1 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
5.7.4.2 EN-DC FR2 CSI-RS based L1-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Test 2 Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for CSI-RS-RSRP Test 2 Ês1 is NR cell 2 signal Meas PRB is the measurement PRB for CSI-RS-RSRP
5.7.6.1 EN-DC FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for CSI-RS-RSRP
5.7.6.2 EN-DC FR2 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for SSB or CSI-RS
5.7.6.3 EN-DC FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for CSI-RS-RSRP

Table F.1.1.2-6: Maximum test system uncertainty for RRM requirements for SA FR2 test cases

Subclause	Maximum Test System Uncertainty[1]	Derivation of Test System Uncertainty
7.1.1.1 NR SA FR2 cell re-selection	Noc, averaged over BW_{Config}, ±5.65 dB Noc, averaged over Measurement PRB, ±5.65 dB Es_1/Noc averaged over BW_{Config} ±0.3 dB Es_1/Noc averaged over Measurement PRB ±0.3 dB Es_2/Noc averaged over BW_{Config} ±0.3 dB Es_2/Noc averaged over Measurement PRB ±0.3 dB	Noc averaged over BW_{Config} is the AWGN absolute power of RF channel 1 averaged over BW_{Config} Noc averaged over Measurement PRB is the AWGN absolute power of RF channel 1 averaged over Measurement PRB Es_1/Noc averaged over BW_{Config} is Ratio of cell 1 signal / AWGN averaged over BW_{Config} Es_1/Noc averaged over Measurement PRB is Ratio of cell 1 signal / AWGN averaged over Measurement PRB Es_2/Noc averaged over BW_{Config} is Ratio of cell 2 signal / AWGN averaged over BW_{Config} Es_2/Noc averaged over Measurement PRB is Ratio of cell 2 signal / AWGN averaged over Measurement PRB
7.1.1.2 NR SA FR2-FR2 cell re-selection	Noc_1, averaged over BW_{Config}, ±5.65 dB Noc_1, averaged over Measurement PRB, ±5.65 dB Noc_2, averaged over BW_{Config}, ±5.65 dB Noc_2, averaged over Measurement PRB, ±5.65 dB Es_1/Noc_1 averaged over BW_{Config} ±0.3 dB Es_1/Noc_1 averaged over Measurement PRB ±0.3 dB Es_2/Noc_2 averaged over BW_{Config} ±0.3 dB Es_2/Noc_2 averaged over Measurement PRB ±0.3 dB	Noc_1 averaged over BW_{Config} is the AWGN absolute power of RF channel 1 averaged over BW_{Config} Noc_1 averaged over Measurement PRB is the AWGN absolute power of RF channel 1 averaged over Measurement PRB Noc_2 averaged over BW_{Config} is the AWGN absolute power of RF channel 2 averaged over BW_{Config} Noc_2 averaged over Measurement PRB is the AWGN absolute power of RF channel 2 averaged over Measurement PRB Es_1/Noc_1 averaged over BW_{Config} is Ratio of cell 1 signal / AWGN averaged over BW_{Config} Es_1/Noc_1 averaged over Measurement PRB is Ratio of cell 1 signal / AWGN averaged over Measurement PRB Es_2/Noc_2 averaged over BW_{Config} is Ratio of cell 2 signal / AWGN averaged over BW_{Config} Es_2/Noc_2 averaged over Measurement PRB is Ratio of cell 2 signal / AWGN averaged over Measurement PRB
7.1.1.3 NR SA FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	Same as 7.1.1.1	Same as 7.1.1.1
7.1.1.4 NR SA FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	Same as 7.1.1.1	Same as 7.1.1.1
7.1.1.5 NR SA FR2-FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	Same as 7.1.1.2	Same as 7.1.1.2
7.1.1.6 NR SA FR2-FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	Same as 7.1.1.2	Same as 7.1.1.2

7.3.1.4 NR SA FR1-FR2 synchronous DAPS handover	Noc, averaged over BW_{Config}, ±5.65 dB Noc, averaged over Measurement PRB, ±5.65 dB Es_2/Noc averaged over BW_{Config} ±0.3 dB Es_2/Noc averaged over Measurement PRB ±0.3 dB	Noc averaged over BW_{Config} is the AWGN absolute power of RF channel 2 averaged over BW_{Config} Noc averaged over Measurement PRB is the AWGN absolute power of RF channel 2 averaged over Measurement PRB Es_2/Noc averaged over BW_{Config} is Ratio of cell 2 signal / AWGN averaged over BW_{Config} Es_2/Noc averaged over Measurement PRB is Ratio of cell 2 signal / AWGN averaged over Measurement PRB
7.3.1.5 NR SA FR1-FR2 asynchronous DAPS handover	Same as 7.3.1.4	Same as 7.3.1.4
7.3.2.1.1 NR SA FR2 RRC re-establishment	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB Average Ês2 / Noc ±0.3 dB Ês2 / Noc over meas PRBs ±0.3 dB	Ês1 is NR cell 1 signal Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.3.2.1.2 NR SA FR2 - FR2 RRC re-establishment	Average Noc_1 ±5.65 dB, f <= 40.8 GHz Noc_1 over meas PRBs ±5.65 dB f <= 40.8 GHz Average Noc_2 ±5.65 dB, f <= 40.8 GHz Noc_2 over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês1 / Noc_1 ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB Average Ês2 / Noc_2 ±0.3 dB Ês2 / Noc over meas PRBs ±0.3 dB	Ês1 is NR cell 1 signal Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.3.2.2.1 NR SA FR2 contention based random access	Average Ês ±6.0 dB Meas PRB Ês ±6.0 dB Uplink absolute power measurement ±6.0 dB Uplink relative power measurement ±FFS dB ±[48]T_c Uplink signal transmit timing relative to downlink	Meas PRB is the measurement PRB for SS-RSRP #RB_J to RB_{J+19} T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
7.3.2.2.2 NR SA FR2 non-contention based random access	Same as 7.3.2.2.1	Same as 7.3.2.2.1

7.3.3.1 NR SA FR2 conditional handover	Noc averaged over BW_{Config}, ±5.65 dB Noc, averaged over Measurement PRB, ±5.65 dB Es_1/Noc averaged over BW_{Config} ±0.3 dB Es_1/Noc averaged over Measurement PRB ±0.3 dB Es_2/Noc ±0.3 dB Noc, averaged over BW_{Config}, ±5.65 dB Es_2/Noc averaged over Measurement PRB ±0.3 dB	Noc averaged over BW_{Config},is the AWGN absolute power of RF channel 1 averaged over BW_{Config}, Noc averaged over Measurement PRB,is the AWGN absolute power of RF channel 1 averaged over Measurement PRB, Es_1/Noc averaged over BW_{Config} is Ratio of cell 1 signal / AWGN averaged over BW_{Config} Es_1/Noc averaged over Measurement PRB is Ratio of cell 1 signal / AWGN averaged over Measurement PRB Es_2/Noc averaged over BW_{Config} is Ratio of cell 2 signal / AWGN averaged over BW_{Config} Es_2/Noc averaged over Measurement PRB is Ratio of cell 2 signal / AWGN averaged over Measurement PRB
7.4.1.1 SA FR2 UE transmit timing accuracy	Noc ±5.65 dB $\hat{E}s_1$ / N_{oc} ±0.3 dB ±48T_c Uplink signal transmit timing relative to downlink ±40T_c Relative during UE timing adjustment	$\hat{E}s_1$ / Noc is the ratio of cell 1 signal / AWGN T_c = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
7.4.3.1 NR SA FR2 UE timing advance adjustment accuracy	Noc ±5.65 dB Ês1 / Noc ±0.3 dB ±40Tc timing advance adjustment	 Ês1 / Noc is the ratio of cell 1 signal / AWGN Tc = 1/(480000 x 4096) seconds, the basic timing unit defined in TS 38.211 [7]
7.5.1.1 Radio Link Monitoring Out-of-sync Test for FR2 PCell configured with SSB-based RLM RS in non-DRX mode	Same as 5.5.1.1	Same as 5.5.1.1
7.5.1.2 Radio Link Monitoring In-sync Test for FR2 PCell configured with SSB-based RLM RS in non-DRX mode	Same as 5.5.1.1	Same as 5.5.1.1
7.5.1.3 Radio Link Monitoring Out-of-sync Test for FR2 PCell configured with SSB-based RLM RS in DRX mode	Same as 5.5.1.1	Same as 5.5.1.1
7.5.1.4 Radio Link Monitoring In-sync Test for FR2 PCell configured with SSB-based RLM RS in DRX mode	Same as 5.5.1.1	Same as 5.5.1.1
7.5.5.1 NR SA FR2 SSB-based beam failure detection and link recovery in non-DRX	Same as 5.5.5.1	Same as 5.5.5.1
7.5.5.2 NR SA FR2 SSB-based beam failure detection and link recovery in DRX	Same as 5.5.5.1	Same as 5.5.5.1
7.5.5.3 NR SA FR2 CSI-RS-based beam failure detection and link recovery in non-DRX	Noc ±5.65 dB, f<=40.8 GHz $\hat{E}s_1$ / N_{oc} ±0.3 dB Fading profile ±0.7 dB for 2Tx	Note: Noc is the AWGN on cell 1 frequency $\hat{E}s_1$ / Noc is the SNR for the CSI-RS
7.5.5.4 NR SA FR2 CSI-RS-based beam failure detection and link recovery in DRX	Same as 7.5.5.3	Same as 7.5.5.3
7.5.5.5 NR SA FR2 scheduling available restriction during SSB-based beam failure detection and link recovery in non-DRX	Same as 5.5.5.1	Same as 5.5.5.1
7.5.5.6 NR SA FR2 SCell CSI-RS-based beam failure detection and link recovery in non-DRX	Noc ±5.65 dB, f<=40.8 GHz $\hat{E}s_2$ / N_{oc} ±0.3 dB Fading profile ±0.7 dB for 2Tx	Note: Noc is the AWGN on cell 2 frequency $\hat{E}s_2$ / Noc is the SNR for the CSI-RS

7.5.5.7 NR SA FR2 SCell CSI-RS-based beam failure detection and link recovery in DRX	Same as 7.5.5.6	Same as 7.5.5.6
7.6.1.1 NR SA FR2 event-triggered reporting without gap in non-DRX	$Ês_1$ averaged over BW ±5.65 dB, f <= 40.8 GHz $Ês_1$ averaged over measured PRB ±5.65 dB, f <= 40.8 GHz $Ês_2$ averaged over BW ±5.65 dB, f <= 40.8 GHz $Ês_2$ averaged over measured PRB ±5.65 dB, f <= 40.8 GHz	$Ês_1$ averaged over BW is the absolute power of cell 1 signal averaged over BW $Ês_1$ averaged over measured PRB is the absolute power of cell 1 signal averaged over measured PRB $Ês_2$ averaged over BW is the absolute power of cell 2 signal averaged over BW $Ês_2$ averaged over measured PRB is the absolute power of cell 2 signal averaged over measured PRB
7.6.1.2 NR SA FR2 event-triggered reporting without gap in DRX	Noc averaged over BW, ±5.65 dB, f <= 40.8 GHz Noc averaged over measured PRB, ±5.65 dB, f <= 40.8 GHz Ês1 / Noc averaged over BW, ±0.3 dB, f <= 40.8 GHz Ês1 / Noc averaged over measured PRB, ±0.3 dB, f <= 40.8 GHz Ês2 / Noc averaged over BW, ±0.3 dB, f <= 40.8 GHz Ês2 / Noc averaged over measured PRB, ±0.3 dB, f <= 40.8 GHz	Noc averaged over BW is AWGN absolute power averaged over BW. Noc averaged over measured PRB is AWGN absolute power averaged over measured PRB. Ês1 / Noc averaged over BW is the ratio of cell 1 signal / AWGN averaged over BW Ês1 / Noc averaged over measured PRB is the ratio of cell 1 signal / AWGN averaged over measured PRB Ês2 / Noc averaged over BW is the ratio of cell 2 signal / AWGN averaged over BW. Ês2 / Noc averaged over measured PRB is the ratio of cell 2 signal / AWGN averaged over measured PRB.
7.6.1.3 NR SA FR2 event-triggered reporting without gap in non-DRX	Same as 7.6.1.1	Same as 7.6.1.1
7.6.1.4 NR SA FR2 event-triggered reporting with gap in DRX	Same as 7.6.1.2	Same as 7.6.1.2
7.6.2.1 NR SA FR2-FR2 event-triggered reporting in non-DRX	Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz Average Ês2 ±5.65 dB Meas PRB Ês2 ±5.65 dB	Ês1 is NR cell 1 signal Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.6.2.2 NR SA FR2-FR2 event-triggered reporting in DRX	Average Noc_1 ±5.65 dB, f <= 40.8 GHz Noc_1 over meas PRBs ±5.65 dB f <= 40.8 GHz Average Noc_2 ±5.65 dB, f <= 40.8 GHz Noc_2 over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês1 / Noc_1 ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB Average Ês2 / Noc_2 ±0.3 dB Ês2 / Noc_2 over meas PRBs ±0.3 dB	Ês1 is NR cell 1 signal Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.6.2.3 NR SA FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	Same as 7.6.2.1	Same as 7.6.2.1
7.6.2.4 NR SA FR2-FR2 event-triggered reporting in DRX with SSB time index detection	Same as 7.6.2.2	Same as 7.6.2.2

7.6.2.5 NR SA FR1-FR2 event-triggered reporting in non-DRX	Average Ês2 ±5.65 dB, f <= 40.8 GHz	Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19

7.6.2.6 NR SA FR1-FR2 event-triggered reporting in DRX	Noc ±5.65 dB, f <= 40.8 GHz Ês2 / Noc ±0.3 dB	Ês2 / Noc is the ratio of cell 2 signal / AWGN
7.6.2.7 NR SA FR1-FR2 event-triggered reporting in non-DRX with SSB time index detection	Same as 7.6.2.5	Same as 7.6.2.5
7.6.2.8 NR SA FR1-FR2 event-triggered reporting in DRX with SSB time index detection	Same as 7.6.2.6	Same as 7.6.2.6
7.6.3.1 NR SA FR2 SSB-based L1-RSRP measurement in non-DRX	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the SSB#0 Ês1 / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.6.3.2 NR SA FR2 SSB-based L1-RSRP measurement in DRX	Same as 7.6.3.1	Same as 7.6.3.1
7.6.3.3 NR SA FR2 CSI-RS-based L1-RSRP measurement in non-DRX	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the CSI-RS#0 Ês1 / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-RS-RSRP
7.6.3.4 NR SA FR2 CSI-RS-based L1-RSRP measurement in DRX	Same as 7.6.3.3	Same as 7.6.3.3
7.6.6.1 NR SA FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the CSI-RS#0 Ês1 / Noc is the SNR for the CSI-RS#1 Meas PRB is the measurement PRB for CSI-RS-SINR #RBJ to RBJ+275
7.6.6.2 NR SA FR2 SSB based CMR and dedicated IMR L1-SINR measurement accuracy	Average Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Average Ês0 / Noc ±0.3 dB Ês0 / Noc over meas PRBs ±0.3 dB Average Ês1 / Noc ±0.3 dB Ês1 / Noc over meas PRBs ±0.3 dB	Ês0 / Noc is the SNR for the SSB#0 Ês1 / Noc is the SNR for the SSB#1 Meas PRB is the measurement PRB for SS-SINR #RBJ to RBJ+19
7.6.6.3 NR SA FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	Same as 7.6.6.1	Same as 7.6.6.1

7.7.1.1 NR SA FR2 SS-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.3 dB Test 2 Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz Average Ês2 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês2 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 1 signal / AWGN Ês2 / Noc is the ratio of cell 1 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19 Test 2 Ês1 is NR cell 1 signal Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.7.1.2 NR SA FR2-FR2 SS-RSRP measurement accuracy	Noc1 ±5.65 dB, f <= 40.8 GHz Noc1 over measPRBs ±5.65 dB, f <= 40.8 GHz Noc2 ±5.65 dB, f <= 40.8 GHz Noc2 over measPRBs ±5.65 dB, f <= 40.8 GHz Ês1 / Noc1 ±0.3 dB Ês2 / Noc2 ±0.3 dB Meas PRB Ês1 / Noc1 ±0.3 dB Meas PRB Ês2 / Noc2 ±0.3 dB	Noc1 is the AWGN on the NR freq 1 Noc2 is the AWGN on the NR freq 2 Ês1 / Noc1 is the ratio of cell 1 signal / AWGN Ês2 / Noc2 is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.7.1.3 NR SA FR1-FR2 SS-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês2 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.3 dB Test 2 Average Ês2 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês2 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês2 / Noc is the ratio of cell 1 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19 Test 2 Ês2 is NR cell 2 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.7.2.1 NR SA FR2 SS-RSRQ measurement accuracy	Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB, f <= 40.8 GHz Ês1 / Noc ±0.3 dB Ês2 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Meas PRB Ês2 / Noc ±0.3 dB	Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 1 signal / AWGN Ês2 / Noc is the ratio of cell 2 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.7.2.2 NR SA FR2-FR2 SS-RSRQ measurement accuracy	Same as 7.7.1.2	Same as 7.7.1.2
7.7.3.1 NR SA FR2 SS-SINR measurement accuracy	Same as 7.7.2.1	Same as 7.7.2.1
7.7.3.3 NR SA FR2-FR2 SS-SINR measurement accuracy	Same as 7.7.1.2	Same as 7.7.1.2

7.7.4.1 NR SA FR2 SSB based L1-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Test 2 Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 1 signal / AWGN Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19 Test 2 Ês1 is NR cell 1 signal Meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19
7.7.4.2 NR SA FR2 CSI-RS based L1-RSRP measurement accuracy	Test 1 Noc ±5.65 dB, f <= 40.8 GHz Noc over meas PRBs ±5.65 dB f <= 40.8 GHz Ês1 / Noc ±0.3 dB Meas PRB Ês1 / Noc ±0.3 dB Test 2 Average Ês1 ±5.65 dB, f <= 40.8 GHz Meas PRB Ês1 ±5.65 dB, f <= 40.8 GHz	Test 1 Noc is the AWGN on the NR freq Ês1 / Noc is the ratio of cell 1 signal / AWGN Meas PRB is the measurement PRB for CSI-RS-RSRP Test 2 Ês1 is NR cell 1 signal Meas PRB is the measurement PRB for CSI-RS-RSRP
7.7.6.1 NR SA FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	Same as 7.6.6.1	Same as 7.6.6.1
7.7.6.2 NR SA FR2 SSB based CMR and dedicated IMR L1-SINR measurement accuracy	Same as 7.6.6.2	Same as 7.6.6.2
7.7.6.3 NR SA FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	Same as 7.6.6.1	Same as 7.6.6.1

Table F.1.1.2-7: Maximum test system uncertainty for RRM requirements for E-UTRA – NR inter-RAT test cases with E-UTRA serving cell

Subclause	Maximum Test System Uncertainty[1]	Derivation of Test System Uncertainty
8.2.1.1 E-UTRA – NR FR1 cell re-selection to higher priority NR target cell	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	Note: Noc_1 is the AWGN on cell 1 frequency Noc_2 is the AWGN on cell 2 frequency $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB on cell 2 are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
8.2.1.2 E-UTRA – NR FR1 Cell reselection to lower priority NR target Cell in FR1 for UE configured with highSpeedInterRAT-NR-r16	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	Note: Noc_1 is the AWGN on cell 1 frequency Noc_2 is the AWGN on cell 2 frequency $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB on cell 2 are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
8.3.1.1 E-UTRA – NR FR1 handover with known target cell	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	Note: Noc_1 is the AWGN on cell 1 frequency Noc_2 is the AWGN on cell 2 frequency $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB on cell 2 are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
8.4.1.1 E-UTRA – NR FR1 SFTD measurement delay in non-DRX	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	Note: Noc_1 is the AWGN on cell 1 frequency Noc_2 is the AWGN on cell 2 frequency $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB on cell 2 are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
8.4.1.2 E-UTRA – NR FR1 SFTD measurement delay in DRX	Same as 8.4.1.1	Same as 8.4.1.1
8.4.2.1 E-UTRA event-triggered reporting of a NR FR1 neighbour cell without SSB time index detection in non-DRX	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB Fading profile ±0.5 dB	Note: Noc_1 is the AWGN on cell 1 frequency Noc_2 is the AWGN on cell 2 frequency $Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB on cell 2 are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
8.4.2.2 E-UTRA event-triggered reporting of a NR FR1 neighbour cell without SSB time index detection in DRX	Same as 8.4.2.1	Same as 8.4.2.1
8.4.2.3 E-UTRA event-triggered reporting of a NR FR1 neighbour cell with SSB time index detection in non-DRX	Same as 8.4.2.1	Same as 8.4.2.1
8.4.2.4 E-UTRA event-triggered reporting of a NR FR1 neighbour cell with SSB time index detection in DRX	Same as 8.4.2.1	Same as 8.4.2.1
8.4.2.9 E-UTRA – NR Inter-RAT event triggered reporting tests for FR1 with SSB time index detection in DRX for UE configured with highSpeedInterRAT-NR-r16	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	Average Noc_1 ±1.5 dB Average Noc_2 ±1.5 dB Average $Ês_1$ / Noc_1 ±0.3 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB Noc_2 ±1.5 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB
8.5.1.1 E-UTRA – NR FR1 SFTD measurement accuracy	Average $Ês_1$ / Noc_1 ±0.8 dB Average $Ês_2$ / Noc_2 ±0.3 dB Meas PRB $Ês_1$ / Noc_1 ±0.8 dB Meas PRB $Ês_2$ / Noc_2 ±0.3 dB	$Ês_1$ / Noc_1 is the ratio of cell 1 signal / AWGN $Ês_2$ / Noc_2 is the ratio of cell 2 signal / AWGN Meas PRB on cell 2 are the measurement PRB for SS-RSRP #RB_J to RB_{J+19}
8.5.2.1.1.1 E-UTRA SS-RSRP absolute measurement accuracy of a NR FR1 neighbour cell	Average Noc ±1.5 dB Noc over meas PRBs #RB_{J-J+19} ±1.5 dB Average Ês / Noc ±0.3 dB meas PRB Ês1 / Noc1 ±0.8 dB	Noc is the AWGN on the NR freq Ês / Noc is the cell SNR meas PRB is the measurement PRB for SS-RSRP #RBJ to RBJ+19

8.5.2.1.2 E-UTRA SS-RSRP absolute measurement accuracy of a NR FR2 neighbour cell	Test 1 Average Noc ±5.65 dB Noc over meas PRBs ±5.65 dB Average Ês / Noc ±0.3 dB Ês / Noc over meas PRBs ±0.3 dB Test 2 Average Es ±5.65 dB Es over meas PRBs ±5.65 dB	Test 1 Noc is the AWGN on the NR freq Ês / Noc is the cell SNR meas PRB is the measurement PRB for SS-RSRP #RB$_{J\ to\ RBJ+19}$
8.5.2.2.1 E-UTRA SS-RSRQ absolute measurement accuracy of a NR FR1 neighbour cell	Same as 8.5.2.1.1.1	Same as 8.5.2.1.1.1
8.5.2.2.2 E-UTRA SS-RSRQ absolute measurement accuracy of a NR FR2 neighbour cellA	Same as 8.5.2.1.2	Same as 8.5.2.1.2
8.5.2.3.1 E-UTRA SS-SINR absolute measurement accuracy of a NR FR1 neighbour cell	Same as 8.5.2.1.1.1	Same as 8.5.2.1.1.1
8.5.2.3.2 E-UTRA SS-SINR absolute measurement accuracy of a NR FR2 neighbour cell	Same as 8.5.2.1.2	Same as 8.5.2.1.2

Table F.1.1.2-8: Maximum test system uncertainty for RRM requirements for FR1 NR sidelink test cases

Subclause	Maximum Test System Uncertainty	Derivation of Test System Uncertainty
9.1.1.1 NR SA FR1 UE transmit timing accuracy for GNSS as synchronization reference source	Sidelink signal transmit timing relative to GNSS timing: ±192 Tc	Tc is the basic timing unit defined in TS 38.211 [7], Tc = 1/(480000 x 4096) seconds
9.1.1.2 NR SA FR1 UE transmit timing accuracy for SyncRef UE as synchronization reference source	Sidelink signal transmit timing relative to SyncRef UE: ±128 Tc for SL SCS = 30kHz Average Noc: ±1.5 dB Average $Ês_1$ / Noc: ±0.3 dB Meas PRB Noc: ±1.5 dB Meas PRB $Ês_1$ / Noc: ±0.3 dB	Tc is the basic timing unit defined in TS 38.211 [7], Tc = 1/(480000 x 4096) seconds Noc is the AWGN absolute power on PC5 carrier. $Ês_1$ / Noc is the ratio of SyncRef UE 1 signal / AWGN Meas PRB is the meaurement PRB for PSBCH-RSRP #RB_J to RB_{J+10}
9.1.1.3 NR SA FR1 UE transmit timing accuracy for FR1 NR cell as synchronization reference source	Sidelink signal transmit timing relative to downlink timing: ±192 Tc for DL SCS = 15kHz and SL SCS = 30kHz ±160 Tc for DL SCS = 30kHz and SL SCS = 30kHz Average Noc: ±1.5 dB Average $Ês_1$ / Noc: ±0.3 dB Meas PRB Noc: ±1.5 dB Meas PRB $Ês_1$ / Noc: ±0.3 dB	Tc is the basic timing unit defined in TS 38.211 [7], Tc = 1/(480000 x 4096) seconds Noc is the AWGN absolute power on Uu carrier. $Ês_1$ / Noc is the ratio of Cell 1 signal / AWGN Meas PRB is the meaurement PRB for SS-RSRP #RB_J to RB_{J+19}
9.1.2.1 NR SA FR1 initiation/cease of S-SSB transmission for FR1 NR cell as synchronization reference source	Average Noc: ±1.5 dB Average $Ês_1$ / Noc: ±0.3 dB Meas PRB Noc: ±1.5 dB Meas PRB $Ês_1$ / Noc: ±0.3 dB	Noc is the AWGN absolute power on Uu carrier. $Ês_1$ / Noc is the ratio of Cell 1 signal / AWGN Meas PRB is the meaurement PRB for SS-RSRP #RB_J to RB_{J+19}
9.1.2.2 NR SA FR1 initiation/cease of S-SSB transmission for SyncRef UE as synchronization reference source	Average Noc: ±1.5 dB Average $Ês_1$ / Noc: ±0.3 dB Meas PRB Noc: ±1.5 dB Meas PRB $Ês_1$ / Noc: ±0.3 dB	Noc is the AWGN absolute power on PC5 carrier. $Ês_1$ / Noc is the ratio of SyncRef UE 1 signal / AWGN Meas PRB is the meaurement PRB for PSBCH-RSRP #RB_J to RB_{J+10}
9.1.3.1 NR SA FR1 synchronization reference selection/reselection for GNSS configured as the highest priority synchronization reference source	Average Noc: ±1.5 dB Average $Ês_i$ / Noc: ±0.3 dB, i=1,2,3 Meas PRB Noc: ±1.5 dB Meas PRB $Ês_i$ / Noc: ±0.3 dB, i=1,2,3	Noc is the AWGN absolute power on PC5 carrier. $Ês_i$ / Noc is the ratio of SyncRef UE i signal / AWGN, i = 1,2,3 Meas PRB is the meaurement PRB for PSBCH-RSRP #RB_J to RB_{J+10}
9.1.3.2 NR SA FR1 synchronization reference selection/reselection for FR1 NR Cell configured as the highest priority synchronization reference source	Average Noc: ±1.5 dB Average $Ês_i$ / Noc: ±0.3 dB, i=1,2 Meas PRB Noc: ±1.5 dB Meas PRB $Ês_i$ / Noc: ±0.3 dB, i=1,2	Noc is the AWGN absolute power on PC5 carrier. $Ês_i$ / Noc is the ratio of SyncRef UE i signal / AWGN, i = 1,2 Meas PRB is the meaurement PRB for PSBCH-RSRP #RB_J to RB_{J+10}

9.1.4.1 NR SA FR1 L1 SL-RSRP measurement for autonomous resource selection/reselection	Average Noc: ±1.5 dB Average $Ês_i$ / Noc: ±0.3 dB, i=0,1,...,49 Meas PRB Noc: ±1.5 dB Meas PRB $Ês_i$ / Noc: ±0.3 dB, i=0,1,...,49	Noc is the AWGN absolute power on PC5 carrier. $Ês_i$ / Noc is the ratio of active sidelink UE i signal / AWGN, i = 0,1,...,49 Meas PRB is the meaurement PRB for SL-RSRP #RB_J to RB_{J+599}
9.1.4.2 NR SA FR1 L1 SL-RSRP measurement for resource pre-emption	Average Noc: ±1.5 dB Average $Ês_1$ / Noc: ±0.3 dB, Meas PRB Noc: ±1.5 dB Meas PRB $Ês_1$ / Noc: ±0.3 dB,	Noc is the AWGN absolute power on PC5 carrier. $Ês_1$ / Noc is the ratio of active sidelink UE 1 signal / AWGN, Meas PRB is the meaurement PRB for SL-RSRP #RB_J to RB_{J+119}
9.1.4.3 NR SA FR1 L1 SL-RSRP measurement for resource re-evaluation	Average Noc: ±1.5 dB Average $Ês_i$ / Noc: ±0.3 dB, i=0,1,...,129 Meas PRB Noc: ±1.5 dB Meas PRB $Ês_i$ / Noc: ±0.3 dB, i=0,1,...,129	Noc is the AWGN absolute power on PC5 carrier. $Ês_i$ / Noc is the ratio of active sidelink UE i signal / AWGN, i = 0,1,...,129 Meas PRB is the meaurement PRB for SL-RSRP #RB_J to RB_{J+119}
9.1.5.1 NR SA FR1 congestion control measurement for concurrent operation	Average Noc: ±1.5 dB Average $Ês_i$ / Noc: ±0.3 dB, i=0,1,2,3 Meas PRB Noc: ±1.5 dB Meas PRB $Ês_i$ / Noc: ±0.3 dB, i=0,1,2,3	Noc is the AWGN absolute power on PC5 carrier. $Ês_i$ / Noc is the ratio of active sidelink UE i signal / AWGN, i = 0,1,2,3 Meas PRB is the meaurement PRB for SL-RSSI #RB_J to RB_{J+119}
9.1.5.2 NR SA FR1 congestion control measurement for PC5-only operation	Same as 9.1.5.1	Same as 9.1.5.1
9.1.6.1 NR SA FR1 interruption to WAN due to NR sidelink communication	± 0.6dB (AWGN conditions)	Overall system uncertainty for AWGN condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Effect of AWGN flatness and signal flatness Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: AWGN flatness and signal flatness has x 0.25 effect on the required SNR, so use sensitivity factor of x 0.25 for the uncertainty contribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty 2 + (0.25 x AWGN flatness and signal flatness) 2) Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB

F.1.2 Interpretation of measurement results (normative)

See TS 38.521-1 [17] Annex F.2.

F.1.3 Test Tolerance and Derivation of Test Requirements (informative)

See TS 38.521-1 [17] Annex F.3.

F.1.3.1 Measurement of test environments

See TS 38.521-1 [17] Annex F.3.1.

F.1.3.2 Measurement of RRM requirements

Because the relationships between the test system uncertainties and the test tolerances are often complex, it is not always possible to give a simple derivation of the test requirement in this document. The analysis is recorded in 3GPP TR 38 903 [22].

The derivation of the test requirements for the EN-DC FR1 test cases in chapter 4 is defined in Table F.1.3.2-1.

The derivation of the test requirements for the NR/5GC FR1 test cases in chapter 6 is defined in Table F.1.3.2-2.

The derivation of the test requirements for the EN-DC FR2 test cases in chapter 5 is defined in Table F.1.3.2-3.

The derivation of the test requirements for the NR/5GC FR2 test cases in chapter 7 is defined in Table F.1.3.2-4.

The derivation of the test requirements for the E-UTRA – NR inter-RAT with E-UTRA serving cell test cases in chapter 8 is defined in Table F.1.3.2-5.

The derivation of the test requirements for the FR1 NR sidelink test cases in chapter 9 is defined in Table F.1.3.2-6.

Table F.1.3.2-1: Derivation of test requirements for EN-DC FR1 RRM tests

Test	Minimum requirement in TS 38.133 [6]	Test tolerance (TT)	Test requirement in TS 38.533
4.3.2.2.1	Absolute uplink power: Normal conditions ±9dB Relative uplink power step: Normal conditions ±2.5dB Uplink timing: 15kHz SCS T_e ±12*64*T_c 30kHz SCS T_e ±8*64*T_c	 2.1dB 0.7dB 112T_c 112T_c	Absolute uplink power: Normal conditions ±11.1dB Relative uplink power step: Normal conditions ±3.2dB Uplink timing: 15kHz SCS T_e ±880*T_c 30kHz SCS Te ±624*T_c
4.3.2.2.2	Same as 4.3.2.2.1	Same as 4.3.2.2.1	Same as 4.3.2.2.1
4.3.2.2.3	Same as 4.3.2.2.1	Same as 4.3.2.2.1	Same as 4.3.2.2.1
4.3.2.2.4	Same as 4.3.2.2.1	Same as 4.3.2.2.1	Same as 4.3.2.2.1
4.4.1.1 EN-DC FR1 UE transmit timing accuracy	Test 1 (no DRX): Uplink timing: ±12*64 T_c for 15 KHz SSB SCS,15 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,30 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,60 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,15 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,30 kHz UL SCS ±7*64 T_c for 30 KHz SSB SCS,60 kHz UL SCS Max step size T_q: 5.5*64*T_c Min adjust rate T_p: 5.5*64*T_c Max adjust rate: 5.5*64*T_c $\hat{E}s_2$ / N_{oc}: +3.00dB N_{oc} = -98 dBm/15 kHz (Config 1,2,3) Test 2 (with DRX): ±12*64 T_c for 15 KHz SSB SCS,15 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,30 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,60 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,15 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,30 kHz UL SCS ±7*64 T_c for 30 KHz SSB SCS,60 kHz UL SCS $\hat{E}s_2$ / N_{oc}: +3.00dB	 ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c +0.5*64T_c -3.6*64*T_c +1.1*64*T_c +0.3 dB +1.5 dB ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c +0.3dB	 Test 1 (10MHz Ch BW): Uplink timing: ±13.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±8.75*64*T_c Max step size T_q: 6.0*64*T_c Min adjust rate: 1.9*64*T_c Max adjust rate: 6.6*64*T_c $\hat{E}s_2$ / N_{oc}: +3.30dB N_{oc} = -98 dBm/15 kHz (Config 1,2,3) +1.5 dB Test 2 (with DRX): Uplink timing: ±13.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±8.75*64*T_c $\hat{E}s_2$ / N_{oc}: +3.30dB
4.4.3.1 EN-DC FR1 timing advance adjustment accuracy	N_{oc} = -98 dBm/15 kHz (Config 1, 2, 4, 5) N_{oc} = -95 dBm/15 kHz (Config 3, 6) $\hat{E}s_x$ / N_{oc} = 3 dB UE Timing Advance Adjustment Accuracy for 15kHz SCS = ±256 T_c+ TT UE Timing Advance Adjustment Accuracy for 30kHz SCS = ±256 T_c+ TT	0 0 0 +/- 88 Tc +/- 88 Tc	N_{oc} = -98 dBm/15 kHz (Config 1, 2, 4, 5) N_{oc} = -95 dBm/15 kHz (Config 3, 6) $\hat{E}s_x$ / N_{oc} = 3 dB UE TAAA for 15kHz SCS = ±344 T_c UE TAAA for 30kHz SCS = ±344 T_c
4.5.1.1 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	SNR during T1: 1dB T2: -7dB T3: -15dB	Offset during T1: +0.8dB T2: +0.8dB T3: -0.8dB	SNR during T1: 1.8dB T2: -6.2dB T3: -15.8dB
4.5.1.2 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	SNR during T1: 1dB T2: -7dB T3: -15dB T4: -4.5dB T5: 1dB	Offset during T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: +0.8dB	SNR during T1: 1.8dB T2: -6.2dB T3: -15.8dB T4: -5.3dB T5: 1.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3 and T4 is modified as specified in clause D.4.1.1

4.5.1.3 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Same as 4.5.1.1	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.4 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Same as 4.5.1.2	Same as 4.5.1.2	Same as 4.5.1.2
4.5.1.5 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 4.5.1.1	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.6 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 4.5.1.2	Same as 4.5.1.2	Same as 4.5.1.2
4.5.1.7 EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Same as 4.5.1.1	Same as 4.5.1.1	Same as 4.5.1.1
4.5.1.8 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Same as 4.5.1.2	Same as 4.5.1.2	Same as 4.5.1.2
4.5.2.1 EN-DC FR1 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	SNRs as specified	0.6dB	Formula: SNR + TT
4.5.2.2 EN-DC FR1 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	Same as 4.5.2.1	Same as 4.5.2.1	Same as 4.5.2.1
4.5.2.3 EN-DC FR1 interruptions during measurements on deactivated NR SCC in synchronous EN-DC	During T1: Noc2: -104dBm/15kHz Noc3: -104dBm/15kHz Ês2 / Noc2: +17dB Ês3 / Noc3: +17dB	During T1: 0dB 0dB 0dB 0dB	During T1: Noc2: -104dBm/15kHz Noc3: -104dBm/15kHz Ês2 / Noc2: +17dB Ês3 / Noc3: +17dB
4.5.2.4 EN-DC FR1 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC	Same as 4.5.2.3	Same as 4.5.2.3	Same as 4.5.2.3
4.5.2.5 EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB $Ês_3$ / Noc_3: +17dB	During T1: 0dB 0dB 0dB 0dB	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_1$ / Noc1: +17dB $Ês_2$ / Noc2: +17dB $Ês_3$ / Noc3: +17dB
4.5.2.6 EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	Same as 4.5.2.5	Same as 4.5.2.5	Same as 4.5.2.5

4.5.3.1 EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	During T1: Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB $Ês_3$ / Noc_3: +17dB During T2: Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB $Ês_3$ / Noc_3: +17dB During T3: Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB $Ês_3$ / Noc_3: +17dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 0dB 0dB	During T1: Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB $Ês_3$ / Noc_3: +17dB During T2: Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB $Ês_3$ / Noc_3: +17dB During T3: Noc_2: -104dBm/15kHz Noc_3: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB $Ês_3$ / Noc_3: +17dB
4.5.3.2 EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 640ms SCell measurement cycle	Same as 4.5.3.1	Same as 4.5.3.1	Same as 4.5.3.1
4.5.3.3 EN-DC FR1 SCell activation and deactivation of unknown SCell in non-DRX	Same as 4.5.3.1	Same as 4.5.3.1	Same as 4.5.3.1
4.5.4.1 EN-DC FR1 UE UL carrier RRC reconfiguration delay	During T1: Noc2: -102dBm/15kHz Noc3: -102dBm/15kHz Ês2 / Noc2: +16dB Ês3 / Noc3: +16dB During T2: Noc2: -102dBm/15kHz Noc3: -102dBm/15kHz Ês2 / Noc2: +16dB Ês3 / Noc3: +16dB During T3: Noc2: -102dBm/15kHz Noc3: -102dBm/15kHz Ês2 / Noc2: +16dB Ês3 / Noc3: +16dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 0dB 0dB	During T1: Noc2: -102dBm/15kHz Noc3: -102dBm/15kHz Ês2 / Noc2: +16dB Ês3 / Noc3: +16dB During T2: Noc2: -102dBm/15kHz Noc3: -102dBm/15kHz Ês2 / Noc2: +16dB Ês3 / Noc3: +16dB During T3: Noc2: -102dBm/15kHz Noc3: -102dBm/15kHz Ês2 / Noc2: +16dB Ês3 / Noc3: +16dB
4.5.5.1 EN-DC FR1 SSB-based beam failure detection and link recovery in non-DRX	q0 SSB SNR during: T1: 5dB T2: -3dB T3: -12dB T4: -12dB T5: -12dB q1 SSB during T1: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10dB q1 SSB during T2: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10dB q1 SSB during T3, T4 and T5: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: +10dB	Offset during: T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: -0.8dB q1 SSB during T1: 0dB -0.2dB q1 SSB during T2: 0dB -0.2dB q1 SSB during T3, T4 and T5: 0dB +0.2dB	SNR during: T1: +5.8dB T2: -2.2dB T3: -12.8dB T4: -12.8dB T5: -12.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3, T4 and T5 is modified as specified in clause D.4.1.1 q1 SSB during T1: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10.2dB q1 SSB during T2: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10.2dB q1 SSB during T3, T4 and T5: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: +10.2dB

4.5.5.2 EN-DC FR1 SSB-based beam failure detection and link recovery in DRX	Same as 4.5.5.1	Same as 4.5.5.1	Same as 4.5.5.1
4.5.5.3 EN-DC FR1 CSI-RS-based beam failure detection and link recovery in non-DRX	q0 CSI-RS SNR during: T1: 5dB T2: -3dB T3: -12dB T4: -12dB T5: -12dB q1 CSI-RS during T1: Noc_2: -98dBm/15kHz $\hat{E}s_2$ / Noc_2: -10dB q1 CSI-RS during T2: Noc_2: -98dBm/15kHz $\hat{E}s_2$ / Noc_2: -10dB q1 CSI-RS during T3, T4 and T5: Noc_2: -98dBm/15kHz $\hat{E}s_2$ / Noc_2: +10dB	Offset during: T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: -0.8dB q1 CSI-RS during T1: 0dB -0.2dB q1 CSI-RS during T2: 0dB -0.2dB q1 CSI-RS during T3, T4 and T5: 0dB +0.2dB	SNR during: T1: +5.8dB T2: -2.2dB T3: -12.8dB T4: -12.8dB T5: -12.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3, T4 and T5 is modified as specified in clause D.4.1.1 q1 CSI-RS during T1: Noc_2: -98dBm/15kHz $\hat{E}s_2$ / Noc_2: -10.2dB q1 CSI-RS during T2: Noc_2: -98dBm/15kHz $\hat{E}s_2$ / Noc_2: -10.2dB q1 CSI-RS during T3, T4 and T5: Noc_2: -98dBm/15kHz $\hat{E}s_2$ / Noc_2: +10.2dB
4.5.5.4 EN-DC FR1 CSI-RS-based beam failure detection and link recovery in DRX	Same as 4.5.5.3	Same as 4.5.5.3	Same as 4.5.5.3

4.5.5.5 EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in non-DRX	q0 SSB SNR during: T1: 5dB T2: -3dB T3: -12dB T4: -12dB T5: -12dB q1 SSB during T1: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10dB q1 SSB during T2: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10dB q1 SSB during T3, T4 and T5: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: +10dB q1 CSI-RS during T1: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10dB q1 CSI-RS during T2: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10dB q1 CSI-RS during T3, T4 and T5: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: +10dB	Offset during: T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: -0.8dB q1 SSB during T1: 0dB -0.2dB q1 SSB during T2: 0dB -0.2dB q1 SSB during T3, T4 and T5: 0dB +0.2dB q1 CSI-RS during T1: 0dB -0.2dB q1 CSI-RS during T2: 0dB -0.2dB q1 CSI-RS during T3, T4 and T5: 0dB +0.2dB	SNR during: T1: +5.8dB T2: -2.2dB T3: -12.8dB T4: -12.8dB T5: -12.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3, T4 and T5 is modified as specified in section D.4.1.1 q1 SSB during T1: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10.2dB q1 SSB during T2: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10.2dB q1 SSB during T3, T4 and T5: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: +10.2dB q1 CSI-RS during T1: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10.2dB q1 CSI-RS during T2: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: -10.2dB q1 CSI-RS during T3, T4 and T5: Noc_2: -98dBm/15kHz $Ês_2$ / Noc_2: +10.2dB
4.5.5.6 EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in DRX	Same as 4.5.5.5	Same as 4.5.5.5	Same as 4.5.5.5
4.5.6.1.1 EN-DC FR1 DCI-based DL active BWP switch in non-DRX in synchronous EN-DC	During T1: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB During T2: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB During T3: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB	During T1: 0dB 0dB During T2: 0dB 0dB During T3: 0dB 0dB	During T1: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB During T2: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB During T3: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB

4.5.6.1.2 EN-DC FR1 DCI-based DL active BWP switch with SCell in non-DRX in synchronous EN-DC	During T1: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB Noc_3: -104dBm/15kHz $Ês_3$ / Noc_3: +17dB During T2: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB Noc_3: -104dBm/15kHz $Ês_3$ / Noc_3: +17dB During T3: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB Noc_3: -104dBm/15kHz $Ês_3$ / Noc_3: +17dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 0dB 0dB	During T1: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB Noc_3: -104dBm/15kHz $Ês_3$ / Noc_3: +17dB During T2: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB Noc_3: -104dBm/15kHz $Ês_3$ / Noc_3: +17dB During T3: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB Noc_3: -104dBm/15kHz $Ês_3$ / Noc_3: +17dB
4.5.6.2.1 EN-DC FR1 RRC-based DL active BWP switch in non-DRX in synchronous EN-DC	During T1: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB	During T1: 0dB 0dB	During T1: Noc_2: -104dBm/15kHz $Ês_2$ / Noc_2: +17dB
4.5.7.1 EN-DC FR1 addition and release delay of known PSCell	For Test Configurations 1,2,4,5 N_{oc}: -88dBm/15kHz $Ê_s$ / N_{oc}: 0.0dB B1-Threshold: -96 dBm/SCS For Test Configurations 3,6 N_{oc}: -88dBm/15kHz $Ê_s$ / N_{oc}: 0.0dB B1-Threshold: -93 dBm/SCS	 -0.6dB 0dB -3dB -0.6dB 0dB -3dB	 N_{oc}: -88.6dBm/15kHz Ês / N_{oc}: 0.0dB B1-Threshold: -99 dBm/SCS N_{oc}: -88.6dBm/15kHz Ês / N_{oc}: 0.0dB B1-Threshold: -96 dBm/SCS
4.5.8.1 EN-DC FR1 interruptions at switching between two uplink carriers	N_{oc}: -104dBm/15kHz $Ê_s$ / N_{oc}: 17dB	0dB 0dB	N_{oc}: -104dBm/15kHz Ês / N_{oc}: 17dB
4.6.1.1 EN-DC FR1 event-triggered reporting without gap in non-DRX	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: +4.00dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: +4.00dB
4.6.1.2 EN-DC FR1 event-triggered reporting without gap in DRX	Same as 4.6.1.1	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.3 EN-DC FR1 event-triggered reporting with gap in non-DRX	Same as 4.6.1.1	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.4 EN-DC FR1 event-triggered reporting with gap in DRX	Same as 4.6.1.1	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.5 EN-DC FR1 event-triggered reporting without gap in non-DRX with SSB time index detection	Same as 4.6.1.1	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.6 EN-DC FR1 event-triggered reporting with gap in non-DRX with SSB time index detection	Same as 4.6.1.1	Same as 4.6.1.1	Same as 4.6.1.1
4.6.1.7 EN-DC FR1 event-triggered reporting without gap in DRX for UE configured with highSpeedMeasFlag-r16	Same as 4.6.1.1	Same as 4.6.1.1	Same as 4.6.1.1

4.6.2.1 EN-DC FR1-FR1 event-triggered reporting in non-DRX	During T1: Freq 2 Noc: -98dBm/15kHz Freq 3 Noc: -98dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: -infinity During T2: Freq 2 Noc: -98dBm/15kHz Freq 3 Noc: -98dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: +7.00dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB	During T1: Freq 2 Noc: -98dBm/15kHz Freq 3 Noc: -98dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: -infinity During T2: Freq 2 Noc: -98dBm/15kHz Freq 3 Noc: -98dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: +7.00dB
4.6.2.2 EN-DC FR1-FR1 event-triggered reporting in DRX	Same as 4.6.2.1	Same as 4.6.2.1	Same as 4.6.2.1
4.6.2.5 EN-DC FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	Same as 4.6.2.1	Same as 4.6.2.1	Same as 4.6.2.1
4.6.2.6 EN-DC FR1-FR1 event-triggered reporting in DRX with SSB time index detection	Same as 4.6.2.1	Same as 4.6.2.1	Same as 4.6.2.1
4.6.4.1 EN-DC FR1 SSB-based L1-RSRP measurement in non-DRX	During T1: Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: +0.00dB $\hat{E}s_1$ / Noc: -infinity During T2: Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported SSB#0 SS-RSRP values ± 10dB Reported SSB#1 SS-RSRP values ± 10dB Reported Differential SS-RSRP values ± 3dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0.5dB Via mapping	During T1: Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: +0.00dB $\hat{E}s_1$ / Noc: -infinity During T2: Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.50dB **For configuration 1,2,4,5** SSB#1: RSRP_55 to RSRP_75 SSB#0: DIFFRSRP_0 to DIFFRSRP_3 **For configuration 3,6** SSB#1: RSRP_58 to RSRP_78 SSB#0: DIFFRSRP_0 to DIFFRSRP_3
4.6.4.2 EN-DC FR1 SSB-based L1-RSRP measurement in DRX	Same as 4.6.4.1	Same as 4.6.4.1	Same as 4.6.4.1
4.6.4.3 EN-DC FR1 CSI-RS-based L1-RSRP measurement in non-DRX	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported CSI-RSRP values ± 10dB Reported Differential CSI-RSRP values ± 3dB	0dB 0dB 0.5dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.50dB **For configuration 1,2,4,5** CSI-RS#1: RSRP_55 to RSRP_75 CSI-RS#0: DIFFRSRP_0 to DIFFRSRP_3 **For configuration 3,6** CSI-RS#1: RSRP_58 to RSRP_78 CSI-RS#0: DIFFRSRP_0 to DIFFRSRP_3
4.6.4.4 EN-DC FR1 CSI-RS-based L1-RSRP measurement in DRX	Same as 4.6.4.3	Same as 4.6.4.3	Same as 4.6.4.3
4.6.4.5 EN-DC FR1 SSB-based L1-RSRP measurement in DRX for UE configured with highSpeedMeasFlag-r16	Same as 4.6.4.1	Same as 4.6.4.1	Same as 4.6.4.1

4.6.5.2 EN-DC FR1 CLI-RSSI measurement with non-DRX	During T1: Noc on CLI RSSI: -116 dBm/15kHz Io on CLI RSSI : -97.43 dBm/ 1.08 MHz During T2: Noc on CLI RSSI: -108dBm/15kHz Io on CLI RSSI : -89.43 dBm/ 1.08 Mhz	During T1: 0dB 0dB During T2: 0dB 0.5dB	During T1: Noc: -116 dBm/15kHz Io on CLI RSSI : -97.43 dBm/ 1.08 MHz During T2: Noc: -116 dBm/15kHz Io on CLI RSSI : -88.93 dBm/ 1.08 MHz
4.6.7.1 EN-DC FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in non-DRX	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported CSI-SINR values ± 5.5dB Reported Differential CSI-SINR values ± 4.5dB	0dB 0dB 0dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB **For configuration 1,2,3,4,5,6** CSI-RS#1: SINR_41 to SINR_64 CSI-RS#0: DIFFSINR_0 to DIFFSINR_7
4.6.7.2 EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR measurement in DRX	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported SS-SINR values ±4.5dB Reported Differential SS-SINR values ±3.5dB	0dB 0dB 0dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB **For configuration 1,2,3,4,5,6** SSB#1: SINR_43 to SINR_62 SSB#0: DIFFSINR_0 to DIFFSINR_6
4.6.7.3 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in DRX	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported CSI-SINR values ±4dB Reported Differential CSI-SINR values ±3dB	0dB 0.5dB 0dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.50dB $\hat{E}s_1$ / Noc: +3.00dB **For configuration 1,2,3,4,5,6** CSI-RS#1: SINR_44 to SINR_61 CSI-RS#0: DIFFSINR_0 to DIFFSINR_5
4.7.1.1.1 EN-DC FR1 SS-RSRP absolute measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc}: -106dBm/15kHz $\hat{E}s_2$ / N_{oc}: +6.0dB $\hat{E}s_3$ / N_{oc}: +1.0dB Reported RSRP values: ±4.5dB Test 2: N_{oc}: -88dBm/15kHz $\hat{E}s_2$ / N_{oc}: +6.0dB $\hat{E}s_3$ / N_{oc}: +1.0dB Reported RSRP values: ±8dB Test 3: N_{oc}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2$ / N_{oc}: +3.0dB $\hat{E}s_3$ / N_{oc}: -1.0dB Reported RSRP values: ±6dB	Test 1: -1.5dB 0dB +0.4dB Via mapping Test 2: 0dB 0dB +0.4dB Via mapping Test 3: 0dB 0dB +0.2dB Via mapping	Test 1: N_{oc}: -107.5dBm/15kHz $\hat{E}s_2$ / N_{oc}: +6.0dB $\hat{E}s_3$ / N_{oc}: +1.4dB RSRP_44 to RSRP_56 Test 2: N_{oc}: -88dBm/15kHz $\hat{E}s_2$ / N_{oc}: +6.0dB $\hat{E}s_3$ / N_{oc}: +1.4dB RSRP_60 to RSRP_79 Test 3: N_{oc}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2$ / N_{oc}: +3.0dB $\hat{E}s_3$ / N_{oc}: -0.8dB RSRP_34 to RSRP_46 RSRP_34 to RSRP_46 RSRP_35 to RSRP_47 RSRP_35 to RSRP_47 RSRP_36 to RSRP_48 RSRP_37 to RSRP_49 RSRP_37 to RSRP_49 depending on operating band
	TEST CONFIGURATION 3, 6		

	Test 1: N_{oc}: -110dBm/30kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +1.0dB Reported RSRP values: ±4.5dB Test 2: N_{oc}: -91dBm/30kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +1.0dB Reported RSRP values: ±8dB Test 3: N_{oc}: -113dBm/30kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: -1.0dB Reported RSRP values: ±6dB	Test 1: -0.8dB 0dB +0.4dB Via mapping Test 2: 0dB 0dB +0.4dB Via mapping Test 3: 0dB 0dB +0.2dB Via mapping	Test 1: N_{oc}: -110.8dBm/30kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +1.4dB RSRP_41 to RSRP_53 Test 2: N_{oc}: -91dBm/30kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +1.4dB RSRP_57 to RSRP_76 Test 3: N_{oc}: -113dBm/30kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: -0.8dB RSRP_37 to RSRP_49 RSRP_37 to RSRP_49 RSRP_38 to RSRP_50 RSRP_38 to RSRP_50 RSRP_39 to RSRP_51 RSRP_40 to RSRP_52 RSRP_40 to RSRP_52 depending on operating band
The derivation of the RSRP values takes into account the uncertainty in Cell 3 SS-RSRP from N_{oc} and $\hat{E}s_3 / N_{oc}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRP values given above are for normal conditions. In all cases the RSRP values are 4.5dB wider at each end for extreme conditions.			
4.7.1.1.2 EN-DC FR1 SS-RSRP relative measurement accuracy	Test 1: N_{oc}: Test configuration 1, 2, 4, 5:-106dBm/15kHz Test configuration 3, 6:-110dBm/30kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +1.0dB Reported relative SS-RSRP values: ±3dB Test 2: N_{oc}: -88dBm/15kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +1.0dB Reported relative SS-RSRP values: ±3dB Test 3: N_{oc}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: -1.0dB Reported relative SS-RSRP values: ±3dB	Test 1: 0 dB 0 dB 0 dB +1.0dB Via mapping Test 2: 0dB 0dB +1.0dB Via mapping Test 3: 0dB 0dB +1.0dB Via mapping	Test 1: N_{oc}: -106 dBm/15kHz N_{oc}: -110 dBm/30kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +2.0dB RSRP_x-8 to RSRP_x-1 Test 2: N_{oc}: -88dBm/15kHz $\hat{E}s_2 / N_{oc}$: +6.0dB $\hat{E}s_3 / N_{oc}$: +2.0dB RSRP_x-8 to RSRP_x-1 Test 3: N_{oc}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: 0dB RSRP_x-7 to RSRP_x+1
The derivation of the SS-RSRP values takes into account the uncertainty in Cell 2 and Cell 3 RSRP from N_{oc}, $\hat{E}s_2 / N_{oc}$ and $\hat{E}s_3 / N_{oc}$, the allowed UE reporting accuracy, and the UE mapping function. The RSRP values given above are for both normal and extreme conditions.			
4.7.1.2.1 EN-DC FR1-FR1 SS-RSRP absolute measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		

	Test 1: N_{oc1}: -94.65 dBm/15kHz N_{oc2}: -94.65 dBm/15kHz $\hat{E}s_2 / N_{oc1}$: +10.0dB $\hat{E}s_3 / N_{oc2}$: +10.0dB Reported RSRP values: ±8dB Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc2}: -118dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: +13.0dB $\hat{E}s_3 / N_{oc2}$: -3.0dB Reported RSRP values: ±4.5dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz N_{oc2}: -94.65dBm/15kHz $\hat{E}s_2 / N_{oc1}$: +10.0dB $\hat{E}s_3 / N_{oc2}$: +10.0dB RSRP_62 to RSRP_81 Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc2}: -118dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: +13.0dB $\hat{E}s_3 / N_{oc2}$: -3.0dB RSRP_32 to RSRP_45 RSRP_33 to RSRP_45 RSRP_33 to RSRP_46 RSRP_34 to RSRP_46 RSRP_34 to RSRP_47 RSRP_35 to RSRP_48 RSRP_36 to RSRP_48 depending on operating band
	TEST CONFIGURATION 3, 6		
	Test 1: N_{oc1}: -94.65 dBm/15kHz N_{oc2}: -94.65 dBm/15kHz $\hat{E}s_2 / N_{oc1}$: +10.0dB $\hat{E}s_3 / N_{oc2}$: +10.0dB Reported RSRP values: ±8dB Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: +13.0dB $\hat{E}s_3 / N_{oc2}$: -3.0dB Reported RSRP values: ±4.5dB	Test 1: -1.35dB -1.35dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz N_{oc2}: -96dBm/15kHz $\hat{E}s_2 / N_{oc1}$: +10.0dB $\hat{E}s_3 / N_{oc2}$: +10.0dB RSRP_64 to RSRP_83 Test 2: N_{oc}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: +13.0dB $\hat{E}s_3 / N_{oc2}$: -3.0dB RSRP_35 to RSRP_48 RSRP_36 to RSRP_48 RSRP_36 to RSRP_49 RSRP_37 to RSRP_49 RSRP_37 to RSRP_50 RSRP_38 to RSRP_51 RSRP_39 to RSRP_51 depending on operating band
The derivation of the RSRP values takes into account the uncertainty in Cell 3 SS-RSRP from N_{oc2} and $\hat{E}s_3 / N_{oc2}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRP values given above are for normal conditions. For extreme conditions, the RSRP values are 3.0dB wider at each end for Test 1, and 4.5 dB wider at each for Test 2.			
4.7.1.2.2 EN-DC FR1-FR1 SS-RSRP relative measurement accuracy	Test 1: N_{oc1}: -94.65 dBm/15kHz N_{oc2}: -94.65 dBm/15kHz $\hat{E}s_2 / N_{oc1}$: +10.0dB $\hat{E}s_3 / N_{oc2}$: +10.0dB Reported relative RSRP values: ±4.5dB Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: +13.0dB $\hat{E}s_3 / N_{oc2}$: -3.0dB Reported relative RSRP values: ±4.5dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz N_{oc2}: -94.65dBm/15kHz $\hat{E}s_2 / N_{oc1}$: +10.0dB $\hat{E}s_3 / N_{oc2}$: +10.0dB RSRP_x-7 to RSRP_x+7 Test 2: N_{oc}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: +13.0dB $\hat{E}s_3 / N_{oc2}$: -3.0dB RSRP_x-31 to RSRP_x-18
The derivation of the SS-RSRP values takes into account the uncertainty in Cell 2 and Cell 3 RSRP from N_{oc}, $\hat{E}s_2 / N_{oc}$ and $\hat{E}s_3 / N_{oc}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRP values given above are for normal conditions. For extreme conditions, the RSRP values are 1.5dB wider at each end.			
4.7.2.1 EN-DC FR1 SS-RSRQ measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		

	Test 1: N_{oc}: -85dBm/15kHz $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: +3.0dB Reported RSRQ values: ±2.5dB Test 2: N_{oc}: -101dBm/15kHz $\hat{E}s_2 / N_{oc}$: -2.9dB $\hat{E}s_3 / N_{oc}$: -2.9dB Reported RSRQ values: ±3.5dB Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -4.0dB $\hat{E}s_3 / N_{oc}$: -4.0dB Reported RSRQ values: ±3.5dB	Test 1: -1.5dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB Via mapping	Test 1: N_{oc}: -86.5dBm/15kHz $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: +3.0dB RSRQ_52 to RSRQ_62 Test 2: N_{oc}: -101dBm/15kHz $\hat{E}s_2 / N_{oc}$: -2.9dB $\hat{E}s_3 / N_{oc}$: -2.9dB RSRQ_46 to RSRQ_60 Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -4.0dB $\hat{E}s_3 / N_{oc}$: -4.0dB RSRQ_44 to RSRQ_59
	TEST CONFIGURATION 3, 6		
	Test 1: N_{oc}: -91dBm/15kHz $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: +3.0dB Reported RSRQ values: ±2.5dB Test 2: N/A Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -4.0dB $\hat{E}s_3 / N_{oc}$: -4.0dB Reported RSRQ values: ±3.5dB	Test 1: -1.6dB 0dB 0dB Via mapping Test 2: N/A Test 3: 0dB 0dB 0dB Via mapping	Test 1: N_{oc}: -92.6dBm/15kHz $\hat{E}s_2 / N_{oc}$: +3.0dB $\hat{E}s_3 / N_{oc}$: +3.0dB RSRQ_52 to RSRQ_62 Test 2: N/A Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -4.0dB $\hat{E}s_3 / N_{oc}$: -4.0dB RSRQ_44 to RSRQ_59
The derivation of the RSRQ values takes into account the uncertainty in Cell 3 SS-RSRQ from N_{oc} and $\hat{E}s_3 / N_{oc}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRQ values given above are for normal conditions. For extreme conditions, the SS-RSRQ values are 1.5dB wider at each end for Test 1, and 0.5 dB wider at each for Tests 2 and 3.			
4.7.2.2.1 EN-DC FR1-FR1 SS-RSRQ absolute measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc1}: -80.18 dBm/15kHz N_{oc2}: -80.18 dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB Reported RSRQ values: ±2.5dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB Reported RSRQ values: ±2.5dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: 3dB $\hat{E}s_3 / N_{oc2}$: -1.75dB Reported RSRQ values: ±2.5dB	Test 1: -1.5dB -1.5dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -81.68dBm/15kHz N_{oc2}: -81.68dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB RSRQ_52 to RSRQ_62 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB RSRQ_52 to RSRQ_62 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: 3dB $\hat{E}s_3 / N_{oc2}$: -1.75dB RSRQ_52 to RSRQ_62
	TEST CONFIGURATION 3, 6		

	Test 1: N_{oc1}: -86.27 dBm/15kHz N_{oc2}: -86.27 dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: 3dB $Ês_3$ / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB	Test 1: -1.53dB -1.53dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -87.8dBm/15kHz N_{oc2}: -87.8dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: 3dB $Ês_3$ / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62
The derivation of the RSRQ values takes into account the uncertainty in Cell 3 SS-RSRQ from N_{oc2} and $Ês_3$ / N_{oc2}, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRQ values given above are for normal conditions. For extreme conditions, the RSRQ values are 1.5dB wider at each end.			
4.7.2.2.2 EN-DC FR1-FR1 SS-RSRQ relative measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc1}: -80.18 dBm/15kHz N_{oc2}: -80.18 dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB Reported RSRQ values: ±3dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB Reported RSRQ values: ±3dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: 3dB $Ês_3$ / N_{oc2}: -1.75dB Reported RSRQ values: ±3dB	Test 1: -1.5dB -1.5dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -81.68dBm/15kHz N_{oc2}: -81.68dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: 3dB $Ês_3$ / N_{oc2}: -1.75dB RSRQ_x-11 to RSRQ_x+2
	TEST CONFIGURATION 3, 6		

	Test 1: N_{oc1}: -86.27 dBm/15kHz N_{oc2}: -86.27 dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB Reported RSRQ values: ±2.5dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB Reported RSRQ values: ±3dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: 3dB $\hat{E}s_3 / N_{oc2}$: -1.75dB Reported RSRQ values: ±3dB	Test 1: -1.53dB -1.53dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -87.8dBm/15kHz N_{oc2}: -87.8dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $\hat{E}s_2 / N_{oc1}$: -1.75dB $\hat{E}s_3 / N_{oc2}$: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $\hat{E}s_2 / N_{oc1}$: 3dB $\hat{E}s_3 / N_{oc2}$: -1.75dB RSRQ_x-11 to RSRQ_x+2
The derivation of the RSRQ values takes into account the uncertainty in Cell 2 and Cell 3 SS-RSRQ from N_{oc2} and $\hat{E}s_3 / N_{oc2}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRQ values given above are for normal conditions. For extreme conditions, the RSRQ values are 1dB wider at each end.			
4.7.3.1 EN-DC FR1 SS-SINR measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc}: -93dBm/15kHz $\hat{E}s_2 / N_{oc}$: +4.54dB $\hat{E}s_3 / N_{oc}$: +4.54dB Reported SINR values: ±3.5dB Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -4dB $\hat{E}s_3 / N_{oc}$: -4dB Reported SINR values: ±3.5dB	Test 1: 0dB 0dB 0dB Via mapping Test 2: 0dB 0.5dB 0.5dB Via mapping	Test 1: N_{oc}: -93dBm/15kHz $\hat{E}s_2 / N_{oc}$: +4.54dB $\hat{E}s_3 / N_{oc}$: +4.54dB SINR_31 to SINR_49 Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -3.5dB $\hat{E}s_3 / N_{oc}$: -3.5dB SINR_28 to SINR_45
	TEST CONFIGURATION 3, 6		
	Test 1: N_{oc}: -93dBm/15kHz $\hat{E}s_2 / N_{oc}$: +4.54dB $\hat{E}s_3 / N_{oc}$: +4.54dB Reported SINR values: ±3.5dB Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -4dB $\hat{E}s_3 / N_{oc}$: -4dB Reported SINR values: ±3.5dB	Test 1: -0.2dB 0dB 0dB Via mapping Test 2: 0dB 0.5dB 0.5dB Via mapping	Test 1: N_{oc}: -93.2dBm/15kHz $\hat{E}s_2 / N_{oc}$: +4.54dB $\hat{E}s_3 / N_{oc}$: +4.54dB SINR_31 to SINR_49 Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} $\hat{E}s_2 / N_{oc}$: -3.5dB $\hat{E}s_3 / N_{oc}$: -3.5dB SINR_28 to SINR_45
The derivation of the SINR values takes into account the uncertainty in Cell 3 SS- SINR from N_{oc} and $\hat{E}s_3 / N_{oc}$, the allowed UE reporting accuracy, and the UE mapping function. The SS- SINR values given above are for normal conditions. For extreme conditions, the SS- SINR values are 0.5dB wider at each end.			
4.7.3.2.1 EN-DC FR1-FR1 SS-SINR absolute measurement accuracy	**TEST CONFIGURATION 1, 2, 3, 4, 5, 6**		

	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB Reported SINR values: ±3dB Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz $Ês_2$ / N_{oc1}: 20dB $Ês_3$ / N_{oc2}: 20dB Reported SINR values: ±3dB Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -4dB $Ês_3$ / N_{oc2}: -4dB Reported SINR values: ±3.5dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0.8dB 0.8dB Via mapping	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB SINR_35 to SINR_51 Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz $Ês_2$ / N_{oc1}: 20dB $Ês_3$ / N_{oc2}: 20dB SINR_79 to SINR_94 Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -3.2dB $Ês_3$ / N_{oc2}: -3.2dB SINR_32 to SINR_49
The derivation of the SINR values takes into account the uncertainty in Cell 3 SS- SINR from N_{oc} and $Ês_3$ / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The SS- SINR values given above are for normal conditions. For extreme conditions, the SS- SINR values are 1dB wider at each for Tests 1 and 2 and 0.5dB wider at each end for Test 3.			
4.7.3.2.2 EN-DC FR1-FR1 SS-SINR relative measurement accuracy	**TEST CONFIGURATION 1, 2, 3, 4, 5, 6**		
	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB Reported SINR values: ±3.5dB Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz $Ês_2$ / N_{oc1}: 20dB $Ês_3$ / N_{oc2}: 20dB Reported SINR values: ±3.5dB Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -4dB $Ês_3$ / N_{oc2}: -4dB Reported SINR values: ±4dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0.8dB 0.8dB Via mapping	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz $Ês_2$ / N_{oc1}: -1.75dB $Ês_3$ / N_{oc2}: -1.75dB SINR_x-10 to SINR_x+10 Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz $Ês_2$ / N_{oc1}: 20dB $Ês_3$ / N_{oc2}: 20dB SINR_x-10 to SINR_x+10 Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -3.2dB $Ês_3$ / N_{oc2}: -3.2dB SINR_x-11 to SINR_x+11
The derivation of the SINR values takes into account the uncertainty in Cell 3 SS- SINR from N_{oc} and $Ês_3$ / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The SS- SINR values given above are for normal conditions. For extreme conditions, the SS- SINR values are 0.5dB wider at each for Tests 1 and 2 and 0dB wider at each end for Test 3.			
4.7.4.1.1 EN-DC FR1 SSB based L1-RSRP absolute measurement accuracy			

Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz $Ês_2$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±4.5dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±3dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz $Ês_2$ / N_{oc1}: 10dB RSRP_62 to RSRP_82 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -2.2dB RSRP_31 to RSRP_44 RSRP_31 to RSRP_45 RSRP_32 to RSRP_45 RSRP_32 to RSRP_46 RSRP_33 to RSRP_46 RSRP_34 to RSRP_47 RSRP_34 to RSRP_48 depending on operating band
Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz $Ês_2$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±4.5dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±3dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz $Ês_2$ / N_{oc1}: 10dB RSRP_63 to RSRP_84 Test 2: N_{oc1}: -116.2dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -2.2dB RSRP_34 to RSRP_47 RSRP_34 to RSRP_48 RSRP_35 to RSRP_48 RSRP_35 to RSRP_49 RSRP_36 to RSRP_49 RSRP_37 to RSRP_50 RSRP_37 to RSRP_51 depending on operating band
4.7.4.1.2 EN-DC FR1 SSB based L1-RSRP relative measurement accuracy			
Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz $Ês_2$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±1dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz $Ês_2$ / N_{oc1}: 10dB RSRP_x-3 to RSRP_x+3 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -2.2dB RSRP_x-3 to RSRP_x+3
Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz $Ês_2$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±1dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz $Ês_2$ / N_{oc1}: 10dB RSRP_x-3 to RSRP_x+3 Test 2: N_{oc1}: -116.2dBm/15kHz + Δ_{BG_offset} $Ês_2$ / N_{oc1}: -2.2dB RSRP_x-3 to RSRP_x+3

4.7.4.2.1 EN-DC FR1 CSI-RS based L1-RSRP absolute measurement accuracy	Same as 4.7.4.1.1	Same as 4.7.4.1.1	Same as 4.7.4.1.1
4.7.4.2.2 EN-DC FR1 CSI-RS based L1-RSRP relative measurement accuracy	Same as 4.7.4.1.2	Same as 4.7.4.1.2	Same as 4.7.4.1.2
4.7.5.1 EN-DC FR1 SFTD measurement accuracy	N_{oc1}: -104dBm/15kHz $\hat{E}_{s1}$ / N_{oc1}: -3.0dB N_{oc2}: -104dBm/15kHz $\hat{E}_{s2}$ / N_{oc2}: 17.0dB	0dB 0.3dB 0dB 0dB	N_{oc1}: -104dBm/15kHz $\hat{E}_{s1}$ / N_{oc1}: -2.7dB N_{oc2}: -104dBm/15kHz $\hat{E}_{s2}$ / N_{oc2}: 17.0dB
4.7.7.1.1 EN-DC FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy			
Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB Reported CSI-SINR values: ±5.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -3dB Reported CSI-SINR values: ±5.5dB (±1dB additionally for extreme conditions)	<u>Test 1:</u> 0dB 0dB Via mapping <u>Test 2:</u> 0dB 0.8dB Via mapping	<u>Test 1:</u> N_{oc1}: -94.65dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB All bands: L1-SINR_28 to L1-SINR_57 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $\hat{E}_{s2}$ / N_{oc1}: -2.2dB All bands: L1-SINR_27 to L1-SINR_58
Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB Reported CSI-SINR values: ±5.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -3dB Reported CSI-SINR values: ±5.5dB (±1dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB All bands: L1-SINR_28 to L1-SINR_57 Test 2: N_{oc1}: -116.2dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -2.2dB All bands: L1-SINR_27 to L1-SINR_58
4.7.7.1.2 EN-DC FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR relative measurement accuracy			
Same as 4.7.7.1.1	Same as 4.7.7.1.1	Same as 4.7.7.1.1	<u>Test 1:</u> N_{oc1}: -94.65dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB L1-SINR_x-9 to L1-SINR_x+9 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $\hat{E}_{s2}$ / N_{oc1}: -2.2dB L1-SINR_x-9 to L1-SINR_x+9

Same as 4.7.7.1.1	Same as 4.7.7.1.1	Same as 4.7.7.1.1	Test 1: N_{oc1}: -96dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB L1-SINR_x-9 to L1-SINR_x+9 Test 2: N_{oc1}: -116.2dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -2.2dB L1-SINR_x-9 to L1-SINR_x+9
4.7.7.2 EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy			
Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB Reported SS-SINR values: ±4.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -3dB Reported SS-SINR values: ±4.5dB (±1dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB All bands: L1-SINR_30 to L1-SINR_55 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $\hat{E}_{s2}$ / N_{oc1}: -2.2dB All bands: L1-SINR_29 to L1-SINR_56
Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB Reported CSI-SINR values: ±4.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -3dB Reported CSI-SINR values: ±4.5dB (±1dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB All bands: L1-SINR_30 to L1-SINR_55 Test 2: N_{oc1}: -116.2dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -2.2dB All bands: L1-SINR_29 to L1-SINR_56
4.7.7.3.1 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR absolute measurement accuracy			
Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB Reported CSI-SINR values: ±4.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -3dB Reported CSI-SINR values: ±4.5dB (±1dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB All bands: L1-SINR_30 to L1-SINR_55 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $\hat{E}_{s2}$ / N_{oc1}: -2.2dB All bands: L1-SINR_29 to L1-SINR_56

Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB Reported CSI-SINR values: ±4.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -3dB Reported CSI-SINR values: ±4.5dB (±1dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz $\hat{E}_{s2}$ / N_{oc1}: 10dB All bands: L1-SINR_30 to L1-SINR_55 Test 2: N_{oc1}: -116.2dBm/15kHz + ΔBG_offset $\hat{E}_{s2}$ / N_{oc1}: -2.2dB All bands: L1-SINR_29 to L1-SINR_56
4.7.7.3.2 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR relative measurement accuracy			
Same as 4.7.7.1.2	Same as 4.7.7.1.2	Same as 4.7.7.1.2	Same as 4.7.7.1.2
Same as 4.7.7.1.2	Same as 4.7.7.1.2	Same as 4.7.7.1.2	Same as 4.7.7.1.2

Table F.1.3.2-2: Derivation of test requirements for NR SA FR1 RRM tests

Test	Minimum requirement in TS 38.133 [6]	Test tolerance (TT)	Test requirement in TS 38.533
6.1.1.1 NR SA FR1 cell re-selection	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +13dB Ês2 / Noc: +16dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: +13dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0.45dB During T3: 0dB 0.45dB 0dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +13dB Ês2 / Noc: +16.45dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +16.45dB Ês2 / Noc: +13dB
6.1.1.2 NR SA FR1-FR1 cell re-selection	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -4dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -infinity During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: +12dB	During T1: 0dB -2dB 1.6dB 0.4dB During T2: 0dB 0dB 1.6dB 0dB During T3: 0dB 0dB 1.6dB 1.6dB	During T1: Noc1: -98dBm/15kHz Noc2: -100dBm/15kHz Ês1 / Noc1: +15.6dB Ês2 / Noc2: -3.6dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +15.6dB Ês2 / Noc2: -infinity During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +15.6dB Ês2 / Noc2: 13.6dB
6.1.1.3 NR SA FR1 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +13dB Ês2 / Noc: +16dB During T2: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: +13dB In Signalling SSearchDeltaP = 3dB	During T1: 0dB -0.45dB 0dB During T2: 0dB 0dB -0.45dB In Signalling 3dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +12.55dB Ês2 / Noc: +16dB During T2: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: +12.55dB In Signalling SSearchDeltaP = 6dB
6.1.1.4 NR SA FR1 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +13dB Ês2 / Noc: +16dB During T2: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: +13dB	During T1: 0dB -0.45dB 0dB During T2: 0dB 0dB -0.45dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +12.55dB Ês2 / Noc: +16dB During T2: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: +12.55dB

6.1.1.5 NR SA FR1-FR1 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	During T1: Noc1: -98dBm/15kHz Ês1 / Noc1: +14dB Noc2: -98dBm/15kHz Ês2 / Noc2: -4dB During T2: Noc1: -98dBm/15kHz Ês1 / Noc1: +14dB Noc2: -98dBm/15kHz Ês2 / Noc2: +12dB In signalling: Thresh_X_HighP of Cell 1 = 48dB Thresh_X_HighP of Cell 2 = 48dB Thresh_X_LowP of Cell 1 = 50dB Thresh_X_LowP of Cell 2 = 50dB Thresh_Serving_LowP of Cell 1 = 44dB Thresh_Serving_LowP of Cell 2 = 44dB SSearchDeltaP of Cell 1 = 3dB SSearchDeltaP of Cell 2 = 3dB	During T1: 0dB 0dB 0dB 0.3dB During T2: 0dB 0dB 0dB -2.25dB In signalling: 0dB -4dB -2dB 0dB 0dB 2dB 0dB 12dB	During T1: Noc1: -98dBm/15kHz Ês1 / Noc1: +14dB Noc2: -98dBm/15kHz Ês2 / Noc2: -3.7dB During T2: Noc1: -98dBm/15kHz Ês1 / Noc1: +14dB Noc1: -98dBm/15kHz Ês2 / Noc2: +9.75dB In signalling: Thresh_X_HighP of Cell 1 = 48dB Thresh_X_HighP of Cell 2 = 44dB Thresh_X_LowP of Cell 1 = 48dB Thresh_X_LowP of Cell 2 = 50dB Thresh_Serving_LowP of Cell 1 = 44dB Thresh_Serving_LowP of Cell 2 = 46dB SSearchDeltaP of Cell 1 = 3dB SSearchDeltaP of Cell 2 = 15dB
6.1.1.6 NR SA FR1-FR1 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	During T1: Noc1: -98dBm/15kHz Ês1 / Noc1: +14dB Noc2: -98dBm/15kHz Ês2 / Noc2: -4dB During T2: Noc1: -98dBm/15kHz Ês1 / Noc1: +14dB Noc2: -98dBm/15kHz Ês2 / Noc2: +12dB In signalling: SSearchThresholdP of Cell 1 = 50dB SSearchThresholdP of Cell 2 = 50dB	During T1: 0dB 2dB -2dB 0.35dB During T2: 0dB 0dB -2dB 4dB In signalling: 0dB -16dB	During T1: Noc1: -98dBm/15kHz Ês1 / Noc1: +16dB Noc2: -100dBm/15kHz Ês2 / Noc2: -3.65dB During T2: Noc1: -98dBm/15kHz Ês1 / Noc1: +14dB Noc1: -100dBm/15kHz Ês2 / Noc2: +16dB In signalling: SSearchThresholdP of Cell 1 = 50dB SSearchThresholdP of Cell 2 = 34dB
6.1.1.7 NR SA FR1 cell re-selection for UE configured with highSpeedMeasFlag-r16	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +13dB Ês2 / Noc: +16dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: +13dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0.45dB During T3: 0dB 0.45dB 0dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +16dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +13dB Ês2 / Noc: +16.45dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +16.45dB Ês2 / Noc: +13dB

6.1.2.1 NR SA FR1 – E-UTRA cell re-selection to higher priority E-UTRA	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: +12dB During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -4dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 1.6dB 1.6dB During T3: 0dB -2dB 1.6dB 0.4dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +15.6dB Ês2 / Noc2: 13.6dB During T3: Noc1: -98dBm/15kHz Noc2: -100dBm/15kHz Ês1 / Noc1: +15.6dB Ês2 / Noc2: -3.6dB
6.1.2.2 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRA	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: +14dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +12dB Ês2 / Noc2: +14dB	During T1: -2dB 0dB 0.4dB 1.6dB During T2: 0dB 0dB 1.6dB 0dB	During T1: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -3.6dB Ês2 / Noc2: +15.6dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +13.6dB Ês2 / Noc2: +14dB
6.1.2.3 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRAN for UE fulfilling low mobility relaxed measurement criterion	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: +14dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +12dB Ês2 / Noc2: +14dB	During T1: -2dB 0dB 0.4dB 1.6dB During T2: 0dB 0dB 1.6dB 0dB	During T1: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -3.6dB Ês2 / Noc2: +15.6dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +13.6dB Ês2 / Noc2: +14dB
6.1.2.4 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRAN for UE fulfilling not-at-cell edge relaxed measurement criterion	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: +14dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +12dB Ês2 / Noc2: +14dB	During T1: -2dB 0dB 0.4dB 1.6dB During T2: 0dB 0dB 1.6dB 0dB	During T1: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -3.6dB Ês2 / Noc2: +15.6dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +13.6dB Ês2 / Noc2: +14dB
6.1.2.5 NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRA for UE configured with highSpeedMeasFlag-r16	Same as 6.1.2.2	Same as 6.1.2.2	Same as 6.1.2.2
6.3.1.1 NR SA FR1 handover with known target cell	TEST CONFIGURATION 1, 2 A3-Offset: 0dB	-1dB	A3-Offset: -1dB

	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 8dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +11dB During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +11dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB -1dB During T3: 0dB 0dB 0dB -1dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 8dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +10dB During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +10dB
	TEST CONFIGURATION 3 A3-Offset: 0dB	-1dB	A3-Offset: -1dB
	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 8dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +11dB During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +11dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB -1dB During T3: 0dB 0dB 0dB -1dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 8dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +10dB During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +10dB
6.3.1.2 NR SA FR1 handover with unknown target cell	A3-Offset: 0dB During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 8dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +8dB	-1dB During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 1.5dB	A3-Offset: -1dB During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 8dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +8dB Ês2 / Noc2: +9.5dB
6.3.1.3 NR SA FR1-FR1 Handover with unknown Target Cell	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +5dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 1.7dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +6.7dB

6.3.1.4 NR SA FR1 – E-UTRA handover with known target cell	During T1: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +12dB Ês2 / Noc2: -infinity During T2: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: +8dB During T3: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: +8dB	During T1: 0dB 0dB 1.55dB 0dB During T2: 0dB 0dB -1.55dB 1.55dB During T3: 0dB 0dB -1.55dB 1.55dB	During T1: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +13.55dB Ês2 / Noc2: -infinity During T2: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -5.55dB Ês2 / Noc2: +9.55dB During T3: Noc1: -100dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -5.55dB Ês2 / Noc2: +9.55dB
6.3.1.5 NR SA FR1 – E-UTRA handover with unknown target cell	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 0dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 0dB Ês2 / Noc2: +7dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 0dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: 0dB Ês2 / Noc2: +7dB
6.3.1.6 NR SA FR1 – UTRAN FDD handover with known target cell	During T1: Noc: -100dBm/15kHz Ês / Noc: 12dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB During T2: Noc: -100dBm/15kHz Ês / Noc: -4dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB During T3: Noc: -100dBm/15kHz Ês / Noc: -4dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB	During T1: -1.54dB 0dB 0dB 0dB 0dB 0dB During T2: -1.54dB 0dB 0dB 0dB 0dB 0dB During T3: -1.54dB 0dB 0dB 0dB 0dB 0dB	During T1: Noc: -101.54dBm/15kHz Ês / Noc: 12dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB During T2: Noc: -101.54dBm/15kHz Ês / Noc: -4dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB During T3: Noc: -101.54dBm/15kHz Ês / Noc: -4dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB

6.3.1.7 NR SA FR1 synchronous DAPS handover	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB In signaling: A3-offset: 0dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 1dB During T3: 0dB 0dB 1dB During T4: 0dB 0dB 1dB During T5: 0dB 0dB 1dB In signaling: -1dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB In signaling: A3-offset: -1dB
6.3.1.8 NR SA FR1 asynchronous DAPS handover	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +9dB In signaling: A3-offset: 0dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 1dB During T3: 0dB 0dB 1dB During T4: 0dB 0dB 1dB During T5: 0dB 0dB 1dB In signaling: -1dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB In signaling: A3-offset: -1dB

6.3.1.9 NR SA FR1 Intra-band inter-frequency synchronous DAPS handover	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB In signaling: A3-offset: 0dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 3.7dB During T3: 0dB 0dB 3.7dB During T4: 0dB 0dB 3.7dB During T5: 0dB 0dB 3.7dB In signaling: -3dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB In signaling: A3-offset: -3dB
6.3.1.10 NR SA FR1 Intra-band inter-frequency asynchronous DAPS handover	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +8dB In signaling: A3-offset: 0dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 3.7dB During T3: 0dB 0dB 3.7dB During T4: 0dB 0dB 3.7dB During T5: 0dB 0dB 3.7dB In signaling: -3dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11.7dB In signaling: A3-offset: -3dB

6.3.1.11 NR SA FR1 Inter-band inter-frequency synchronous DAPS handover	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB In signaling: A3-offset: -6dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB During T3: 0dB 0dB 0dB During T4: 0dB 0dB 0dB During T5: 0dB 0dB 0dB In signaling: -1dB for config 1,2,4,5,9 In signaling: -4dB for config 3,6 In signaling: 2dB for config 7,8	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB In signaling: -7dB for config 1,2,4,5,9 In signaling: -10dB for config 3,6 In signaling: -4dB for config 7,8
6.3.1.12 NR SA FR1 Inter-band inter-frequency asynchronous DAPS handover	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB In signaling: A3-offset: -4dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB During T3: 0dB 0dB 0dB During T4: 0dB 0dB 0dB During T5: 0dB 0dB 0dB In signaling: -3dB for config 1,2,4,5,9 In signaling: -6dB for config 3,6 In signaling: 0dB for config 7,8	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T4: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB During T5: Noc: -98dBm/15kHz Ês1 / Noc: +4dB Ês2 / Noc: +4dB In signaling: -7dB for config 1,2,4,5,9 In signaling: -10dB for config 3,6 In signaling: -4dB for config 7,8

6.3.2.1.1 NR SA FR1 RRC re-establishment	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +7dB Ês2 / Noc: +4dB During T2: Noc: -98dBm/15kHz Ês1 / Noc: -infinity Ês2 / Noc: +4dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: -infinity Ês2 / Noc: +4dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB During T3: 0dB 0dB 0dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +7dB Ês2 / Noc: +4dB During T2: Noc: -98dBm/15kHz Ês1 / Noc: -infinity Ês2 / Noc: +4dB During T3: Noc: -98dBm/15kHz Ês1 / Noc: -infinity Ês2 / Noc: +4dB
6.3.2.1.2 NR SA FR1 - FR1 RRC re-establishment	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -infinity Ês2 / Noc2: -infinity During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -infinity Ês2 / Noc2: +7dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 0dB 0dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -infinity Ês2 / Noc2: -infinity During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -infinity Ês2 / Noc2: +7dB
6.3.2.1.3 NR SA FR1 RRC re-establishment without serving cell timing	During T1: Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: +4dB $\hat{E}s_2$ / Noc: -infinity During T2: Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: -infinity $\hat{E}s_2$ / Noc: -infinity During T3: Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: -infinity $\hat{E}s_2$ / Noc: +4dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB During T3: 0dB 0dB 0dB	During T1: Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: +4dB $\hat{E}s_2$ / Noc: -infinity During T2: Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: -infinity $\hat{E}s_2$ / Noc: -infinity During T3: Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: -infinity $\hat{E}s_2$ / Noc: +4dB
6.3.2.2.1	Absolute uplink power: Normal conditions ±9dB Relative uplink power step: Normal conditions ±2.5dB Uplink timing: 15kHz SCS T_e ±12*64*T_c 30kHz SCS T_e ±8*64*T_c	 2.1dB 0.7dB $112T_c$ $112T_c$	Absolute uplink power: Normal conditions ±11.1dB Relative uplink power step: Normal conditions ±3.2dB Uplink timing: 15kHz SCS T_e ±880*T_c 30kHz SCS T_e ±624*T_c
6.3.2.2.2	Same as 6.3.2.2.1	Same as 6.3.2.2.1	Same as 6.3.2.2.1
6.3.2.2.3	Same as 6.3.2.2.1	Same as 6.3.2.2.1	Same as 6.3.2.2.1
6.3.2.2.4	Same as 6.3.2.2.1	Same as 6.3.2.2.1	Same as 6.3.2.2.1
6.3.2.3.1 NR SA FR1 RRC connection release with redirection	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +4dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +4dB

6.3.2.3.2 NR SA FR1 – E-UTRA RRC connection release with redirection	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +4dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +4dB
6.3.3.1 NR SA FR1 conditional handover	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +11dB In signaling: A3-offset: 0dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB -1dB In signaling: -1dB	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +8dB Ês2 / Noc: +10dB In signaling: A3-offset: -1dB
6.3.3.2 NR SA FR1-FR1 conditional handover	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +5dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 1.7dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +4dB Ês2 / Noc2: +6.7dB

6.4.1.1 EN-DC FR1 UE transmit timing accuracy	Test 1 (no DRX): Uplink timing: ±12*64 T_c for 15 KHz SSB SCS,15 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,30 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,60 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,15 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,30 kHz UL SCS ±7*64 T_c for 30 KHz SSB SCS,60 kHz UL SCS Max step size T_q: 5.5*64*T_c Min adjust rate T_p: 5.5*64*T_c Max adjust rate: 5.5*64*T_c $\hat{E}s_2$ / N_{oc}: +3.00dB N_{oc} = -98 dBm/15 kHz (Config 1,2,3) Test 2 (with DRX): ±12*64 T_c for 15 KHz SSB SCS,15 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,30 kHz UL SCS ±10*64 T_c for 15 KHz SSB SCS,60 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,15 kHz UL SCS ±8*64 T_c for 30 KHz SSB SCS,30 kHz UL SCS ±7*64 T_c for 30 KHz SSB SCS,60 kHz UL SCS $\hat{E}s_1$ / N_{oc}: +3.00dB	±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c +0.5*64T_c -3.6*64*T_c +1.1*64*T_c +0.3 dB +1.5 dB ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c ±1.75*64*T_c +0.3dB	Test 1 (10MHz Ch BW): Uplink timing: ±13.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±8.75*64*T_c Max step size T_q: 6.0*64*T_c Min adjust rate: 1.9*64*T_c Max adjust rate: 6.6*64*T_c $\hat{E}s_1$ / N_{oc}: +3.30dB N_{oc} = -98 dBm/15 kHz (Config 1,2,3) +1.5 dB Test 2 (with DRX): Uplink timing: ±13.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±11.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±9.75*64*T_c Uplink timing: ±8.75*64*T_c $\hat{E}s_1$ / N_{oc}: +3.30dB
6.4.3.1 NR SA FR1 timing advance adjustment accuracy	N_{oc} = -98 dBm/15 kHz (Config 1, 2, 4, 5) N_{oc} = -95 dBm/15 kHz (Config 3, 6) $\hat{E}s_x$ / N_{oc} = 3 dB UE Timing Advance Adjustment Accuracy for 15kHz SCS = ±256 T_c+ TT UE Timing Advance Adjustment Accuracy for 30kHz SCS = ±256 T_c+ TT	0 0 0 +/- 88 Tc +/- 88 Tc	N_{oc} = -98 dBm/15 kHz (Config 1, 2) N_{oc} = -95 dBm/15 kHz (Config 3) $\hat{E}s_x$ / N_{oc} = 3 dB UE TAAA for 15kHz SCS = ±344 T_c UE TAAA for 30kHz SCS = ±344 T_c
6.5.1.1 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	SNR during T1: 1dB T2: -7dB T3: -15dB	Offset during T1: +0.8dB T2: +0.8dB T3: -0.8dB	SNR during T1: 1.8dB T2: -6.2dB T3: -15.8dB
6.5.1.2 NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	SNR during T1: 1dB T2: -7dB T3: -15dB T4: -4.5dB T5: 1dB	Offset during T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: +0.8dB	SNR during T1: 1.8dB T2: -6.2dB T3: -15.8dB T4: -5.3dB T5: 1.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3 and T4 is modified as specified in clause D.4.1.1
6.5.1.3 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in DRX mode	Same as 6.5.1.1	Same as 6.5.1.1	Same as 6.5.1.1

6.5.1.4 NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in DRX mode	Same as 6.5.1.2	Same as 6.5.1.2	Same as 6.5.1.2
6.5.1.5 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 6.5.1.1	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.6 NR SA FR1 radio link monitoring in-sync test for PCell configured with CSI-RS-based RLM RS in non-DRX mode	Same as 6.5.1.2	Same as 6.5.1.2	Same as 6.5.1.2
6.5.1.7 NR SA FR1 radio link monitoring out-of-sync test for PCell configured with CSI-RS-based RLM RS in DRX mode	Same as 6.5.1.1	Same as 6.5.1.1	Same as 6.5.1.1
6.5.1.8 NR SA FR1 radio link monitoring in-sync test for PCell configured with CSI-RS-based RLM RS in DRX mode	Same as 6.5.1.2	Same as 6.5.1.2	Same as 6.5.1.2
6.5.2.1 NR SA FR1 interruptions during measurements on deactivated NR SCC	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB	During T1: 0dB 0dB 0dB 0dB	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB
6.5.3.1 NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T2: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T3: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 0dB 0dB	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T2: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T3: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB
6.5.3.2 NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 640ms SCell measurement cycle	Same as 6.5.3.1	Same as 6.5.3.1	Same as 6.5.3.1
6.5.3.3 NR SA FR1 SCell activation and deactivation of unknown SCell in non-DRX	Same as 6.5.3.1	Same as 6.5.3.1	Same as 6.5.3.1

6.5.5.1 NR SA FR1 SSB-based beam failure detection and link recovery in non-DRX	q0 SSB SNR during: T1: 5dB T2: -3dB T3: -12dB T4: -12dB T5: -12dB q1 SSB during T1: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10dB q1 SSB during T2: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10dB q1 SSB during T3, T4 and T5: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: +10dB	Offset during: T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: -0.8dB q1 SSB during T1: 0dB -0.2dB q1 SSB during T2: 0dB -0.2dB q1 SSB during T3, T4 and T5: 0dB +0.2dB	SNR during: T1: +5.8dB T2: -2.2dB T3: -12.8dB T4: -12.8dB T5: -12.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3, T4 and T5 is modified as specified in clause D.4.1.1 q1 SSB during T1: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10.2dB q1 SSB during T2: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10.2dB q1 SSB during T3, T4 and T5: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: +10.2dB
6.5.5.2 NR SA FR1 SSB-based beam failure detection and link recovery in DRX	Same as 6.5.5.1	Same as 6.5.5.1	Same as 6.5.5.1
6.5.5.3 NR SA FR1 CSI-RS-based beam failure detection and link recovery in non-DRX	q0 CSI-RS SNR during: T1: 5dB T2: -3dB T3: -12dB T4: -12dB T5: -12dB q1 CSI-RS during T1: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10dB q1 CSI-RS during T2: Noc$_2$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10dB q1 CSI-RS during T3, T4 and T5: Noc$_2$: -98dBm/15kHz Ês$_1$ / Noc$_1$: +10dB	Offset during: T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: -0.8dB q1 CSI-RS during T1: 0dB -0.2dB q1 CSI-RS during T2: 0dB -0.2dB q1 CSI-RS during T3, T4 and T5: 0dB +0.2dB	SNR during: T1: +5.8dB T2: -2.2dB T3: -12.8dB T4: -12.8dB T5: -12.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3, T4 and T5 is modified as specified in clause D.4.1.1 q1 CSI-RS during T1: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10.2dB q1 CSI-RS during T2: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: -10.2dB q1 CSI-RS during T3, T4 and T5: Noc$_1$: -98dBm/15kHz Ês$_1$ / Noc$_1$: +10.2dB
6.5.5.4 NR SA FR1 CSI-RS-based beam failure detection and link recovery in DRX	Same as 6.5.5.3	Same as 6.5.5.3	Same as 6.5.5.3

6.5.5.5 NR SA FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in non-DRX	On the SCell: q0 CSI-RS SNR during: T1: 5dB T2: -3dB T3: -12dB T4: -12dB T5: -12dB q1 SSB during T1: Noc_1: -98dBm/15kHz $Ês_1$ / Noc_1: -10dB q1 SSB during T2: Noc_1: -98dBm/15kHz $Ês_1$ / Noc_1: -10dB q1 SSB during T3, T4 and T5: Noc_1: -98dBm/15kHz $Ês_1$ / Noc_1: +10dB	On the SCell: Offset during: T1: +0.8dB T2: +0.8dB T3: -0.8dB T4: -0.8dB T5: -0.8dB q1 SSB during T1: 0dB -0.2dB q1 SSB during T2: 0dB -0.2dB q1 SSB during T3, T4 and T5: 0dB +0.2dB	On the SCell: T1: +5.8dB T2: -2.2dB T3: -12.8dB T4: -12.8dB T5: -12.8dB For testing of a UE which supports 4RX on all bands, the SNR during T3, T4 and T5 is modified as specified in clause D.4.1.1 q1 SSB during T1: Noc_1: -98dBm/15kHz $Ês_1$ / Noc_1: -10.2dB q1 SSB during T2: Noc_1: -98dBm/15kHz $Ês_1$ / Noc_1: -10.2dB q1 SSB during T3, T4 and T5: Noc_1: -98dBm/15kHz $Ês_1$ / Noc_1: +10.2dB
6.5.5.6 NR SA FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in DRX	Same as 6.5.5.5	Same as 6.5.5.5	Same as 6.5.5.5
6.5.6.1.1 NR SA FR1-FR1 DCI-based DL active BWP switch in non-DRX	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T2: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T3: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 0dB 0dB	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T2: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T3: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB
6.5.6.1.2 NR SA FR1 DCI-based DL active BWP switch in non-DRX	During T1: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB During T2: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB During T3: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB	During T1: 0dB 0dB During T2: 0dB 0dB During T3: 0dB 0dB	During T1: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB During T2: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB During T3: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB
6.5.6.2.1 NR SA FR1 RRC-based DL active BWP switch in non-DRX	During T1: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB	During T1: 0dB 0dB	During T1: Noc_1: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB
6.6.1.1 SA event triggered reporting tests without gap under non-DRX	During T1: Noc: -98dBm/15kHz $Ês_1$ / Noc: +4.00dB $Ês_2$ / Noc: -infinity During T2: Noc: -98dBm/15kHz $Ês_1$ / Noc: +4.00dB $Ês_2$ / Noc: +4.00dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB	During T1: Noc: -98dBm/15kHz $Ês_1$ / Noc: +4.00dB $Ês_2$ / Noc: -infinity During T2: Noc: -98dBm/15kHz $Ês_1$ / Noc: +4.00dB $Ês_2$ / Noc: +4.00dB

6.6.1.2 SA event triggered reporting tests without gap under DRX	Same as 6.6.1.1	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.3 SA event triggered reporting tests with per-UE gaps under non-DRX	Same as 64.6.1.1	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.4 SA event triggered reporting tests with per-UE gaps under DRX	Same as 6.6.1.1	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.5 SA event triggered reporting tests without gap under non-DRX with SSB index reading	Same as 6.6.1.1	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.6 SA event triggered reporting tests with per-UE gaps under non-DRX with SSB index reading	Same as 6.6.1.1	Same as 6.6.1.1	Same as 6.6.1.1
6.6.1.7 NR SA FR1 event-triggered reporting without gap in DRX for UE configured with highSpeedMeasFlag-r16	Same as 6.6.1.1	Same as 6.6.1.1	Same as 6.6.1.1
6.5.3.1	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T2: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T3: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 0dB 0dB	During T1: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T2: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB During T3: Noc_1: -104dBm/15kHz Noc_2: -104dBm/15kHz $Ês_1$ / Noc_1: +17dB $Ês_2$ / Noc_2: +17dB
6.5.3.2	Same as 6.5.3.1	Same as 6.5.3.1	Same as 6.5.3.1
6.5.3.3	Same as 6.5.3.1	Same as 6.5.3.1	Same as 6.5.3.1
6.5.7.1 NR SA FR1 DL Interruptions at switching between two uplink carriers in FDD-TDD CA	Noc1: -104dBm/15kHz Noc2: -104dBm/15kHz Ês1 / Noc: +17dB Ês2 / Noc: +17dB Reported CSI-RSRP values ± 10dB	-1.10dB -1.10dB 0dB 0dB Via mapping	Noc1: -105.10dBm/15kHz Noc2: -105.10dBm/15kHz Ês1 / Noc: +17dB Ês2 / Noc: +17dB CSI-RS#0: RSRP_64 to RSRP_84 CSI-RS#1: RSRP_67 to RSRP_87
6.5.7.2 NR SA FR1 DL Interruptions at switching between two uplink carriers in TDD-TDD CA	Same as 6.5.7.1	Same as 6.5.7.1	Noc1: -105.10dBm/15kHz Noc2: -105.10dBm/15kHz Ês1 / Noc: +17dB Ês2 / Noc: +17dB CSI-RS#0: RSRP_67 to RSRP_87 CSI-RS#1: RSRP_67 to RSRP_87

6.6.2.1 NR SA FR1-FR1 event-triggered reporting in non-DRX	During T1: Freq 1 Noc: -98dBm/15kHz Freq 2 Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: +4.00dB $\hat{E}s_2$ / Noc: -infinity During T2: Freq 1 Noc: -98dBm/15kHz Freq 2 Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: +4.00dB $\hat{E}s_2$ / Noc: +7.00dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB	During T1: Freq 1 Noc: -98dBm/15kHz Freq 2 Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: +4.00dB $\hat{E}s_2$ / Noc: -infinity During T2: Freq 1 Noc: -98dBm/15kHz Freq 2 Noc: -98dBm/15kHz $\hat{E}s_1$ / Noc: +4.00dB $\hat{E}s_2$ / Noc: +7.00dB
6.6.2.2 NR SA FR1-FR1 event-triggered reporting in DRX	Same as 6.6.2.1	Same as 6.6.2.1	Same as 6.6.2.1
6.6.2.5 NR SA FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	Same as 6.6.2.1	Same as 6.6.2.1	Same as 6.6.2.1
6.6.2.6 NR SA FR1-FR1 event-triggered reporting in DRX with SSB time index detection	Same as 6.6.2.1	Same as 6.6.2.1	Same as 6.6.2.1
6.6.3.1 NR SA FR1 – E-UTRAN event-triggered reporting in non-DRX	During T1: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: +18.00dB Ês2 / Noc: -infinity During T2: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: -2dB Ês2 / Noc: +19.00dB	During T1: 0dB 0dB +1.65dB 0dB During T2: 0dB 0dB -1.65dB 1.65dB	During T1: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: +19.65dB Ês2 / Noc: -infinity During T2: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: -3.65dB Ês2 / Noc: +20.65dB
6.6.3.2 NR SA FR1 – E-UTRAN event-triggered reporting in DRX	Same as 6.6.3.1	Same as 6.6.3.1	Same as 6.6.3.1
6.6.3.3 NR SA FR1 – E-UTRAN event-triggered reporting in DRX for UE configured with highSpeedMeasFlag-r16	During T1: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: +18.00dB Ês2 / Noc: -infinity During T2: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: -2dB Ês2 / Noc: +19.00dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB	During T1: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: +18.00dB Ês2 / Noc: -infinity During T2: Freq 1 Noc: -106dBm/15kHz Freq 2 Noc: -106dBm/15kHz Ês1 / Noc: -2dB Ês2 / Noc: +19.00dB
6.6.4.1 NR SA FR1 SSB-based L1-RSRP measurement in non-DRX	During T1: Noc: -98dBm/15kHz $\hat{E}s_0$ / Noc: +0.00dB $\hat{E}s_1$ / Noc: -infinity During T2: Noc: -98dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported SSB#0 SS-RSRP values ± 10dB Reported SSB#1 SS-RSRP values ± 10dB Reported Differential SS-RSRP values ± 3dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0.5dB Via mapping	During T1: Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: +0.00dB $\hat{E}s_1$ / Noc: -infinity During T2: Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.50dB **For configuration 1,2,4,5** SSB#1: RSRP_55 to RSRP_75 SSB#0: DIFFRSRP_0 to DIFFRSRP_3 **For configuration 3,6** SSB#1: RSRP_58 to RSRP_78 SSB#0: DIFFRSRP_0 to DIFFRSRP_3
6.6.4.2 NR SA FR1 SSB-based L1-RSRP measurement in DRX	Same as 6.6.4.1	Same as 6.6.4.1	Same as 6.6.4.1

6.6.4.3 NR SA FR1 CSI-RS-based L1-RSRP measurement in non-DRX	Noc: -98dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported CSI-RSRP values ± 10dB Reported Differential CSI-RSRP values ± 3dB	0dB 0dB 0.5dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.50dB **For configuration 1,2,4,5** CSI-RS#1: RSRP_55 to RSRP_75 CSI-RS#0: DIFFRSRP_0 to DIFFRSRP_3 **For configuration 3,6** CSI-RS#1: RSRP_58 to RSRP_78 CSI-RS#0: DIFFRSRP_0 to DIFFRSRP_3
6.6.4.4 NR SA FR1 CSI-RS-based L1-RSRP measurement in DRX	Same as 6.6.4.3	Same as 6.6.4.3	Same as 6.6.4.3
6.6.4.5 NR SA FR1 SSB-based L1-RSRP measurement in DRX for UE configured with highSpeedMeasFlag-r16	Same as 6.6.4.1	Same as 6.6.4.1	Same as 6.6.4.1
6.6.5.1 NR SA FR1 – UTRAN event-triggered reporting in non-DRX	During T1: Noc: -106dBm/15kHz Ês / Noc: 18dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB During T2: Noc: -106dBm/15kHz Ês / Noc: -2dB Ioc: -70dBm/3.84MHz Îor / Ioc: -1.8dB CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB	During T1: 0dB 0dB 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB 0dB 0dB	During T1: Noc: -106dBm/15kHz Ês / Noc: 18dB Ioc: -70dBm/3.84MHz Îor / Ioc: -infinity CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB During T2: Noc: -106dBm/15kHz Ês / Noc: -2dB Ioc: -70dBm/3.84MHz Îor / Ioc: -1.8dB CPICH Ec / Ior: -10dB SCH Ec / Ior: -12dB
6.6.8.1 NR SA FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported CSI-SINR values ±5.5dB Reported Differential CSI-SINR values ±4.5dB	0dB 0dB 0dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB **For configuration 1,2,3,4,5,6** CSI-RS#1: SINR_41 to SINR_64 CSI-RS#0: DIFFSINR_0 to DIFFSINR_7
6.6.8.2 NR SA FR1 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported SS-SINR values ±4dB Reported Differential SS-SINR values ±3dB	0dB 0.5dB 0dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.50dB $\hat{E}s_1$ / Noc: +3.00dB **For configuration 1,2,3,4,5,6** SSB#1: SINR_44 to SINR_61 SSB#0: DIFFSINR_0 to DIFFSINR_5
6.6.8.3 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB Reported CSI-SINR values ±4.5dB Reported Differential CSI-SINR values ±3.5dB	0dB 0dB 0dB Via mapping	Noc: -94.65dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +3.00dB **For configuration 1,2,3,4,5,6** CSI-RS#1: SINR_43 to SINR_62 CSI-RS#0: DIFFSINR_0 to DIFFSINR_6
6.7.1.1.1 NR SA FR1 SS-RSRP absolute measurement accuracy	TEST CONFIGURATION 1, 2,		

	Test 1: Noc: -106dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.0dB Reported RSRP values: ±4.5dB Test 2: Noc: -88dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.0dB Reported RSRP values: ±8dB Test 3: Noc: -116dBm/15kHz + ΔBG_offset Ês1 / Noc: +3.0dB Ês2 / Noc: -1.0dB Reported RSRP values: ±6dB	Test 1: -1.5dB 0dB +0.4dB Via mapping Test 2: 0dB 0dB +0.4dB Via mapping Test 3: 0dB 0dB +0.2dB Via mapping	Test 1: Noc: -107.5dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.4dB RSRP_44 to RSRP_56 Test 2: Noc: -88dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.4dB RSRP_60 to RSRP_79 Test 3: Noc: -116dBm/15kHz + ΔBG_offset Ês1 / Noc: +3.0dB Ês2 / Noc: -0.8dB RSRP_34 to RSRP_46 RSRP_34 to RSRP_46 RSRP_35 to RSRP_47 RSRP_35 to RSRP_47 RSRP_36 to RSRP_48 RSRP_37 to RSRP_49 RSRP_37 to RSRP_49 depending on operating band
	TEST CONFIGURATION 3		
	Test 1: Noc: -110dBm/30kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.0dB Reported RSRP values: ±4.5dB Test 2: Noc: -91dBm/30kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.0dB Reported RSRP values: ±8dB Test 3: Noc: -113dBm/30kHz + ΔBG_offset Ês1 / Noc: +3.0dB Ês2 / Noc: -1.0dB Reported RSRP values: ±6dB	Test 1: -0.8dB 0dB +0.4dB Via mapping Test 2: 0dB 0dB +0.4dB Via mapping Test 3: 0dB 0dB +0.2dB Via mapping	Test 1: Noc: -110.8dBm/30kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.4dB RSRP_41 to RSRP_53 Test 2: Noc: -91dBm/30kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.4dB RSRP_57 to RSRP_76 Test 3: Noc: -113dBm/30kHz + ΔBG_offset Ês1 / Noc: +3.0dB Ês2 / Noc: -0.8dB RSRP_37 to RSRP_49 RSRP_37 to RSRP_49 RSRP_38 to RSRP_50 RSRP_38 to RSRP_50 RSRP_39 to RSRP_51 RSRP_40 to RSRP_52 RSRP_40 to RSRP_52 depending on operating band
The derivation of the RSRP values takes into account the uncertainty in Cell 2 SS-RSRP from N_{oc} and $Ês_2 / N_{oc}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRP values given above are for normal conditions. In all cases the RSRP values are 4.5dB wider at each end for extreme conditions.			

6.7.1.1.2 NR SA FR1 SS-RSRP relative measurement accuracy	Test 1: Noc: Test configuration 1, 2:-106dBm/15kHz Test configuration 3:-110dBm/30kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.0dB Reported rel. SS-RSRP values: ±3dB Test 2: Noc: -88dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.0dB Reported rel. SS-RSRP values: ±3dB Test 3: Noc: -116dBm/15kHz + ΔBG_offset Ês1 / Noc: +3.0dB Ês2 / Noc: -1.0dB Reported re. SS-RSRP values: ±3dB	Test 1: 0 dB 0 dB 0 dB +1.0dB Via mapping Test 2: 0dB 0dB +1.0dB Via mapping Test 3: 0dB 0dB +1.0dB Via mapping	Test 1: Noc: -106 dBm/15kHz Noc: -110 dBm/30kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +2.0dB RSRP_x-8 to RSRP_x-1 Test 2: Noc: -88dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +2.0dB RSRP_x-8 to RSRP_x-1 Test 3: Noc: -116dBm/15kHz + ΔBG_offset Ês1 / Noc: +3.0dB Ês2 / Noc: 0dB RSRP_x-7 to RSRP_x+1
The derivation of the SS-RSRP values takes into account the uncertainty in Cell 1 and Cell 2 RSRP from N_{oc}, $Ês_1$ / N_{oc} and $Ês_2$ / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The RSRP values given above are for both normal and extreme conditions.			
6.7.1.2.1 NR SA FR1-FR1 SS-RSRP absolute measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc1}: -94.65 dBm/15kHz N_{oc2}: -94.65 dBm/15kHz Ês1 / N_{oc1}: +10.0dB Ês2 / N_{oc2}: +10.0dB Reported RSRP values: ±8dB Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc2}: -118dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: +13.0dB Ês2 / N_{oc2}: -3.0dB Reported RSRP values: ±4.5dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz N_{oc2}: -94.65dBm/15kHz Ês1 / N_{oc1}: +10.0dB Ês2 / N_{oc2}: +10.0dB RSRP_62 to RSRP_81 Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc2}: -118dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: +13.0dB Ês2 / N_{oc2}: -3.0dB RSRP_32 to RSRP_45 RSRP_33 to RSRP_45 RSRP_33 to RSRP_46 RSRP_34 to RSRP_46 RSRP_34 to RSRP_47 RSRP_35 to RSRP_48 RSRP_36 to RSRP_48 depending on operating band
	TEST CONFIGURATION 3, 6		

	Test 1: N_{oc1}: -94.65 dBm/15kHz N_{oc2}: -94.65 dBm/15kHz Ês1 / N_{oc1}: +10.0dB Ês2 / N_{oc2}: +10.0dB Reported RSRP values: ±8dB Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: +13.0dB Ês2 / N_{oc2}: -3.0dB Reported RSRP values: ±4.5dB	Test 1: -1.35dB -1.35dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz N_{oc2}: -96dBm/15kHz Ês1 / N_{oc1}: +10.0dB Ês2 / N_{oc2}: +10.0dB RSRP_64 to RSRP_83 Test 2: N_{oc}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: +13.0dB Ês2 / N_{oc2}: -3.0dB RSRP_35 to RSRP_48 RSRP_36 to RSRP_48 RSRP_36 to RSRP_49 RSRP_37 to RSRP_49 RSRP_37 to RSRP_50 RSRP_38 to RSRP_51 RSRP_39 to RSRP_51 depending on operating band
The derivation of the RSRP values takes into account the uncertainty in Cell 2 SS-RSRP from N_{oc2} and Ês2 / N_{oc2}, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRP values given above are for normal conditions. For extreme conditions, the RSRP values are 3.0 dB wider at each end for Test 1, and 4.5 dB wider at each for Test 2.			
6.7.1.2.2 NR SA FR1-FR1 SS-RSRP relative measurement accuracy	Test 1: N_{oc1}: -94.65 dBm/15kHz N_{oc2}: -94.65 dBm/15kHz Ês1 / N_{oc1}: +10.0dB Ês2 / N_{oc2}: +10.0dB Reported relative RSRP values: ±4.5dB Test 2: N_{oc1}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: +13.0dB Ês2 / N_{oc2}: -3.0dB Reported relative RSRP values: ±4.5dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz N_{oc2}: -94.65dBm/15kHz Ês1 / N_{oc1}: +10.0dB Ês2 / N_{oc2}: +10.0dB RSRP_x-7 to RSRP_x+7 Test 2: N_{oc}: -107dBm/15kHz + Δ_{BG_offset} N_{oc1}: -118dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: +13.0dB Ês2 / N_{oc2}: -3.0dB RSRP_x-31 to RSRP_x-18
The derivation of the SS-RSRP values takes into account the uncertainty in Cell 1 and Cell 2 RSRP from N_{oc}, Ês1 / N_{oc} and Ês2 / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRP values given above are for normal conditions. For extreme conditions, the RSRP values are 1.5dB wider at each end.			
6.7.2.1 NR SA FR1 SS-RSRQ measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc}: -85dBm/15kHz Ês1 / N_{oc}: +3.0dB Ês2 / N_{oc}: +3.0dB Reported RSRQ values: ±2.5dB Test 2: N_{oc}: -101dBm/15kHz Ês1 / N_{oc}: -2.9dB Ês2 / N_{oc}: -2.9dB Reported RSRQ values: ±3.5dB Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc}: -4.0dB Ês2 / N_{oc}: -4.0dB Reported RSRQ values: ±3.5dB	Test 1: -1.5dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB Via mapping	Test 1: N_{oc}: -86.5dBm/15kHz Ês1 / N_{oc}: +3.0dB Ês2 / N_{oc}: +3.0dB RSRQ_52 to RSRQ_62 Test 2: N_{oc}: -101dBm/15kHz Ês1 / N_{oc}: -2.9dB Ês2 / N_{oc}: -2.9dB RSRQ_46 to RSRQ_60 Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc}: -3.5dB Ês2 / N_{oc}: -3.5dB RSRQ_44 to RSRQ_59
	TEST CONFIGURATION 3, 6		

	Test 1: N_{oc}: -91dBm/15kHz Ês1 / N_{oc}: +3.0dB Ês2 / N_{oc}: +3.0dB Reported RSRQ values: ±2.5dB Test 2: N/A Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc}: -4.0dB Ês2 / N_{oc}: -4.0dB Reported RSRQ values: ±3.5dB	Test 1: -1.6dB 0dB 0dB Via mapping Test 2: N/A Test 3: 0dB 0dB 0dB Via mapping	Test 1: N_{oc}: -92.6dBm/15kHz Ês1 / N_{oc}: +3.0dB Ês2 / N_{oc}: +3.0dB RSRQ_52 to RSRQ_62 Test 2: N/A Test 3: N_{oc}: -114dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc}: -3.5dB Ês2 / N_{oc}: -3.5dB RSRQ_44 to RSRQ_59
The derivation of the RSRQ values takes into account the uncertainty in Cell 2 SS-RSRQ from N_{oc} and Ês2 / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRQ values given above are for normal conditions. For extreme conditions, the SS-RSRQ values are 1.5dB wider at each end for Test 1, and 0.5 dB wider at each for Tests 2 and 3.			
6.7.2.2.1 NR SA FR1-FR1 SS-RSRQ absolute measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc1}: -80.18 dBm/15kHz N_{oc2}: -80.18 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: 3dB Ês2 / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB	Test 1: -1.5dB -1.5dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -81.68dBm/15kHz N_{oc2}: -81.68dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: 3dB Ês2 / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62
	TEST CONFIGURATION 3, 6		
	Test 1: N_{oc1}: -86.27 dBm/15kHz N_{oc2}: -86.27 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: 3dB Ês2 / N_{oc2}: -1.75dB Reported RSRQ values: ±2.5dB	Test 1: -1.53dB -1.53dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -87.8dBm/15kHz N_{oc2}: -87.8dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: 3dB Ês2 / N_{oc2}: -1.75dB RSRQ_52 to RSRQ_62

The derivation of the RSRQ values takes into account the uncertainty in Cell 2 SS-RSRQ from N_{oc2} and $Ês2 / N_{oc2}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRQ values given above are for normal conditions. For extreme conditions, the RSRQ values are 1.5dB wider at each end.			
6.7.2.2.2 NR SA FR1-FR1 SS-RSRQ relative measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		
	Test 1: N_{oc1}: -80.18 dBm/15kHz N_{oc2}: -80.18 dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB Reported RSRQ values: ±3dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB Reported RSRQ values: ±3dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês1 / N_{oc1}$: 3dB $Ês2 / N_{oc2}$: -1.75dB Reported RSRQ values: ±3dB	Test 1: -1.5dB -1.5dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -81.68dBm/15kHz N_{oc2}: -81.68dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês1 / N_{oc1}$: 3dB $Ês2 / N_{oc2}$: -1.75dB RSRQ_x-11 to RSRQ_x+2
	TEST CONFIGURATION 3, 6		
	Test 1: N_{oc1}: -86.27 dBm/15kHz N_{oc2}: -86.27 dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB Reported RSRQ values: ±2.5dB Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB Reported RSRQ values: ±3dB Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês1 / N_{oc1}$: 3dB $Ês2 / N_{oc2}$: -1.75dB Reported RSRQ values: ±3dB	Test 1: -1.53dB -1.53dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0dB 0dB Via mapping	Test 1: N_{oc1}: -87.8dBm/15kHz N_{oc2}: -87.8dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 2: N_{oc1}: -106dBm/15kHz N_{oc2}: -106dBm/15kHz $Ês1 / N_{oc1}$: -1.75dB $Ês2 / N_{oc2}$: -1.75dB RSRQ_x-7 to RSRQ_x+7 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} N_{oc2}: -116dBm/15kHz + Δ_{BG_offset} $Ês1 / N_{oc1}$: 3dB $Ês2 / N_{oc2}$: -1.75dB RSRQ_x-11 to RSRQ_x+2
The derivation of the RSRQ values takes into account the uncertainty in Cell 1 and Cell 2 SS-RSRQ from N_{oc2} and $Ês2 / N_{oc2}$, the allowed UE reporting accuracy, and the UE mapping function. The SS-RSRQ values given above are for normal conditions. For extreme conditions, the RSRQ values are 1dB wider at each end.			
6.7.3.1 NR SA FR1 SS-SINR measurement accuracy	**TEST CONFIGURATION 1, 2, 4, 5**		

	Test 1: N_{oc}: -93dBm/15kHz Ês1 / N_{oc}: +4.54dB Ês2 / N_{oc}: +4.54dB Reported SINR values: ±3.5dB Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} Ês1 / N_{oc}: -4dB Ês2 / N_{oc}: -4dB Reported SINR values: ±3.5dB	Test 1: 0dB 0dB 0dB Via mapping Test 2: 0dB 0.5dB 0.5dB Via mapping	Test 1: N_{oc}: -93dBm/15kHz Ês1 / N_{oc}: +4.54dB Ês2 / N_{oc}: +4.54dB SINR_31 to SINR_49 Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} Ês1 / N_{oc}: -3.5dB Ês2 / N_{oc}: -3.5dB SINR_28 to SINR_45
	TEST CONFIGURATION 3, 6		
	Test 1: N_{oc}: -93dBm/15kHz Ês1 / N_{oc}: +4.54dB Ês2 / N_{oc}: +4.54dB Reported SINR values: ±3.5dB Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} Ês1 / N_{oc}: -4dB Ês2 / N_{oc}: -4dB Reported SINR values: ±3.5dB	Test 1: -0.2dB 0dB 0dB Via mapping Test 2: 0dB 0.5dB 0.5dB Via mapping	Test 1: N_{oc}: -93.2dBm/15kHz Ês1 / N_{oc}: +4.54dB Ês2 / N_{oc}: +4.54dB SINR_31 to SINR_49 Test 2: N_{oc}: -116dBm/15kHz+ Δ_{BG_offset} Ês1 / N_{oc}: -3.5dB Ês2 / N_{oc}: -3.5dB SINR_28 to SINR_45
The derivation of the SINR values takes into account the uncertainty in Cell 2 SS- SINR from N_{oc} and Ês2 / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The SS- SINR values given above are for normal conditions. For extreme conditions, the SS- SINR values are 0.5dB wider at each end.			
6.7.3.2.1 NR SA FR1-FR1 SS-SINR absolute measurement accuracy	**TEST CONFIGURATION 1, 2, 3, 4, 5, 6**		
	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB Reported SINR values: ±3dB Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz Ês1 / N_{oc1}: 20dB Ês2 / N_{oc2}: 20dB Reported SINR values: ±3dB Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -4dB Ês2 / N_{oc2}: -4dB Reported SINR values: ±3.5dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0.8dB 0.8dB Via mapping	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB SINR_35 to SINR_51 Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz Ês1 / N_{oc1}: 20dB Ês2 / N_{oc2}: 20dB SINR_79 to SINR_94 Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -3.2dB Ês2 / N_{oc2}: -3.2dB SINR_32 to SINR_49
The derivation of the SINR values takes into account the uncertainty in Cell 2 SS- SINR from N_{oc} and Ês2 / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The SS- SINR values given above are for normal conditions. For extreme conditions, the SS- SINR values are 1dB wider at each for Tests 1 and 2 and 0.5dB wider at each end for Test 3.			
6.7.3.2.2 NR SA FR1-FR1 SS-SINR relative measurement accuracy	**TEST CONFIGURATION 1, 2, 3, 4, 5, 6**		

	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB Reported SINR values: ±3.5dB Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz Ês1 / N_{oc1}: 20dB Ês2 / N_{oc2}: 20dB Reported SINR values: ±3.5dB Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -4dB Ês2 / N_{oc2}: -4dB Reported SINR values: ±4dB	Test 1: 0dB 0dB 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 0dB Via mapping Test 3: 0dB 0dB 0.8dB 0.8dB Via mapping	Test 1: N_{oc1}: -88 dBm/15kHz N_{oc2}: -88 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Ês2 / N_{oc2}: -1.75dB SINR_x-10 to SINR_x+10 Test 2: N_{oc1}: -108.5dBm/15kHz N_{oc2}: -108.5dBm/15kHz Ês1 / N_{oc1}: 20dB Ês2 / N_{oc2}: 20dB SINR_x-10 to SINR_x+10 Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} N_{oc2}: -119.5dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -3.2dB Ês2 / N_{oc2}: -3.2dB SINR_x-11 to SINR_x+11
The derivation of the SINR values takes into account the uncertainty in Cell 1 and Cell 2 SS- SINR from N_{oc} and Ês2 / N_{oc}, the allowed UE reporting accuracy, and the UE mapping function. The SS- SINR values given above are for normal conditions. For extreme conditions, the SS- SINR values are 0.5dB wider at each for Tests 1 and 2 and 0dB wider at each end for Test 3.			
6.7.4.1.1 NR SA FR1 SSB based L1-RSRP absolute measurement accuracy			
Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz $Ês_1$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±4.5dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_1$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±3dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz $Ês_1$ / N_{oc1}: 10dB RSRP_62 to RSRP_82 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $Ês_1$ / N_{oc1}: -2.2dB RSRP_31 to RSRP_44 RSRP_31 to RSRP_45 RSRP_32 to RSRP_45 RSRP_32 to RSRP_46 RSRP_33 to RSRP_46 RSRP_34 to RSRP_47 RSRP_34 to RSRP_48 depending on operating band
Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz $Ês_1$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±4.5dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $Ês_1$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±3dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz $Ês_1$ / N_{oc1}: 10dB RSRP_63 to RSRP_84 Test 2: N_{oc1}: -116.2dBm/15kHz + Δ_{BG_offset} $Ês_1$ / N_{oc1}: -2.2dB RSRP_34 to RSRP_47 RSRP_34 to RSRP_48 RSRP_35 to RSRP_48 RSRP_35 to RSRP_49 RSRP_36 to RSRP_49 RSRP_37 to RSRP_50 RSRP_37 to RSRP_51 depending on operating band
6.7.4.1.2 NR SA FR1 SSB based L1-RSRP relative measurement accuracy			

Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}s_1$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $\hat{E}s_1$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±1dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz $\hat{E}s_1$ / N_{oc1}: 10dB RSRP_x-3 to RSRP_x+3 Test 2: N_{oc1}: -119.2dBm/15kHz + Δ_{BG_offset} $\hat{E}s_1$ / N_{oc1}: -2.2dB RSRP_x-3 to RSRP_x+3
Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz $\hat{E}s_1$ / N_{oc1}: 10dB Reported L1-RSRP values: ±8.5dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} $\hat{E}s_1$ / N_{oc1}: -3dB Reported L1-RSRP values: ±5dB (±1dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96dBm/15kHz $\hat{E}s_1$ / N_{oc1}: 10dB RSRP_x-3 to RSRP_x+3 Test 2: N_{oc1}: -116.2dBm/15kHz + Δ_{BG_offset} $\hat{E}s_1$ / N_{oc1}: -2.2dB RSRP_x-3 to RSRP_x+3
6.7.4.2.1 NR SA FR1 CSI-RS based L1-RSRP absolute measurement accuracy	Same as 6.7.4.1.1	Same as 6.7.4.1.1	Same as 6.7.4.1.1
6.7.4.2.2 NR SA FR1 CSI-RS based L1-RSRP relative measurement accuracy	Same as 6.7.4.1.2	Same as 6.7.4.1.2	Same as 6.7.4.1.2
6.7.5.1 NR SA FR1 – E-UTRAN RSRP absolute measurement accuracy	Test 1: N_{oc}: -91.65dBm/15kHz $\hat{E}_s$ / N_{oc}: +10.0dB Reported RSRP values: ±9dB (±2dB additionally for extreme conditions) Test 2: N_{oc}: -117dBm/15kHz+ Δ_{BG_offset} $\hat{E}_s$ / N_{oc}: -4.0dB Reported RSRP values: ±4.5dB (±3.5dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc}: -91.65dBm/15kHz $\hat{E}s$ / N_{oc}: 10dB RSRP_48 to RSRP_70 Test 2: N_{oc}: -117dBm/15kHz+ Δ_{BG_offset} $\hat{E}s$ / N_{oc}: -3.2dB RSRP_14 to RSRP_27 RSRP_15 to RSRP_27 RSRP_15 to RSRP_28 RSRP_16 to RSRP_28 RSRP_16 to RSRP_29 RSRP_17 to RSRP_30 RSRP_18 to RSRP_30 Depending on operating band
6.7.6.1 NR SA FR1 – E-UTRAN RSRQ absolute measurement accuracy	Test 1: N_{oc}: -83dBm/15kHz $\hat{E}_s$ / N_{oc}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions) Test 2: N_{oc}: -104.7dBm/15kHz $\hat{E}_s$ / N_{oc}: -4.0dB Reported RSRQ values: ±3.5dB (±0.5dB additionally for extreme conditions) Test 3: N_{oc}: -119.5dBm/15kHz+ Δ_{BG_offset} $\hat{E}_s$ / N_{oc}: -4.0dB Reported RSRQ values: ±3.5dB (±0.5dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping Test 3: 0dB 0.8dB Via mapping	Test 1: N_{oc}: -83dBm/15kHz $\hat{E}s$ / N_{oc}: -1.75dB RSRQ_4 to RSRQ_16 Test 2: N_{oc}: -104.7dBm/15kHz $\hat{E}s$ / N_{oc}: -3.2dB RSRQ_0 to RSRQ_16 Test 3: N_{oc}: -119.5dBm/15kHz+ Δ_{BG_offset} $\hat{E}s$ / N_{oc}: -3.2dB RSRQ_0 to RSRQ_16

6.7.7.1 NR SA FR1 – E-UTRAN RS-SINR absolute measurement accuracy	Test 1: N_{oc}: -88dBm/15kHz $Ê_s$ / N_{oc}: -1.75dB Reported RS-SINR values: ±3.0dB (±1.0dB additionally for extreme conditions) Test 2: N_{oc}: -108.5dBm/15kHz $Ê_s$ / N_{oc}: 20.0dB Reported RS-SINR values: ±3.0dB (±1.0dB additionally for extreme conditions) Test 3: N_{oc}: -119.5dBm/15kHz+ Δ_{BG_offset} $Ê_s$ / N_{oc}: -4.0dB Reported RS-SINR values: ±3.5dB (±0.5dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0dB Via mapping Test 3: 0dB 0.8dB Via mapping	Test 1: N_{oc}: -88dBm/15kHz Ês / N_{oc}: -1.75dB SINR_35 to SINR_51 Test 2: N_{oc}: -108.5dBm/15kHz Ês / N_{oc}: 20.0dB SINR_79 to SINR_94 Test 3: N_{oc}: -119.5dBm/15kHz+ Δ_{BG_offset} Ês / N_{oc}: -3.2dB SINR_32 to SINR_49
6.7.9.1.1 NR SA FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR absolute measurement accuracy			
Test Configuration 1,2,4,5	Same as 4.7.7.1	Same as 4.7.7.1	Same as 4.7.7.1
Test Configuration 3,6	Same as 4.7.7.1	Same as 4.7.7.1	Same as 4.7.7.1
6.7.9.2 NR SA FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy			
Test Configuration 1,2,4,5	Same as 4.7.7.2	Same as 4.7.7.2	Same as 4.7.7.2
Test Configuration 3,6	Same as 4.7.7.2	Same as 4.7.7.2	Same as 4.7.7.2
6.7.9.3 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy			
Test Configuration 1,2,4,5	Same as 4.7.7.3	Same as 4.7.7.3	Same as 4.7.7.3
Test Configuration 3,6	Same as 4.7.7.3	Same as 4.7.7.3	Same as 4.7.7.3

Table F.1.3.2-3: Derivation of test requirements for EN-DC FR2 RRM tests

Test	Minimum requirement in TS 38.133 [6]	Test tolerance (TT)	Test requirement in TS 38.533
5.3.2.2.1 EN-DC FR2 contention based random access	Absolute uplink power: $P_{int} \geq P \geq P_{min}$ ±14.0dB $P_{UMAX} \geq P > P_{int}$ ±12.0dB Relative uplink power step: $P_{int} \geq P \geq P_{min}$ ±6.0dB $P_{UMAX} \geq P > P_{int}$ ±4.0dB Uplink timing: 120kHz SCS T_e ±3.5*64*T_c	Not applicable due to UL calibration FFS dB FFS dB [48]T_c	Absolute uplink power: ±FFSdB Relative uplink power step: ±(6+FFS)dB, either PRACH being compared ≤ (P_{max} – 6dB) ±(4+FFS)dB, both PRACHs being compared > (P_{max} – 6dB) Uplink timing: 120kHz SCS T_e ±224±[48]*T_c
5.3.2.2.2 EN-DC FR2 non-contention based random access	Same as 5.3.2.2.1	Same as 5.3.2.2.1	Same as 5.3.2.2.1
5.4.1.1 EN-DC FR2 UE transmit timing accuracy	<u>Test 1 (no DRX):</u> Uplink timing: ±3*64*T_c for 240 kHz SSB SCS Max step size T_q: 2.5*64*T_c Min adjust rate T_p: 2.5*64*T_c Max adjust rate: 2.5*64*T_c N_{oc} = -112 dBm/15 kHz $Ês_2$ / N_{oc}: +4.0dB <u>Test 2 (with DRX):</u> Uplink timing: ±3*64*T_c for 240 kHz SSB SCS N_{oc} = -112 dBm/15 kHz $Ês_2$ / N_{oc}: +4.0dB	 ±0.75*64*T_c +0.625*64T_c -3.725*64*T_c +1.225*64*T_c 0dB 0dB ±0.75*64*T_c 0dB 0dB	<u>Test 1 (no DRX):</u> Uplink timing: ±3.75*64*T_c Max step size T_q: 3.125*64*T_c Min adjust rate: -1.225*64*T_c Max adjust rate: 3.725*64*T_c N_{oc} = -112 dBm/15 kHz $Ês_2$ / N_{oc}: +4.0dB <u>Test 2 (with DRX):</u> Uplink timing: ±3.75*64*T_c N_{oc} = -112 dBm/15 kHz $Ês_2$ / N_{oc}: +4.0dB
5.4.3.1 EN-DC FR2 UE timing advance adjustment accuracy	<u>Noc = -112 dBm/15 kHz</u> <u>Ês1 / Noc = 4 dB</u> <u>UE Timing Advance Adjustment Accuracy for 120kHz SCS = ±32 Tc</u>	<u>0dB</u> <u>0dB</u> <u>+/- 40 Tc</u>	<u>Noc = -112 dBm/15 kHz</u> <u>Ês1 / Noc = 4 dB</u> <u>UE TAAA for 120kHz SCS = ±72 Tc</u>
5.5.1.1 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	<u>During T1:</u> Noc: -92.1 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB <u>During T2:</u> Noc: -92.1dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB <u>During T3:</u> Noc: -92.1dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB	During T1: -2.7 dB 2.1 dB 2.1 dB During T2: -2.7 dB 2.1 dB 0 dB During T3: -2.7 dB 0 dB 0 dB	<u>During T1:</u> Noc: -94.8 dBm/15kHz Ês1 / Noc: +4.1 dB Ês2 / Noc: +4.1 dB <u>During T2:</u> Noc: -94.8 dBm/15kHz Ês1 / Noc: -3.9 dB Ês2 / Noc: -15 dB <u>During T3:</u> Noc: -94.8 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB

5.5.1.2 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	During T1: Noc: -92.1 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -92.1dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB During T3: Noc: -92.1dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -92.1dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -92.1dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: -15 dB	During T1: -2.7 dB 2.1 dB 2.1 dB During T2: -2.7 dB 2.1 dB 0 dB During T3: -2.7 dB 0 dB 0 dB During T4: -2.7 dB 0 dB 0 dB During T5: -2.7 dB 2.1 dB 0 dB	During T1: Noc: -94.8 dBm/15kHz Ês1 / Noc: +4.1 dB Ês2 / Noc: +4.1 dB During T2: Noc: -94.8 dBm/15kHz Ês1 / Noc: -3.9 dB Ês2 / Noc: -15 dB During T3: Noc: -94.8 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -94.8 dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -94.8 dBm/15kHz Ês1 / Noc: 4.1 dB Ês2 / Noc: -15 dB
5.5.1.3 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB	During T1: 0 dB 1.3 dB 1.3 dB During T2: 0 dB 1.3 dB -0.4 dB During T3: 0 dB -0.4 dB -0.4 dB	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +3.3 dB Ês2 / Noc: +3.3 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.7 dB Ês2 / Noc: -15.4 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15.4 dB Ês2 / Noc: -15.4 dB
5.5.1.4 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: -14 dB	During T1: 0 dB 1.3 dB 1.3 dB During T2: 0 dB 1.3 dB -0.4 dB During T3: 0 dB -0.4 dB -0.4 dB During T4: 0 dB -0.4 dB -0.4 dB During T5: 0 dB 1.3 dB -0.4 dB	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +3.3 dB Ês2 / Noc: +3.3 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.7 dB Ês2 / Noc: -15.4 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15.4 dB Ês2 / Noc: -15.4 dB During T4: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.9 dB Ês2 / Noc: -15.4 dB During T5: Noc: -104.7 dBm/15kHz Ês1 / Noc: 3.3 dB Ês2 / Noc: -15.4 dB

5.5.1.5 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	During T1: Noc: -92.1 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -92.1dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -14 dB During T3: Noc: -92.1dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB	During T1: -2.7 dB 2.1 dB 2.1 dB During T2: -2.7 dB 2.1 dB 0 dB During T3: -2.7 dB 0 dB 0 dB	During T1: Noc: -94.8 dBm/15kHz Ês1 / Noc: +4.1 dB Ês2 / Noc: +4.1 dB During T2: Noc: -94.8 dBm/15kHz Ês1 / Noc: -3.9 dB Ês2 / Noc: -14 dB During T3: Noc: -94.8 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB
5.5.1.6 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	During T1: Noc: -92.1 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -92.1dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -14 dB During T3: Noc: -92.1dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -92.1dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -92.1dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: -14 dB	During T1: -2.7 dB 2.1 dB 2.1 dB During T2: -2.7 dB 2.1 dB 0 dB During T3: -2.7 dB 0 dB 0 dB During T4: -2.7 dB 0 dB 0 dB During T5: -2.7 dB 2.1 dB 0 dB	During T1: Noc: -94.8 dBm/15kHz Ês1 / Noc: +4.1 dB Ês2 / Noc: +4.1 dB During T2: Noc: -94.8 dBm/15kHz Ês1 / Noc: -3.9 dB Ês2 / Noc: -14 dB During T3: Noc: -94.8 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -94.8 dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -94.8 dBm/15kHz Ês1 / Noc: 4.1 dB Ês2 / Noc: -14 dB
5.5.1.7 EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -104.7dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -14 dB During T3: Noc: -104.7dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB	During T1: 0 dB 1.3 dB 1.3 dB During T2: 0 dB 1.3 dB -0.4 dB During T3: 0 dB -0.4 dB -0.4 dB	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +3.3 dB Ês2 / Noc: +3.3 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.7 dB Ês2 / Noc: -14.4 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15.4 dB Ês2 / Noc: -15.4 dB

5.5.1.8 EN-DC FR2 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -104.7dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -14 dB During T3: Noc: -104.7dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -104.7dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -104.7dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: -14 dB	During T1: 0 dB 1.3 dB 1.3 dB During T2: 0 dB 1.3 dB -0.4 dB During T3: 0 dB -0.4 dB -0.4 dB During T4: 0 dB -0.4 dB -0.4 dB During T5: 0 dB 1.3 dB -0.4 dB	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +3.3 dB Ês2 / Noc: +3.3 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.7 dB Ês2 / Noc: -14.4 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15.4 dB Ês2 / Noc: -15.4 dB During T4: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.9 dB Ês2 / Noc: -15.4 dB During T5: Noc: -104.7 dBm/15kHz Ês1 / Noc: 3.3 dB Ês2 / Noc: -14.4 dB
5.5.5.1 EN-DC FR2 SSB-based beam failure detection and link recovery in non-DRX	During T1: SNR_SSB q_0: 5 dB SNR_SSB q_1: 0.2 dB During T2: SNR_SSB q_0: -3 dB SNR_SSB q_1: 0.2 dB During T3-T5: SNR_SSB q_0: -12 dB SNR_SSB q_1: 20.2 dB In signaling: rsrp-ThresholdSSB: -95 dBm/120kHz for Config 1,2 rsrp-ThresholdSSB: -92 dBm/240kHz for Config 3,4	 +8.70 dB 0 dB +8.70 dB 0 dB 0 dB -0.2 dB -14 dB -14 dB	During T1: SNR_SSB q_0: 13.7 dB SNR_SSB q_1: 0.2 dB During T2: SNR_SSB q_0: 5.7 dB SNR_SSB q_1: 0.2 dB During T3-T5: SNR_SSB q_0: -12 dB SNR_SSB q_1: 20 dB In signaling: rsrp-ThresholdSSB: -109 dBm/120kHz for Config 1,2 srp-ThresholdSSB: -106 dBm/240kHz for Config 3,4
5.5.5.2 EN-DC FR2 SSB-based beam failure detection and link recovery in DRX	Same as 5.5.5.1	Same as 5.5.5.1	Same as 5.5.5.1
5.5.5.3 EN-DC FR2 CSI-RS-based beam failure detection and link recovery in non-DRX	Noc = -104.7 dBm/120 kHz $Ês_2$ / N_{oc} for CSI-RS set q0 T1: 5 dB T2: -3 dB T3: -12 dB T4: -12 dB T5: -12 dB $Ês_2$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20.2 dB T4: 20.2 dB T5: 20.2 dB rsrp-ThresholdSSB: -95 dBm/SCS kHz	0 dB 8.7 dB 8.7 dB 0 dB 0 dB 0 dB 0 dB 0 dB -0.2 dB -0.2 dB -0.2 dB -14 dB	Noc = -104.7 dBm/120 kHz $Ês_2$ / N_{oc} for CSI-RS set q0 T1: 13.7 dB T2: 5.7 dB T3: -12 dB T4: -12 dB T5: -12 dB $Ês_2$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20 dB T4: 20 dB T5: 20 dB rsrp-ThresholdSSB: -109.0 dBm/SCS kHz

5.5.5.4 EN-DC FR2 CSI-RS-based beam failure detection and link recovery in DRX	Same as 5.5.5.3	Same as 5.5.5.3	Same as 5.5.5.3
5.5.5.5 EN-DC FR2 scheduling available restriction during SSB-based beam failure detection and link recovery in non-DRX	Same as 5.5.5.1	Same as 5.5.5.1	Same as 5.5.5.1
5.5.5.6 EN-DC FR2 SCell CSI-RS-based beam failure detection and link recovery in non-DRX	Noc = -104.7 dBm/120 kHz $\hat{E}s_3$ / N_{oc} for CSI-RS set q0 T1: 5 dB T2: -3 dB T3: -12 dB T4: -12 dB T5: -12 dB $\hat{E}s_3$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20.2 dB T4: 20.2 dB T5: 20.2 dB rsrp-ThresholdBFR: -95 dBm/SCS kHz	0 dB 8.7 dB 8.7 dB 0 dB 0 dB 0 dB 0 dB 0 dB -0.2 dB -0.2 dB -0.2 dB -14 dB	Noc = -104.7 dBm/120 kHz $\hat{E}s_3$ / N_{oc} for CSI-RS set q0 T1: 13.7 dB T2: 5.7 dB T3: -12 dB T4: -12 dB T5: -12 dB $\hat{E}s_3$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20 dB T4: 20 dB T5: 20 dB rsrp-ThresholdBFR: -109.0 dBm/SCS kHz
5.5.5.7 EN-DC FR2 SCell CSI-RS-based beam failure detection and link recovery in DRX	Same as 5.5.5.6	Same as 5.5.5.6	Same as 5.5.5.6
5.6.1.1 EN-DC FR2 event-triggered reporting without gap in non-DRX	During T1: Ês2: -86dBm/120kHz Ês3: -infinity During T2: Ês2: -86dBm/120kHz Ês3: -86dBm/120kHz	During T1: 0dB 0dB During T2: 0dB 0dB	During T1: Ês2: -86dBm/120kHz Ês3: -infinity During T2: Ês2: -86dBm/120kHz Ês3: -86dBm/120kHz
5.6.1.2 EN-DC FR2 event-triggered reporting without gap in DRX	During T1: Noc: -98dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: +4.00dB Signalled A3-offset: -6.0	During T1: -3.5dB 0dB 0dB During T2: -3.5dB 0dB 0dB Signalled A3-offset: -1.0	During T1: Noc: -101.5dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: -infinity During T2: Noc: -101.5dBm/15kHz Ês2 / Noc: +4.00dB Ês3 / Noc: +4.00dB Signalled A3-offset: -7.0
5.6.1.3 EN-DC FR2 event-triggered reporting with gap in non-DRX	Same as 5.6.1.1	Same as 5.6.1.1	Same as 5.6.1.1
5.6.1.4 EN-DC FR2 event-triggered reporting with gap in DRX	Same as 5.6.1.2	Same as 5.6.1.2	Same as 5.6.1.2
5.6.2.1 EN-DC FR2-FR2 event-triggered reporting in non-DRX	During T1: Ês1: -87 dBm/120kHz Ês2: - infinity During T2: Ês1: -87 dBm/120kHz Ês2: -87 dBm/120kHz	During T1: 0dB 0dB During T2: 0dB 0dB	During T1: Ês1: -87 dBm/120kHz Ês2: -- infinity During T2: Ês1: -87 dBm/120kHz Ês2: -87 dBm/120kHz

5.6.2.2 EN-DC FR2-FR2 event-triggered reporting in DRX	During T1: Noc: -104.70dBm/15kHz Ês1 / Noc: +6.00dB Ês2 / Noc: -infinity During T2: Noc: -104.70dBm/15kHz Ês1 / Noc: +6.00dB Ês2 / Noc: +9.00dB Signalled A3-offset: -6.0	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB Signalled A3-offset: -6.0	During T1: Noc: -104.70dBm/15kHz Ês1 / Noc: +6.00dB Ês2 / Noc: -infinity During T2: Noc: -104.70dBm/15kHz Ês1 / Noc: +6.00dB Ês2 / Noc: +9.00dB Signalled A3-offset: -12.0
5.6.2.3 EN-DC FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	Same as 5.6.2.1	Same as 5.6.2.1	Same as 5.6.2.1
5.6.2.4 EN-DC FR2-FR2 event-triggered reporting in DRX with SSB time index detection	Same as 5.6.2.2	Same as 5.6.2.2	Same as 5.6.2.2
5.6.2.5 EN-DC FR1-FR2 event-triggered reporting in non-DRX	During T1: Ês2: - Infinity During T2: Ês2: -87 dBm/120kHz	During T1: 0dB During T2: 0dB	During T1: Ês2: - Infinity During T2: Ês2: -87 dBm/120kHz
5.6.2.6 EN-DC FR1-FR2 event-triggered reporting in DRX	During T1: Noc = -104.7 dBm/15 kHz Ês2 / Noc = - Infinity During T2: Noc = -104.7 dBm/15 kHz Ês2 / Noc = 9 dB	During T1: 0dB 0dB During T2: 0dB 0dB	During T1: Noc = -104.7 dBm/15 kHz Ês2 / Noc = - Infinity During T2: Noc = -104.7 dBm/15 kHz Ês2 / Noc = 9 dB
5.6.2.7 EN-DC FR1-FR2 event-triggered reporting in non-DRX with SSB time index detection	Same as 5.6.2.5	Same as 5.6.2.5	Same as 5.6.2.5
5.6.2.8 EN-DC FR1-FR2 event-triggered reporting in DRX with SSB time index detection	Same as 5.6.2.6	Same as 5.6.2.6	Same as 5.6.2.6
5.6.3.1 EN-DC FR2 SSB-based L1-RSRP measurement in non-DRX	During T1: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: -infinity During T2: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: +9.00dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB	During T1: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: -infinity During T2: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: +9.00dB
5.6.3.2 EN-DC FR2 SSB-based L1-RSRP measurement in DRX	Same as 5.6.3.1	Same as 5.6.3.1	Same as 5.6.3.1
5.6.3.3 EN-DC FR2 CSI-RS-based L1-RSRP measurement in non-DRX	Noc: -105dBm/15kHz $Ês_0$ / Noc: 0.00dB $Ês_1$ / Noc: +9.00dB Reported CSI-RSRP values ± 29dB Reported Differential CSI-RSRP values ± 7dB	0dB 0dB 0dB Via mapping	Noc: -105dBm/15kHz $Ês_0$ / Noc: 0.00dB $Ês_1$ / Noc: +9.00dB CSI-RS#1: RSRP_40 to RSRP_99 CSI-RS#0: DIFFRSRP_1 to DIFFRSRP_7
5.6.3.4 EN-DC FR2 CSI-RS-based L1-RSRP measurement in DRX	Same as 5.6.3.3	Same as 5.6.3.3	Same as 5.6.3.3

5.6.6.1 EN-DC FR2 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +9.00dB Reported CSI-SINR values ± 5.5dB Reported Differential CSI-SINR values ± 4.5dB	0dB 0dB 0dB Via mapping	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +9.00dB CSI-RS#1: SINR_51 to SINR_74 CSI-RS#0: DIFFSINR_4 to DIFFSINR_13
5.6.6.2 EN-DC FR2 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	During T1: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: -infinity During T2: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: +9.00dB Reported SS-SINR values ± 4.0dB Reported Differential SS-SINR values ± 3.0dB	During T1: 0dB 1.5dB 0dB During T2: 0dB 1.5dB 0dB Via mapping	During T1: Noc: -105dBm/15kHz Ês0 / Noc: +1.50dB Ês1 / Noc: -infinity During T2: Noc: -105dBm/15kHz Ês0 / Noc: +1.50dB Ês1 / Noc: +9.00dB SSB#1: SINR_54 to SINR_71 SSB#0: DIFFSINR_4 to DIFFSINR_10
5.6.6.3 EN-DC FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +9.00dB Reported CSI-SINR values ± 4.5dB Reported Differential CSI-SINR values ± 3.5dB	0dB 0dB 0dB Via mapping	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +9.00dB CSI-RS#1: SINR_53 to SINR_72 CSI-RS#0: DIFFSINR_5 to DIFFSINR_12
5.7.1.1 EN-DC FR2 SS-RSRP measurement accuracy	Test 1: Noc: -91.60dBm/15kHz Ês2 / Noc: +6.0dB Ês3 / Noc: +1.0dB Reported absolute RSRP values: ±8dB Reported relative RSRP values: ±6dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 Ês2: -110.0dBm/120kHz n257 Ês3: -110.0dBm/120kHz n260 Ês2: -107.4dBm/120kHz n260 Ês3: -107.4dBm/120kHz Reported absolute RSRP values: ±8dB Reported relative RSRP values: ±6dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -5.80dB 0dB 0.4dB Via Mapping Test 2: 7.70dB 7.70dB 7.70dB 7.70dB Via Mapping	Test 1: Noc: -97.40dBm/15kHz Ês2 / Noc: +6.0dB Ês3 / Noc: +1.4dB Cell 2: RSRP_50 to RSRP_108 Cell 3: RSRP_46 to RSRP_103 Cell 3: RSRP_x-12 to RSRP_X+2 Test 2: n257 Ês2: -102.3dBm/120kHz n257 Ês3: -102.3dBm/120kHz n260 Ês2: -99.7dBm/120kHz n260 Ês3: -99.7dBm/120kHz Band dependent. See test case tables in clause 5.7.1.1.5

5.7.1.2 EN-DC FR2-FR2 SS-RSRP measurement accuracy	Test 1 Config 1: Noc1: -90.60dBm/15kHz Noc2: -90.60dBm/15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1 Config 1: -5.70dB -5.70dB 0dB 0dB Via Mapping	Test 1 Config 1: Noc1: -96.30dBm/15kHz Noc2: -96.30dBm /15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Cell 2 n257: RSRP_41 to RSRP_109 n260: RSRP_39 to RSRP_109 Cell 3: RSRP_52 to RSRP_109
	Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Via Mapping	Cell 3: n257: RSRP_x-15 to RSRP_x+25 n260: RSRP_x-15 to RSRP_x+27
	Test 2 Config 1: n257 Noc1: -108.13dBm/15kHz n257 Noc2: -113.13dBm/15kHz n260 Noc1: -105.53dBm/15kHz n260 Noc2: -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: -1.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 2 Config 1: -6.60dB 0dB -6.60dB 0dB 0dB 2dB Via Mapping	Test 2 Config 1: -114.73dBm/15kHz -113.13dBm/15kHz -112.13dBm/15kHz -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: 1.0dB Cell 2 n257: RSRP_33 to RSRP_101 n260: RSRP_34 to RSRP_104 Cell 3: n257: RSRP_32 to RSRP_87 n260: RSRP_34 to RSRP_90
	Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Via Mapping	Cell 3: n257: RSRP_x-29 to RSRP_x+11 n260: RSRP_x-29 to RSRP_x+13
	Test 1 Config 2: Noc1: -93.70dBm/15kHz Noc2: -93.70dBm/15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1 Config 2: -5.60dB -5.60dB 0dB 0dB Via Mapping	Test 1 Config 2: Noc1: -99.30dBm/15kHz Noc2: -99.30dBm /15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Cell 12 n257: RSRP_41 to RSRP_109 n260: RSRP_39 to RSRP_109 Cell 3: RSRP_52 to RSRP_109
	Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Via Mapping	Cell 3: n257: RSRP_x-15 to RSRP_x+25 n260: RSRP_x-15 to RSRP_x+27
	Test 2 Config 2: n257 Noc1: -108.13dBm/15kHz n257 Noc2: -113.13dBm/15kHz n260 Noc1: -105.53dBm/15kHz n260 Noc2: -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: -1.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 2 Config 2: -6.60dB 0dB -6.60dB 0dB 0dB 2dB Via Mapping	Test 2 Config 2: -114.73dBm/15kHz -113.13dBm/15kHz -112.13dBm/15kHz -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: 1.0dB Cell 2 n257: RSRP_36 to RSRP_104 n260: RSRP_37 to RSRP_107 Cell 3: n257: RSRP_35 to RSRP_90 n260: RSRP_37 to RSRP_93

	Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Via Mapping	Cell 3: n257: RSRP_x-29 to RSRP_x+11 n260: RSRP_x-29 to RSRP_x+13
5.7.1.3 EN-DC FR1-FR2 SS-RSRP measurement accuracy	Test 1: Noc: -90dBm/15kHz Ês3 / Noc: +5.0dB Reported absolute RSRP values: ±8dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 Ês3: -98.2dBm/120kHz n260 Ês3: -93.9dBm/120kHz Reported absolute RSRP values: ±8dBFor extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -5.50dB 0dB Via Mapping Test 2: 5.50dB 5.50dB Via Mapping	Test 1: Noc: -95.50dBm/15kHz Ês3 / Noc: +5dB Band dependent. See test case tables in clause 5.7.1.3.5 Test 2: n257 Ês3: -92.7dBm/120kHz n260 Ês3: -88.4dBm/120kHz Band dependent. See test case tables in clause 5.7.1.3.5
5.7.2.1 EN-DC FR2 SS-RSRQ measurement accuracy	Test 1: Noc: -95.0dBm/15kHz Ês2 / Noc: +3.0dB Ês3 / Noc: +3.0dB Reported absolute RSRQ values: ±2.5dB For extreme conditions allow ±1.5dB+ FFS MU additionally Test 2: Noc: -95.0dBm/15kHz Ês2 / Noc: -3.0dB Ês3 / Noc: -3.0dB Reported absolute RSRQ values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally	Test 1: -5.70dB 0dB 0dB Via Mapping Test 2: -1.70dB 0dB 0dB Via Mapping	Test 1: Noc: -100.70dBm/15kHz Ês2 / Noc: +3.0dB Ês3 / Noc: +3.0dB Cell 3: All bands: RSRQ_41 to RSRQ_73 Test 2: Noc: -96.70dBm/15kHz Ês2 / Noc: -3.0dB Ês3 / Noc: -3.0dB Cell 3: n257, n258, n261: RSRQ_35 to RSRQ_71 n260: RSRQ_34 to RSRQ_71
5.7.2.2 EN-DC FR2-FR2 SS-RSRQ measurement accuracy	Test 1: Noc1: -94.03dBm/15kHz Noc2: -94.03dBm/15kHz Ês1 / Noc1: -1.75dB Ês2 / Noc2: -1.75dB Reported absolute RSRQ values: ±2.5dB For extreme conditions allow ±1.5dB+ FFS MU additionally Reported relative RSRQ values: ±3.0dB For extreme conditions allow ±1.0dB+ FFS MU additionally Test 2: Noc1: -94.03dBm/15kHz Noc2: -94.03dBm/15kHz Ês1 / Noc1: -3.0dB Ês2 / Noc2: -3.0dB Reported absolute RSRQ values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Reported relative RSRQ values: ±4.0dB For extreme conditions allow ±0.0dB+ FFS MU additionally	Test 1: -1.90dB -1.90dB 0dB 0dB Via Mapping Via Mapping Test 2: -1.41dB -1.41dB 0dB 0dB Via Mapping Via Mapping	Test 1: Noc1: -95.93dBm/15kHz Noc2: -95.93dBm /15kHz Ês1 / Noc1: -1.75dB Ês2 / Noc2: -1.75dB Cell 2 and Cell 3: RSRQ_41 to RSRQ_73 Cell 3: RSRQ_x-7 to RSRQ_x+7 Test 2: Noc1: -95.44dBm/15kHz Noc2: -95.44dBm /15kHz Ês1 / Noc1: -3.0dB Ês2 / Noc2: -3.0dB Cell 2 and Cell 3: RSRQ_37 to RSRQ_74 Cell 3: RSRQ_x-9 to RSRQ_x+9

5.7.3.1 EN-DC FR2 SS-SINR measurement accuracy	Test 1: Noc: -105.0dBm/15kHz Ês2 / Noc: +4.54dB Ês3 / Noc: +2.66dB Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Test 2: Noc: -105.0dBm/15kHz Ês2 / Noc: -3.0dB Ês3 / Noc: -3.0dB Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally	Test 1: 0dB 0dB 0dB Via Mapping Test 2: 0dB 0.2dB 0.2dB Via Mapping	Test 1: Noc: -105.0dBm/15kHz Ês2 / Noc: +4.54dB Ês3 / Noc: +2.66dB Cell 3: n257, n258, n261: SINR_22 to RSRQ_58 n260: SINR_21 to RSRQ_58 Test 2: Noc: -105.0dBm/15kHz Ês2 / Noc: -2.8dB Ês3 / Noc: -2.8dB Cell 3: n257, n258, n261: SINR_18 to RSRQ_55 n260: SINR_18 to RSRQ_54
5.7.3.2 EN-DC FR2-FR2 SS-SINR measurement accuracy	Test 1: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -0.5dB Ês2 / Noc2: -0.5dB Reported absolute SINR values: ±3.0dB For extreme conditions allow ±1.0dB+ FFS MU additionally Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Test 2: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: +11.0dB Ês2 / Noc2: +11.0dB Reported absolute SINR values: ±3.0dB For extreme conditions allow ±1.0dB+ FFS MU additionally Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Test 3: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -3.0dB Ês2 / Noc2: -3.0dB Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Reported absolute SINR values: ±4.0dB For extreme conditions allow ±0.0dB+ FFS MU additionally	Test 1: 0dB 0dB 0dB 0dB Via Mapping Via Mapping Test 2: -0.1dB -0.1dB 0dB 0dB Via Mapping Via Mapping Test 3: 0dB 0dB 0.9dB 0.9dB Via Mapping Via Mapping	Test 1: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -0.5dB Ês2 / Noc2: -0.5dB Cell 2 and Cell 3: n257, n258, n261: SINR_27 to SINR_62 n260: SINR_27 to SINR_61 Cell 3: SINR_x-8 to SINR_x+8 Test 2: Noc1: -105.1dBm/15kHz Noc2: -105.1dBm/15kHz Ês1 / Noc1: +11.0dB Ês2 / Noc2: +11.0dB Cell 2 and Cell 3: n257, n258, n261: SINR_48 to SINR_87 n260: SINR_48 to SINR_86 Cell 3: SINR_x-17 to SINR_x+17 Test 3: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -2.1dB Ês2 / Noc2: -2.1dB Cell 2 and Cell 3: n257, n258, n261: SINR_23 to SINR_60 n260: SINR_22 to SINR_59 Cell 3: SINR_x-9 to SINR_x+9

5.7.4.1 EN-DC FR2 SSB based L1-RSRP measurement accuracy	Test 1: Noc: -100dBm/15kHz SSB#0 Ês / Noc: +10.0dB SSB#1 Ês / Noc: -2.0dB Reported absolute RSRP values: ±8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 SSB#0 Ês: -108.1dBm/120kHz n257 SSB#1 Ês: -105.5dBm/120kHz n260 SSB#0 Ês: -108.1dBm/120kHz n260 SSB#1 Ês: -105.5dBm/120kHz Reported absolute RSRP values: -6.5 +8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -4.1dB 0dB 0.4dB Test 2: 5.7dB	Test 1: Noc: -104.1dBm/15kHz SSB#0 Ês / Noc: +10.0dB SSB#1 Ês / Noc: -1.6dB SSB#0: RSRP_42 to RSRP_101 SSB#1: RSRP_31 to RSRP_89 SSB#1-SSB#0: -9 to -2 Test 2: n257 SSB#0 Ês: -102.4dBm/120kHz n257 SSB#1 Ês: -99.8dBm/120kHz n260 SSB#0 Ês: -102.4dBm/120kHz n260 SSB#1 Ês: -99.8dBm/120kHz SSB#0 and SSB#1 n257: RSRP_27 to RSRP_83 n260: RSRP_30 to RSRP_86 SSB#1-SSB#0: -4 to +4
5.7.4.2 EN-DC FR2 CSI-RS based L1-RSRP measurement accuracy	Test 1: Noc: -100dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -2.0dB Reported absolute RSRP values: ±8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 CSI-RS#0 Ês: -108.1dBm/120kHz n257 CSI-RS#1 Ês: -105.5dBm/120kHz n260 CSI-RS#0 Ês: -108.1dBm/120kHz n260 CSI-RS#1 Ês: -105.5dBm/120kHz Reported absolute RSRP values: -6.5 +8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -4.1dB 0dB 0.2dB Test 2: 5.7dB	Test 1: Noc: -104.1dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -1.8dB CSI-RS#0: RSRP_42 to RSRP_101 CSI-RS#1: RSRP_30 to RSRP_89 CSI-RS#1-CSI-RS#0: -9 to -2 Test 2: n257 CSI-RS#0 Ês: -102.4dBm/120kHz n257 CSI-RS#1 Ês: -99.8dBm/120kHz n260 CSI-RS#0 Ês: -102.4dBm/120kHz n260 CSI-RS#1 Ês: -99.8dBm/120kHz CSI-RS#0 and CSI-RS#1 n257: RSRP_27 to RSRP_83 n260: RSRP_30 to RSRP_86 CSI-RS#1-CSI-RS#0: -4 to +4
5.7.6.1 EN-DC FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	Test 1: Noc: -100dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -2.0dB Reported absolute SINR values: ±5.5dB Reported relative SINR values: ±4.5dB For extreme conditions allow ±1dB + FFS MU additionally	Test 1: -4.1dB 0dB 0.2dB	Test 1: Noc: -104.1dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -1.8dB CSI-RS#0: SINR_53 to SINR_76 CSI-RS#1-CSI-RS#0: 6 to 15
5.7.6.2 EN-DC FR2 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	Test 1: Noc: -100dBm/15kHz SSB#0 Ês / Noc: +10.0dB SSB#1 Ês / Noc: 0.0dB CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: 0.0dB Reported absolute SINR values: ±4dB Reported relative SINR values: ±3dB For extreme conditions allow ±1dB + FFS MU additionally	Test 1: -4.1dB 0dB 0.2dB 0dB 0.2dB	Test 1: Noc: -104.1dBm/15kHz SSB#0 Ês / Noc: +10.0dB SSB#1 Ês / Noc: 1.2dB CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: 1.2dB SSB#0: SINR_56 to SINR_73 SSB#1-SSB#0: 5 to 12

5.7.6.3 EN-DC FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	Test 1: Noc: -100dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -2.0dB Reported absolute SINR values: ±4.5dB Reported relative SINR values: ±3.5dB For extreme conditions allow ±1dB + FFS MU additionally	Test 1: -4.1dB 0dB 0.2dB	Test 1: Noc: -104.1dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -1.8dB CSI-RS#0: SINR_55 to SINR_74 CSI-RS#1-CSI-RS#0: 7 to 15

Table F.1.3.2-4: Derivation of test requirements for NR SA FR2 RRM tests

Test	Minimum requirement in TS 38.133 [6]	Test tolerance (TT)	Test requirement in TS 38.533
7.1.1.1 NR SA FR2 cell re-selection	During T1: Noc = -102 dBm/15kHz Es_1/Noc = 8dB Es_2/Noc = -infinity During T2: Noc = -102 dBm/15kHz Es_1/Noc = -3dB Es_2/Noc = 1.5dB During T3: Noc = -102 dBm/15kHz Es_1/Noc = 1.5dB Es_2/Noc = -3dB In signalling: Qrxlevmin = -138dBm/SCS for config. 1 Qrxlevmin = -135dBm/SCS for config. 2	During T1: 0dB 0dB N/A During T2: 0dB 0.1dB 0.55dB During T3: 0dB 0.55dB 0.1dB In signalling: 18 dB 18 dB	During T1: Noc = -102 dBm/15kHz Es_1/Noc = 8dB Es_2/Noc = -infinity During T2: Noc = -102 dBm/15kHz Es_1/Noc = -2.90dB Es_2/Noc = 2.05dB During T3: Noc = -102 dBm/15kHz Es_1/Noc = 2.05dB Es_2/Noc = -2.90dB In signalling: Qrxlevmin = -120dBm/SCS for config. 1 Qrxlevmin = -117dBm/SCS for config. 2
7.1.1.2 NR SA FR2-FR2 cell re-selection	During T1: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -10.5dB During T2: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -infinity During T3: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 8dB Es_2/Noc_2 = 8.5dB In signalling: Cell 2 Qrxlevmin = -138dBm/SCS for config. 1 Cell 2 Qrxlevmin = -135dBm/SCS for config. 2 Cell 2 SnonintraSearchP = 50dB Cell 1 Threshx, highP = 48dB Cell 2 Threshserving, lowP = 44dB Cell 2 Threshx, lowP = 50dB	During T1: 0dB 0dB 0dB 7.6dB During T2: 0dB 0dB 0dB N/A During T3: 0dB 0dB 0dB 0dB In signalling: 16 dB 16 dB 12dB -16dB 18dB -32dB	During T1: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -2.9dB During T2: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -infinity During T3: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 8dB Es_2/Noc_2 = 8.5dB In signalling: Qrxlevmin = -124dBm/SCS for config. 1 Qrxlevmin = -121dBm/SCS for config. 2 Cell 2 SnonintraSearchP = 62dB Cell 1 Threshx, highP = 32dB Cell 2 Threshserving, lowP = 62dB Cell 2 Threshx, lowP = 18dB
7.1.1.3 NR SA FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	During T1: Noc = -102 dBm/15kHz Es_1/Noc = -3dB Es_2/Noc = 1.5dB During T2: Noc = -102 dBm/15kHz Es_1/Noc = 1.5dB Es_2/Noc = -3dB In signalling: Qrxlevmin = -140dBm/SCS for config. 1 Qrxlevmin = -137dBm/SCS for config. 2	During T1: 0dB 0.1dB 0.55dB During T2: 0dB 0.55dB 0.1dB In signalling: 20dB 20dB	During T1: Noc = -102 dBm/15kHz Es_1/Noc = -2.90dB Es_2/Noc = 2.05dB During T2: Noc = -102 dBm/15kHz Es_1/Noc = 2.05dB Es_2/Noc = -2.90dB In signalling: Qrxlevmin = -120dBm/SCS for config. 1 Qrxlevmin = -117dBm/SCS for config. 2

7.1.1.4 NR SA FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	During T1: Noc = -102 dBm/15kHz Es_1/Noc = -3dB Es_2/Noc = 1.5dB During T2: Noc = -102 dBm/15kHz Es_1/Noc = 1.5dB Es_2/Noc = -3dB In signalling: Qrxlevmin = -140dBm/SCS for config. 1 Qrxlevmin = -137dBm/SCS for config. 2 SsearchThresholdP = 35dB	During T1: 0dB 0.1dB 0.55dB During T2: 0dB 0.55dB 0.1dB In signalling: 20dB 20dB -27dB	During T1: Noc = -102 dBm/15kHz Es_1/Noc = -2.90dB Es_2/Noc = 2.05dB During T2: Noc = -102 dBm/15kHz Es_1/Noc = 2.05dB Es_2/Noc = -2.90dB In signalling: Qrxlevmin = -120dBm/SCS for config. 1 Qrxlevmin = -117dBm/SCS for config. 2 SsearchThresholdP = 8dB
7.1.1.5 NR SA FR2-FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	During T1: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -10.5dB During T2: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 8dB Es_2/Noc_2 = 8.5dB In signalling: Cell 2 Qrxlevmin = -138dBm/SCS for config. 1 Cell 2 Qrxlevmin = -135dBm/SCS for config. 2 Cell 2 SnonintraSearchP = 50dB Cell 1 Threshx, highP = 48dB Cell 2 Threshserving, lowP = 44dB Cell 2 Threshx, lowP = 50dB SSearchDeltaP = 6dB	During T1: 0dB 0dB 0dB 7.6dB During T2: 0dB 0dB 0dB 0dB In signalling: 16 dB 16 dB 12dB -16dB 18dB -32dB 6dB	During T1: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -2.9dB During T2: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 8dB Es_2/Noc_2 = 8.5dB In signalling: Qrxlevmin = -124dBm/SCS for config. 1 Qrxlevmin = -121dBm/SCS for config. 2 Cell 2 SnonintraSearchP = 62dB Cell 1 Threshx, highP = 32dB Cell 2 Threshserving, lowP = 62dB Cell 2 Threshx, lowP = 18dB SSearchDeltaP = 12dB
7.1.1.6 NR SA FR2-FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	During T1: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -10.5dB During T2: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 8dB Es_2/Noc_2 = 8.5dB In signalling: Cell 2 Qrxlevmin = -138dBm/SCS for config. 1 Cell 2 Qrxlevmin = -135dBm/SCS for config. 2 Cell 2 SnonintraSearchP = 50dB Cell 1 Threshx, highP = 48dB Cell 2 Threshserving, lowP = 44dB Cell 2 Threshx, lowP = 50dB Cell 2 SsearchThresholdP = 29dB	During T1: 0dB 0dB 0dB 7.6dB During T2: 0dB 0dB 0dB 0dB In signalling: 16 dB 16 dB 12dB -16dB 18dB -32dB -17dB	During T1: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 10.5dB Es_2/Noc_2 = -2.9dB During T2: Noc_1 = -102 dBm/15kHz Noc_2 = -102 dBm/15kHz Es_1/Noc_1 = 8dB Es_2/Noc_2 = 8.5dB In signalling: Qrxlevmin = -124dBm/SCS for config. 1 Qrxlevmin = -121dBm/SCS for config. 2 Cell 2 SnonintraSearchP = 62dB Cell 1 Threshx, highP = 32dB Cell 2 Threshserving, lowP = 62dB Cell 2 Threshx, lowP = 18dB Cell 2 SsearchThresholdP = 12dB

7.3.1.4 NR SA FR1-FR2 synchronous DAPS handover	During T1: Noc -104.7dBm/15kHz Es_2/Noc -infinity During T2-T5: Noc -104.7 dBm/15kHz Es_2/Noc 10 dB	During T1: 0 dB 0 dB During T2-T5: 0 dB 0 dB	During T1: Noc -104.7dBm/15kHz Es_2/Noc -infinity During T2-T5: Noc -104.7 dBm/15kHz Es_2/Noc 10 dB
7.3.1.5 NR SA FR1-FR2 asynchronous DAPS handover	Same as 7.3.1.4	Same as 7.3.1.4	Same as 7.3.1.4
7.3.2.1.1 NR SA FR2 RRC re-establishment	During T1: Noc = -104.7 dBm/15 kHz Ês1 / Noc = 4 dB Ês2 / Noc = 2 dB During T2: Noc = -104.7 dBm/15 kHz Ês1 / Noc = - Infinity Ês2 / Noc = 2 dB During T3: Noc = -104.7 dBm/15 kHz Ês1 / Noc = - Infinity Ês2 / Noc = 2 dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB During T3: 0dB 0dB 0dB	During T1: Noc = -104.7 dBm/15 kHz Ês1 / Noc = 4 dB Ês2 / Noc = 2 dB During T2: Noc = -104.7 dBm/15 kHz Ês1 / Noc = - Infinity Ês2 / Noc = 2 dB During T3: Noc = -104.7 dBm/15 kHz Ês1 / Noc = - Infinity Ês2 / Noc = 2 dB
7.3.2.1.2 NR SA FR2 - FR2 RRC re-establishment	During T1: Noc1 = -92.1 dBm/15 kHz Noc2 = -92.1 dBm/15 kHz Ês1 / Noc1 = 0 dB Ês2 / Noc 2= - Infinity During T2: Noc1 = -92.1 dBm/15 kHz Noc2 = -92.1 dBm/15 kHz Ês1 / Noc1 = - Infinity Ês2 / Noc2 = - Infinity During T3: Noc1 = -92.1 dBm/15 kHz Noc2 = -92.1 dBm/15 kHz Ês1 / Noc1 = - Infinity Ês2 / Noc2 = 0 dB	During T1: -0.2dB -0.2dB 0dB 0dB During T2: -0.2dB -0.2dB 0dB 0dB During T3: -0.2dB -0.2dB 0dB 0dB	During T1: Noc1 = -92.3 dBm/15 kHz Noc2 = -92.3 dBm/15 kHz Ês1 / Noc1 = 0 dB Ês2 / Noc 2= - Infinity During T2: Noc1 = -92.3 dBm/15 kHz Noc2 = -92.3 dBm/15 kHz Ês1 / Noc1 = - Infinity Ês2 / Noc2 = - Infinity During T3: Noc1 = -92.3 dBm/15 kHz Noc2 = -92.3 dBm/15 kHz Ês1 / Noc1 = - Infinity Ês2 / Noc2 = 0 dB
7.3.2.2.1 NR SA FR2 contention based random access	Absolute uplink power: $P_{int} \geq P \geq P_{min}$ ±14.0dB $P_{UMAX} \geq P > P_{int}$ ±12.0dB Relative uplink power step: $P_{int} \geq P \geq P_{min}$ ±6.0dB $P_{UMAX} \geq P > P_{int}$ ±4.0dB Uplink timing: 120kHz SCS T_e ±3.5*64*T_c	 Not applicable due to UL calibration FFS dB FFS dB [48]T_c	Absolute uplink power: ±FFSdB Relative uplink power step: ±(6+FFS)dB, either PRACH being compared ≤ (P_{max} – 6dB) ±(4+FFS)dB, both PRACHs being compared > (P_{max} – 6dB) Uplink timing: 120kHz SCS T_e ±224±[48]*T_c
7.3.2.2.2 NR SA FR2 non-contention based random access	Same as 7.3.2.2.1	Same as 7.3.2.2.1	Same as 7.3.2.2.1

7.3.3.1 NR SA FR2 conditional handover	During T1: Noc -104.7dBm/15kHz Es_1/Noc 6 dB Es_2/Noc -infinity During T2: Noc -104.7dBm/15kHz Es_1/Noc 6 dB Es_2/Noc 11dB In signaling: A3-offset = -1dB	During T1 -1.5dB 0dB 0dB During T2 -1.5dB 0dB 0dB In signaling: -1dB	During T1: Noc -106.2 dBm/15kHz Es_1/Noc 6 dB Es_2/Noc -infinity During T2: Noc -106.2 dBm/15kHz Es_1/Noc 6 dB Es_2/Noc 11dB In signaling: A3-offset = -2dB
7.4.1.1 SA FR2 UE transmit timing accuracy	Test 1 (no DRX): Uplink timing: ±3*64*T_c for 240 kHz SSB SCS Max step size T_q: 2.5*64*T_c Min adjust rate T_p: 2.5*64*T_c Max adjust rate: 2.5*64*T_c N_{oc} = -112 dBm/15 kHz $Ês_1$ / N_{oc}: +4.0dB Test 2 (with DRX): Uplink timing: ±3*64*T_c for 240 kHz SSB SCS N_{oc} = -112 dBm/15 kHz $Ês_1$ / N_{oc}: +4.0dB	 ±0.75*64*T_c +0.625*64T_c -3.725*64*T_c +1.225*64*T_c 0dB 0dB ±0.75*64*T_c 0dB 0dB	Test 1 (no DRX): Uplink timing: ±3.75*64*T_c Max step size T_q: 3.125*64*T_c Min adjust rate: -1.225*64*T_c Max adjust rate: 3.725*64*T_c N_{oc} = -112 dBm/15 kHz $Ês_1$ / N_{oc}: +4.0dB Test 2 (with DRX): Uplink timing: ±3.75*64*T_c N_{oc} = -112 dBm/15 kHz $Ês_1$ / N_{oc}: +4.0dB
7.4.3.1 NR SA FR2 UE timing advance adjustment accuracy	Noc = -112 dBm/15 kHz Ês1 / Noc = 4 dB UE Timing Advance Adjustment Accuracy for 120kHz SCS = ±32 Tc	0dB 0dB +/- 40 Tc	Noc = -112 dBm/15 kHz Ês1 / Noc = 4 dB UE TAAA for 120kHz SCS = ±72 Tc
7.5.1.1 Radio Link Monitoring Out-of-sync Test for FR2 PCell configured with SSB-based RLM RS in non-DRX mode	During T1: Noc: -92.1 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -92.1dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB During T3: Noc: -92.1dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB	During T1: -2.7 dB 2.1 dB 2.1 dB During T2: -2.7 dB 2.1 dB 0 dB During T3: -2.7 dB 0 dB 0 dB	During T1: Noc: -94.8 dBm/15kHz Ês1 / Noc: +4.1 dB Ês2 / Noc: +4.1 dB During T2: Noc: -94.8 dBm/15kHz Ês1 / Noc: -3.9 dB Ês2 / Noc: -15 dB During T3: Noc: -94.8 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB

7.5.1.2 Radio Link Monitoring In-sync Test for FR2 PCell configured with SSB-based RLM RS in non-DRX mode	During T1: Noc: -92.1 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -92.1dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB During T3: Noc: -92.1dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -92.1dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -92.1dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: -15 dB	During T1: -2.7 dB 2.1 dB 2.1 dB During T2: -2.7 dB 2.1 dB 0 dB During T3: -2.7 dB 0 dB 0 dB During T4: -2.7 dB 0 dB 0 dB During T5: -2.7 dB 2.1 dB 0 dB	During T1: Noc: -94.8 dBm/15kHz Ês1 / Noc: +4.1 dB Ês2 / Noc: +4.1 dB During T2: Noc: -94.8 dBm/15kHz Ês1 / Noc: -3.9 dB Ês2 / Noc: -15 dB During T3: Noc: -94.8 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -94.8 dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -94.8 dBm/15kHz Ês1 / Noc: 4.1 dB Ês2 / Noc: -15 dB
7.5.1.3 Radio Link Monitoring Out-of-sync Test for FR2 PCell configured with SSB-based RLM RS in DRX mode	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB	During T1: 0 dB 1.3 dB 1.3 dB During T2: 0 dB 1.3 dB -0.4 dB During T3: 0 dB -0.4 dB -0.4 dB	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +3.3 dB Ês2 / Noc: +3.3 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.7 dB Ês2 / Noc: -15.4 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15.4 dB Ês2 / Noc: -15.4 dB
7.5.1.4 Radio Link Monitoring In-sync Test for FR2 PCell configured with SSB-based RLM RS in DRX mode	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: +2 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -6 dB Ês2 / Noc: -15 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15 dB Ês2 / Noc: -15 dB During T4: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.5 dB Ês2 / Noc: -15 dB During T5: Noc: -104.7 dBm/15kHz Ês1 / Noc: +2 dB Ês2 / Noc: -14 dB	During T1: 0 dB 1.3 dB 1.3 dB During T2: 0 dB 1.3 dB -0.4 dB During T3: 0 dB -0.4 dB -0.4 dB During T4: 0 dB -0.4 dB -0.4 dB During T5: 0 dB 1.3 dB -0.4 dB	During T1: Noc: -104.7 dBm/15kHz Ês1 / Noc: +3.3 dB Ês2 / Noc: +3.3 dB During T2: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.7 dB Ês2 / Noc: -15.4 dB During T3: Noc: -104.7 dBm/15kHz Ês1 / Noc: -15.4 dB Ês2 / Noc: -15.4 dB During T4: Noc: -104.7 dBm/15kHz Ês1 / Noc: -4.9 dB Ês2 / Noc: -15.4 dB During T5: Noc: -104.7 dBm/15kHz Ês1 / Noc: 3.3 dB Ês2 / Noc: -15.4 dB

7.5.5.1 NR SA FR2 SSB-based beam failure detection and link recovery in non-DRX	During T1: SNR_SSB q_0: 5 dB SNR_SSB q_1: 0.2 dB During T2: SNR_SSB q_0: -3 dB SNR_SSB q_1: 0.2 dB During T3-T5: SNR_SSB q_0: -12 dB SNR_SSB q_1: 20.2 dB In signaling: rsrp-ThresholdSSB: -95 dBm/120kHz for Config 1 rsrp-ThresholdSSB: -92 dBm/240kHz for Config 2	 +8.70 dB 0 dB +8.70 dB 0 dB 0 dB -0.2 dB -14 dB -14 dB	During T1: SNR_SSB q_0: 13.7 dB SNR_SSB q_1: 0.2 dB During T2: SNR_SSB q_0: 5.7 dB SNR_SSB q_1: 0.2 dB During T3-T5: SNR_SSB q_0: -12 dB SNR_SSB q_1: 20 dB In signaling: rsrp-ThresholdSSB: -109 dBm/120kHz for Config 1 srp-ThresholdSSB: -106 dBm/240kHz for Config 2
7.5.5.2 NR SA FR2 SSB-based beam failure detection and link recovery in DRX	Same as 7.5.5.1	Same as 7.5.5.1	Same as 7.5.5.1
7.5.5.3 NR SA FR2 CSI-RS-based beam failure detection and link recovery in non-DRX	Noc = -104.7 dBm/120 kHz $\hat{E}s_1$ / N_{oc} for CSI-RS set q0 T1: 5 dB T2: -3 dB T3: -12 dB T4: -12 dB T5: -12 dB $\hat{E}s_1$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20.2 dB T4: 20.2 dB T5: 20.2 dB rsrp-ThresholdSSB: -95 dBm/SCS kHz	0 dB 8.7 dB 8.7 dB 0 dB 0 dB 0 dB 0 dB 0 dB -0.2 dB -0.2 dB -0.2 dB -14 dB	Noc = -104.7 dBm/120 kHz $\hat{E}s_1$ / N_{oc} for CSI-RS set q0 T1: 13.7 dB T2: 5.7 dB T3: -12 dB T4: -12 dB T5: -12 dB $\hat{E}s_1$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20 dB T4: 20 dB T5: 20 dB rsrp-ThresholdSSB: -109.0 dBm/SCS kHz
7.5.5.4 NR SA FR2 CSI-RS-based beam failure detection and link recovery in DRX	Same as 7.5.5.3	Same as 7.5.5.3	Same as 7.5.5.3
7.5.5.5 NR SA FR2 scheduling available restriction during SSB-based beam failure detection and link recovery in non-DRX	Same as 7.5.5.1	Same as 7.5.5.1	Same as 7.5.5.1
7.5.5.6 NR SA FR2 SCell CSI-RS-based beam failure detection and link recovery in non-DRX	Noc = -104.7 dBm/120 kHz $\hat{E}s_2$ / N_{oc} for CSI-RS set q0 T1: 5 dB T2: -3 dB T3: -12 dB T4: -12 dB T5: -12 dB $\hat{E}s_2$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20.2 dB T4: 20.2 dB T5: 20.2 dB rsrp-ThresholdBFR: -95 dBm/SCS kHz	0 dB 8.7 dB 8.7 dB 0 dB 0 dB 0 dB 0 dB 0 dB -0.2 dB -0.2 dB -0.2 dB -14 dB	Noc = -104.7 dBm/120 kHz $\hat{E}s_2$ / N_{oc} for CSI-RS set q0 T1: 13.7 dB T2: 5.7 dB T3: -12 dB T4: -12 dB T5: -12 dB $\hat{E}s_2$ / N_{oc} for CSI-RS set q1 T1: 0.2 dB T2: 0.2 dB T3: 20 dB T4: 20 dB T5: 20 dB rsrp-ThresholdBFR: -109.0 dBm/SCS kHz

7.5.5.7 NR SA FR2 SCell CSI-RS-based beam failure detection and link recovery in DRX	Same as 7.5.5.6	Same as 7.5.5.6	Same as 7.5.5.6
7.6.1.1 NR SA FR2 event-triggered reporting without gap in non-DRX	During T1: Ês1: -86dBm/120kHz Ês2: -infinity During T2: Ês1: -86dBm/120kHz Ês2: -86dBm/120kHz	During T1: 0dB 0dB During T2: 0dB 0dB	During T1: Ês1: -86dBm/120kHz Ês2: -infinity During T2: Ês1: -86dBm/120kHz Ês2: -86dBm/120kHz
7.6.1.2 NR SA FR2 event-triggered reporting without gap in DRX	During T1: Noc: -98dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: -infinity During T2: Noc: -98dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: +4.00dB Signalled A3-offset: -6.0	During T1: -3.5dB 0dB 0dB During T2: -3.5dB 0dB 0dB Signalled A3-offset: -1.0	During T1: Noc: -101.5dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: -infinity During T2: Noc: -101.5dBm/15kHz Ês1 / Noc: +4.00dB Ês2 / Noc: +4.00dB Signalled A3-offset: -7.0
7.6.1.3 NR SA FR2 event-triggered reporting with gap in non-DRX	Same as 7.6.1.1	Same as 7.6.1.1	Same as 7.6.1.1
7.6.1.4 NR SA FR2 event-triggered reporting with gap in DRX	Same as 7.6.1.2	Same as 7.6.1.2	Same as 7.6.1.2
7.6.2.1 NR SA FR2-FR2 event-triggered reporting in non-DRX	During T1: Ês1: -87 dBm/120kHz Ês2: - infinity During T2: Ês1: -87 dBm/120kHz Ês2: -87 dBm/120kHz	During T1: 0dB 0dB During T2: 0dB 0dB	During T1: Ês1: -87 dBm/120kHz Ês2: - infinity During T2: Ês1: -87 dBm/120kHz Ês2: -87 dBm/120kHz
7.6.2.3 NR SA FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	Same as 7.6.2.1	Same as 7.6.2.1	Same as 7.6.2.1
7.6.2.5 SA event triggered reporting tests for FR2 without SSB time index detection when DRX is not used (PCell in FR1)	During T1: Ês2: - Infinity During T2: Ês2: -87 dBm/120kHz	During T1: 0dB During T2: 0dB	During T1: Ês2: - Infinity During T2: Ês2: -87 dBm/120kHz

7.6.2.6 SA event triggered reporting tests for FR2 without SSB time index detection when DRX is used (PCell in FR1)	During T1: Noc = -104.7 dBm/15 kHz Ês2 / Noc = - Infinity During T2: Noc = -104.7 dBm/15 kHz Ês2 / Noc = 9 dB	During T1: 0dB 0dB During T2: 0dB 0dB	During T1: Noc = -104.7 dBm/15 kHz Ês2 / Noc = - Infinity During T2: Noc = -104.7 dBm/15 kHz Ês2 / Noc = 9 dB
7.6.2.7 SA event triggered reporting tests for FR2 with SSB time index detection when DRX is not used (PCell in FR1)	Same as 5.6.2.5	Same as 5.6.2.5	Same as 5.6.2.5
7.6.2.8 SA event triggered reporting tests for FR2 with SSB time index detection when DRX is used (PCell in FR1)	Same as 5.6.2.6	Same as 5.6.2.6	Same as 5.6.2.6
7.6.3.1 NR SA FR2 SSB-based L1-RSRP measurement in non-DRX	Same as 5.6.3.1	Same as 5.6.3.1	Same as 5.6.3.1
7.6.3.2 NR SA FR2 SSB-based L1-RSRP measurement in DRX	Same as 5.6.3.1	Same as 5.6.3.1	Same as 5.6.3.1
7.6.3.3 NR SA FR2 CSI-RS-based L1-RSRP measurement in non-DRX	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +9.00dB Reported CSI-RSRP values ± 29dB Reported Differential CSI-RSRP values ± 7dB	0dB 0dB 0dB Via mapping	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +9.00dB CSI-RS#1: RSRP_40 to RSRP_99 CSI-RS#0: DIFFRSRP_1 to DIFFRSRP_7
7.6.3.4 NR SA FR2 CSI-RS-based L1-RSRP measurement in DRX	Same as 7.6.3.3	Same as 7.6.3.3	Same as 7.6.3.3
7.6.6.1 NR SA FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	Same as 5.6.6.1	Same as 5.6.6.1	Same as 5.6.6.1
7.6.6.2 NR SA FR2 SSB based CMR and dedicated IMR L1-SINR measurement accuracy	During T1: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: -infinity During T2: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: +9.00dB Reported SS-SINR values ± 4.5dB Reported Differential SS-SINR values ± 3.5dB	During T1: 0dB 0dB 0dB During T2: 0dB 0dB 0dB Via mapping	During T1: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: -infinity During T2: Noc: -105dBm/15kHz Ês0 / Noc: 0.00dB Ês1 / Noc: +9.00dB SSB#1: SINR_53 to SINR_72 SSB#0: DIFFSINR_5 to DIFFSINR_12
7.6.6.3 NR SA FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: 0.00dB $\hat{E}s_1$ / Noc: +9.00dB Reported CSI-SINR values ± 4.0dB Reported Differential CSI-SINR values ± 3.0dB	0dB 1.5dB 0dB Via mapping	Noc: -105dBm/15kHz $\hat{E}s_0$ / Noc: +1.50dB $\hat{E}s_1$ / Noc: +9.00dB CSI-RS#1: SINR_54 to SINR_71 CSI-RS#0: DIFFSINR_4 to DIFFSINR_10

7.7.1.1 NR SA FR2 SS-RSRP measurement accuracy	Test 1: Noc: -91.60dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.0dB Reported absolute RSRP values: ±8dB Reported relative RSRP values: ±6dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 Ês1: -110.0dBm/120kHz n257 Ês2: -110.0dBm/120kHz n260 Ês1: -107.4dBm/120kHz n260 Ês2: -107.4dBm/120kHz Reported absolute RSRP values: ±8dB Reported relative RSRP values: ±6dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -5.80dB 0dB 0.4dB Via Mapping Test 2: 7.70dB 7.70dB 7.70dB 7.70dB Via Mapping	Test 1: Noc: -97.40dBm/15kHz Ês1 / Noc: +6.0dB Ês2 / Noc: +1.4dB Cell 1: RSRP_50 to RSRP_108 Cell 2: RSRP_46 to RSRP_103 Cell 2: RSRP_x-12 to RSRP_X+2 Test 2: n257 Ês1: -102.3dBm/120kHz n257 Ês2: -102.3dBm/120kHz n260 Ês1: -99.7dBm/120kHz n260 Ês2: -99.7dBm/120kHz Band dependent. See test case tables in clause 5.7.1.1.5

7.7.1.2 NR SA FR2-FR2 SS-RSRP measurement accuracy	Test 1 Config 1: Noc1: -90.60dBm/15kHz Noc2: -90.60dBm/15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally Test 2 Config 1: n257 Noc1: -108.13dBm/15kHz n257 Noc2: -113.13dBm/15kHz n260 Noc1: -105.53dBm/15kHz n260 Noc2: -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: -1.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally Test 1 Config 2: Noc1: -93.70dBm/15kHz Noc2: -93.70dBm/15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally Test 2 Config 2: n257 Noc1: -108.13dBm/15kHz n257 Noc2: -113.13dBm/15kHz n260 Noc1: -105.53dBm/15kHz n260 Noc2: -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: -1.0dB Reported absolute RSRP values: ±8.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1 Config 1: -5.70dB -5.70dB 0dB 0dB Via Mapping Via Mapping Test 2 Config 1: -6.60dB 0dB -6.60dB 0dB 0dB 2dB Via Mapping Via Mapping Test 1 Config 2: -5.60dB -5.60dB 0dB 0dB Via Mapping Via Mapping Test 2 Config 2: -6.60dB 0dB -6.60dB 0dB 0dB 2dB Via Mapping	Test 1 Config 1: Noc1: -96.30dBm/15kHz Noc2: -96.30dBm /15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Cell 1 n257: RSRP_41 to RSRP_109 n260: RSRP_39 to RSRP_109 Cell 2: RSRP_52 to RSRP_109 Cell 2: n257: RSRP_x-15 to RSRP_x+25 n260: RSRP_x-15 to RSRP_x+27 Test 2 Config 1: -114.73dBm/15kHz -113.13dBm/15kHz -112.13dBm/15kHz -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: 1.0dB Cell 1 n257: RSRP_33 to RSRP_101 n260: RSRP_34 to RSRP_104 Cell 2: n257: RSRP_32 to RSRP_87 n260: RSRP_34 to RSRP_90 Cell 2: n257: RSRP_x-29 to RSRP_x+11 n260: RSRP_x-29 to RSRP_x+13 Test 1 Config 2: Noc1: -99.30dBm/15kHz Noc2: -99.30dBm /15kHz Ês1 / Noc1: +6.0dB Ês2 / Noc2: +6.0dB Cell 1 n257: RSRP_41 to RSRP_109 n260: RSRP_39 to RSRP_109 Cell 2: RSRP_52 to RSRP_109 Cell 2: n257: RSRP_x-15 to RSRP_x+25 n260: RSRP_x-15 to RSRP_x+27 Test 2 Config 2: -114.73dBm/15kHz -113.13dBm/15kHz -112.13dBm/15kHz -110.53dBm/15kHz Ês1 / Noc1: 17.0dB Ês2 / Noc2: 1.0dB Cell 1 n257: RSRP_36 to RSRP_104 n260: RSRP_37 to RSRP_107 Cell 2: n257: RSRP_35 to RSRP_90 n260: RSRP_37 to RSRP_93

	Reported relative RSRP values: ±6.0dB For extreme conditions allow ±3dB+ FFS MU additionally	Via Mapping	Cell 2: n257: RSRP_x-29 to RSRP_x+11 n260: RSRP_x-29 to RSRP_x+13
7.7.1.3 NR SA FR1-FR2 SS-RSRP measurement accuracy	Test 1: Noc: -90dBm/15kHz Ês2 / Noc: +5.0dB Reported absolute RSRP values: ±8dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 Ês2: -98.2dBm/120kHz n260 Ês2: -93.9dBm/120kHz Reported absolute RSRP values: ±8dBFor extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -5.50dB 0dB Via Mapping Test 2: 5.50dB 5.50dB Via Mapping	Test 1: Noc: -95.50dBm/15kHz Ês2 / Noc: +5dB Band dependent. See test case tables in clause 7.7.1.3.5 Test 2: n257 Ês2: -92.7dBm/120kHz n260 Ês2: -88.4dBm/120kHz Band dependent. See test case tables in clause 7.7.1.3.5
7.7.2.1 NR SA FR2 SS-RSRQ measurement accuracy	Test 1: Noc: -95.0dBm/15kHz Ês1 / Noc: +3.0dB Ês2 / Noc: +3.0dB Reported absolute RSRQ values: ±2.5dB For extreme conditions allow ±1.5dB+ FFS MU additionally Test 2: Noc: -95.0dBm/15kHz Ês1 / Noc: -3.0dB Ês2 / Noc: -3.0dB Reported absolute RSRQ values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally	Test 1: -5.70dB 0dB 0dB Via Mapping Test 2: -1.70dB 0dB 0dB Via Mapping	Test 1: Noc: -100.70dBm/15kHz Ês1 / Noc: +3.0dB Ês2 / Noc: +3.0dB Cell 2: All bands: RSRQ_41 to RSRQ_73 Test 2: Noc: -96.70dBm/15kHz Ês1 / Noc: -3.0dB Ês2 / Noc: -3.0dB Cell 2: n257, n258, n261: RSRQ_35 to RSRQ_71 n260: RSRQ_34 to RSRQ_71
7.7.2.2 NR SA FR2-FR2 SS-RSRQ measurement accuracy	Test 1: Noc1: -94.03dBm/15kHz Noc2: -94.03dBm/15kHz Ês1 / Noc1: -1.75dB Ês2 / Noc2: -1.75dB Reported absolute RSRQ values: ±2.5dB For extreme conditions allow ±1.5dB+ FFS MU additionally Reported relative RSRQ values: ±3.0dB For extreme conditions allow ±1.0dB+ FFS MU additionally Test 2: Noc1: -94.03dBm/15kHz Noc2: -94.03dBm/15kHz Ês1 / Noc1: -3.0dB Ês2 / Noc2: -3.0dB Reported absolute RSRQ values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Reported relative RSRQ values: ±4.0dB For extreme conditions allow ±0.0dB+ FFS MU additionally	Test 1: -1.90dB -1.90dB 0dB 0dB Via Mapping Via Mapping Test 2: -1.41dB -1.41dB 0dB 0dB Via Mapping Via Mapping	Test 1: Noc1: -95.93dBm/15kHz Noc2: -95.93dBm /15kHz Ês1 / Noc1: -1.75dB Ês2 / Noc2: -1.75dB Cell 1 and Cell 2: RSRQ_41 to RSRQ_73 Cell 2: RSRQ_x-7 to RSRQ_x+7 Test 2: Noc1: -95.44dBm/15kHz Noc2: -95.44dBm /15kHz Ês1 / Noc1: -3.0dB Ês2 / Noc2: -3.0dB Cell 1 and Cell 2: RSRQ_37 to RSRQ_74 Cell 2: RSRQ_x-9 to RSRQ_x+9

7.7.3.1 NR SA FR2 SS-SINR measurement accuracy	Test 1: Noc: -105.0dBm/15kHz Ês1 / Noc: +4.54dB Ês2 / Noc: +2.66dB Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Test 2: Noc: -105.0dBm/15kHz Ês1 / Noc: -3.0dB Ês2 / Noc: -3.0dB Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally	Test 1: 0dB 0dB 0dB Via Mapping Test 2: 0dB 0.2dB 0.2dB Via Mapping	Test 1: Noc: -105.0dBm/15kHz Ês1 / Noc: +4.54dB Ês2 / Noc: +2.66dB Cell 2: n257, n258, n261: SINR_22 to RSRQ_58 n260: SINR_21 to RSRQ_58 Test 2: Noc: -105.0dBm/15kHz Ês1 / Noc: -2.8dB Ês2 / Noc: -2.8dB Cell 2: n257, n258, n261: SINR_18 to RSRQ_55 n260: SINR_18 to RSRQ_54
7.7.3.2 NR SA FR2-FR2 SS-SINR measurement accuracy	Test 1: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -0.5dB Ês2 / Noc2: -0.5dB Reported absolute SINR values: ±3.0dB For extreme conditions allow ±1.0dB+ FFS MU additionally Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Test 2: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: +11.0dB Ês2 / Noc2: +11.0dB Reported absolute SINR values: ±3.0dB For extreme conditions allow ±1.0dB+ FFS MU additionally Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Test 3: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -3.0dB Ês2 / Noc2: -3.0dB Reported absolute SINR values: ±3.5dB For extreme conditions allow ±0.5dB+ FFS MU additionally Reported absolute SINR values: ±4.0dB For extreme conditions allow ±0.0dB+ FFS MU additionally	Test 1: 0dB 0dB 0dB 0dB Via Mapping Via Mapping Test 2: -0.1dB -0.1dB 0dB 0dB Via Mapping Via Mapping Test 3: 0dB 0dB 0.9dB 0.9dB Via Mapping Via Mapping	Test 1: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -0.5dB Ês2 / Noc2: -0.5dB Cell 1 and Cell 2: n257, n258, n261: SINR_27 to SINR_62 n260: SINR_27 to SINR_61 Cell 2: SINR_x-8 to SINR_x+8 Test 2: Noc1: -105.1dBm/15kHz Noc2: -105.1dBm/15kHz Ês1 / Noc1: +11.0dB Ês2 / Noc2: +11.0dB Cell 1 and Cell 2: n257, n258, n261: SINR_48 to SINR_87 n260: SINR_48 to SINR_86 Cell 2: SINR_x-17 to SINR_x+17 Test 3: Noc1: -105.0dBm/15kHz Noc2: -105.0dBm/15kHz Ês1 / Noc1: -2.1dB Ês2 / Noc2: -2.1dB Cell 1 and Cell 2: n257, n258, n261: SINR_23 to SINR_60 n260: SINR_22 to SINR_59 Cell 2: SINR_x-9 to SINR_x+9

7.7.4.1 NR SA FR2 SSB based L1-RSRP measurement accuracy	Test 1: Noc: -100dBm/15kHz SSB#0 Ês / Noc: +10.0dB SSB#1 Ês / Noc: -2.0dB Reported absolute RSRP values: ±8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 SSB#0 Ês: -108.1dBm/120kHz n257 SSB#1 Ês: -105.5dBm/120kHz n260 SSB#0 Ês: -108.1dBm/120kHz n260 SSB#1 Ês: -105.5dBm/120kHz Reported absolute RSRP values: -6.5 +8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -4.1dB 0dB 0.4dB Test 2: 5.7dB	Test 1: Noc: -104.1dBm/15kHz SSB#0 Ês / Noc: +10.0dB SSB#1 Ês / Noc: -1.6dB SSB#0: RSRP_42 to RSRP_101 SSB#1: RSRP_31 to RSRP_89 SSB#1-SSB#0: -9 to -2 Test 2: n257 SSB#0 Ês: -102.4dBm/120kHz n257 SSB#1 Ês: -99.8dBm/120kHz n260 SSB#0 Ês: -102.4dBm/120kHz n260 SSB#1 Ês: -99.8dBm/120kHz SSB#0 and SSB#1 n257: RSRP_27 to RSRP_83 n260: RSRP_30 to RSRP_86 SSB#1-SSB#0: -4 to +4
7.7.4.2 NR SA FR2 CSI-RS based L1-RSRP measurement accuracy	Test 1: Noc: -100dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -2.0dB Reported absolute RSRP values: ±8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB + FFS MU additionally Test 2: n257 CSI-RS#0 Ês: -108.1dBm/120kHz n257 CSI-RS#1 Ês: -105.5dBm/120kHz n260 CSI-RS#0 Ês: -108.1dBm/120kHz n260 CSI-RS#1 Ês: -105.5dBm/120kHz Reported absolute RSRP values: -6.5 +8.5dB Reported relative RSRP values: ±6.5dB For extreme conditions allow ±3dB+ FFS MU additionally	Test 1: -4.1dB 0dB 0.2dB Test 2: 5.7dB	Test 1: Noc: -104.1dBm/15kHz CSI-RS#0 Ês / Noc: +10.0dB CSI-RS#1 Ês / Noc: -1.8dB CSI-RS#0: RSRP_42 to RSRP_101 CSI-RS#1: RSRP_30 to RSRP_89 CSI-RS#1-CSI-RS#0: -9 to -2 Test 2: n257 CSI-RS#0 Ês: -102.4dBm/120kHz n257 CSI-RS#1 Ês: -99.8dBm/120kHz n260 CSI-RS#0 Ês: -102.4dBm/120kHz n260 CSI-RS#1 Ês: -99.8dBm/120kHz CSI-RS#0 and CSI-RS#1 n257: RSRP_27 to RSRP_83 n260: RSRP_30 to RSRP_86 CSI-RS#1-CSI-RS#0: -4 to +4
7.7.6.1 NR SA FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	Noc: -100dBm/15kHz Ês0 / Noc: 10.00dB Ês1 / Noc: -2.00dB Reported CSI-SINR values ± 5.5dB Reported Differential CSI-SINR values ± 4.5dB	-4.1dB 0dB 0.2dB Via mapping	Noc: -104.1dBm/15kHz Ês0 / Noc: 10.00dB Ês1 / Noc: -1.8dB CSI-RS#0: SINR_53 to SINR_76 CSI-RS#0: DIFFSINR_6 to DIFFSINR_15
7.7.6.2 NR SA FR2 SSB based CMR and dedicated IMR L1-SINR measurement accuracy	Noc: -100dBm/15kHz Ês0 / Noc: 10.00dB Ês1 / Noc: -2.00dB Reported SS-SINR values ± 4.5dB Reported Differential SS-SINR values ± 3.5dB	-4.1dB 0dB 0.2dB Via mapping	Noc: -104.1dBm/15kHz Ês0 / Noc: 10.00dB Ês1 / Noc: -1.8dB SSB#0: SINR_55 to SINR_74 SSB#0: DIFFSINR_7 to DIFFSINR_15

7.7.6.3 NR SA FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	Noc: -100dBm/15kHz Ês0 / Noc: 10.00dB Ês1 / Noc: 0.00dB Reported CSI-SINR values ± 4.5dB Reported Differential CSI-SINR values ± 3.5dB	-4.1dB 0dB 0.2dB Via mapping	Noc: -104.1dBm/15kHz Ês0 / Noc: 10.00dB Ês1 / Noc: 0.2dB CSI-RS#0: SINR_55 to SINR_74 CSI-RS#0: DIFFSINR_5 to DIFFSINR_13

Table F.1.3.2-5: Derivation of test requirements for E-UTRA – NR inter-RAT test cases with E-UTRA serving cell RRM tests

Test	Minimum requirement in TS 38.133 [6]	Test tolerance (TT)	Test requirement in TS 38.533
8.2.1.1 E-UTRA – NR FR1 cell re-selection to higher priority NR target cell	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -4dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -infinity During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: +12dB	During T1: 0dB -1.90dB 0dB 0.35dB During T2: 0dB 0dB 0dB 0dB During T3: 0dB 0dB 1.55dB 1.55dB	During T1: Noc1: -98dBm/15kHz Noc2: -99.90dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -3.65dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +14dB Ês2 / Noc2: -infinity During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +15.55dB Ês2 / Noc2: +13.55dB
8.2.1.2 E-UTRA – NR FR1 Cell reselection to lower priority NR target Cell in FR1 for UE configured with highSpeedInterRAT-NR-r16	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: 14dB During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +12dB Ês2 / Noc2: +14dB	During T1: -1.90dB -1.90dB 0.35dB 3.45dB During T2: -1.90dB -1.90dB 3.45dB 0dB	During T1: Noc1: -99.9dBm/15kHz Noc2: -99.9dBm/15kHz Ês1 / Noc1: -3.65dB Ês2 / Noc2: 17.45dB During T2: Noc1: -99.9dBm/15kHz Noc2: -99.9dBm/15kHz Ês1 / Noc1: +15.45dB Ês2 / Noc2: +14dB
8.3.1.1 E-UTRA – NR FR1 handover with known target cell	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +7dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +7dB Ês2 / Noc2: 0dB During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +7dB Ês2 / Noc2: 0dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB -1.55dB +1.55dB During T3: 0dB 0dB -1.55dB +1.55dB	During T1: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +7dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +5.45dB Ês2 / Noc2: +1.55dB During T3: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +5.45dB Ês2 / Noc2: +1.55dB
8.4.1.1 E-UTRA – NR FR1 SFTD measurement delay in non-DRX	During T1: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: +4dB	During T1: 0dB 0dB 0dB 0dB	During T1: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: +4dB
8.4.1.2 E-UTRA – NR FR1 SFTD measurement delay in DRX	Same as 8.4.1.1	Same as 8.4.1.1	Same as 8.4.1.1
8.4.2.1 E-UTRA event-triggered reporting of a NR FR1 neighbour cell without SSB time index detection in non-DRX	During T1: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: -infinity During T2: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: +7dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB -1.65dB +1.65dB	During T1: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +15.35dB Ês2 / Noc2: +8.65dB

8.4.2.2 E-UTRA event-triggered reporting of a NR FR1 neighbour cell without SSB time index detection in DRX	Same as 8.4.2.1	Same as 8.4.2.1	Same as 8.4.2.1
8.4.2.3 E-UTRA event-triggered reporting of a NR FR1 neighbour cell with SSB time index detection in non-DRX	Same as 8.4.2.1	Same as 8.4.2.1	Same as 8.4.2.1
8.4.2.4 E-UTRA event-triggered reporting of a NR FR1 neighbour cell with SSB time index detection in DRX	Same as 8.4.2.1	Same as 8.4.2.1	Same as 8.4.2.1
8.4.2.9 E-UTRA – NR Inter-RAT event triggered reporting tests for FR1 with SSB time index detection in DRX for UE configured with highSpeedInterRAT-NR-r16	During T1: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: -infinity During T2: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: +7dB	During T1: 0dB 0dB 0dB 0dB During T2: 0dB 0dB 0dB 0dB	During T1: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: -infinity During T2: Noc1: -104dBm/15kHz Noc2: -98dBm/15kHz Ês1 / Noc1: +17dB Ês2 / Noc2: +7dB
8.5.1.1 E-UTRA – NR FR1 SFTD measurement accuracy	Test 1 Ês1 / Noc1: -3dB Ês2 / Noc2: -3dB	Test 1: +0.8dB +0.3dB	Test 1: Ês1 / Noc1: -2.2dB Ês2 / Noc2: -2.7dB
8.5.2.1.1.1 E-UTRA SS-RSRP absolute measurement accuracy of a NR FR1 neighbour cell			
Test Configuration 1,2,4,5	Test 1: N_{oc1}: -94.65 dBm/15kHz Ês1 / N_{oc1}: +10.0dB Reported RSRP values: ±8dB (±3.0dB additionally for extreme conditions) Test 2: N_{oc1}: -117dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -4.0dB Reported RSRP values: ±4.5dB (±4.5dB additionally for extreme conditions)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -94.65dBm/15kHz Ês1 / N_{oc1}: +10.0dB RSRP_62 to RSRP_82 Test 2: N_{oc1}: -117dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -3.2dB RSRP_30 to RSRP_43 RSRP_31 to RSRP_43 RSRP_31 to RSRP_44 RSRP_32 to RSRP_44 RSRP_32 to RSRP_45 RSRP_33 to RSRP_45 RSRP_33 to RSRP_46 RSRP_34 to RSRP_46 depending on operating band

Test Configuration 3,6	Test 1: N_{oc1}: -94.65 dBm/15kHz Ês1 / N_{oc1}: +10.0dB Reported RSRP values: ±8dB (±3.0dB additionally for extreme conditions) Test 2: N_{oc1}: -117dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -4.0dB Reported RSRP values: ±4.5dB (±4.5dB additionally for extreme conditions)	Test 1: -1.35dB 0dB Via mapping Test 2: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -96.00dBm/15kHz Ês1 / N_{oc1}: +10.0dB RSRP_64 to RSRP_83 Test 2: N_{oc1}: -117dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -3.2dB RSRP_33 to RSRP_46 RSRP_34 to RSRP_46 RSRP_34 to RSRP_47 RSRP_35 to RSRP_47 RSRP_35 to RSRP_48 RSRP_36 to RSRP_48 RSRP_36 to RSRP_49 RSRP_37 to RSRP_49 depending on operating band
8.5.2.1.2 E-UTRA SS-RSRP absolute measurement accuracy of a NR FR2 neighbour cell	Test 1: N_{oc}: -105dBm/15kHz Ês / N_{oc} 11dB Reported RSRP values: ±8dB (±3dB additionally for extreme conditions) Test 2: Ês FR2a PC3: -109.1dBm/SCS Reported RSRP values: ±8dB Ês FR2b PC3: -106.5dBm/SCS Reported RSRP values: ±8dB Ês FR2c PC3: -105.5dBm/SCS Reported RSRP values: ±8dB (±3dB additionally for extreme conditions in all frequency ranges)	Test 1: -0.1dB 0dB Via mapping Test 2: +5.65dB Via mapping +5.65dB Via mapping +5.65dB Via mapping	Test 1: N_{oc}: -105.1dBm/15kHz Ês / N_{oc}: +11.0dB RSRP_48 to RSRP_105 Test 2: Ês: -103.45dBm/SCS RSRP_29 to RSRP_87 Ês: -100.85dBm/SCS RSRP_32 to RSRP_89 Ês: -99.85dBm/SCS RSRP_33 to RSRP_90
8.5.2.2.1 E-UTRA SS-RSRQ absolute measurement accuracy of a NR FR1 neighbour cell			
Test Configuration 1,2,4,5	Test 1: N_{oc1}: -80.18 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions) Test 2: N_{oc1}: -106dBm/15kHz Ês1 / N_{oc1}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions) Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions)	Test 1: -1.5dB 0dB Via mapping Test 2: 0dB 0dB Via mapping Test 3: 0dB 0dB Via mapping	Test 1: N_{oc1}: -81.68dBm/15kHz Ês1 / N_{oc1}: -1.75dB RSRQ_51 to RSRQ_63 Test 2: N_{oc1}: -106dBm/15kHz Ês1 / N_{oc1}: -1.75dB RSRQ_51 to RSRQ_63 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -1.75dB RSRQ_51 to RSRQ_63

Test Configuration 3,6	Test 1: N_{oc1}: -86.27 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions) Test 2: N_{oc1}: -113dBm/15kHz Ês1 / N_{oc1}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions) Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions)	Test 1: -1.53dB 0dB Via mapping Test 2: 0dB 0dB Via mapping Test 3: 0dB 0dB Via mapping	Test 1: N_{oc1}: -87.80dBm/15kHz Ês1 / N_{oc1}: -1.75dB RSRQ_51 to RSRQ_63 Test 2: N_{oc1}: -113dBm/15kHz Ês1 / N_{oc1}: -1.75dB RSRQ_51 to RSRQ_63 Test 3: N_{oc1}: -116dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -1.75dB RSRQ_51 to RSRQ_63
8.5.2.2.2 E-UTRA SS-RSRQ absolute measurement accuracy of a NR FR2 neighbour cell	Test 1: N_{oc1}: -105dBm/15kHz Ês1 / N_{oc1}: -0.5dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions) Test 2: N_{oc1} FR2a PC3: -115.1dBm/15kHz N_{oc1} FR2b PC3: -112.5dBm/15kHz N_{oc1} FR2c PC3: -111.5dBm/15kHz Ês1 / N_{oc1}: -1.75dB Reported RSRQ values: ±2.5dB (±1.5dB additionally for extreme conditions in all frequency ranges)	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0dB 0dB 5.3dB Via mapping	Test 1: N_{oc1}: -105dBm/15kHz Ês1 / N_{oc1}: -0.5dB RSRQ_23 to RSRQ_95 Test 2: N_{oc1}: -115.1dBm/15kHz N_{oc1}: -112.5dBm/15kHz N_{oc1}: -111.5dBm/SCS Ês1 / N_{oc1}: 3.55dB RSRQ_26 to RSRQ_98
8.5.2.3.1 E-UTRA SS-SINR absolute measurement accuracy of a NR FR1 neighbour cell	Test 1: N_{oc1}: -88 dBm/15kHz Ês1 / N_{oc1}: -1.75dB Reported SINR values: ±3dB Test 2: N_{oc1}: -108.5dBm/15kHz Ês1 / N_{oc1}: 20dB Reported SINR values: ±3dB Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -4dB Reported SINR values: ±3.5dB	Test 1: 0dB 0dB Via mapping Test 2: 0dB 0dB Via mapping Test 3: 0dB 0.8dB Via mapping	Test 1: N_{oc1}: -88 dBm/15kHz Ês1 / N_{oc1}: -1.75dB SINR_35 to SINR_51 Test 2: N_{oc1}: -108.5dBm/15kHz Ês1 / N_{oc1}: 20dB SINR_79 to SINR_94 Test 3: N_{oc1}: -119.5dBm/15kHz + Δ_{BG_offset} Ês1 / N_{oc1}: -3.2dB SINR_32 to SINR_49

8.5.2.3.2 E-UTRA SS-SINR absolute measurement accuracy of a NR FR2 neighbour cell	Test 1: N_{oc1}: -105dBm/15kHz Ês1 / N_{oc1}: -0.5dB Reported SINR values: ±3dB (±1dB additionally for extreme conditions) Test 2: N_{oc1}: -105dBm/15kHz Ês1 / N_{oc1}: 11dB Reported SINR values: ±3dB (±1dB additionally for extreme conditions) Test 3: N_{oc1} FR2a PC3: -115.1dBm/15kHz N_{oc1} FR2b PC3: -112.5dBm/15kHz N_{oc1} FR2c PC3: -111.5dBm/15kHz Ês1 / N_{oc1}: -1dB Reported SINR values: ±3dB (±1dB additionally for extreme conditions in all frequency ranges)	Test 1: 0dB 0dB Via mapping Test 2: -0.1dB 0dB Via mapping Test 3: 0dB 0dB 0dB 4.6dB Via mapping	Test 1: N_{oc1}: -105dBm/15kHz Ês1 / N_{oc1}: -0.5dB SINR_9 to SINR_82 Test 2: N_{oc1}: -105.1dBm/15kHz Ês1 / N_{oc1}: 11dB SINR_32 to SINR_105 Test 3: N_{oc1}: -115.1dBm/15kHz N_{oc1}: -112.5dBm/15kHz N_{oc1}: -111.5dBm/SCS Ês1 / N_{oc1}: 3.6dB SINR_17 to SINR_90

Table F.1.3.2-6: Derivation of test requirements for FR1 NR sidelink RRM tests

Test	Minimum requirement in TS 38.133 [6]	Test tolerance (TT)	Test requirement in TS 38.533
9.1.1.1 NR SA FR1 UE transmit timing accuracy for GNSS as synchronization reference source	Sidelink transmit timing error limit: ±12*64 Tc	 ±3*64 Tc	 ±15*64 Tc
9.1.1.2 NR SA FR1 UE transmit timing accuracy for SyncRef UE as synchronization reference source	Sidelink transmit timing error limit: ±8*64 Tc Noc = -95 dBm/30 kHz Es_1/Noc = 3 dB	 ±2*64 Tc 0dB 0dB	 ±10*64 Tc Noc = -95 dBm/30 kHz Es_1/Noc = 3 dB
9.1.1.3 NR SA FR1 UE transmit timing accuracy for FR1 NR cell as synchronization reference source	**Uu Test Configuration 1, 2**		
	Sidelink transmit timing error limit: ±12*64 Tc Noc = -98 dBm/15 kHz Es_1/Noc = 3 dB	 ±3*64 Tc 0dB 0dB	 ±15*64 Tc Noc = -98 dBm/15 kHz Es_1/Noc = 3 dB
	Uu Test Configuration 3		
	Sidelink transmit timing error limit: ±10*64 Tc Noc = -98 dBm/15 kHz Es_1/Noc = 3 dB	 ±3*64 Tc 0dB 0dB	 ±13*64 Tc Noc = -98 dBm/15 kHz Es_1/Noc = 3 dB
9.1.2.1 NR SA FR1 initiation/cease of S-SSB transmission for FR1 NR cell as synchronization reference source	**Uu Test Configuration 1, 2**		
	During T1: Noc = -110 dBm/15 kHz Es_1/Noc = 4.50 dB During T2: Noc = -110 dBm/15 kHz Es_1/Noc = -4.50 dB During T3: Noc = -110 dBm/15 kHz Es_1/Noc = 4.50 dB In signaling: syncTxThreshIC = -110.00 dBm/SCS	 -1.55dB 3.10dB -1.55dB 0dB -1.55dB 3.10dB 0dB	During T1: Noc = -111.55 dBm/15 kHz Es_1/Noc = 7.60 dB During T2: Noc = -111.55 dBm/15 kHz Es_1/Noc = -4.50 dB During T3: Noc = -111.55 dBm/15 kHz Es_1/Noc = 7.60 dB syncTxThreshIC = -110.00 dBm/SCS
	Uu Test Configuration 3		
	During T1: Noc = -110 dBm/15 kHz Es_1/Noc = 4.50 dB During T2: Noc = -110 dBm/15 kHz Es_1/Noc = -4.50 dB During T3: Noc = -110 dBm/15 kHz Es_1/Noc = 4.50 dB In signaling: syncTxThreshIC = -110.00 dBm/SCS	 -4.55dB 3.10dB -4.55dB 0dB -4.55dB 3.10dB 0dB	During T1: Noc = -114.55 dBm/15 kHz Es_1/Noc = 7.60 dB During T2: Noc = -114.55 dBm/15 kHz Es_1/Noc = -4.50 dB During T3: Noc = -114.55 dBm/15 kHz Es_1/Noc = 7.60 dB syncTxThreshIC = -110.00 dBm/SCS

9.1.2.2 NR SA FR1 initiation/cease of S-SSB transmission for SyncRef UE as synchronization reference source	During T1: Noc = -98 dBm/30 kHz Es_1/Noc = 5.50 dB During T2: Noc = -98 dBm/30 kHz Es_1/Noc = -3.50 dB During T3: Noc = -98 dBm/30 kHz Es_1/Noc = 5.50 dB In signaling: syncTxThreshOoC = -100.00 dBm/SCS	 -1.35dB 0dB -4.55dB 0dB -1.35dB 0dB 0dB	During T1: Noc = -99.35 dBm/30 kHz Es_1/Noc = 5.50 dB During T2: Noc = -102.55 dBm/30 kHz Es_1/Noc = -3.50 dB During T3: Noc = -99.35 dBm/30 kHz Es_1/Noc = 5.50 dB syncTxThreshOoC = -100.00 dBm/SCS
9.1.3.1 NR SA FR1 synchronization reference selection/reselection for GNSS configured as the highest priority synchronization reference source	During T1: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = -infinity Es_3/Noc = -infinity During T2: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = 0 dB Es_3/Noc = -infinity During T3: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = 0 dB Es_3/Noc = 3 dB	 0dB 0.35dB N/A N/A 0dB 0dB 0.35dB N/A 0dB 0dB 0dB 0.35dB	During T1: Noc = -95 dBm/30 kHz Es_1/Noc = 0.35 dB Es_2/Noc = -infinity Es_3/Noc = -infinity During T2: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = 0.35 dB Es_3/Noc = -infinity During T3: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = 0 dB Es_3/Noc = 3.35 dB
9.1.3.2 NR SA FR1 synchronization reference selection/reselection for FR1 NR Cell configured as the highest priority synchronization reference source	During T1: Noc = -95 dBm/30 kHz Es_1/Noc = -infinity Es_2/Noc = -infinity During T2: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = -infinity During T3: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = 0 dB	 0dB N/A N/A 0dB 0.35dB N/A 0dB 0dB 0.35dB	During T1: Noc = -95 dBm/30 kHz Es_1/Noc = -infinity Es_2/Noc = -infinity During T2: Noc = -95 dBm/30 kHz Es_1/Noc = 0.35 dB Es_2/Noc = -infinity During T3: Noc = -95 dBm/30 kHz Es_1/Noc = 0 dB Es_2/Noc = 0.35 dB
9.1.4.1 NR SA FR1 L1 SL-RSRP measurement for autonomous resource selection/reselection	During T1: Noc = -110 dBm/30 kHz Es_i/Noc = 10 dB, i = 20~29 Es_i/Noc = 0 dB, i = 0~19, 30~49 During T2: Noc = -121 dBm/30 kHz Es_i/Noc = 10 dB, i = 20~29 Es_i/Noc = 20 dB, i = 0~19, 30~49 In signaling: SL-Thres-RSRP = -106 dBm/SCS	 0dB 10.55dB 0.35dB 0dB 0dB 10.55dB 6dB	During T1: Noc = -110 dBm/30 kHz Es_i/Noc = 20.55 dB, i = 20~29 Es_i/Noc = 0.35 dB, i = 0~19, 30~49 During T2: Noc = -121 dBm/30 kHz Es_i/Noc = 10 dB, i = 20~29 Es_i/Noc = 30.55 dB, i = 0~19, 30~49 In signaling: SL-Thres-RSRP = -100 dBm/SCS

9.1.4.2 NR SA FR1 L1 SL-RSRP measurement for resource pre-emption	During T1: Noc = -infinity Es_1/Noc = -infinity During T2: Noc = -100 dBm/30 kHz Es_1/Noc = 5 dB In signaling: SL-Thres-RSRP = -106 dBm/SCS	 N/A N/A 0dB 0dB 0dB	During T1: Noc = -infinity Es_1/Noc = -infinity During T2: Noc = -100 dBm/30 kHz Es_1/Noc = 5 dB In signaling: SL-Thres-RSRP = -106 dBm/SCS
9.1.4.3 NR SA FR1 L1 SL-RSRP measurement for resource re-evaluation	During T1: Noc = -103 dBm/30 kHz Es_i/Noc = 12dB, i = 0~29 Es_i/Noc = 2 dB, i = 30~49 Es_i/Noc = 25.50 dB, i = 50~64, 85~99 Es_i/Noc = 12 dB, i = 65~84 Es_i/Noc = -infinity, i = 100~129 During T2: Noc = -103 dBm/30 kHz Es_i/Noc = -infinity, i = 0~29 Es_i/Noc = 2 dB, i = 30~49 Es_i/Noc = 25.5 dB, i = 50~64, 85~99 Es_i/Noc = 12 dB, i = 65~84 Es_i/Noc = 25.5dB, i = 100~129 In signaling: SL-Thres-RSRP = -96 dBm/SCS	 -7.05dB 2.1dB 0dB 7.1dB 2.1dB N/A -7.05dB N/A 0dB 7.1dB 2.1dB 7.55dB -6dB	During T1: Noc = -110.05 dBm/30 kHz Es_i/Noc = 14.1 dB, i = 0~29 Es_i/Noc = 2 dB, i = 30~49 Es_i/Noc = 32.60 dB, i = 50~64, 85~99 Es_i/Noc = 14.1 dB, i = 65~84 Es_i/Noc = -infinity, i = 100~129 During T2: Noc = -110.05 dBm/30 kHz Es_i/Noc = -infinity, i = 0~29 Es_i/Noc = 2 dB, i = 30~49 Es_i/Noc = 32.60 dB, i = 50~64, 85~99 Es_i/Noc = 14.1 dB, i = 65~84 Es_i/Noc = 33.05dB, i = 100~129 In signaling: SL-Thres-RSRP = -102 dBm/SCS
9.1.5.1 NR SA FR1 congestion control measurement for concurrent operation	During T1: Noc = -103 dBm/30kHz Es_i/Noc = 4.35 dB, i = 0,1,2,3 During T2: Noc = -103 dBm/30kHz Es_i/Noc = 10.32 dB, i = 0,1,2,3 In signaling: threshS-RSSI-CBR = -74 dBm/subchannel	 -1.55dB 0dB -1.55dB 3.30dB 0dB	During T1: Noc = -104.55 dBm/30kHz Es_i/Noc = 4.35 dB, i = 0,1,2,3 During T2: Noc = -104.55 dBm/30kHz Es_i/Noc = 13.62 dB, i = 0,1,2,3 In signaling: threshS-RSSI-CBR = -74 dBm/subchannel
9.1.5.2 NR SA FR1 congestion control measurement for PC5-only operation	Same as 9.1.5.1	Same as 9.1.5.1	Same as 9.1.5.1
9.1.6.1 NR SA FR1 interruption to WAN due to NR sidelink communication	N/A	N/A	N/A

Annex G (normative): Statistical testing

G.1 General

The test requirements are expressed as absolute requirements with a single value stating the requirement or expressed as a success rate. The statistical nature depends on the type of test requirement. Some have large statistical variations, while others are not statistical in nature at all. When testing a parameter with a statistical nature, a confidence level is set. This establishes the probability that a Device Under Test (DUT) passing the test actually meets the test requirement and determines how many times a test have to be repeated and what the pass and fail criteria is. This Annex describes how to set the statistical significance.

G.2 Statistical testing of delay and UE measurement performance in RRM tests

G.2.1 General

The RRM tests are either of deterministic or of statistical nature. The pass fail limits in tests of statistical nature are expressed as a limit (e.g. delay limit) and a success ratio applicable for the limit. The success ratio is 90% uniform (the complement is the error ratio ER = 10%).

G.2.2 Design of the test

The test is defined by the following design principles (see TS 36.521-1 clause G.X, Theory):

1) The early decision concept is applied.

2) A second limit is introduced: bad DUT factor M>1

To decide the test pass:

Supplier risk is applied based on the bad DUT quality

To decide the test fails

Customer risk is applied based on the specified DUT quality

The test is defined by the following parameters:

1) Limit ER = 0.1 (success ratio = 90%)

2) Bad DUT factor M=1.5 (selectivity)

3) Confidence level CL = 95% (for specified DUT and bad DUT-quality)

G.2.3 Numerical definition of the pass fail limits

Editor's Note:

- Further investigate the technical details behind this statistical method to ensure that this is applicable for FR2 radiated test cases.

Table G.2.3-1: pass fail limits

ne	ns_p	ns_f	ne	ns_p	ns_f	ne	ns_p	ns_f	ne	ns_p	ns_f
0	33	NA	43	408	283	86	737	644	129	1056	1021
1	46	NA	44	416	291	87	745	653	130	1064	1030
2	58	NA	45	424	299	88	752	661	131	1071	1039
3	69	NA	46	432	307	89	760	670	132	1078	1048
4	79	NA	47	440	315	90	767	679	133	1086	1057
5	89	NA	48	447	324	91	775	687	134	1093	1066
6	99	NA	49	455	332	92	782	696	135	1100	1074
7	109	NA	50	463	340	93	790	705	136	1108	1083
8	118	NA	51	471	348	94	797	713	137	1115	1092
9	127	NA	52	478	356	95	804	722	138	1122	1101
10	136	39	53	486	365	96	812	731	139	1130	1110
11	145	45	54	494	373	97	819	739	140	1137	1119
12	154	51	55	502	381	98	827	748	141	1144	1128
13	163	58	56	509	389	99	834	757	142	1152	1137
14	172	64	57	517	398	100	842	766	143	1159	1147
15	180	71	58	525	406	101	849	774	144	1166	1155
16	189	78	59	532	414	102	857	783	145	1174	1164
17	197	85	60	540	423	103	864	792	146	1181	1173
18	206	92	61	548	431	104	871	801	147	NA	1182
19	214	99	62	555	440	105	879	809	148		
20	223	106	63	563	448	106	886	818	149		
21	231	113	64	571	456	107	894	827	150		
22	239	120	65	578	465	108	901	836	151		
23	248	128	66	586	473	109	909	844	152		
24	256	135	67	594	482	110	916	853	153		
25	264	142	68	601	490	111	923	862	154		
26	272	150	69	609	499	112	931	871	155		
27	281	157	70	616	507	113	938	880	156		
28	289	165	71	624	516	114	946	888	157		
29	297	173	72	632	524	115	953	897	158		
30	305	180	73	639	533	116	960	906	159		
31	313	188	74	647	541	117	968	915	160		
32	321	196	75	654	550	118	975	924	161		
33	329	204	76	662	558	119	983	933	162		
34	337	211	77	669	567	120	990	941	163		
35	345	219	78	677	575	121	997	950	164		
36	353	227	79	684	584	122	1005	959	165		
37	361	235	80	692	592	123	1012	968	166		
38	369	243	81	700	601	124	1019	977	167		
39	377	251	82	707	610	125	1027	986	168		
40	385	259	83	715	618	126	1034	994	169		
41	393	267	84	722	627	127	1042	1003			
42	400	275	85	730	635	128	1049	1012			

The first column is the number of errors (ne = number of exceeded delays or number of wrong reports)

The second column is the number of samples for the pass limit (ns_p , ns=Number of samples= number of successes + number of exceedings or number of reports)

The third column is the number of samples for the fail limit (ns_f)

G.2.4 Pass fail decision rules

The pass fail decision rules apply for a single test, comprising one component in the test vector. The over all Pass /Fail conditions are defined in clause G.2.6

Having observed 0 errors, pass the test at 33+ samples, otherwise continue

Having observed 1 error, pass the test at 46+ samples, otherwise continue

Having observed 2 errors, pass the test at 58+ samples, otherwise continue

Having observed 10 errors, pass the test at 136+ samples, fail the test at 39 samples, otherwise continue

Having observed 146 errors, pass the test at 1181+ samples, fail the test at 1173- samples, otherwise continue

Having observed 147 errors, fail the test at 1182- samples,

Where x+ means: x or more, x- means x or less

NOTE 1: an ideal DUT passes after 33 samples. The maximum test time is 1181 samples.

G.2.5 Void

G.2.6 Test conditions for delay tests and UE measurement performance

Table G.2.6-1: test conditions

Test	Statistical independence	Number of components in the test vector, as specified in the test requirements and initial conditions of the applicable test	Over all Pass/Fail condition
All tests in clauses 4.4.3, 4.5, 4.6, 5.4.3, 5.5, 5.6, 6.1, 6.2, 6.3.1, 6.3.2.1, 6.3.2.3, 6.4.3, 6.5, 6.6, 7.1, 7.2, 7.3.1, 7.3.2.1, 7.3.2.3, 7.4.3, 7.5, 7.6 are delay tests of statistical nature while 4.3.2.2, 4.4.1, 5.3.2.2, 5.4.1, 6.3.2.2, 6.4.1, 7.3.2.2, 7.4.1 are not applicable, since they are deterministic.	Test procedure in all statistical tests ensures independency	1 per operating band (if tested, see 3A.3)	Full set of environmental conditions (5) per operating band
All tests in clauses 4.7, 5.7, 6.7 and 7.7 are UE level reports of statistical nature	Independency is assumed, although Layer 1 filtering is applied to the reported results	Full set of environmental conditions (5) per operating band	Full set of environmental conditions (5) per operating band

G.3 Statistical testing of NR sidelink CBR measurement tests

G.3.1 General

The CBR measurement tests are of statistical nature. The pass fail limits in tests of statistical nature are expressed as a limit (e.g. delay limit) and a success ratio applicable for the limit. The success ratio is 98% (the complement is the error ratio ER = 2%).

G.3.2 Design of the test

The test is defined by the following design principles (see TS 36.521-1 clause G.X, Theory):

1) The early decision concept is applied.

2) A second limit is introduced: bad DUT factor M>1

To decide the test pass:

- Supplier risk is applied based on the bad DUT quality

To decide the test fails

- Customer risk is applied based on the specified DUT quality

The test is defined by the following parameters:

1) Limit ER = 0.02 (success ratio = 98%)
2) Bad DUT factor M=1.5 (selectivity)
3) Confidence level CL = 95% (for specified DUT and bad DUT-quality)

G.3.3 Numerical definition of the pass fail limits

Table G.3.3-1: pass fail limits for ER = 0.02

FFS

The first column is the number of errors (ne = number of exceeded delays or number of wrong reports)

The second column is the number of samples for the pass limit (ns_p , ns=Number of samples= number of successes + number of wrong reports)

The third column is the number of samples for the fail limit (ns_f)

G.3.4 Pass fail decision rules

FFS

G.X Theory to derive the numbers in Table G.2.3-1 (informative)

TS 36.521-1 Annex G.X applies.

Annex H (normative): Default message contents for RRM

H.1 Void

H.2 System information blocks message content exceptions

H.2.1 System information blocks message contents exceptions for NR intra frequency cell re-selection

SIB2: for NR intra-frequency cell re-selection

Table H.2.1-1: *SIB2*: NR intra frequency cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.2-1			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB2 ::= SEQUENCE {			
cellReselectionInfoCommon SEQUENCE {			
rangeToBestCell	Not present		
}			
intraFreqCellReselectionInfo SEQUENCE {			
q-RxLevMin	-70	-140 is actual value in dBm (-70 * 2 dBm)	SCS15
	-69	-138 is actual value in dBm (-69 * 2 dBm)	SCS30
	-69	-138 is actual value in dBm (-69 * 2 dBm)	SCS120
	-68	-136 is actual value in dBm (-68 * 2 dBm)	SCS240
s-IntraSearchP	30	60 is actual value in dB (30 * 2 dB)	
smtc	SSB-MTC specified in TS 38.508-1 [14] Table 7.3.1-3 with condition SMTC.n		SMTC.n
deriveSSB-IndexFromCell	false		Asynchronous cells
	true		Synchronous cells
}			
}			

Condition	Explanation
SMTC.n	SMTC pattern n according to TS 38.133 [6] A.3.11
Synchronous cells	SSB indices of neigibour cells can be derived from timing of serving cell
Asynchronous cells	SSB indices of neigibour cells cannot be derived from timing of serving cell

SIB3: for NR intra-frequency cell re-selection

Table H.2.1-2: *SIB3*: NR intra frequency cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.2-2			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB3 ::= SEQUENCE {			
intraFreqNeighCellList SEQUENCE (SIZE (1..maxCellIntra)) OF SEQUENCE {			
IntraFreqNeighCellInfo ::= SEQUENCE{			
physCellId	Set according to the neighbour cell PCI		
q-OffsetCell	dB0	0 is actual value in dB (0 * 2 dB)	
}			
}			
}			

SIB1: for NR intra frequency cell re-selection

Table H.2.1-3: *SIB1*: NR intra frequency cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.1-28			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB1 ::= SEQUENCE {			
cellSelectionInfo SEQUENCE {			
q-RxLevMin	-70	-140 is actual value in dBm (-70 * 2 dBm)	SCS15
	-69	-138 is actual value in dBm (-69 * 2 +1 dBm)	SCS30
	-69	-138 is actual value in dBm (-69 * 2 dBm)	SCS120
	-68	-136 is actual value in dBm (-68 * 2 dBm)	SCS240
}			
servingCellConfigCommon SEQUENCE {			
highSpeedConfig-r16 SEQUENCE {			
highSpeedMeasFlag-r16	true		HighSpeedMeas
}			
}			
}			

Condition	Explanation
HighSpeedMeas	highSpeedMeasFlag-r16 is configured. UE shall apply the enhanced measurement requirements to support high speed up to 500 km/h as specified in TS 38.133 [14]

H.2.2 System information blocks message contents exceptions for NR inter frequency cell re-selection

SIB2: for NR inter-frequency cell re-selection

Table H.2.2-1: *SIB2*: NR inter frequency cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.2-1			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB2 ::= SEQUENCE {			
cellReselectionInfoCommon SEQUENCE {			
rangeToBestCell	Not present		
}			
cellReselectionServingFreqInfo SEQUENCE {			
s-NonIntraSearchP	25	50 is actual value in dB (25 * 2 dB)	
threshServingLowP	22	44 is actual value in dB (22 * 2 dB)	
cellReselectionPriority	4		NR Cell 1
	5		NR Cell 2
}			
}			

SIB4: for NR inter-frequency cell re-selection

Table H.2.2-2: *SIB4*: NR inter frequency cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.2-3			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB4 ::= SEQUENCE {			
interFreqCarrierFreqList SEQUENCE (SIZE (1..maxFreq)) OF SEQUENCE {	1 Entry		
dl-CarrierFreq[1]	Downlink NR SSB ARFCN of NR Cell 2		NR Cell 1
	Downlink NR SSB ARFCN of NR Cell 1		NR Cell 2
smtc	SSB-MTC specified in TS 38.508-1 [14] Table 7.3.1-3 with condition SMTC.n		SMTC.n
deriveSSB-IndexFromCell[1]	false		Asynchronous cells
	true		Synchronous cells
q-RxLevMin[1]	-70	-140 is actual value in dBm (-70 * 2 dBm)	dBm/15kHz
	-69	-137 is actual value in dBm (-69 * 2 +1 dBm)	dBm/30kHz
threshX-HighP[1]	24	48 is actual value in dB (24 * 2 dB)	
threshX-LowP[1]	25	50 is actual value in dB (25 * 2 dB)	
cellReselectionPriority[1]	5		NR Cell 1
	4		NR Cell 2
q-OffsetFreq[1]	dB0	0 is actual value in dB (0 * 2 dB).	
}			
}			

Condition	Explanation

SSB.n FRm	SSB pattern n in FRm according to TS 38.133 [6] A.3.10
Synchronous cells	SSB indices of neighbour cells can be derived from timing of serving cell
Asynchronous cells	SSB indices of neighbour cells cannot be derived from timing of serving cell

SIB1: for NR inter frequency cell re-selection

Table H.2.2-3: *SIB1*: NR inter frequency cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.1-28			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB1 ::= SEQUENCE {			
cellSelectionInfo SEQUENCE {			
q-RxLevMin	-70	-140 is actual value in dBm (-70 * 2 dBm)	dBm/15kHz
	-69	-137 is actual value in dBm (-69 * 2 +1 dBm)	dBm/30kHz
}			
}			

H.2.3 System information blocks message contents exceptions for NR inter-RAT cell re-selection

SIB1: for inter-RAT NR – E-UTRA cell re-selection

Table H.2.3-1: *SIB1*: Inter-RAT NR – E-UTRA cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.1-28			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB1 ::= SEQUENCE {			
cellSelectionInfo SEQUENCE {			
q-RxLevMin	-70	-140 is actual value in dBm (-70 * 2 dBm)	SCS15
	-69	-137 is actual value in dBm (-69 * 2 +1 dBm)	SCS30
}			
}			

SIB2: for inter-RAT NR – E-UTRA cell re-selection

Table H.2.3-2: *SIB2*: Inter-RAT NR – E-UTRA cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.2-1			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB2 ::= SEQUENCE {			
cellReselectionServingFreqInfo SEQUENCE {			
s-NonIntraSearchP	25	50 is actual value in dB (25 * 2 dB)	
threshServingLowP	22	44 is actual value in dB (22 * 2 dB)	
cellReselectionPriority	4		higher priority
	5		lower priority
}			
intraFreqCellReselectionInfo SEQUENCE {			
smtc	SSB-MTC specified in TS 38.508-1 [14] Table 7.3.1-3 with condition SMTC.n		SMTC.n
}			
}			

Condition	Explanation
SMTC.n	SMTC pattern n according to TS 38.133 [6] A.3.11
higher priority	NR cell re-selection to higher priority E-UTRA
lower priority	NR cell re-selection to lower priority E-UTRA

SIB5: for inter-RAT NR – E-UTRA cell re-selection

Table H.2.3-3: *SIB5*: Inter-RAT NR – E-UTRA cell re-selection

Derivation Path: TS 38.508-1 [14], Table 4.6.2-4			
Information Element	**Value/remark**	**Comment**	**Condition**
SIB5 ::= SEQUENCE {			
carrierFreqListEUTRA SEQUENCE (SIZE (1..maxEUTRA-Carrier)) OF SEQUENCE {	1 Entry		
carrierFreq[1]	Downlink EUTRA ARFCN of E-UTRA Cell 1		
eutra-FreqNeighCellList[1] SEQUENCE (SIZE (1..maxCellEUTRA)) OF SEQUENCE {			
physCellId	E-UTRA physical cell identity		
dummy	dB0		
}			
presenceAntennaPort1[1]	FALSE		
cellReselectionPriority[1]	5		higher priority
	4		lower priority
threshX-High	24	48 is actual value in dB (24 * 2 dB)	
threshX-Low	25	50 is actual value in dB (25 * 2 dB)	
q-RxLevMin	-70	-140 is actual value in dBm (-70 * 2 dBm)	
}			
}			

Condition	Explanation
higher priority	NR cell re-selection to higher priority E-UTRA
lower priority	NR cell re-selection to lower priority E-UTRA

H.3 RRC message content exceptions

H.3.1 RRC messages and information elements contents exceptions for NR measurement configuration

RRCReconfiguration

To setup NR Measurement Configuration.

Table H.3.1-1: *RRCReconfiguration*: NR measurement Configuration

Derivation Path: TS 38.508-1 [14], Table 4.6.1-13 with condition NR_MEAS			
Information Element	**Value/remark**	**Comment**	**Condition**
RRCReconfiguration ::= SEQUENCE {			
criticalExtensions CHOICE {			
rrcReconfiguration ::= SEQUENCE {			
measConfig	MeasConfig-DEFAULT	Measurements configuration	
}			
}			
}			

MeasConfig-DEFAULT

Configuration for NR measurement.

Table H.3.1-2: MeasConfig-DEFAULT: Configuration of NR measurement

Derivation path: 38.508-1 [14] table 4.6.3-69			
Information Element	**Value/Remark**	**Comment**	**Condition**
measConfig ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE (1..maxNrofMeasId)) OF SEQUENCE {	n entries	n=1 without condition n=2 for INTER-FREQ OR INTER-RAT OR Deactivated SCell	
measObjectId[1]	1		
measObject[1] CHOICE {			
measObjectNR	MeasObjectNR-DEFAULT with Condition INTRA-FREQ MO		
}			
measObjectId[2]	2		INTER-FREQ OR INTER-RAT OR Deactivated SCell
measObject[2] CHOICE {			
measObjectNR	MeasObjectNR-DEFAULT with Condition INTER-FREQ MO		INTER-FREQ
measObjectNR	MeasObjectNR-DEFAULT with Condition Deactivated SCell		Deactivated SCell
measObjectEUTRA	MeasObjectEUTRA-DEFAULT		INTER-RAT
}			
}			
reportConfigToAddModList SEQUENCE(SIZE (1..maxReportConfigId)) OF SEQUENCE {	1 entry		
reportConfigId[1]	ReportConfigId		
reportConfig[1] CHOICE {			
reportConfigNR	ReportConfigNR-DEFAULT		
	ReportConfigNR-DEFAULT		INTER-FREQ OR Deactivated SCell
reportConfigInterRAT	ReportConfigInterRAT-DEFAULT		INTER-RAT
}			
}			
measIdToAddModList SEQUENCE (SIZE (1..maxNrofMeasId)) OF SEQUENCE {	1 entry		
measId[1]	MeasId		
measObjectId[1]	1		
	2		INTER-FREQ OR INTER-RAT OR Deactivated SCell
reportConfigId[1]	ReportConfigId		
}			
quantityConfig	QuantityConfig-DEFAULT		
	QuantityConfig	TS 38.508-1 Table 4.6.3-127	L3 FILTERING NEEDED

measGapConfig	MeasGapConfig-DEFAULT		GAP NEEDED
}			

Condition	Explanation
GAP NEEDED	Measurement gap on the NR Cell is needed for measurement
INTER-FREQ	Configuration for inter-frequency NR measurement tests
INTER-RAT	Configuration for inter-RAT EUTRA measurement tests
Deactivated SCell	Configuration for measurement on deactivated SCell tests
L3 FILTERING NEEDED	L3 filtering is needed for measurement

MeasObjectNR-DEFAULT

NR measurement object configuration.

Table H.3.1-3: MeasObjectNR-DEFAULT: NR intra-frequency measurement object configuration

Derivation Path: TS 38.508-1 [14], Table 4.6.3-76			
Information Element	**Value/remark**	**Comment**	**Condition**
MeasObjectNR::= SEQUENCE {			
ssbFrequency	ARFCN-ValueNR of the SSB associated to serving cell	frequency of the serving cell	INTRA-FREQ MO
	ARFCN-ValueNR of the SSB associated to SCell		Deactivated SCell
	ARFCN-ValueNR of the SSB associated to inter-frequency neighbour cell		INTER-FREQ MO
referenceSignalConfig SEQUENCE {			
ssb-ConfigMobility SEQUENCE {			
ssb-ToMeasure	Not present		
deriveSSB-IndexFromCell	false		
	true		Synchronous cells OR RLM
}			
}			
absThreshSS-BlocksConsolidation SEQUENCE {			
thresholdRSRP	0	SS-RSRP < -156dB	NOT SS-SINR
thresholdSINR	0	SS-SINR<-23	SS-SINR
}			
measCycleSCell-v1530	sf640		Deactivated SCell
}			

Condition	Explanation
INTRA-FREQ MO	Configuration for NR MO associated to intra-frequency carrier
INTER-FREQ MO	Configuration for NR MO associated to inter-frequency carrier
Synchronous cells	SSB indices of neighbourcells can be derived from timing of serving cell
RLM	Configuration for RLM tests
Deactivated SCell	Configuration for SCell activation and deactivation tests
SS-SINR	Configuration for SS-SINR tests

MeasObjectEUTRA-DEFAULT

EUTRA measurement object configuration for NR FR1 to E-UTRAN handover.

Table H.3.1-3A: MeasObjectEUTRA-DEFAULT: InterRAT EUTRA measurement object configuration for FR1 to E-UTRAN handover

Derivation Path: TS 38.508-1 [14], Table 4.6.3-74			
Information Element	**Value/remark**	**Comment**	**Condition**
MeasObjectEUTRA ::= SEQUENCE {			
cellsToAddModListEUTRAN SEQUENCE (SIZE (1..maxCellMeasEUTRA)) OF SEQUENCE{			
cellIndexEUTRA	1		
physCellId	Physical Cell ID of the E-UTRA cell	Annex E	
cellIndividualOffset	dB0		
}			
eutra-PresenceAntennaPort1	false		
}			

ReportConfigNR-DEFAULT

NR Report Configuration

Table H.3.1-4: ReportConfigNR-DEFAULT(a3-offset): NR report configuration for event A3

Derivation Path: 38.508-1 [14] Table 4.6.3-142 with condition EVENT_A3			
Information Element	**Value/remark**	**Comment**	**Condition**
ReportConfigNR::= SEQUENCE {			
reportType CHOICE {			
eventTriggered SEQUENCE {			
eventId CHOICE {			
eventA3 SEQUENCE {			
a3-Offset CHOICE {			
rsrp	A3-offset*2	The actual value is field value * 0.5 dB	
}			
hysteresis	0	0 dB	
timeToTrigger	ms0		
}			
}			
reportQuantity-RsIndexes SEQUENCE {			SSB Index
rsrp	true		
rsrq	false		
sinr	false		
}			
maxReportCells	2		
maxNrofRS-IndexesToReport	2		SSB Index
}			
}			
}			

Condition	Explanation
SSB Index	To include SSB Index

Table H.3.1-4AA: ReportConfigNR-DEFAULT(a4-threshold): NR report configuration for event A4

Derivation Path: 38.508-1 [14] Table 4.6.3-142 with condition EVENT_A4			
Information Element	**Value/remark**	**Comment**	**Condition**
ReportConfigNR::= SEQUENCE {			
reportType CHOICE {			
eventTriggered SEQUENCE {			
eventId CHOICE {			
eventA4 SEQUENCE {			
a4-Threshold CHOICE {			
rsrp	a4-threshold+156	For thresholds, the actual value is (IE value – 156) dBm	
}			
hysteresis	0		
timeToTrigger	ms0		
}			
}			
reportQuantity-RsIndexes SEQUENCE {			SSB Index
rsrp	true		
rsrq	false		
sinr	false		
}			
maxReportCells	2		
maxNrofRS-IndexesToReport	2		SSB Index
}			
}			
}			

Condition	Explanation
SSB Index	To include SSB Index

ReportConfigInterRAT-DEFAULT

InterRAT NR Report Configuration for NR FR1 to E-UTRAN handover.

Table H.3.1-4A: ReportConfigInterRAT- DEFAULT (b2-Thres1, b2-Thres2): InterRAT NR report configuration for FR1 to E-UTRAN handover with b2-Threshold1 = b2-Thres1 and b2-Threshold2EUTRA = b2-Thres2 dBm

Derivation Path: 38.508-1 [4] Table 4.6.3-141			
Information Element	**Value/remark**	**Comment**	**Condition**
ReportConfigInterRAT ::= SEQUENCE {			
reportType CHOICE {			
eventTriggered SEQUENCE {			
eventId CHOICE {			
eventB2 SEQUENCE {			
b2-Threshold1 CHOICE {			
rsrp	b2-Thres1	b2-Thres1 – 156 dBm	
}			
b2-Threshold2EUTRA CHOICE {			
rsrp	b2-Thres2	b2-Thres2 – 140 dBm	
}			
hysteresis	0	0 dB	
timeToTrigger	ms0		
}			
}			
reportQuantityCell SEQUENCE {			
rsrp	true		
rsrq	false		
sinr	false		
}			
}			
}			
}			

QuantityConfig-DEFAULT

NR quantity configuration when L3 filtering is not used.

Table H.3.1-5: QuantityConfig-DEFAULT: NR quantity configuration when L3 filtering is not used

Derivation Path: TS 38.508-1 [14], Table 4.6.3-127			
Information Element	**Value/remark**	**Comment**	**Condition**
QuantityConfig::= SEQUENCE {			
quantityConfigNR-List SEQUENCE (SIZE (1..maxNrofQuantityConfig)) OF SEQUENCE {	1 entry		
quantityConfigCell[1] SEQUENCE {			
ssb-FilterConfig SEQUENCE {			
filterCoefficientRSRP	fc0	No L3 filtering	
filterCoefficientRSRQ	fc0	No L3 filtering	
filterCoefficientRS-SINR	fc0	No L3 filtering	
}			
csi-RS-FilterConfig SEQUENCE {			
filterCoefficientRSRP	fc0	No L3 filtering	
filterCoefficientRSRQ	fc0	No L3 filtering	
filterCoefficientRS-SINR	fc0	No L3 filtering	
}			
}			
}			
quantityConfigEUTRA	Not present		
quantityConfigEUTRA SEQUENCE {			INTER-RAT
filterCoefficientRSRP	fc0		
filterCoefficientRSRQ	fc0		
filterCoefficientRS-SINR	fc0		

Condition	Explanation
INTER-RAT	Configuration for inter-RAT EUTRA measurement tests

MeasGapConfig-DEFAULT

Measurement gap configuration.

Table H.3.1-6: MeasGapConfig: measurement gap configuration

Derivation Path: TS 38.508-1 [14], Table 4.6.3-70			
Information Element	**Value/remark**	**Comment**	**Condition**
MeasGapConfig ::= SEQUENCE {			
gapFR2 CHOICE {			gapFR2
setup SEQUENCE {			
gapOffset	39		Pattern #13
mgl	ms5dot5		Pattern #13
mgrp	ms40		Pattern #13
mgta	ms0		
}			
}			
gapFR1 CHOICE {			gapFR1
setup SEQUENCE {			
gapOffset	39		Pattern #2
	19		Pattern #4
mgl	ms3		Pattern #2
	ms6		Pattern #4
mgrp	ms40		Pattern #2
	ms20		Pattern #4
mgta	ms0		
}			
}			
gapUE CHOICE {			gapUE
setup SEQUENCE {			
gapOffset	39		Pattern #0 OR Pattern #2 OR Pattern #13
	0		RLM OR BFD
mgl	ms6		Pattern #0 OR RLM OR BFD
	ms3		Pattern #2
	ms5dot5		Pattern #13
mgrp	ms40		Pattern #0 OR Pattern #2 OR Pattern #13 OR RLM OR BFD
mgta	ms0		
}			
}			
}			

Condition	Explanation
Pattern #0	Measurement gap pattern #0 defined in TS 38.133 [6] Table 9.1.2-1 is used for measurement tests
Pattern #2	Measurement gap pattern #2 defined in TS 38.133 [6] Table 9.1.2-1 is used for measurement tests
Pattern #4	Measurement gap pattern #4 defined in TS 38.133 [6] Table 9.1.2-1 is used for measurement tests
Pattern #13	Measurement gap pattern #13 defined in TS 38.133 [6] Table 9.1.2-1 is used for measurement tests
RLM	Measurement gap pattern for RLM tests
BFD	Measurement gap pattern for Beam Failure Dectection tests
gapFR2	Indicates measurement gap configuration that applies to FR2 only. gapFR2 cannot be configured together with gapUE. In (NG)EN-DC or NE-DC, gapFR2 can only be set up by NR RRC
gapFR1	Indicates measurement gap configuration that applies to FR1 only. gapFR1 cannot be configured together with gapUE. In (NG)EN-DC, gapFR1 cannot be set up by NR RRC
gapUE	Indicates measurement gap configuration that applies to all frequencies (FR1 and FR2). If gapUE is configured, then neither gapFR1 nor gapFR2 can be configured. In (NG)EN-DC, gapUE cannot be set up by NR RRC.

MeasResults-DEFAULT

measurement result for NR measurements.

Table H.3.1-7: MeasResults: measurement result for NR measurements

Derivation Path: TS 38.508-1 [14], Table 4.6.3-79 with condition A3			
Information Element	**Value/remark**	**Comment**	**Condition**
measResults SEQUENCE {			
measId	MeasId		
measResultServingMOList SEQUENCE (SIZE (1..maxNrofServingCells)) OF SEQUENCE {	2 entries		
servCellId[1]	ServCellIndex of NR SpCell		
measResultServingCell[1] SEQUENCE {			
physCellId	PhysCellId of NR SpCell		
measResult SEQUENCE {			
cellResults SEQUENCE {			
resultsSSB-Cell SEQUENCE {			
rsrp	(0..127)		
rsrq	(0..127)		
}			
}			
}			
}			
}			
servCellId[2]	ServCellIndex of NR SCell		Deactivated SCell
measResultServingCell[2] SEQUENCE {			Deactivated SCell
physCellId	PhysCellId of NR SCell		
measResult SEQUENCE {			
cellResults SEQUENCE {			
resultsSSB-Cell SEQUENCE {			
rsrp	(0..127)		
rsrq	(0..127)		
}			
}			
}			
}			
measResultNeighCells CHOICE {			
measResultListNR SEQUENCE (SIZE(1..maxCellReport)) OF SEQUENCE {	1 entry		INTRA-FREQ OR INTER-FREQ
physCellId[1]	PhysCellId of NR neighbour Cell		
measResult[1] SEQUENCE {			
cellResults SEQUENCE {			
resultsSSB-Cell SEQUENCE {			
rsrp	(0..127)		
}			
}			
rsIndexResults SEQUENCE {	*n* entires of ResultsPerSSB-Index	*ResultsPerSSB-IndexList*	SSB Index
resultsPerSSB-Index SEQUENCE {	entry [1]		
ssb-Index	SSB-Index	an SS-Block within an SS-Burst	
}			
}			
}			
}			
measResultListEUTRA SEQUENCE (SIZE (1..maxCellReport)) OF SEQUENCE {	1 entry		INTER-RAT
eutra-PhysCellId [1]	PhysCellId of E-UTRA neighbour Cell		
measResult[1] SEQUENCE {			
rsrp	(0..97)		
rsrq	(0..34)		
}			

cgi-Info	Not present		
}			
}			
}			

Condition	Explanation
SSB Index	To include SSB Index
INTRA-FREQ	Configuration for intra-frequency NR measurement tests
INTER-FREQ	Configuration for inter-frequency NR measurement tests
INTER-RAT	Configuration for inter-RAT EUTRA measurement tests
Deactivated SCell	Configuration for measurement on Deactivated SCell tests

RadioLinkMonitoringConfig -DEFAULT

Default configuration for RLM resources.

Table H.3.1-8: RadioLinkMonitoringConfig-DEFAULT: Default configuration for RLM and BFD resources

Derivation Path: TS 38.508-1 [14], Table 4.6.3-133			
Information Element	**Value/remark**	**Comment**	**Condition**
RadioLinkMonitoringConfig ::= SEQUENCE {			
failureDetectionResourcesToAddModList SEQUENCE (SIZE(1..maxNrofFailureDetectionResources)) OF {	n entries	n = 1 for FR1, n = 2 for FR2	SSB RLM OR CSI-RS RLM
RadioLinkMonitoringRS[1] SEQUENCE {			
radioLinkMonitoringRS-Id	0		
purpose	rlf		
detectionResource CHOICE {			
ssb-Index	0	Index of SSB #0	SSB RLM
csi-RS-Index	NZP-CSI-RS-ResourceId for TRS(4)	TS 38.508-1[14], table 7.3.1-7C	CSI-RS RLM
}			
}			
RadioLinkMonitoringRS[2] SEQUENCE {			FR2
radioLinkMonitoringRS-Id	1		
purpose	rlf		
detectionResource CHOICE {			
ssb-Index	1	Index of SSB #1	SSB RLM
csi-RS-Index	NZP-CSI-RS-ResourceId for TRS(4) with condition SECOND_SET	TS 38.508-1[14], table 7.3.1-7C	CSI-RS RLM
}			
}			
}			
failureDetectionResourcesToAddModList SEQUENCE (SIZE(1..maxNrofFailureDetectionResources)) OF {	2 entries		SSB BFD OR CSI-RS BFD
RadioLinkMonitoringRS[1] SEQUENCE {			
radioLinkMonitoringRS-Id	0		
purpose	both		
detectionResource CHOICE {			
ssb-Index	0	Index of SSB #0	SSB BFD
csi-RS-Index	NZP-CSI-RS-ResourceId for BM(0)	TS 38.508-1[14], Table 7.3.1-7E	CSI-RS BFD
}			
}			
RadioLinkMonitoringRS[2] SEQUENCE {			
radioLinkMonitoringRS-Id	1		
purpose	rlf		
detectionResource CHOICE {			
ssb-Index	1	Index of SSB #1	SSB BFD
csi-RS-Index	NZP-CSI-RS-ResourceId for BM(1)	TS 38.508-1[14], Table 7.3.1-7E	CSI-RS BFD
}			
}			
}			
beamFailureInstanceMaxCount	n1		SSB BFD OR CSI-RS BFD
beamFailureDetectionTimer	pbfd4		SSB BFD OR CSI-RS BFD
}			

Condition	Explanation
SSB RLM	Used when SSB based RLM is configured in test case
CSI-RS RLM	Used when CSI-RS based RLM is configured in test case
SSB BFD	Used when SSB based BFD is configured in test case
CSI-RS BFD	Used when CSI-RS based BFD is configured in test case

RLF-TimersAndConstants-DEFAULT

Default parameters for RLM related timers and counters.

Table H.3.1-9: RLF-TimersAndConstants-DEFAULT

Derivation Path: TS 38.508-1 [14], Table 4.6.3-150			
Information Element	**Value/remark**	**Comment**	**Condition**
RLF-TimersAndConstants ::= SEQUENCE {			
t310	ms0		
}			

BeamFailureRecoveryConfig-DEFAULT

Default configuration for CBD and contention-free RACH in link recovery.

Table H.3.1-10: BeamFailureRecoveryConfig-DEFAULT

Derivation Path: TS 38.508-1 [14], Table 4.6.3-6			
Information Element	**Value/remark**	**Comment**	**Condition**
BeamFailureRecoveryConfig ::= SEQUENCE {			
rootSequenceIndex-BFR	0		
rach-ConfigBFR	RACH-ConfigGeneric specified in 38.508-1 [14] Table 7.3.1-14		SSB
	RACH-ConfigGeneric specified in 38.508-1 [14] Table 7.3.1-14 with condition PRACH.4 FR1		CSI-RS and FR1
	RACH-ConfigGeneric specified in 38.508-1 [14] Table 7.3.1-14 with condition PRACH.4 FR2		CSI-RS and FR1
rsrp-ThresholdSSB	58	Actual value is 58 - 156 = -98 dBm	SCS15
	61	Actual value is 61 - 156 = -95 dBm	SCS30
	47	Actual value is 47 - 156 = -109 dBm	SCS120
	50	Actual value is 50 - 156 = -106 dBm	SCS240
candidateBeamRSList SEQUENCE (SIZE(1..maxNrofCandidateBeams)) OF CHOICE {	1 entry		
ssb[1] SEQUENCE {			SSB
ssb	1		
ra-PreambleIndex	50		
}			
csi-RS[1] SEQUENCE {			CSI-RS
csi-RS	NZP-CSI-RS-ResourceId of the CSI-RS resource used for CBD		
ra-OccasionList	1		
ra-PreambleIndex	50		
}			
}			
ssb-perRACH-Occasion	oneFourth		
ra-ssb-OccasionMaskIndex	Not present		
	1		PRACH.2 FR1 OR PRACH.2 FR2
recoverySearchSpaceId	SearchSpaceId of the search space used for BFD RAR in DL active BWP		
ra-Prioritization	Not present		
beamFailureRecoveryTimer	Not present		
}			

Condition	Explanation
SSB	Configuration for SSB based CBD
CSI-RS	Configuration for CSI-RS based CBD

BWP-UplinkDedicated

Default BWP configuration for Beam Failure Recovery

Table H.3.1-10A: *BWP-UplinkDedicated*

Derivation Path: TS 38.508-1 [14], Table 4.6.3-15			
Information Element	**Value/remark**	**Comment**	**Condition**
BWP-UplinkDedicated ::= SEQUENCE {			
beamFailureRecoveryConfig	BeamFailureRecoveryConfig-DEFAULT		
}			

Table H.3.1-11: Void

BeamFailureRecoverySCellConfig-DEFAULT

Default configuration for CBD and contention-free RACH in link recovery.

Table H.3.1-12: BeamFailureRecoverySCellConfig-DEFAULT

Derivation Path: TS 38.508-1 [14], Table 4.6.3-6AA			
Information Element	**Value/remark**	**Comment**	**Condition**
BeamFailureRecoverySCellConfig ::= SEQUENCE {			
rsrp-ThresholdBFR-r16	58	-98dBm	SCS15
	61	-95dBm	SCS30
	47	-109dBm	SCS120
candidateBeamRSSCellList-r16 SEQUENCE (SIZE(1..maxNrofCandidateBeams-r16)) OF SEQUENCE {			
CandidateBeamRS-r16[1] SEQUENCE {			
candidateBeamConfig-r16 CHOICE {			
ssb-r16	1		SSB
csi-RS-r16	NZP-CSI-RS-ResourceId of the CSI-RS resource used for CBD		CSI-RS
}			
servingCellId	ServCellIndex of the SCell		
}			
}			
}			

BWP-DownlinkDedicated

Table H.3.1-13: *BWP-DownlinkDedicated*

Derivation Path: TS 38.331 [6], clause 6.3.2			
Information Element	**Value/remark**	**Comment**	**Condition**
BWP-DownlinkDedicated ::= SEQUENCE {			
beamFailureRecoverySCellConfig-r16 CHOICE {			
setup	BeamFailureRecoverySCellConfig-DEFAULT		SCell
}			
}			

H.3.2 RRC messages and information elements contents exceptions for and handover

Table H.3.2-1: *Void*

Table H.3.2-2: RRCReconfiguration-HO

Derivation Path: TS 38.508-1, table 4.6.1-13			
Information Element	**Value/remark**	**Comment**	**Condition**
RRCReconfiguration::= SEQUENCE {			
criticalExtensions CHOICE {			
rrcReconfiguration SEQUENCE {			
radioBearerConfig	RadioBearerConfig with conditions SRB1 and SRB2 and DRBn and Re-establish_PDCP		RBConfig_KeyChange
	RadioBearerConfig with conditions DRBn and Recover_PDCP		RBConfig_NoKeyChange
secondaryCellGroup	Not present		
nonCriticalExtension SEQUENCE {			
masterCellGroup	CellGroupConfig	Table H.3.2-3	
}			
}			
}			
}			

Condition	Explanation
RBConfig_KeyChange	RadioBearerConfig to perform Intra-NR handover with security key change
RBConfig _NoKeyChange	RadioBearerConfig to perform Intra-NR handover without security key change

Table H.3.2-3: CellGroupConfig

Derivation Path: TS 38.508-1 [14] Table 4.6.3-19 with condition PCell_change			
Information Element	**Value/remark**	**Comment**	**Condition**
CellGroupConfig ::= SEQUENCE {			
spCellConfig SEQUENCE {			
reconfigurationWithSync SEQUENCE {			
smtc	SMTC specified in 38.508-1 [14] Table 7.3.1-3 with condition SMTC.n	SMTC.n is the SMTC reference configuration used in test case	
}			
}			

H.3.3 RRC messages and information elements contents exceptions for NR inter-RAT handover

MobilityFromNRCommand

For Inter-RAT NR handover.

Table H.3.3-1: *MobilityFromNRCommand*: InterRAT NR handover

Derivation Path: TS 38.508-1 [14], Table 4.6.1-8			
Information Element	**Value/remark**	**Comment**	**Condition**
MobilityFromNRCommand::= SEQUENCE {			
rrc-TransactionIdentifier	RRC-TransactionIdentifier		
criticalExtensions CHOICE {			
mobilityFromNRCommand SEQUENCE {			
targetRAT-Type	eutra		
targetRAT-MessageContainer	OCTET STRING including the RRCConnectionReconfiguration message according TS 36.508 [2], table 4.6.1-8 with condition HO-TO-EUTRA		
nas-SecurityParamFromNR	The 4 LSB of the downlink NAS COUNT		
lateNonCriticalExtension	Not present		
nonCriticalExtension SEQUENCE {}	Not present		
}			
}			
}			

MobilityFromEUTRACommand

Table H.3.3-2: *MobilityFromEUTRACommand*: inter-RAT handover to NR Cell

Derivation Path:TS 36.508 [25] Table 4.6.1-6			
Information Element	**Value/remark**	**Comment**	**Condition**
MobilityFromEUTRACommand ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
mobilityFromEUTRACommand-r9 SEQUENCE {			
purpose CHOICE {			
handover SEQUENCE {			
targetRAT-Type	nr		
targetRAT-MessageContainer	OCTET STRING containing RRCReconfiguration according to TS 38.508-1 [14] with Condition NR		
nas-SecurityParamFromEUTRA	Not present		
systemInformation	Not present		
}			
}			
}			
}			
}			
}			

H.3.4 E-UTRA RRC messages and information elements contents exceptions for NR measurement configuration

RRCConnectionReconfiguration

Includes the nr-SecondaryCellGroupConfig-r15 to convey NR *RRCReconfiguration* message as specified in TS 38.331 [13].

Table H.3.4-1: RRCConnectionReconfiguration: NR RRC Reconfiguration in EN-DC

Derivation Path: 36.508 [25], Table 4.6.1-8 with condition MCG_and_SCG			
Information Element	**Value/remark**	**Comment**	**Condition**
RRCConnectionReconfiguration ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE{			
rrcConnectionReconfiguration-r8 ::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
setup SEQUENCE {			
nr-SecondaryCellGroupConfig-r15	*RRCReconfiguration*		
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			

Table H.3.4-1a: RRCConnectionReconfiguration for measurement configuration

For measurement configuration provided by NR PSCell under EN-DC.

Derivation Path: 36.508 [25], Table 4.6.1-8 with condition MEAS			
Information Element	**Value/remark**	**Comment**	**Condition**
RRCConnectionReconfiguration ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE{			
rrcConnectionReconfiguration-r8 ::= SEQUENCE {			
measConfig	Not present		
	MeasConfig-DEFAULT	Table H.3.4-4	GAP_NEEDED
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
nonCriticalExtensions::= SEQUENCE {			
setup SEQUENCE {			
nr-SecondaryCellGroupConfig-r15	*RRCReconfiguration*	Table H.3.1-1	
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			
}			

Condition	Explanation
GAP_NEEDED	Measurement gap is needed in Test

ULInformationTransferMRDC

uplink transfer of MR DC information for transferring the NR RRC Measurement Report message in EN-DC.

Table H.3.4-2: ULInformationTransferMRDC: uplink transfer of MR DC information

Derivation Path: 36.508 [25], Table 4.6.1-27			
Information Element	**Value/remark**	**Comment**	**Condition**
ULInformationTransferMRDC ::= SEQUENCE {			
ul-DCCH-MessageNR-r15	OCTET STRING including the MeasurementReport		
}			

RRCConnectionReconfigurationComplete

Includes the scg-ConfigResponseNR to convey NR *RRCReconfigurationComplete* message as specified in TS 38.331 [13].

Table H.3.4-3: *RRCConnectionReconfigurationComplete*: NR RRC Reconfiguration Complete in EN-DC

Derivation Path: 36.508 [25], Table 4.6.1-9: with condition MCG_and_SCG			
Information Element	**Value/remark**	**Comment**	**Condition**
RRCConnectionReconfigurationComplete ::= SEQUENCE {			
rrc-TransactionIdentifier	RRC-TransactionIdentifier-UL		
criticalExtensions CHOICE {			
rrcConnectionReconfigurationComplete-r8 SEQUENCE {			
nonCriticalExtension SEQUENCE {			
scg-ConfigResponseNR-r15	OCTET STRING including the RRCReconfigurationComplete message according TS 38.508-1, table 4.6.1-14.		
}			
}			
}			
}			

MeasConfig-DEFAULT

Configures measurement gap that applies to FR1 only in EN-DC as specified in TS 38.331 [13].

Table H.3.4-4: MeasConfig-DEFAULT

Derivation Path: 36.508 [25],Table 4.6.6-1			
Information Element	**Value/remark**	**Comment**	**Condition**
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE (1..maxObjectId)) OF SEQUENCE {	1 entry		
measObjectId[1]	1		
measObject[1] CHOICE {			
measObjectEUTRA	MeasObjectEUTRA-GENERIC(Freq)	Freq is the frequency of E-UTRA PCell	
}			
}			
measObjectToAddModList SEQUENCE (SIZE (1..maxObjectId)) OF SEQUENCE {	2 entries		INTER-RAT NR
measObjectId[1]	1		
measObject[1] CHOICE {			
measObjectEUTRA	MeasObjectEUTRA-GENERIC(Freq)	Freq is the frequency of E-UTRA PCell	
}			
measObjectId[2]	2		
measObject[2] CHOICE {			
measObjectNR-r15	MeasObjectNR	Table H.3.4-6	
}			
}			
reportConfigToAddModList SEQUENCE (SIZE (1..maxReportConfigId)) OF SEQUENCE {	1 entry		INTER-RAT NR
reportConfigId[1]	1		
reportConfig[1] CHOICE {			
reportConfigEUTRA	ReportConfigEUTRA-A4(Thres)	Set Thres according to test parameters specified in test cases	EVENT A4
reportConfigInterRAT	ReportConfigInterRAT-B2-NR(EUTRA-Thres, NR-Thres)	Set EUTRA-Thres and NR-Thres according to test parameters specified in test cases	EVENT B2
	ReportConfigInterRAT-B1-NR(EUTRA-Thres, NR-Thres)	Set EUTRA-Thres and NR-Thres according to test parameters specified in test cases	EVENT B1
	ReportConfigInterRAT-SFTD with Condition INTER-RAT	TS 36.508 [25] Table 4.6.6-8B	SFTD
	ReportConfigInterRAT-PERIODICAL	Table 4.6.6-9 in TS 36.508 [25]	PERIODICAL
}			
}			
measIdToAddModList SEQUENCE (SIZE (1..maxMeasId)) OF SEQUENCE {	1 entry		INTER-RAT NR
measId[1]	1		
measObjectId[1]	2		
reportConfigId[1]	1		
}			
measGapConfig	MeasGapConfig-FR1	Table H.3.4-5	
	Not present		GAPLESS
fr1-Gap-r15	false		gapUE
	true		gapFR1
}			

Condition	Explanation
gapUE	fr1-Gap-r15 set to false indicates the gap is applicable for measurements on FR1 and FR2. E-UTRAN includes this field only when the UE is configured with (NG)EN-DC.
gapFR1	fr1-Gap-r15 set to true indicates the gap is only applicable for measurements on FR1. E-UTRAN includes this field only when the UE is configured with (NG)EN-DC.
INTER-RAT NR	Measurement configuration for inter-RAT NR measurements
EVENT B2	For event B2 triggered measurement reporting test cases
EVENT B1	For event B1 triggered measurement reporting test cases
EVENT A4	For event A4 triggered measurement reporting
SFTD	For inter-RAT SFTD measurement test cases
GAPLESS	MG is not needed in test
PERIODICAL	For periodic measurement reporting test cases

MeasGapConfig

Configures measurement gap by LTE RRC in EN-DC as specified in TS 38.331 [13].

Table H.3.4-5: MeasGapConfig

Derivation Path: 36.508 [25],Table 4.6.6-1A			
Information Element	**Value/remark**	**Comment**	**Condition**
MeasGapConfig ::= CHOICE {			
setup SEQUENCE {			
gapOffset CHOICE {			
gp0	39	TGRP = 40 ms	Pattern #0
	0		BFD
gp4-r15	19	TGRP = 20 ms	Pattern #4
}			
}			
}			

Condition	Explanation
Pattern #0	*gp0* corresponds to gap offset of Gap Pattern Id "0" with MGRP = 40ms
Pattern #4	*gp4-r15* corresponds to gap offset of Gap Pattern Id "4" with MGRP = 40ms (see TS 38.133, Table 9.1.2-1). It can be applied for (NG)EN-DC, see TS 38.133, Table 9.1.2-2.
BFD	Measurement gap pattern for Beam Failure Dectection tests

Table H.3.4-6: MeasObjectNR

Derivation Path: TS 36.508 [25] Table 4.6.6-2B			
Information Element	**Value/remark**	**Comment**	**Condition**
MeasObjectNR-GENERIC(Freq) ::= SEQUENCE {			
rs-ConfigSSB-r15 ::= SEQUENCE {			
measTimingConfig-r15 ::= SEQUENCE {			
periodicityAndOffset-r15 CHOICE {			
sf20-r15	0		SMTC.1 or SMTC.2
	10		SMTC.4 or SMTC.5
	17		SMTC.6
sf160-r15	0		SMTC.3
}			
ssb-Duration-r15	sf1		SMTC.1, SMTC.3 or SMTC.4
	sf5		SMTC.2, SMTC.5 or SMTC.6
}			
subcarrierSpacingSSB-r15	kHz15		SSB.1 FR1, SSB.3 FR1 or SSB.5 FR1
	kHz30		SSB.2 FR1, SSB.4 FR1 or SSB.6 FR1
	kHz120		SSB.1 FR2, SSB.3 FR2, SSB.5 FR2 or SSB.7 FR2
	KHz240		SSB.2 FR2, SSB.4 FR2, SSB.6 FR2 or SSB.8 FR2
}			
deriveSSB-IndexFromCell-r15	Not present		
	true		Synchronous cells
	false		Asynchronous cells
}			

Table H.3.4-7: RRCConnectionReconfiguration for iRAT measurement configuration

Derivation Path: 36.508 [25], Table 4.6.1-8 with condition MEAS			
Information Element	**Value/remark**	**Comment**	**Condition**
RRCConnectionReconfiguration ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE{			
rrcConnectionReconfiguration-r8 ::= SEQUENCE {			
measConfig	MeasConfig-DEFAULT with Conditions INTER RAT NR and PERIODICAL	Table H.3.4-4	
	MeasConfig-DEFAULT with Conditions INTER RAT NR and SFTD	Table H.3.4-4	INTER-RAT and SFTD
	MeasConfig-DEFAULT with Conditions INTER RAT NR and EVENT B2	Table H.3.4-4	INTER-RAT and EVENT B2
	MeasConfig-DEFAULT with Conditions INTER RAT NR and EVENT B1	Table H.3.4-4	INTER-RAT and EVENT B1
}			
}			
}			
}			

Table H.3.4-8: ReportConfigInterRAT-B2-NR(EUTRA-Thres, NR-Thres)

Derivation Path: 36.508 [25], Table 4.6.6-8A			
Information Element	**Value/remark**	**Comment**	**Condition**
ReportConfigInterRAT-B2-NR ::= SEQUENCE {			
maxReportRS-Index-r15	2		SSB-Index
reportQuantityRS-IndexNR-r15 SEQUENCE {			SSB-Index
ss-rsrp	TRUE		
ss-rsrq	FALSE		
ss-sinr	FALSE		
}			
reportRS-IndexResultsNR	TRUE		SSB-Index
}			

Condition	Explanation
SSB-Index	To include SSB Index

H.3.5 RRC messages and information elements contents exceptions for NR radio link monitoring (RLM)

CSI-RS information elements contents exception for NR RLM SSB-Based test cases

Table H.3.5-1 to H.3.5-3: Void

Table H.3.5-4: CSI-ReportConfig

Derivation Path: TS 38.508[14] Table 7.3.1-12F			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-ReportConfig ::= SEQUENCE {			
reportConfigType CHOICE {			
periodic SEQUENCE {			
reportSlotConfig ::= CHOICE {			
slots5	0		SCS15kHz_ FDD
slots5	2		SCS15kHz_ TDD
slots10	4		SCS30kHz
slots40	16		SCS120kHz
}			
pucch-CSI-ResourceList SEQUENCE (SIZE (1..maxNrofBWPs)) OF{			
PUCCH_CSI_Resource[0] SEQUENCE {			
uplinkBandwidthPartId	BWP-Id		
pucch_Resource	9		
}			
}			
}			
}			
}			

Table H.3.5-5 to H.3.5-7: Void

BWP-DownlinkDedicated: to setup radioLinkMonitoringConfig Configuration

Table H.3.5-8: Void

RadioLinkMonitoringConfig: Configuration for RLM RS

Table H.3.5-9: *RadioLinkMonitoringConfig*

Derivation Path: TS 38.508-1 [4], Table 4.6.3-133			
Information Element	**Value/remark**	**Comment**	**Condition**
RadioLinkMonitoringConfig ::= SEQUENCE {			
failureDetectionResourcesToAddModList SEQUENCE (SIZE(1..maxNrofFailureDetectionResources)) OF SEQUENCE {	1 entry		
radioLinkMonitoringRS-Id[1]	0		
purpose[1]	rlf		
detectionResource[1] CHOICE {			
ssb-Index	0		SSB RLM
csi-RS-Index	NZP-CSI-RS-ResourceId for TRS(4)		CSI-RS RLM
}			
}			
failureDetectionResourcesToReleaseList	Not present		
beamFailureInstanceMaxCount	Not present		
beamFailureDetectionTimer	Not present		
}			

Condition	Explanation
SSB RLM	Configuration for SSB based RLM test cases
CSI-RS RLM	Configuration for CSI-RS based RLM test cases

Table H.3.5-10: Void

H.3.6 RRC messages and IE content exceptions for L1-RSRP measurement for beam reporting

ServingCellConfig: Default generic configuration for enabling CSI measurements and reporting

Table H.3.6-1: Void

CSI-ReportConfig: Default generic configuration for L1-RSRP measurements

Table H.3.6-2: CSI-ReportConfig

Derivation Path: TS 38.508-1 [14], Table 7.3.1-12G			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-ReportConfig ::= SEQUENCE {			
csi-IM-ResourcesForInterference	Not present		
nzp-CSI-RS-ResourcesForInterference	Not present		
reportConfigType CHOICE {			
periodic SEQUENCE {			PERIODIC
reportSlotConfig CHOICE {			
slot80	7	Periodicity 80 slots and offset 7	SCS30
	2	Periodicity 80 slots and offset 2	SCS15
slot320	4	Periodicity 320 slots and offset 4	FR2
pucch-CSI-ResourceList SEQUENCE {	1 entry		
(SIZE (1..maxNrofBWPs)) OF SEQUENCE {			
uplinkBandwidthPartId	BWP-Id of active BWP		
pucch-Resource	8	PUCCH-format2 as configured in TS 38.508-1 [14], Table 4.6.3-112	
}			
}			
}			
}			
reportQuantity CHOICE {			
ssb-Index-RSRP	NULL		SS-RSRP
cri-RSRP	NULL		CSI-RSRP
}			
timeRestrictionForChannelMeasurements	configured		
groupBasedBeamReporting CHOICE {			
disabled SEQUENCE {			
nrofReportedRS	n2		
}			
}			
}			

Condition	Explanation
PERIODIC	Configuration for periodic reporting
SS-RSRP	L1-RSRP measurement based on SSB
CSI-RSRP	L1-RSRP measurement based on CSI-RS

CSI-ResourceConfig: Default generic resource configuration for L1-RSRP measurements

Table H.3.6-3: CSI-ResourceConfig

Derivation Path: TS 38.508-1 [14], Table 7.3.1-12B			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-ResourceConfig ::= SEQUENCE {			
csi-RS-ResourceSetList CHOICE {			
nzp-CSI-RS-SSB SEQUENCE {			
nzp-CSI-RS-ResourceSetList SEQUENCE (SIZE (1..maxNrofNZP-CSI-RS-ResourceSetsPerConfig)) OF {	1 entry		CSI-RS
NZP-CSI-RS-ResourceSetId[0]	0		
}			
csi-SSB-ResourceSetList SEQUENCE (SIZE (1..maxNrofCSI-SSB-ResourceSetsPerConfig)) OF {	1 entry		SSB
CSI-SSB-ResourceSetId[0]	0		
}			
}			
}			
}			

Condition	Explanation
SSB	Configuration for SSB based CSI
CSI-RS	Configuration for CSI-RS based CSI

Table H.3.6-4 to H.3.6-9: Void

H.3.6A RRC messages and IE content exceptions for L1-SINR measurement for beam reporting

ServingCellConfig: Default generic configuration for enabling CSI measurements and reporting.

CSI-ReportConfig: Default generic configuration for L1-SINR measurements.

Table H.3.6A-1: CSI-ReportConfig

Derivation Path: TS 38.508-1 [14], Table 7.3.1-12G			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-ReportConfig ::= SEQUENCE {			
csi-IM-ResourcesForInterference	CSI-IM-ResourceConfigId-IMR		CSI-IM_IMR
	CSI-IM-ResourceConfigId-IMR with condition APERIODIC		CSI-IM_IMR AND APERIODIC
nzp-CSI-RS-ResourcesForInterference	CSI-ResourceConfigId-IMR		CSI-RS_IMR
	CSI-ResourceConfigId-IMR with condition APERIODIC		CSI-RS_IMR AND APERIODIC
reportConfigType CHOICE {			
periodic SEQUENCE {			PERIODIC
reportSlotConfig CHOICE {			
slot80	7	Periodicity 80 slots and offset 7	SCS30
	2	Periodicity 80 slots and offset 2	SCS15
	4	Periodicity 80 slots and offset 4	FR2
pucch-CSI-ResourceList SEQUENCE {	1 entry		
(SIZE (1..maxNrofBWPs)) OF SEQUENCE {			
uplinkBandwidthPartId	BWP-Id of active BWP		
pucch-Resource	8	PUCCH-format2 as configured in TS 38.508-1 [14], Table 4.6.3-112	
}			
}			
}			
}			
aperiodic SEQUENCE {			APERIODIC
reportSlotOffsetList SEQUENCE (SIZE (1..maxNrofUL-Allocations)) OF {	1 entry		
INTEGER[1]	26		
}			
}			
}			
timeRestrictionForChannelMeasurements	configured		
groupBasedBeamReporting CHOICE {			
disabled SEQUENCE {			
nrofReportedRS	n2		
}			
}			
reportQuantity-r16 CHOICE {			
cri-SINR-r16	NULL		CSI-SINR
ssb-Index- SINR-r16	NULL		SS-SINR
}			
}			

Condition	Explanation
PERIODIC	Configuration for periodic reporting
APERIODIC	Configuration for aperiodic reporting
SS-SINR	L1-SINR measurement based on SSB
CSI- SINR	L1-SINR measurement based on CSI-RS
CSI-RS_IMR	Configuration for NZP-CSI-RS based IMR
CSI-IM_IMR	Configuration for CSI-IM based IMR

CSI-ResourceConfig for CMR: Default generic resource configuration for L1-SINR measurements.

Table H.3A.6-2: CSI-ResourceConfig for CMR

Derivation Path: TS 38.508-1 [14], Table 7.3.1-12B			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-ResourceConfig ::= SEQUENCE {			
csi-RS-ResourceSetList CHOICE {			
nzp-CSI-RS-SSB SEQUENCE {			
nzp-CSI-RS-ResourceSetList SEQUENCE (SIZE (1..maxNrofNZP-CSI-RS-ResourceSetsPerConfig)) OF {	1 entry		CSI-RS
NZP-CSI-RS-ResourceSetId[1]	0		
}			
csi-SSB-ResourceSetList SEQUENCE (SIZE (1..maxNrofCSI-SSB-ResourceSetsPerConfig)) OF {	1 entry		SSB
CSI-SSB-ResourceSetId[1]	0		
}			
}			
}			
bwp-Id	BWP-Id of active BWP		
resourceType	aperiodic		APERIODIC
	periodic		PERIODIC
}			

Condition	Explanation
SSB	Configuration for SSB based CMR
CSI-RS	Configuration for CSI-RS based CMR

CSI-ResourceConfig for IMR: For NZP-CSI-RS resource configured as dedicated IMR, refer to Table H.3A.6-3; For CSI-IM resource configured as dedicated IMR, refer to Table H.3A.6-4.

Table H.3A.6-3: CSI-ResourceConfig for NZP-CSI-RS as IMR

Derivation Path: TS 38.508-1 [14], Table 7.3.1-12B			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-ResourceConfig ::= SEQUENCE {			
csi-ResourceConfigId	CSI-ResourceConfigId-IMR		
	CSI-ResourceConfigId-IMR with condition APERIODIC		APERIODIC
csi-RS-ResourceSetList CHOICE {			
nzp-CSI-RS-SSB SEQUENCE {			
nzp-CSI-RS-ResourceSetList SEQUENCE (SIZE (1..maxNrofNZP-CSI-RS-ResourceSetsPerConfig)) OF {	1 entry		
NZP-CSI-RS-ResourceSetId[1]	NZP-CSI-RS-ResourceSetId-IMR		
	NZP-CSI-RS-ResourceSetId-IMR with condition APERIODIC		APERIODIC
}			
}			
}			
bwp-Id	BWP-Id of active BWP		
resourceType	aperiodic		APERIODIC
	periodic		PERIODIC
}			

Table H.3A.6-3a: NZP-CSI-RS-ResourceSet for IMR

Derivation Path: TS 38.508-1 [14], Table 7.3.1-11B			
Information Element	**Value/remark**	**Comment**	**Condition**
NZP-CSI-RS-ResourceSet ::= SEQUENCE {			
nzp-CSI-ResourceSetId	NZP-CSI-RS-ResourceSetId-IMR		
	NZP-CSI-RS-ResourceSetId-IMR with condition APERIODIC		APERIODIC
nzp-CSI-RS-Resources SEQUENCE (SIZE (1..maxNrofNZP-CSI-RS-ResourcesPerSet)) OF NZP-CSI-RS-ResourceId {	2 entries		
NZP-CSI-RS-ResourceId[1]	NZP-CSI-RS-ResourceId for IMR(0)	INTEGER 12	
	NZP-CSI-RS-ResourceId for IMR(0) with condition APERIODIC	INTEGER 22	APERIODIC
NZP-CSI-RS-ResourceId[2]	NZP-CSI-RS-ResourceId for IMR(1)	INTEGER 13	
	NZP-CSI-RS-ResourceId for IMR(1) with condition APERIODIC	INTEGER 23	APERIODIC
}			
aperiodicTriggeringOffset	6		APERIODIC
}			

Table H.3A.6-3b: NZP-CSI-RS-Resource for IMR(Id)

Derivation Path: TS 38.508-1 [14], Table 7.3.1-7B			
Information Element	**Value/remark**	**Comment**	**Condition**
NZP-CSI-RS-Resource ::= SEQUENCE {			
nzp-CSI-RS-ResourceId	NZP-CSI-RS-ResourceId for IMR(Id)		
	NZP-CSI-RS-ResourceId for IMR(Id) with condition APERIODIC		APERIODIC
resourceMapping SEQUENCE {			
frequencyDomainAllocation CHOICE {			
row1	0001		
}			
nrofPorts	p1		
firstOFDMSymbolInTimeDomain	6		Id = 0
	10		Id = 1
	7		Id = 0 AND APERIODIC
	11		Id = 1 AND APERIODIC
cdm-Type	noCDM		
density CHOICE {			
three	NULL		
}			
freqBand	CSI-FrequencyOccupation-RRM		See TS 38.508-1 [14], Table 7.3.1-10
}			
powerControlOffset	0		
powerControlOffsetSS	db0		
scramblingID	0		
periodicityAndOffset {			
slots20	1		SCS15
slots40	2		SCS30
}			
periodicityAndOffset	Not present		APERIODIC
qcl-InfoPeriodicCSI-RS	Not present		
}			

Table H.3A.6-3c: NZP-CSI-RS-ResourceSetId-IMR

Derivation Path: TS 38.331 [6], clause 6.3.2			
Information Element	**Value/remark**	**Comment**	**Condition**
NZP-CSI-RS-ResourceSetId	1		

Table H.3A.6-4: CSI-ResourceConfig for CSI-IM as IMR

Derivation Path: TS 38.508-1 [14], Table 7.3.1-12B			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-ResourceConfig ::= SEQUENCE {			
csi-ResourceConfigId	CSI-IM-ResourceConfigId-IMR		
	CSI-IM-ResourceConfigId-IMR with condition APERIODIC		APERIODIC
csi-RS-ResourceSetList CHOICE {			
csi-IM-ResourceSetList SEQUENCE (SIZE (1..maxNrofCSI-IM-ResourceSetsPerConfig) OF {	1 entry		
CSI-IM-ResourceSetId[1]	CSI-IM-ResourceSetId-IMR		
	CSI-IM-ResourceSetId-IMR with condition APERIODIC		APERIODIC
}			
}			
bwp-Id	BWP-Id of active BWP		
resourceType	aperiodic		APERIODIC
	periodic		PERIODIC
}			

Table H.3A.6-4a: CSI-IM-ResourceSet for IMR

Derivation Path: TS 38.508-1 [14], Table 7.3.1-26			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-IM-ResourceSet ::= SEQUENCE {			
csi-IM-ResourceSetId	CSI-IM-ResourceSetId-IMR		
	CSI-IM-ResourceSetId-IMR with condition APERIODIC		APERIODIC
csi-IM-Resources SEQUENCE (SIZE (1..maxNrofCSI-IM-ResourcesPerSet)) OF CSI-IM-ResourceId {	2 entries		
CSI-IM-ResourceId[1]	CSI-IM-ResourceId for IMR(0)	INTEGER 0	
	CSI-IM-ResourceId for IMR(0) with condition APERIODIC	INTEGER 10	APERIODIC
CSI-IM-ResourceId[2]	CSI-IM-ResourceId for IMR(1)	INTEGER 1	
	CSI-IM-ResourceId for IMR(1) with condition APERIODIC	INTEGER 11	APERIODIC
}			
}			

Table H.3A.6-4b: CSI-IM-Resource for IMR(Id)

Derivation Path: TS 38.508-1 [14], Table 7.3.1-24			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-IM-Resource ::= SEQUENCE {			
csi-IM-ResourceId	CSI-IM-ResourceId for IMR(Id)		
	CSI-IM-ResourceId for IMR(Id) with condition APERIODIC		APERIODIC
csi-IM-ResourceElementPattern CHOICE {			
pattern1 SEQUENCE {			
subcarrierLocation-p1	s0		
symbolLocation-p1	6		Id = 0
	10		Id = 1
	7		Id = 0 AND APERIODIC
	11		Id = 1 AND APERIODIC
}			
}			
freqBand	CSI-FrequencyOccupation-RRM		See TS 38.508-1 [14], Table 7.3.1-10
periodicityAndOffset	CSI-ResourcePeriodicityAndOffset for CSI		
slots20	1		SCS15
slots40	2		SCS30
}			
periodicityAndOffset	Not present		APERIODIC
}			

Table H.3A.6-4c: CSI-IM-ResourceSetId-IMR

Derivation Path: TS 38.331 [6], clause 6.3.2			
Information Element	**Value/remark**	**Comment**	**Condition**
CSI-IM-ResourceSetId	0		

H.3.7 RRC messages and information elements contents exceptions for NR cell search when DRX is used

MAC-CellGroupConfig: DRX configuration for NR serving cell

Table H.3.7-1: *MAC-CellGroupConfig:* NR intra-frequency cell search when DRX is used

Derivation Path: TS 38.508-1, Table 4.6.3-68			
Information Element	**Value/remark**	**Comment**	**Condition**
MAC-CellGroupConfig ::= SEQUENCE {			
drx-Config CHOICE {			
setup SEQUENCE {			
drx-onDurationTimer CHOICE {			
milliSeconds	ms1		DRX.1 OR DRX.2 OR DRX.6
	ms6		DRX.3 OR DRX.7 OR DRX.8 OR DRX.11
}			
drx-InactivityTimer	ms1		
drx-RetransmissionTimerDL	sl1		
drx-RetransmissionTimerUL	sl1		
drx-LongCycleStartOffset CHOICE {			
ms20	0		DRX.11
ms40	0		DRX.1 or DRX.3
	10		(DRX.1 and Gap) OR (DRX.1 and Offset)
	15		DRX.1 and Gap and INTER-FREQ
	20		DRX.3 and Gap
ms320	0		DRX.6 OR DRX.8
	10		DRX.6 and Gap
ms640	0		DRX.2 OR DRX.7
	10		(DRX.2 and Gap) OR (DRX.7 and Offset)
	15		(DRX.2 OR DRX.7) and Gap and INTER-FREQ
}			
shortDRX	not present		
drx-SlotOffset	0		
}			
}			
tag-Config SEQUENCE {			
tag-ToReleaseList	Not present		
tag-ToAddModList SEQUENCE (SIZE (1..maxNrofTAGs)) OF SEQUENCE {	1 entry		
tag-Id[1]	0		
timeAlignmentTimer[1]	ms500		DRX.1 OR DRX.2 OR DRX.6
	infinity		DRX.3 OR DRX.7 OR DRX.8 OR DRX.11
}			
}			

Condition	Explanation

DRX.1	DRX Configuration 1 according to TS 38.133 [6] A.3.3.1
DRX.2	DRX Configuration 2 according to TS 38.133 [6] A.3.3.2
DRX.3	DRX Configuration 3 according to TS 38.133 [6] A.3.3.3
DRX.6	DRX Configuration 6 according to TS 38.133 [6] A.3.3.6
DRX.7	DRX Configuration 7 according to TS 38.133 [6] A.3.3.7
DRX.8	DRX Configuration 8 according to TS 38.133 [6] A.3.3.8
INTER-FREQ	Configuration for inter-frequency NR measurement tests
Gap	Configuration for tests with measurement gap
Offset	Tests that requires offset for DRX to eliminate overlap of DRX and SMTC

MAC-MainConfig: DRX configuration for E-UTRAN serving cell

Table H.3.7-2: MAC-MainConfig

Derivation Path: 36.508, Table 4.8.2.1.5-1			
Information Element	**Value/remark**	**Comment**	**Condition**
MAC-MainConfig ::= SEQUENCE {			
drx-Config CHOICE {			
setup SEQUENCE {			
onDurationTimer	psf2		DRX.4 OR DRX.9
	psf6		DRX.5 OR DRX.10 OR DRX.12
drx-InactivityTimer	psf2		DRX.4 OR DRX.12
	psf1920		DRX.5 OR DRX.10
	psf100		DRX.9
longDRX-CycleStartOffset CHOICE {			
sf160	0		DRX.4
sf320	0		DRX.5
	10		DRX.5 and Gap
sf40	0		DRX.9
	10		DRX.9 and Gap
sf640	0		DRX.10 OR DRX.12
	10		DRX.12 and Gap
}			
}			
}			
timeAlignmentTimerDedicated	infinity		DRX.4 OR DRX.5 OR DRX.12
	sf500		DRX.9 OR DRX.10
}			

Condition	Explanation
DRX.4	DRX Configuration 4 according to TS 38.133 [6] A.3.3.4
DRX.5	DRX Configuration 5 according to TS 38.133 [6] A.3.3.5
DRX.9	DRX Configuration 9 according to TS 38.133 [6] A.3.3.9
DRX.10	DRX Configuration 10 according to TS 38.133 [6] A.3.3.10
DRX.12	DRX Configuration 12 according to TS 38.133 [6] A.3.3.12

H.3.8 RRC messages and information elements contents exceptions for NR RRC reconfiguration delay

ServingCellConfigCommonSIB: information elements content exception for RRC reconfiguration delay test cases to specific both NR uplink and supplementary uplink for SCell.

Table H.3.8-1: ServingCellConfigCommonSIB-Procedure Delay

Derivation Path: TS 38.508-1, table 4.6.3-169			
Information Element	**Value/remark**	**Comment**	**Condition**
ServingCellConfigCommonSIB ::= SEQUENCE {			
downlinkConfigCommon	DownlinkConfigCommonSIB		
uplinkConfigCommon	UplinkConfigCommonSIB	NR uplink	
	UplinkConfigCommonSIB with condition SUL_NUL		SUL
supplementaryUplink	UplinkConfigCommonSIB with condition SUL_SUL		SUL
n-TimingAdvanceOffset	Not present		
ssb-PositionsInBurst SEQUENCE {			
inOneGroup	'0100 0000'B	When carrier frequency is smaller than or equal to 3 GHz, only the 4 leftmost bits are valid;	
groupPresence	Not present		
}			
ssb-PeriodicityServingCell	ms20		
tdd-UL-DL-ConfigurationCommon	TDD-UL-DL-ConfigCommon		FR1_TDD
ss-PBCH-BlockPower	0		
}			

RRCReconfiguration: information elements contents exception for RRC reconfiguration delay test cases to specific radio bearers and cell groups.

Table H.3.8-2: RRCReconfiguration-Procedure Delay

Derivation Path: TS 38.508-1, table 4.6.1-13			
Information Element	**Value/remark**	**Comment**	**Condition**
RRCReconfiguration::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
rrcReconfiguration ::= SEQUENCE {			
radioBearerConfig	RadioBearerConfig with conditions SRB2 and DRB1		
}			
secondaryCellGroup	CellGroupConfig with condition EN-DC_SCell_add	OCTET STRING (CONTAINING CellGroupConfig)	
nonCriticalExtension SEQUENCE {			
masterCellGroup	CellGroupConfig with conditions EN-DC	OCTET STRING (CONTAINING CellGroupConfig)	
}			
}			
}			
}			

H.3.9 RRC messages and information elements contents exceptions for UL timing

Table H.3.9-1: *PUSCH-TimeDomainResourceAllocationList*

Derivation Path: TS 38.508-1, Table 4.6.3-122			
Information Element	**Value/remark**	**Comment**	**Condition**
PUSCH-TimeDomainResourceAllocationList ::= SEQUENCE (SIZE(1..maxNrofUL-Allocations)) OF {	2 entries		
PUSCH-TimeDomainResourceAllocation[1] SEQUENCE {			
startSymbolAndLength	41	Start symbol(S)=0, Length(L)=13	
}			
PUSCH-TimeDomainResourceAllocation[2] SEQUENCE {		addressed by Msg3 PUSCH time resource allocation field of the Random Access Response acc. to TS 38.213 [22] Table 8.2-1.	
startSymbolAndLength	41	Start symbol(S)=0, Length(L)=13	
}			
}			

Annex I (normative): RRM OTA procedures

Annex I defines the RRM OTA procedures for the permitted testing methodologies defined in [32].

I.0 Test applicability per permitted test method

The applicability of each permitted test method for the different RRM Angle of Arrival (AoA) setups as defined in Clause A.9 is defined in Table I.0-1.

Table I.0-1 AoA Test Setup applicability per permitted test method

AoA Test Setup	D > 5cm or No declaration	D ≤ 5cm
Setup 1	IFF, Enhanced IFF	DFF, IFF, Enhanced IFF, IFF+DFF
Setup 2a	IFF, Enhanced IFF	DFF, IFF, Enhanced IFF, IFF+DFF
Setup 2b	IFF, Enhanced IFF	DFF, IFF, Enhanced IFF, IFF+DFF
Setup 3	Enhanced IFF	DFF, Enhanced IFF, IFF+DFF
Setup 4a	Enhanced IFF	DFF, Enhanced IFF, IFF+DFF
Setup 4b	Enhanced IFF	DFF, Enhanced IFF, IFF+DFF
NOTE1: D =The diameter of the smallest sphere that encloses the radiating parts of the phase coherent array antenna(s) active at any one time during the test., declared by UE vendor as per Table 4.3.9-9 in TS 38.508-2 NOTE2: DFF indicates both DFF and DFF simplification in TR 38.810. NOTE3: For DFF and DFF part of IFF+DFF, minimum range length needs to meet the requirement as specified in 38.508-1 Annex B.2.2-4 with the declared D		

I.1 Direct far field (DFF)

I.1.1 RX beam peak direction search

The Rx beam peak direction search can be found using any of the following options:

- Same measurement procedure as in clause Annex K.1.2 of TS 38.521-2 [18].
- Any of the procedures described in Annex I.4.

I.1.2 Search for directions corresponding to the EIS spherical coverage percentile

The test directions corresponding to the EIS spherical coverage percentile can be found using any of the following options:

- EIS spherical coverage scan procedure as described in Annex K.1.6 of TS 38.521-2 [18].
- Any of the procedures described in Annex I.4.

I.2 Direct far field (DFF) simplification

I.2.1 RX beam peak direction search

The Rx beam peak direction search can be found using any of the following options:

- Same measurement procedure as in clause Annex K.2.2 of TS 38.521-2 [18].

- Any of the procedures described in Annex I.4.

I.2.2 Search for directions corresponding to the EIS spherical coverage percentile

The test directions corresponding to the EIS spherical coverage percentile can be found using any of the following options:

- EIS spherical coverage scan procedure as described in Annex K.1.6 of TS 38.521-2 [18].
- Any of the procedures described in Annex I.4.

I.3 Indirect far field (IFF)

I.3.1 RX beam peak direction search

The Rx beam peak direction search can be found using any of the following options:

- Same measurement procedure as in clause Annex K.3.2 of TS 38.521-2 [18].
- Any of the procedures described in Annex I.4.

I.3.2 Search for directions corresponding to the EIS spherical coverage percentile

The test directions corresponding to the EIS spherical coverage percentile can be found using any of the following options:

- EIS spherical coverage scan procedure as described in Annex K.1.6 of TS 38.521-2 [18].
- Any of the procedures described in Annex I.4.

I.3A Enhanced indirect far field (Enhanced IFF)

I.3A.1 RX beam peak direction search

Same as in clause I.3.1 for IFF.

I.3A.2 Search for directions corresponding to the EIS spherical coverage percentile

Same as in clause I.3.2 for IFF.

I.4 Procedures to search test directions for RRM FR2

I.4.1 RSRPB-based scan with fallback option to Rx beam peak direction search

This clause provides RSRPB-based scan to find the Rx beam peak of the UE for Setup 1, single AoA cases and one of the test directions for Setup 4. It also provides a method to find test directions fulfilling the EIS Spherical Coverage (TS 38.521-2 [18] clause 7.3.4.3) for Setup 2, 3 and 4. Other approaches are not precluded. RSRPB-based peak beam scan greatly reduces the time to find the peak beam position compared to traditional EIS scan using either constant step size or constant density. The procedure can be used with DFF as well as IFF methodology. The procedure is achieved implementing the following steps:

1. Enable periodic RSRPB reporting from the UE

2. Set of grid points for the UE scan can be user defined set or entire sphere.

3. Set the DL SSB_RP (at the centre of the QZ) to -95 dBm / SCS. For each grid point, record RSRPB first by connecting SS to the DUT through the measurement antenna with Pol_{Link}= θ polarization to form the Rx beam towards the measurement antenna.

4. Wait for BEAM_SELECT_WAIT_TIME before recording the RSRPB reports.

4a For each of the grid points, calculate the RSRPB result for Pol_{Link}= θ as the linear sum of the 2 RSRPB reports (one per receiver branch).

4b Repeat Steps 3, 4 and 4a with Pol_{Link}= ϕ.

5. Once the grid points scan is completed, sort the grid points based on the linear sum of the RSRPB results for Pol_{Link}= θ and Pol_{Link}= ϕ.

6. For the top 10 grid points, run the REFSENS throughput test as per the test condition defined in TS 38.521-2 [18] clause 7.3.2

7. Select the grid point with the best REFSENS result among the 10 points from Step 6 as the Rx beam peak for RRM test cases using AoA Setup 1 or 4.

.

8. Use the EIS result for the RRM beam peak to offset the RSRPB results to obtain an estimate of the EIS Spherical coverage (SC) map.

9. From the EIS map in Step 8, select all the points meeting the EIS SC criteria (as defined in TS 38.521-2 [18] Clause 7.3.4.3) as potential test directions for AoA Setup 2a, 2b, 3 and 4. In order to confirm that the grid point is suitable, run the REFSENS throughput test as per the test condition defined in TS 38.521-2 [18] clause 7.3.2 and verify that the EIS SC criteria is met. .

If not enough grid points are found using this method, fallback to using the method in Annex I.1, I.2, I.3 or I.3A as applicable.

Annex J (informative): Change history

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2017-08	RAN5#76	R5-175205	-	-	-	Introduction of TS 38.533	0.0.1
2018-08	RAN5#80	R5-184115	-	-	-	Added specification structure including headers up to third level	0.0.2
2018-11	RAN5#81	R5-186706	-	-	-	Added references and common sections	0.1.0
2018-11	RAN5#81	R5-187847	-	-	-	Added RMCs, OCGN, SMTC and SSB configurations to Annex A	0.1.0
2018-11	RAN5#81	R5-187996	-	-	-	Added test cases 6.7.1.1.1 to 6.7.1.2.2	0.1.0
2018-11	RAN5#81	R5-187997	-	-	-	Added test cases 4.6.2.1 to 4.6.2.8	0.1.0
2018-11	RAN5#81	R5-187998	-	-	-	Added test cases 5.6.2.1 to 5.6.2.4	0.1.0
2018-11	RAN5#81	R5-187999	-	-	-	Added test cases 6.6.2.1 to 6.6.2.8	0.1.0
2018-11	RAN5#81	R5-188000	-	-	-	Added test cases 7.6.2.1 to 7.6.2.4	0.1.0
2018-11	RAN5#81	R5-188001	-	-	-	Added test case 4.4.1.1	0.1.0
2018-11	RAN5#81	R5-188002	-	-	-	Added test cases 4.7.1.1.1 to 4.7.1.2.2	0.1.0
2018-11	RAN5#81	R5-188005	-	-	-	Added Annexes B to H	0.1.0
2018-11	RAN5#81	R5-188011	-	-	-	Added test case 4.4.3.1	0.1.0
2019-01	RAN5#4 5G-NR AH	R5-190448	-	-	-	Updating FR1 MU for timing measurements	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190476	-	-	-	Addition of band group power offsets	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190477	-	-	-	Update of the annexes	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190478	-	-	-	Changes to 4.7.1.x tests	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190479	-	-	-	Addition of 4.7.2.x tests	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190480	-	-	-	Addition of 4.7.4.x tests	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190481	-	-	-	Changes to 6.7.1.x tests	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190482	-	-	-	Addition of 6.7.2.x tests	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190483	-	-	-	Addition of 6.7.4.x tests	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190512	-	-	-	Addition of EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode test case 4.5.1.5	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190513	-	-	-	Addition of EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode test case 4.5.1.6	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190514	-	-	-	Addition of EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode test case 4.5.1.7	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190515	-	-	-	Addition of EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode test case 4.5.1.8	0.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-01	RAN5#4 5G-NR AH	R5-190516	-	-	-	Addition of EN-DC FR1 interruptions at transitions between active and non-active during DRX in synchronous EN-DC test case 4.5.2.1	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190517	-	-	-	Addition of EN-DC FR1 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC test case 4.5.2.2	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190518	-	-	-	Addition of EN-DC FR1 interruptions during measurements on deactivated NR SCC in synchronous EN-DC test case 4.5.2.3	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190519	-	-	-	Addition of EN-DC FR1 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC test case 4.5.2.4	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190520	-	-	-	Addition of EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC test case 4.5.2.5	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190582	-	-	-	Annex F correction	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190803	-	-	-	Update Annex G in TS 38.533	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190874	-	-	-	Addition of NR test case 6.6.1.1-reporting without gap non-DRX	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190875	-	-	-	Addition of NR test case 6.6.1.2-reporting without gap DRX	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190876	-	-	-	Addition of NR test case 6.6.1.3-with gap non DRX	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190877	-	-	-	Addition of NR test case 6.6.1.4-with gap DRX	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190878	-	-	-	Addition of NR test case 6.6.1.5-without gap non DRX SBI reading	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190879	-	-	-	Addition of NR test case 6.6.1.6-with gap non DRX SBI reading	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190880	-	-	-	CR to 38.533 annex for event triggered reporting test cases	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190881	-	-	-	Addition of EN-DC FR1 event triggered reporting test case 4.6.1.5	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190882	-	-	-	Addition of EN-DC FR1 event triggered reporting test case 4.6.1.6	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190883	-	-	-	Addition of EN-DC FR1 event triggered reporting test case 4.6.1.3	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190884	-	-	-	Addition of EN-DC FR1 event triggered reporting test case 4.6.1.4	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190885	-	-	-	Addition of default config for event triggered test cases	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190886	-	-	-	Introduction of 5G RRM TC 4.5.3.1	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190887	-	-	-	Introduction of 5G RRM TC 4.5.3.2	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190888	-	-	-	Introduction of 5G RRM TC 4.5.3.3	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190889	-	-	-	Introduction of 5G RRM TC 4.6.1.1	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190890	-	-	-	Introduction of 5G RRM TC 4.6.1.2	0.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-01	RAN5#4 5G-NR AH	R5-190891	-	-	-	Introduction of 5G RRM TC 5.5.3.1	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190892	-	-	-	Introduction of 5G RRM TC 6.6.3.1	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190893	-	-	-	pCR for Addition of TC 6.5.1.3 NR SA FR1 RLM OOS in DRX	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190894	-	-	-	pCR for Addition of TC 6.4.3.1 NR SA FR1 TAA Accuracy	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190895	-	-	-	pCR for Modification of TC 4.4.3.1 EN-DC FR1 TAA accuracy	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190896	-	-	-	pCR for Addition of TC 6.5.1.1 NR SA FR1 RLM OOS	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190897	-	-	-	pCR for Addition of TC 4.5.1.1 EN-DC FR1 RLM OOS	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190898	-	-	-	pCR for Addition of TC 4.5.1.3 EN-DC FR1 RLM OOS in DRX	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190899	-	-	-	Update to EN-DC FR1 transmit timing accuracy test	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190900	-	-	-	Addition of EN-DC FR1 RLM IS non-DRX test with SSB-based RLM RS	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190901	-	-	-	Addition of EN-DC FR1 RLM IS DRX test with SSB-based RLM RS	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190902	-	-	-	Addition of NR SA FR1 RLM IS non-DRX test with SSB-based RLM RS	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190903	-	-	-	Addition of NR SA FR1 RLM IS DRX test with SSB-based RLM RS	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190904	-	-	-	Correction of RRM 5G Test Cases 4.6.2 - EN-DC FR1-FR1 Inter-frequency measurements	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190905	-	-	-	Correction of RRM 5G Test Cases 6.6.2 - NR SA FR1-FR1 Inter-frequency measurements	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190906	-	-	-	Correction of RRM 5G Test Cases 7.6.2 - NR SA FR2-FR2 Inter-frequency measurements	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190907	-	-	-	Addition of RRM Test Cases 4.5.2.6: EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190908	-	-	-	Addition of RRM Test Cases 5.5.2.1: EN-DC FR2 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190909	-	-	-	Addition of RRM Test Cases 5.5.2.2: EN-DC FR2 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190910	-	-	-	Addition of RRM Test Cases 5.5.2.3: EN-DC FR2 interruptions during measurements on deactivated NR SCC in synchronous EN-DC	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190911	-	-	-	Addition of RRM Test Cases 5.5.2.4: EN-DC FR2 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190912	-	-	-	Addition of RRM Test Cases 5.5.2.5: EN-DC FR2 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190913	-	-	-	Addition of RRM Test Cases 5.5.2.6: EN-DC FR2 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190914	-	-	-	Addition of RRM Test Cases 6.1.1.1: NR SA FR1 cell re-selection	0.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-01	RAN5#4 5G-NR AH	R5-190915	-	-	-	Addition of RRM Test Cases 6.1.1.2: NR SA FR1-FR1 cell re-selection	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190916	-	-	-	Addition of cell re-selection to higher priority E-UTRAN test case 6.1.2.1	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190917	-	-	-	Addition of cell re-selection to lower priority E-UTRAN test case 6.1.2.2	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190918	-	-	-	Addition of SA NR to E-UTRAN handover test case 6.3.1.4	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190919	-	-	-	Addition of SA NR to E-UTRAN handover test case 6.3.1.5	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190920	-	-	-	Addition of NR SA FR1 UE UL carrier RRC reconfiguration delay test case 6.5.4.1	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190921	-	-	-	Addition of NR SA FR1 CSI-RS based RLM out-of-sync non-DRX test case 6.5.1.5	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190922	-	-	-	Addition of NR SA FR1 CSI-RS based RLM in-sync non-DRX test case 6.5.1.6	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190923	-	-	-	Addition of NR SA FR1 CSI-RS based RLM out-of-sync in DRX test case 6.5.1.7	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190924	-	-	-	Addition of NR SA FR1 CSI-RS based RLM in-sync in DRX test case 6.5.1.8	0.2.0
2019-01	RAN5#4 5G-NR AH	R5-190987	-	-	-	38.533 Common Section updates to clarify leverage across architecture options	0.2.0
2019-03	RAN5#82	R5-191484	-	-	-	Correction Annex G	0.3.0
2019-03	RAN5#82	R5-191485	-	-	-	Correction NSA Options	0.3.0
2019-03	RAN5#82	R5-191486	-	-	-	Modifications NSA FR1 SS-RSRP tests	0.3.0
2019-03	RAN5#82	R5-191487	-	-	-	Modifications NSA FR1 SS-RSRQ tests	0.3.0
2019-03	RAN5#82	R5-191488	-	-	-	Modifications NSA FR1 L1-RSRP tests	0.3.0
2019-03	RAN5#82	R5-191489	-	-	-	Modifications SA FR1 SS-RSRP tests	0.3.0
2019-03	RAN5#82	R5-191490	-	-	-	Modifications SA FR1 SS-RSRQ tests	0.3.0
2019-03	RAN5#82	R5-191491	-	-	-	Modifications SA FR1 L1-RSRP tests	0.3.0
2019-03	RAN5#82	R5-191492	-	-	-	Addition NSA FR1 BWP switch tests	0.3.0
2019-03	RAN5#82	R5-191493	-	-	-	Addition SA FR1 BWP switch tests	0.3.0
2019-03	RAN5#82	R5-191494	-	-	-	Addition NSA FR2 BWP switch tests	0.3.0
2019-03	RAN5#82	R5-191495	-	-	-	Addition SA FR2 BWP switch tests	0.3.0
2019-03	RAN5#82	R5-191720	-	-	-	addition of cell mapping for BFD and measurement	0.3.0
2019-03	RAN5#82	R5-191924	-	-	-	Correction of default message contents for RRM	0.3.0
2019-03	RAN5#82	R5-191926	-	-	-	Addition of event-triggered reporting Test Cases to Cell configuration mapping in Annex E	0.3.0
2019-03	RAN5#82	R5-191930	-	-	-	Correction of 5G RRM Test Case 4.6.2.3	0.3.0
2019-03	RAN5#82	R5-191931	-	-	-	Correction of 5G RRM Test Case 4.6.2.4	0.3.0
2019-03	RAN5#82	R5-191934	-	-	-	Correction of 5G RRM Test Case 4.6.2.7	0.3.0
2019-03	RAN5#82	R5-191935	-	-	-	Correction of 5G RRM Test Case 4.6.2.8	0.3.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-03	RAN5#82	R5-191936	-	-	-	Addition of Minimum conformance requirements 5.6.2.0	0.3.0
2019-03	RAN5#82	R5-191937	-	-	-	Correction of 5G RRM Test Case 5.6.2.1	0.3.0
2019-03	RAN5#82	R5-191938	-	-	-	Correction of 5G RRM Test Case 5.6.2.2	0.3.0
2019-03	RAN5#82	R5-191939	-	-	-	Correction of 5G RRM Test Case 5.6.2.3	0.3.0
2019-03	RAN5#82	R5-191940	-	-	-	Correction of 5G RRM Test Case 5.6.2.4	0.3.0
2019-03	RAN5#82	R5-191945	-	-	-	Addition of Minimum conformance requirements 7.6.2.0	0.3.0
2019-03	RAN5#82	R5-191946	-	-	-	Correction of 5G RRM Test Case 7.6.2.1	0.3.0
2019-03	RAN5#82	R5-191947	-	-	-	Correction of 5G RRM Test Case 7.6.2.2	0.3.0
2019-03	RAN5#82	R5-191948	-	-	-	Correction of 5G RRM Test Case 7.6.2.3	0.3.0
2019-03	RAN5#82	R5-191949	-	-	-	Correction of 5G RRM Test Case 7.6.2.4	0.3.0
2019-03	RAN5#82	R5-191950	-	-	-	Correction of 5G RRM Test Case 7.6.2.5	0.3.0
2019-03	RAN5#82	R5-191951	-	-	-	Correction of 5G RRM Test Case 7.6.2.6	0.3.0
2019-03	RAN5#82	R5-191952	-	-	-	Correction of 5G RRM Test Case 7.6.2.7	0.3.0
2019-03	RAN5#82	R5-191953	-	-	-	Correction of 5G RRM Test Case 7.6.2.8	0.3.0
2019-03	RAN5#82	R5-192062	-	-	-	Update of EN-DC FR1 event triggered reporting test case 4.6.1.6	0.3.0
2019-03	RAN5#82	R5-192063	-	-	-	Update of EN-DC FR1 event triggered reporting test case 4.6.1.3	0.3.0
2019-03	RAN5#82	R5-192064	-	-	-	Update of EN-DC FR1 event triggered reporting test case 4.6.1.4	0.3.0
2019-03	RAN5#82	R5-192221	-	-	-	Update on RRC_Connected generic procedure within RRM tests	0.3.0
2019-03	RAN5#82	R5-192477	-	-	-	Introduction of FR1 EN-DC Contention based random access Test case	0.3.0
2019-03	RAN5#82	R5-192478	-	-	-	Introduction of FR1 EN-DC non-Contention based random access Test case	0.3.0
2019-03	RAN5#82	R5-192479	-	-	-	Introduction of FR1 standalone Contention based random access Test case	0.3.0
2019-03	RAN5#82	R5-192480	-	-	-	Introduction of FR1 standalone Non-contention based random access Test case	0.3.0
2019-03	RAN5#82	R5-192481	-	-	-	Updated to 5G RRM TC 4.6.1.1	0.3.0
2019-03	RAN5#82	R5-192482	-	-	-	Updated to 5G RRM TC 4.6.1.2	0.3.0
2019-03	RAN5#82	R5-192483	-	-	-	Addition of NR test case 6.7.1.3.1-absolute RSRP	0.3.0
2019-03	RAN5#82	R5-192484	-	-	-	Addition of NR test case 6.7.1.3.2-relative RSRP	0.3.0
2019-03	RAN5#82	R5-192485	-	-	-	Addition of NR test case 6.5.5.3 FR1 CSI-RS BFD nonDRX	0.3.0
2019-03	RAN5#82	R5-192486	-	-	-	Addition of NR test case 6.5.5.4 FR1 CSI-RS BFD DRX	0.3.0
2019-03	RAN5#82	R5-192487	-	-	-	Addition of NR test case 7.5.5.1 FR2 SSB BFD nonDRX	0.3.0
2019-03	RAN5#82	R5-192488	-	-	-	Addition of NR test case 7.5.5.2 FR2 SSB BFD DRX	0.3.0
2019-03	RAN5#82	R5-192489	-	-	-	Addition of NR test case 7.5.5.3 FR2 CSI-RS BFD nonDRX	0.3.0
2019-03	RAN5#82	R5-192490	-	-	-	Addition of NR test case 7.5.5.4 FR2 CSI-RS BFD DRX	0.3.0
2019-03	RAN5#82	R5-192492	-	-	-	Correction of 5G RRM Test Case 4.6.2.1	0.3.0
2019-03	RAN5#82	R5-192493	-	-	-	Correction of 5G RRM Test Case 4.6.2.2	0.3.0
2019-03	RAN5#82	R5-192494	-	-	-	Correction of 5G RRM Test Case 4.6.2.5	0.3.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-03	RAN5#82	R5-192495	-	-	-	Correction of 5G RRM Test Case 4.6.2.6	0.3.0
2019-03	RAN5#82	R5-192496	-	-	-	Correction of 5G RRM Test Case 6.6.2.1	0.3.0
2019-03	RAN5#82	R5-192497	-	-	-	Correction of 5G RRM Test Case 6.6.2.2	0.3.0
2019-03	RAN5#82	R5-192498	-	-	-	Correction of 5G RRM Test Case 6.6.2.3	0.3.0
2019-03	RAN5#82	R5-192499	-	-	-	Correction of 5G RRM Test Case 6.6.2.4	0.3.0
2019-03	RAN5#82	R5-192500	-	-	-	Update of EN-DC FR1 event triggered reporting test case 4.6.1.5	0.3.0
2019-03	RAN5#82	R5-192503	-	-	-	Update to EN-DC FR1 transmit timing accuracy test	0.3.0
2019-03	RAN5#82	R5-192674	-	-	-	Update to EN-DC FR1 RLM IS non-DRX test with SSB-based RLM RS	0.3.0
2019-03	RAN5#82	R5-192675	-	-	-	Update to EN-DC FR1 RLM IS DRX test with SSB-based RLM RS	0.3.0
2019-03	RAN5#82	R5-192676	-	-	-	Update to NR SA FR1 RLM IS non-DRX test with SSB-based RLM RS	0.3.0
2019-03	RAN5#82	R5-192677	-	-	-	Update to NR SA FR1 RLM IS DRX test with SSB-based RLM RS	0.3.0
2019-03	RAN5#82	R5-192678	-	-	-	pCR for modification of TAAA TC for EN-DC FR1	0.3.0
2019-03	RAN#83	RP-190161	-	-	-	Presented to the RAN#83 plenary for 1-step approval	1.0.0
2019-03	RAN#83	-	-	-	-	Upgraded to Rel-15 with small editorial changes	15.0.0
2019-06	RAN#84	R5-193578	0100	-	F	Update the test case number of TC 4.3.2.2.2	15.1.0
2019-06	RAN#84	R5-193755	0102	-	F	Update of Minimum conformance requirements 6.6.1.0	15.1.0
2019-06	RAN#84	R5-193758	0104	-	F	Update of EN-DC RLM in-sync in non-DRX test case 4.5.1.6	15.1.0
2019-06	RAN#84	R5-193759	0105	-	F	Update of EN-DC RLM out-of-sync in DRX test case 4.5.1.7	15.1.0
2019-06	RAN#84	R5-193760	0106	-	F	Update of EN-DC RLM in-sync in DRX test case 4.5.1.8	15.1.0
2019-06	RAN#84	R5-193761	0107	-	F	Addition of Minimum conformance requirements 6.3.2	15.1.0
2019-06	RAN#84	R5-193762	0108	-	F	Addition of NR RRM TC 6.3.2.1.1-Intra Freq RRC Re-establishment	15.1.0
2019-06	RAN#84	R5-193763	0109	-	F	Addition of FR1-FR1 re-establishment test case 6.3.2.1.2	15.1.0
2019-06	RAN#84	R5-193764	0110	-	F	Addition of FR1 RRC connection release with redirection test case 6.3.2.3.1	15.1.0
2019-06	RAN#84	R5-193765	0111	-	F	Addition of FR1-E-UTRA RRC connection release with redirection test case 6.3.2.3.2	15.1.0
2019-06	RAN#84	R5-193766	0112	-	F	Update of TC 6.5.1.5 SA FR1 CSI-RS RLM OOS non-DRX	15.1.0
2019-06	RAN#84	R5-193767	0113	-	F	Update of TC 6.5.1.6 SA FR1 CSI-RS RLM IS non-DRX	15.1.0
2019-06	RAN#84	R5-193768	0114	-	F	Update of TC 6.5.1.7 SA FR1 CSI-RS RLM OOS DRX	15.1.0
2019-06	RAN#84	R5-193769	0115	-	F	Update of TC 6.5.1.8 SA FR1 CSI-RS RLM IS DRX	15.1.0
2019-06	RAN#84	R5-193770	0116	-	F	Addition of Minimum conformance requirements 6.5.5.0	15.1.0
2019-06	RAN#84	R5-193771	0117	-	F	Update of TC 6.5.5.3 SA FR1 CSI-RS BFD non-DRX	15.1.0
2019-06	RAN#84	R5-193772	0118	-	F	Update of TC 6.5.5.4 SA FR1 CSI-RS BFD DRX	15.1.0
2019-06	RAN#84	R5-193773	0119	-	F	Addition of Minimum conformance requirements 7.5.5.0	15.1.0
2019-06	RAN#84	R5-193774	0120	-	F	Update of TC 7.5.5.1 SA FR2 SSB BFD non-DRX	15.1.0
2019-06	RAN#84	R5-193775	0121	-	F	Update of TC 7.5.5.2 SA FR2 SSB BFD DRX	15.1.0
2019-06	RAN#84	R5-193776	0122	-	F	Update of TC 7.5.5.3 SA FR2 CSI-RS BFD non-DRX	15.1.0
2019-06	RAN#84	R5-193777	0123	-	F	Update of TC 7.5.5.4 SA FR2 CSI-RS BFD DRX	15.1.0
2019-06	RAN#84	R5-193778	0124	-	F	Addition of Minimum conformance requirements 7.6.1.0	15.1.0
2019-06	RAN#84	R5-193779	0125	-	F	Addition of 7.6.1.1 SA FR2 RRM measurement no-gap non-DRX	15.1.0
2019-06	RAN#84	R5-193780	0126	-	F	Addition of 7.6.1.2 SA FR2 RRM measurement no-gap DRX	15.1.0
2019-06	RAN#84	R5-193781	0127	-	F	Addition of 7.6.1.3 SA FR2 RRM measurement gap non-DRX	15.1.0
2019-06	RAN#84	R5-193782	0128	-	F	Addition of 7.6.1.4 SA FR2 RRM measurement gap DRX	15.1.0
2019-06	RAN#84	R5-193784	0130	-	F	Update of FR1 cell re-selection test case 6.1.1.1	15.1.0
2019-06	RAN#84	R5-193785	0131	-	F	Update of FR1-FR1 cell re-selection test case 6.1.1.2	15.1.0
2019-06	RAN#84	R5-193786	0132	-	F	Update of FR1-EUTRA higher priority cell re-selection test case 6.1.2.1	15.1.0
2019-06	RAN#84	R5-193787	0133	-	F	Update of FR1-EUTRA lower priority cell re-selection test case 6.1.2.2	15.1.0
2019-06	RAN#84	R5-193788	0134	-	F	Update of FR1-EUTRA handover known cell test case 6.3.1.4	15.1.0
2019-06	RAN#84	R5-193790	0136	-	F	Update of 6.6.1.1 SA FR1 RRM measurement no-gap non-DRX	15.1.0
2019-06	RAN#84	R5-193791	0137	-	F	Update of 6.6.1.2 SA FR1 RRM measurement no-gap DRX	15.1.0
2019-06	RAN#84	R5-193792	0138	-	F	Update of 6.6.1.3 SA FR1 RRM measurement gap non-DRX	15.1.0
2019-06	RAN#84	R5-193793	0139	-	F	Update of 6.6.1.4 SA FR1 RRM measurement gap DRX	15.1.0
2019-06	RAN#84	R5-193794	0140	-	F	Update of FR1 event-triggered without gap with SSB index test case 6.6.1.5	15.1.0
2019-06	RAN#84	R5-193795	0141	-	F	Update of FR1 event-triggered with gap with SSB index test case 6.6.1.6	15.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-06	RAN#84	R5-193812	0145	-	F	Addition of 6.3.2.2 minimum conformance requirements	15.1.0
2019-06	RAN#84	R5-193872	0146	-	F	Introduction of TC 4.5.5.4 EN-DC FR1 CSI-RS-based beam failure detection and link recovery in DRX	15.1.0
2019-06	RAN#84	R5-193949	0148	-	F	Correction of PRACH Configurations	15.1.0
2019-06	RAN#84	R5-194328	0153	-	F	Additional of new reference used in RRM test spec	15.1.0
2019-06	RAN#84	R5-194329	0154	-	F	Correction of reference spec number in RRM spec	15.1.0
2019-06	RAN#84	R5-194494	0165	-	F	Addition missing Editor's note 4.5.2.5	15.1.0
2019-06	RAN#84	R5-194549	0173	-	F	Correction of 5G RRM Test Case 5.6.2.1	15.1.0
2019-06	RAN#84	R5-194550	0174	-	F	Correction of 5G RRM Test Case 5.6.2.2	15.1.0
2019-06	RAN#84	R5-194551	0175	-	F	Correction of 5G RRM Test Case 5.6.2.3	15.1.0
2019-06	RAN#84	R5-194552	0176	-	F	Correction of 5G RRM Test Case 5.6.2.4	15.1.0
2019-06	RAN#84	R5-194553	0177	-	F	Correction of 5G RRM Test Case 5.6.2.5	15.1.0
2019-06	RAN#84	R5-194555	0179	-	F	Correction of 5G RRM Test Case 5.6.2.7	15.1.0
2019-06	RAN#84	R5-194556	0180	-	F	Correction of 5G RRM Test Case 5.6.2.8	15.1.0
2019-06	RAN#84	R5-194557	0181	-	F	Correction of Minimum conformance requirements 6.6.2.0	15.1.0
2019-06	RAN#84	R5-194562	0186	-	F	Correction of Minimum conformance requirements 7.6.2.0	15.1.0
2019-06	RAN#84	R5-194564	0188	-	F	Correction of 5G RRM Test Case 7.6.2.2	15.1.0
2019-06	RAN#84	R5-194565	0189	-	F	Correction of 5G RRM Test Case 7.6.2.3	15.1.0
2019-06	RAN#84	R5-194566	0190	-	F	Correction of 5G RRM Test Case 7.6.2.4	15.1.0
2019-06	RAN#84	R5-194567	0191	-	F	Correction of 5G RRM Test Case 7.6.2.5	15.1.0
2019-06	RAN#84	R5-194568	0192	-	F	Correction of 5G RRM Test Case 7.6.2.6	15.1.0
2019-06	RAN#84	R5-194569	0193	-	F	Correction of 5G RRM Test Case 7.6.2.7	15.1.0
2019-06	RAN#84	R5-194570	0194	-	F	Correction of 5G RRM Test Case 7.6.2.8	15.1.0
2019-06	RAN#84	R5-194571	0195	-	F	Correction of Minimum conformance requirements 7.3.2.1.0	15.1.0
2019-06	RAN#84	R5-194572	0196	-	F	Correction of 5G RRM Test Case 7.3.2.1.1	15.1.0
2019-06	RAN#84	R5-194573	0197	-	F	Correction of 5G RRM Test Case 7.3.2.1.2	15.1.0
2019-06	RAN#84	R5-194700	0208	-	F	Clean-up in EN-DC FR1 transmit timing accuracy test	15.1.0
2019-06	RAN#84	R5-194702	0210	-	F	Update to EN-DC FR1 RLM IS DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-194703	0211	-	F	Update to NR SA FR1 RLM IS non-DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-194704	0212	-	F	Update to NR SA FR1 RLM IS DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-194710	0214	-	F	Update to E-UTRA configuration for RRM EN-DC tests to align with core spec update	15.1.0
2019-06	RAN#84	R5-194713	0216	-	F	Update to EN-DC FR1 RLM IS DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-195013	0156	1	F	Updated to EN-DC FR1 RRM tests in clause 4.5.3	15.1.0
2019-06	RAN#84	R5-195016	0198	1	F	Test tolerance and measurement uncertainty in Annex F for Inter-Freq measurement test cases	15.1.0
2019-06	RAN#84	R5-195017	0129	1	F	Addition of default configuration in Annex H	15.1.0
2019-06	RAN#84	R5-195018	0143	1	F	Update of 6.3.2.2.1 random access	15.1.0
2019-06	RAN#84	R5-195019	0144	1	F	Update of 6.3.2.2.2 non-contention random access	15.1.0
2019-06	RAN#84	R5-195020	0151	1	F	Updated to EN-DC FR1 RRM tests in clause 4.6.1	15.1.0
2019-06	RAN#84	R5-195021	0207	1	F	Modification of EN-DC FR1 TAAA	15.1.0
2019-06	RAN#84	R5-195024	0199	1	F	Modification of EN-DC FR1 SSB RLM OOS in non-DRX	15.1.0
2019-06	RAN#84	R5-195025	0200	1	F	Modification of EN-DC FR1 SSB RLM OOS in DRX	15.1.0
2019-06	RAN#84	R5-195026	0201	1	F	Modification of NR SA FR1 TAAA	15.1.0
2019-06	RAN#84	R5-195027	0202	1	F	Modification of SA FR1 SSB RLM OOS in non-DRX	15.1.0
2019-06	RAN#84	R5-195028	0203	1	F	Modification of SA FR1 SSB RLM OOS in DRX	15.1.0
2019-06	RAN#84	R5-195029	0204	1	F	Modification of EN-DC FR2 TAAA	15.1.0
2019-06	RAN#84	R5-195030	0205	1	F	Modification of EN-DC FR2 SSB RLM OOS in non-DRX	15.1.0
2019-06	RAN#84	R5-195031	0206	1	F	Modification of EN-DC FR2 SSB RLM OOS in DRX	15.1.0
2019-06	RAN#84	R5-195032	0219	1	F	Update to EN-DC FR2 RLM IS non-DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-195033	0220	1	F	Update to EN-DC FR2 RLM IS DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-195034	0221	1	F	Addition of EN-DC FR2 Transmit Timing Accuracy tests	15.1.0
2019-06	RAN#84	R5-195035	0209	1	F	Update to EN-DC FR1 RLM IS non-DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-195036	0150	1	F	Correction to EN-DC FR1 UE transmit timing accuracy TC 4.4.1.1	15.1.0
2019-06	RAN#84	R5-195037	0155	1	F	Updated to cell configuration mapping table for RRM tests	15.1.0
2019-06	RAN#84	R5-195038	0147	1	F	Introduction of TC 6.5.2.1 NR SA FR1 interruptions during measurements on deactivated NR SCC	15.1.0
2019-06	RAN#84	R5-195039	0178	1	F	Correction of 5G RRM Test Case 5.6.2.6	15.1.0
2019-06	RAN#84	R5-195040	0166	1	F	Correction of default message content for RRM in Annex H	15.1.0
2019-06	RAN#84	R5-195041	0217	1	F	Update to NR SA FR1 RLM IS non-DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-195042	0218	1	F	Update to NR SA FR1 RLM IS DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-195043	0215	1	F	Update to EN-DC FR1 RLM IS non-DRX test with SSB-based RLM RS	15.1.0
2019-06	RAN#84	R5-195044	0187	1	F	Correction of 5G RRM Test Case 7.6.2.1	15.1.0
2019-06	RAN#84	R5-195045	0103	1	F	Update of EN-DC RLM out-of-sync in non-DRX test case 4.5.1.5	15.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-06	RAN#84	R5-195099	0223	-	F	RRM implementation of FR2 UL demod OTA tests using single pol Rx TE	15.1.0
2019-06	RAN#84	R5-195173	0167	1	F	Correction of Minimum conformance requirements 4.6.2.0	15.1.0
2019-06	RAN#84	R5-195174	0168	1	F	Correction of 5G RRM Test Case 4.6.2.1 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195175	0169	1	F	Correction of 5G RRM Test Case 4.6.2.2 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195176	0170	1	F	Correction of 5G RRM Test Case 4.6.2.3 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195177	0171	1	F	Correction of 5G RRM Test Case 4.6.2.4 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195179	0172	1	F	Correction of Minimum conformance requirements 5.6.2.0	15.1.0
2019-06	RAN#84	R5-195182	0142	1	F	Addition of FR1-E-UTRAN event-triggered reporting in DRX test case 6.6.3.2	15.1.0
2019-06	RAN#84	R5-195185	0158	1	F	Update of FR1 Test tolerance and uncertainties in AnnexF	15.1.0
2019-06	RAN#84	R5-195186	0182	1	F	Correction of 5G RRM Test Case 6.6.2.1 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195187	0183	1	F	Correction of 5G RRM Test Case 6.6.2.2 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195188	0184	1	F	Correction of 5G RRM Test Case 6.6.2.3 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195189	0185	1	F	Correction of 5G RRM Test Case 6.6.2.4 with FR1 Test tolerance	15.1.0
2019-06	RAN#84	R5-195445	0152	2	F	Updated to SA FR1 RRM tests in clause 6.6.3	15.1.0
2019-06	RAN#84	-	-	-	-	Administrative release upgrade to match the release of 3GPP TS 38.508-1 and TS 38.521-1 which were upgraded at RAN#84 to Rel-16 due to Rel-16 relevant CR(s)	16.0.0
2019-09	RAN#85	R5-195563	0228	-	F	Addition of 5.6.1.0 minimum requirements	16.1.0
2019-09	RAN#85	R5-195568	0233	-	F	Update of 6.1.1.2 inter-freq cell re-selection	16.1.0
2019-09	RAN#85	R5-195569	0234	-	F	Update of 6.1.2.1 inter-RAT cell re-selection to higher priority	16.1.0
2019-09	RAN#85	R5-195571	0236	-	F	Update of 6.3.1.4 inter-RAT handover to known cell	16.1.0
2019-09	RAN#85	R5-195573	0238	-	F	Update Test Tolerance of 6.3.2.1.1 intra-freq RRC re-establishment	16.1.0
2019-09	RAN#85	R5-195574	0239	-	F	Update Test Tolerance of 6.3.2.1.2 inter-freq RRC re-establishment	16.1.0
2019-09	RAN#85	R5-195575	0240	-	F	Update Test Tolerance of 6.3.2.3.1 NR RRC redirection	16.1.0
2019-09	RAN#85	R5-195576	0241	-	F	Update Test Tolerance of 6.3.2.3.2 inter-RAT RRC redirection	16.1.0
2019-09	RAN#85	R5-195577	0242	-	F	Update of 6.5.1.5 RLM out-of-sync non-DRX	16.1.0
2019-09	RAN#85	R5-195578	0243	-	F	Update of 6.5.1.6 RLM in-sync non-DRX	16.1.0
2019-09	RAN#85	R5-195579	0244	-	F	Update of 6.5.1.7 RLM out-of-sync in DRX	16.1.0
2019-09	RAN#85	R5-195580	0245	-	F	Update of 6.5.1.8 RLM in-sync in DRX	16.1.0
2019-09	RAN#85	R5-195581	0246	-	F	Update of 6.5.5.3 CSI-RS-based BFD non-DRX	16.1.0
2019-09	RAN#85	R5-195582	0247	-	F	Update of 6.5.5.4 CSI-RS-based BFD in DRX	16.1.0
2019-09	RAN#85	R5-195596	0248	-	F	Addition of minimum conformance requirements for FR2 EN-DC CSI-RS based RLM	16.1.0
2019-09	RAN#85	R5-195601	0253	-	F	Addition of minimum conformance requirements for FR2 EN-DC CSI-RS based BFD	16.1.0
2019-09	RAN#85	R5-195604	0256	-	F	Addition of minimum conformance requirements for SA FR2 reselection	16.1.0
2019-09	RAN#85	R5-195605	0257	-	F	Addition of NR test case 7.1.1.1-intra freq reselection	16.1.0
2019-09	RAN#85	R5-195606	0258	-	F	Addition of NR test case 7.1.1.2-inter freq reselection	16.1.0
2019-09	RAN#85	R5-195608	0260	-	F	Addition of NR test case 8.4.2.1-without SBI non-DRX	16.1.0
2019-09	RAN#85	R5-195609	0261	-	F	Addition of NR test case 8.4.2.2-without SBI DRX	16.1.0
2019-09	RAN#85	R5-195610	0262	-	F	Addition of NR test case 8.4.2.3-with SBI non-DRX	16.1.0
2019-09	RAN#85	R5-195611	0263	-	F	Addition of NR test case 8.4.2.4-with SBI DRX	16.1.0
2019-09	RAN#85	R5-195612	0264	-	F	Addition of minimum conformance requirements for FR1 EN-DC CSI-RS based RLM	16.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-09	RAN#85	R5-195623	0275	-	F	Correction of NR test case 5.5.2.1-interruption transition DRX sync	16.1.0
2019-09	RAN#85	R5-195624	0276	-	F	Correction of NR test case 5.5.2.2-interruption transition DRX async	16.1.0
2019-09	RAN#85	R5-195625	0277	-	F	Correction of NR test case 5.5.2.3-interruption NR deactivated SCell sync	16.1.0
2019-09	RAN#85	R5-195626	0278	-	F	Correction of NR test case 5.5.2.4-interruption NR deactivated SCell async	16.1.0
2019-09	RAN#85	R5-195627	0279	-	F	Correction of NR test case 5.5.2.5-interruption LTE deactivated SCell sync	16.1.0
2019-09	RAN#85	R5-195628	0280	-	F	Correction of NR test case 5.5.2.6-interruption LTE deactivated SCell async	16.1.0
2019-09	RAN#85	R5-195629	0281	-	F	Correction of NR test case 7.5.5.1-SSB BFD non-DRX	16.1.0
2019-09	RAN#85	R5-195630	0282	-	F	Correction of NR test case 7.5.5.2-SSB BFD DRX	16.1.0
2019-09	RAN#85	R5-195631	0283	-	F	Correction of NR test case 7.5.5.3-CSI-RS BFD non-DRX	16.1.0
2019-09	RAN#85	R5-195632	0284	-	F	Correction of NR test case 7.5.5.4-CSI-RS BFD DRX	16.1.0
2019-09	RAN#85	R5-195633	0285	-	F	Correction of NR test case 7.6.1.1-without gap non-DRX	16.1.0
2019-09	RAN#85	R5-195634	0286	-	F	Correction of NR test case 7.6.1.2-without gap DRX	16.1.0
2019-09	RAN#85	R5-195636	0288	-	F	Correction of NR test case 7.6.1.4-with gap DRX	16.1.0
2019-09	RAN#85	R5-196140	0295	-	F	Update NR operating band groups	16.1.0
2019-09	RAN#85	R5-196250	0296	-	F	Correction to EN-DC FR1 event-triggered reporting without gap TC 4.6.1.1 and 4.6.1.2	16.1.0
2019-09	RAN#85	R5-196503	0301	-	F	Updated to EN-DC FR1 RRM tests in clause 4.5.3	16.1.0
2019-09	RAN#85	R5-196504	0302	-	F	Updated to EN-DC FR2 RRM tests in clause 5.5.3	16.1.0
2019-09	RAN#85	R5-196547	0304	-	F	Update of FR1 Test tolerance and uncertainties in AnnexF	16.1.0
2019-09	RAN#85	R5-196601	0306	-	F	Correction of the reference for test frequencies and test mode - Chapter 4	16.1.0
2019-09	RAN#85	R5-196602	0307	-	F	Correction of the reference for test frequencies and test mode - Chapter 6	16.1.0
2019-09	RAN#85	R5-196603	0308	-	F	Editorial Corrections to section 5.5	16.1.0
2019-09	RAN#85	R5-196659	0309	-	F	Editorial corrections of Annex A	16.1.0
2019-09	RAN#85	R5-196660	0310	-	F	Correction of RRM Test Case 7.3.2.1.1	16.1.0
2019-09	RAN#85	R5-196661	0311	-	F	Correction of RRM Test Case 7.3.2.1.2	16.1.0
2019-09	RAN#85	R5-196662	0312	-	F	Correction of cell configuration mapping for RRM Test Cases in Annex E.3	16.1.0
2019-09	RAN#85	R5-196666	0316	-	F	Correction of RRM Test Case 5.6.2.1	16.1.0
2019-09	RAN#85	R5-196667	0317	-	F	Correction of RRM Test Case 5.6.2.2	16.1.0
2019-09	RAN#85	R5-196668	0318	-	F	Correction of RRM Test Case 5.6.2.3	16.1.0
2019-09	RAN#85	R5-196669	0319	-	F	Correction of RRM Test Case 5.6.2.4	16.1.0
2019-09	RAN#85	R5-196670	0320	-	F	Correction of RRM Test Case 5.6.2.5	16.1.0
2019-09	RAN#85	R5-196671	0321	-	F	Correction of RRM Test Case 5.6.2.6	16.1.0
2019-09	RAN#85	R5-196672	0322	-	F	Correction of RRM Test Case 5.6.2.7	16.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-09	RAN#85	R5-196673	0323	-	F	Correction of RRM Test Case 5.6.2.8	16.1.0
2019-09	RAN#85	R5-196674	0324	-	F	Addition of minimum conformance requirements for L1-RSRP measurement RRM FR1 test cases	16.1.0
2019-09	RAN#85	R5-196675	0325	-	F	Addition of SSB based L1-RSRP measurement RRM test case 4.6.3.1	16.1.0
2019-09	RAN#85	R5-196676	0326	-	F	Addition of SSB based L1-RSRP measurement RRM test case 4.6.3.2	16.1.0
2019-09	RAN#85	R5-196677	0327	-	F	Addition of CSI-RS based L1-RSRP measurement RRM test case 4.6.3.3	16.1.0
2019-09	RAN#85	R5-196679	0329	-	F	Addition of minimum conformance requirements for L1-RSRP measurement RRM FR2 test cases	16.1.0
2019-09	RAN#85	R5-196680	0330	-	F	Addition of SSB based L1-RSRP measurement RRM test case 5.6.3.1	16.1.0
2019-09	RAN#85	R5-196681	0331	-	F	Addition of SSB based L1-RSRP measurement RRM test case 5.6.3.2	16.1.0
2019-09	RAN#85	R5-196682	0332	-	F	Addition of CSI-RS based L1-RSRP measurement RRM test case 5.6.3.3	16.1.0
2019-09	RAN#85	R5-196735	0334	-	F	Editorial to fix conversion issues with two equations	16.1.0
2019-09	RAN#85	R5-196736	0335	-	F	Adding Chapter 8	16.1.0
2019-09	RAN#85	R5-196737	0336	-	F	New test 4.5.7.1	16.1.0
2019-09	RAN#85	R5-196738	0337	-	F	New test 4.5.5.1	16.1.0
2019-09	RAN#85	R5-196739	0338	-	F	New test 4.5.5.2	16.1.0
2019-09	RAN#85	R5-196740	0339	-	F	New test 4.7.3.1	16.1.0
2019-09	RAN#85	R5-196741	0340	-	F	New test 4.7.3.2	16.1.0
2019-09	RAN#85	R5-196742	0341	-	F	New test 6.7.3.1	16.1.0
2019-09	RAN#85	R5-196743	0342	-	F	New test 6.7.3.2	16.1.0
2019-09	RAN#85	R5-196925	0351	-	F	Modification of EN-DC FR2 TAAA Section 5.4.3.1	16.1.0
2019-09	RAN#85	R5-196943	0360	-	F	Addition of CSI-RS based L1-RSRP measurement RRM test case 5.6.3.4	16.1.0
2019-09	RAN#85	R5-197361	0357	1	F	Modification of SA FR1 TAAA Section 6.4.3.1	16.1.0
2019-09	RAN#85	R5-197364	0290	1	F	Update of NR UE Tx Timing Accuracy Test	16.1.0
2019-09	RAN#85	R5-197366	0235	1	F	Update Test Tolerance of 6.1.2.2 inter-RAT cell re-selection to lower priority	16.1.0
2019-09	RAN#85	R5-197396	0346	1	F	Update NSA Event trigger reporting test case	16.1.0
2019-09	RAN#85	R5-197397	0352	1	F	Modification of EN-DC FR2 SSB-RLM OOS Section 5.5.1.1	16.1.0
2019-09	RAN#85	R5-197398	0353	1	F	Modification of EN-DC FR2 SSB-RLM OOS in DRX Section 5.5.1.3	16.1.0
2019-09	RAN#85	R5-197399	0354	1	F	Modification of Synchronous EN-DC FR2 RRC DL BWP Switch in non-DRX Section 5.5.6.2.1	16.1.0
2019-09	RAN#85	R5-197400	0355	1	F	Modification of SA FR1 Handover with unknown Target Cell Section 6.3.1.2	16.1.0
2019-09	RAN#85	R5-197401	0356	1	F	Modification of SA FR1-FR1 Handover with unknown Target Cell Section 6.3.1.3	16.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-09	RAN#85	R5-197402	0224	1	F	Update of 4.6.1.3 event with gap non-DRX	16.1.0
2019-09	RAN#85	R5-197403	0225	1	F	Update of 4.6.1.4 event with gap in DRX	16.1.0
2019-09	RAN#85	R5-197404	0226	1	F	Update of 4.6.1.5 event without gap with ssb index	16.1.0
2019-09	RAN#85	R5-197405	0227	1	F	Update of 4.6.1.6 event with gap with ssb index	16.1.0
2019-09	RAN#85	R5-197406	0314	1	F	Correction of 5G RRM Inter Frequency measurements EN-DC test cases	16.1.0
2019-09	RAN#85	R5-197407	0229	1	F	Addition of 5.6.1.1 event without gap non-DRX	16.1.0
2019-09	RAN#85	R5-197408	0230	1	F	Addition of 5.6.1.2 event without gap in DRX	16.1.0
2019-09	RAN#85	R5-197409	0231	1	F	Addition of 5.6.1.3 event with gap non-DRX	16.1.0
2019-09	RAN#85	R5-197410	0232	1	F	Addition of 5.6.1.4 event with gap in DRX	16.1.0
2019-09	RAN#85	R5-197411	0249	1	F	Addition of NR test case 5.5.1.5-CSI-RS RLM OOS non-DRX	16.1.0
2019-09	RAN#85	R5-197412	0250	1	F	Addition of NR test case 5.5.1.6-CSI-RS RLM IS non-DRX	16.1.0
2019-09	RAN#85	R5-197413	0251	1	F	Addition of NR test case 5.5.1.7-CSI-RS RLM OOS DRX	16.1.0
2019-09	RAN#85	R5-197414	0252	1	F	Addition of NR test case 5.5.1.8-CSI-RS RLM IS DRX	16.1.0
2019-09	RAN#85	R5-197415	0254	1	F	Addition of NR test case 5.5.5.3-CSI-RS BFD non-DRX	16.1.0
2019-09	RAN#85	R5-197416	0255	1	F	Addition of NR test case 5.5.5.4-CSI-RS BFD DRX	16.1.0
2019-09	RAN#85	R5-197417	0259	1	F	Addition of minimum conformance requirements for inter-RAT NR measurements	16.1.0
2019-09	RAN#85	R5-197418	0289	1	F	Correction of default configuration in annex H	16.1.0
2019-09	RAN#85	R5-197419	0303	1	F	Updated to cell configuration mapping table for RRM tests	16.1.0
2019-09	RAN#85	R5-197420	0313	1	F	Correction of default message content for RRM in Annex H	16.1.0
2019-09	RAN#85	R5-197422	0305	1	F	Clarification on NE-DC tests for RRM	16.1.0
2019-09	RAN#85	R5-197423	0343	1	F	Addition RRM FR2 test setups into TS 38.533	16.1.0
2019-09	RAN#85	R5-197424	0345	1	F	Update TDD UL-DL Config based on TS 38.133	16.1.0
2019-09	RAN#85	R5-197425	0347	1	F	Modification of EN-DC FR1 UE Transmit Timing Section 4.4.1.1	16.1.0
2019-09	RAN#85	R5-197426	0265	1	F	Correction of NR test case 4.5.1.5-CSI-RS RLM OOS non-DRX	16.1.0
2019-09	RAN#85	R5-197427	0266	1	F	Correction of NR test case 4.5.1.6-CSI-RS RLM IS non-DRX	16.1.0
2019-09	RAN#85	R5-197428	0267	1	F	Correction of NR test case 4.5.1.7-CSI-RS RLM OOS DRX	16.1.0
2019-09	RAN#85	R5-197429	0268	1	F	Correction of NR test case 4.5.1.8-CSI-RS RLM IS DRX	16.1.0
2019-09	RAN#85	R5-197430	0269	1	F	Correction of NR test case 4.5.2.1-interruption transition DRX sync	16.1.0
2019-09	RAN#85	R5-197431	0270	1	F	Correction of NR test case 4.5.2.2-interruption transition DRX async	16.1.0
2019-09	RAN#85	R5-197432	0271	1	F	Correction of NR test case 4.5.2.3-interruption NR deactivated SCell sync	16.1.0
2019-09	RAN#85	R5-197433	0272	1	F	Correction of NR test case 4.5.2.4-interruption NR deactivated SCell async	16.1.0
2019-09	RAN#85	R5-197434	0273	1	F	Correction of NR test case 4.5.2.5-interruption LTE deactivated SCell sync	16.1.0
2019-09	RAN#85	R5-197435	0274	1	F	Correction of NR test case 4.5.2.6-interruption LTE deactivated SCell async	16.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-09	RAN#85	R5-197436	0328	1	F	Addition of CSI-RS based L1-RSRP measurement RRM test case 4.6.3.4	16.1.0
2019-09	RAN#85	R5-197437	0315	1	F	Correction of 5G RRM Inter Frequency measurements SA test cases	16.1.0
2019-09	RAN#85	R5-197570	0294	1	F	Annex E and F FR1 Test tolerance update for SS-RSRP	16.1.0
2019-09	RAN#85	R5-197584	0344	1	F	Addition Annex for RRM OTA procedures in TS 38.533	16.1.0
2019-09	RAN#85	R5-197607	0287	1	F	Correction of NR test case 7.6.1.3-with gap non-DRX.	16.1.0
2019-09	RAN#85	R5-197611	0237	1	F	Update of 6.3.1.5 inter-RAT handover to unknown cell	16.1.0
2019-09	RAN#85	R5-197612	0291	1	F	Update of SSB-based RLM in-sync test cases	16.1.0
2019-09	RAN#85	R5-197624	0297	1	F	Correction to PRACH configurations for FR1	16.1.0
2019-09	RAN#85	R5-197651	0348	2	F	Modification of EN-DC FR1 TAAA Section 4.4.3.1	16.1.0
2019-09	RAN#85	R5-197652	0349	2	F	Modification of EN-DC FR1 SSB-RLM OOS Section 4.5.1.1	16.1.0
2019-09	RAN#85	R5-197653	0350	2	F	Modification of EN-DC FR1 SSB-RLM OOS DRX Section 4.5.1.3	16.1.0
2019-09	RAN#85	R5-197654	0358	2	F	Modification of SA FR1 SSB RLM OOS in non-DRX Section 6.5.1.1	16.1.0
2019-09	RAN#85	R5-197655	0359	2	F	Modification of SA FR1 SSB RLM OOS in DRX Section 6.5.1.3	16.1.0
2019-09	RAN#85	R5-197656	0292	2	F	FR1 Test tolerance update for SS-RSRP NSA FR1 test cases	16.1.0
2019-09	RAN#85	R5-197657	0300	2	F	Correction to EN-DC FR1 radio link monitoring TC 4.5.1.1 and 4.5.1.2	16.1.0
2019-09	RAN#85	R5-197658	0293	2	F	FR1 Test tolerance update for SS-RSRP SA FR1 test cases	16.1.0
2019-12	RAN#86	R5-197794	0369	-	F	Update Test Tolerance of 4.5.2.1 interruptions active and non-active in sync	16.2.0
2019-12	RAN#86	R5-197795	0370	-	F	Update Test Tolerance of 4.5.2.2 interruptions active and non-active in async	16.2.0
2019-12	RAN#86	R5-197804	0379	-	F	Update Test Tolerance of 6.6.3.1 inter-RAT measurement non-DRX	16.2.0
2019-12	RAN#86	R5-197805	0380	-	F	Update Test Tolerance of 6.6.3.2 inter-RAT measurement DRX	16.2.0
2019-12	RAN#86	R5-197813	0382	-	F	Addition of minimum conformance requirements 5.5.5.0.1-SSB based BFD	16.2.0
2019-12	RAN#86	R5-197814	0383	-	F	Addition of minimum conformance requirements 8.2.1.0-inter-RAT reselection	16.2.0
2019-12	RAN#86	R5-197815	0384	-	F	Addition of minimum conformance requirements 8.3.1.0-inter-RAT handover	16.2.0
2019-12	RAN#86	R5-197816	0385	-	F	Addition of minimum conformance requirements 8.4.1.0-inter-RAT SFTD delay	16.2.0
2019-12	RAN#86	R5-197817	0386	-	F	Addition of minimum conformance requirements 8.5.1.0-inter-RAT SFTD accuracy	16.2.0
2019-12	RAN#86	R5-197820	0389	-	F	Addition of NR test case 8.2.1.1-high priority NR reselection	16.2.0
2019-12	RAN#86	R5-198029	0394	-	F	Update NSA SS-RSRP tests for 4Rx connection diagram	16.2.0
2019-12	RAN#86	R5-198032	0397	-	F	Align Annex D to TS 38.133	16.2.0
2019-12	RAN#86	R5-198289	0400	-	F	Correction of PRACH index in 6.1.1.1, 6.3.2.2.1 and 6.3.2.2.2	16.2.0
2019-12	RAN#86	R5-198415	0404	-	F	Correction to NR SA FR1 timing advance adjustment accuracy TC 6.4.3.1	16.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-12	RAN#86	R5-198416	0405	-	F	Correction to intra-frequency event-triggered reporting TC 6.6.1.1, 6.6.1.2, 6.6.1.3	16.2.0
2019-12	RAN#86	R5-198421	0410	-	F	Correction to FR1 SA random access test cases	16.2.0
2019-12	RAN#86	R5-198472	0412	-	F	Correct message contents for 5.6.2.x tests	16.2.0
2019-12	RAN#86	R5-198477	0416	-	F	Correction to Annex E	16.2.0
2019-12	RAN#86	R5-198518	0418	-	F	Update PUSCH symbol length as message exception in 6.4.1.1 in TS 38.533	16.2.0
2019-12	RAN#86	R5-198519	0419	-	F	Update 4.4.3.1 test requirements	16.2.0
2019-12	RAN#86	R5-198545	0420	-	F	Update 4.7.1.1.1 test requirements in TS 38.533	16.2.0
2019-12	RAN#86	R5-198549	0421	-	F	Updated to cell configuration mapping table for RRM tests	16.2.0
2019-12	RAN#86	R5-198550	0422	-	F	Minimum conformance requirements updated for 5G RRM Inter-RAT measurements tests	16.2.0
2019-12	RAN#86	R5-198551	0423	-	F	Minimum conformance requirements updated for 5G RRM SCell activation and deactivation delay tests	16.2.0
2019-12	RAN#86	R5-198558	0428	-	F	5G RRM Spec 3GPP style correction in clause 4 and 5	16.2.0
2019-12	RAN#86	R5-198572	0429	-	F	Correction of minimum conformance requirements 4.6.2.0	16.2.0
2019-12	RAN#86	R5-198575	0432	-	F	Correction of minimum conformance requirements 5.6.3.0	16.2.0
2019-12	RAN#86	R5-198577	0434	-	F	Correction of clause 3 definitions, symbols and abbreviations	16.2.0
2019-12	RAN#86	R5-198578	0435	-	F	Correction of RRM Test Case 4.6.3.1	16.2.0
2019-12	RAN#86	R5-198581	0438	-	F	Correction of RRM Test Case 4.6.3.4	16.2.0
2019-12	RAN#86	R5-198582	0439	-	F	Correction of RRM Test Case 5.6.2.1	16.2.0
2019-12	RAN#86	R5-198583	0440	-	F	Correction of RRM Test Case 5.6.2.2	16.2.0
2019-12	RAN#86	R5-198584	0441	-	F	Correction of RRM Test Case 5.6.2.3	16.2.0
2019-12	RAN#86	R5-198585	0442	-	F	Correction of RRM Test Case 5.6.2.4	16.2.0
2019-12	RAN#86	R5-198586	0443	-	F	Correction of RRM Test Case 5.6.2.5	16.2.0
2019-12	RAN#86	R5-198587	0444	-	F	Correction of RRM Test Case 5.6.2.6	16.2.0
2019-12	RAN#86	R5-198588	0445	-	F	Correction of RRM Test Case 5.6.2.7	16.2.0
2019-12	RAN#86	R5-198589	0446	-	F	Correction of RRM Test Case 5.6.2.8	16.2.0
2019-12	RAN#86	R5-198594	0451	-	F	Correction of RRM Test Case 7.6.2.1	16.2.0
2019-12	RAN#86	R5-198595	0452	-	F	Correction of RRM Test Case 7.6.2.2	16.2.0
2019-12	RAN#86	R5-198596	0453	-	F	Correction of RRM Test Case 7.6.2.3	16.2.0
2019-12	RAN#86	R5-198597	0454	-	F	Correction of RRM Test Case 7.6.2.4	16.2.0
2019-12	RAN#86	R5-198598	0455	-	F	Correction of RRM Test Case 7.6.2.5	16.2.0
2019-12	RAN#86	R5-198599	0456	-	F	Correction of RRM Test Case 7.6.2.6	16.2.0
2019-12	RAN#86	R5-198601	0458	-	F	Correction of RRM Test Case 7.6.2.8	16.2.0
2019-12	RAN#86	R5-198692	0471	-	F	Addition of RRM Test Case 6.6.4.1	16.2.0
2019-12	RAN#86	R5-198693	0472	-	F	Addition of RRM Test Case 6.6.4.2	16.2.0
2019-12	RAN#86	R5-198694	0473	-	F	Addition of RRM Test Case 6.6.4.3	16.2.0

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2019-12	RAN#86	R5-198695	0474	-	F	Addition of RRM Test Case 6.6.4.4	16.2.0
2019-12	RAN#86	R5-198696	0475	-	F	Addition of RRM Test Case 7.6.3.1	16.2.0
2019-12	RAN#86	R5-198697	0476	-	F	Addition of RRM Test Case 7.6.3.2	16.2.0
2019-12	RAN#86	R5-198698	0477	-	F	Addition of RRM Test Case 7.6.3.3	16.2.0
2019-12	RAN#86	R5-198699	0478	-	F	Addition of RRM Test Case 7.6.3.4	16.2.0
2019-12	RAN#86	R5-199364	0365	1	F	Update Test Tolerance of 4.5.1.5 RLM OOS non-DRX	16.2.0
2019-12	RAN#86	R5-199365	0367	1	F	Update Test Tolerance of 4.5.1.7 RLM OOS DRX	16.2.0
2019-12	RAN#86	R5-199366	0375	1	F	Update Test Tolerance of 6.5.1.5 SA RLM OOS non-DRX	16.2.0
2019-12	RAN#86	R5-199367	0377	1	F	Update Test Tolerance of 6.5.1.7 SA RLM OOS DRX	16.2.0
2019-12	RAN#86	R5-199368	0366	1	F	Update Test Tolerance of 4.5.1.6 RLM in-sync non-DRX	16.2.0
2019-12	RAN#86	R5-199369	0368	1	F	Update Test Tolerance of 4.5.1.8 RLM in-sync DRX	16.2.0
2019-12	RAN#86	R5-199370	0376	1	F	Update Test Tolerance of 6.5.1.6 SA RLM in-sync non-DRX	16.2.0
2019-12	RAN#86	R5-199371	0378	1	F	Update Test Tolerance of 6.5.1.8 SA RLM in-sync DRX	16.2.0
2019-12	RAN#86	R5-199379	0417	1	F	Update 4.4.1.1 test procedure in TS 38.533	16.2.0
2019-12	RAN#86	R5-199380	0479	1	F	Update 4.5.1.1 and 4.5.1.2 in TS 38.533	16.2.0
2019-12	RAN#86	R5-199381	0406	1	F	Correction to NR SA FR1 SS-RSRP absolute and relative measurement accuracy Intra-frequency measurements	16.2.0
2019-12	RAN#86	R5-199389	0402	1	F	Correction to NR SA Cell re-selection tests	16.2.0
2019-12	RAN#86	R5-199390	0436	1	F	Correction of RRM Test Case 4.6.3.2	16.2.0
2019-12	RAN#86	R5-199391	0437	1	F	Correction of RRM Test Case 4.6.3.3	16.2.0
2019-12	RAN#86	R5-199392	0387	1	F	Addition of NR test case 5.5.5.1-ENDC FR2 SSB BFD no-DRX	16.2.0
2019-12	RAN#86	R5-199393	0388	1	F	Addition of NR test case 5.5.5.2-ENDC FR2 SSB BFD DRX	16.2.0
2019-12	RAN#86	R5-199394	0431	1	F	Correction of minimum conformance requirements 5.6.2.0	16.2.0
2019-12	RAN#86	R5-199395	0395	1	F	Update SA SS-RSRP tests for 4Rx connection diagram	16.2.0
2019-12	RAN#86	R5-199396	0403	1	F	Correction to NR SA FR1 UE transmit timing accuracy TC 6.4.1.1	16.2.0
2019-12	RAN#86	R5-199397	0457	1	F	Correction of RRM Test Case 7.6.2.7	16.2.0
2019-12	RAN#86	R5-199398	0361	1	F	Add AoA Setup 4 for FR2 RRM Test cases	16.2.0
2019-12	RAN#86	R5-199399	0390	1	F	Addition of NR test case 8.3.1.1-known handover	16.2.0
2019-12	RAN#86	R5-199400	0391	1	F	Addition of NR test case 8.4.1.1-SFTD delay non-DRX	16.2.0
2019-12	RAN#86	R5-199401	0392	1	F	Addition of NR test case 8.4.1.2-SFTD delay DRX	16.2.0
2019-12	RAN#86	R5-199402	0393	1	F	Addition of NR test case 8.5.1.1-SFTD accuracy	16.2.0
2019-12	RAN#86	R5-199403	0396	1	F	Align Annex A to TS 38.133	16.2.0
2019-12	RAN#86	R5-199404	0413	1	F	Clean up RRM message contents in Annex H	16.2.0
2019-12	RAN#86	R5-199405	0424	1	F	New 5G RRM Inter-RAT measurement TC 8.4.2.5	16.2.0
2019-12	RAN#86	R5-199406	0425	1	F	New 5G RRM Inter-RAT measurement TC 8.4.2.6	16.2.0
2019-12	RAN#86	R5-199407	0426	1	F	New 5G RRM Inter-RAT measurement TC 8.4.2.7	16.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-12	RAN#86	R5-199408	0427	1	F	New 5G RRM Inter-RAT measurement TC 8.4.2.8	16.2.0
2019-12	RAN#86	R5-199409	0433	1	F	Correction of message content in Annex H	16.2.0
2019-12	RAN#86	R5-199436	0470	1	F	Introduction of n29 and n65 to 38.533	16.2.0
2019-12	RAN#86	R5-199499	0401	1	F	Correction to EN-DC FR1 UE transmit timing accuracy TC 4.4.1.1	16.2.0
2019-12	RAN#86	R5-199515	0381	1	F	Update Test Tolerance in Annex F	16.2.0
2019-12	RAN#86	R5-199517	0481	1	F	Update General parameters in test case 4.5.1.2	16.2.0
2019-12	RAN#86	R5-199533	0482	1	F	Update NSA FR2 RLM IS non-DRX test	16.2.0
2019-12	RAN#86	R5-199534	0483	1	F	Update NSA FR2 RLM IS test with DRX	16.2.0
2019-12	RAN#86	R5-199535	0484	1	F	Update NSA FR2 Timing Accuracy Test	16.2.0
2019-12	RAN#86	R5-199544	0399	1	F	Add applicable test methods for RRM FR2	16.2.0
2019-12	RAN#86	R5-199550	0463	1	F	Addition of NR SA FR1 Handover with known Target Cell Section 6.3.1.1	16.2.0
2019-12	RAN#86	R5-199551	0464	1	F	Modification of NR SA FR1 Handover with unknown Target Cell Section 6.3.1.2	16.2.0
2019-12	RAN#86	R5-199552	0465	1	F	Modification of NR SA FR1-FR1 Handover with unknown Target Cell Section 6.3.1.3	16.2.0
2019-12	RAN#86	R5-199583	0409	1	F	Correction to FR1 NSA random access test cases	16.2.0
2020-03	RAN#87	R5-200822	0544	-	F	Correction to Test Applicability for 4.3.2.2.2 Non-contention based random access test in FR1 for PSCell in EN-DC	16.3.0
2020-03	RAN#87	R5-200823	0545	-	F	Correction to SRS Configuration for 4.4.3.1 EN-DC FR1 timing advance adjustment accuracy	16.3.0
2020-03	RAN#87	R5-200829	0551	-	F	Correction to Message Exception for 4.6.1.5 EN-DC FR1 event-triggered reporting without gap in non-DRX with SSB time index detection	16.3.0
2020-03	RAN#87	R5-200833	0555	-	F	Correction to Test Applicability for 6.3.2.2.2 Non-Contention based random access test in FR1 for NR standalone	16.3.0
2020-03	RAN#87	R5-200834	0556	-	F	Correction to SRS Configuration for 6.4.3.1 NR SA FR1 timing advance adjustment accuracy	16.3.0
2020-03	RAN#87	R5-200839	0561	-	F	Correction to Message Exception for 6.6.1.5 NR SA FR1 event-triggered reporting without gap in non-DRX with SSB time index detection	16.3.0
2020-03	RAN#87	R5-200277	0488	-	F	Test tolerance update intra-frequency SS-SINR NSA	16.3.0
2020-03	RAN#87	R5-200278	0489	-	F	Test tolerance update inter-frequency SS-SINR NSA	16.3.0
2020-03	RAN#87	R5-200279	0490	-	F	Test tolerance update inter-frequency SS-RSRP SA	16.3.0
2020-03	RAN#87	R5-200281	0492	-	F	Test tolerance update inter-frequency SS-RSRQ SA	16.3.0
2020-03	RAN#87	R5-200282	0493	-	F	Test tolerance update intra-frequency SS-SINR SA	16.3.0
2020-03	RAN#87	R5-200283	0494	-	F	Test tolerance update inter-frequency SS-SINR SA	16.3.0
2020-03	RAN#87	R5-200306	0497	-	F	Reference SSB configuration correction	16.3.0
2020-03	RAN#87	R5-200421	0508	-	F	Correction to Active UL BWP for intra-frequency event triggered reporting with gap	16.3.0
2020-03	RAN#87	R5-200422	0509	-	F	Correction to EN-DC FR1 event-triggered reporting test cases	16.3.0
2020-03	RAN#87	R5-200423	0510	-	F	Correction to FR1 NR SA E-UTRA cell re-selection test cases	16.3.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-03	RAN#87	R5-200425	0512	-	F	Correction to NR SA FR1 SS-RSRP measurement accuracy tests	16.3.0
2020-03	RAN#87	R5-200427	0514	-	F	Correction to the simulated cell for cell-reselection test cases	16.3.0
2020-03	RAN#87	R5-200428	0515	-	F	Correction to UE transmit timing accuracy test case	16.3.0
2020-03	RAN#87	R5-200564	0524	-	F	Correction to Statistical testing of delay and UE measurement performance in RRM tests	16.3.0
2020-03	RAN#87	R5-200606	0526	-	F	Cell mapping update measurement tests Annex E	16.3.0
2020-03	RAN#87	R5-200607	0527	-	F	Re-submission R5-197804 not implemented	16.3.0
2020-03	RAN#87	R5-200608	0528	-	F	Corrections to SS-RSRP meas accuracy NSA tests	16.3.0
2020-03	RAN#87	R5-200610	0530	-	F	Correct message contents measurement tests	16.3.0
2020-03	RAN#87	R5-200705	0533	-	F	Correction to TC 6.1.1.2 FR1 inter-freq re-selection	16.3.0
2020-03	RAN#87	R5-200708	0536	-	F	Update of TC 6.3.2.3.1 FR1 RRC redirection	16.3.0
2020-03	RAN#87	R5-200709	0537	-	F	Update of TC 6.3.2.3.2 inter-freq RRC redirection	16.3.0
2020-03	RAN#87	R5-200785	0539	-	F	Update of EN-DC SSB-based RLM TC 4.5.1.1, 4.5.1.2, 4.5.1.3 and 4.5.1.4	16.3.0
2020-03	RAN#87	R5-200786	0540	-	F	Update of EN-DC CSI-RS-based RLM TC 4.5.1.5, 4.5.1.6, 4.5.1.7 and 4.5.1.8	16.3.0
2020-03	RAN#87	R5-200787	0541	-	F	Update of NR CSI-RS-based RLM TC 6.5.1.5, 6.5.1.6, 6.5.1.7 and 6.5.1.8	16.3.0
2020-03	RAN#87	R5-200818	0543	-	F	Correction to cell mapping Annex E	16.3.0
2020-03	RAN#87	R5-200858	0569	-	F	Corrections to Table H.3.1-8	16.3.0
2020-03	RAN#87	R5-200916	0538	1	F	Update to test applicability per permitted test method	16.3.0
2020-03	RAN#87	R5-200986	0507	1	F	Core alignment for event-triggered reporting test cases	16.3.0
2020-03	RAN#87	R5-200987	0534	1	F	Update of TC 6.3.2.1.1 FR1 RRC re-establishment	16.3.0
2020-03	RAN#87	R5-200988	0535	1	F	Update of TC 6.3.2.1.2 inter-freq RRC re-establishment	16.3.0
2020-03	RAN#87	R5-201030	0529	1	F	Corrections to SS-RSRP meas accuracy SA tests	16.3.0
2020-03	RAN#87	R5-201039	0485	1	F	Test tolerance update inter-frequency SS-RSRP NSA	16.3.0
2020-03	RAN#87	R5-201040	0486	1	F	Test tolerance update intra-frequency SS-RSRQ NSA	16.3.0
2020-03	RAN#87	R5-201041	0491	1	F	Test tolerance update intra-frequency SS-RSRQ SA	16.3.0
2020-03	RAN#87	R5-201056	0511	1	F	Correction to message contents in 6.6.1.5 and 6.6.1.6	16.3.0
2020-03	RAN#87	R5-201057	0513	1	F	Correction to test description of RRM TC 4.6.1.3 and 4.6.1.6	16.3.0
2020-03	RAN#87	R5-201058	0516	1	F	Update of maximum test system uncertainty for FR1 RRM Test	16.3.0
2020-03	RAN#87	R5-201063	0517	1	F	Update FR1 Test Tolerance of 4.5.2.3 interruptions on NR SCC in sync	16.3.0
2020-03	RAN#87	R5-201064	0518	1	F	Update FR1 Test Tolerance of 4.5.2.4 interruptions on NR SCC in async	16.3.0
2020-03	RAN#87	R5-201071	0552	1	F	Correction to Test Applicability for 4.6.2.2 EN-DC FR1-FR1 event-triggered reporting in DRX	16.3.0
2020-03	RAN#87	R5-201072	0553	1	F	Correction to Test Applicability for 4.6.2.5 EN-DC FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	16.3.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-03	RAN#87	R5-201073	0554	1	F	Correction to Test Applicability for 4.6.2.6 EN-DC FR1-FR1 event-triggered reporting in DRX with SSB time index detection	16.3.0
2020-03	RAN#87	R5-201078	0562	1	F	Correction to Test Applicability for 6.6.2.1 NR SA FR1-FR1 event-triggered reporting in non-DRX	16.3.0
2020-03	RAN#87	R5-201080	0564	1	F	Correction to Test Applicability for 6.6.2.5 NR SA FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	16.3.0
2020-03	RAN#87	R5-201081	0565	1	F	Correction to Test Applicability for 6.6.2.6 NR SA FR1-FR1 event-triggered reporting in DRX with SSB time index detection	16.3.0
2020-03	RAN#87	R5-201082	0571	1	F	Correction to Test Parameters for 4.6.1.1	16.3.0
2020-03	RAN#87	R5-201083	0572	1	F	Correction to Test Parameters for 4.6.1.2	16.3.0
2020-03	RAN#87	R5-201160	0531	1	F	Correct message contents event triggered measurement tests	16.3.0
2020-03	RAN#87	R5-201166	0567	1	F	Update RLM non DRX test cases	16.3.0
2020-03	RAN#87	R5-201167	0568	1	F	Update 4.5.1.4 test case	16.3.0
2020-03	RAN#87	R5-201168	0570	1	F	Clarification 4.4.1.1 test procedure	16.3.0
2020-03	RAN#87	R5-201169	0521	1	F	Update of FR1 Test Tolerance in Annex F	16.3.0
2020-03	RAN#87	R5-201190	0542	1	F	Update of NR SSB-based RLM TC 6.5.1.1, 6.5.1.2, 6.5.1.3 and 6.5.1.4	16.3.0
2020-03	RAN#87	R5-201240	0563	2	F	Correction to Test Applicability for 6.6.2.2 NA SA FR1-FR1 event-triggered reporting in DRX	16.3.0
2020-03	RAN#87	R5-201242	0532	2	F	Correction to Test Applicability for 4.6.2.1 EN-DC FR1-FR1 event-triggered reporting in non-DRX	16.3.0
2020-03	RAN#87	R5-200276	0487	-	F	Test tolerance update inter-frequency SS-RSRQ NSA	16.3.0
2020-03	RAN#87	R5-200284	0495	-	F	Test tolerance update measurement tests Annex F	16.3.0
2020-03	RAN#87	R5-201044	0496	-	F	Test Tolerance and Measurement Uncertainty in Annex F for L1-RSRP measurement test cases	16.3.0
2020-03	RAN#87	R5-201045	0499	1	F	Correction of RRM Test Case 4.6.3.1 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201046	0500	1	F	Correction of RRM Test Case 4.6.3.2 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201047	0501	1	F	Correction of RRM Test Case 4.6.3.3 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201048	0502	1	F	Correction of RRM Test Case 4.6.3.4 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201049	0503	1	F	Correction of RRM Test Case 6.6.4.1 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201050	0504	1	F	Correction of RRM Test Case 6.6.4.2 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201051	0505	1	F	Correction of RRM Test Case 6.6.4.3 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201052	0506	1	F	Correction of RRM Test Case 6.6.4.4 including FR1 Test Tolerance	16.3.0
2020-03	RAN#87	R5-201070	0548	1	F	Correction to Message Exception for 4.5.1.3 EN-DC FR1 radio link monitoring Out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	16.3.0
2020-03	RAN#87	R5-201074	0557	1	F	Correction to Test Parameter for 6.5.1.1 NR SA FR1 radio link monitoring Out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	16.3.0
2020-03	RAN#87	R5-201075	0558	1	F	Correction to Test Procedure for 6.5.1.2 NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	16.3.0

Change history

Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-03	RAN#87	R5-201076	0559	1	F	Correction to Message Exception for 6.5.1.3 NR SA FR1 radio link monitoring Out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	16.3.0
2020-03	RAN#87	R5-201077	0560	1	F	Correction to Message Exception for 6.5.1.4 NR SA FR1 radio link monitoring In-sync test for PSCell configured with SSB-based RLM RS in DRX mode	16.3.0
2020-03	RAN#87	R5-201105	0546	1	F	Correction to Test Parameters for 4.5.1.1 EN-DC FR1 radio link monitoring Out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	16.3.0
2020-03	RAN#87	R5-201106	0547	1	F	Correction to Test Procedure for 4.5.1.2 EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	16.3.0
2020-06	RAN#88	R5-201395	0576	-	F	Correction to NR test case 7.7.1.3.2 SS-RSRP relative accuracy	16.4.0
2020-06	RAN#88	R5-201396	0577	-	F	Correction to NR test case 8.2.1.1 higher priority NR cell reselection	16.4.0
2020-06	RAN#88	R5-201398	0579	-	F	Correction to NR test case 8.4.1.1 SFTD non-DRX	16.4.0
2020-06	RAN#88	R5-201399	0580	-	F	Correction to NR test case 8.4.1.2 SFTD DRX	16.4.0
2020-06	RAN#88	R5-201400	0581	-	F	Correction to NR test case 8.4.2.1 event-triggered without SSB index non-DRX	16.4.0
2020-06	RAN#88	R5-201401	0582	-	F	Correction to NR test case 8.4.2.2 event-triggered without SSB index DRX	16.4.0
2020-06	RAN#88	R5-201402	0583	-	F	Correction to NR test case 8.4.2.3 event-triggered with SSB index non-DRX	16.4.0
2020-06	RAN#88	R5-201403	0584	-	F	Correction to NR test case 8.4.2.4 event-triggered with SSB index DRX	16.4.0
2020-06	RAN#88	R5-201404	0585	-	F	Correction to NR test case 8.5.1.1 SFTD accuracy	16.4.0
2020-06	RAN#88	R5-201405	0586	-	F	Addition to minimum conformance requirement 5.5.5.0.3 - scheduling restriction for BFD and CBD	16.4.0
2020-06	RAN#88	R5-201407	0588	-	F	Addition to minimum conformance requirement 5.5.8.0 - TCI-state switch	16.4.0
2020-06	RAN#88	R5-201408	0589	-	F	Addition to NR test case 5.5.8.1 MAC-CE based TCI switch	16.4.0
2020-06	RAN#88	R5-201409	0590	-	F	Addition to NR test case 5.5.8.2 RRC based TCI switch	16.4.0
2020-06	RAN#88	R5-201412	0593	-	F	Addition to minimum conformance requirements 7.5.1.0.5 - Scheduling restriction for RLM	16.4.0
2020-06	RAN#88	R5-201414	0595	-	F	Addition to minimum Conformance Requirements 7.5.6.1.0 - DCI-based DL active BWP switch	16.4.0
2020-06	RAN#88	R5-201415	0596	-	F	Addition to NR test case 7.5.6.1.3 FR2 DCI-based DL active BWP switch non-DRX	16.4.0
2020-06	RAN#88	R5-201619	0603	-	F	Corrections to 6.7.1.1	16.4.0
2020-06	RAN#88	R5-201676	0614	-	F	Correction to inter-freq measurement TCs for SSB configuration	16.4.0
2020-06	RAN#88	R5-201677	0615	-	F	Correction to TC 6.3.2.3.1 for the test procedure	16.4.0
2020-06	RAN#88	R5-201679	0617	-	F	Update of TC 5.6.1.1 event-triggered without gap non-DRX	16.4.0
2020-06	RAN#88	R5-201680	0618	-	F	Update of TC 5.6.1.2 event-triggered without gap DRX	16.4.0
2020-06	RAN#88	R5-201681	0619	-	F	Update of TC 5.6.1.3 event-triggered with gap non-DRX	16.4.0
2020-06	RAN#88	R5-201682	0620	-	F	Update of TC 5.6.1.4 event-triggered with gap DRX	16.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-06	RAN#88	R5-201686	0624	-	F	Update of TC 8.4.2.5 FR2 event-triggered without SSB index non-DRX	16.4.0
2020-06	RAN#88	R5-201687	0625	-	F	Update of TC 8.4.2.6 FR2 event-triggered without SSB index DRX	16.4.0
2020-06	RAN#88	R5-201688	0626	-	F	Update of TC 8.4.2.7 FR2 event-triggered with SSB index non-DRX	16.4.0
2020-06	RAN#88	R5-201689	0627	-	F	Update of TC 8.4.2.8 FR2 event-triggered with SSB index DRX	16.4.0
2020-06	RAN#88	R5-201821	0634	-	F	Correction of SS-SINR applicability -NSA	16.4.0
2020-06	RAN#88	R5-201822	0635	-	F	Correction of SS-SINR applicability -SA	16.4.0
2020-06	RAN#88	R5-201824	0637	-	F	Corrections to 4.7.1.1	16.4.0
2020-06	RAN#88	R5-202054	0644	-	F	Minimum Requirements SS-RSRP iRAT	16.4.0
2020-06	RAN#88	R5-202055	0645	-	F	Addition 8.5.2.1.1	16.4.0
2020-06	RAN#88	R5-202056	0646	-	F	Addition 8.5.2.1.2	16.4.0
2020-06	RAN#88	R5-202057	0647	-	F	Minimum Requirements SS-RSRQ iRAT	16.4.0
2020-06	RAN#88	R5-202058	0648	-	F	Addition 8.5.2.2.1	16.4.0
2020-06	RAN#88	R5-202059	0649	-	F	Addition 8.5.2.2.2	16.4.0
2020-06	RAN#88	R5-202060	0650	-	F	Minimum Requirements SS-SINR iRAT	16.4.0
2020-06	RAN#88	R5-202061	0651	-	F	Addition 8.5.2.3.1	16.4.0
2020-06	RAN#88	R5-202062	0652	-	F	Addition 8.5.2.3.2	16.4.0
2020-06	RAN#88	R5-202063	0653	-	F	Minimum requirements SS-RSRP NSA FR2	16.4.0
2020-06	RAN#88	R5-202064	0654	-	F	Addition 5.7.1.1	16.4.0
2020-06	RAN#88	R5-202065	0655	-	F	Addition 5.7.1.2	16.4.0
2020-06	RAN#88	R5-202066	0656	-	F	Addition 5.7.1.3	16.4.0
2020-06	RAN#88	R5-202067	0657	-	F	Minimum requirements SS-RSRQ NSA FR2	16.4.0
2020-06	RAN#88	R5-202068	0658	-	F	Addition 5.7.2.1	16.4.0
2020-06	RAN#88	R5-202069	0659	-	F	Addition 5.7.2.2	16.4.0
2020-06	RAN#88	R5-202070	0660	-	F	Minimum requirements SS-SINR NSA FR2	16.4.0
2020-06	RAN#88	R5-202071	0661	-	F	Addition 5.7.3.1	16.4.0
2020-06	RAN#88	R5-202072	0662	-	F	Addition 5.7.3.2	16.4.0
2020-06	RAN#88	R5-202073	0663	-	F	Minimum requirements SS-RSRP SA FR2	16.4.0
2020-06	RAN#88	R5-202074	0664	-	F	Addition 7.7.1.1	16.4.0
2020-06	RAN#88	R5-202075	0665	-	F	Addition 7.7.1.2	16.4.0
2020-06	RAN#88	R5-202076	0666	-	F	Minimum requirements SS-RSRQ SA FR2	16.4.0
2020-06	RAN#88	R5-202077	0667	-	F	Addition 7.7.2.1	16.4.0
2020-06	RAN#88	R5-202078	0668	-	F	Addition 7.7.2.2	16.4.0
2020-06	RAN#88	R5-202079	0669	-	F	Minimum requirements SS-SINR SA FR2	16.4.0
2020-06	RAN#88	R5-202080	0670	-	F	Addition 7.7.3.1	16.4.0
2020-06	RAN#88	R5-202081	0671	-	F	Addition 7.7.3.2	16.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-06	RAN#88	R5-202091	0672	-	F	Correction of OCNG configurations and CSI-RS for tracking in Annex A	16.4.0
2020-06	RAN#88	R5-202092	0673	-	F	Cell configuration for SA FR2 event-triggered reporting test cases	16.4.0
2020-06	RAN#88	R5-202093	0674	-	F	Correction of MeasGapConfig in Annex H	16.4.0
2020-06	RAN#88	R5-202095	0676	-	F	Correction of AoA configuration for FR2 SA Inter-freq measurement test cases in clause 5.6.2	16.4.0
2020-06	RAN#88	R5-202096	0677	-	F	Correction of RRM Test Case 7.6.2.1	16.4.0
2020-06	RAN#88	R5-202097	0678	-	F	Correction of RRM Test Case 7.6.2.2	16.4.0
2020-06	RAN#88	R5-202098	0679	-	F	Correction of RRM Test Case 7.6.2.3	16.4.0
2020-06	RAN#88	R5-202099	0680	-	F	Correction of RRM Test Case 7.6.2.4	16.4.0
2020-06	RAN#88	R5-202100	0681	-	F	Correction of RRM Test Case 7.6.2.5	16.4.0
2020-06	RAN#88	R5-202101	0682	-	F	Correction of RRM Test Case 7.6.2.6	16.4.0
2020-06	RAN#88	R5-202102	0683	-	F	Correction of RRM Test Case 7.6.2.7	16.4.0
2020-06	RAN#88	R5-202103	0684	-	F	Correction of RRM Test Case 7.6.2.8	16.4.0
2020-06	RAN#88	R5-202263	0704	-	F	Core alignment in 4.6.1.5 and 4.6.1.6 Event Triggered Reporting with SSB time index detection	16.4.0
2020-06	RAN#88	R5-202265	0706	-	F	Correction on EN-DC FR1 radio link monitoring out-of-sync test	16.4.0
2020-06	RAN#88	R5-202273	0714	-	F	Correction to NR SA FR1 - E-UTRA RRC Connection release with redirection	16.4.0
2020-06	RAN#88	R5-202277	0718	-	F	Editorial Correction to FR2 Interruption test cases	16.4.0
2020-06	RAN#88	R5-202385	0720	-	F	Addition of RRM Cell configuration mapping table for EN-DC FR1 Test Case 4.5.4.1	16.4.0
2020-06	RAN#88	R5-202387	0721	-	F	Addition of RRC message content exceptions for UE UL Carrier Reconfiguration Delay	16.4.0
2020-06	RAN#88	R5-202389	0722	-	F	Addition of RRM Test Case 4.5.4.1 in Annex F	16.4.0
2020-06	RAN#88	R5-202415	0728	-	F	Alignment 5.4.1.1 test procedure with 4.4.1.1	16.4.0
2020-06	RAN#88	R5-202418	0730	-	F	Update 6.5.1.1 and CSI-ReportConfig in Annex H	16.4.0
2020-06	RAN#88	R5-202488	0736	-	F	Correction to the simulated cell for cell-reselection test cases	16.4.0
2020-06	RAN#88	R5-202496	0744	-	F	Correction of RRM Test Case 6.4.1.1	16.4.0
2020-06	RAN#88	R5-202497	0745	-	F	Title Correction of Annex D.4.2.4	16.4.0
2020-06	RAN#88	R5-202700	0723	1	F	Addition of new RRM Test Case 4.5.4.1	16.4.0
2020-06	RAN#88	R5-202701	0675	1	F	Editorial correction of RRM TT in Annex F	16.4.0
2020-06	RAN#88	R5-202744	0708	1	F	Correction to EN-DC FR1 radio link monitoring tests	16.4.0
2020-06	RAN#88	R5-202745	0727	1	F	Clarification cell2 SS-RSRP in 4.7.1.2.1	16.4.0
2020-06	RAN#88	R5-202746	0587	1	F	Addition to NR test case 5.5.5.5 scheduling available restriction	16.4.0
2020-06	RAN#88	R5-202747	0707	1	F	Correction on NR SA FR1 - E-UTRAN event-triggered reporting tests	16.4.0
2020-06	RAN#88	R5-202748	0731	1	F	Update 6.5.1.2 message content exception and test procedure	16.4.0
2020-06	RAN#88	R5-202749	0737	1	F	Correction of RRM Test Case 6.1.1.1	16.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-06	RAN#88	R5-202750	0738	1	F	Correction of RRM Test Case 6.1.1.2	16.4.0
2020-06	RAN#88	R5-202751	0621	1	F	Update of TC 7.1.1.1 intra-freq cell re-selection	16.4.0
2020-06	RAN#88	R5-202752	0622	1	F	Update of TC 7.1.1.2 inter-freq cell re-selection	16.4.0
2020-06	RAN#88	R5-202753	0724	1	F	Addition of new RRM Test Cases in clause 7.5.3	16.4.0
2020-06	RAN#88	R5-202754	0725	1	F	Addition of new RRM Test Cases in clause 7.5.7	16.4.0
2020-06	RAN#88	R5-202812	0685	1	F	Correction to Test Applicability for 4.6.1.3 EN-DC FR1 event-triggered reporting with gap in non-DRX	16.4.0
2020-06	RAN#88	R5-202813	0686	1	F	Correction to Test Applicability for 4.6.1.4 EN-DC FR1 event-triggered reporting with gap in DRX	16.4.0
2020-06	RAN#88	R5-202814	0687	1	F	Correction to Test Applicability & Message Exception for 4.6.1.6 EN-DC FR1 event-triggered reporting with gap in non-DRX with SSB time index detection	16.4.0
2020-06	RAN#88	R5-202815	0688	1	F	Correction to Test Applicability for 6.6.1.3 NR SA FR1 event-triggered reporting with gap in non-DRX	16.4.0
2020-06	RAN#88	R5-202816	0689	1	F	Correction to Test Applicability for 6.6.1.4 NR SA FR1 event-triggered reporting with gap in DRX	16.4.0
2020-06	RAN#88	R5-202817	0732	1	F	Correction to Test Requirement for 4.4.3.1 by updating TT values from Annex F	16.4.0
2020-06	RAN#88	R5-202833	0591	1	F	Addition to NR test case 6.3.2.1.3 FR1-FR1 RRC re-establishment without serving cell timing	16.4.0
2020-06	RAN#88	R5-202834	0575	1	F	Correction to NR test case 7.7.1.3.1 SA FR2 SS-RSRP absolute accuracy	16.4.0
2020-06	RAN#88	R5-202835	0592	1	F	Addition to NR test case 7.3.2.1.3 FR2-FR2 RRC re-establishment without serving cell timing	16.4.0
2020-06	RAN#88	R5-202836	0594	1	F	Addition to NR test case 7.5.1.9 FR2 RLM scheduling restrictions	16.4.0
2020-06	RAN#88	R5-202837	0578	1	F	Correction to NR test case 8.3.1.1 handover to known cell	16.4.0
2020-06	RAN#88	R5-202838	0597	1	F	Addition of Default Configuration in Annex H	16.4.0
2020-06	RAN#88	R5-202839	0628	1	F	Update of Annex D.4.1.1 for parameters of BFD with 4RX	16.4.0
2020-06	RAN#88	R5-202840	0630	1	F	Update of Cell mapping in Annex E	16.4.0
2020-06	RAN#88	R5-202841	0633	1	F	Add auxiliary bands for RRM inter-frequency SA tests	16.4.0
2020-06	RAN#88	R5-202909	0697	1	F	Correction to Test Requirements in 4.4.1.1, Table 4.4.1.1.5-5 to include TT values from Annex F	16.4.0
2020-06	RAN#88	R5-202910	0698	1	F	Correction to Test Requirements in 6.4.1.1, Table 6.4.1.1.5-5 to include TT values from Annex F	16.4.0
2020-06	RAN#88	R5-202911	0734	1	F	Correction to Test Requirement for 6.4.3.1 by updating TT values from Annex F	16.4.0
2020-06	RAN#88	R5-202912	0735	1	F	Annex I RRM OTA procedures update to add RSRPB based UE Positioning Method for FR2	16.4.0
2020-06	RAN#88	R5-202913	0703	1	F	Clarification of disabling Tx diversity for FR2 UE for FR2 RRM testing	16.4.0
2020-06	RAN#88	R5-202914	0719	1	F	Updates of FR2 MU and TT in TS 38.533	16.4.0
2020-06	RAN#88	R5-202950	0693	1	F	Correction to Message Exception for 4.6.2.5 EN-DC FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	16.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-06	RAN#88	R5-202951	0694	1	F	Correction to Message Exception for 4.6.2.6 EN-DC FR1-FR1 event-triggered reporting in DRX with SSB time index detection	16.4.0
2020-06	RAN#88	R5-202961	0690	1	F	Correction to Test Applicability and Message Exception for 6.6.1.6 NR SA FR1 event-triggered reporting with gap in non-DRX with SSB index reading	16.4.0
2020-06	RAN#88	R5-202969	0639	1	F	Corrections to 4.7.2.1	16.4.0
2020-06	RAN#88	R5-202970	0641	1	F	Corrections to 4.7.3.1	16.4.0
2020-06	RAN#88	R5-202971	0642	1	F	Corrections to 4.7.3.2	16.4.0
2020-06	RAN#88	R5-202972	0598	1	F	Corrections to 6.7.1.2 and core spec alignment	16.4.0
2020-06	RAN#88	R5-202973	0599	1	F	Corrections to 6.7.2.1 and core spec alignment	16.4.0
2020-06	RAN#88	R5-202974	0600	1	F	Corrections to 6.7.2.2 and core spec alignment	16.4.0
2020-06	RAN#88	R5-202975	0601	1	F	Corrections to 6.7.3.1 and core spec alignment	16.4.0
2020-06	RAN#88	R5-202976	0602	1	F	Corrections to 6.7.3.2 and core spec alignment	16.4.0
2020-06	RAN#88	R5-202977	0638	1	F	Corrections to 4.7.1.2	16.4.0
2020-06	RAN#88	R5-202978	0640	1	F	Corrections to 4.7.2.2	16.4.0
2020-06	RAN#88	R5-202982	0710	1	F	Correction to FR1 UE transmit timing accuracy	16.4.0
2020-06	RAN#88	R5-202983	0709	1	F	Correction to EN-DC FR2 RRC-based DL active BWP switch in non-DRX in synchronous ENDC	16.4.0
2020-06	RAN#88	R5-202984	0711	1	F	Correction to FR2 UE transmit timing accuracy	16.4.0
2020-06	RAN#88	R5-202985	0705	1	F	Core alignment in 6.6.1.2 NR SA FR1 event-triggered reporting without gap in DRX	16.4.0
2020-06	RAN#88	R5-202986	0713	1	F	Correction to NR E-UTRA reselection tests	16.4.0
2020-06	RAN#88	R5-202987	0715	1	F	Correction to NR SA FR1 handover test cases	16.4.0
2020-06	RAN#88	R5-202996	0604	1	F	Update FR1 Test Tolerance of 4.5.2.5 E-UTRAN SCC in sync	16.4.0
2020-06	RAN#88	R5-202997	0605	1	F	Update FR1 Test Tolerance of 4.5.2.6 E-UTRAN SCC in async	16.4.0
2020-06	RAN#88	R5-202998	0606	1	F	Update FR1 Test Tolerance of 4.5.3.1 SCell activation 160ms	16.4.0
2020-06	RAN#88	R5-202999	0607	1	F	Update FR1 Test Tolerance of 4.5.3.2 SCell activation 320ms	16.4.0
2020-06	RAN#88	R5-203000	0608	1	F	Update FR1 Test Tolerance of 4.5.3.3 unknown SCell activation	16.4.0
2020-06	RAN#88	R5-203091	0623	1	F	Update of 4.5.3.0 minimum requirements for Scell activation	16.4.0
2020-06	RAN#88	R5-203092	0613	1	F	Update FR1 Test Tolerance of 6.5.4.1 UL carrier RRC reconfiguration delay	16.4.0
2020-06	RAN#88	R5-203093	0629	1	F	Update of FR1 Test Tolerance in Annex F	16.4.0
2020-06	RAN#88	R5-203095	0609	1	F	Addition FR1 Test Tolerance of 6.5.5.1 SSB BFD non-DRX	16.4.0
2020-06	RAN#88	R5-203096	0610	1	F	Addition FR1 Test Tolerance of 6.5.5.2 SSB BFD DRX	16.4.0
2020-06	RAN#88	R5-203097	0611	1	F	Update FR1 Test Tolerance of 6.5.5.3 CSI-RS BFD non-DRX	16.4.0
2020-06	RAN#88	R5-203098	0612	1	F	Update FR1 Test Tolerance of 6.5.5.4 CSI-RS BFD DRX	16.4.0
2020-09	RAN#89	R5-203234	0747	-	F	Update TC 8.5.2.1.1.1 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-203235	0748	-	F	Update TC 8.5.2.2.1 with TT results and message contents	16.5.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-09	RAN#89	R5-203249	0758	-	F	Annex E and F update with TT results for 8.5.2.x.x iRAT periodic reporting test cases	16.5.0
2020-09	RAN#89	R5-203250	0759	-	F	Annex E and F update with TT results for 4.7.4.x.x EN-DC L1-RSRP periodic reporting test cases	16.5.0
2020-09	RAN#89	R5-203252	0761	-	F	Void unnecessary TC 8.5.2.1.1.2	16.5.0
2020-09	RAN#89	R5-203267	0765	-	F	[EDITORIAL] Fix formatting issues throwing DOCX conversion errors in TS 38.533	16.5.0
2020-09	RAN#89	R5-203268	0766	-	F	Correction of test applicability for EN-DC event-triggered tests	16.5.0
2020-09	RAN#89	R5-203269	0767	-	F	Correction of test applicability for NR SA event-triggered tests	16.5.0
2020-09	RAN#89	R5-203270	0768	-	F	Adding annex table for iRAT measurement configuration	16.5.0
2020-09	RAN#89	R5-203271	0769	-	F	Clarification on the usage of auxiliary bands	16.5.0
2020-09	RAN#89	R5-203272	0770	-	F	Remove IE includeBeamMeasurements from 6.6.1.5 and 6.6.1.6	16.5.0
2020-09	RAN#89	R5-203280	0772	-	F	n26 addition to group of bands in 38.533	16.5.0
2020-09	RAN#89	R5-203299	0773	-	F	Corrected test description in non-DRX test case 6.5.1.2	16.5.0
2020-09	RAN#89	R5-203300	0774	-	F	Correction of comment for monitoringSymbolsWithinSlot	16.5.0
2020-09	RAN#89	R5-203301	0775	-	F	Correction of delta offset application for Cell 2 in test case 4.7.1.2.1	16.5.0
2020-09	RAN#89	R5-203303	0777	-	F	PUSCH allocation correction in test case 6.4.3.1	16.5.0
2020-09	RAN#89	R5-203304	0778	-	F	Correction to the RRC Reconfiguration message for measurements	16.5.0
2020-09	RAN#89	R5-203306	0779	-	F	Update extreme conditions limits in TC 4.7.1.2.1	16.5.0
2020-09	RAN#89	R5-203307	0780	-	F	Update extreme conditions limits in TC 6.7.1.2.1	16.5.0
2020-09	RAN#89	R5-203308	0781	-	F	Update extreme conditions limits in TC 4.7.1.2.1 and TC 6.7.1.2.1 - Annex F	16.5.0
2020-09	RAN#89	R5-203309	0782	-	F	Correction power offset for Band Group F	16.5.0
2020-09	RAN#89	R5-203317	0786	-	F	Removing SearchSpaceId and ControlResourceSetId modification	16.5.0
2020-09	RAN#89	R5-203319	0788	-	F	Unification of cell frequency for FR1-FR1 test cases	16.5.0
2020-09	RAN#89	R5-203732	0790	-	F	Set ss-sinr request to false for EN-DC RRM measurement accuracy tests	16.5.0
2020-09	RAN#89	R5-203733	0791	-	F	Set ss-sinr request to false for NR SA RRM measurement accuracy tests	16.5.0
2020-09	RAN#89	R5-203832	0798	-	F	Update of 4.5.6.1.0 minimum requirement for DCI-based BWP switch	16.5.0
2020-09	RAN#89	R5-203835	0801	-	F	Update of 4.5.6.2.0 minimum requirement for RRC-based BWP switch	16.5.0
2020-09	RAN#89	R5-203837	0803	-	F	Update of FR1 Test Tolerance in 6.3.2.1.3 RRC re-establishment without serving cell timing	16.5.0
2020-09	RAN#89	R5-203838	0804	-	F	Addition of 6.5.2.0 minimum requirement for interruptions during measurements on NR SCC	16.5.0
2020-09	RAN#89	R5-203839	0805	-	F	Update of 6.5.2.1 interruptions during measurements on deactivated NR SCC	16.5.0
2020-09	RAN#89	R5-203840	0806	-	F	Addition of new Test Case 6.5.3.1 SCell activation and deactivation for 160ms cycle	16.5.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-09	RAN#89	R5-203841	0807	-	F	Addition of new Test Case 6.5.3.2 SCell activation and deactivation for 320ms cycle	16.5.0
2020-09	RAN#89	R5-203842	0808	-	F	Addition of new Test Case 6.5.3.3 SCell activation and deactivation of unknown SCell	16.5.0
2020-09	RAN#89	R5-203847	0813	-	F	Update of 6.5.6.1.0 minimum requirement for DCI-based BWP switch	16.5.0
2020-09	RAN#89	R5-203850	0816	-	F	Update of 6.5.6.2.0 minimum requirement for RRC-based BWP switch	16.5.0
2020-09	RAN#89	R5-203853	0819	-	F	Correction to FR1 intra-frequency measurement with gap test cases	16.5.0
2020-09	RAN#89	R5-203855	0821	-	F	Update of Cell mapping in Annex E	16.5.0
2020-09	RAN#89	R5-204034	0827	-	F	CR to 38.533 on RRM Test Cases in clause 7.5.3	16.5.0
2020-09	RAN#89	R5-204036	0828	-	F	CR to 38.533 on RRM Test Cases in clause 7.5.7	16.5.0
2020-09	RAN#89	R5-204068	0829	-	F	Correction to FR2 timing advance adjustment accuracy	16.5.0
2020-09	RAN#89	R5-204069	0830	-	F	Correction to EN-DC FR2 interruptions at transitions between active and non-active during DRX	16.5.0
2020-09	RAN#89	R5-204070	0831	-	F	Addition of E-UTRA Test frequency selection rule for IRAT test cases	16.5.0
2020-09	RAN#89	R5-204071	0832	-	F	Correction on event-triggered reporting with gap in DRX and DRX configuration settings for NR serving cell	16.5.0
2020-09	RAN#89	R5-204072	0833	-	F	Correction to EN-DC and SA FR1-FR1 SS-RSRP and SS-RSRQ periodical measurement accuracy	16.5.0
2020-09	RAN#89	R5-204073	0834	-	F	Correction to SS-RSRQ periodical measurement accuracy	16.5.0
2020-09	RAN#89	R5-204075	0836	-	F	Correction to message configuration for radio link monitoring tests	16.5.0
2020-09	RAN#89	R5-204076	0837	-	F	Correction to NR SA FR1 E-UTRA RRC connection release with redirection	16.5.0
2020-09	RAN#89	R5-204077	0838	-	F	Correction to SRS PeriodicityAndOffset for Timing Advance tests	16.5.0
2020-09	RAN#89	R5-204079	0840	-	F	Correction to CSI-RS for tracking for TDD FR2	16.5.0
2020-09	RAN#89	R5-204116	0841	-	F	Correction of EN-DC FR2 SSB-based L1-RSRP measurement test case 5.6.3.1	16.5.0
2020-09	RAN#89	R5-204118	0843	-	F	Correction of EN-DC FR2 CSI-RS-based L1-RSRP measurement test case 5.6.3.3	16.5.0
2020-09	RAN#89	R5-204119	0844	-	F	Correction of EN-DC FR2 CSI-RS-based L1-RSRP measurement test case 5.6.3.4	16.5.0
2020-09	RAN#89	R5-204122	0847	-	F	Correction of NR SA FR2 SSB-based L1-RSRP measurement test case 7.6.3.1	16.5.0
2020-09	RAN#89	R5-204123	0848	-	F	Correction of NR SA FR2 SSB-based L1-RSRP measurement test case 7.6.3.2	16.5.0
2020-09	RAN#89	R5-204124	0849	-	F	Correction of NR SA FR2 CSI-RS-based L1-RSRP measurement test case 7.6.3.3	16.5.0
2020-09	RAN#89	R5-204125	0850	-	F	Correction of NR SA FR2 CSI-RS-based L1-RSRP measurement test case 7.6.3.4	16.5.0
2020-09	RAN#89	R5-204126	0851	-	F	Correction of minimum conformance requirements 4.6.4.0 for EN-DC FR1 L1-RSRP measurement test cases	16.5.0
2020-09	RAN#89	R5-204127	0852	-	F	Correction of minimum conformance requirements 5.6.3.0 for EN-DC FR2 L1-RSRP measurement test cases	16.5.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-09	RAN#89	R5-204128	0853	-	F	Correction of minimum conformance requirements 7.6.3.0 for SA FR2 L1-RSRP measurement test cases	16.5.0
2020-09	RAN#89	R5-204220	0854	-	F	Update missing SMTC and SSB configurations in H.2	16.5.0
2020-09	RAN#89	R5-204221	0855	-	F	Update missing SMTC and SSB configurations in H.3	16.5.0
2020-09	RAN#89	R5-204222	0856	-	F	Editorial: correct table placement in H.2	16.5.0
2020-09	RAN#89	R5-204285	0859	-	F	Correction to Message Exceptions for 4.6.2.5 EN-DC FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	16.5.0
2020-09	RAN#89	R5-204337	0874	-	F	Addition of 4.5.5.0 minimum requirement for BFR	16.5.0
2020-09	RAN#89	R5-204730	0792	1	F	Update of PDSCH RMC in Annex A.1.1	16.5.0
2020-09	RAN#89	R5-204733	0793	1	F	Correction of RRM Test Case 6.1.1.1	16.5.0
2020-09	RAN#89	R5-204734	0824	1	F	Correction of RRM Test Case 6.1.1.2	16.5.0
2020-09	RAN#89	R5-204735	0825	1	F	Correction of RRM Test Case 7.1.1.1	16.5.0
2020-09	RAN#89	R5-204736	0826	1	F	Correction of RRM Test Case 7.1.1.2	16.5.0
2020-09	RAN#89	R5-204775	0751	1	F	Update TC 4.7.4.1.2 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204776	0753	1	F	Update TC 4.7.4.2.2 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204777	0771	1	F	Correction of measurement gap configuration for intra-frequency even-triggered tests needing gap	16.5.0
2020-09	RAN#89	R5-204778	0755	1	F	Update TC 6.7.4.1.2 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204779	0757	1	F	Update TC 6.7.4.2.2 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204780	0762	1	F	Correction to the test procedure of NR SA event triggered tests	16.5.0
2020-09	RAN#89	R5-204781	0763	1	F	Correction to the test procedure of NR SA event triggered tests inter-freq	16.5.0
2020-09	RAN#89	R5-204782	0764	1	F	Correction to the test procedure of NR SA event triggered tests inter-RAT	16.5.0
2020-09	RAN#89	R5-204783	0749	1	F	Update TC 8.5.2.3.1 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204784	0760	1	F	Annex E and F update with TT results for 6.7.4.x.x NR SA L1-RSRP periodic reporting test cases	16.5.0
2020-09	RAN#89	R5-204785	0785	1	F	Correction in A.1.4 CSI-RS for nzp-CSI-RS-ResourceId values	16.5.0
2020-09	RAN#89	R5-204786	0820	1	F	Update of FR1 Test Tolerance in Annex F	16.5.0
2020-09	RAN#89	R5-204787	0823	1	F	Correction to default configurations in Annex H	16.5.0
2020-09	RAN#89	R5-204872	0857	1	F	Correction to Test Procedure and sync to latest RAN4 in 4.4.1.1 EN-DC FR1 UE transmit timing accuracy	16.5.0
2020-09	RAN#89	R5-204873	0858	1	F	Correction to Test Procedure and sync to latest RAN4 in 6.4.1.1 NR SA FR1 UE transmit timing accuracy	16.5.0
2020-09	RAN#89	R5-204874	0866	1	F	Correction to 6.5.1.1 NR SA FR1 RLM OOS test with SSB-based RLM RS in non-DRX mode, sync to latest RAN4 Core Spec	16.5.0
2020-09	RAN#89	R5-204875	0867	1	F	Correction to 6.5.1.2 NR SA FR1 RLM IS test with SSB-based RLM RS in non-DRX mode, sync to latest RAN4 Core Spec	16.5.0
2020-09	RAN#89	R5-204876	0868	1	F	Correction to 6.5.1.3 NR SA FR1 RLM OOS test with SSB-based RLM RS in DRX mode, sync to latest RAN4 Core Spec	16.5.0
2020-09	RAN#89	R5-204877	0869	1	F	Correction to 6.5.1.4 NR SA FR1 RLM IS test with SSB-based RLM RS in DRX mode, sync to latest RAN4 Core Spec	16.5.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-09	RAN#89	R5-204878	0750	1	F	Update TC 4.7.4.1.1 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204879	0752	1	F	Update TC 4.7.4.2.1 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204880	0754	1	F	Update TC 6.7.4.1.1 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204881	0756	1	F	Update TC 6.7.4.2.1 with TT results and message contents	16.5.0
2020-09	RAN#89	R5-204882	0776	1	F	Gap Pattern Id correction in section 6.6.2 to align to core spec 38.133	16.5.0
2020-09	RAN#89	R5-204883	0787	1	F	Test Procedure correction in test case 6.5.1.3 for definition of Point C	16.5.0
2020-09	RAN#89	R5-204884	0789	1	F	Addition of new RRM Test Cases in clause 7.5.5	16.5.0
2020-09	RAN#89	R5-204885	0783	1	F	CR to update the RRM FR2 MUs in Annex F	16.5.0
2020-09	RAN#89	R5-204886	0784	1	F	Add information on the AoA change during test for RRM FR2 tests	16.5.0
2020-09	RAN#89	R5-204941	0835	1	F	Correction to connection diagram for radio link monitoring tests	16.5.0
2020-09	RAN#89	R5-204942	0842	1	F	Correction of EN-DC FR2 SSB-based L1-RSRP measurement test case 5.6.3.2	16.5.0
2020-09	RAN#89	R5-204943	0845	1	F	Correction of FR2 condition tables in Annex B	16.5.0
2020-09	RAN#89	R5-204944	0846	1	F	Introduction of band n259 in clause 3	16.5.0
2020-09	RAN#89	R5-204985	0794	1	F	Update of FR1 Test Tolerance in 4.5.5.1 SSB based BFR in non-DRX	16.5.0
2020-09	RAN#89	R5-204986	0795	1	F	Update of FR1 Test Tolerance in 4.5.5.2 SSB based BFR in DRX	16.5.0
2020-09	RAN#89	R5-204987	0796	1	F	Addition of new Test Case 4.5.5.3 CSI-RS based BFR non-DRX with FR1 Test Tolerance	16.5.0
2020-09	RAN#89	R5-204988	0797	1	F	Update of FR1 Test Tolerance in 4.5.5.4 CSI-RS based BFR in DRX	16.5.0
2020-09	RAN#89	R5-204989	0799	1	F	Update of FR1 Test Tolerance in 4.5.6.1.1 DCI-based BWP switch	16.5.0
2020-09	RAN#89	R5-204990	0800	1	F	Update of FR1 Test Tolerance in 4.5.6.1.2 DCI-based BWP switch with SCell	16.5.0
2020-09	RAN#89	R5-204991	0802	1	F	Update of FR1 Test Tolerance in 4.5.6.2.1 RRC-based BWP switch	16.5.0
2020-09	RAN#89	R5-204992	0809	1	F	Update of FR1 Test Tolerance in 6.5.5.1 SSB based BFR in non-DRX	16.5.0
2020-09	RAN#89	R5-204993	0810	1	F	Update of FR1 Test Tolerance in 6.5.5.2 SSB based BFR in DRX	16.5.0
2020-09	RAN#89	R5-204994	0811	1	F	Update of FR1 Test Tolerance in 6.5.5.3 CSI-RS based BFR in non-DRX	16.5.0
2020-09	RAN#89	R5-204995	0812	1	F	Update of FR1 Test Tolerance in 6.5.5.4 CSI-RS based BFR in DRX	16.5.0
2020-09	RAN#89	R5-204996	0814	1	F	Update of FR1 Test Tolerance in 6.5.6.1.1 DCI-based BWP switch with SCell	16.5.0
2020-09	RAN#89	R5-204997	0815	1	F	Addition of new Test Case 6.5.6.1.2 DCI-based BWP switch with FR1 Test Tolerance	16.5.0
2020-09	RAN#89	R5-204998	0817	1	F	Update of FR1 Test Tolerance in 6.5.6.2.1 RRC-based BWP switch	16.5.0
2020-09	RAN#89	R5-204999	0818	1	F	Update of test parameters in 6.3.1.4 inter-RAT handover	16.5.0
2020-09	RAN#89	R5-205000	0822	1	F	Update of default configurations for RMC scheduling in Annex A	16.5.0
2020-12	RAN#90	R5-205051	0879	-	F	Message contents for RRM iRAT	16.6.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-12	RAN#90	R5-205059	0884	-	F	Message contents for RRM PSCell addition	16.6.0
2020-12	RAN#90	R5-205063	0885	-	F	Update RRM 8.5.2.1.2 including TT analysis results	16.6.0
2020-12	RAN#90	R5-205068	0890	-	F	Correction of the measObjectID, measID and reportConfigID in Annex H	16.6.0
2020-12	RAN#90	R5-205070	0892	-	F	Remove includeBeamMeasurements requirement for TC4.6.1.5	16.6.0
2020-12	RAN#90	R5-205257	0907	-	F	NR Band n53 addition to RRM group of bands	16.6.0
2020-12	RAN#90	R5-205296	0914	-	F	Add FR2 Fading MU values	16.6.0
2020-12	RAN#90	R5-205813	0920	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.1	16.6.0
2020-12	RAN#90	R5-205814	0921	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.2	16.6.0
2020-12	RAN#90	R5-205815	0922	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.3	16.6.0
2020-12	RAN#90	R5-205816	0923	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.4	16.6.0
2020-12	RAN#90	R5-205817	0924	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.5	16.6.0
2020-12	RAN#90	R5-205818	0925	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.6	16.6.0
2020-12	RAN#90	R5-205819	0926	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.7	16.6.0
2020-12	RAN#90	R5-205820	0927	-	F	Correction of EN-DC FR2 Inter-frequency measurements test case 5.6.2.8	16.6.0
2020-12	RAN#90	R5-205821	0928	-	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.1	16.6.0
2020-12	RAN#90	R5-205822	0929	-	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.2	16.6.0
2020-12	RAN#90	R5-205823	0930	-	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.3	16.6.0
2020-12	RAN#90	R5-205824	0931	-	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.4	16.6.0
2020-12	RAN#90	R5-205826	0933	-	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.6	16.6.0
2020-12	RAN#90	R5-205827	0934	-	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.7	16.6.0
2020-12	RAN#90	R5-205828	0935	-	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.8	16.6.0
2020-12	RAN#90	R5-205834	0939	-	F	Correction of message content exceptions in Annex H	16.6.0
2020-12	RAN#90	R5-205953	0946	-	F	Update of FR1 TT in 8.4.1.1 inter-RAT SFTD in non-DRX	16.6.0
2020-12	RAN#90	R5-205954	0947	-	F	Update of FR1 TT in 8.4.1.2 inter-RAT SFTD in DRX	16.6.0
2020-12	RAN#90	R5-205960	0953	-	F	Addition of test case 5.5.1.9 EN-DC FR2 radio link monitoring UE scheduling restrictions	16.6.0
2020-12	RAN#90	R5-205961	0954	-	F	Update of test case 5.5.3.1 EN-DC FR2 SCell activation and deactivation	16.6.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-12	RAN#90	R5-205963	0956	-	F	Update of 7.3.2.1.3 SA FR2 RRC re-establishment without serving cell timing	16.6.0
2020-12	RAN#90	R5-205967	0960	-	F	Update of Annex E for cell mapping	16.6.0
2020-12	RAN#90	R5-205975	0964	-	F	Correction to default configuration in Annex H	16.6.0
2020-12	RAN#90	R5-205976	0965	-	F	Correction to SSB reference configuration	16.6.0
2020-12	RAN#90	R5-206100	0968	-	F	Correction to EN-DC FR1 interruptions at transitions between active and non-active during DRX	16.6.0
2020-12	RAN#90	R5-206102	0970	-	F	Correction to FR1 NSA SS-SINR measurement TCs	16.6.0
2020-12	RAN#90	R5-206105	0973	-	F	Correction to message exception for inter-RAT reselection TCs	16.6.0
2020-12	RAN#90	R5-206106	0974	-	F	Editorial correction of RSRP tests	16.6.0
2020-12	RAN#90	R5-206111	0976	-	F	Update of Annex C.1.3 of default connection setup	16.6.0
2020-12	RAN#90	R5-206156	0977	-	F	Addition of missing PRACH configuration 4 for FR1 and FR2 applicability	16.6.0
2020-12	RAN#90	R5-206214	0979	-	F	Alignment test parameter table with TS 38.133 in SA cell reselection test case	16.6.0
2020-12	RAN#90	R5-206215	0980	-	F	Alignment test parameter table with TS 38.133 in SA handover test case	16.6.0
2020-12	RAN#90	R5-206216	0981	-	F	Addition RLM IE into event trigger reporting CSI-RS based RLM	16.6.0
2020-12	RAN#90	R5-206217	0982	-	F	Addition RLM IE into event trigger reporting SSB based	16.6.0
2020-12	RAN#90	R5-206219	0984	-	F	Update message content section in SS-SINR test cases	16.6.0
2020-12	RAN#90	R5-206221	0985	-	F	Update to Section 5.4.1.1 NSA FR2 Transmit Timing Accuracy	16.6.0
2020-12	RAN#90	R5-206222	0986	-	F	Update to Section 5.4.3.1 NSA FR2 Timing Advance Accuracy	16.6.0
2020-12	RAN#90	R5-206606	0998	-	F	Update of CSI-RS RMC configuration in Annex A	16.6.0
2020-12	RAN#90	R5-206672	0918	1	F	Editorial CR to clarify SS-RSRP dBm / 15 kHz for PRACH tests	16.6.0
2020-12	RAN#90	R5-206673	0941	1	F	Correction of RRM TC 4.7.2.1	16.6.0
2020-12	RAN#90	R5-206674	0943	1	F	Update of message contents for EN-DC RLM test case	16.6.0
2020-12	RAN#90	R5-206675	0969	1	F	Correction to FR1 Inter frequency Event triggered Reporting test cases	16.6.0
2020-12	RAN#90	R5-206677	0987	1	F	Update to Message Exceptions for 4.3.2.2.2 EN-DC Non Contention Based Random Access	16.6.0
2020-12	RAN#90	R5-206678	0989	1	F	Update to 4.5.1.1 NSA FR1 OOS RLM to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0
2020-12	RAN#90	R5-206679	0990	1	F	Update to 4.5.1.2 NSA FR1 IS RLM to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0
2020-12	RAN#90	R5-206680	0991	1	F	Update to 4.5.1.3 NSA FR1 OOS RLM in DRX to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0
2020-12	RAN#90	R5-206681	0992	1	F	Update to 4.5.1.4 NSA FR1 IS RLM in DRX to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0
2020-12	RAN#90	R5-206682	0993	1	F	Update to 6.5.1.1 SA FR1 OOS RLM to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0
2020-12	RAN#90	R5-206683	0994	1	F	Update to 6.5.1.2 SA FR1 IS RLM to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-12	RAN#90	R5-206684	0995	1	F	Update to 6.5.1.3 SA FR1 OOS RLM in DRX to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0
2020-12	RAN#90	R5-206685	0996	1	F	Update to 6.5.1.4 SA FR1 IS RLM in DRX to reword the Note for proper application of SNR for 4Rx Vs 2Rx	16.6.0
2020-12	RAN#90	R5-206686	0952	1	F	Update of 5.5.1 EN-DC FR2 radio link monitoring	16.6.0
2020-12	RAN#90	R5-206687	0955	1	F	Update of 5.5.5 EN-DC FR2 Beam failure detection	16.6.0
2020-12	RAN#90	R5-206688	0891	1	F	Corrections to re-selection test procedure	16.6.0
2020-12	RAN#90	R5-206689	0896	1	F	Correction of RRM TC 6.1.1.2	16.6.0
2020-12	RAN#90	R5-206690	0897	1	F	Correction of RRM TC 6.1.2.1	16.6.0
2020-12	RAN#90	R5-206691	0899	1	F	Correction of RRM TC 6.3.2.2.2	16.6.0
2020-12	RAN#90	R5-206692	0910	1	F	Correction of RRM TC 6.5.5.3	16.6.0
2020-12	RAN#90	R5-206693	0911	1	F	Correction of RRM TC 6.5.5.4	16.6.0
2020-12	RAN#90	R5-206694	0919	1	F	Editorial CR to clarify SS-RSRP dBm / 15 kHz for SA PRACH tests	16.6.0
2020-12	RAN#90	R5-206695	0942	1	F	Correction of RRM TC 6.7.2.1	16.6.0
2020-12	RAN#90	R5-206696	0961	1	F	Update of FR1 TT in 6.1.1.1 intra-freq re-selection	16.6.0
2020-12	RAN#90	R5-206697	0962	1	F	Correction of clause 6.1 cell re-selection	16.6.0
2020-12	RAN#90	R5-206698	0967	1	F	Correction to NR SA RLM out-of-sync test cases	16.6.0
2020-12	RAN#90	R5-206699	0983	1	F	Clarification in message exception for SA RLM out of synch test cases in non DRX	16.6.0
2020-12	RAN#90	R5-206700	0900	1	F	Correction of RRM TC 7.1.1.2	16.6.0
2020-12	RAN#90	R5-206701	0932	1	F	Correction of NR SA FR2 Inter-frequency measurements test case 7.6.2.5	16.6.0
2020-12	RAN#90	R5-206702	0936	1	F	Correction of NR SA FR2 RRC re-establishment test case 7.3.2.1.1	16.6.0
2020-12	RAN#90	R5-206703	0937	1	F	Correction of NR SA FR2-FR2 RRC re-establishment test case 7.3.2.1.2	16.6.0
2020-12	RAN#90	R5-206704	0957	1	F	Update of clause 7.5.5 SA FR2 Beam failure detection	16.6.0
2020-12	RAN#90	R5-206705	0958	1	F	Update of clause 7.6.1 SA FR2 Intra-frequency measurements	16.6.0
2020-12	RAN#90	R5-206706	0889	1	F	Correction of the message contents for RRM re-selection test cases	16.6.0
2020-12	RAN#90	R5-206707	0917	1	F	Correction to the aggregation level in the CORESET for RMC scheduling	16.6.0
2020-12	RAN#90	R5-206708	0938	1	F	Correction of clause 3.3 Abbreviations	16.6.0
2020-12	RAN#90	R5-206709	0963	1	F	Update of Annex H for cell re-selection	16.6.0
2020-12	RAN#90	R5-206797	0882	1	F	Complete RRM 4.5.7.1 including TT analysis results	16.6.0
2020-12	RAN#90	R5-206798	0875	1	F	Complete RRM 6.7.5.1 including TT analysis results	16.6.0
2020-12	RAN#90	R5-206799	0916	1	F	Add FR2 PRACH Test cases 7.3.2.2.1 and 7.3.2.2.2	16.6.0
2020-12	RAN#90	R5-206800	0944	1	F	Update of FR1 TT in 8.2.1.1 inter-RAT cell re-selection	16.6.0
2020-12	RAN#90	R5-206801	0945	1	F	Update of FR1 TT in 8.3.1.1 inter-RAT handover	16.6.0
2020-12	RAN#90	R5-206802	0948	1	F	Update of FR1 TT in 8.4.2.1 inter-RAT event-triggered reporting without SSB time index in non-DRX	16.6.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2020-12	RAN#90	R5-206803	0949	1	F	Update of FR1 TT in 8.4.2.2 inter-RAT event-triggered reporting without SSB time index in DRX	16.6.0
2020-12	RAN#90	R5-206804	0950	1	F	Update of FR1 TT in 8.4.2.3 inter-RAT event-triggered reporting with SSB time index in non-DRX	16.6.0
2020-12	RAN#90	R5-206805	0951	1	F	Update of FR1 TT in 8.4.2.4 inter-RAT event-triggered reporting with SSB time index in DRX	16.6.0
2020-12	RAN#90	R5-206806	0878	1	F	Annex E and F iRAT measurement accuracy tests	16.6.0
2020-12	RAN#90	R5-206807	0888	1	F	Annex E and F iRAT FR2 measurement accuracy tests	16.6.0
2020-12	RAN#90	R5-206808	0959	1	F	Update of Annex F for Test Tolerance	16.6.0
2020-12	RAN#90	R5-206834	0915	1	F	Update FR2 Downlink and Es/Noc MU values	16.6.0
2020-12	RAN#90	R5-206843	0876	1	F	Complete RRM 6.7.6.1 including TT analysis results	16.6.0
2020-12	RAN#90	R5-206844	0886	1	F	Update RRM 8.5.2.2.2 including TT analysis results	16.6.0
2020-12	RAN#90	R5-206871	0894	1	F	Correction of RRM TC 4.3.2.2.2	16.6.0
2020-12	RAN#90	R5-206872	0905	1	F	New DRX configuration for RLM TC	16.6.0
2020-12	RAN#90	R5-206895	0971	1	F	Correction to message configuration for NSA radio link monitoring CSI-RS Based in DRX mode tests	16.6.0
2020-12	RAN#90	R5-206906	0880	1	F	Complete RRM 4.7.5.1 including TT analysis results	16.6.0
2020-12	RAN#90	R5-206907	0877	1	F	Complete RRM 6.7.7.1 including TT analysis results	16.6.0
2020-12	RAN#90	R5-206908	0972	1	F	Correction to message configuration for SA radio link monitoring CSI RS Based RLM RS	16.6.0
2020-12	RAN#90	R5-206909	0887	1	F	Update RRM 8.5.2.3.2 including TT analysis results	16.6.0
2020-12	RAN#90	R5-206910	0881	1	F	Annex E and F 4.7.5.1 SFTD measurement accuracy test	16.6.0
2021-03	RAN#91	R5-210134	0999	-	F	Update of first preamble power for EN-DC TC 4.3.2.2.1 and 4.3.2.2.2	16.7.0
2021-03	RAN#91	R5-210135	1000	-	F	Update of first preamble power for SA TC 6.3.2.2.1 and 6.3.2.2.2	16.7.0
2021-03	RAN#91	R5-210136	1001	-	F	Update of UE initial state for SA RLM TC 6.5.1.x	16.7.0
2021-03	RAN#91	R5-210137	1002	-	F	Update of process delay for SFTD measurement TC 8.4.1.x	16.7.0
2021-03	RAN#91	R5-210138	1003	-	F	Update of cell frequency for TC 6.7.2.2.2	16.7.0
2021-03	RAN#91	R5-210171	1004	-	F	Editorial update of SS-RSRP for TC 6.7.1.2.1	16.7.0
2021-03	RAN#91	R5-210173	1006	-	F	Update of RRC message for TC 6.4.3.1 and 6.5.2.1	16.7.0
2021-03	RAN#91	R5-210176	1009	-	F	Update of Scell activation and CSI reporting time for EN-DC TC 5.5.3.1	16.7.0
2021-03	RAN#91	R5-210177	1010	-	F	Update of CSI reporting time for SA TC 7.5.3.1 and 7.5.3.2	16.7.0
2021-03	RAN#91	R5-210178	1011	-	F	Update of PRACH configuration for SA TC 7.3.2.2.2	16.7.0
2021-03	RAN#91	R5-210179	1012	-	F	Update of PRACH configuration for EN-DC TC 4.5.5.3 and 4.5.5.4	16.7.0
2021-03	RAN#91	R5-210180	1013	-	F	Update of PRACH configuration for EN-DC TC 5.5.5.x	16.7.0
2021-03	RAN#91	R5-210181	1014	-	F	Update of PRACH configuration for SA TC 6.5.5.3 and 6.5.5.4	16.7.0
2021-03	RAN#91	R5-210182	1015	-	F	Update of PRACH configuration for SA TC 7.5.5.x	16.7.0
2021-03	RAN#91	R5-210183	1016	-	F	Update of prach-ConfigurationIndex for FR1 PRACH configuration 4 in A.7	16.7.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-03	RAN#91	R5-210279	1017	-	F	Addition of minimum conformance requirements for R16 NR HST cell re-selection in 6.1.1.0	16.7.0
2021-03	RAN#91	R5-210281	1019	-	F	Addition of minimum conformance requirements for R16 NR HST measurement in 6.6.1.0	16.7.0
2021-03	RAN#91	R5-210283	1021	-	F	Update of Annex H.2.1-3 for R16 NR HST	16.7.0
2021-03	RAN#91	R5-210434	1025	-	F	Correct cell mapping for 5.4.3.1	16.7.0
2021-03	RAN#91	R5-210437	1027	-	F	Annex E and F 4.5.7.1 PSCell addition test	16.7.0
2021-03	RAN#91	R5-210440	1029	-	F	Update of TT analysis results in Annex F for FR2 iRAT test cases	16.7.0
2021-03	RAN#91	R5-210442	1030	-	F	Update TT results for SS-RSRP measurement accuracy test cases chapter 4	16.7.0
2021-03	RAN#91	R5-210443	1031	-	F	Update TT results for SS-RSRP measurement accuracy test cases chapter 6	16.7.0
2021-03	RAN#91	R5-210444	1032	-	F	Update TT results for SS-RSRP measurement accuracy test cases Annex F	16.7.0
2021-03	RAN#91	R5-210446	1033	-	F	Update TT results for SS-RSRQ measurement accuracy test cases chapter 4	16.7.0
2021-03	RAN#91	R5-210447	1034	-	F	Update TT results for SS-RSRQ measurement accuracy test cases chapter 6	16.7.0
2021-03	RAN#91	R5-210448	1035	-	F	Update TT results for SS-RSRQ measurement accuracy test cases Annex F	16.7.0
2021-03	RAN#91	R5-210456	1039	-	F	Update Annex I to TS 38.533	16.7.0
2021-03	RAN#91	R5-210457	1040	-	F	Update NR frequency band groups for FR1	16.7.0
2021-03	RAN#91	R5-210458	1041	-	F	Correction RLM config for event triggered test cases	16.7.0
2021-03	RAN#91	R5-210465	1046	-	F	Editorial correction of title of clause 6	16.7.0
2021-03	RAN#91	R5-210466	1047	-	F	Corrections to 6.3.2.2.1 and 6.3.2.2.2	16.7.0
2021-03	RAN#91	R5-210467	1048	-	F	Corrections to 4.3.2.2.2	16.7.0
2021-03	RAN#91	R5-210470	1049	-	F	Clarification on SSB Index to use in the PUxCH-PowerControl for RRM tests with more than one SSB	16.7.0
2021-03	RAN#91	R5-210471	1050	-	F	Clarification on SSB Index to use in the PUxCH-PowerControl for RRM tests with more than one SSB - EN-DC	16.7.0
2021-03	RAN#91	R5-210472	1051	-	F	Editorial: correct title of PRACH test cases to match RRM work plan - EN-DC FR1	16.7.0
2021-03	RAN#91	R5-210473	1052	-	F	Editorial: correct title of PRACH test cases to match RRM work plan - SA FR1	16.7.0
2021-03	RAN#91	R5-210474	1053	-	F	Editorial: correct title of PRACH test cases to match RRM work plan - SA FR2	16.7.0
2021-03	RAN#91	R5-210475	1054	-	F	Editorial: correct title of PRACH test cases to match RRM work plan - Annexes	16.7.0
2021-03	RAN#91	R5-210507	1056	-	F	Correction of test applicability for long DRX cycle related test cases in section 4	16.7.0
2021-03	RAN#91	R5-210508	1057	-	F	Correction of test applicability for long DRX cycle related test cases in section 5	16.7.0
2021-03	RAN#91	R5-210509	1058	-	F	Correction of test applicability for long DRX cycle related test cases in section 6	16.7.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-03	RAN#91	R5-210510	1059	-	F	Correction of test applicability for long DRX cycle related test cases in section 7	16.7.0
2021-03	RAN#91	R5-210511	1060	-	F	Correction of test applicability for long DRX cycle related test cases in section 8	16.7.0
2021-03	RAN#91	R5-210528	1062	-	F	Correction to test procedure in test case 6.5.1.4	16.7.0
2021-03	RAN#91	R5-210529	1063	-	F	Correction to Interruptions during measurements on deactivated NR SCC test cases	16.7.0
2021-03	RAN#91	R5-210530	1064	-	F	Correction to message configuration for NSA CSI-RS-based RLM RS test cases	16.7.0
2021-03	RAN#91	R5-210531	1065	-	F	Correction to NR SA RLM out-of-sync test cases	16.7.0
2021-03	RAN#91	R5-210532	1066	-	F	Correction to NR SA FR1 RRC Re-establishment test cases	16.7.0
2021-03	RAN#91	R5-210533	1067	-	F	Correction to 4.5.1.2 and 6.5.1.2 PDCCH Aggregation Level	16.7.0
2021-03	RAN#91	R5-210535	1069	-	F	Correction to FR1 NSA SS-SINR measurement test cases	16.7.0
2021-03	RAN#91	R5-210536	1070	-	F	Correction to L1-RSRP test cases	16.7.0
2021-03	RAN#91	R5-210537	1071	-	F	Correction to the procedure to add a step for establishing SRB2 and DRB	16.7.0
2021-03	RAN#91	R5-210538	1072	-	F	Update of DRX configuration in FR1 Event-triggered Test cases	16.7.0
2021-03	RAN#91	R5-210601	1073	-	F	Clarification of BWP1 and BWP2 in 6.6.1.3, 6.6.1.4, 6.6.1.6	16.7.0
2021-03	RAN#91	R5-210608	1077	-	F	Correction in 4.5.2.1 and 4.5.2.2 test procedure	16.7.0
2021-03	RAN#91	R5-210613	1079	-	F	Correction in SIB5 for iRAT cell reselection	16.7.0
2021-03	RAN#91	R5-210614	1080	-	F	Correction in 6.1.2.2 test procedure	16.7.0
2021-03	RAN#91	R5-210814	1085	-	F	Finalise FR2 Timing MU values	16.7.0
2021-03	RAN#91	R5-210816	1086	-	F	Update of FR2 Tx Timing Test case 5.4.1.1 Test Tolerances	16.7.0
2021-03	RAN#91	R5-210851	1089	-	F	Update of FR1 TT for 4.5.5.1 and 4.5.5.2 SSB based LR	16.7.0
2021-03	RAN#91	R5-210852	1090	-	F	Update of FR1 TT for 4.5.5.3 and 4.5.5.4 CSI-RS based LR	16.7.0
2021-03	RAN#91	R5-210853	1091	-	F	Correction to 4.6.4.3 and 4.6.4.4 L1-RSRP reporting delay	16.7.0
2021-03	RAN#91	R5-210857	1095	-	F	Update of FR1 TT for 6.5.5.1 and 6.5.5.2 SSB based LR	16.7.0
2021-03	RAN#91	R5-210858	1096	-	F	Update of FR1 TT for 6.5.5.3 and 6.5.5.4 CSI-RS based LR	16.7.0
2021-03	RAN#91	R5-210860	1098	-	F	Correction to 6.6.4.3 and 6.6.4.4 L1-RSRP reporting delay	16.7.0
2021-03	RAN#91	R5-210863	1101	-	F	Update of 6.5.3.1 SCell activation and deactivation	16.7.0
2021-03	RAN#91	R5-210864	1102	-	F	Update of D.4 antenna configuration	16.7.0
2021-03	RAN#91	R5-210866	1104	-	F	Correction to CSI-RS RMC	16.7.0
2021-03	RAN#91	R5-210867	1105	-	F	Correction to default configuration on L1-RSRP reporting in Annex H	16.7.0
2021-03	RAN#91	R5-210959	1113	-	F	Update to 6.5.4.1 NR SA FR1 UE UL carrier RRC reconfiguration delay	16.7.0
2021-03	RAN#91	R5-211049	1116	-	F	Additional of default downlink level for FR2	16.7.0
2021-03	RAN#91	R5-211219	1124	-	F	Correction of the minimum conformance requirements for Inter-RAT measurements 6.6.3.0	16.7.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-03	RAN#91	R5-211220	1125	-	F	Addition of new RRM iRAT measurement Inter-RAT measurements test case 6.6.3.3	16.7.0
2021-03	RAN#91	R5-211255	1131	-	F	Clarification of BWP1 and BWP2 in 4.6.1.3, 4.6.1.4, 4.6.1.6	16.7.0
2021-03	RAN#91	R5-211614	1007	1	F	Update of Scell activation and CSI reporting time for EN-DC TC 4.5.3.1	16.7.0
2021-03	RAN#91	R5-211615	1026	1	F	Complete RRM 4.5.7.1 including TT analysis results	16.7.0
2021-03	RAN#91	R5-211616	1087	1	F	Update Test Tolerance for FR1 RLM Test Cases	16.7.0
2021-03	RAN#91	R5-211617	1092	1	F	Correction to EN-DC radio link monitoring	16.7.0
2021-03	RAN#91	R5-211618	1093	1	F	Update of 4.5.3.1 SCell activation and deactivation	16.7.0
2021-03	RAN#91	R5-211619	1108	1	F	Update to 4.5.4.1 EN-DC FR1 UE UL carrier RRC reconfiguration delay	16.7.0
2021-03	RAN#91	R5-211620	1109	1	F	Update to 4.7.5.1 EN-DC FR1 SFTD measurement accuracy	16.7.0
2021-03	RAN#91	R5-211621	1117	1	F	Correction of applied TT for EN-DC FR1 L1-RSRP measurement test cases	16.7.0
2021-03	RAN#91	R5-211622	1023	1	F	Update 5.4.3.1 with TT analysis results	16.7.0
2021-03	RAN#91	R5-211623	1119	1	F	Correction of EN-DC FR2 inter-freq measurement test case 5.6.2.1 including TT	16.7.0
2021-03	RAN#91	R5-211624	1120	1	F	Correction of EN-DC FR2 inter-freq measurement test case 5.6.2.3 including TT	16.7.0
2021-03	RAN#91	R5-211625	1008	1	F	Update of CSI reporting time for SA TC 6.5.3.1	16.7.0
2021-03	RAN#91	R5-211626	1094	1	F	Correction to SA radio link monitoring	16.7.0
2021-03	RAN#91	R5-211627	1110	1	F	Update to 6.3.2.2.1 Contention based random access test in FR1 for NR standalone	16.7.0
2021-03	RAN#91	R5-211628	1111	1	F	Update to 6.3.2.2.2 Non-Contention based random access test in FR1 for NR standalone	16.7.0
2021-03	RAN#91	R5-211629	1112	1	F	Update to 6.5.2.1 NR SA FR1 interruptions during measurements on deactivated NR SCC	16.7.0
2021-03	RAN#91	R5-211630	1114	1	F	Update to 6.6.3.1 NR SA FR1 - E-UTRAN event-triggered reporting in non-DRX	16.7.0
2021-03	RAN#91	R5-211631	1115	1	F	Update to 6.6.3.2 NR SA FR1 - E-UTRAN event-triggered reporting in DRX	16.7.0
2021-03	RAN#91	R5-211632	1118	1	F	Correction of applied TT for SA FR1 L1-RSRP measurement test cases	16.7.0
2021-03	RAN#91	R5-211633	1121	1	F	Correction of SA FR2 inter-freq measurement test case 7.6.2.1 including TT	16.7.0
2021-03	RAN#91	R5-211634	1122	1	F	Correction of SA FR2 inter-freq measurement test case 7.6.2.3 including TT	16.7.0
2021-03	RAN#91	R5-211635	1028	1	F	Complete FR2 iRAT measurement accuracy test cases	16.7.0
2021-03	RAN#91	R5-211636	1024	1	F	Update Annex F for 5.4.3.1 and 7.4.3.1 with TT analysis results	16.7.0
2021-03	RAN#91	R5-211637	1038	1	F	Update DL AWGN MU for RRM FR2	16.7.0
2021-03	RAN#91	R5-211638	1084	1	F	Update FR2 Downlink and Uplink MU values	16.7.0
2021-03	RAN#91	R5-211639	1103	1	F	Update of Annex F for Test Tolerance	16.7.0
2021-03	RAN#91	R5-211640	1123	1	F	Correction of MTSU and applied TT in Annex F	16.7.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-03	RAN#91	R5-211641	1130	1	F	Addition of new RMCs and OCNGs into Annex A	16.7.0
2021-03	RAN#91	R5-211722	1042	1	F	Correction EN-DC FR1 timing tests	16.7.0
2021-03	RAN#91	R5-211723	1043	1	F	Corrections to 5.4.1.1	16.7.0
2021-03	RAN#91	R5-211724	1061	1	F	Clarification of SNR for 4RX UE in RLM Test Cases	16.7.0
2021-03	RAN#91	R5-211725	1076	1	F	Correction in 4.7.3.2.1 test parameters	16.7.0
2021-03	RAN#91	R5-211726	1005	1	F	Update of RRC message for TC 6.3.1.4, 6.3.1.5 and 6.3.2.3.2	16.7.0
2021-03	RAN#91	R5-211727	1045	1	F	Corrections NR SA FR1 timing test cases	16.7.0
2021-03	RAN#91	R5-211728	1097	1	F	Correction to NR TC 6.6.3.2-Inter-RAT DRX	16.7.0
2021-03	RAN#91	R5-211729	1099	1	F	Update of 6.5.1.2 and 6.5.1.4 SSB based RLM	16.7.0
2021-03	RAN#91	R5-211730	1083	1	F	Clarification of BWP1 and BWP2 in 7.6.1.3 and 7.6.1.4	16.7.0
2021-03	RAN#91	R5-211731	1044	1	F	Addition of Serving Cell Config for RRM timing test cases	16.7.0
2021-03	RAN#91	R5-211827	1018	1	F	Addition of new test case 6.1.1.7 for R16 NR HST	16.7.0
2021-03	RAN#91	R5-211828	1020	1	F	Addition of new test case 6.6.1.7 for R16 NR HST	16.7.0
2021-03	RAN#91	R5-211829	1022	1	F	Addition of cell configuration mapping in Annex E for R16 NR HST	16.7.0
2021-03	RAN#91	R5-211830	1126	1	F	Correction of the minimum conformance requirements for E-UTRA - NR FR1 Cell reselection 8.2.1.0	16.7.0
2021-03	RAN#91	R5-211831	1127	1	F	Addition of new RRM E-UTRA - NR FR1 Cell reselection test case 8.2.1.2	16.7.0
2021-03	RAN#91	R5-211832	1128	1	F	Correction of the minimum conformance requirements for E-UTRA - NR Inter-RAT event triggered reporting tests 8.4.2.0	16.7.0
2021-03	RAN#91	R5-211833	1129	1	F	Addition of new RRM E-UTRA - NR Inter-RAT event triggered reporting test case 8.4.2.9	16.7.0
2021-03	RAN#91	R5-211889	1036	1	F	Update TT results for 6.3.1.1	16.7.0
2021-03	RAN#91	R5-211890	1037	1	F	Update TT results for 6.3.1.1 Annex F	16.7.0
2021-06	RAN#92	R5-212024	1132	-	F	Complete 5.7.1.1 with TT analysis results	16.8.0
2021-06	RAN#92	R5-212025	1133	-	F	Complete 5.7.2.1 with TT analysis results	16.8.0
2021-06	RAN#92	R5-212026	1134	-	F	Complete 5.7.3.1 with TT analysis results	16.8.0
2021-06	RAN#92	R5-212256	1138	-	F	Core alignment of TCI state of CSI-RS for TRS	16.8.0
2021-06	RAN#92	R5-212257	1139	-	F	Introducing additional band for n38	16.8.0
2021-06	RAN#92	R5-212265	1147	-	F	Updates to DRX configuration in FR1 Event-triggered Test cases	16.8.0
2021-06	RAN#92	R5-212266	1148	-	F	Core alignment of BWP configuration parameter in 6.5.2.1	16.8.0
2021-06	RAN#92	R5-212267	1149	-	F	Correction to CSI-RS based L1-RSRP measurement tests	16.8.0
2021-06	RAN#92	R5-212612	1153	-	F	Addition of new test case 6.6.4.5 for R16 NR HST	16.8.0
2021-06	RAN#92	R5-212613	1154	-	F	Addition of cell configuration mapping in Annex E for TC 6.6.4.5	16.8.0
2021-06	RAN#92	R5-212712	1158	-	F	Remove obsolete message contents tables after Chapter 7 alignment	16.8.0
2021-06	RAN#92	R5-212715	1161	-	F	Correcting measurement accuracy iRAT test cases	16.8.0
2021-06	RAN#92	R5-212716	1162	-	F	Corrections to 5.4.1.1	16.8.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-06	RAN#92	R5-212717	1163	-	F	Corrections to 5.4.3.1	16.8.0
2021-06	RAN#92	R5-212718	1164	-	F	Corrections to 4.4.1.1	16.8.0
2021-06	RAN#92	R5-212719	1165	-	F	Corrections to 4.4.3.1	16.8.0
2021-06	RAN#92	R5-212720	1166	-	F	Corrections to 6.4.1.1	16.8.0
2021-06	RAN#92	R5-212721	1167	-	F	Corrections to 6.4.3.1	16.8.0
2021-06	RAN#92	R5-212726	1171	-	F	Correct applicability of Interruption EN-DC test cases with CA	16.8.0
2021-06	RAN#92	R5-212727	1172	-	F	Correct applicability of Scell activation EN-DC test cases with CA	16.8.0
2021-06	RAN#92	R5-212728	1173	-	F	Correct applicability of Interruption SA test cases with CA	16.8.0
2021-06	RAN#92	R5-212729	1174	-	F	Correct applicability of Scell activation SA test cases with CA	16.8.0
2021-06	RAN#92	R5-212731	1175	-	F	Addition of RRM FR2 EN-DC PRACH test case 5.3.2.2.1	16.8.0
2021-06	RAN#92	R5-212732	1176	-	F	Addition of RRM FR2 EN-DC PRACH test case 5.3.2.2.2	16.8.0
2021-06	RAN#92	R5-212737	1177	-	F	Update to test applicability of RRM TC6.5.4.1	16.8.0
2021-06	RAN#92	R5-212745	1178	-	F	Update to RRM Antenna connection for 4Rx capable Ues	16.8.0
2021-06	RAN#92	R5-212895	1180	-	F	Correction to FR1 EN-DC interruption during SCell measurement test cases	16.8.0
2021-06	RAN#92	R5-212896	1181	-	F	Correction to FR1 EN-DC beam failure recovery test cases	16.8.0
2021-06	RAN#92	R5-212900	1185	-	F	Correction to FR1 NR SA TC 6.5.3.1-SCell activation	16.8.0
2021-06	RAN#92	R5-212901	1186	-	F	Correction to FR1 NR SA beam failure recovery test cases	16.8.0
2021-06	RAN#92	R5-212904	1189	-	F	Correction to RMSI CORESET reference configuration in Annex A	16.8.0
2021-06	RAN#92	R5-212905	1190	-	F	Correction to CSI-RS reference configuration in annex A	16.8.0
2021-06	RAN#92	R5-212906	1191	-	F	Correction to TRS reference configuration in annex A	16.8.0
2021-06	RAN#92	R5-212909	1194	-	F	Correction to BWP reference configuration in Annex A	16.8.0
2021-06	RAN#92	R5-212910	1195	-	F	Correction of minimum requirements for L1-RSRP reporting test cases	16.8.0
2021-06	RAN#92	R5-212911	1196	-	F	Addition of FR1 EN-DC TC 4.6.4.5-HST L1-RSRP	16.8.0
2021-06	RAN#92	R5-213183	1205	-	F	Extension of Annex I for EIS spherical coverage points	16.8.0
2021-06	RAN#92	R5-213227	1212	-	F	Correction of SA FR2 inter-freq measurement test case 7.6.2.5 including TT	16.8.0
2021-06	RAN#92	R5-213228	1213	-	F	Correction of SA FR2 inter-freq measurement test case 7.6.2.6 including TT	16.8.0
2021-06	RAN#92	R5-213229	1214	-	F	Correction of SA FR2 inter-freq measurement test case 7.6.2.7 including TT	16.8.0
2021-06	RAN#92	R5-213230	1215	-	F	Correction of SA FR2 inter-freq measurement test case 7.6.2.8 including TT	16.8.0
2021-06	RAN#92	R5-213240	1219	-	F	Test frequency selection for Inter-frequency RRM test cases in Annex E	16.8.0
2021-06	RAN#92	R5-213345	1222	-	F	Update on iRAT measurement 6.6.3.2 test case	16.8.0
2021-06	RAN#92	R5-213346	1223	-	F	Update on Annex H.3.1 for iRAT measurement	16.8.0
2021-06	RAN#92	R5-213351	1224	-	F	Correction to Coreset and Search Space RMC for FR2 RRM	16.8.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-06	RAN#92	R5-213352	1225	-	F	Correction to Message Exceptions for 6.3.2.2.2 Non-contention based random access test in FR1	16.8.0
2021-06	RAN#92	R5-213353	1226	-	F	Correction to PDSCH RMC when DRX is configured	16.8.0
2021-06	RAN#92	R5-213354	1227	-	F	Correction to intra and inter frequency reselection test cases with asynchronous cells	16.8.0
2021-06	RAN#92	R5-213847	1179	1	F	Addition of inter-frequency measurements configuration for FR1 EN-DC BFD and RLM test cases	16.8.0
2021-06	RAN#92	R5-213848	1183	1	F	Addition of inter-frequency measurements configuration for FR1 NR SA BFD and RLM test cases	16.8.0
2021-06	RAN#92	R5-213849	1184	1	F	Correction to FR1 NR SA interruption during SCell measurement test cases	16.8.0
2021-06	RAN#92	R5-213850	1193	1	F	Correction to PRACH reference configuration in Annex H	16.8.0
2021-06	RAN#92	R5-213921	1145	1	F	Correction to test procedure for SSB-based L1-RSRP measurement reporting	16.8.0
2021-06	RAN#92	R5-213922	1159	1	F	Remove obsolete message contents tables after Chapter 7 alignment - EN-DC	16.8.0
2021-06	RAN#92	R5-213923	1168	1	F	Corrections to RLM test cases EN-DC	16.8.0
2021-06	RAN#92	R5-213924	1141	1	F	Correction to FR2 RRM test channel reference for Event triggered reporting test	16.8.0
2021-06	RAN#92	R5-213925	1142	1	F	Correction to FR2 RRM test channel reference for RLM and BFD tests	16.8.0
2021-06	RAN#92	R5-213926	1143	1	F	Correction to FR2 RRM test channel reference for UL timing test	16.8.0
2021-06	RAN#92	R5-213927	1208	1	F	Correction of EN-DC FR2 inter-freq measurement test case 5.6.2.5 including TT	16.8.0
2021-06	RAN#92	R5-213928	1209	1	F	Correction of EN-DC FR2 inter-freq measurement test case 5.6.2.6 including TT	16.8.0
2021-06	RAN#92	R5-213929	1210	1	F	Correction of EN-DC FR2 inter-freq measurement test case 5.6.2.7 including TT	16.8.0
2021-06	RAN#92	R5-213930	1211	1	F	Correction of EN-DC FR2 inter-freq measurement test case 5.6.2.8 including TT	16.8.0
2021-06	RAN#92	R5-213931	1156	1	F	Correct reference to cell mapping for SA test cases	16.8.0
2021-06	RAN#92	R5-213932	1160	1	F	Correcting typos in PRACH test case	16.8.0
2021-06	RAN#92	R5-213933	1169	1	F	Corrections to RLM test cases SA	16.8.0
2021-06	RAN#92	R5-213934	1135	1	F	Annex F for EN-DC and SA FR2 Measurement Accuracy	16.8.0
2021-06	RAN#92	R5-213935	1157	1	F	Align Annex H of TS 38.533 to Clause 7 of TS 38.508-1	16.8.0
2021-06	RAN#92	R5-213936	1202	1	F	Correction to AoA Test Setup applicability per permitted test method	16.8.0
2021-06	RAN#92	R5-213937	1204	1	F	Adapt Annex F to indicate applicability of the RRM FR2 TT analysis results	16.8.0
2021-06	RAN#92	R5-213938	1207	1	F	Correction of MTSU and applied TT in Annex F for FR2 inter-freq measurement test cases	16.8.0
2021-06	RAN#92	R5-214009	1151	1	F	Addition of 5G-SRVCC RRM TC 6.3.1.6-handover	16.8.0
2021-06	RAN#92	R5-214010	1152	1	F	Addition of 5G-SRVCC RRM TC 6.6.5.1-envent triggered reporting non-DRX	16.8.0
2021-06	RAN#92	R5-214060	1182	1	F	Correction to FR1 EN-DC BWP switching test cases	16.8.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-06	RAN#92	R5-214061	1198	1	F	Update of CSI reporting time for EN-DC FR1 TC 4.5.3.1	16.8.0
2021-06	RAN#92	R5-214062	1199	1	F	Update of CSI reporting time for EN-DC FR2 TC 5.5.3.1	16.8.0
2021-06	RAN#92	R5-214063	1203	1	F	Adapt RRM FR2 test cases to indicate applicability of the TT analysis results	16.8.0
2021-06	RAN#92	R5-214064	1146	1	F	Corrections to NR SA FR1 RRC Re-establishment tests	16.8.0
2021-06	RAN#92	R5-214065	1187	1	F	Correction to FR1 NR SA BWP switch test cases	16.8.0
2021-06	RAN#92	R5-214066	1200	1	F	Update of CSI reporting time for SA FR1 TC 6.5.3.1	16.8.0
2021-06	RAN#92	R5-214067	1201	1	F	Update of CSI reporting time for SA FR2 TC 7.5.3.1 and 7.5.3.2	16.8.0
2021-06	RAN#92	R5-214068	1188	1	F	Correction to NR inter-RAT measurement test cases	16.8.0
2021-06	RAN#92	R5-214090	1197	1	F	Correction to Annex A.9 on the selection of test direction	16.8.0
2021-06	RAN#92	R5-214091	1206	1	F	Extension of the RSRPB Rx Beak Peak Search method	16.8.0
2021-06	RAN#92	R5-214092	1221	1	F	Update on test frequencies selection for inter-frequency test cases	16.8.0
2021-06	RAN#92	R5-214108	1216	1	F	Correction of EN-DC FR2 inter-freq measurement test case 5.6.2.1 and 5.6.2.3	16.8.0
2021-06	RAN#92	R5-214109	1217	1	F	Correction of SA FR2 inter-freq measurement test case 7.6.2.1 and 7.6.2.3	16.8.0
2021-06	RAN#92	R5-214111	1144	1	F	Correction to Interruptions during measurements on deactivated NR SCC	16.8.0
2021-06	RAN#92	R5-214113	1140	1	F	Correction to FR2 event-triggered reporting of intra frequency cell	16.8.0
2021-09	RAN#93	R5-214195	1232	-	F	Completion 7.7.2.2 including TT analysis results	16.9.0
2021-09	RAN#93	R5-214197	1234	-	F	Annex E and F update for FR2 inter-frequency periodic measurements tests	16.9.0
2021-09	RAN#93	R5-214198	1235	-	F	Completion 7.7.1.1	16.9.0
2021-09	RAN#93	R5-214199	1236	-	F	Completion 7.7.2.1	16.9.0
2021-09	RAN#93	R5-214200	1237	-	F	Completion 7.7.3.1	16.9.0
2021-09	RAN#93	R5-214339	1239	-	F	Correction to 4.5.1.1 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-214342	1242	-	F	Correction to 4.5.1.4 core spec alignment	16.9.0
2021-09	RAN#93	R5-214343	1243	-	F	Correction to 4.5.1.5 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-214345	1245	-	F	Correction to 4.4.1.1 and core spec alignment	16.9.0
2021-09	RAN#93	R5-214347	1247	-	F	Editorial corrections and core spec alignment for 5.7.1.1	16.9.0
2021-09	RAN#93	R5-214348	1248	-	F	Editorial corrections and core spec alignment for 5.7.2.1	16.9.0
2021-09	RAN#93	R5-214349	1249	-	F	Editorial corrections and core spec alignment for 5.7.3.1	16.9.0
2021-09	RAN#93	R5-214350	1250	-	F	Core spec alignment for 5.6.1.1	16.9.0
2021-09	RAN#93	R5-214351	1251	-	F	Core spec alignment for 5.6.1.2	16.9.0
2021-09	RAN#93	R5-214352	1252	-	F	Core spec alignment for 5.6.1.3	16.9.0
2021-09	RAN#93	R5-214353	1253	-	F	Core spec alignment for 5.6.1.4	16.9.0
2021-09	RAN#93	R5-214354	1254	-	F	Correction to 5.6.2.1 message contents	16.9.0
2021-09	RAN#93	R5-214355	1255	-	F	Correction to 5.6.2.2 message contents	16.9.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-09	RAN#93	R5-214356	1256	-	F	Correction to 5.6.2.3 message contents	16.9.0
2021-09	RAN#93	R5-214357	1257	-	F	Correction to 5.6.2.4 message contents	16.9.0
2021-09	RAN#93	R5-214358	1258	-	F	Correction to 5.6.2.5 message contents	16.9.0
2021-09	RAN#93	R5-214359	1259	-	F	Correction to 5.6.2.6 message contents	16.9.0
2021-09	RAN#93	R5-214360	1260	-	F	Correction to 5.6.2.7 message contents	16.9.0
2021-09	RAN#93	R5-214361	1261	-	F	Correction to 5.6.2.8 message contents	16.9.0
2021-09	RAN#93	R5-214363	1263	-	F	Correction to 6.5.1.1 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-214365	1265	-	F	Correction to 6.5.1.5 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-214367	1267	-	F	Correction to 6.3.1.6 and core spec alignment	16.9.0
2021-09	RAN#93	R5-214368	1268	-	F	Correction to 6.5.2.1 and core spec alignment	16.9.0
2021-09	RAN#93	R5-214370	1270	-	F	Correction to 6.7.5.1 and core spec alignment	16.9.0
2021-09	RAN#93	R5-214371	1271	-	F	Correction to 6.7.6.1 and core spec alignment	16.9.0
2021-09	RAN#93	R5-214372	1272	-	F	Correction to 6.7.7.1 and core spec alignment	16.9.0
2021-09	RAN#93	R5-214373	1273	-	F	Core spec alignment for 7.6.1.1	16.9.0
2021-09	RAN#93	R5-214374	1274	-	F	Core spec alignment for 7.6.1.2	16.9.0
2021-09	RAN#93	R5-214375	1275	-	F	Core spec alignment for 7.6.1.3	16.9.0
2021-09	RAN#93	R5-214376	1276	-	F	Core spec alignment for 7.6.1.4	16.9.0
2021-09	RAN#93	R5-214378	1278	-	F	Correction to 8.3.1.1 and core spec alignment	16.9.0
2021-09	RAN#93	R5-214395	1280	-	F	Addition of FR1 mobility enhancement TC 6.3.1.9-Intra-band inter-frequency sync DAPS HO in SA for FR1	16.9.0
2021-09	RAN#93	R5-214407	1281	-	F	Clarification of test procedure for 4.3.2.2.1	16.9.0
2021-09	RAN#93	R5-214408	1282	-	F	Corrections to 4.7.1.x.y SS-RSRP test cases	16.9.0
2021-09	RAN#93	R5-214409	1283	-	F	Corrections to 4.7.2.x SS-RSRQ test cases	16.9.0
2021-09	RAN#93	R5-214410	1284	-	F	Corrections to 4.7.3.x SS-SINR test cases	16.9.0
2021-09	RAN#93	R5-214411	1285	-	F	Corrections to 4.5.1.6	16.9.0
2021-09	RAN#93	R5-214412	1286	-	F	Corrections to 4.5.1.8	16.9.0
2021-09	RAN#93	R5-214413	1287	-	F	Core spec alignment of EN-DC FR2 PRACH	16.9.0
2021-09	RAN#93	R5-214414	1288	-	F	Corrections to 6.5.1.2	16.9.0
2021-09	RAN#93	R5-214415	1289	-	F	Corrections to 6.5.1.4	16.9.0
2021-09	RAN#93	R5-214416	1290	-	F	Corrections to 6.7.1.x.y SS-RSRP test cases	16.9.0
2021-09	RAN#93	R5-214417	1291	-	F	Corrections to 6.7.2.x SS-RSRQ test cases	16.9.0
2021-09	RAN#93	R5-214418	1292	-	F	Corrections to 6.7.3.x SS-SINR test cases	16.9.0
2021-09	RAN#93	R5-214419	1293	-	F	Corrections to 6.5.1.6	16.9.0
2021-09	RAN#93	R5-214420	1294	-	F	Corrections to 6.5.1.8	16.9.0
2021-09	RAN#93	R5-214421	1295	-	F	Align 6.3.2.2.x to core spec	16.9.0
2021-09	RAN#93	R5-214422	1296	-	F	Align 6.4.3.1 to core spec	16.9.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-09	RAN#93	R5-214423	1297	-	F	Align 6.6.2.x to core spec	16.9.0
2021-09	RAN#93	R5-214424	1298	-	F	Align 6.6.3.x to core spec	16.9.0
2021-09	RAN#93	R5-214426	1300	-	F	Correction to Table H.3.5-9	16.9.0
2021-09	RAN#93	R5-214427	1301	-	F	Clarification CSI-ReportConfig from Annex H	16.9.0
2021-09	RAN#93	R5-214519	1302	-	F	Addition of FR1 mobility enhancement TC 6.3.1.10-Intra-band inter-frequency asynchronous DAPS HO in SA for FR1	16.9.0
2021-09	RAN#93	R5-214520	1303	-	F	Addition of FR1 mobility enhancement TC 6.3.1.11-Inter-band inter-frequency sync DAPS HO in SA for FR1	16.9.0
2021-09	RAN#93	R5-214521	1304	-	F	Addition of FR1 mobility enhancement TC 6.3.1.12-Inter-band inter-frequency asynchronousDAPS HO in SA for FR1	16.9.0
2021-09	RAN#93	R5-214522	1305	-	F	Update of applicability for RLM TC 4.6.1.3 and 4.6.1.6	16.9.0
2021-09	RAN#93	R5-214525	1308	-	F	Update of applicability for RLM TC 6.6.1.3 and 6.6.1.6	16.9.0
2021-09	RAN#93	R5-214526	1309	-	F	Correction of cell configuration for SA FR1 TC 6.3.2.1.2 and 6.3.2.1.3	16.9.0
2021-09	RAN#93	R5-214527	1310	-	F	Correction of specific message content for SA FR2 TC 7.6.1.4	16.9.0
2021-09	RAN#93	R5-214528	1311	-	F	Correction of cell configuration for SA FR2 TC 7.3.2.1.1, 7.3.2.1.2 and 7.3.2.1.3	16.9.0
2021-09	RAN#93	R5-214529	1312	-	F	Update of TCI configuration for SA FR2 TC 7.6.2.1 and 7.6.2.3	16.9.0
2021-09	RAN#93	R5-214530	1313	-	F	Correction of non-existent config for SA FR2 TC 7.7.1.3.1	16.9.0
2021-09	RAN#93	R5-214681	1319	-	F	Core alignment for DRX configuration	16.9.0
2021-09	RAN#93	R5-214682	1320	-	F	Correction to FR2 event-triggered reporting in DRX test cases	16.9.0
2021-09	RAN#93	R5-214685	1323	-	F	Correction to Inter-RAT SFTD measurement delay and event triggered reporting tests	16.9.0
2021-09	RAN#93	R5-214687	1325	-	F	Correction to 4.5.7.1EN-DC FR1 addition and release delay of known PSCell	16.9.0
2021-09	RAN#93	R5-214688	1326	-	F	Correction to NR SA FR1 - E-UTRAN event-triggered reporting tests	16.9.0
2021-09	RAN#93	R5-214689	1327	-	F	Correction to the number of entries in the measObjectToAddModList	16.9.0
2021-09	RAN#93	R5-214693	1331	-	F	Clean up on editor notes for FR2 test cases	16.9.0
2021-09	RAN#93	R5-214711	1335	-	F	Add minimum conformance requirements for DAPS handover	16.9.0
2021-09	RAN#93	R5-214832	1337	-	F	Correction to 5G-SRVCC RRM TC 6.3.1.6-handover	16.9.0
2021-09	RAN#93	R5-214833	1338	-	F	Correction to 5G-SRVCC RRM TC 6.6.5.1-envent triggered reporting non-DRX	16.9.0
2021-09	RAN#93	R5-214921	1340	-	F	Alignment HO test case 6.3.1.2 with core requirements	16.9.0
2021-09	RAN#93	R5-214922	1341	-	F	Correction re-establishment test cases 6.3.2.1.x	16.9.0
2021-09	RAN#93	R5-214923	1342	-	F	Remove gapUE and gapFR1 from iRAT test cases	16.9.0
2021-09	RAN#93	R5-214924	1343	-	F	Annex A.6.1 for iRAT test cases	16.9.0
2021-09	RAN#93	R5-214948	1344	-	F	Addition of FR-1 NSA CLI Measurement test cases	16.9.0
2021-09	RAN#93	R5-214983	1349	-	F	Correction to FR1 EN-DC TCs-RLM	16.9.0
2021-09	RAN#93	R5-214985	1351	-	F	Correction to FR2 EN-DC TCs-RLM	16.9.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-09	RAN#93	R5-214986	1352	-	F	Correction to FR2 EN-DC TCs-SCell activation	16.9.0
2021-09	RAN#93	R5-214987	1353	-	F	Correction to FR1 NR SA TC 6.5.2.1-SCell interruption	16.9.0
2021-09	RAN#93	R5-214989	1355	-	F	Correction to FR1 NR SA TCs-cell reselection	16.9.0
2021-09	RAN#93	R5-214991	1357	-	F	Correction to FR1 NR SA TCs-RLM	16.9.0
2021-09	RAN#93	R5-214993	1359	-	F	Correction to FR2 NR SA TCs-cell reselection	16.9.0
2021-09	RAN#93	R5-214994	1360	-	F	Correction to FR2 NR SA TCs-SCell activation	16.9.0
2021-09	RAN#93	R5-214996	1362	-	F	Correction to LTE SA TCs-cell reselection	16.9.0
2021-09	RAN#93	R5-214997	1363	-	F	Correction to LTE SA TCs-inter-RAT delay	16.9.0
2021-09	RAN#93	R5-214999	1365	-	F	Correction to cell mapping for CA TCs	16.9.0
2021-09	RAN#93	R5-215005	1367	-	F	Addition of minimum requirements for FR1 CHO	16.9.0
2021-09	RAN#93	R5-215006	1368	-	F	Addition of minimum requirements for FR2 CHO	16.9.0
2021-09	RAN#93	R5-215007	1369	-	F	Addition of NR Mob_Enh RRM TC 6.3.1.7-intra freq sync DAPS HO	16.9.0
2021-09	RAN#93	R5-215008	1370	-	F	Addition of NR Mob_Enh RRM TC 6.3.1.8-intra freq async DAPS HO	16.9.0
2021-09	RAN#93	R5-215009	1371	-	F	Addition of NR Mob_Enh RRM TC 6.3.3.1-intra freq CHO	16.9.0
2021-09	RAN#93	R5-215010	1372	-	F	Addition of NR Mob_Enh RRM TC 6.3.3.2-inter freq CHO	16.9.0
2021-09	RAN#93	R5-215011	1373	-	F	Addition of NR Mob_Enh RRM TC 7.3.1.4-inter band sync DAPS HO	16.9.0
2021-09	RAN#93	R5-215012	1374	-	F	Addition of NR Mob_Enh RRM TC 7.3.1.5-inter band async DAPS HO	16.9.0
2021-09	RAN#93	R5-215013	1375	-	F	Addition of NR Mob_Enh RRM TC 7.3.3.1-intra freq CHO	16.9.0
2021-09	RAN#93	R5-215014	1376	-	F	Addition of NR Mob_Enh RRM TC 7.3.3.2-inter freq CHO	16.9.0
2021-09	RAN#93	R5-215020	1378	-	F	Addition of minimum requirements for inter-freq relaxed measurement	16.9.0
2021-09	RAN#93	R5-215022	1380	-	F	Addition of minimum requirements for intra-freq relaxed measurement	16.9.0
2021-09	RAN#93	R5-215023	1381	-	F	Addition of NR PS RRM TC 6.1.1.3 - intra-freq cell reselection low mobility	16.9.0
2021-09	RAN#93	R5-215024	1382	-	F	Addition of NR PS RRM TC 6.1.1.4 - intra-freq cell reselection non-cell-edge	16.9.0
2021-09	RAN#93	R5-215025	1383	-	F	Addition of NR PS RRM TC 6.1.1.5 - inter-freq cell reselection low mobility	16.9.0
2021-09	RAN#93	R5-215026	1384	-	F	Addition of NR PS RRM TC 6.1.1.6 - inter-freq cell reselection non-cell-edge	16.9.0
2021-09	RAN#93	R5-215036	1388	-	F	Correction to minimum requirements for inter-RAT cell reselection with highSpeedMeasFlag	16.9.0
2021-09	RAN#93	R5-215037	1389	-	F	Correction to minimum requirements for intra-frequency measurement with highSpeedMeasFlag	16.9.0
2021-09	RAN#93	R5-215038	1390	-	F	Correction to NR HST RRM TC 6.1.1.7-HST intra-freq cell reselection	16.9.0
2021-09	RAN#93	R5-215039	1391	-	F	Addition of cell mapping for NR HST RRM TCs	16.9.0
2021-09	RAN#93	R5-215243	1398	-	F	Update of test case 6.6.4.5 for R16 NR HST	16.9.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-09	RAN#93	R5-215244	1399	-	F	Editorial change of RRM test case 6.6.1.7	16.9.0
2021-09	RAN#93	R5-215352	1401	-	F	Correction to test frequeny selection for intra-band EN-DC	16.9.0
2021-09	RAN#93	R5-215354	1403	-	F	Correction to test requirement for 8.4.2.4 and error in writing for 8.4.2.x	16.9.0
2021-09	RAN#93	R5-215355	1404	-	F	Correction to DRX configuration for eliminating overlap between DRX and SMTC	16.9.0
2021-09	RAN#93	R5-215360	1405	-	F	Correction to test case 6.3.1.1 and 6.3.1.3	16.9.0
2021-09	RAN#93	R5-215365	1406	-	F	Core spec alignment to add CCR configuration for EN-DC PRACH	16.9.0
2021-09	RAN#93	R5-215366	1407	-	F	Core spec alignment to add CCR configuration for EN-DC Timing	16.9.0
2021-09	RAN#93	R5-215367	1408	-	F	Core spec alignment to add CCR configuration for EN-DC event triggered	16.9.0
2021-09	RAN#93	R5-215368	1409	-	F	Addition of minimum conformance requirements of cell re-selection with relaxed measurement criterion in FR2	16.9.0
2021-09	RAN#93	R5-215392	1410	-	F	Add test case 4.3.2.2.3 for EN-DC FR1 2-step PRACH	16.9.0
2021-09	RAN#93	R5-215393	1411	-	F	Add test case 4.3.2.2.4 for EN-DC FR1 2-step PRACH	16.9.0
2021-09	RAN#93	R5-215394	1412	-	F	Add test case 5.3.2.2.3 for EN-DC FR2 2-step PRACH	16.9.0
2021-09	RAN#93	R5-215395	1413	-	F	Add test case 5.3.2.2.4 for EN-DC FR2 2-step PRACH	16.9.0
2021-09	RAN#93	R5-215396	1414	-	F	Add test case 6.3.2.2.3 for SA FR1 2-step PRACH	16.9.0
2021-09	RAN#93	R5-215397	1415	-	F	Add test case 6.3.2.2.4 for SA FR1 2-step PRACH	16.9.0
2021-09	RAN#93	R5-215398	1416	-	F	Add 2-Step PRACH test cases to Annex E	16.9.0
2021-09	RAN#93	R5-215412	1417	-	F	Addition of cell configuration for RRM HST test cases in Annex E	16.9.0
2021-09	RAN#93	R5-215413	1418	-	F	Correction of RRM HST Inter-RAT measurements test case 6.6.3.3	16.9.0
2021-09	RAN#93	R5-215414	1419	-	F	Correction of RRM HST E-UTRA NR FR1 Cell reselection test case 8.2.1.2	16.9.0
2021-09	RAN#93	R5-215415	1420	-	F	Correction of RRM HST E-UTRA NR Inter-RAT event triggered reporting test case 8.4.2.9	16.9.0
2021-09	RAN#93	R5-215420	1425	-	F	Correction of RRM EN-DC FR2 CSI-RS-based L1-RSRP measurement in DRX test case 5.6.3.4	16.9.0
2021-09	RAN#93	R5-215425	1430	-	F	Correction of RRM EN-DC FR2-FR2 event-triggered reporting in DRX test case 5.6.2.2 including Test Tolerance	16.9.0
2021-09	RAN#93	R5-215426	1431	-	F	Correction of RRM EN-DC FR2-FR2 event-triggered reporting in DRX with SSB time index detection test case 5.6.2.4 including Test Tolerance	16.9.0
2021-09	RAN#93	R5-215427	1432	-	F	Correction of RRM SA FR2-FR2 event-triggered reporting in DRX test case 7.6.2.2 including Test Tolerance	16.9.0
2021-09	RAN#93	R5-215428	1433	-	F	Correction of RRM SA FR2-FR2 event-triggered reporting in DRX with SSB time index detection test case 7.6.2.4 including Test Tolerance	16.9.0
2021-09	RAN#93	R5-215429	1434	-	F	Editorial correction of RRM FR2 EN-DC event triggered measurement test cases	16.9.0
2021-09	RAN#93	R5-215430	1435	-	F	Editorial correction of RRM FR2 SA event triggered measurement test cases	16.9.0
2021-09	RAN#93	R5-215431	1436	-	F	Correction of Measurement Uncertainty and Test Tolerance in Annex F for RRM test cases	16.9.0

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2021-09	RAN#93	R5-215436	1437	-	F	Add MsgA configuration to the TS 38.533 annexes	16.9.0
2021-09	RAN#93	R5-215614	1438	-	F	Update on 6.3.1.1 to be aligned with TS 38.133	16.9.0
2021-09	RAN#93	R5-215620	1439	-	F	MTSU and TT mapping related to Max Device Size in TS 38.533	16.9.0
2021-09	RAN#93	R5-215622	1441	-	F	Updates on 5.6.1.3 and 5.6.1.4 CSI-RS RLM test cases test applicability	16.9.0
2021-09	RAN#93	R5-215624	1443	-	F	Correction in 5.6.1.1, 5.6.1.3 test procedure to configure iterations	16.9.0
2021-09	RAN#93	R5-215625	1444	-	F	Correction in 5.6.2.1, 5.6.2.2, 5.6.2.3, 5.6.2.4 test procedure to configure iterations	16.9.0
2021-09	RAN#93	R5-215655	1451	-	F	Update to applicability statement to include gap pattern id 13 for applicable NSA event triggered test cases	16.9.0
2021-09	RAN#93	R5-215656	1452	-	F	TRS configuration update to NSA FR1 TC 6.5.4.1.1	16.9.0
2021-09	RAN#93	R5-215903	1238	1	F	Change to EN-DC L1-RSRP test cases to add evaluation rules	16.9.0
2021-09	RAN#93	R5-215904	1240	1	F	Correction to 4.5.1.2 core spec alignment	16.9.0
2021-09	RAN#93	R5-215905	1241	1	F	Correction to 4.5.1.3 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-215906	1244	1	F	Correction to 4.5.1.7 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-215907	1329	1	F	Correction to FR1 and FR2 event-triggered reporting with gap tests	16.9.0
2021-09	RAN#93	R5-215908	1262	1	F	Change to SA L1-RSRP test cases to add evaluation rules	16.9.0
2021-09	RAN#93	R5-215909	1264	1	F	Correction to 6.5.1.3 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-215910	1266	1	F	Correction to 6.5.1.7 message contents and core spec alignment	16.9.0
2021-09	RAN#93	R5-215911	1356	1	F	Correction to FR1 NR SA TCs-inter-RAT accuracy	16.9.0
2021-09	RAN#93	R5-215912	1402	1	F	Correction to test procedure for 6.1.2.2 IRAT ReSelection	16.9.0
2021-09	RAN#93	R5-215913	1277	1	F	Change title of iRAT test cases for clarity	16.9.0
2021-09	RAN#93	R5-215914	1361	1	F	Correction to LTE SA TC 8.5.1.1-SFTD accuracy	16.9.0
2021-09	RAN#93	R5-215915	1279	1	F	Change title of iRAT test cases for clarity - Annexes	16.9.0
2021-09	RAN#93	R5-215916	1333	1	F	Update to Annex H.3.4	16.9.0
2021-09	RAN#93	R5-215917	1366	1	F	Correction to default configuration-Annex H	16.9.0
2021-09	RAN#93	R5-215918	1421	1	F	Correction of CSI-ReportConfig in Annex H	16.9.0
2021-09	RAN#93	R5-215932	1377	1	F	Addition of cell mapping for Mob_Enh RRM TCs	16.9.0
2021-09	RAN#93	R5-215938	1316	1	F	Addition of NR SA FR2-FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	16.9.0
2021-09	RAN#93	R5-215939	1385	1	F	Addition of cell mapping for NR PS RRM TCs	16.9.0
2021-09	RAN#93	R5-215940	1392	1	F	Addition of minimum conformance requirements of inter-RAT cell re-selection with relaxed measurement criterion	16.9.0
2021-09	RAN#93	R5-215941	1395	1	F	Update of Annex E and Annex F for test cases with relaxed measurement criterion	16.9.0
2021-09	RAN#93	R5-215948	1386	1	F	Addition of NR HST RRM TC 4.6.1.7-intra-freq DRX highSpeedMeasFlag	16.9.0
2021-09	RAN#93	R5-215949	1387	1	F	Addition of NR HST RRM TC 6.1.2.5-intra-freq cell reselection highSpeedMeasFlag	16.9.0
2021-09	RAN#93	R5-216042	1328	1	F	Correction to FR1 Beam Failure Detection and Link Recovery tests	16.9.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-09	RAN#93	R5-216043	1339	1	F	Correction message contents 4.3.2.2.2	16.9.0
2021-09	RAN#93	R5-216044	1345	1	F	Update to applicability of test cases on CSI-RS based RLM	16.9.0
2021-09	RAN#93	R5-216045	1445	1	F	Updates to DCI based BWP switch NSA FR1 TC 4.5.6.1.1	16.9.0
2021-09	RAN#93	R5-216046	1446	1	F	Updates to DCI based BWP switch NSA FR1 2DLCA TC 4.5.6.1.2	16.9.0
2021-09	RAN#93	R5-216047	1447	1	F	Updates to RRC based BWP switch NSA FR1 TC 4.5.6.2.1	16.9.0
2021-09	RAN#93	R5-216048	1228	1	F	Completion 5.7.1.2 including TT analysis results	16.9.0
2021-09	RAN#93	R5-216049	1229	1	F	Completion 5.7.2.2 including TT analysis results	16.9.0
2021-09	RAN#93	R5-216050	1230	1	F	Completion 5.7.3.2 including TT analysis results	16.9.0
2021-09	RAN#93	R5-216051	1322	1	F	Correction to 6.5.3.1 NR SA FR1 SCell activation and deactivation of known SCell	16.9.0
2021-09	RAN#93	R5-216052	1231	1	F	Completion 7.7.1.2 including TT analysis results	16.9.0
2021-09	RAN#93	R5-216053	1233	1	F	Completion 7.7.3.2 including TT analysis results	16.9.0
2021-09	RAN#93	R5-216054	1346	1	F	Update to applicability of test cases requiring gap pattern ID 4	16.9.0
2021-09	RAN#93	R5-216055	1299	1	F	Completion Annex C.2.3	16.9.0
2021-09	RAN#93	R5-216098	1336	1	F	Correction to EN-DC FR2 interruptions at transitions between active and non-active during DRX	16.9.0
2021-09	RAN#93	R5-216099	1324	1	F	Correction to 6.5.2.1 NR SA FR1 interruptions during measurements on deactivated NR SCC	16.9.0
2021-09	RAN#93	R5-216100	1330	1	F	Correction to the propagation condition of NR cell for Inter RAT test cases	16.9.0
2021-09	RAN#93	R5-216101	1318	1	F	Addition of BWP definition for FR2 SSB SCS240kHz	16.9.0
2021-09	RAN#93	R5-216123	1448	1	F	Updates to DCI based BWP switch SA FR1 2DLCA TC 6.5.6.1.1	16.9.0
2021-09	RAN#93	R5-216124	1449	1	F	Updates to DCI based BWP switch SA FR1 TC 6.5.6.1.2	16.9.0
2021-09	RAN#93	R5-216125	1450	1	F	Updates to RRC based BWP switch SA FR1 TC 6.5.6.2.1	16.9.0
2021-09	RAN#93	R5-216132	1347	1	F	Correction to FR1 EN-DC TC 4.5.7.1-PSCell addition	16.9.0
2021-09	RAN#93	R5-216133	1348	1	F	Correction to FR1 EN-DC TCs-BWP switching	16.9.0
2021-09	RAN#93	R5-216134	1350	1	F	Correction to FR1 EN-DC TCs-SCell activation	16.9.0
2021-09	RAN#93	R5-216135	1354	1	F	Correction to FR1 NR SA TCs-BWP switching	16.9.0
2021-09	RAN#93	R5-216136	1358	1	F	Correction to FR1 NR SA TCs-SCell activation	16.9.0
2021-09	RAN#93	R5-216137	1454	1	F	Correction to UL BWP configuration for SA FR1 TC 6.5.2.1	16.9.0
2021-09	RAN#93	R5-216138	1364	1	F	Correction to LTE SA TCs-SFTD delay	16.9.0
2021-09	RAN#93	R5-216143	1393	1	F	Addition of 6.1.2.3 inter-RAT cell re-selection with relaxed measurement with low mobility	16.9.0
2021-09	RAN#93	R5-216144	1394	1	F	Addition of 6.1.2.4 inter-RAT cell re-selection with relaxed measurement with not at cell edge	16.9.0
2021-09	RAN#93	R5-216145	1422	1	F	Correction of RRM EN-DC FR2 SSB-based L1-RSRP measurement in non-DRX test case 5.6.3.1 including Test Tolerance	16.9.0
2021-09	RAN#93	R5-216146	1423	1	F	Correction of RRM EN-DC FR2 SSB-based L1-RSRP measurement in DRX test case 5.6.3.2 including Test Tolerance	16.9.0

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2021-09	RAN#93	R5-216147	1424	1	F	Correction of RRM EN-DC FR2 CSI-RS-based L1-RSRP measurement in non-DRX test case 5.6.3.3	16.9.0
2021-09	RAN#93	R5-216148	1426	1	F	Correction of RRM NR SA FR2 SSB-based L1-RSRP measurement in non-DRX test case 7.6.3.1 including Test Tolerance	16.9.0
2021-09	RAN#93	R5-216149	1427	1	F	Correction of RRM NR SA FR2 SSB-based L1-RSRP measurement in DRX test case 7.6.3.2 including Test Tolerance	16.9.0
2021-09	RAN#93	R5-216360	1428	1	F	Correction of RRM NR SA FR2 CSI-RS-based L1-RSRP measurement in non-DRX test case 7.6.3.3	16.9.0
2021-09	RAN#93	R5-216361	1429	1	F	Correction of RRM NR SA FR2 CSI-RS-based L1-RSRP measurement in DRX test case 7.6.3.4	16.9.0
2021-09	RAN#93	R5-216364	1314	1	F	Addition of NR SA FR2 cell re-selection for UE fulfilling low mobility relaxed measurement criterion	16.9.0
2021-09	RAN#93	R5-216365	1315	1	F	Addition of NR SA FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	16.9.0
2021-09	RAN#93	R5-216366	1317	1	F	Addition of NR SA FR2-FR2 cell re-selection for UE fulfilling not-at-cell edge relaxed measurement criterion	16.9.0
2021-09	RAN#93	R5-215968	1397	1	B	Introduction of n24	17.0.0
2021-12	RAN#94	R5-216602	1455	-	F	Update of TC 6.7.1.1.2	17.1.0
2021-12	RAN#94	R5-216839	1458	-	F	Correction to CSI-RS based beam failure detection test cases	17.1.0
2021-12	RAN#94	R5-216840	1459	-	F	Correction to Initial DL and UL BWP for test case 6.3.2.1.2	17.1.0
2021-12	RAN#94	R5-216841	1460	-	F	Correction to SRS configuration for FR1 timing test cases	17.1.0
2021-12	RAN#94	R5-216842	1461	-	F	Correction to SRS configuration for FR2 timing test cases	17.1.0
2021-12	RAN#94	R5-216843	1462	-	F	Correction to FR1 CA RRM tests for generic channel BW configurations	17.1.0
2021-12	RAN#94	R5-216844	1463	-	F	Correction to FR1 Active BWP Switch Delay TCs	17.1.0
2021-12	RAN#94	R5-216845	1464	-	F	Correction to FR1 Redirection test cases	17.1.0
2021-12	RAN#94	R5-216846	1465	-	F	Correction to message exceptions for CSI-RS based BFR tests	17.1.0
2021-12	RAN#94	R5-216857	1470	-	F	Correction to FR2 EN-DC RRM TCs - RLM	17.1.0
2021-12	RAN#94	R5-216860	1473	-	F	Correction to FR2 EN-DC RRM TCs using Table H.3.1-4 for event A4	17.1.0
2021-12	RAN#94	R5-216861	1474	-	F	Correction to FR1 NR SA RRM TC 6.1.1.1 - intra-freq reselection	17.1.0
2021-12	RAN#94	R5-216862	1475	-	F	Correction to FR1 NR SA RRM TC 6.7.6.1 - inter-RAT meas	17.1.0
2021-12	RAN#94	R5-216864	1477	-	F	Correction to FR1 NR SA RRM TCs 6.5.2.1 - interruption	17.1.0
2021-12	RAN#94	R5-216866	1479	-	F	Correction to FR2 NR SA RRM TCs using Table H.3.1-4 for event A4	17.1.0
2021-12	RAN#94	R5-216868	1481	-	F	Correction to SSB reference configurations	17.1.0
2021-12	RAN#94	R5-216869	1482	-	F	Correction to Annex H for RRM TCs	17.1.0
2021-12	RAN#94	R5-216873	1485	-	F	Correction to Mob_enh RRM TC 6.3.3.1 - FR1 intra CHO	17.1.0
2021-12	RAN#94	R5-216874	1486	-	F	Correction to Mob_enh RRM TC 6.3.3.2 - FR1 inter CHO	17.1.0
2021-12	RAN#94	R5-216876	1488	-	F	Correction to Mob_enh RRM TC 7.3.1.5 - inter-FR DAPS async	17.1.0
2021-12	RAN#94	R5-216886	1492	-	F	Correction to PS RRM TC 6.1.1.3 - intra low mobility	17.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-12	RAN#94	R5-216887	1493	-	F	Correction to PS RRM TC 6.1.1.4 - intra not cell edge	17.1.0
2021-12	RAN#94	R5-216888	1494	-	F	Correction to PS RRM TC 6.1.1.5 - inter low mobility	17.1.0
2021-12	RAN#94	R5-216889	1495	-	F	Correction to PS RRM TC 6.1.1.6 - inter not cell edge	17.1.0
2021-12	RAN#94	R5-216890	1496	-	F	Correction to Annex F for PS RRM TCs	17.1.0
2021-12	RAN#94	R5-216900	1497	-	F	Correction to SRVCC RRM TC 6.3.1.6 - UTRA handover	17.1.0
2021-12	RAN#94	R5-216902	1499	-	F	Correction to Annex F for SRVCC RRM TCs	17.1.0
2021-12	RAN#94	R5-216912	1500	-	F	Correction to HST RRM TC 4.6.1.7 - intra-freq meas	17.1.0
2021-12	RAN#94	R5-216913	1501	-	F	Correction to HST RRM TC 4.6.4.5 - L1-RSRP	17.1.0
2021-12	RAN#94	R5-216914	1502	-	F	Correction to HST RRM TC 6.1.2.5 - inter-RAT reselection	17.1.0
2021-12	RAN#94	R5-216915	1503	-	F	Correction to Annex F for HST RRM TCs	17.1.0
2021-12	RAN#94	R5-217070	1505	-	F	Correction of message configuration for EN-DC FR1 SFTD TC 4.7.5.1	17.1.0
2021-12	RAN#94	R5-217122	1510	-	F	Reinstate wrongly deleted Table H.3.5-4	17.1.0
2021-12	RAN#94	R5-217123	1511	-	F	Correct B2 Threshold in H.3.1-4A	17.1.0
2021-12	RAN#94	R5-217124	1512	-	F	Corrections to 4.3.2.2.1	17.1.0
2021-12	RAN#94	R5-217131	1515	-	F	Corrections to L1-RSRP EN-DC test cases	17.1.0
2021-12	RAN#94	R5-217132	1516	-	F	Corrections to L1-RSRP NR SA test cases	17.1.0
2021-12	RAN#94	R5-217145	1517	-	F	Correct reference to test frequencies	17.1.0
2021-12	RAN#94	R5-217203	1519	-	F	Addition of minimum requirements for EN-DC L1-SINR measurement for beam reporting	17.1.0
2021-12	RAN#94	R5-217207	1523	-	F	Addition of minimum requirements for NR SA FR1 L1-SINR measurement for beam reporting	17.1.0
2021-12	RAN#94	R5-217211	1527	-	F	Addition of the abbreviations for Rel-16 NR MIMO	17.1.0
2021-12	RAN#94	R5-217213	1529	-	F	Addition of Annex A.1.4B CSI-IM Reference Measurement Channels	17.1.0
2021-12	RAN#94	R5-217214	1530	-	F	Addition of Annex H.3.6A RRC messages and IE exceptions for L1-SINR measurement for beam reporting	17.1.0
2021-12	RAN#94	R5-217228	1539	-	F	Correct of RRM Test Cases for test applicability	17.1.0
2021-12	RAN#94	R5-217229	1540	-	F	Correct of RRM Test Cases	17.1.0
2021-12	RAN#94	R5-217255	1541	-	F	Addition of FR-1 NSA CLI accuracy test cases	17.1.0
2021-12	RAN#94	R5-217258	1542	-	F	Corrections to event-triggered iRAT	17.1.0
2021-12	RAN#94	R5-217395	1545	-	F	Update of 6.1.2.3 and 6.1.2.4 for MU and TT	17.1.0
2021-12	RAN#94	R5-217396	1546	-	F	Update of Annex F for test cases with relaxed measurement criterion	17.1.0
2021-12	RAN#94	R5-217436	1550	-	F	Correction to E-UTRA - NR FR1 cell re-selection to higher priority NR target cell	17.1.0
2021-12	RAN#94	R5-217438	1551	-	F	Correction to SIB4 exceptions in Annex H	17.1.0
2021-12	RAN#94	R5-217439	1552	-	F	Correction to FR2 event-triggered reporting with gap test	17.1.0
2021-12	RAN#94	R5-217441	1553	-	F	Correction to test procedure in 8.2.1.1	17.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-12	RAN#94	R5-217443	1555	-	F	Correction to test requirement in 8.3.1.1	17.1.0
2021-12	RAN#94	R5-217520	1559	-	F	Addition of RMC CORESET to FR2 random access tests	17.1.0
2021-12	RAN#94	R5-217570	1561	-	F	Correction of RRM HST Inter-RAT measurements test case 6.6.3.3 including Test Tolerance	17.1.0
2021-12	RAN#94	R5-217572	1563	-	F	Correction of RRM HST E-UTRA NR Inter-RAT event triggered reporting test case 8.4.2.9 including Test Tolerance	17.1.0
2021-12	RAN#94	R5-217573	1564	-	F	Correction of RRM EN-DC FR2 CSI-RS-based L1-RSRP measurement in non-DRX test case 5.6.3.3 including Test Tolerance	17.1.0
2021-12	RAN#94	R5-217574	1565	-	F	Correction of RRM EN-DC FR2 CSI-RS-based L1-RSRP measurement in DRX test case 5.6.3.4 including Test Tolerance	17.1.0
2021-12	RAN#94	R5-217575	1566	-	F	Correction of RRM NR SA FR2 CSI-RS-based L1-RSRP measurement in non-DRX test case 7.6.3.3 including Test Tolerance	17.1.0
2021-12	RAN#94	R5-217576	1567	-	F	Correction of RRM NR SA FR2 CSI-RS-based L1-RSRP measurement in DRX test case 7.6.3.4 including Test Tolerance	17.1.0
2021-12	RAN#94	R5-217577	1568	-	F	Correction of SA FR2 RRC re-establishment test case 7.3.2.1.1	17.1.0
2021-12	RAN#94	R5-217580	1571	-	F	Correction of Measurement Uncertainty and Test Tolerance in Annex F for RRM test cases	17.1.0
2021-12	RAN#94	R5-217585	1572	-	F	Correction of Minimum conformance requirements for FR1 re-establishment test cases	17.1.0
2021-12	RAN#94	R5-217586	1573	-	F	Correction of Minimum conformance requirements for FR2 re-establishment test cases	17.1.0
2021-12	RAN#94	R5-217661	1574	-	F	Update on FR2 Radio Link monitoring SSB based RLM test cases	17.1.0
2021-12	RAN#94	R5-217663	1575	-	F	Update on FR2 radio link monitoring CSI-RS based RLM test cases	17.1.0
2021-12	RAN#94	R5-217736	1576	-	F	Update to SA Handover delay requirements	17.1.0
2021-12	RAN#94	R5-218207	1577	-	F	Correct 5.7.3.2 / 7.7.3.2 test case limits based on TT analysis results	17.1.0
2021-12	RAN#94	R5-218215	1457	1	F	Correction to Mob_enh RRM TC 6.3.1.9 - inter-freq sync DAPS HO	17.1.0
2021-12	RAN#94	R5-218216	1491	1	F	Correction to Annex F for Mob_enh RRM TCs	17.1.0
2021-12	RAN#94	R5-218217	1504	1	F	Correction to Mob_enh RRM TC 6.3.1.10 - inter-freq async DAPS HO	17.1.0
2021-12	RAN#94	R5-218250	1469	1	F	Correction to FR1 EN-DC RRM TCs 4.5.2.X - interruption	17.1.0
2021-12	RAN#94	R5-218251	1513	1	F	Corrections to RLM EN-DC test cases	17.1.0
2021-12	RAN#94	R5-218252	1548	1	F	Correction to EN-DC FR1 addition and release delay of known PSCell	17.1.0
2021-12	RAN#94	R5-218253	1471	1	F	Correction to FR2 EN-DC RRM TCs - RRC based	17.1.0
2021-12	RAN#94	R5-218254	1506	1	F	Correction of T2 timer value for SA FR1 TC 6.3.2.1.3	17.1.0
2021-12	RAN#94	R5-218255	1514	1	F	Corrections to RLM NR SA test cases	17.1.0
2021-12	RAN#94	R5-218256	1478	1	F	Correction to FR2 NR SA RRM TCs - RLM	17.1.0
2021-12	RAN#94	R5-218257	1507	1	F	Correction of RRC re-establishment delay for SA FR2 TC 7.3.2.1.1	17.1.0
2021-12	RAN#94	R5-218258	1508	1	F	Correction of T2 timer value for SA FR2 TC 7.3.2.1.2	17.1.0
2021-12	RAN#94	R5-218259	1509	1	F	Correction of T2 timer value for SA FR2 TC 7.3.2.1.3	17.1.0

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2021-12	RAN#94	R5-218260	1569	1	F	Correction of SA FR2 - FR2 RRC re-establishment test case 7.3.2.1.2	17.1.0
2021-12	RAN#94	R5-218261	1480	1	F	Correction to LTE SA RRM TCs - NR inter-RAT accuracy	17.1.0
2021-12	RAN#94	R5-218294	1544	1	F	Update of Annex for 4.5.8.1 EN-DC FR1 DL interruptions at switching between two uplink carriers	17.1.0
2021-12	RAN#94	R5-218296	1483	1	F	Correction to Mob_enh RRM TC 6.3.1.7 - intra DAPS sync	17.1.0
2021-12	RAN#94	R5-218297	1484	1	F	Correction to Mob_enh RRM TC 6.3.1.8 - intra DAPS async	17.1.0
2021-12	RAN#94	R5-218298	1487	1	F	Correction to Mob_enh RRM TC 7.3.1.4 - inter-FR DAPS sync	17.1.0
2021-12	RAN#94	R5-218299	1490	1	F	Correction to Mob_enh RRM TC 7.3.3.2 - FR2 inter CHO	17.1.0
2021-12	RAN#94	R5-218313	1520	1	F	Addition of 4.6.7.1 EN-DC FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in non-DRX	17.1.0
2021-12	RAN#94	R5-218314	1521	1	F	Addition of 4.6.7.2 EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR measurement in DRX	17.1.0
2021-12	RAN#94	R5-218315	1522	1	F	Addition of 4.6.7.3 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in DRX	17.1.0
2021-12	RAN#94	R5-218316	1524	1	F	Addition of 6.6.8.1 NR SA FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	17.1.0
2021-12	RAN#94	R5-218317	1525	1	F	Addition of 6.6.8.2 NR SA FR1 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	17.1.0
2021-12	RAN#94	R5-218318	1526	1	F	Addition of 6.6.8.3 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	17.1.0
2021-12	RAN#94	R5-218319	1528	1	F	Addition of CSI-RS Reference Measurement Channels based on IMR	17.1.0
2021-12	RAN#94	R5-218320	1531	1	F	Addition of 4.5.5.5 EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in non-DRX	17.1.0
2021-12	RAN#94	R5-218321	1532	1	F	Addition of 4.5.5.6 EN-DC FR1 Scell CSI-RS-based beam failure detection and SSB-based link recovery in DRX	17.1.0
2021-12	RAN#94	R5-218322	1533	1	F	Addition of 4.7.7.1 EN-DC FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	17.1.0
2021-12	RAN#94	R5-218323	1535	1	F	Addition of 4.7.7.3 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	17.1.0
2021-12	RAN#94	R5-218324	1536	1	F	Addition of 6.7.9.1 NR SA FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	17.1.0
2021-12	RAN#94	R5-218325	1537	1	F	Addition of 6.7.9.2 NR SA FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	17.1.0
2021-12	RAN#94	R5-218326	1538	1	F	Addition of 6.7.9.3 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	17.1.0
2021-12	RAN#94	R5-218327	1547	1	F	Addition of cell configuration MU and TT for Enhancement on MIMO	17.1.0
2021-12	RAN#94	R5-218336	1498	1	F	Correction to SRVCC RRM TC 6.6.5.1 - UTRA meas	17.1.0
2021-12	RAN#94	R5-218351	1562	1	F	Correction of RRM HST E-UTRA NR FR1 Cell reselection test case 8.2.1.2 including Test Tolerance	17.1.0
2021-12	RAN#94	R5-218352	1570	1	F	Correction of Measurement Uncertainty and Test Tolerance in Annex F for RRM HST test cases	17.1.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2021-12	RAN#94	R5-218372	1543	1	F	Addition of 4.5.8.1 EN-DC FR1 DL interruptions at switching between two uplink carriers	17.1.0
2021-12	RAN#94	R5-218439	1468	1	F	Correction to FR1 EN-DC RRM TCs - RRC based	17.1.0
2021-12	RAN#94	R5-218440	1560	1	F	Test Procedure update for FR1 Event Triggered test cases with CDRX	17.1.0
2021-12	RAN#94	R5-218441	1472	1	F	Correction to FR2 EN-DC RRM TCs 5.5.2.X - interruption	17.1.0
2021-12	RAN#94	R5-218442	1558	1	F	Update to FR2 interruption tests 5.5.2.1 and 5.5.2.2	17.1.0
2021-12	RAN#94	R5-218443	1456	1	F	Addition of clause 3A.6 for UE with Multiband Capability	17.1.0
2021-12	RAN#94	R5-218444	1556	1	F	Clarification on cl 3A.1.1 test coverage across 5G NR architecture options for RRM	17.1.0
2021-12	RAN#94	R5-218461	1489	1	F	Correction to Mob_enh RRM TC 7.3.3.1 - FR2 intra CHO	17.1.0
2021-12	RAN#94	R5-218464	1534	1	F	Addition of 4.7.7.2 EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR absolute measurement accuracy	17.1.0
2022-03	RAN#95	R5-220096	1578	-	F	Correction to Mob_enh RRM TC 6.3.1.11 - inter-band sync DAPS HO including test tolerance	17.2.0
2022-03	RAN#95	R5-220097	1579	-	F	Correction to Mob_enh RRM TC 6.3.1.12 - inter-band async DAPS HO including test tolerance	17.2.0
2022-03	RAN#95	R5-220109	1580	-	F	Update of SA FR1 TC 4.5.3.1 and 4.5.3.3	17.2.0
2022-03	RAN#95	R5-220110	1581	-	F	Update of SA FR1 TC 6.5.3.1 and 6.5.3.3	17.2.0
2022-03	RAN#95	R5-220136	1582	-	F	Correction to Annex F for Mob_enh RRM TCs	17.2.0
2022-03	RAN#95	R5-220160	1583	-	F	Add test case 7.3.2.2.4 for SA FR2 2-step PRACH	17.2.0
2022-03	RAN#95	R5-220167	1584	-	F	Updates to RRM HST Test Case 6.6.1.7	17.2.0
2022-03	RAN#95	R5-220168	1585	-	F	Updates to RRM HST Test Case 6.6.4.5	17.2.0
2022-03	RAN#95	R5-220196	1586	-	F	Update to table E.5-1 to add the cell configurations for one 2-step RACH test case	17.2.0
2022-03	RAN#95	R5-220278	1587	-	F	Clarifications on 5G NR connectivity options for RRM	17.2.0
2022-03	RAN#95	R5-220282	1588	-	F	Test case update for FR1 CLI-RSSI measurement with non-DRX	17.2.0
2022-03	RAN#95	R5-220283	1589	-	F	Annexure update for test tolerance for FR1 CLI-RSSI measurement with non-DRX	17.2.0
2022-03	RAN#95	R5-220689	1592	-	F	Correction to FR1 EN-DC RRM TCs - SCell activation	17.2.0
2022-03	RAN#95	R5-220697	1600	-	F	Correction to FR2 EN-DC RRM TC 5.6.1.2	17.2.0
2022-03	RAN#95	R5-220699	1602	-	F	Correction to FR2 EN-DC RRM TC 5.6.1.4	17.2.0
2022-03	RAN#95	R5-220701	1604	-	F	Correction to FR1 NR SA RRM TC 6.5.2.1 - interruption SCC	17.2.0
2022-03	RAN#95	R5-220702	1605	-	F	Correction to FR1 NR SA RRM TCs - SCell activation	17.2.0
2022-03	RAN#95	R5-220726	1623	-	F	Addition of band group for NR SL RRM test	17.2.0
2022-03	RAN#95	R5-220727	1624	-	F	Addition of minimum requirements for NR SL UE Tx timing TCs	17.2.0
2022-03	RAN#95	R5-220728	1625	-	F	Addition of NR SL RRM TC 9.1.1.1 - Tx Timing GNSS	17.2.0
2022-03	RAN#95	R5-220729	1626	-	F	Addition of NR SL RRM TC 9.1.1.2 - Tx Timing SyncRef UE	17.2.0
2022-03	RAN#95	R5-220730	1627	-	F	Addition of NR SL RRM TC 9.1.1.3 - Tx Timing NR Cell	17.2.0
2022-03	RAN#95	R5-220731	1628	-	F	Addition of minimum requirements for NR SL S-SSB Tx TCs	17.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-03	RAN#95	R5-220734	1631	-	F	Addition of minimum requirements for NR SL SyncRef reselection TCs	17.2.0
2022-03	RAN#95	R5-220737	1634	-	F	Addition of minimum requirements for NR SL L1 SL-RSRP TCs	17.2.0
2022-03	RAN#95	R5-220738	1635	-	F	Addition of NR SL RRM TC 9.1.4.1 - Resource sensing	17.2.0
2022-03	RAN#95	R5-220741	1638	-	F	Addition of minimum requirements for NR SL Congestion control TCs	17.2.0
2022-03	RAN#95	R5-220742	1639	-	F	Addition of NR SL RRM TC 9.1.5.1 - SL-RSSI con-current	17.2.0
2022-03	RAN#95	R5-220744	1641	-	F	Addition of minimum requirements for NR SL interruption TCs	17.2.0
2022-03	RAN#95	R5-220745	1642	-	F	Addition of NR SL RRM TC 9.1.6.1 - WAN interruption	17.2.0
2022-03	RAN#95	R5-220747	1644	-	F	Addition of side conditions for NR SL RRM test in Annex B	17.2.0
2022-03	RAN#95	R5-220748	1645	-	F	Correction to Annex E for NR SL RRM TCs	17.2.0
2022-03	RAN#95	R5-220749	1646	-	F	Correction to Annex G for NR SL RRM TCs	17.2.0
2022-03	RAN#95	R5-220798	1647	-	F	Update to 5.5.5.0 FR2 BFD minimum requirements	17.2.0
2022-03	RAN#95	R5-220801	1650	-	F	Update to 7.5.5.0 FR2 BFD minimum requirements	17.2.0
2022-03	RAN#95	R5-220804	1653	-	F	Update to Annex E for eMIMO test cases	17.2.0
2022-03	RAN#95	R5-220910	1657	-	F	Correction to TRS Configuration of 6.3.2.1.3	17.2.0
2022-03	RAN#95	R5-220911	1658	-	F	Correction to test procedure of 6.1.1.2	17.2.0
2022-03	RAN#95	R5-220912	1659	-	F	Correction to reference of test frequency in 6.3.1.x NR only test cases	17.2.0
2022-03	RAN#95	R5-220918	1661	-	F	Correction to SRS configuration condition for FR1 timing test cases	17.2.0
2022-03	RAN#95	R5-220920	1662	-	F	Correction to DRX setting of 8.4.2.9	17.2.0
2022-03	RAN#95	R5-220921	1663	-	F	Correction to message exception for handover test cases	17.2.0
2022-03	RAN#95	R5-220923	1665	-	F	Correction to BWP switch delay test cases	17.2.0
2022-03	RAN#95	R5-220924	1666	-	F	Correction to message exception for 4.7.5.1	17.2.0
2022-03	RAN#95	R5-220927	1668	-	F	Correction to 6.3.2.3.1 NR SA FR1 RRC connection release with redirection	17.2.0
2022-03	RAN#95	R5-220928	1669	-	F	Correction to NR-EUTRA and EUTRA-NR reselection with high speed	17.2.0
2022-03	RAN#95	R5-220929	1670	-	F	Correction to message exception for 8.5.1.1	17.2.0
2022-03	RAN#95	R5-220930	1671	-	F	Correction to ssb-ResourceList for 5.3.2.2.2	17.2.0
2022-03	RAN#95	R5-220931	1672	-	F	Correction to SMTC configuration in 6.1.1.7	17.2.0
2022-03	RAN#95	R5-220933	1674	-	F	Correction to T HARQ setting for 6.5.3.1	17.2.0
2022-03	RAN#95	R5-220938	1678	-	F	Correction to DRX setting of 6.6.1.7	17.2.0
2022-03	RAN#95	R5-220939	1679	-	F	Correction to message exception of 4.6.1.7	17.2.0
2022-03	RAN#95	R5-220940	1680	-	F	Correction to test procedure for 8.2.1.2	17.2.0
2022-03	RAN#95	R5-220941	1681	-	F	Correction to SIB1 message exceptions of 4.6.1.7 and 4.6.4.5	17.2.0
2022-03	RAN#95	R5-220942	1682	-	F	Addition of new test case 7.7.6.1 NR SA FR2 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR measurement accuracy	17.2.0

Change history

Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-03	RAN#95	R5-220943	1683	-	F	Addition of new test case 7.7.6.2 NR SA FR2 SSB based CMR and dedicated IMR L1-SINR measurement accuracy	17.2.0
2022-03	RAN#95	R5-220944	1684	-	F	Addition of new test case 7.7.6.3 NR SA FR2 CSI-RS based CMR and dedicated IMR L1-SINR measurement accuracy	17.2.0
2022-03	RAN#95	R5-220986	1688	-	F	Update of 4.6.7.1 EN-DC FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in non-DRX	17.2.0
2022-03	RAN#95	R5-220988	1690	-	F	Update of 4.6.7.3 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in DRX	17.2.0
2022-03	RAN#95	R5-220989	1691	-	F	Update of 6.6.8.1 NR SA FR1 CSI-RS based CMR and no dedicated IMR L1-SINR measurement in DRX	17.2.0
2022-03	RAN#95	R5-220991	1693	-	F	Update of 6.6.8.3 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR measurement in non-DRX	17.2.0
2022-03	RAN#95	R5-220992	1694	-	F	Update of Annex for EN-DC FR1 L1-SINR measurement test cases	17.2.0
2022-03	RAN#95	R5-220993	1695	-	F	Update of Annex for NR SA FR1 L1-SINR measurement test cases	17.2.0
2022-03	RAN#95	R5-221001	1696	-	F	Correction to Annex H.3.6A RRC messages for L1-SINR measurement	17.2.0
2022-03	RAN#95	R5-221008	1698	-	F	Editorial corrections for EditHelp comments s1 to s3	17.2.0
2022-03	RAN#95	R5-221009	1699	-	F	Editorial corrections for EditHelp comments s4	17.2.0
2022-03	RAN#95	R5-221010	1700	-	F	Editorial corrections to revert headers to h6 for s4	17.2.0
2022-03	RAN#95	R5-221011	1701	-	F	Editorial corrections for EditHelp comments s5	17.2.0
2022-03	RAN#95	R5-221012	1702	-	F	Editorial corrections to revert headers to h6 for s5	17.2.0
2022-03	RAN#95	R5-221013	1703	-	F	Editorial corrections for EditHelp comments s6.1 to s6.3	17.2.0
2022-03	RAN#95	R5-221014	1704	-	F	Editorial corrections for EditHelp comments s6.4 to s6.5	17.2.0
2022-03	RAN#95	R5-221015	1705	-	F	Editorial corrections for EditHelp comments s7	17.2.0
2022-03	RAN#95	R5-221016	1706	-	F	Editorial corrections for EditHelp comments s8	17.2.0
2022-03	RAN#95	R5-221017	1707	-	F	Editorial corrections to revert headers to h6 for s8	17.2.0
2022-03	RAN#95	R5-221018	1708	-	F	Editorial corrections for EditHelp comments Annexes	17.2.0
2022-03	RAN#95	R5-221019	1709	-	F	New section for NE-DC RRM test cases	17.2.0
2022-03	RAN#95	R5-221020	1710	-	F	Minimum requirements for EN-DC FR1 L1-RSRP test cases	17.2.0
2022-03	RAN#95	R5-221021	1711	-	F	Minimum requirements for EN-DC FR2 L1-RSRP test cases	17.2.0
2022-03	RAN#95	R5-221024	1714	-	F	Correct message contents reference iRAT	17.2.0
2022-03	RAN#95	R5-221025	1715	-	F	Add auxiliary band for n39	17.2.0
2022-03	RAN#95	R5-221026	1716	-	F	Corrections to 5.7.x.x	17.2.0
2022-03	RAN#95	R5-221027	1717	-	F	Corrections to 8.4.2.4	17.2.0
2022-03	RAN#95	R5-221028	1718	-	F	Corrections to 8.2.1.1	17.2.0
2022-03	RAN#95	R5-221029	1719	-	F	Corrections to 8.5.2.2.1	17.2.0
2022-03	RAN#95	R5-221031	1721	-	F	Correction reportAmount for B2 report	17.2.0
2022-03	RAN#95	R5-221033	1723	-	F	Corrections to message contents for 8.4.2.3 and 8.4.2.4	17.2.0
2022-03	RAN#95	R5-221187	1728	-	F	Correct message content for RLM-SSB Based FR2 5.5.1.1	17.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-03	RAN#95	R5-221188	1729	-	F	Correct message content for RLM-SSB Based FR2 5.5.1.2	17.2.0
2022-03	RAN#95	R5-221189	1730	-	F	Correct message content for RLM-SSB Based FR2 5.5.1.3	17.2.0
2022-03	RAN#95	R5-221190	1731	-	F	Correct message content for RLM-SSB Based FR2 5.5.1.4	17.2.0
2022-03	RAN#95	R5-221191	1732	-	F	Correct message content for FR2 interruption	17.2.0
2022-03	RAN#95	R5-221254	1733	-	F	Update 4.5.7.1 test procedure	17.2.0
2022-03	RAN#95	R5-221256	1734	-	F	Update number of HARQ processes for FDD	17.2.0
2022-03	RAN#95	R5-221289	1736	-	F	Correction of RRM re-establishment test case 7.3.2.1.1 including Test Tolerance	17.2.0
2022-03	RAN#95	R5-221290	1737	-	F	Correction of RRM re-establishment test case 7.3.2.1.2 including Test Tolerance	17.2.0
2022-03	RAN#95	R5-221291	1738	-	F	Test Tolerance addition in Annex F for RRM FR2 re-establishment test cases	17.2.0
2022-03	RAN#95	R5-221297	1739	-	F	Addition of Minimum conformance requirements for DL interruptions at switching between two uplink carriers	17.2.0
2022-03	RAN#95	R5-221298	1740	-	F	Addition of UL switching test case 6.5.7.1	17.2.0
2022-03	RAN#95	R5-221300	1742	-	F	Cell configuration mapping for UL switching test cases	17.2.0
2022-03	RAN#95	R5-221301	1743	-	F	Addition of Idle mode CA/DC measurement test case 6.6.9.1	17.2.0
2022-03	RAN#95	R5-221302	1744	-	F	Addition of Idle Mode measurements of inter-RAT CA candidate cells for early reporting test case 6.6.15.1	17.2.0
2022-03	RAN#95	R5-221370	1748	-	F	Update to PDSCH reference measurement channels for RRM test cases with DRX config	17.2.0
2022-03	RAN#95	R5-221637	1613	1	F	Correction to FR2 NR SA RRM TC 7.6.1.2 with TT	17.2.0
2022-03	RAN#95	R5-221638	1615	1	F	Correction to FR2 NR SA RRM TC 7.6.1.4 with TT	17.2.0
2022-03	RAN#95	R5-221645	1619	1	F	Correction to Mob_enh RRM TC 7.3.1.4 with TT	17.2.0
2022-03	RAN#95	R5-221646	1620	1	F	Correction to Mob_enh RRM TC 7.3.1.5 with TT	17.2.0
2022-03	RAN#95	R5-221650	1685	1	F	Completion 4.5.5.5 including TT analysis results	17.2.0
2022-03	RAN#95	R5-221651	1686	1	F	Completion 4.5.5.6 including TT analysis results	17.2.0
2022-03	RAN#95	R5-221652	1687	1	F	Addition of cell configuration MU and TT for Enhancement on MIMO	17.2.0
2022-03	RAN#95	R5-221653	1689	1	F	Update of 4.6.7.2 EN-DC FR1 SSB based CMR and dedicated IMR L1-SINR measurement in DRX	17.2.0
2022-03	RAN#95	R5-221654	1692	1	F	Update of 6.6.8.2 NR SA FR1 SSB based CMR and dedicated IMR L1-SINR measurement in non-DRX	17.2.0
2022-03	RAN#95	R5-221655	1656	1	F	Correction to NR SA FR1 cell re-selection for UE configured with highSpeedMeasFlag-r16	17.2.0
2022-03	RAN#95	R5-221713	1591	1	F	Correction to FR1 EN-DC RRM TCs - interruption SCC	17.2.0
2022-03	RAN#95	R5-221714	1746	1	F	Introduce Test case for LTE PSCell addition and release in NE-DC	17.2.0
2022-03	RAN#95	R5-221715	1593	1	F	Correction to FR2 EN-DC RRM TCs - RLM	17.2.0
2022-03	RAN#95	R5-221716	1594	1	F	Correction to FR2 EN-DC RRM TC 5.5.5.1 with TT	17.2.0
2022-03	RAN#95	R5-221717	1595	1	F	Correction to FR2 EN-DC RRM TC 5.5.5.2 with TT	17.2.0
2022-03	RAN#95	R5-221718	1596	1	F	Correction to FR2 EN-DC RRM TC 5.5.5.3 with TT	17.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-03	RAN#95	R5-221719	1597	1	F	Correction to FR2 EN-DC RRM TC 5.5.5.4 with TT	17.2.0
2022-03	RAN#95	R5-221720	1598	1	F	Correction to FR2 EN-DC RRM TC 5.5.5.5 with TT	17.2.0
2022-03	RAN#95	R5-221721	1599	1	F	Correction to FR2 EN-DC RRM TC 5.6.1.1 with TT	17.2.0
2022-03	RAN#95	R5-221722	1601	1	F	Correction to FR2 EN-DC RRM TC 5.6.1.3 with TT	17.2.0
2022-03	RAN#95	R5-221723	1712	1	F	New test case 5.7.4.1	17.2.0
2022-03	RAN#95	R5-221724	1713	1	F	New test case 5.7.4.2	17.2.0
2022-03	RAN#95	R5-221725	1725	1	F	Update to RRM test case with CDRX	17.2.0
2022-03	RAN#95	R5-221726	1720	1	F	Corrections to 6.7.x.x	17.2.0
2022-03	RAN#95	R5-221727	1607	1	F	Correction to FR2 NR SA RRM TC 7.5.5.1 with TT	17.2.0
2022-03	RAN#95	R5-221728	1608	1	F	Correction to FR2 NR SA RRM TC 7.5.5.2 with TT	17.2.0
2022-03	RAN#95	R5-221729	1609	1	F	Correction to FR2 NR SA RRM TC 7.5.5.3 with TT	17.2.0
2022-03	RAN#95	R5-221730	1610	1	F	Correction to FR2 NR SA RRM TC 7.5.5.4 with TT	17.2.0
2022-03	RAN#95	R5-221731	1611	1	F	Correction to FR2 NR SA RRM TC 7.5.5.5 with TT	17.2.0
2022-03	RAN#95	R5-221732	1612	1	F	Correction to FR2 NR SA RRM TC 7.6.1.1 with TT	17.2.0
2022-03	RAN#95	R5-221733	1614	1	F	Correction to FR2 NR SA RRM TC 7.6.1.3 with TT	17.2.0
2022-03	RAN#95	R5-221734	1667	1	F	Correction to message exception for 8.4.2.x with SSB index detection	17.2.0
2022-03	RAN#95	R5-221735	1726	1	F	Test procedure update to L2NR Cell reselection test case	17.2.0
2022-03	RAN#95	R5-221736	1616	1	F	Correction to Annex F for FR2 SSB based BFD TCs	17.2.0
2022-03	RAN#95	R5-221737	1617	1	F	Correction to Annex F for FR2 SSB based intra-freq measurement TCs	17.2.0
2022-03	RAN#95	R5-221738	1618	1	F	Correction to default configuration in Annex H	17.2.0
2022-03	RAN#95	R5-221739	1722	1	F	Updates to CSI-ReportConfig for FR2	17.2.0
2022-03	RAN#95	R5-221740	1724	1	F	Update report config for iRAT test cases	17.2.0
2022-03	RAN#95	R5-221741	1745	1	F	Correction of clause 3	17.2.0
2022-03	RAN#95	R5-221742	1749	1	F	Correction to test frequencies for intra-band contiguous CA	17.2.0
2022-03	RAN#95	R5-221798	1741	1	F	Addition of UL switching test case 6.5.7.2	17.2.0
2022-03	RAN#95	R5-221812	1621	1	F	Correction to Mob_enh RRM TC 7.3.3.1 with TT	17.2.0
2022-03	RAN#95	R5-221813	1622	1	F	Correction to Annex F for Mob_enh RRM TCs	17.2.0
2022-03	RAN#95	R5-221821	1629	1	F	Addition of NR SL RRM TC 9.1.2.1 - SLSS Tx NR Cell	17.2.0
2022-03	RAN#95	R5-221822	1630	1	F	Addition of NR SL RRM TC 9.1.2.2 - SLSS Tx SyncRef UE	17.2.0
2022-03	RAN#95	R5-221823	1632	1	F	Addition of NR SL RRM TC 9.1.3.1 - SyncRef reselection GNSS	17.2.0
2022-03	RAN#95	R5-221824	1633	1	F	Addition of NR SL RRM TC 9.1.3.2 - SyncRef reselection Cell	17.2.0
2022-03	RAN#95	R5-221825	1636	1	F	Addition of NR SL RRM TC 9.1.4.2 - Resource pre-emption	17.2.0
2022-03	RAN#95	R5-221826	1637	1	F	Addition of NR SL RRM TC 9.1.4.3 - Resource re-evaluation	17.2.0
2022-03	RAN#95	R5-221827	1640	1	F	Addition of NR SL RRM TC 9.1.5.2 - SL-RSSI PC5 only	17.2.0
2022-03	RAN#95	R5-221828	1643	1	F	Addition of RMC for NR SL RRM test in Annex A	17.2.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-03	RAN#95	R5-221833	1648	1	F	Addition of 5.5.5.6 FR2 SCell BFD in non-DRX for NSA	17.2.0
2022-03	RAN#95	R5-221834	1649	1	F	Addition of 5.5.5.7 FR2 SCell BFD in DRX for NSA	17.2.0
2022-03	RAN#95	R5-221835	1651	1	F	Addition of 7.5.5.6 FR2 SCell BFD in non-DRX for SA	17.2.0
2022-03	RAN#95	R5-221836	1652	1	F	Addition of 7.5.5.7 FR2 SCell BFD in DRX for SA	17.2.0
2022-03	RAN#95	R5-221837	1654	1	F	Update to Annex F for eMIMO test cases	17.2.0
2022-03	RAN#95	R5-221838	1655	1	F	Update to Annex H for eMIMO test cases	17.2.0
2022-03	RAN#95	R5-221839	1697	1	F	Update of RRM Test Cases for UE Enhancements on MIMO	17.2.0
2022-03	RAN#95	R5-221859	1664	1	F	Correction to DRX setting of 4.6.4.5 and 6.6.4.5	17.2.0
2022-03	RAN#95	R5-221893	1590	1	F	Add test case 7.3.2.2.3 for NR SA FR2 2-step RACH	17.2.0
2022-03	RAN#95	R5-221923	1660	1	F	Correction to test procedure of SFTD measurement accuracy	17.2.0
2022-03	RAN#95	R5-221924	1677	1	F	Correction to BWP configuration for 4.5.6.1.2	17.2.0
2022-03	RAN#95	R5-221925	1673	1	F	Correction to active BWP ID and TRS configuration in 6.5.6.1.1	17.2.0
2022-03	RAN#95	R5-221926	1675	1	F	Correction to CSI-RS offset for 6.5.3.1	17.2.0
2022-03	RAN#95	R5-221927	1676	1	F	Correction to CSI report offset for 6.5.3.1	17.2.0
2022-06	RAN#96	R5-222490	1752	-	F	Correction to test time in 6.1.1.7	17.3.0
2022-06	RAN#96	R5-222491	1753	-	F	Editorial correction in 6.1.2.5	17.3.0
2022-06	RAN#96	R5-222492	1754	-	F	Correction to physical cell identity in 6.6.3.2 and 6.6.3.3	17.3.0
2022-06	RAN#96	R5-222493	1755	-	F	Correction to test procedure in 8.2.1.2	17.3.0
2022-06	RAN#96	R5-222494	1756	-	F	Correction to test procedure in 8.5.1.1	17.3.0
2022-06	RAN#96	R5-222505	1758	-	F	Correction to test parameters in 5.6.1.x and 5.6.2.x	17.3.0
2022-06	RAN#96	R5-222507	1760	-	F	Correction to DRX offset setting in 6.6.1.7	17.3.0
2022-06	RAN#96	R5-222508	1761	-	F	Correction to DRX offset setting in 6.6.3.3	17.3.0
2022-06	RAN#96	R5-222509	1762	-	F	Correction to DRX offset setting in 8.4.2.x	17.3.0
2022-06	RAN#96	R5-222517	1765	-	F	Add minimum requirements for 7.7.4	17.3.0
2022-06	RAN#96	R5-222522	1769	-	F	Remove incorrect references - Chapter 4	17.3.0
2022-06	RAN#96	R5-222523	1770	-	F	Remove incorrect references - Chapter 5	17.3.0
2022-06	RAN#96	R5-222524	1771	-	F	Remove incorrect references - Chapter 6	17.3.0
2022-06	RAN#96	R5-222525	1772	-	F	Remove incorrect references - Chapter 7	17.3.0
2022-06	RAN#96	R5-222526	1773	-	F	Remove incorrect references - Chapter 8	17.3.0
2022-06	RAN#96	R5-222527	1774	-	F	Corrections to 6.6.3.1	17.3.0
2022-06	RAN#96	R5-222528	1775	-	F	Corrections to 8.4.1.2	17.3.0
2022-06	RAN#96	R5-222529	1776	-	F	Modification to the asynchronous / synchronous cells conditions	17.3.0
2022-06	RAN#96	R5-222531	1778	-	F	Clean-up asynchronous / synchronous cells conditions for IRAT	17.3.0
2022-06	RAN#96	R5-222532	1779	-	F	Editorial correction to H.3.4-5	17.3.0
2022-06	RAN#96	R5-222533	1780	-	F	Corrections to 5.6.1.3	17.3.0
2022-06	RAN#96	R5-222534	1781	-	F	Corrections to 5.6.1.4	17.3.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-06	RAN#96	R5-222535	1782	-	F	Correction to H.3.4-7	17.3.0
2022-06	RAN#96	R5-222536	1783	-	F	Editorial correction 4.5.5.x	17.3.0
2022-06	RAN#96	R5-222633	1791	-	F	Correction to NR SL RRM TCs	17.3.0
2022-06	RAN#96	R5-222636	1792	-	F	Correction to FR1 EN-DC TC 4.7.5.1 - SFTD	17.3.0
2022-06	RAN#96	R5-222638	1794	-	F	Correction to FR1 NR SA TCs 6.1.2.2 - low priority reselection	17.3.0
2022-06	RAN#96	R5-222640	1796	-	F	Correction to inter-RAT TC 8.5.1.1 - SFTD	17.3.0
2022-06	RAN#96	R5-222882	1803	-	F	Editorial update to minimum requirement in 6.5.7.0	17.3.0
2022-06	RAN#96	R5-222887	1804	-	F	Update to minimum requirements for BFR	17.3.0
2022-06	RAN#96	R5-222890	1807	-	F	Update to FR2 SCell BFD test cases	17.3.0
2022-06	RAN#96	R5-222962	1810	-	F	Corrections AoA setup references	17.3.0
2022-06	RAN#96	R5-222964	1812	-	F	Corrections 7.6.3.1	17.3.0
2022-06	RAN#96	R5-222965	1813	-	F	Corrections 7.6.3.2	17.3.0
2022-06	RAN#96	R5-222966	1814	-	F	Corrections 7.6.3.3	17.3.0
2022-06	RAN#96	R5-222967	1815	-	F	Corrections 7.6.3.4	17.3.0
2022-06	RAN#96	R5-222968	1816	-	F	Update to 4.3.2.2.3	17.3.0
2022-06	RAN#96	R5-222969	1817	-	F	Update to 4.3.2.2.4	17.3.0
2022-06	RAN#96	R5-222970	1818	-	F	Update to 6.3.2.2.3	17.3.0
2022-06	RAN#96	R5-222971	1819	-	F	Update to 6.3.2.2.4	17.3.0
2022-06	RAN#96	R5-222998	1821	-	F	Update of 4.6.7 EN-DC FR1 L1-SINR measurement procedure	17.3.0
2022-06	RAN#96	R5-222999	1822	-	F	Update of 6.6.8 NR SA FR1 L1-SINR measurement procedure	17.3.0
2022-06	RAN#96	R5-223001	1824	-	F	Addition of 5.6.6.1 EN-DC FR2 L1-SINR measurement including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223002	1825	-	F	Addition of 5.6.6.2 EN-DC FR2 L1-SINR measurement including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223004	1827	-	F	Addition of 7.6.6.1 NR SA FR2 L1-SINR measurement including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223007	1830	-	F	Addition of Annex E and Annex F for FR2 L1-SINR measurement	17.3.0
2022-06	RAN#96	R5-223214	1835	-	F	Editorial correction to 5G RRM TCs	17.3.0
2022-06	RAN#96	R5-223246	1836	-	F	Correction to Annexes for RRM SCell activation test cases	17.3.0
2022-06	RAN#96	R5-223305	1837	-	F	Update to eMIMO test cases 4.5.5.5 and 4.5.5.6	17.3.0
2022-06	RAN#96	R5-223605	1826	1	F	Addition of 5.6.6.3 EN-DC FR2 L1-SINR measurement including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223606	1829	1	F	Addition of 7.6.6.3 NR SA FR2 L1-SINR measurement including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223607	1750	1	F	Correction to EN-DC FR2 RLM tests for PSCell configured with CSI-RS-based RLM RS in non-DRX including TT	17.3.0
2022-06	RAN#96	R5-223615	1763	1	F	Completing 5.7.4.1 including TT analysis	17.3.0
2022-06	RAN#96	R5-223616	1766	1	F	Completing 7.7.4.1 including TT analysis	17.3.0

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2022-06	RAN#96	R5-223707	1823	1	F	Addition of minimum requirements for EN-DC FR2 L1-SINR measurement for beam reporting	17.3.0
2022-06	RAN#96	R5-223710	1786	1	F	Introduction of EN-DC FR2 SRS-RSRP measurement in non-DRX test case 5.6.4.1	17.3.0
2022-06	RAN#96	R5-223711	1787	1	F	Introduction of EN-DC FR2 SRS-RSRP measurement accuracy test case 5.7.5.1	17.3.0
2022-06	RAN#96	R5-223712	1797	1	F	Introduction of NR SA FR2 SRS-RSRP measurement in non-DRX test case 7.6.4.1	17.3.0
2022-06	RAN#96	R5-223713	1798	1	F	Introduction of NR SA FR2 SRS-RSRP measurement accuracy test case 7.7.5.1	17.3.0
2022-06	RAN#96	R5-223850	1777	1	F	Corrections to 4.7.5.1	17.3.0
2022-06	RAN#96	R5-223851	1784	1	F	Corrections to 4.5.5.1	17.3.0
2022-06	RAN#96	R5-223853	1808	1	F	Remove condition asynchronous cells	17.3.0
2022-06	RAN#96	R5-223854	1757	1	F	Correction to CSI-RS for tracking in 5.6.1.2	17.3.0
2022-06	RAN#96	R5-223855	1764	1	F	Completing 5.7.4.2 including TT analysis	17.3.0
2022-06	RAN#96	R5-223856	1790	1	F	Update to FR2 interruption test case 5.5.2.1	17.3.0
2022-06	RAN#96	R5-223857	1793	1	F	Correction to FR2 EN-DC BFD TCs	17.3.0
2022-06	RAN#96	R5-223858	1809	1	F	Corrections to 6.6.3.2	17.3.0
2022-06	RAN#96	R5-223859	1751	1	F	Editorial reference correction to NR SA FR2 cell re-selection test requirements	17.3.0
2022-06	RAN#96	R5-223860	1767	1	F	Completing 7.7.4.2 including TT analysis	17.3.0
2022-06	RAN#96	R5-223861	1795	1	F	Correction to FR2 NR SA BFD TCs	17.3.0
2022-06	RAN#96	R5-223862	1831	1	F	Correction of RRM test case 7.7.1.1	17.3.0
2022-06	RAN#96	R5-223863	1768	1	F	Annex F for L1-RSRP meas accuracy test cases	17.3.0
2022-06	RAN#96	R5-223864	1788	1	F	Alignment of RMC note for DRX test cases	17.3.0
2022-06	RAN#96	R5-223870	1785	2	F	Corrections to 4.5.5.2	17.3.0
2022-06	RAN#96	R5-223874	1759	1	F	Correction to Active UL BWP-2 Configuration in 4.5.6.1.1 and 6.5.6.1.2	17.3.0
2022-06	RAN#96	R5-223878	1832	1	F	Correction of UL switching test case 6.5.7.1 including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223879	1833	1	F	Correction of UL switching test case 6.5.7.2 including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223880	1805	1	F	Addition of eMIMO test case 6.5.5.5	17.3.0
2022-06	RAN#96	R5-223881	1806	1	F	Addition of eMIMO test case 6.5.5.6	17.3.0
2022-06	RAN#96	R5-223882	1828	1	F	Addition of 7.6.6.2 NR SA FR2 L1-SINR measurement including Test Tolerance	17.3.0
2022-06	RAN#96	R5-223886	1789	1	F	Update to FR1 Scell activation and deactivation test cases	17.3.0
2022-07	RAN#96	R5-223615	1763	1	F	addition of missing changes from R5-223615 in Tables 5.7.4.1.5-2, /-3, /-4	17.3.1
2022-09	RAN#97	R5-223926	1838	-	F	Update to 2-step RACH RRM TC 7.3.2.2.4-FR2 non-contention based random access	17.4.0
2022-09	RAN#97	R5-223965	1841	-	F	Complete 5.7.1.3 including TT analysis results	17.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-09	RAN#97	R5-223966	1842	-	F	Complete 7.7.1.3 including TT analysis results	17.4.0
2022-09	RAN#97	R5-223977	1844	-	F	Complete TC 4.3.2.2.3 including TT analysis results	17.4.0
2022-09	RAN#97	R5-223978	1845	-	F	Complete TC 4.3.2.2.4 including TT analysis results	17.4.0
2022-09	RAN#97	R5-223981	1848	-	F	Annexes for 2-step RACH test cases	17.4.0
2022-09	RAN#97	R5-224006	1851	-	F	Update of SA FR1 TC 6.3.2.1.1 and 6.3.2.1.2	17.4.0
2022-09	RAN#97	R5-224182	1854	-	F	Addition of new test case 4.7.7.1.2 EN-DC FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR relative measurement accuracy	17.4.0
2022-09	RAN#97	R5-224186	1858	-	F	Addition of new test case 4.7.7.3.2 EN-DC FR1 CSI-RS based CMR and dedicated IMR L1-SINR relative measurement accuracy	17.4.0
2022-09	RAN#97	R5-224468	1866	-	F	Corrections to 5.6.1.3 and 5.6.1.4	17.4.0
2022-09	RAN#97	R5-224469	1867	-	F	Corrections to 5.5.5.1	17.4.0
2022-09	RAN#97	R5-224470	1868	-	F	Corrections to 5.5.5.2	17.4.0
2022-09	RAN#97	R5-224471	1869	-	F	Corrections to 5.5.5.3	17.4.0
2022-09	RAN#97	R5-224472	1870	-	F	Corrections for BFD LR test cases	17.4.0
2022-09	RAN#97	R5-224474	1872	-	F	Core spec alignment 6.7.x.1 test cases	17.4.0
2022-09	RAN#97	R5-224476	1874	-	F	Correction to CSI-RS.3.2 TDD	17.4.0
2022-09	RAN#97	R5-224501	1877	-	F	Correction to Mob_enh RRM TCs 7.3.1.X - FR2 DAPS HO	17.4.0
2022-09	RAN#97	R5-224505	1878	-	F	Correction to minimum requirements in 9.1.1.0 - SL Tx timing error	17.4.0
2022-09	RAN#97	R5-224506	1879	-	F	Correction to NR SL RRM TC 9.1.1.1 - GNSS with TT	17.4.0
2022-09	RAN#97	R5-224507	1880	-	F	Correction to NR SL RRM TC 9.1.1.2 - SyncRef UE with TT	17.4.0
2022-09	RAN#97	R5-224508	1881	-	F	Correction to NR SL RRM TC 9.1.1.3 - gNB with TT	17.4.0
2022-09	RAN#97	R5-224509	1882	-	F	Correction to NR SL RRM TC 9.1.2.1 - S-SSB Tx gNB with TT	17.4.0
2022-09	RAN#97	R5-224510	1883	-	F	Correction to NR SL RRM TC 9.1.2.2 - S-SSB Tx SyncRef UE with TT	17.4.0
2022-09	RAN#97	R5-224511	1884	-	F	Correction to minimum requirements in 9.1.3.0 - SyncRef reselection	17.4.0
2022-09	RAN#97	R5-224512	1885	-	F	Correction to NR SL RRM TC 9.1.3.1 - GNSS highest priority with TT	17.4.0
2022-09	RAN#97	R5-224514	1887	-	F	Correction to NR SL RRM TC 9.1.4.1 - resource selection with TT	17.4.0
2022-09	RAN#97	R5-224515	1888	-	F	Correction to NR SL RRM TC 9.1.4.2 - resource pre-emption with TT	17.4.0
2022-09	RAN#97	R5-224517	1890	-	F	Correction to NR SL RRM TC 9.1.5.1 - CBR concurrent with TT	17.4.0
2022-09	RAN#97	R5-224518	1891	-	F	Correction to NR SL RRM TC 9.1.5.2 - CBR PC5 only with TT	17.4.0
2022-09	RAN#97	R5-224519	1892	-	F	Correction to NR SL RRM TC 9.1.6.1 - WAN interruption with TT	17.4.0
2022-09	RAN#97	R5-224546	1903	-	F	Correction to NR HST RRM TC 6.1.1.7 - intra-freq reselection	17.4.0
2022-09	RAN#97	R5-224553	1910	-	F	Correction to NR HST RRM TC 8.2.1.2 - intra-RAT reselection	17.4.0
2022-09	RAN#97	R5-224635	1912	-	F	Correction to condition DRX.7 in H.3.7	17.4.0
2022-09	RAN#97	R5-224637	1914	-	F	Correction to test requirement for SFTD measurement accuracy	17.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-09	RAN#97	R5-224645	1915	-	F	Correction to measurement delay in 4.6.4.5	17.4.0
2022-09	RAN#97	R5-224646	1916	-	F	Correction to RMSI CORESET Reference Measurement Channels in A.1.2	17.4.0
2022-09	RAN#97	R5-224647	1917	-	F	Correction to SS-SINR condition in 5.7.3.x	17.4.0
2022-09	RAN#97	R5-224648	1918	-	F	Correction to Starting PRB index for ULBWP.1.3 in A.8.2	17.4.0
2022-09	RAN#97	R5-224768	1921	-	F	Addition of minimum requirement for L1-SINR measurement in 5.7.6.0	17.4.0
2022-09	RAN#97	R5-224801	1926	-	F	Update to FR2 L1-RSRP measurement test cases 5.6.3.x	17.4.0
2022-09	RAN#97	R5-224804	1928	-	F	Test Tolerances and test case introduction for FR2 RLM test cases 7.5.1.x	17.4.0
2022-09	RAN#97	R5-225145	1935	-	F	Correction of the measurement accuracy test cases in Annex F	17.4.0
2022-09	RAN#97	R5-225146	1936	-	F	Correction of UL switching test case 6.5.7.1 including Test Tolerance	17.4.0
2022-09	RAN#97	R5-225147	1937	-	F	Correction of UL switching test case 6.5.7.2 including Test Tolerance	17.4.0
2022-09	RAN#97	R5-225148	1938	-	F	Addition of Test Tolerance for UL switching test cases in Annex F of TS 38.533	17.4.0
2022-09	RAN#97	R5-225149	1939	-	F	Correction of SA FR2-FR2 SS-RSRP measurement accuracy test case 7.7.1.2 including Test Tolerance	17.4.0
2022-09	RAN#97	R5-225152	1942	-	F	Correction of NR SA FR1 SA Idle mode CA/DC measurement for FR1 test case 6.6.9.1	17.4.0
2022-09	RAN#97	R5-225153	1943	-	F	Correction of Idle Mode inter-RAT CA/DC Measurements test case 6.6.15.1	17.4.0
2022-09	RAN#97	R5-225154	1944	-	F	Addition of E-UTRA - NR FR1 Early Measurement Reporting 8.2.2.1 test case	17.4.0
2022-09	RAN#97	R5-225213	1946	-	F	Update on number of HARQ processes for FDD RRM test cases	17.4.0
2022-09	RAN#97	R5-225230	1952	-	F	Update 6.1.1.3 test procedure	17.4.0
2022-09	RAN#97	R5-225617	1839	1	F	Correction to EN-DC FR2 RLM tests for PSCell configured with CSI-RS-based RLM RS in DRX including TT	17.4.0
2022-09	RAN#97	R5-225622	1859	1	F	Addition of new test case 6.7.9.3.2 NR SA FR1 CSI-RS based CMR and dedicated IMR L1-SINR relative measurement accuracy	17.4.0
2022-09	RAN#97	R5-225623	1861	1	F	Completion 7.7.6.2 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225624	1862	1	F	Completion 7.7.6.3 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225628	1846	1	F	Complete TC 6.3.2.2.3 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225629	1847	1	F	Complete TC 6.3.2.2.4 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225630	1927	1	F	Test Tolerances for FR2 RLM test cases 5.5.1.x	17.4.0
2022-09	RAN#97	R5-225631	1933	1	F	Correction of ENDC FR2 SSB based L1-RSRP measurement accuracy test case 5.7.4.1 including Test Tolerance	17.4.0
2022-09	RAN#97	R5-225632	1934	1	F	Correction of ENDC FR2 CSI-RS based L1-RSRP measurement accuracy test case 5.7.4.2 including Test Tolerance	17.4.0
2022-09	RAN#97	R5-225633	1940	1	F	Correction of SA FR2 SSB based L1-RSRP measurement accuracy test case 7.7.4.1 including Test Tolerance	17.4.0
2022-09	RAN#97	R5-225634	1941	1	F	Correction of SA FR2 CSI-RS based L1-RSRP measurement accuracy test case 7.7.4.2 including Test Tolerance	17.4.0

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2022-09	RAN#97	R5-225635	1843	1	F	Annex F for 5.7.1.3 and 7.7.1.3	17.4.0
2022-09	RAN#97	R5-225690	1853	1	F	Completion 4.7.7.1.1 and 6.7.9.1.1 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225691	1855	1	F	Addition of new test case 6.7.9.1.2 NR SA FR1 CSI-RS based CMR and no dedicated IMR configured and CSI-RS resource set with repetition off L1-SINR relative measurement accuracy	17.4.0
2022-09	RAN#97	R5-225692	1856	1	F	Completion 4.7.7.2 and 6.7.9.2 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225693	1857	1	F	Completion 4.7.7.3.1 and 6.7.9.3.1 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225725	1955	1	F	Update to Annex E and F for eMIMO test cases	17.4.0
2022-09	RAN#97	R5-225748	1945	1	F	Addition of E-UTRA - NR FR2 Early Measurement Reporting 8.2.2.2 test case	17.4.0
2022-09	RAN#97	R5-225815	1863	1	F	Correction on test applicability of HST TCs	17.4.0
2022-09	RAN#97	R5-225816	1864	1	F	Correction message contents 4.6.4.3 and 4.6.4.4	17.4.0
2022-09	RAN#97	R5-225817	1947	1	F	Clarification on SFTD delay in 4.7.5.1	17.4.0
2022-09	RAN#97	R5-225818	1931	1	F	Correction of ENDC FR2 SS-RSRP measurement accuracy test case 5.7.1.1	17.4.0
2022-09	RAN#97	R5-225819	1949	1	F	Updates on 5.7.4.1 test procedure and test requirements	17.4.0
2022-09	RAN#97	R5-225820	1951	1	F	Updates on 5.7.4.2 test procedure and test requirements	17.4.0
2022-09	RAN#97	R5-225821	1871	1	F	Correction message contents 6.6.4.3 and 6.6.4.4	17.4.0
2022-09	RAN#97	R5-225822	1930	1	F	Editorial correction to 5G RRM test case 7.6.1.x	17.4.0
2022-09	RAN#97	R5-225823	1948	1	F	Clarification on SFTD delay in 8.5.1.1	17.4.0
2022-09	RAN#97	R5-225824	1950	1	F	Corrections to Interruptions at SCell addition/release RRM tests	17.4.0
2022-09	RAN#97	R5-225846	1860	1	F	Completion 7.7.6.1 including TT analysis results	17.4.0
2022-09	RAN#97	R5-225847	1922	1	F	Addition of new test case 5.7.6.1 EN-DC FR2 L1-SINR measurement	17.4.0
2022-09	RAN#97	R5-225848	1923	1	F	Addition of new test case 5.7.6.2 EN-DC FR2 L1-SINR measurement	17.4.0
2022-09	RAN#97	R5-225849	1924	1	F	Addition of new test case 5.7.6.3 EN-DC FR2 L1-SINR measurement	17.4.0
2022-09	RAN#97	R5-225850	1932	1	F	Correction of ENDC FR2-FR2 SS-RSRP measurement accuracy test case 5.7.1.2 including Test Tolerance	17.4.0
2022-09	RAN#97	R5-225851	1886	1	F	Correction to NR SL RRM TC 9.1.3.2 - Cell highest priority with TT	17.4.0
2022-09	RAN#97	R5-225852	1889	1	F	Correction to NR SL RRM TC 9.1.4.3 - resource re-evaluation with TT	17.4.0
2022-09	RAN#97	R5-225853	1893	1	F	Correction to Annex F for NR SL RRM TCs	17.4.0
2022-09	RAN#97	R5-225855	1894	1	F	Correction to NR PS RRM TC 7.1.1.3 - intra-freq reselection low mobility with TT	17.4.0
2022-09	RAN#97	R5-225856	1895	1	F	Correction to NR PS RRM TC 7.1.1.4 - intra-freq reselection not-at-cell-edge with TT	17.4.0
2022-09	RAN#97	R5-225857	1896	1	F	Correction to NR PS RRM TC 7.1.1.5 - inter-freq reselection low mobility with TT	17.4.0
2022-09	RAN#97	R5-225858	1897	1	F	Correction to NR PS RRM TC 7.1.1.6 - inter-freq reselection not-at-cell-edge with TT	17.4.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2022-09	RAN#97	R5-225859	1898	1	F	Correction to Annex F for NR PS RRM TCs	17.4.0
2022-09	RAN#97	R5-225864	1908	1	F	Correction to NR SA FR2 RRM TC 7.1.1.1 - intra-freq reselection with TT	17.4.0
2022-09	RAN#97	R5-225865	1909	1	F	Correction to NR SA FR2 RRM TC 7.1.1.2 - inter-freq reselection with TT	17.4.0
2022-09	RAN#97	R5-225866	1911	1	F	Correction to Annex F for NR RRM TCs	17.4.0
2022-09	RAN#97	R5-225871	1919	1	F	Correction to test parameters in 5.6.3.x	17.4.0
2022-09	RAN#97	R5-225872	1925	1	F	Update of eMIMO test case 6.5.5.5 and 6.5.5.6	17.4.0
2022-09	RAN#97	R5-225876	1876	1	F	Correction to Mob_enh RRM TCs 6.3.1.X - FR1 DAPS HO	17.4.0
2022-09	RAN#97	R5-225884	1899	1	F	Correction to EN-DC FR1 RRM TC 4.5.2.X - interruption	17.4.0
2022-09	RAN#97	R5-225885	1900	1	F	Correction to EN-DC FR1 RRM TC 4.5.3.X - SCell activation	17.4.0
2022-09	RAN#97	R5-225886	1901	1	F	Correction to EN-DC FR1 RRM TC 4.5.6.1.2 - BWP switching	17.4.0
2022-09	RAN#97	R5-225887	1904	1	F	Correction to NR SA FR1 RRM TC 6.5.2.1 - interruption	17.4.0
2022-09	RAN#97	R5-225888	1905	1	F	Correction to NR SA FR1 RRM TC 6.5.3.X - SCell activation	17.4.0
2022-09	RAN#97	R5-225889	1906	1	F	Correction to NR SA FR1 RRM TC 6.5.6.1.1 - BWP switching	17.4.0