**3GPP TSG-RAN WG4 Meeting #103-e *R4-22xxxxx***

Online, 9th May – 20th May, 2022

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | **xxx** | **rev** | **-** | **Current version:** | **15.17.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Big CR for TS 38.133 Perf Maintenance Part-2 (Rel-15) | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | MCC, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Perf | | | | |  | ***Date:*** | | | 2022-5-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Big CR to merge the multiple endorsed/agreed CRs in RAN4#103e meeting for RRM performance maintenance part-2.   * R4-2208906 Correction to cell reselection test case\_r15 * R4-2209612 Draft CR to TS 38.133: Corrections to beam failure and link recovery test cases (Rel 15) * R4-2209609 Draft CR to TS 38.133: Corrections to intra-frequency event triggered test cases (Rel 15) * R4-2210978 CR to maintain test case of PScell addition and release delay (A4.5.7)\_R15 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The summary of changes in each endorsed/agreed CR are copied below.   * R4-2208906 Correction to cell reselection test case\_r15   + SnonintrasearchP is set to not present * R4-2209612 Draft CR to TS 38.133: Corrections to beam failure and link recovery test cases (Rel 15)   + In FR1 BFD-LR test cases (A.4.5.5, A.6.5.5), dedicated CORESET RMCs have been added, while the current CORESET RMCs have been specified to be RMSI CORESET RMCs * R4-2209609 Draft CR to TS 38.133: Corrections to intra-frequency event triggered test cases (Rel 15)   + In all intra-frequency event triggerend measurement test cases, set the connection-related transmission parameters (RMC, TRS) for the neighbour cell to N/A. * R4-2210978 CR to maintain test case of PScell addition and release delay (A4.5.7)\_R15   + Modify the incorrect event: from event A4 to event B1. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The summary in each endorsed/agreed CR are copied below.   * R4-2208906 Correction to cell reselection test case\_r15   + Conformant UE may fail the test. * R4-2209612 Draft CR to TS 38.133: Corrections to beam failure and link recovery test cases (Rel 15)   + Missing dedicated CORESET RMCs will make the implementation of test cases ambiguous. * R4-2209609 Draft CR to TS 38.133: Corrections to intra-frequency event triggered test cases (Rel 15)   + Redundant parameters for the neighbour cell will complicate unnecessarily the test implementaion.   + Inconsistency between intra- and inter-frequency test cases. * R4-2210978 CR to maintain test case of PScell addition and release delay (A4.5.7)\_R15   + The test case for Addition and Release Delay of known NR PSCell are not clear. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.4.5.5, A.4.5.7.1, A.4.6.1, A.5.6.1, A.6.1.2.2, A.6.5.5, A.6.6.1, A.7.6.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**< Start of change 1 (from - R4-2209612) >**

**< Unchanged sections omitted >**

Table A.4.5.5.1.1-2: General test parameters for FR1 PSCell for SSB-based beam failure detection and link recovery testing in non-DRX mode

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | | | | Unit | Value | Comment |
|  | | | |  | Test 1 |  |
| Active E-UTRA PCell | | | |  | Cell 1 |  |
| E-UTRA RF Channel Number | | | |  | 1 |  |
| Active PSCell | | | |  | Cell 2 |  |
| RF Channel Number | | | |  | 2 |  |
| Duplex mode | Config 1, 4 | | |  | FDD |  |
|  | Config 2, 3, 5, 6 | | | TDD |  |
| BWchannel | Config 1, 4 | | | MHz | 10: NRB,c = 52 |  |
|  | Config 2, 5 | | |  | 10: NRB,c = 52 |  |
|  | Config 3, 6 | | |  | 40: NRB,c = 106 |  |
| DL initial BWP configuration | Config 1, 2, 3, 4, 5, 6 | | |  | DLBWP.0.1 |  |
| DL dedicated BWP configuration | Config 1, 2, 3, 4, 5, 6 | | |  | DLBWP.1.1 |  |
| UL initial BWP configuration | Config 1, 2, 3, 4, 5, 6 | | |  | ULBWP.0.1 |  |
| UL dedicated BWP configuration | Config 1, 2, 3, 4, 5, 6 | | |  | ULBWP.1.1 |  |
| TDD Configuration | Config 1, 4 | | |  | Not Applicable |  |
|  | Config 2, 5 | | |  | TDDConf.1.1 |  |
|  | Config 3, 6 | | |  | TDDConf.2.1 |  |
| RMSI CORESET Reference Channel | Config 1, 4 | | |  | CR.1.1 FDD |  |
|  | Config 2, 5 | | |  | CR.1.1 TDD |  |
|  | Config 3, 6 | | |  | CR.2.1 TDD |  |
| Dedicated CORESET Reference Channel | Config 1, 4 | | |  | CCR.1.1 FDD |  |
|  | Config 2, 5 | | |  | CCR.1.1 TDD |  |
|  | Config 3, 6 | | |  | CCR.2.1 TDD |  |
| SSB Configuration | Config 1, 4 | | |  | SSB.3 FR1 |  |
|  | Config 2, 5 | | |  | SSB.3 FR1 |  |
|  | Config 3, 6 | | |  | SSB.4 FR1 |  |
| SMTC Configuration | Config 1, 2, 4, 5 | | |  | SMTC.1 |  |
|  | Config 3, 6 | | |  | SMTC.1 |  |
| PDSCH/PDCCH subcarrier spacing | Config 1, 2, 4, 5 | | |  | 15 KHz |  |
|  | Config 3, 6 | | |  | 30 KHz |  |
| PRACH Configuration | Config 1, 2, 4, 5 | | |  | Table A.3.8.2.2-1 |  |
|  | Config 3, 6 | | |  | Table A.3.8.2.2-1 |  |
| SSB Index assigned as BFD RS (q0) | | | |  | 0 |  |
| SSB Index assigned as CBD RS (q1) | | | |  | 1 |  |
| OCNG parameters | | | |  | OP.1 |  |
| CP length | | | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | | | |  | 2x2 Low |  |
| Beam failure | | DCI format | |  | 1-0 |  |
| detection transmission parameters | | Number of Control OFDM symbols | |  | 2 |  |
|  | | Aggregation level | | CCE | 8 |  |
|  | | Ratio of hypothetical PDCCH RE energy to average SSS RE energy | | dB | 0 |  |
|  | | Ratio of hypothetical PDCCH DMRS energy to average SSS RE energy | | dB | 0 |  |
|  | | DMRS precoder granularity | |  | REG bundle size |  |
|  | | REG bundle size | |  | 6 |  |
| DRX | | | |  | OFF |  |
| Gap pattern ID | | | |  | gp0 |  |
| gapOffset | | | |  | 0 |  |
| rlmInSyncOutOfSyncThreshold | | | |  | absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp-ThresholdSSB | Config 1, 2, 4, 5 | | | dBm/SCS kHz | -98 | Threshold used for Qin\_LR\_SSB |
|  | Config 3, 6 | | |  | -95 |
| powerControlOffsetSS | | | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | | | |  | n1 | see TS 38.321 [7], clause 5.17 |
| beamFailureDetectionTimer | | | |  | pbfd4 | see TS 38.321 [7], clause 5.17 |
| CSI-RS configuration for CSI reporting | | | Config 1, 4 |  | CSI-RS.1.1 FDD |  |
|  | | | Config 2, 5 |  | CSI-RS.1.1 TDD |  |
|  | | | Config 3, 6 |  | CSI-RS.2.1 TDD |  |
| CSI-RS for tracking | | | Config 1, 4 |  | TRS.1.1 FDD |  |
|  | | | Config 2, 5 |  | TRS.1.1 TDD |  |
|  | | | Config 3, 6 |  | TRS.1.2 TDD |  |
| SSB Index assigned as RLM RS | | | |  | 0,1 |  |
| T310 timer | | | | ms | 1000 |  |
| N310 | | | |  | 2 |  |
| T1 | | | | s | 0.2 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | | | s | 0.37 |  |
| T3 | | | | s | 0.24 |  |
| T4 | | | | s | 0 |  |
| T5 | | | | s | 0.17 |  |
| D1 | | | | s | 0.13 |  |
| Note 1: All configurations are assigned to the UE prior to the start of time period T1.  Note 2: UE-specific PDCCH is not transmitted after T1 starts.  Note 3: E-UTRAN is in non-DRX mode under test. | | | | | | |

**< End of change 1>**

**< Start of change 2 (from - R4-2209612) >**

**< Unchanged sections omitted >**

Table A.4.5.5.2.1-2: General test parameters for FR1 PCell for SSB-based beam failure detection and link recovery testing in DRX mode

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | | | | | Unit | Value | Comment |
|  | | | | |  | Test 1 |  |
| Active E-UTRA PCell | | | | |  | Cell 1 |  |
| E-UTRA RF Channel Number | | | | |  | 1 |  |
| Active PSCell | | | | |  | Cell 2 |  |
| RF Channel Number | | | | |  | 2 |  |
| Duplex mode | | | | Config 1, 4 |  | FDD |  |
|  | | | | Config 2, 3, 5, 6 |  | TDD |  |
| BWchannel | | | | Config 1, 4 | MHz | 10: NRB,c = 52 |  |
|  | | | | Config 2, 5 |  | 10: NRB,c = 52 |  |
|  | | | | Config 3, 6 |  | 40: NRB,c = 106 |  |
| DL initial BWP configuration | | | | Config 1, 2, 3, 4, 5, 6 |  | DLBWP.0.1 |  |
| DL dedicated BWP configuration | | | | Config 1, 2, 3, 4, 5, 6 |  | DLBWP.1.1 |  |
| UL initial BWP configuration | | | | Config 1, 2, 3, 4, 5, 6 |  | ULBWP.0.1 |  |
| UL dedicated BWP configuration | | | | Config 1, 2, 3, 4, 5, 6 |  | ULBWP.1.1 |  |
| TDD Configuration | | | | Config 1, 4 |  | Not Applicable |  |
|  | | | | Config 2, 5 |  | TDDConf.1.1 |  |
|  | | | | Config 3, 6 |  | TDDConf.2.1 |  |
| RMSI CORESET Reference Channel | | | | Config 1, 4 |  | CR.1.1 FDD |  |
|  | | | | Config 2, 5 |  | CR.1.1 TDD |  |
|  | | | | Config 3, 6 |  | CR.2.1 TDD |  |
| Dedicated CORESET Reference Channel | | | | Config 1, 4 |  | CCR.1.1 FDD |  |
|  | | | | Config 2, 5 |  | CCR.1.1 TDD |  |
|  | | | | Config 3, 6 |  | CCR.2.1 TDD |  |
| SSB Configuration | | | | Config 1, 4 |  | SSB.3 FR1 |  |
|  | | | | Config 2, 5 |  | SSB.3 FR1 |  |
|  | | | | Config 3, 6 |  | SSB.4 FR1 |  |
| SMTC Configuration | | | | Config 1, 2, 4, 5 |  | SMTC.1 |  |
|  | | | | Config 3, 6 |  | SMTC.1 |  |
| PDSCH/PDCCH subcarrier spacing | | | | Config 1, 2, 4, 5 |  | 15 KHz |  |
|  | | | | Config 3, 6 |  | 30 KHz |  |
| PRACH Configuration | | | | Config 1, 2, 4, 5 |  | Table A.3.8.2.2-1 |  |
|  | | | | Config 3, 6 |  | Table A.3.8.2.2-1 |  |
| SSB Index assigned as BFD RS (q0) | | | | |  | 0 |  |
| SSB Index assigned as CBD RS (q1) | | | | |  | 1 |  |
| OCNG parameters | | | | |  | OP.1 |  |
| CP length | | | | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | | | | |  | 2x2 Low |  |
| Beam failure | | DCI format | | |  | 1-0 |  |
| detection transmission parameters | | Number of Control OFDM symbols | | |  | 2 |  |
|  | | Aggregation level | | | CCE | 8 |  |
|  | | Ratio of hypothetical PDCCH RE energy to average SSS RE energy | | | dB | 0 |  |
|  | | Ratio of hypothetical PDCCH DMRS energy to average SSS RE energy | | | dB | 0 |  |
|  | | DMRS precoder granularity | | |  | REG bundle size |  |
|  | | REG bundle size | | |  | 6 |  |
| DRX | | | | |  | DRX.7 | A.3.3.7 |
| Gap pattern ID | | | | |  | N.A. |  |
| rlmInSyncOutOfSyncThreshold | | | | |  | absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp-ThresholdSSB | Config 1, 2, 4, 5 | | | | dBm/SCS kHz | -98 | Threshold used for Qin\_LR\_SSB |
|  | Config 3, 6 | | | |  | -95 |
| powerControlOffsetSS | | | | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | | | | |  | n1 | see TS 38.321 [7], clause 5.17 |
| beamFailureDetectionTimer | | | | |  | pbfd4 | see TS 38.321 [7], clause 5.17 |
| CSI-RS configuration for CSI reporting | | | Config 1, 4 | |  | CSI-RS.1.1 FDD |  |
|  | | | Config 2, 5 | |  | CSI-RS.1.1 TDD |  |
|  | | | Config 3, 6 | |  | CSI-RS.2.1 TDD |  |
| CSI-RS for tracking | | | Config 1, 4 | |  | TRS.1.1 FDD |  |
|  | | | Config 2, 5 | |  | TRS.1.1 TDD |  |
|  | | | Config 3, 6 | |  | TRS.1.2 TDD |  |
| SSB Index assigned as RLM RS | | | | |  | 0,1 |  |
| T310 Timer | | | | | ms | 1000 |  |
| N310 | | | | |  | 2 |  |
| T1 | | | | | s | 1 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | | | | s | 5.17 |  |
| T3 | | | | | s | 3.24 |  |
| T4 | | | | | s | 0 |  |
| T5 | | | | | s | 1.97 |  |
| D1 | | | | | s | 1.93 |  |
| Note 1: All configurations are assigned to the UE prior to the start of time period T1.  Note 2: UE-specific PDCCH is not transmitted after T1 starts.  Note 3: E-UTRAN is in non-DRX mode under test. | | | | | | | |

**< End of change 2>**

**< Start of change 3 (from - R4-2209612) >**

**< Unchanged sections omitted >**

Table A.4.5.5.3.1-2: General test parameters for FR1 PSCell for CSI-RS-based beam failure detection and link recovery testing in non-DRX mode

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | | | Unit | Value | Comment |
|  | | |  | Test 1 |  |
| Active PCell | | |  | Cell 1 |  |
| RF Channel Number | | |  | 1 |  |
| Active PSCell | | |  | Cell 2 |  |
| RF Channel Number | | |  | 2 |  |
| Duplex mode | Config 1, 4 | |  | FDD |  |
|  | Config 2, 3, 5, 6 | |  | TDD |  |
| BWchannel | Config 1, 4 | | MHz | 10: NRB,c = 52 |  |
|  | Config 2, 5 | |  | 10: NRB,c = 52 |  |
|  | Config 3, 6 | |  | 40: NRB,c = 106 |  |
| DL initial BWP configuration | Config 1, 2, 3, 4, 5, 6 | |  | DLBWP.0.1 |  |
| DL dedicated BWP configuration | Config 1, 2, 3, 4, 5, 6 | |  | DLBWP.1.1 |  |
| UL initial BWP configuration | Config 1, 2, 3, 4, 5, 6 | |  | ULBWP.0.1 |  |
| UL dedicated BWP configuration | Config 1, 2, 3, 4, 5, 6 | |  | ULBWP.1.1 |  |
| TDD Configuration | Config 1, 4 | |  | Not Applicable |  |
|  | Config 2, 5 | |  | TDDConf.1.1 |  |
|  | Config 3, 6 | |  | TDDConf.2.1 |  |
| RMSI CORESET Reference Channel | Config 1, 4 | |  | CR.1.1 FDD | A.3.1.2 |
|  | Config 2, 5 | |  | CR.1.1 TDD |  |
|  | Config 3, 6 | |  | CR.2.1 TDD |  |
| Dedicated CORESET Reference Channel | Config 1, 4 | |  | CCR.1.1 FDD | A.3.1.3 |
|  | Config 2, 5 | |  | CCR.1.1 TDD |  |
|  | Config 3, 6 | |  | CCR.2.1 TDD |  |
| SSB Configuration | Config 1, 4 | |  | SSB.3 FR1 | A.3.10 |
|  | Config 2, 5 | |  | SSB.3 FR1 |  |
|  | Config 3, 6 | |  | SSB.4 FR1 |  |
| SMTC Configuration | Config 1, 2, 4, 5 | |  | SMTC.1 | A.3.11 |
|  | Config 3, 6 | |  | SMTC.1 |  |
| PDSCH/PDCCH subcarrier spacing | Config 1, 2, 4, 5 | |  | 15 KHz |  |
|  | Config 3, 6 | |  | 30 KHz |  |
| PRACH Configuration | Config 1, 2, 4, 5 | |  | FR1 PRACH configuration 4 | A.3.8.2 |
|  | Config 3, 6 | | FR1 PRACH configuration 4 | A.3.8.2 |
| csi-RS-Index assigned as beam failure detection RS in set q0 | | |  | 0 |  |
| OCNG parameters | | |  | OP.1 | A.3.2.1 |
| CP length | | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | | |  | 2x2 Low |  |
| Beam failure | DCI format | |  | 1-0 |  |
| detection transmission parameters | Number of Control OFDM symbols | |  | 2 |  |
|  | Aggregation level | | CCE | 8 |  |
|  | Ratio of hypothetical PDCCH RE energy to average CSI-RS RE energy | | dB | 0 |  |
|  | Ratio of hypothetical PDCCH DMRS energy to average CSI-RS RE energy | | dB | 0 |  |
|  | DMRS precoder granularity | |  | REG bundle size |  |
|  | REG bundle size | |  | 6 |  |
| DRX | | |  | OFF |  |
| Gap pattern ID | | |  | N.A. |  |
| csi-RS-Index assigned as candidate beam detection RS in set q1 | | |  | 1 |  |
| rlmInSyncOutOfSyncThreshold | | |  | absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp-ThresholdSSB | | Config 1, 2, 4, 5 | dBm/SCS kHz | -98 | Threshold used for Qin\_LR\_SSB |
|  | | Config 3, 6 |  | -95 |  |
| powerControlOffsetSS | | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | | |  | n1 | see TS 38.321 [7], clause 5.17 |
| beamFailureDetectionTimer | | |  | pbfd4 | see TS 38.321 [7], clause 5.17 |
| CSI-RS | Config 1, 4 | |  | CSI-RS.1.2 FDD | A.3.14 |
| configuration for q0 | Config 2, 5 | |  | CSI-RS.1.2 TDD |  |
| and q1 | Config 3, 6 | |  | CSI-RS.2.2 TDD |  |
| CSI-RS | Config 1, 4 | |  | CSI-RS.1.1 FDD | A.3.14 |
| configuration for | Config 2, 5 | |  | CSI-RS.1.1 TDD |  |
| CSI reporting | Config 3, 6 | |  | CSI-RS.2.1 TDD |  |
| TRS configuration | Config 1, 4 | |  | TRS.1.1 FDD |  |
|  | Config 2, 5 | |  | TRS.1.1 TDD |  |
|  | Config 3, 6 | |  | TRS.1.2 TDD |  |
| csi-RS-Index | Config 1, 4 | |  | CSI-RS.1.2 FDD | A.3.14 |
| assigned as RLM | Config 2, 5 | |  | CSI-RS.1.2 TDD |  |
| RS | Config 3, 6 | |  | CSI-RS.2.2 TDD |  |
| T310 Timer | | | ms | 1000 |  |
| N310 | | |  | 2 |  |
| T1 | | | s | 1 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | | s | 0.18 |  |
| T3 | | | s | 0.14 |  |
| T4 | | | s | 0 |  |
| T5 | | | s | 0.08 |  |
| D1 | | | s | 0.04 |  |
| Note 1: UE-specific PDCCH is not transmitted after T1 starts. | | | | | |

**< End of change 3>**

**< Start of change 4 (from - R4-2209612) >**

**< Unchanged sections omitted >**

Table A.4.5.5.4.1-2: General test parameters for FR1 PSCell for CSI-RS-based beam failure detection and link recovery testing in DRX mode

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | | | **Unit** | **Value** | **Comment** |
| **Test 1** |
| Active PCell | | |  | Cell 1 |  |
| RF Channel Number | | |  | 1 |  |
| Active PSCell | | |  | Cell 2 |  |
| RF Channel Number | | |  | 2 |  |
| Duplex mode | | Config 1, 4 |  | FDD |  |
|  | | Config 2, 3, 5, 6 |  | TDD |  |
| BWchannel | | Config 1, 4 | MHz | 10: NRB,c = 52 |  |
|  | | Config 2, 5 |  | 10: NRB,c = 52 |  |
|  | | Config 3, 6 |  | 40: NRB,c = 106 |  |
| DL initial BWP configuration | | Config 1, 2, 3, 4, 5, 6 |  | DLBWP.0.1 |  |
| DL dedicated BWP configuration | | Config 1, 2, 3, 4, 5, 6 |  | DLBWP.1.1 |  |
| UL initial BWP configuration | | Config 1, 2, 3, 4, 5, 6 |  | ULBWP.0.1 |  |
| UL dedicated BWP configuration | | Config 1, 2, 3, 4, 5, 6 |  | ULBWP.1.1 |  |
| TDD Configuration | | Config 1, 4 |  | Not Applicable |  |
|  | | Config 2, 5 |  | TDDConf.1.1 |  |
|  | | Config 3, 6 |  | TDDConf.2.1 |  |
| RMSI CORESET Reference | | Config 1, 4 |  | CR.1.1 FDD | A.3.1.2 |
| Channel | | Config 2, 5 |  | CR.1.1 TDD |  |
|  | | Config 3, 6 |  | CR.2.1 TDD |  |
| Dedicated CORESET Reference | | Config 1, 4 |  | CCR.1.1 FDD | A.3.1.3 |
| Channel | | Config 2, 5 |  | CCR.1.1 TDD |  |
|  | | Config 3, 6 |  | CCR.2.1 TDD |  |
| SSB Configuration | | Config 1, 4 |  | SSB.3 FR1 | A.3.10 |
|  | | Config 2, 5 |  | SSB.3 FR1 |  |
|  | | Config 3, 6 |  | SSB.4 FR1 |  |
| SMTC Configuration | | Config 1, 2, 4, 5 |  | SMTC.1 | A.3.11 |
|  | | Config 3, 6 |  | SMTC.1 |  |
| PDSCH/PDCCH | | Config 1, 2, 4, 5 |  | 15 KHz |  |
| subcarrier spacing | | Config 3, 6 |  | 30 KHz |  |
| PRACH Configuration | | Config 1, 2, 4, 5 |  | FR1 PRACH configuration 4 | A.3.8.2 |
|  | | Config 3, 6 |  | FR1 PRACH configuration 4 | A.3.8.2 |
| csi-RS-Index assigned as beam failure detection RS in set q0 | | |  | 0 |  |
| OCNG parameters | | |  | OP.1 | A.3.2.1 |
| CP length | | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | | |  | 2x2 Low |  |
| Beam failure detection | | DCI format |  | 1-0 |  |
| transmission parameters | | Number of Control OFDM symbols |  | 2 |  |
|  | | Aggregation level | CCE | 8 |  |
|  | | Ratio of hypothetical PDCCH RE energy to average CSI-RS RE energy | dB | 0 |  |
|  | | Ratio of hypothetical PDCCH DMRS energy to average CSI-RS RE energy | dB | 0 |  |
|  | | DMRS precoder granularity |  | REG bundle size |  |
|  | | REG bundle size |  | 6 |  |
| DRX | | |  | DRX.7 | A.3.3.7 |
| Gap pattern ID | | |  | N.A. |  |
| csi-RS-Index assigned as candidate beam detection RS in set q1 | | |  | 1 |  |
| rlmInSyncOutOfSyncThreshold | | |  | absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp-ThresholdSSB | | | dBm | -98 | Threshold used for Qin\_LR\_SSB |
| powerControlOffsetSS | | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | | |  | n1 | see TS 38.321 [7], clause 5.17 |
| beamFailureDetectionTimer | | |  | pbfd4 | see TS 38.321 [7], clause 5.17 |
| CSI-RS configuration | Config 1, 4 | |  | CSI-RS.1.2 FDD | A.3.14 |
| for q0 and q1 | Config 2, 5 | |  | CSI-RS.1.2 TDD |  |
|  | Config 3, 6 | |  | CSI-RS.2.2 TDD |  |
| CSI-RS configuration | Config 1, 4 | |  | CSI-RS.1.1 FDD | A.3.14 |
| for CSI reporting | Config 2, 5 | |  | CSI-RS.1.1 TDD |  |
|  | Config 3, 6 | |  | CSI-RS.2.1 TDD |  |
| TRS configuration | Config 1, 4 | |  | TRS.1.1 FDD |  |
|  | Config 2, 5 | |  | TRS.1.1 TDD |  |
|  | Config 3, 6 | |  | TRS.1.2 TDD |  |
| csi-RS-Index | Config 1, 4 | |  | CSI-RS.1.2 FDD | A.3.14 |
| assigned as RLM RS | Config 2, 5 | |  | CSI-RS.1.2 TDD |  |
|  | Config 3, 6 | |  | CSI-RS.2.2 TDD |  |
| T310 Timer | | | ms | 1000 |  |
| N310 | | |  | 2 |  |
| T1 | | | s | 1 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | | s | 8.37 |  |
| T3 | | | s | 6.44 |  |
| T4 | | | s | 0 |  |
| T5 | | | s | 1.97 |  |
| D1 | | | s | 1.93 |  |
| Note 1: UE-specific PDCCH is not transmitted after T1 starts. | | | | | |

**< End of change 1>**

**< Start of change 5 (from - R4-2210978) >**

A.4.5.7.1 Addition and Release Delay of known NR PSCell

A.4.5.7.1.1 Test purpose and environment

The purpose of this test is to verify that the NR PSCell addition and release delays under EN-DC are within the requirements stated in clause 7.31.2 [15] for the case when the PSCell is known by the UE at the time of addition.

Supported test configurations are shown in A.4.5.7.1.1-1. The test parameters for the E-UTRA cell are given in Table A.3.7.2.1-1. The E-UTRA cell once set up is not changed across time.

The test parameters for NR cell are given in Tables A.4.5.7.1.1-2 and cell-specific parameters in A.4.5.7.1.1-3 below. The test consists of five successive time periods with duration of T1, T2, T3, T4 and T5 respectively. There are two carriers each with one cell. Before the test starts the UE is connected to Cell 1 (E-UTRA PCell) on radio channel 1 (PCC) but is not aware of Cell 2 (NR PSCell) on radio channel 2. The UE is only monitoring the PCC. During T1 only Cell1 is known to the UE.

Before the start of T2, the UE in the measurement control information that event-triggered reporting with Event B1 is configured for neighbour cell (Cell2). Before the start of T2 the UE is configured with the measurement gaps (gap pattern Id # 0). The Cell2 becomes known to the UE during T2. Therefore, during T2 the UE shall report Event B1. After receiving the Event B1, the test system shall send a RRC message to the UE to release the measurement gaps.

The test system shall send a RRC message to the UE to add PSCell (Cell 2) on radio channel 2. The RRC message (to add PSCell) also includes a request for the UE to start periodic CSI reporting for the PSCell after the PSCell has been successfully added. The RRC message to add PSCell shall be sent to the UE during period T2, after the measurement gaps are released by the test system. The point in time at which the RRC message to add PSCell (Cell2) is received at the UE antenna connector defines the start of period T3.

The test system shall observe the periodic reporting of CSI for PSCell during T4. The point in time at which the UE has sent PRACH to the PSCell (Cell 2) defines the start of period T4.

The test system shall send a RRC message to the UE to release PSCell (Cell 2) on radio channel 2. The RRC message to release PSCell (Cell2) shall be sent to the UE during period T4, after the UE has sent at least one CQI report with non-zero CQI index for PSCell (Cell 2). The point in time at which the RRC message to release PSCell (Cell2) is received at the UE antenna connector defines the start of period T5.

**Table A.4.5.7.1.1-1: Supported test configurations for FR1 PSCell**

|  |  |
| --- | --- |
| **Configuration** | **Description** |
| 1 | LTE FDD, NR SCS 15 kHz, BW 10 MHz, FDD |
| 2 | LTE FDD, NR SCS 15 kHz, BW 10 MHz, TDD |
| 3 | LTE FDD, NR SCS 30 kHz, BW 40 MHz, TDD |
| 4 | LTE TDD, NR SCS 15 kHz, BW 10 MHz, FDD |
| 5 | LTE TDD, NR SCS 15 kHz, BW 10 MHz, TDD |
| 6 | LTE TDD, NR SCS 30 kHz, BW 40 MHz, TDD |
| Note: The UE is only required to pass in one of the supported test configurations in FR1 | |

**Table A.4.5.7.1.1-2: General Test Parameters for PSCell Addition and Release**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | | **Unit** | **Value** | **Comment** |
| RF Channel Number | |  | 1, 2 | Two radio channels are used for this test. One for E-UTRA cell and second for NR Cell |
| Initial | Active PCell |  | Cell1 | PCell on RF channel number 1. |
|  | Neighbour cell |  | Cell2 | Neighbour cell on RF channel number 2. |
| Final | Active PCell |  | Cell1 | PCell on RF channel number 1. |
| Condition | Neighbour Cell |  | Cell2 | PSCell released on RF channel number 2. |
| B1 | Hysteresis | dB | 0 | Hysteresis for evaluation of event B1. |
|  | Threshold RSRP | dBm | -93 | Actual RSRP threshold for event B1. Needs to take absolute accuracy tolerance in clause 9.1.11.1 into account plus margin. |
|  | Time to Trigger | S | 0 |  |
| DRX | |  | OFF | Continuous monitoring of primary cell |
| Measurement gap pattern Id | |  | 0 | Gaps are configured before T2 and released before T3. |
| PRACH configuration on cell2 | |  | FR1 PRACH configuration 1 | Captured in A.3.8.2.1 |
| Cell-individual offset for cells on RF channel number 1 | | dB | 0 | Individual offset for cells on primary component carrier. |
| Cell-individual offset for cells on RF channel number 2 | | dB | 0 | Individual offset for cells on carrier frequency of cell2. |
| T1 | | s | 1 | During this time the PCell shall be known and cell2 shall be unknown. |
| T2 | | s | 1.5 | During this time the UE shall identify neighbour cell (cell2) and report event B1. |
| T3 | | s | 0.5 | During this time the UE adds the PSCell. |
| T4 | | s | 0.5 | During this time the UE sends CSI reports for PSCell. |
| T5 | | s | 0.5 | During this time the UE releases the PSCell. |

**Table A.4.5.7.1.1-3: Cell Specific Parameters for PSCell Addition and Release**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Config** | **Test** | | | | |
|  |  |  | **T1** | **T2** | **T3** | **T4** | **T5** |
| E-UTRA RF Channel Number |  | 1,2,3,4,5,6 | 1 | | | | |
| NR RF Channel Number |  | 1,2,3,4,5,6 | 2 | | | | |
| TDD |  | 1,4 | Not Applicable | | | | |
| configuration |  | 2,5 | TDDConf.1.1 | | | | |
|  |  | 3,6 | TDDConf.2.1 | | | | |
| BWchannel | MHz | 1,4 | 10: NRB,c = 52 | | | | |
|  |  | 2,5 | 10: NRB,c = 52 | | | | |
|  |  | 3,6 | 40: NRB,c = 106 | | | | |
| Initial BWP Configuration |  | 1,2,3 | DLBWP.0.1  ULBWP.0.1 | | | | |
| Dedicated BWP Configuration |  | 1,2,3 | DLBWP.1.1  ULBWP.1.1 | | | | |
| PDSCH Reference |  | 1,4 | SR.1.1 FDD | | | | |
| measurement |  | 2,5 | SR.1.1 TDD | | | | |
| channel |  | 3,6 | SR.2.1 TDD | | | | |
| RMSI CORESET Reference |  | 1,4 | CR.1.1 FDD | | | | |
| Channel |  | 2,5 | CR.1.1 TDD | | | | |
|  |  | 3,6 | CR.2.1 TDD | | | | |
| Dedicated CORESET Reference |  | 1,4 | CCR.1.1 FDD | | | | |
| Channel |  | 2,5 | CCR.1.1 TDD | | | | |
|  |  | 3,6 | CCR.2.1 TDD | | | | |
| OCNG Patterns |  | 1,2,3,4,5,6 | OP.1 | | | | |
| SSB configuration |  | 1,2,4,5 | SSB.1 FR1 | | | | |
|  |  | 3,6 | SSB.2 FR1 | | | | |
| SMTC configuration |  | 1,2,4,5 | SMTC.1 | | | | |
|  |  | 3,6 | SMTC.1 | | | | |
| TRS Configuration |  | 1,4 | TRS.1.1 FDD | | | | |
|  |  | 2,5 | TRS.1.1 TDD | | | | |
|  |  | 3,6 | TRS.1.2 TDD | | | | |
| CSI-RS configuration for CSI reporting |  | 1,4 | CSI-RS.1.1 FDD | | | | |
| 2,5 | CSI-RS.1.1 TDD | | | | |
| 3,6 | CSI-RS.2.1 TDD | | | | |
| reportConfigType |  | 1,2,3,4,5,6 | periodic | | | | |
| reportQuantity |  | 1,2,3,4,5,6 | cri-RI-PMI-CQI | | | | |
| CSI reporting periodicity | slot | 1,2,4,5 | 5 | | | | |
| 3,6 | 10 | | | | |
| CSI reporting offset | slot | 1,2,4,5 | 2 | | | | |
| 3,6 | 4 | | | | |
| EPRE ratio of PSS to SSS |  |  |  | | | | |
| EPRE ratio of PBCH DMRS to SSS |  |  |  | | | | |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  | | | | |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  | | | | |
| EPRE ratio of PDCCH to PDCCH DMRS | dB | 1,2,3,4,5,6 | 0 | | | | |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  | | | | |
| EPRE ratio of PDSCH to PDSCH |  |  |  | | | | |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  | | | | |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  | | | | |
| Note2 | dBm/15 kHz | 1,2,3,4,5,6 | N/A | -85 | | | |
| Note2 | dBm/SCS | 1,2,4,5 | N/A | -85 | | | |
|  |  | 3,6 | N/A | -82 | | | |
|  |  | 1,2,3,4,5,6 | -infinity | 0 | | | |
|  |  | 1,2,3,4,5,6 | -infinity | 0 | | | |
| SS-RSRPNote3 | dBm/SCS | 1,2,4,5 | -infinity | -85 | | | |
|  |  | 3,6 | -infinity | -82 | | | |
| IoNote3 | dBm/9.36MHz | 1,2,4,5 | N/A | -57 | | | |
|  | dBm/38.1MHz | 3,6 | N/A | -51 | | | |
| Propagation condition |  | 1,2,3,4,5,6 | AWGN | | | | |
| Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP and Io levels have been derived from other parameters for information purposes. They are not settable parameters themselves.  Note 4: SS-RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port. | | | | | | | |

A.4.5.7.1.2 Test Requirements

The UE shall transmit the PRACH to PSCell no later than 82 msNote1 from the start of T3.

The UE shall send at least one CSI report for PSCell with non-zero CQI index during T4.

The UE shall periodically send CSI reports for PSCell after the UE has sent first CQI report with non-zero CQI index during T4

The UE shall stop sending CSI reports for PSCell no later than 20ms from the start of T5.

All the above test requirements shall be fulfilled in order for the observed PSCell addition delay and PSCell release delay to be counted as correct. The rate of correct observed PSCell addition delay and PSCell release delay during repeated tests shall be at least 90%.

Note1: The PSCell addition delay can be expressed as follows as specified in clause 7.31.2 [15]:

Tconfig\_PSCell = TRRC\_delay + Tprocessing + Tsearch + T∆ + TPSCell\_ DU + 2ms

Where:

TRRC\_delay = 20ms

Tprocessing = 20ms

Tsearch = 0

T∆ = 20ms

TPSCell\_ DU = 1\*10+10 = 20ms

**< End of change 5>**

**< Start of change 6 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.4.6.1.1.2-3: NR Cell specific test parameters for EN-DC intra-frequency event triggered reporting without gap for PSCell in FR1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Test configuration | Cell 2 | | Cell 3 | |
|  |  |  | T1 | T2 | T1 | T2 |
| TDD |  | 1, 4 | N/A | | N/A | |
| configuration |  | 2, 5 | TDDConf.1.1 | | TDDConf.1.1 | |
|  |  | 3, 6 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC |  | 1, 4 | SR.1.1 FDD | | N/A | |
| configuration |  | 2, 5 | SR.1.1 TDD | |  | |
|  |  | 3, 6 | SR.2.1 TDD | |  | |
| RMSI CORESET |  | 1, 4 | CR.1.1 FDD | | N/A | |
| RMC |  | 2, 5 | CR.1.1 TDD | | N/A | |
| configuration |  | 3, 6 | CR.2.1 TDD | | N/A | |
| Dedicated |  | 1, 4 | CCR.1.1 FDD | | N/A | |
| CORESET RMC |  | 2, 5 | CCR.1.1 TDD | | N/A | |
| configuration |  | 3, 6 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3, 4, 5, 6 | OP.1 | | OP.1 | |
| TRS |  | 1, 4 | TRS.1.1 FDD | | N/A | |
| configuration |  | 2, 5 | TRS.1.1 TDD | | N/A | |
|  |  | 3, 6 | TRS.1.2 TDD | | N/A | |
| Initial BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3, 4, 5, 6 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3, 4, 5, 6 | SSB | | SSB | |
| Note 2 | dBm/SCS | 1, 4 | -98 | | | |
|  |  | 2, 5 | -98 | | | |
|  |  | 3, 6 | -95 | | | |
| Note 2 | dBm/15 kHz | 1, 4 | -98 | | | |
|  |  | 2, 5 |  | | | |
|  |  | 3, 6 |  | | | |
|  | dB | 1, 4 | 4 | -1.46 | -Infinity | -1.46 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
|  | dB | 1, 4 | 4 | 4 | -Infinity | 4 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
| SS-RSRP Note 3 | dBm/SCS kHz | 1, 4 | -94 | -94 | -Infinity | -94 |
|  |  | 2, 5 | -94 | -94 | -Infinity | -94 |
|  |  | 3, 6 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1, 4 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/9.36 MHz | 2, 5 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/38.16 MHz | 3, 6 | -58.50 | -56.16 | -58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3, 4, 5, 6 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 6>**

**< Start of change 7 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.4.6.1.2.2-3: NR Cell specific test parameters for EN-DC intra-frequency event triggered reporting without gap for PSCell in FR1 with DRX

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Test configuration | Cell 2 | | Cell 3 | |
|  |  |  | T1 | T2 | T1 | T2 |
| TDD configuration |  | 1, 4 | N/A | | N/A | |
|  |  | 2, 5 | TDDConf.1.1 | | TDDConf.1.1 | |
|  |  | 3, 6 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC configuration |  | 1, 4 | SR.1.1 FDD | | N/A | |
| 2, 5 | SR.1.1 TDD | |  | |
| 3, 6 | SR.2.1 TDD | |  | |
| RMSI CORESET |  | 1, 4 | CR.1.1 FDD | | N/A | |
| RMC |  | 2, 5 | CR.1.1 TDD | | N/A | |
| configuration |  | 3, 6 | CR.2.1 TDD | | N/A | |
| Dedicated |  | 1, 4 | CCR.1.1 FDD | | N/A | |
| CORESET RMC |  | 2, 5 | CCR.1.1 TDD | | N/A | |
| configuration |  | 3, 6 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3, 4, 5, 6 | OP.1 | | OP.1 | |
| TRS |  | 1, 4 | TRS.1.1 FDD | | N/A | |
| configuration |  | 2, 5 | TRS.1.1 TDD | | N/A | |
|  |  | 3, 6 | TRS.1.2 TDD | | N/A | |
| Initial BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3, 4, 5, 6 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3, 4, 5, 6 | SSB | | SSB | |
| Note 2 | dBm/SCS | 1, 4 | -98 | | | |
|  |  | 2, 5 | -98 | | | |
|  |  | 3, 6 | -95 | | | |
| Note 2 | dBm/15 kHz | 1, 4 | -98 | | | |
|  |  | 2, 5 |  | | | |
|  |  | 3, 6 |  | | | |
|  | dB | 1, 4 | 4 | -1.46 | -Infinity | -1.46 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
|  | dB | 1, 4 | 4 | 4 | -Infinity | 4 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
| SS-RSRP Note 3 | dBm/SCS kHz | 1, 4 | -94 | -94 | -Infinity | -94 |
|  |  | 2, 5 | -94 | -94 | -Infinity | -94 |
|  |  | 3, 6 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1, 4 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/9.36 MHz | 2, 5 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/38.16 MHz | 3, 6 | -58.50 | -56.16 | -58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3, 4, 5, 6 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 7>**

**< Start of change 8 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.4.6.1.3.2-3: NR Cell specific test parameters for EN-DC intra-frequency event triggered reporting with per-UE gaps for PSCell in FR1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Test | Cell 2 | | Cell 3 | |
|  |  | configuration | T1 | T2 | T1 | T2 |
| TDD |  | 1, 4 | N/A | | N/A | |
| configuration |  | 2, 5 | TDDConf.1.1 | | TDDConf.1.1 | |
|  |  | 3, 6 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC |  | 1, 4 | SR.1.1 FDD | | N/A | |
| configuration |  | 2, 5 | SR.1.1 TDD | |  | |
|  |  | 3, 6 | SR.2.1 TDD | |  | |
| RMSI CORESET |  | 1, 4 | CR.1.1 FDD | | N/A | |
| RMC |  | 2, 5 | CR.1.1 TDD | | N/A | |
| configuration |  | 3, 6 | CR.2.1 TDD | | N/A | |
| Dedicated |  | 1, 4 | CCR.1.2 FDD | | N/A | |
| CORESET RMC |  | 2, 5 | CCR.1.2 TDD | | N/A | |
| configuration |  | 3, 6 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3, 4, 5, 6 | OP.1 | | OP.1 | |
| TRS |  | 1, 4 | TRS.1.1 FDD | | N/A | |
| configuration |  | 2, 5 | TRS.1.1 TDD | | N/A | |
|  |  | 3, 6 | TRS.1.2 TDD | | N/A | |
| Initial BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3, 4, 5, 6 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3, 4, 5, 6 | CSI-RS | | SSB | |
| Note 2 | dBm/SCS | 1, 4 | -98 | | | |
|  |  | 2, 5 | -98 | | | |
|  |  | 3, 6 | -95 | | | |
| Note 2 | dBm/15 kHz | 1, 4 | -98 | | | |
|  |  | 2, 5 |  | | | |
|  |  | 3, 6 |  | | | |
|  | dB | 1, 4 | 4 | -1.46 | -Infinity | -1.46 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
|  | dB | 1, 4 | 4 | 4 | -Infinity | 4 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
| SS-RSRP Note 3 | dBm/SCS kHz | 1, 4 | -94 | -94 | -Infinity | -94 |
|  |  | 2, 5 | -94 | -94 | -Infinity | -94 |
|  |  | 3, 6 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1, 4 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/9.36 MHz | 2, 5 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/38.16 MHz | 3, 6 | -58.50 | -56.16 | -58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3, 4, 5, 6 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 8>**

**< Start of change 9 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.4.6.1.4.2-3: NR Cell specific test parameters for EN-DC intra-frequency event triggered reporting with per-UE gaps for PSCell in FR1 with DRX

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Test configuration | Cell 2 | | Cell 3 | |
|  |  |  | T1 | T2 | T1 | T2 |
| TDD |  | 1, 4 | N/A | | N/A | |
| configuration |  | 2, 5 | TDDConf.1.1 | | TDDConf.1.1 | |
|  |  | 3, 6 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC |  | 1, 4 | SR.1.1 FDD | | N/A | |
| configuration |  | 2, 5 | SR.1.1 TDD | |  | |
|  |  | 3, 6 | SR.2.1 TDD | |  | |
| RMSI CORESET |  | 1, 4 | CR.1.1 FDD | | N/A | |
| RMC |  | 2, 5 | CR.1.1 TDD | | N/A | |
| configuration |  | 3, 6 | CR.2.1 TDD | | N/A | |
| Dedicated |  | 1, 4 | CCR.1.2 FDD | | N/A | |
| CORESET RMC |  | 2, 5 | CCR.1.2 TDD | | N/A | |
| configuration |  | 3, 6 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3, 4, 5, 6 | OP.1 | | OP.1 | |
| TRS |  | 1, 4 | TRS.1.1 FDD | | N/A | |
| configuration |  | 2, 5 | TRS.1.1 TDD | | N/A | |
|  |  | 3, 6 | TRS.1.2 TDD | | N/A | |
| Initial BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3, 4, 5, 6 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3, 4, 5, 6 | CSI-RS | | SSB | |
| Note 2 | dBm/SCS | 1, 4 | -98 | | | |
|  |  | 2, 5 | -98 | | | |
|  |  | 3, 6 | -95 | | | |
| Note 2 | dBm/15 KHz | 1, 4 | -98 | | | |
|  |  | 2, 5 |  | | | |
|  |  | 3, 6 |  | | | |
|  | dB | 1, 4 | 4 | -1.46 | -Infinity | -1.46 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
|  | dB | 1, 4 | 4 | 4 | -Infinity | 4 |
|  |  | 2, 5 |  |  |  |  |
|  |  | 3, 6 |  |  |  |  |
| SS-RSRP Note 3 | dBm/SCS KHz | 1, 4 | -94 | -94 | -Infinity | -94 |
|  |  | 2, 5 | -94 | -94 | -Infinity | -94 |
|  |  | 3, 6 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1, 4 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/9.36 MHz | 2, 5 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/38.16 MHz | 3, 6 | -58.50 | -56.16 | -58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3, 4, 5, 6 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 9>**

**< Start of change 10 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.4.6.1.5.1-3: NR Cell specific test parameters for EN-DC intra-frequency event triggered reporting without gap for FDD PSCell in FR1 with SSB index reading

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Test configuration | Cell 2 | | Cell 3 | |
|  |  |  | T1 | T2 | T1 | T2 |
| TDD configuration |  | 1, 2 | N/A | | N/A | |
| PDSCH RMC configuration |  | 1, 2 | SR.1.1 FDD | | N/A | |
| RMSI CORESET RMC configuration |  | 1, 2 | CR.1.1 FDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1, 2 | CCR.1.1 FDD | | N/A | |
| OCNG Patterns |  | 1, 2 | OP.1 | | OP.1 | |
| TRS configuration |  | 1, 2 | TRS.1.1 FDD | | N/A | |
| Initial BWP configuration |  | 1, 2 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2 | SSB | | SSB | |
| Note 2 | dBm/SCS | 1, 2 | -98 | | | |
| Note 2 | dBm/15 kHz | 1, 2 | -98 | | | |
|  | dB | 1, 2 | 4 | -1.46 | -Infinity | -1.46 |
|  | dB | 1, 2 | 4 | 4 | -Infinity | 4 |
| SS-RSRP Note 3 | dBm/SCS kHz | 1, 2 | -94 | -94 | -Infinity | -94 |
| Io | dBm/9.36 MHz | 1, 2 | -64.60 | -62.25 | -64.60 | -62.25 |
| Propagation Condition |  | 1, 2 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 10>**

**< Start of change 11 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.4.6.1.6.2-3: NR Cell specific test parameters for EN-DC intra-frequency event triggered reporting with gap for PSCell in FR1 with SSB index reading

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Test | Cell 2 | | Cell 3 | |
|  |  | configuration | T1 | T2 | T1 | T2 |
| TDD configuration |  | 1, 2 | N/A | | N/A | |
| PDSCH RMC configuration |  | 1, 2 | SR.1.1 FDD | | N/A | |
| RMSI CORESET RMC configuration |  | 1, 2 | CR.1.1 FDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1, 2 | CCR.1.2 FDD | | N/A | |
| OCNG Patterns |  | 1, 2 | OP.1 | | OP.1 | |
| TRS configuration |  | 1, 2 | TRS.1.1 FDD | | N/A | |
| Initial BWP configuration |  | 1, 2 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2 | CSI-RS | | SSB | |
| Note 2 | dBm/SCS | 1, 2 | -98 | | | |
| Note 2 | dBm/15 kHz | 1, 2 | -98 | | | |
|  | dB | 1, 2 | 4 | -1.46 | -Infinity | -1.46 |
|  | dB | 1, 2 | 4 | 4 | -Infinity | 4 |
| SS-RSRP Note 3 | dBm/SCS kHz | 1, 2 | -94 | -94 | -Infinity | -94 |
| Io | dBm/9.36 MHz | 1, 2 | -64.60 | -62.25 | -64.60 | -62.25 |
| Propagation Condition |  | 1, 2 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 11>**

**< Start of change 12 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.5.6.1.1.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for EN-DC with TDD PSCell in FR2 without gap without DRX

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Config | Cell 2 | | Cell 3 | |
| T1 | T2 | T1 | T2 |
| TDD configuration |  | 1~4 | TDDConf.3.1 | | TDDConf.3.1 | |
| BWchannel | MHz | 1~4 | 100: NRB,c = 66 | | 100: NRB,c = 66 | |
| Data RBs allocated |  | 1,2 | 24 | | 24 | |
| 3,4 | 48 | | 48 | |
| Intial BWP configuration |  | 1~4 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1~4 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1~4 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1~4 | SSB | | SSB | |
| PDSCH RMC configuration |  | 1,2 | SR.3.2 TDD | | N/A | |
| 3,4 | SR.3.3 TDD | |
| RMSI CORESET RMC configuration |  | 1,2 | CR.3.1 TDD | | N/A | |
| 3,4 | CR.3.2 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1,2 | CCR.3.1 TDD | | N/A | |
| 3,4 | CCR.3.7 TDD | | N/A | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1~4 | 120 | | 120 | |
| OCNG Patterns |  | 1~4 | OP.5 | | N/A | |
| TRS configuration |  | 1~4 | TRS.2.1 TDD | | N/A | |
| PDSCH/PDCCH TCI state |  | 1~4 | TCI.State.2 | | N/A | |
| cellIndividualOffset | dB | 1~4 | N/A | | 16 | |
| SSB configuration |  | 1, 2 | SSB.3 FR2 | | SSB.7 FR2 | |
| 3, 4 | SSB.4 FR2 | | SSB.8 FR2 | |
| Propagation Condition |  | 1~4 | AWGN | | AWGN | |

**< End of change 12>**

**< Start of change 13 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.5.6.1.2.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for EN-DC with TDD PSCell in FR2 without gap with DRX

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Config | Cell 2 | | Cell 3 | |
| T1 | T2 | T1 | T2 |
| TDD configuration |  | 1~4 | TDDConf.3.1 | | TDDConf.3.1 | |
| BWchannel | MHz | 1~4 | 100: NRB,c = 66 | | 100: NRB,c = 66 | |
| Data RBs allocated |  | 1~4 | 66 | | 66 | |
| Intial BWP configuration |  | 1~4 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1~4 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1~4 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1~4 | SSB | | SSB | |
| PDSCH RMC configuration |  | 1,2 | SR.3.2 TDD | | N/A | |
| 3,4 | SR.3.3 TDD | |
| RMSI CORESET RMC configuration |  | 1,2 | CR.3.1 TDD | | N/A | |
| 3,4 | CR.3.2 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1,2 | CCR.3.1 TDD | | N/A | |
| 3,4 | CCR.3.7 TDD | | N/A | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1~4 | 120 | | 120 | |
| OCNG Patterns |  | 1~4 | OP.1 | | OP.1 | |
| PDSCH/PDCCH TCI state |  | 1~4 | TCI.State.2 | | N/A | |
| CSI-RS for tracking |  |  | TRS.2.1 TDD | | N/A | |
|  |  | TRS.2.1 TDD | | N/A | |
| SSB configuration |  | 1, 2 | SSB.3 FR2 | | SSB.3 FR2 | |
| 3, 4 | SSB.4 FR2 | | SSB.4 FR2 | |
| Propagation Condition |  | 1~4 | AWGN | | AWGN | |

**< End of change 13>**

**< Start of change 14 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.5.6.1.3.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for EN-DC with TDD PSCell in FR2 with per-UE gaps without DRX

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Config | Cell 2 | | | Cell 3 | |
| T1 | T2 | | T1 | T2 |
| TDD configuration |  | 1~4 | TDDConf.3.1 | | | TDDConf.3.1 | |
| BWchannel | MHz | 1~4 | 100: NRB,c = 66 | | | 100: NRB,c = 66 | |
| Data RBs allocated |  | 1,2 | 24 | | | 24 | |
| 3,4 | 48 | | | 48 | |
| Intial BWP configuration |  | 1~4 | DLBWP.0.1  ULBWP.0.1 | | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1~4 | DLBWP.1.2 | | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1~4 | ULBWP.1.2 | | | ULBWP.1.1 | |
| RLM-RS |  | 1~4 | CSI-RS | | | SSB | |
| PDSCH RMC configuration |  | 1,2 | SR.3.2 TDD | | | N/A | |
| 3,4 | SR.3.3 TDD | | |
| RMSI CORESET RMC configuration |  | 1,2 | CR.3.1 TDD | | | N/A | |
| 3,4 | CR.3.2 TDD | | | N/A | |
| Dedicated CORESET RMC configuration |  | 1,2 | CCR.3.1 TDD | | | N/A | |
| 3,4 | CCR.3.7 TDD | | | N/A | |
| TRS configuration |  | 1~4 | TRS.2.1 TDD | | | N/A | |
| PDSCH/PDCCH TCI state |  | 1~4 | TCI.State.2 | | | N/A | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1~4 | 120 | | | 120 | |
| OCNG Patterns |  | 1~4 | OP.5 | | | N/A | |
| cellIndividualOffset | dB | 1~4 | N/A | | | 16 | |
| SSB |  | 1, 2 | SSB.3 FR2 | | | SSB.7 FR2 | |
| 3, 4 | SSB.4 FR2 | | | SSB.8 FR2 | |
| Propagation Condition |  | 1~4 | AWGN | | AWGN | | |

**< End of change 14>**

**< Start of change 15 (from - R4-2209609) >**

**< Unchanged sections omitted >**

Table A.5.6.1.4.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for EN-DC with TDD PSCell in FR2 with per-UE gaps with DRX

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Config | Cell 2 | | Cell 3 | |
| T1 | T2 | T1 | T2 |
| TDD configuration |  | 1~4 | TDDConf.3.1 | | TDDConf.3.1 | |
| BWchannel | MHz | 1~4 | 100: NRB,c = 66 | | 100: NRB,c = 66 | |
| Data RBs allocated |  | 1~4 | 66 | | 66 | |
| Intial BWP configuration |  | 1~4 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1~4 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1~4 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1~4 | CSI-RS | | SSB | |
| PDSCH RMC configuration |  | 1,2 | SR.3.2 TDD | | N/A | |
| 3,4 | SR.3.3 TDD | |
| RMSI CORESET RMC configuration |  | 1,2 | CR.3.1 TDD | | N/A | |
| 3,4 | CR.3.2 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1,2 | CCR.3.1 TDD | | N/A | |
| 3,4 | CCR.3.7 TDD | | N/A | |
| TRS configuration |  | 1~4 | TRS.2.1 TDD | | N/A | |
| PDSCH/PDCCH TCI state |  | 1~4 | TCI.State.2 | | N/A | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1~4 | 120 | | 120 | |
| OCNG Patterns |  | 1~4 | OP.1 | | OP.1 | |
| SSB |  | 1, 2 | SSB.3 FR2 | | SSB.3 FR2 | |
| 3, 4 | SSB.4 FR2 | | SSB.4 FR2 | |
| Propagation Condition |  | 1~4 | AWGN | | AWGN | |

**< End of change 15>**

**< Start of change 16 (from R4-2208906) >**

#### A.6.1.2.2 Cell reselection to lower priority E-UTRAN

##### A.6.1.2.2.1 Test Purpose and Environment

This test is to verify the requirement for the NR to E-UTRAN inter-RAT cell reselection requirements specified in clause 4.2.2.5 when the E-UTRAN cell is of lower priority.

##### A.6.1.2.2.2 Test Parameters

The test scenario comprises of one NR cell and one E-UTRAN cell as given in tables A.6.1.2.2.2-1, A.6.1.2.2.2-2, A.6.1.2.2.2-3 and A.6.1.2.2.2-4. The test consists of two successive time periods, with time duration of T1 and T2 respectively. Both NR cell 1 and E-UTRAN cell 2 are already identified by the UE prior to the start of the test. E-UTRAN cell 2 is of lower priority than cell 1.

Table A.6.1.2.2.2-1: Supported test configurations

|  |  |  |
| --- | --- | --- |
| **Configuration** | **Description of serving cell** | **Description of target cell** |
| 1 | NR 15 kHz SSB SCS, 10 MHz bandwidth, FDD duplex mode | LTE 10 MHz bandwidth, TDD duplex mode |
| 2 | NR 15 kHz SSB SCS, 10 MHz bandwidth, TDD duplex mode | LTE 10 MHz bandwidth, TDD duplex mode |
| 3 | NR 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode | LTE 10 MHz bandwidth, TDD duplex mode |
| 4 | NR 15 kHz SSB SCS, 10 MHz bandwidth, FDD duplex mode | LTE 10 MHz bandwidth, FDD duplex mode |
| 5 | NR 15 kHz SSB SCS, 10 MHz bandwidth, TDD duplex mode | LTE 10 MHz bandwidth, FDD duplex mode |
| 6 | NR 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode | LTE 10 MHz bandwidth, FDD duplex mode |
| Note: The UE is only required to be tested in one of the supported test configurations. | | |

Table A.6.1.2.2.2-2: General test parameters for NR to E-UTRAN cell re-selection test case

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | | **Unit** | **Test configuration** | **Value** | **Comment** |
| Initial condition | Active cell |  | 1, 2, 3, 4, 5, 6 | Cell1 | The UE camps on cell 1 in the initial phase. |
| Neighbour cell |  | 1, 2, 3, 4, 5, 6 | Cell2 |
| T1 end condition | Active cell |  | 1, 2, 3, 4, 5, 6 | Cell2 | The UE shall perform reselection to cell 2 during T1. |
| Neighbour cell |  | 1, 2, 3, 4, 5, 6 | Cell1 |
| T2 end condition | Active cell |  | 1, 2, 3, 4, 5, 6 | Cell1 | The UE shall perform reselection to cell 1 during T2 for iteration of the tests. |
| Neighbour cell |  | 1, 2, 3, 4, 5, 6 | Cell2 |
| Access Barring Information | | - | 1, 2, 3, 4, 5, 6 | Not Sent | No additional delays in random access procedure. |
| DRX cycle length | | s | 1, 2, 3, 4, 5, 6 | 1.28 | The value shall be used for all cells in the test. |
| NR PRACH configuration index | |  | 1, 2, 3, 4, 5, 6 | 102 | The detailed configuration is specified in TS 38.211 clause 6.3.3.2 |
| E-UTRAN PRACH configuration index | |  | 1, 2, 3 | 53 | As specified in table 5.7.1-2 in TS 36.211 [23] |
| 4, 5, 6 | 4 |
| T1 | | s | 1, 2, 3, 4, 5, 6 | 15 | T1 needs to be defined so that cell re-selection reaction time is taken into account. |
| T2 | | s | 1, 2, 3, 4, 5, 6 | 75 | T2 needs to be defined so that cell re-selection reaction time is taken into account. |

Table A.6.1.2.2.2-3: Cell specific test parameters for NR cell 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Test configuration** | **Cell 1** | |
| **T1** | **T2** |
| TDD configuration |  | 1, 4 | N/A | |
|  | 2, 5 | TDDConf.1.1 | |
|  | 3, 6 | TDDConf.2.1 | |
| PDSCH RMC configuration |  | 1, 4 | SR.1.1 FDD | |
|  | 2, 5 | SR.1.1 TDD | |
|  | 3, 6 | SR.2.1 TDD | |
| RMSI CORESET RMC configuration |  | 1, 4 | CR.1.1 FDD | |
|  | 2, 5 | CR.1.1 TDD | |
|  | 3, 6 | CR.2.1 TDD | |
| Dedicated CORESET RMC configuration |  | 1, 4 | CCR.1.1 FDD | |
|  | 2, 5 | CCR.1.1 TDD | |
|  | 3, 6 | CCR.2.1 TDD | |
| SSB configuration |  | 1, 4 | SSB.1 FR1 | |
|  | 2, 5 | SSB.1 FR1 | |
|  | 3, 6 | SSB.2 FR1 | |
| SMTC configuration |  | 1, 4 | SMTC.2 | |
|  | 2, 5 | SMTC.1 | |
|  | 3, 6 | SMTC.1 | |
| OCNG Pattern |  | 1, 2, 3, 4, 5, 6 | OP.1 defined in A.3.2.1 | |
| Initial DL BWP configuration |  | 1, 2, 3, 4, 5, 6 | DLBWP.0.1 | |
| Initial UL BWP configuration |  | 1, 2, 3, 4, 5, 6 | ULBWP.0.1 | |
| RLM-RS |  | 1, 2, 3, 4, 5, 6 | SSB | |
| Qrxlevmin | dBm/SCS | 1, 2, 4, 5 | -140 | |
| 3, 6 | -137 | |
|  | dBm/SCS | 1, 4 | -98 | |
| 2, 5 | -98 | |
| 3, 6 | -95 | |
|  | dBm/15 kHz | 1, 2, 3, 4, 5, 6 | -98 | |
| SS-RSRP | dBm/SCS | 1, 4 | -102 | -86 |
| 2, 5 | -102 | -86 |
| 3, 6 | -99 | -83 |
|  | dB | 1, 4 | -4 | 12 |
| 2, 5 |
| 3, 6 |
|  | dB | 1, 4 | -4 | 12 |
| 2, 5 |
| 3, 6 |
| Io | dBm/9.36 MHz | 1, 4 | -68.60 | -57.78 |
| dBm/9.36 MHz | 2, 5 | -68.60 | -57.78 |
| dBm/38.16 MHz | 3, 6 | -62.50 | -51.69 |
| Treselection | S | 1, 2, 3, 4, 5, 6 | 0 | |
| SnonintrasearchP | dB | 1, 2, 3, 4, 5, 6 | Not sent | |
| Threshx, highP | dB | 1, 2, 3, 4, 5, 6 | 48 | |
| Threshserving, lowP | dB | 1, 2, 3, 4, 5, 6 | 44 | |
| Threshx, lowP (Note 2) | dB | 1, 2, 3, 4, 5, 6 | 50 | |
| Propagation Condition |  | 1, 2, 3, 4, 5, 6 | AWGN | |
| Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.  Note 2: This refers to the value of Thresh**x, Low** which is included in NR system information, and is a threshold for the E-UTRA target cell | | | | |

**Table A.6.1.2.2.2-4: Cell specific test parameters for E-UTRA cell 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Unit** | **Cell 2** | |
| **T1** | **T2** |
| E-UTRA RF Channel number |  | 1 | |
| BWchannel | MHz | 10 | |
| OCNG Patterns defined in TS 36.133 [15] clause A.3.2 |  | OP.2 TDD for test configuration 1, 2, 3;  OP.2 FDD for test configuration 4, 5, 6 | |
| 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\_RANote 1 | dB |
| OCNG\_RBNote 1 | dB |
| Qrxlevmin | dBm | -140 | |
|  | dBm/15 kHz | -98 | |
| RSRP | dBm/15 KHz | -84 | -84 |
|  | dB | 14 | 14 |
|  | dB | 14 | 14 |
| TreselectionEUTRAN | S | 0 | |
| SnonintrasearchP | dB | Not sent | |
| Threshx, highP (Note 2) | dB | 48 | |
| Threshserving, lowP | dB | 44 | |
| Threshx, lowP | dB | 50 | |
| Propagation Condition |  | AWGN | |
| Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.  Note 2: This refers to the value of Thresh**x, high** which is included in E-UTRA system information, and is a threshold for the NR target cell | | | |

##### A.6.1.2.2.3 Test Requirements

The cell reselection delay to a lower priority E-UTRAN cell is defined as the time from the beginning of time period T1, to the moment when the UE camps on cell 2, and starts to send preambles on the PRACH for sending the *RRCSetupRequest* message to perform a Tracking Area Update procedure on cell 2.

The cell re-selection delay to a lower priority cell shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: The cell re-selection delay to a lower priority cell can be expressed as: Tevaluate, E-UTRAN + TSI-E-UTRA,

Where:

Tevaluate, E-UTRAN See Table 4.2.2.5-1 in clause 4.2.2.5

TSI-E-UTRA Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell; 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8 s for the cell re-selection delay to a lower priority E-UTRAN cell.

**< End of change 16>**

**< Start of change 17 (from - R4-2209612) >**

**< Unchanged sections omitted >**

Table A.6.5.5.1.1-2: General test parameters for FR1 PCell for SSB-based beam failure detection and link recovery testing in non-DRX mode

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | | | | Unit | Value | Comment |
|  | | | |  | Test 1 |  |
| Active PSCell | | | |  | Cell 1 |  |
| RF Channel Number | | | |  | 1 |  |
| Duplex mode | | | Config 1 |  | FDD |  |
|  | | | Config 2, 3 |  | TDD |  |
| BWchannel | | | Config 1 | MHz | 10: NRB,c = 52 |  |
|  | | | Config 2 |  | 10: NRB,c = 52 |  |
|  | | | Config 3 |  | 40: NRB,c = 106 |  |
| DL initial BWP configuration | | | Config 1, 2, 3 |  | DLBWP.0.1 |  |
| DL dedicated BWP configuration | | | Config 1, 2, 3 |  | DLBWP.1.1 |  |
| UL initial BWP configuration | | | Config 1, 2, 3 |  | ULBWP.0.1 |  |
| UL dedicated BWP configuration | | | Config 1, 2, 3 |  | ULBWP.1.1 |  |
| TDD Configuration | | | Config 1 |  | Not Applicable |  |
|  | | | Config 2 |  | TDDConf.1.1 |  |
|  | | | Config 3 |  | TDDConf.2.1 |  |
| RMSI CORESET | | | Config 1 |  | CR.1.1 FDD |  |
| Reference Channel | | | Config 2 |  | CR.1.1 TDD |  |
|  | | | Config 3 |  | CR.2.1 TDD |  |
| Dedicated CORESET | | | Config 1 |  | CCR.1.1 FDD |  |
| Reference Channel | | | Config 2 |  | CCR.1.1 TDD |  |
|  | | | Config 3 |  | CCR.2.1 TDD |  |
| SSB Configuration | | | Config 1 |  | SSB.3 FR1 |  |
|  | | | Config 2 |  | SSB.3 FR1 |  |
|  | | | Config 3 |  | SSB.4 FR1 |  |
| SMTC Configuration | | | Config 1, 2 |  | SMTC.1 |  |
|  | | | Config 3 |  | SMTC.1 |  |
| PDSCH/PDCCH | | | Config 1, 2 |  | 15 KHz |  |
| subcarrier spacing | | | Config 3 |  | 30 KHz |  |
| PRACH | | | Config 1, 2 |  | Table A.3.8.2.2-1 |  |
| Configuration | | | Config 3 |  | Table A.3.8.2.2-1 |  |
| SSB Index assigned as BFD RS (q0) | | | |  | 0 |  |
| SSB Index assigned as CBD RS (q1) | | | |  | 1 |  |
| OCNG parameters | | | |  | OP.1 |  |
| CP length | | | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | | | |  | 2x2 Low |  |
| Beam failure | DCI format | | |  | 1-0 |  |
| detection transmission parameters | Number of Control OFDM symbols | | |  | 2 |  |
|  | Aggregation level | | | CCE | 8 |  |
|  | Ratio of hypothetical PDCCH RE energy to average SSS RE energy | | | dB | 0 |  |
|  | Ratio of hypothetical PDCCH DMRS energy to average SSS RE energy | | | dB | 0 |  |
|  | DMRS precoder granularity | | |  | REG bundle size |  |
|  | REG bundle size | | |  | 6 |  |
| DRX | | | |  | OFF |  |
| Gap pattern ID | | | |  | gp0 |  |
| gapOffset | | | |  | 0 |  |
| rlmInSyncOutOfSyncThreshold | | | |  | absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp-ThresholdSSB | | Config 1, 2 | | dBm/ | -98 | Threshold used for |
|  | | Config 3 | | SCS kHz | -95 | Qin\_LR\_SSB |
| powerControlOffsetSS | | | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | | | |  | n1 | see clause 5.17 of TS 38.321 [7] |
| beamFailureDetectionTimer | | | |  | pbfd4 | see clause 5.17 of TS 38.321 [7] |
| CSI-RS | Config 1 | | |  | CSI-RS.1.1 FDD |  |
| configuration for | Config 2 | | |  | CSI-RS.1.1 TDD |  |
| CSI reporting | Config 3 | | |  | CSI-RS.2.1 TDD |  |
| CSI-RS for | Config 1 | | |  | TRS.1.1 FDD |  |
| tracking | Config 2 | | |  | TRS.1.1 TDD |  |
|  | Config 3 | | |  | TRS.1.2 TDD |  |
| SSB Index assigned as RLM RS |  | | |  | 0, 1 |  |
| T310 Timer |  | | | ms | 1000 |  |
| N310 |  | | |  | 2 |  |
| T1 | | | | s | 0.2 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | | | s | 0.37 |  |
| T3 | | | | s | 0.24 |  |
| T4 | | | | s | 0 |  |
| T5 | | | | s | 0.17 |  |
| D1 | | | | s | 0.13 |  |
| Note 1: All configurations are assigned to the UE prior to the start of time period T1.  Note 2: UE-specific PDCCH is not transmitted after T1 starts. | | | | | | |

**< End of change 17>**

**< Start of change 18 (from - R4-2209612) >**

**< Unchanged sections omitted >**

Table A.6.5.5.2.1-2: General test parameters for FR1 PCell for SSB-based beam failure detection and link recovery testing in DRX mode

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | | | | Unit | Value | Comment |
|  | | | |  | Test 1 |  |
| Active PSCell | | | |  | Cell 1 |  |
| RF Channel Number | | | |  | 1 |  |
| Duplex mode | | | Config 1 |  | FDD |  |
|  | | | Config 2, 3 |  | TDD |  |
| BWchannel | | | Config 1 | MHz | 10: NRB,c = 52 |  |
|  | | | Config 2 |  | 10: NRB,c = 52 |  |
|  | | | Config 3 |  | 40: NRB,c = 106 |  |
| DL initial BWP configuration | | | Config 1, 2, 3 |  | DLBWP.0.1 |  |
| DL dedicated BWP configuration | | | Config 1, 2, 3 |  | DLBWP.1.1 |  |
| UL initial BWP configuration | | | Config 1, 2, 3 |  | ULBWP.0.1 |  |
| UL dedicated BWP configuration | | | Config 1, 2, 3 |  | ULBWP.1.1 |  |
| TDD Configuration | | | Config 1 |  | Not Applicable |  |
|  | | | Config 2 |  | TDDConf.1.1 |  |
|  | | | Config 3 |  | TDDConf.2.1 |  |
| RMSI CORESET | | | Config 1 |  | CR.1.1 FDD |  |
| Reference Channel | | | Config 2 |  | CR.1.1 TDD |  |
|  | | | Config 3 |  | CR.2.1 TDD |  |
| Dedicated CORESET | | | Config 1 |  | CCR.1.1 FDD |  |
| Reference Channel | | | Config 2 |  | CCR.1.1 TDD |  |
|  | | | Config 3 |  | CCR.2.1 TDD |  |
| SSB Configuration | | | Config 1 |  | SSB.3 FR1 |  |
|  | | | Config 2 |  | SSB.3 FR1 |  |
|  | | | Config 3 |  | SSB.4 FR1 |  |
| SMTC Configuration | | | Config 1, 2 |  | SMTC.1 |  |
|  | | | Config 3 |  | SMTC.1 |  |
| PDSCH/PDCCH subcarrier spacing | | | Config 1, 2 |  | 15 KHz |  |
|  | | | Config 3 |  | 30 KHz |  |
| PRACH Configuration | | | Config 1, 2 |  | Table A.3.8.2.2-1 |  |
|  | | | Config 3 |  | Table A.3.8.2.2-1 |  |
| SSB Index assigned as BFD RS (q0) | | | |  | 0 |  |
| SSB Index assigned as CBD RS (q1) | | | |  | 1 |  |
| OCNG parameters | | | |  | OP.1 |  |
| CP length | | | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | | | |  | 2x2 Low |  |
| Beam failure | | DCI format | |  | 1-0 |  |
| detection transmission parameters | | Number of Control OFDM symbols | |  | 2 |  |
|  | | Aggregation level | | CCE | 8 |  |
|  | | Ratio of hypothetical PDCCH RE energy to average SSS RE energy | | dB | 0 |  |
|  | | Ratio of hypothetical PDCCH DMRS energy to average SSS RE energy | | dB | 0 |  |
|  | | DMRS precoder granularity | |  | REG bundle size |  |
|  | | REG bundle size | |  | 6 |  |
| DRX | | | |  | DRX.7 | A.3.3.7 |
| Gap pattern ID | | | |  | N.A. |  |
| rlmInSyncOutOfSyncThreshold | | | |  | Absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp-ThresholdSSB |  | | | dBm/SCS kHz | -98 | Threshold used for |
|  |  | | |  | -95 | Qin\_LR\_SSB |
| powerControlOffsetSS | | | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | | | |  | n1 | see clause 5.17 of TS 38.321 [7] |
| beamFailureDetectionTimer | | | |  | pbfd4 | see clause 5.17 of TS 38.321 [7] |
| CSI-RS configuration for CSI reporting | | Config 1 | |  | CSI-RS.1.1 FDD |  |
|  | | Config 2 | |  | CSI-RS.1.1 TDD |  |
|  | | Config 3 | |  | CSI-RS.2.1 TDD |  |
| CSI-RS for tracking | | Config 1 | |  | TRS.1.1 FDD |  |
|  | | Config 2 | |  | TRS.1.1 TDD |  |
|  | | Config 3 | |  | TRS.1.2 TDD |  |
| SSB Index assigned as RLM RS | |  | |  | 0, 1 |  |
| T310 Timer | |  | | ms | 1000 |  |
| N310 | |  | |  | 2 |  |
| T1 | | | | s | 1 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | | | s | 5.17 |  |
| T3 | | | | s | 3.24 |  |
| T4 | | | | s | 0 |  |
| T5 | | | | s | 1.97 |  |
| D1 | | | | s | 1.93 |  |
| Note 1: All configurations are assigned to the UE prior to the start of time period T1.  Note 2: UE-specific PDCCH is not transmitted after T1 starts. | | | | | | |

**< End of change 18>**

**< Start of change 19 (from - R4-2209612) >**

**< Unchanged sections omitted >**

Table A.6.5.5.3.1-2: General test parameters for FR1 PCell for CSI-RS-based beam failure detection and link recovery testing in non-DRX mode

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | | | Unit | Value | Comment |
|  | | |  | Test 1 |  |
| Active PCell | | |  | Cell 1 |  |
| RF Channel Number | | |  | 1 |  |
| Duplex mode | Config 1 | |  | FDD |  |
|  | Config 2, 3 | |  | TDD |  |
| TDD | Config 1 | |  | Not Applicable |  |
| Configuration | Config 2 | |  | TDDConf.1.1 |  |
|  | Config 3 | |  | TDDConf.2.1 |  |
| RMSI CORESET | Config 1 | |  | CR.1.1 FDD | A.3.1.2 |
| Reference | Config 2 | |  | CR.1.1 TDD |
| Channel | Config 3 | |  | CR.2.1 TDD |
| Dedicated CORESET | Config 1 | |  | CCR.1.1 FDD | A.3.1.3 |
| Reference | Config 2 | |  | CCR.1.1 TDD |
| Channel | Config 3 | |  | CCR.2.1 TDD |
| SSB | Config 1 | |  | SSB.3 FR1 | A.3.10 |
| Configuration | Config 2 | |  | SSB.3 FR1 |
|  | Config 3 | |  | SSB.4 FR1 |
| SMTC | Config 1, 2 | |  | SMTC.1 | A.3.11 |
| Configuration | Config 3 | |  | SMTC.1 |
| PDSCH/PDC | Config 1, 2 | |  | 15 KHz |  |
| CH subcarrier spacing | Config 3 | |  | 30 KHz |  |
| PRACH Configuration | Config 1, 2, 3 | |  | FR1 PRACH configuration 4 | A.3.8.2 |
| csi-RS-Index assigned as beam failure detection RS in set q0 | | |  | 0 |  |
| OCNG parameters | | |  | OP.1 | A.3.2.1 |
| CP length | | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | | |  | 2x2 Low |  |
| Beam failure | DCI format | |  | 1-0 |  |
| detection transmission | Number of Control OFDM symbols | |  | 2 |  |
| parameters | Aggregation level | | CCE | 8 |  |
|  | Ratio of hypothetical PDCCH RE energy to average CSI-RS RE energy | | dB | 0 |  |
|  | Ratio of hypothetical PDCCH DMRS energy to average CSI-RS RE energy | | dB | 0 |  |
|  | DMRS precoder granularity | |  | REG bundle size |  |
|  | REG bundle size | |  | 6 |  |
| DRX | | |  | OFF |  |
| Gap pattern ID | | |  | N.A. |  |
| csi-RS-Index assigned as candidate beam detection RS in set q1 | | |  | 1 | N |
| rlmInSyncOutOfSyncThreshold | | |  | absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp- | Config 1, 2 | | dBm/ | -98 | Threshold used for |
| ThresholdSSB | Config 3 | | SCS kHz | -95 | Qin\_LR\_SSB |
| powerControlOffsetSS | | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | | |  | n1 | see clause 5.17 of TS 38.321 [7] |
| beamFailureDetectionTimer | | |  | pbfd4 | see clause 5.17 of TS 38.321 [7] |
| CSI-RS configuration for | | Config 1 |  | CSI-RS.1.2 FDD | A.3.14 |
| q0 and q1 | | Config 2 |  | CSI-RS.1.2 TDD |  |
|  | | Config 3 |  | CSI-RS.2.2 TDD |  |
| CSI-RS configuration for | | Config 1 |  | CSI-RS.1.1 FDD | A.3.14 |
| CSI reporting | | Config 2 |  | CSI-RS.1.1 TDD |  |
|  | | Config 3 |  | CSI-RS.2.1 TDD |  |
| TRS configuration | | Config 1 |  | TRS.1.1 FDD |  |
|  | | Config 2 |  | TRS.1.1 TDD |  |
|  | | Config 3 |  | TRS.1.2 TDD |  |
| CSI-RS-Index assigned | | Config 1 |  | CSI-RS.1.2 FDD | A.3.14 |
| as RLM RS | | Config 2 |  | CSI-RS.1.2 TDD |  |
|  | | Config 3 |  | CSI-RS.2.2 TDD |  |
| T310 Timer | | | ms | 1000 |  |
| N310 | | |  | 2 |  |
| T1 | | | s | 0.2 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | | s | 0.18 |  |
| T3 | | | s | 0.14 |  |
| T4 | | | s | 0 |  |
| T5 | | | s | 0.08 |  |
| D1 | | | s | 0.04 |  |
| Note 1: UE-specific PDCCH is not transmitted after T1 starts. | | | | | |

**< End of change 19>**

**< Start of change 20 (from - R4-2209612) >**

**< Unchanged sections omitted >**

**Table A.6.5.5.4.1-2: General test parameters for FR1 PCell for CSI-RS-based beam failure detection and link recovery testing in DRX mode**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | | **Unit** | **Value** | **Comment** |
|  | |  | **Test 1** |  |
| Active PCell | |  | Cell 1 |  |
| RF Channel Number | |  | 1 |  |
| Duplex mode | Config 1 |  | FDD |  |
|  | Config 2, 3 |  | TDD |  |
| TDD | Config 1 |  | Not Applicable |  |
| Configuration | Config 2 |  | TDDConf.1.1 |  |
|  | Config 3 |  | TDDConf..21 |  |
| RMSI CORESET | Config 1 |  | CR.1.1 FDD | A.3.1.2 |
| Reference | Config 2 |  | CR.1.1 TDD |  |
| Channel | Config 3 |  | CR.2.1 TDD |  |
| Dedicated CORESET | Config 1 |  | CCR.1.1 FDD | A.3.1.3 |
| Reference | Config 2 |  | CCR.1.1 TDD |  |
| Channel | Config 3 |  | CCR.2.1 TDD |  |
| SSB | Config 1 |  | SSB.3 FR1 | A.3.10 |
| Configuration | Config 2 |  | SSB.3 FR1 |
|  | Config 3 |  | SSB.4 FR1 |  |
| SMTC | Config 1, 2 |  | SMTC.1 | A.3.11 |
| Configuration | Config 3 |  | SMTC.1 |  |
| PDSCH/PDCC | Config 1, 2 |  | 15 KHz |  |
| H subcarrier spacing | Config 3 |  | 30 KHz |  |
| PRACH Configuration | Config 1, 2, 3 |  | FR1 PRACH configuration 4 | A.3.8.2 |
| csi-RS-Index assigned as beam failure detection RS in set q0 | |  | 0 |  |
| OCNG parameters | |  | OP.1 | A.3.2.1 |
| CP length | |  | Normal |  |
| Correlation Matrix and Antenna Configuration | |  | 2x2 Low |  |
| Beam failure | DCI format |  | 1-0 |  |
| detection transmission | Number of Control OFDM symbols |  | 2 |  |
| parameters | Aggregation level | CCE | 8 |  |
|  | Ratio of hypothetical PDCCH RE energy to average CSI-RS RE energy | dB | 0 |  |
|  | Ratio of hypothetical PDCCH DMRS energy to average CSI-RS RE energy | dB | 0 |  |
|  | DMRS precoder granularity |  | REG bundle size |  |
|  | REG bundle size |  | 6 |  |
| DRX | |  | DRX.7 | A.3.3.7 |
| Gap pattern ID | |  | N.A. |  |
| csi-RS-Index assigned as candidate beam detection RS in set q1 | |  | 1 |  |
| rlmInSyncOutOfSyncThreshold | |  | absent | When the field is absent, the UE applies the value 0. (Table 8.1.1-1). |
| rsrp-ThresholdSSB | Config 1, 2 | dBm/ | -98 | Threshold used for |
|  | Config 3 | SCS kHz | -95 | Qin\_LR\_SSB |
| powerControlOffsetSS | |  | db0 | Used for deriving rsrp-ThresholdCSI-RS |
| beamFailureInstanceMaxCount | |  | n1 | see clause 5.17 of TS 38.321 [7] |
| beamFailureDetectionTimer | |  | pbfd4 | see clause 5.17 of TS 38.321 [7] |
| CSI-RS configuration | Config 1 |  | CSI-RS.1.2 FDD | A.3.14  .1 |
| for q0 and q1 | Config 2 |  | CSI-RS.1.2 TDD |  |
|  | Config 3 |  | CSI-RS.2.2 TDD |  |
| CSI-RS | Config 1 |  | CSI-RS.1.1 FDD | A.3.14.1 |
| configuration | Config 2 |  | CSI-RS.1.1 TDD |  |
| for CSI reporting | Config 3 |  | CSI-RS.2.1 TDD |  |
| TRS | Config 1 |  | TRS.1.1 FDD |  |
| configuration | Config 2 |  | TRS.1.1 TDD |  |
|  | Config 3 |  | TRS.1.2 TDD |  |
| CSI-RS-Index | Config 1 |  | CSI-RS.1.2 FDD |  |
| assigned as | Config 2 |  | CSI-RS.1.2 TDD |  |
| RLM RS | Config 3 |  | CSI-RS.2.2 TDD |  |
| T310 Timer | | ms | 1000 |  |
| N310 | |  | 2 |  |
| T1 | | s | 1 | During this time the the UE shall be fully synchronized to cell 1 |
| T2 | | s | 8.37 |  |
| T3 | | s | 6.44 |  |
| T4 | | s | 0 |  |
| T5 | | s | 1.97 |  |
| D1 | | s | 1.93 |  |
| Note 1: UE-specific PDCCH is not transmitted after T1 starts. | | | | |

**< End of change 20>**

**< Start of change 21 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.6.6.1.1.2-3: NR Cell specific test parameters for SA intra-frequency event triggered reporting without gap for FR1**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Test configuration** | **Cell 1** | | **Cell 2** | |
| **T1** | **T2** | **T1** | **T2** |
| TDD configuration |  | 1 | TN/A | | TN/A | |
| 2 | TDDConf.1.1 | | TDDConf.1.1 | |
| 3 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC configuration |  | 1 | SR.1.1 FDD | | N/A | |
| 2 | SR.1.1 TDD | |
| 3 | SR.2.1 TDD | |
| RMSI CORESET RMC configuration |  | 1 | CR.1.1 FDD | | N/A | |
| 2 | CR.1.1 TDD | | N/A | |
| 3 | CR.2.1 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.1.1 FDD | | N/A | |
| 2 | CCR.1.1 TDD | | N/A | |
| 3 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3 | OP.1 | | OP.1 | |
| TRS Configuration |  | 1 | TRS.1.1 FDD | | N/A | |
| 2 | TRS.1.1 TDD | | N/A | |
| 3 | TRS.1.2 TDD | | N/A | |
| IInitial BWP configuration |  | 1, 2, 3 | DLBWP.0.1 ULBWP.0.1 | | DLBWP.0.1 ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3 | SSB | | SSB | |
| Note 2 | dBm/SCS | 1 | -98 | | | |
| 2 | -98 | | | |
| 3 | -95 | | | |
| Note 2 | dBm/15 kHz | 1 | -98 | | | |
| 2 |
| 3 |
|  | dB | 1 | 4 | -1.46 | -Infinity | -1.46 |
| 2 |
| 3 |
|  | dB | 1 | 4 | 4 | -Infinity | 4 |
| 2 |
| 3 |
| SS-RSRP Note 3 | dBm/SCS kHz | 1 | -94 | -94 | -Infinity | -94 |
| 2 | -94 | -94 | -Infinity | -94 |
| 3 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1 | -64.60 | -62.25 | --64.60 | -62.25 |
| dBm/9.36 MHz | 2 | -64.60 | -62.25 | --64.60 | -62.25 |
| dBm/38.16 MHz | 3 | -58.50 | -56.16 | --58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 21>**

**< Start of change 22 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.6.6.1.2.2-3: NR Cell specific test parameters for SA intra-frequency event triggered reporting without gap for PCell in FR1 with DRX**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Test configuration** | **Cell 1** | | **Cell 2** | |
| **T1** | **T2** | **T1** | **T2** |
| TDD configuration |  | 1 | TN/A | | TN/A | |
| 2 | TDDConf.1.1 | | TDDConf.1.1 | |
| 3 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC configuration |  | 1 | SR.1.1 FDD | | N/A | |
| 2 | SR.1.1 TDD | |
| 3 | SR.2.1 TDD | |
| RMSI CORESET RMC configuration |  | 1 | CR.1.1 FDD | | N/A | |
| 2 | CR.1.1 TDD | | N/A | |
| 3 | CR.2.1 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.1.1 FDD | | N/A | |
| 2 | CCR.1.1 TDD | | N/A | |
| 3 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3 | OP.1 | | OP.1 | |
| TRS configuration |  | 1 | TRS.1.1 FDD | | N/A | |
| 2 | TRS.1.1 TDD | | N/A | |
| 3 | TRS.1.2 TDD | | N/A | |
| IInitial BWP configuration |  | 1, 2, 3 | DLBWP.0.1 ULBWP.0.1 | | DLBWP.0.1 ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3 | SSB | | SSB | |
| Note 2 | dBm/SCS | 1 | -98 | | | |
| 2 | -98 | | | |
| 3 | -95 | | | |
| Note 2 | dBm/15 kHz | 1 | -98 | | | |
| 2 |
| 3 |
|  | dB | 1 | 4 | -1.46 | -Infinity | -1.46 |
| 2 |
| 3 |
|  | dB | 1 | 4 | 4 | -Infinity | 4 |
| 2 |
| 3 |
| SS-RSRP Note 3 | dBm/SCS kHz | 1 | -94 | -94 | -Infinity | -94 |
| 2 | -94 | -94 | -Infinity | -94 |
| 3 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1 | -64.60 | -62.25 | --64.60 | -62.25 |
| dBm/9.36 MHz | 2 | -64.60 | -62.25 | --64.60 | -62.25 |
| dBm/38.16 MHz | 3 | -58.50 | -56.16 | --58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 22>**

**< Start of change 23 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.6.6.1.3.2-3: NR Cell specific test parameters for SA intra-frequency event triggered reporting with per-UE gaps for PCell in FR1**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Unit | Test | Cell 1 | | Cell 2 | |
|  |  | configuration | T1 | T2 | T1 | T2 |
| TDD |  | 1 | TN/A | | TN/A | |
| configuration |  | 2 | TDDConf.1.1 | | TDDConf.1.1 | |
|  |  | 3 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC |  | 1 | SR.1.1 FDD | | N/A | |
| configuration |  | 2 | SR.1.1 TDD | |  | |
|  |  | 3 | SR.2.1 TDD | |  | |
| RMSI CORESET |  | 1 | CR.1.1 FDD | | N/A | |
| RMC |  | 2 | CR.1.1 TDD | | N/A | |
| configuration |  | 3 | CR.2.1 TDD | | N/A | |
| Dedicated |  | 1 | CCR.1.1 FDD | | N/A | |
| CORESET RMC |  | 2 | CCR.1.1 TDD | | N/A | |
| configuration |  | 3 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3 | OP.1 | | OP.1 | |
| TRS |  | 1 | TRS.1.1 FDD | | N/A | |
| configuration |  | 2 | TRS.1.1 TDD | | N/A | |
|  |  | 3 | TRS.1.2 TDD | | N/A | |
| IInitial BWP configuration |  | 1, 2, 3 | DLBWP.0.1 ULBWP.0.1 | | DLBWP.0.1 ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3 | CSI-RS | | SSB | |
| Note 2 | dBm/SCS | 1 | -98 | | | |
|  |  | 2 | -98 | | | |
|  |  | 3 | -95 | | | |
| Note 2 | dBm/15 kHz | 1 | -98 | | | |
|  |  | 2 |  | | | |
|  |  | 3 |  | | | |
|  | dB | 1 | 4 | -1.46 | -Infinity | -1.46 |
|  |  | 2 |  |  |  |  |
|  |  | 3 |  |  |  |  |
|  | dB | 1 | 4 | 4 | -Infinity | 4 |
|  |  | 2 |  |  |  |  |
|  |  | 3 |  |  |  |  |
| SS-RSRP Note 3 | dBm/SCS kHz | 1 | -94 | -94 | -Infinity | -94 |
|  |  | 2 | -94 | -94 | -Infinity | -94 |
|  |  | 3 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1 | -64.60 | -62.25 | --64.60 | -62.25 |
|  | dBm/9.36 MHz | 2 | -64.60 | -62.25 | --64.60 | -62.25 |
|  | dBm/38.16 MHz | 3 | -58.50 | -56.16 | --58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 23>**

**< Start of change 24 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.6.6.1.4.2-3: NR Cell specific test parameters for SA intra-frequency event triggered reporting with per-UE gaps for PCell in FR1 with DRX**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Test** | **Cell 1** | | **Cell 2** | |
|  |  | **configuration** | **T1** | **T2** | **T1** | **T2** |
| TDD |  | 1 | TN/A | | TN/A | |
| configuration |  | 2 | TDDConf.1.1 | | TDDConf.1.1 | |
|  |  | 3 | TDDConf.2.1 | | TDDConf.2.1 | |
| PDSCH RMC |  | 1 | SR.1.1 FDD | | N/A | |
| configuration |  | 2 | SR.1.1 TDD | |  | |
|  |  | 3 | SR.2.1 TDD | |  | |
| RMSI CORESET |  | 1 | CR.1.1 FDD | | N/A | |
| RMC |  | 2 | CR.1.1 TDD | | N/A | |
| configuration |  | 3 | CR.2.1 TDD | | N/A | |
| Dedicated |  | 1 | CCR.1.2 FDD | | N/A | |
| CORESET RMC |  | 2 | CCR.1.2 TDD | | N/A | |
| configuration |  | 3 | CCR.2.1 TDD | | N/A | |
| OCNG Patterns |  | 1, 2, 3 | OP.1 | | OP.1 | |
| TRS |  | 1 | TRS.1.1 FDD | | N/A | |
| configuration |  | 2 | TRS.1.1 TDD | | N/A | |
|  |  | 3 | TRS.1.2 TDD | | N/A | |
| IInitial BWP configuration |  | 1, 2, 3 | DLBWP.0.1 ULBWP.0.1 | | DLBWP.0.1 ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2, 3 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2, 3 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2, 3 | CSI-RS | | SSB | |
| Note 2 | dBm/SCS | 1 | -98 | | | |
|  |  | 2 | -98 | | | |
|  |  | 3 | -95 | | | |
| Note 2 | dBm/15 kHz | 1 | -98 | | | |
|  |  | 2 |  | | | |
|  |  | 3 |  | | | |
|  | dB | 1 | 4 | -1.46 | -Infinity | -1.46 |
|  |  | 2 |  |  |  |  |
|  |  | 3 |  |  |  |  |
|  | dB | 1 | 4 | 4 | -Infinity | 4 |
|  |  | 2 |  |  |  |  |
|  |  | 3 |  |  |  |  |
| SS-RSRP Note 3 | dBm/SCS kHz | 1 | -94 | -94 | -Infinity | -94 |
|  |  | 2 | -94 | -94 | -Infinity | -94 |
|  |  | 3 | -91 | -91 | -Infinity | -91 |
| Io | dBm/9.36 MHz | 1 | -64.60 | -62.25 | --64.60 | -62.25 |
|  | dBm/9.36 MHz | 2 | -64.60 | -62.25 | -64.60 | -62.25 |
|  | dBm/38.16 MHz | 3 | -58.50 | -56.16 | --58.50 | -56.16 |
| Propagation Condition |  | 1, 2, 3 | AWGN | | | |
| Note 1: Table A.6.6.1.4.2-1The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: Table A.6.6.1.4.2-1Interference 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  to be fulfilled.  Note 3: Table A.6.6.1.4.2-1SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 24>**

**< Start of change 25 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.6.6.1.5.2-3: NR Cell specific test parameters for SA intra-frequency event triggered reporting without gap for FDD PCell in FR1 with SSB index reading**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Test configuration** | **Cell 1** | | **Cell 2** | |
| **T1** | **T2** | **T1** | **T2** |
| TDD configuration |  | 1 | N/A | | N/A | |
| PDSCH RMC configuration |  | 1 | SR.1.1 FDD | | N/A | |
| RMSI CORESET RMC configuration |  | 1 | CR.1.1 FDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.1.1 FDD | | N/A | |
| OCNG Patterns |  | 1 | OP.1 | | OP.1 | |
| TRS configuration |  | 1 | TRS.1.1 FDD | | N/A | |
| IInitial BWP configuration |  | 1 | DLBWP.0,1 ULBWP.0.1 | | DLBWP.0.1 ULBWP.0.1 | |
| Active DL BWP configuration |  | 1 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1 | SSB | | SSB | |
| Note 2 | dBm/SCS | 1 | -98 | | | |
| Note 2 | dBm/15 kHz | 1 | -98 | | | |
|  | dB | 1 | 4 | -1.46 | -Infinity | -1.46 |
|  | dB | 1 | 4 | 4 | -Infinity | 4 |
| SS-RSRP Note 3 | dBm/SCS kHz | 1 | -94 | -94 | -Infinity | -94 |
| Io | dBm/9.36 MHz | 1 | -64.60 | -62.25 | --64.60 | -62.25 |
| Propagation Condition |  | 1 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 25>**

**< Start of change 26 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.6.6.1.6.2-3: NR Cell specific test parameters for SA intra-frequency event triggered reporting with gap for FDD PCell in FR1 with SSB index reading**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Test configuration** | **Cell 1** | | **Cell 2** | |
| **T1** | **T2** | **T1** | **T2** |
| TDD configuration |  | 1 | N/A | | N/A | |
| PDSCH RMC configuration |  | 1 | SR.1.1 FDD | | N/A | |
| RMSI CORESET RMC configuration |  | 1 | CR.1.1 FDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.1.2 FDD | | N/A | |
| OCNG Patterns |  | 1 | OP.1 | | OP.1 | |
| TRS configuration |  | 1 | TRS.1.1 FDD | | N/A | |
| IInitial BWP configuration |  | 1 | DLBWP.0.1 ULBWP.0.1 | | DLBWP.0.1 ULBWP.0.1 | |
| Active DL BWP configuration |  | 1 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1 | CSI-RS | | SSB | |
| Note 2 | dBm/SCS | 1 | -98 | | | |
| Note 2 | dBm/15 kHz | 1 | -98 | | | |
|  | dB | 1 | 4 | -1.46 | -Infinity | -1.46 |
|  | dB | 1 | 4 | 4 | -Infinity | 4 |
| SS-RSRP Note 3 | dBm/SCS kHz | 1 | -94 | -94 | -Infinity | -94 |
| Io | dBm/9.36 MHz | 1 | -64.60 | -62.25 | --64.60 | -62.25 |
| Propagation Condition |  | 1 | AWGN | | | |
| Note 1: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.  Note 2: 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  to be fulfilled.  Note 3: SS-RSRP levels have been derived from other parameters for information purposes. They are not settable parameters themselves. | | | | | | |

**< End of change 26>**

**< Start of change 27 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.7.6.1.1.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for SA with TDD PCell in FR2 without gap without DRX**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Config** | **Cell 1** | | **Cell 2** | |
| **T1** | **T2** | **T1** | **T2** |
| TDD configuration |  | 1, 2 | TDDConf.3.1 | | TDDConf.3.1 | |
| BWchannel | MHz | 1, 2 | 100: NRB,c = 66 | | 100: NRB,c = 66 | |
| Data RBs allocated |  | 1 | 24 | | 24 | |
| 2 | 48 | | 48 | |
| Intial BWP configuration |  | 1, 2 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2 | DLBWP.1.1 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2 | ULBWP.1.1 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2 | SSB | | SSB | |
| PDSCH RMC configuration |  | 1 | SR.3.2 TDD | | N/A | |
| 2 | SR.3.3 TDD | |
| RMSI CORESET RMC configuration |  | 1 | CR.3.1 TDD | | N/A | |
| 2 | CR.3.2 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.3.1 TDD | | N/A | |
| 2 | CCR.3.7 TDD | | N/A | |
| TRS configuration |  | 1, 2 | TRS.2.1 TDD | | N/A | |
| PDSCH/PDCCH TCI states |  | 1, 2 | TCI.State.2 | | N/A | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1, 2 | 120 | | 120 | |
| OCNG Patterns |  | 1, 2 | OP.5 | | N/A | |
| cellIndividualOffset | dB | 1~2 | N/A | | 16 | |
| SSB |  | 1 | SSB.3 FR2 | | SSB.7 FR2 | |
| 2 | SSB.4 FR2 | | SSB.8 FR2 | |
| Propagation Condition |  | 1, 2 | AWGN | | AWGN | |

**< End of change 27>**

**< Start of change 28 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.7.6.1.2.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for SA with TDD PCell in FR2 without gap with DRX**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Config** | **Cell 1** | | **Cell 2** | | |
| **T1** | **T2** | **T1** | | **T2** |
| TDD configuration |  | 1, 2 | TDDConf.3.1 | | TDDConf.3.1 | | |
| BWchannel | MHz | 1, 2 | 100: NRB,c = 66 | | 100: NRB,c = 66 | | |
| Data RBs allocated |  | 1, 2 | 66 | | 66 | | |
| Intial BWP configuration |  | 1, 2 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | | |
| Active DL BWP configuration |  | 1, 2 | DLBWP.1.1 | | DLBWP.1.1 | | |
| Active UL BWP configuration |  | 1, 2 | ULBWP.1.1 | | ULBWP.1.1 | | |
| RLM-RS |  | 1, 2 | SSB | | SSB | | |
| PDSCH RMC configuration |  | 1 | SR.3.2 TDD | | N/A | | |
| 2 | SR.3.3 TDD | |
| RMSI CORESET RMC configuration |  | 1 | CR.3.1 TDD | | N/A | | |
| 2 | CR.3.2 TDD | | N/A | | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.3.1 TDD | | N/A | | |
| 2 | CCR.3.7 TDD | | N/A | | |
| TRS configuration |  | 1, 2 | TRS.2.1 TDD | | N/A | | |
| PDSCH/PDCCH TCI states |  | 1, 2 | TCI.State.2 | | N/A | | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1, 2 | 120 | | 120 | | |
| OCNG Patterns |  | 1, 2 | OP.1 | | OP.1 | | |
| SSB |  | 1 | SSB.3 FR2 | | SSB.3 FR2 | | |
| 2 | SSB.4 FR2 | | SSB.4 FR2 | | |
| Propagation Condition |  | 1, 2 | AWGN | | | AWGN | |

**< End of change 28>**

**< Start of change 29 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.7.6.1.3.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for SA with TDD PCell in FR2 with per-UE gaps without DRX**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Config** | **Cell 1** | | **Cell 2** | |
| **T1** | **T2** | **T1** | **T2** |
| TDD configuration |  | 1, 2 | TDDConf.3.1 | | TDDConf.3.1 | |
| BWchannel | MHz | 1, 2 | 100: NRB,c = 66 | | 100: NRB,c = 66 | |
| Data RBs allocated |  | 1 | 24 | | 24 | |
| 2 | 48 | | 48 | |
| Intial BWP configuration |  | 1, 2 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2 | CSI-RS | | SSB | |
| PDSCH RMC configuration |  | 1 | SR.3.2 TDD | | N/A | |
| 2 | SR.3.3 TDD | |
| RMSI CORESET RMC configuration |  | 1 | CR.3.1 TDD | | N/A | |
| 2 | CR.3.2 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.3.1 TDD | | N/A | |
| 2 | CCR.3.7 TDD | | N/A | |
| TRS configuration |  | 1, 2 | TRS.2.1 TDD | | N/A | |
| PDSCH/PDCCH TCI states |  | 1, 2 | TCI.State.2 | | N/A | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1, 2 | 120 | | 120 | |
| OCNG Patterns |  | 1, 2 | OP.5 | | N/A | |
| cellIndividualOffset | dB | 1~2 | N/A | | 16 | |
| SSB |  | 1 | SSB.3 FR2 | | SSB.7 FR2 | |
| 2 | SSB.4 FR2 | | SSB.8 FR2 | |
| Propagation Condition |  | 1, 2 | AWGN | | AWGN | |

**< End of change 29>**

**< Start of change 30 (from - R4-2209609) >**

**< Unchanged sections omitted >**

**Table A.7.6.1.4.1-3: NR Cell specific test parameters for intra-frequency event triggered reporting for SA with TDD PCell in FR2 with per-UE gaps with DRX**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Unit** | **Config** | **Cell 1** | | **Cell 2** | |
| **T1** | **T2** | **T1** | **T2** |
| TDD configuration |  | 1, 2 | TDDConf.3.1 | | TDDConf.3.1 | |
| BWchannel | MHz | 1, 2 | 100: NRB,c = 66 | | 100: NRB,c = 66 | |
| Data RBs allocated |  | 1, 2 | 66 | | 66 | |
| Intial BWP configuration |  | 1, 2 | DLBWP.0.1  ULBWP.0.1 | | DLBWP.0.1  ULBWP.0.1 | |
| Active DL BWP configuration |  | 1, 2 | DLBWP.1.2 | | DLBWP.1.1 | |
| Active UL BWP configuration |  | 1, 2 | ULBWP.1.2 | | ULBWP.1.1 | |
| RLM-RS |  | 1, 2 | SCSI-RS | | SSB | |
| PDSCH RMC configuration |  | 1 | SR.3.2 TDD | | N/A | |
| 2 | SR.3.3 TDD | |
| RMSI CORESET RMC configuration |  | 1 | CR.3.1 TDD | | N/A | |
| 2 | CR.3.2 TDD | | N/A | |
| Dedicated CORESET RMC configuration |  | 1 | CCR.3.1 TDD | | N/A | |
| 2 | CCR.3.7 TDD | | N/A | |
| TRS configuration |  | 1, 2 | TRS.2.1 TDD | | N/A | |
| PDSCH/PDCCH TCI state |  | 1, 2 | TCI.State.2 | | N/A | |
| PDSCH/PDCCH subcarrier spacing | kHz | 1, 2 | 120 | | 120 | |
| OCNG Patterns |  | 1, 2 | OP.1 | | OP.1 | |
| SSB |  | 1 | SSB.3 FR2 | | SSB.3 FR2 | |
| 2 | SSB.4 FR2 | | SSB.4 FR2 | |
| Propagation Condition |  | 1, 2 | AWGN | | AWGN | |

**< End of change 30>**