
Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

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where:

- x the first digit:
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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
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The present document is part 1 of a multi-part deliverable covering the 5G System (5GS) User Equipment (UE) conformance specification, as identified below:

- 3GPP TS 38.508-1: "5GS; User Equipment (UE) conformance specification; Part 1: Common test environment" (the present document).
- 3GPP TS 38.508-2 [10]: "5GS; User Equipment (UE) conformance specification; Part 2: Common Implementation Conformance Statement (ICS) proforma".

1 Scope

The present document defines the test environment for the 5G System.

This specification covers all aspects, including NG-RAN, 5GC and interworking between 5GS and EPS used for conformance tests of User Equipment (UE).

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 36.508: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); Common test environments for User Equipment (UE) conformance testing".
- [3] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRAN); Overall description; Stage 2".
- [4] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification".
- [5] 3GPP TS 38.300: "NR; Overall description; Stage 2".
- [6] 3GPP TS 38.331: "NR; Radio Resource Control (RRC); Protocol specification".
- [7] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone".
- [8] 3GPP TS 38.101-2: "NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone".
- [9] 3GPP TS 38.101-3: "NR; User Equipment (UE) radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios".
- [10] 3GPP TS 38.508-2: "5GS; User Equipment (UE) conformance specification; Part 2: Common Implementation Conformance Statement (ICS) proforma".
- [11] 3GPP TS 38.509: "5GS; Special conformance testing functions for User Equipment (UE)".
- [12] 3GPP TS 38.523-1: "5GS; User Equipment (UE) conformance specification; Part 1: Protocol".
- [13] 3GPP TS 38.133: "NR; Requirements for support of radio resource management".
- [14] 3GPP TS 38.521-1: "NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Range 1 Standalone".
- [15] 3GPP TS 38.521-2: "NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 2: Range 2 Standalone".
- [16] 3GPP TS 38.521-3: "NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios".

- [17] 3GPP TS 38.521-4: “NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 4: Performance”.
- [18] 3GPP TS 38.533: “NR; User Equipment (UE) conformance specification; Radio resource management”.
- [19] 3GPP TS 38.523-2: “5GS; User Equipment (UE) conformance specification; Part 2: Applicability of protocol test cases”.
- [20] 3GPP TS 38.321: “NR; Medium Access Control (MAC) protocol specification”.
- [21] 3GPP TS 38.214: “NR; Physical layer procedures for data”.
- [22] 3GPP TS 38.213: “NR; Physical layer procedures for control”.
- [23] 3GPP TS 38.523-3: "5GS; UE conformance specification; Part 3: Protocol Test Suites".
- [24] 3GPP TR 38.810: “NR; Study on test methods”
- [25] 3GPP TS 23.041: “Technical realization of Cell Broadcast Service (CBS)”
- [26] 3GPP TS 23.003: “Numbering, addressing and identification”
- [27] 3GPP TS 38.212: "NR; Multiplexing and channel coding"
- [28] 3GPP TS 24.501: “Non-Access-Stratum (NAS) protocol for 5G System (5GS);Stage 3”
- [29] 3GPP TS 38.211: "NR; Physical channels and modulation".
- [30] IETF RFC 4187: " Extensible Authentication Protocol Method for 3rd Generation Authentication and Key Agreement (EAP-AKA) ".
- [31] IETF RFC 5448: "Improved Extensible Authentication Protocol Method for 3rd Generation Authentication and Key Agreement (EAP-AKA)".
- [32] IETF RFC 3748: "Extensible Authentication Protocol (EAP)".
- [33] 3GPP TS 23.502: "Procedures for the 5G System (5GS); Stage 2".
- [34] IETF RFC 7296: "Internet Key Exchange Protocol Version 2 (IKEv2)".
- [35] 3GPP TS 24.502: “Access to the 3GPP 5G Core Network (5GCN) via Non-3GPP Access Networks (N3AN); Stage 3”
- [36] 3GPP TS 34.123-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification ".
- [37] 3GPP TS 36.523-2: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".
- [38] 3GPP TR 38.903: “NR; Derivation of test tolerances and measurement uncertainty for User Equipment (UE) conformance test cases”
- [39] 3GPP TS 37.571-1: "Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 1: Conformance test specification".
- [40] 3GPP TS 37.571-2: "Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 2: Protocol conformance".
- [41] 3GPP TS 36.523-3: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 3: Test Suites".

- [42] 3GPP TS 36.523-1: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification".
- [43] 3GPP TS 33.501: "Security architecture and procedures for 5G system".
- [44] 3GPP TS 34.229-1: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification".
- [45] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS);Multimedia Telephony;Media handling and interaction".
- [46] IETF RFC 4566: "SDP: Session Description Protocol".
- [47] 3GPP TS 34.229-5: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); User Equipment (UE) conformance specification; Part 5: Protocol conformance specification using 5G System (5GS)".
- [48] 3GPP TS 36.101: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio transmission and reception".
- [49] 3GPP TS 37.571-5: "User Equipment (UE) conformance specification for UE positioning; Part 5: Test scenarios and assistance data".
- [50] STANAG 4294: "NATO STANAG 4294. Navstar Global Positioning System (GPS) System Characteristics".
- [51] 3GPP TS 34.229-2: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP);User Equipment (UE) conformance specification;Part 2: Implementation Conformance Statement (ICS) specification".
- [52] 3GPP TS 34.108: "Common Test Environments for User Equipment (UE); Conformance testing".
- [53] 3GPP TS 23.287: "Architecture enhancements for 5G System (5GS) to support Vehicle-to-Everything (V2X) services".
- [54] 3GPP TS 24.587: "Vehicle-to-Everything (V2X) services in 5G System (5GS)".
- [55] 3GPP TS 38.306: "User equipment (UE) radio access capabilities".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

B: a value followed by "B" is a binary value.

H: a value followed by "H" is a hexadecimal value.

3.2 Symbols

For the purposes of the present document, the following symbols apply:

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

5GC	5G Core Network
5GMM	5GS Mobility Management
5GS	5G System
5GSM	5GS Session Management
EN-DC	E-UTRA-NR Dual Connectivity
MCG	Master Cell Group
MR-DC	Multi-RAT Dual Connectivity
NE-DC	NR-E-UTRA Dual Connectivity
NGC	NG Core Network. Synonym of 5GC.
NGEN-DC	NG-RAN E-UTRA-NR Dual Connectivity
NG-RAN	NG Radio Access Network
NR	NR Radio Access
RedCap	Reduced Capability
RRC	Radio Resource Control
SCG	Secondary Cell Group
SS	System Simulator

4 Common test environments

4.1 Environmental conditions

The requirements in this clause apply to all types of UE(s).

4.1.1 Temperature

Editor's note: Lower humidity limit is under discussion as it is not aligned with previous technologies.

Regarding FR1 the UE shall fulfil all the requirements in the full temperature range of:

Table 4.1.1-1: Temperature conditions for FR1

+15°C to +35°C	For normal conditions (with relative humidity of 25 % to 75 %)
-10°C to +55°C	For extreme conditions (see IEC publications 68-2-1 and 68-2-2)

Outside this temperature range the UE, if powered on, shall not make ineffective use of the radio frequency spectrum. In no case shall the UE exceed the transmitted levels as defined in TS 38.101-1 [7] clause 6.2 for extreme operation.

The normative reference for this requirement is TS 38.101-1 [7] Annex E.2.

All RF requirements for UEs operating in FR2 are defined over the air and can only be tested in an OTA chamber.

Regarding FR2 the UE shall fulfil all requirements in the temperature range defined in Table 4.1.1-2.

Table 4.1.1-2: Temperature conditions for FR2

+15°C to +35°C	For normal (room temperature) conditions with relative humidity of 25% to 75%
-10°C to +55°C	For extreme conditions

Outside this temperature range the UE, if powered on, shall not make ineffective use of the radio frequency spectrum. In no case shall the UE exceed the transmitted levels as defined in TS 38.101-2[8] clause 6.2 for extreme operation.

The normative reference for this requirement is TS 38.101-2 [8] Annex E.2.

Some tests are performed also in extreme temperature conditions. These test conditions are denoted as TL (temperature low, -10°C) and TH (temperature high, $+55^{\circ}\text{C}$).

4.1.2 Voltage

Editor's Note: This clause is incomplete. The following items are missing or are incomplete:

- **Methodology to control the voltage in a case which a power cable is not connected to DUT is FFS since it is not agreed whether we can connect the power cable to DUT at the OTA measurement situation yet.**

Regarding both FR1 and FR2 the UE shall fulfil all the requirements in the full voltage range, i.e. the voltage range between the extreme voltages.

The manufacturer shall declare the lower and higher extreme voltages and the approximate shutdown voltage. For the equipment that can be operated from one or more of the power sources listed below, the lower extreme voltage shall not be higher, and the higher extreme voltage shall not be lower than that specified below.

Table 4.1.2-1: Voltage conditions

Power source	Lower extreme voltage	Higher extreme voltage	Normal conditions voltage
AC mains	0.9 * nominal	1.1 * nominal	nominal
Regulated lead acid battery	0.9 * nominal	1.3 * nominal	1.1 * nominal
Non regulated batteries:			
Leclanché	0.85 * nominal	nominal	nominal
Lithium	0.95 * nominal	1.1 * nominal	1.1 * nominal
Mercury/nickel & cadmium	0.90 * nominal		nominal

Outside this voltage range the UE if powered on, shall not make ineffective use of the radio frequency spectrum. In no case shall the UE exceed the transmitted levels as defined in TS 38.101-1[7] and TS 38.101-2[8] clause 6.2 for extreme operation. In particular, the UE shall inhibit all RF transmissions when the power supply voltage is below the manufacturer declared shutdown voltage.

The normative reference for this requirement is TS 38.101-1 [7] Annex E.2 and TS 38.101-2 [8] Annex E.2.

Some tests are performed also in extreme voltage conditions. These test conditions are denoted as VL (lower extreme voltage) and VH (higher extreme voltage).

4.2 Common requirements of test equipment

Mobile conformance testing can be categorized into 3 distinct areas:

- RF Conformance Testing consisting of:
 - Transmission and Reception Conformance Testing.
 - Performance Conformance Testing.
- RRM Conformance Testing.
- Signalling Conformance Testing.

The test equipment required for each category of testing may or not be different, depending on the supplier of the test equipment. However, there will be some generic requirements of the test equipment that are essential for all three categories of test, and these are specified in this clause.

In addition, there will be requirements to test operation in multi-system configurations other than E-UTRA and NR dual connectivity (EN-DC). However, these would not form a common test equipment requirement for the three test areas and are not considered in the present document.

4.2.1 General functional requirements

NOTE: This clause has been written such that it does not constrain the implementation of different architectures and designs of test equipment.

All test equipment used to perform conformance testing for frequency range 1 on a UE shall provide the following minimum functionality:

- Conducted test method

All test equipment used to perform conformance testing for frequency range 2 on a UE shall provide the following minimum functionality:

- OTA test method

All test equipment used to perform conformance testing on a UE shall provide a platform suitable for testing UE's that are either:

- non-standalone(NSA) mode; or
- standalone(SA) mode.

All test equipment used to perform conformance testing on a UE shall provide a platform suitable for testing UE's that are either of following duplex mode for NR and E-UTRA (NSA only) respectively.

- a) FDD Mode; or
- b) TDD Mode; or
- c) both FDD/TDD Modes; or
- d) HD-FDD Mode (NR RedCap only).

All test equipment shall provide the following minimum functionality.

- The capability of emulating a single NR cell and a single E-UTRA (for NSA mode only) cell with the appropriate channels to allow the UE to register on the cell.
- The capability to allow the UE to set up an RRC connection with the system simulator, and to maintain the connection for the duration of the test.
- The capability (for the specific test):
 - to select and support an appropriate radio bearer for the downlink;
 - to set up and support the appropriate radio bearer for the uplink;

4.2.2 Minimum functional requirements

4.2.2.1 Supported Cell Configuration

The System Simulator shall provide the capability to simulate a minimum number of cells whose number and capabilities are governed by the test cases that need to be performed (test cases are defined in TS 38.523-1 [12] (Signalling), TS 38.521-1 [14], TS 38.521-2 [15], TS 38.521-3 [16] (TRx), TS 38.521-4 [17] (Performance), TS 38.533 [18] (RRM), TS 37.571-1 [39] and TS 37.571-2 [40] (Positioning)).

To perform test cases requiring multiple cell(s), the system simulator shall provide multiple cells offering the capabilities as required by the test case.

The type and number of channels (especially physical channels) constitute an important set of capabilities for a cell. The following clauses list possible channels that may be supported by the SS. Each channel type, however, and the minimum number of channels needed are only mandatory if specific test cases require them.

The mapping between Logical and Transport channels is as described in TS 38.321 [20]. Similarly, the mapping between Transport channels and Physical channels is as described in TS 38.211, TS 38.302 and TS 38.212. The

reference measurement channels (mapping between Transport channels and Physical channels for PDSCH/PDCCH) are defined in TS 38.521-1 [14] annex A

4.2.2.1.1 Supported Channels for an E-UTRA cell (NSA mode only)

Requirement for supported channels for E-UTRA cell is described in TS 36.508[2].

4.2.2.1.2 Supported Channels for a NR cell

4.2.2.1.2.1 Logical channels

Logical channel	Minimum number	Comments
BCCH	0 for EN-DC, 1 for SA	
CCCH	0 for EN-DC, 1 for SA	
DCCH	0 for EN-DC, 2 for SA	Split SRB or SRB3 is optional in EN-DC
PCCH	0 for EN-DC, 1 for SA	
DTCH	n	Depending on SS's support for RB service testing

4.2.2.1.2.2 Transport channels

Transport channel	Minimum number	Comments
BCH	1	
PCH	N/A for EN-DC, 1 for SA	
RACH	1	
DL-SCH	1	
UL-SCH	1	

4.2.2.1.2.3 Physical channels

Physical channel	Minimum number	Comments
PBCH	1	Physical Broadcast Channel
PDCCH	1	The physical downlink control channel carries scheduling assignments and other control information.
PDSCH	1	Physical Downlink Shared Channel
PUCCH	1	The physical uplink control channel carries uplink control information
PUSCH	1	Physical Uplink Shared Channel
PRACH	1	Physical Random Access Channel

4.2.2.1.2.4 Physical signals

Physical signal	Minimum number	Comments
Demodulation reference signal	NA	UL
Sounding Reference signal	NA	UL, if applicable
Phase Tracking Reference Signal	NA	UL, if applicable
Demodulation reference signal(PDSCH)	NA	DL
Demodulation reference signal(PDCCH)	NA	DL
Demodulation reference signal(PBCH)	NA	DL
Phase Tracking Reference Signal	NA	DL, if applicable
CSI reference signal	NA	DL
Primary synchronisation signal	NA	DL
Secondary synchronisation signal	NA	DL

4.3 Reference test conditions

4.3.1 Test frequencies

Editor's Note: n7 (Mid: 25MHz, High: 50MHz), n8 (High: 35MHz), n25 (High: 45MHz), n40 (High: 100MHz), n65 (High: 50MHz), n66 (High: 45MHz), n71 (High: 35MHz), n75 (High: 50MHz), n79 (Low: 10MHz, RedCap: 20MHz, 10MHz) and n80 (High: 40MHz) are currently not yet included in the test channel bandwidth tables due to test frequency have not been defined yet. Further analysis is needed for the test coverage of these test channel bandwidths and bands.

4.3.1.0 General

The test frequencies are based on operating bands defined in TS 38.101-1 [7], TS 38.101-2 [8] and TS 38.101-3 [9].

4.3.1.0A Mid test channel bandwidth

The Mid test channel bandwidth definition for RF is given in Table 4.3.1.0A-1 and Table 4.3.1.0A-2 for FR1 and FR2 respectively.

Table 4.3.1.0A-1: Mid Test Channel bandwidths for each NR band, FR1

NR Band	UE Mid Test Channel bandwidth [MHz] ^{1, 1a, 1b}	RedCap UE Mid Test Channel bandwidth [MHz]
n1	25	15
n2	20	15
n3	20	15
n5	15	15
n7	15	15
n8	15	15
n12	10	10
n14	10	10
n20	15	15
n24	10	10
n25	20	15
n26	10	15
n28	15	15
n29	10 ²	N/A
n30	10	10
n34	10	10
n38	20	15
n39	20	15
n40	30	15
n41	60	15
n48	20 ⁴ , 40 ⁵	15
n50	20	15
n51	5	5
n53	10	10
n65	15	15
n66	20	10 ⁸
n70	15	10
n71	10	10
n74	15	15
n75	15 ²	N/A
n76	5 ²	N/A
n77	50	15
n78	50	15
n79	60	N/A
n80	20 ³	[15]
n81	15 ³	[15]
n82	15 ³	[15]
n83	15 ³	[15]
n84	25 ³	[15]
n86	20 ³	[15]
n95	10 ³	[10]
n97	50 ³	[15]
n99	10 ³	[10]

Note 1:	Mid channel BW is the closest channel BW to the arithmetic average channel BW of all the possible channel BWs per band in Table 5.3.5-1 of TS 38.521-1 [14] among all SCSs. If there are two channel bandwidths that have same distance to the average value, the higher one is selected. In case such bandwidth is not applicable for a given subcarrier spacing, the closer bandwidth to the value in this table applicable for such subcarrier spacing shall be tested. In case such bandwidth is not defined in the UE release specification according to 38.101-1 [7] Table 5.3.5-1: - If the bandwidth listed above is equal or higher than maximum bandwidth supported in the UE release according to 38.101-1 [7] Table 5.3.5-1, the closest channel BW to the arithmetic average among the values supported in the UE release specification shall be tested. the closer bandwidth to the value in this table defined for that band in the UE release specification shall be tested. If there are two channel bandwidths that have same distance to the arithmetic average, the higher one is selected
Note 1a:	Values listed in this table assume that the (non-optional) channel bandwidths specified in Table 5.3.5-1 of TS 38.101-1 [7] lower than the maximum are supported. However, these channel bandwidths are mandatory with capability parameter as defined in [55] TS 38.306 clause 4.2.1 for <i>channelBWs-DL/channelBWs-UL</i> parameters. Hence the UE might indicate them as not supported. In such case, select the closest channel bandwidth in both DL and UL.
Note 1b:	For CA, DC, SDL and SUL, the mid-test channel bandwidth per component carrier is chosen to test the closest aggregated bandwidth to the mathematical centre between minimum and maximum aggregated bandwidth defined for and within a given bandwidth combination set. In case no set of channel bandwidths per component carrier supported by the UE can achieve such aggregated bandwidth, select one combination of bandwidths per component carrier within the bandwidth combination set that minimizes the difference to the target aggregated bandwidth.
Note 2:	This UE channel bandwidth is applicable only to downlink.
Note 3:	This UE channel bandwidth is applicable only to uplink.
Note 4:	Applicable when for use as single carrier, PCell in CA or PCell in DC configuration.
Note 5:	Applicable for use as SCell in CA or SCell in DC configuration.
Note 6:	Void
Note 7:	Void
Note 8:	Void
Note 9:	Void
Note 10:	This Mid test channel bandwidth is chosen since it is more commonly used.

Table 4.3.1.0A-2: Mid Test Channel bandwidths for each NR band, FR2

NR Band	UE Mid Test Channel bandwidth [MHz] ^{1, 2, 3}
n257	200
n258	200
n259	200
n260	200
n261	200
<p>Note 1: Mid channel BW is the closest channel BW to the arithmetic average channel BW of all the possible channel BWs per band in Table 5.3.5-1 of TS 38.521-1 [14] among all SCSs. If there are two channel bandwidths that have same distance to the average value, the higher one is selected.</p> <p>In case such bandwidth is not applicable for a given subcarrier spacing, the closer bandwidth to the value in this table applicable for such subcarrier spacing shall be tested.</p> <p>In case such bandwidth is not defined in the UE release specification according to 38.101-2 [8] Table 5.3.5-1, the closer bandwidth to the value in this table defined for that band in the UE release specification shall be tested.</p> <p>If there are two channel bandwidths that have same distance to the arithmetic average, the higher one is selected.</p> <p>Note 2: Values listed in this table assume that the (non-optional) channel bandwidths specified in Table 5.3.5-1 of TS 38.101-2 [8] lower than the maximum are supported. However, these channel bandwidths are mandatory with capability parameter as defined in [55] TS 38.306 clause 4.2.1 for <i>channelBWs-DL/channelBWs-UL</i> parameters. Hence the UE might indicate them as not supported. In such case, select the closest channel bandwidth in both DL and UL.</p> <p>Note 3: For CA and DC, the mid-test channel bandwidth per component carrier is chosen to test the closest aggregated bandwidth to the mathematical centre between minimum and maximum aggregated bandwidth defined for and within a given bandwidth combination set. In case no set of channel bandwidths per component carrier supported by the UE can achieve such aggregated bandwidth, select one combination of bandwidths per component carrier within the bandwidth combination set that minimizes the difference to the target aggregated bandwidth.</p>	

4.3.1.0B Low test channel bandwidth

The low test channel bandwidth definition for RF is given in Table 4.3.1.0B-1 and Table 4.3.1.0B-2 for FR1 and FR2 respectively.

Table 4.3.1.0B-1: Low Test Channel bandwidths for each NR band, FR1

NR Band	UE Low Test Channel bandwidth [MHz] ^{1, 1a, 1b}	RedCap UE Low Test Channel bandwidth [MHz]
n1	5	5
n2	5	5
n3	5	5
n5	5	5
n7	5	5
n8	5	5
n12	5	5
n14	5	5
n20	5	5
n24	5	5
n25	5	5
n26	5	5
n28	5	5
n29	5 ²	N/A
n30	5	5
n34	5	5
n38	5	5
n39	5	5
n40	5 ⁴ , 10 ⁵	10
n41	10	10
n48	5 ⁴ , 10 ⁵	10
n50	5 ⁴ , 10 ⁵	10
n51	5	5
n53	5	5
n65	5	5
n66	5	5
n70	5	5
n71	5	5
n74	5	5
n75	5 ²	N/A
n76	5 ²	N/A
n77	10	10
n78	10	10
n79	40	N/A
n80	5 ³	[5]
n81	5 ³	[5]
n82	5 ³	[5]
n83	5 ³	[5]
n84	5 ³	[5]
n86	5 ³	[5]
n95	5 ³	[5]
n97	5 ³	[5]
n99	5 ³	[5]

Note 1:	<p>Minimum values among all the possible channel BW combinations per band in Table 5.3.5-1 of TS 38.521-1 [14] are listed.</p> <p>In case such bandwidth is not applicable for a given subcarrier spacing, the minimum bandwidth applicable for such subcarrier spacing shall be tested.</p> <p>In case such bandwidth is not defined in the UE release specification according to 38.101-1 [7] Table 5.3.5-1, the minimum bandwidth defined for that band in the UE release specification shall be tested.</p>
Note 1a:	<p>Values listed in this table assume that the (non-optional) channel bandwidths specified in Table 5.3.5-1 of TS 38.101-1 [7] lower than the maximum are supported. However, these channel bandwidths are mandatory with capability parameter as defined in [55] TS 38.306 clause 4.2.1 for <i>channelBWs-DL/channelBWs-UL</i> parameters. Hence the UE might indicate them as not supported. In such case, select the closest channel bandwidth in both DL and UL.</p>
Note 1b:	<p>For CA, DC, SDL and SUL, the low-test channel bandwidth per component carrier is chosen to allow minimum aggregated bandwidth defined for a given bandwidth combination set. In case no set of channel bandwidths per component carrier supported by the UE can achieve minimum aggregated bandwidth, select one combination of bandwidths per component carrier within the bandwidth combination set that minimizes the aggregated bandwidth.</p>
Note 2:	<p>This UE channel bandwidth is applicable only to downlink.</p>
Note 3:	<p>This UE channel bandwidth is applicable only to uplink.</p>
Note 4:	<p>Applicable for use as SCell in CA or SCell in DC configuration.</p>
Note 5:	<p>Applicable for use as single carrier, PCell in CA or PCell in DC configuration.</p>

Table 4.3.1.0B-2: Low Test Channel bandwidths for each NR band, FR2

NR Band	UE Low Test Channel bandwidth [MHz] ^{1, 2, 3}
n257	50
n258	50
n259	50
n260	50
n261	50
Note 1:	Minimum values among all the possible channel BW combinations per band in Table 5.3.5-1 of TS 38.521-2 [15] are listed. In case such bandwidth is not applicable for a given subcarrier spacing, the minimum bandwidth applicable for such subcarrier spacing shall be tested. In case such bandwidth is not defined in the UE release specification according to 38.101-2 [8] Table 5.3.5-1, the minimum bandwidth defined for that band in the UE release specification shall be tested.
Note 2:	Values listed in this table assume that the (non-optional) channel bandwidths specified in Table 5.3.5-1 of TS 38.101-2 [8] lower than the maximum are supported. However, these channel bandwidths are mandatory with capability parameter as defined in [55] TS 38.306 clause 4.2.1 for <i>channelBWs-DL/channelBWs-UL</i> parameters. Hence the UE might indicate them as not supported. In such case, select the closest channel bandwidth in both DL and UL.
Note 3:	For CA and DC, the low-test channel bandwidth per component carrier is chosen to allow minimum aggregated bandwidth defined for a given bandwidth combination set. In case no set of channel bandwidths per component carrier supported by the UE can achieve minimum aggregated bandwidth, select one combination of bandwidths per component carrier within the bandwidth combination set that minimizes the aggregated bandwidth.

4.3.1.0C High test channel bandwidth

The high test channel bandwidth definition for RF is given in Table 4.3.1.0C-1 and Table 4.3.1.0C-2 for FR1 and FR2 respectively.

Table 4.3.1.0C-1: High Test Channel bandwidths for each NR band, FR1

NR Band	UE High Test Channel bandwidth [MHz] ^{10, 11, 12}	RedCap UE High Test Channel bandwidth [MHz]
n1	50	20
n2	40	20
n3	50	20
n5	20 ¹ , 25 ²	20
n7	20	20
n8	20	20
n12	15	15
n14	10	10
n20	20	20
n24	10	10
n25	40 ¹	20
n26	20	20
n28	30	20
n29	10 ²	N/A
n30	10	10
n34	15	15
n38	25, 40 ¹³	15
n39	40	20
n40	80	20
n41	100	20
n48	40 ³ , 100 ⁴	20
n50	60 ¹ , 80 ²	20
n51	5	5
n53	10	10
n65	20	20
n66	40	20
n70	15 ¹ , 25 ²	15 ¹ , 20 ²
n71	20 ¹	20
n74	20	20
n75	20 ²	N/A
n76	5 ²	N/A
n77	100	20
n78	100	20
n79	100	N/A
n80	30 ¹	[20]
n81	20 ¹	[20]
n82	20 ¹	[20]
n83	30 ¹	[20]
n84	50 ¹	[20]
n86	40 ¹	[20]
n95	15 ¹	[15]
n97	100 ¹	[20]
n99	10 ¹	[10]

- Note 1: This UE channel bandwidth is applicable only to uplink.
- Note 2: This UE channel bandwidth is applicable only to downlink.
- Note 3: Applicable for use as single carrier, PCell in CA or PCell in DC configuration.
- Note 4: Applicable for use as DL SCell in CA or DL SCell in DC configuration.
- Note 5: Void
- Note 6: Void
- Note 7: Void
- Note 8: Void
- Note 9: Void
- Note 10: Maximum values among all the possible channel BW combinations per band in Table 5.3.5-1 of TS 38.521-1 [14] are listed.
- In case such bandwidth is not applicable for a given subcarrier spacing, the maximum bandwidth applicable for such subcarrier spacing shall be tested.
- In case such bandwidth is not defined in the UE release specification according to 38.101-1 [7] Table 5.3.5-1, the maximum bandwidth defined for that band in the UE release specification shall be tested.
- In case such bandwidth is optional in the UE release specification according to 38.101-1 [7] Table 5.3.5-1 and not supported by the UE, the maximum non-optional bandwidth for the UE release specification shall be tested.
- Note 11: Values listed in this table assume that the maximum (non-optional) channel bandwidth specified in Table 5.3.5-1 of TS 38.101-1 [7] is mandatory without capability parameter (i.e., purely mandatory) as defined in [55] TS 38.306 clause 4.2.1 for *supportedBandwidthDL/ supportedBandwidthUL* parameters in a band combination with a single band entry and a single CC entry (i.e., non-CA band combination).
- Note 12: For CA, DC, SDL and SUL, the High-test channel bandwidth per component carrier is chosen to allow maximum aggregated bandwidth defined for a given bandwidth combination set. In case no set of channel bandwidths per component carrier supported by the UE can achieve maximum aggregated bandwidths in CA, DC, SDL or SUL, some flexibility could be provided to the ecosystem for Rel-15 and Rel-16 so one combination of bandwidth per component carrier within the bandwidth combination set that maximizes the aggregated bandwidth is tested instead values described in Note 12 in Table 4.3.1.0C-1.
- Note 13: These UE channel bandwidths are applicable to sidelink operation.

NOTE 1 (Informative): In case values listed in table above are higher than those signalled by the UE in *supportedBandwidthDL/supportedBandwidthUL*, some flexibility could be provided to the ecosystem for Rel-15 and Rel-16 so the value signalled by the UE in *supportedBandwidthDL/supportedBandwidthUL* is used in single carrier operation instead values described in Table 4.3.1.0C-1.

Table 4.3.1.0C-2: High Test Channel bandwidths for each NR band, FR2

NR Band	UE High Test Channel bandwidth [MHz] ^{1, 2, 3}
n257	400
n258	400
n259	400
n260	400
n261	400
<p>Note 1: Maximum values among all the possible channel BW combinations per band in Table 5.3.5-1 of TS 38.521-2 [15] are listed. In case such bandwidth is not applicable for a given subcarrier spacing, the maximum bandwidth applicable for such subcarrier spacing shall be tested.</p> <p>In case such bandwidth is not defined in the UE release specification according to 38.101-2 [8] Table 5.3.5-1, the maximum bandwidth defined for that band in the UE release specification shall be tested.</p> <p>In case such bandwidth is optional in the UE release specification according to 38.101-2 [8] Table 5.3.5-1 and not supported by the UE, the maximum non-optional bandwidth for the UE release specification shall be tested.</p> <p>Note 2: Values listed in this table assume that the maximum (non-optional) channel bandwidth specified in Table 5.3.5-1 of TS 38.101-2 [8] is mandatory without capability parameter (i.e., purely mandatory) as defined in [55] TS 38.306 clause 4.2.1 for <i>supportedBandwidthDL/supportedBandwidthUL</i> parameters in a band combination with a single band entry and a single CC entry (i.e., non-CA band combination).</p> <p>Note 3: For CA and DC, the High-test channel bandwidth per component carrier is chosen to allow maximum aggregated bandwidth defined for a given bandwidth combination set. In case no set of channel bandwidths per component carrier supported by the UE can achieve maximum aggregated bandwidths in CA and DC, some flexibility could be provided to the ecosystem for Rel-15 and Rel-16 so one combination of bandwidth per component carrier within the bandwidth combination set that maximizes the aggregated bandwidth is tested instead values described in Note 3 in Table 4.3.1.0C-2.</p>	

NOTE 1 (Informative): In case values listed in table above are higher than those signalled by the UE in *supportedBandwidthDL/supportedBandwidthUL*, some flexibility could be provided to the ecosystem for Rel-15 and Rel-16 so the value signalled by the UE is used in single carrier operation instead values described in Table 4.3.1.0C-2.

4.3.1.0D Bandwidth part

The value of *locationAndBandwidth* in BWP for FR1 is given in Table 4.3.1.0D-1. The value of *locationAndBandwidth* in BWP for FR2 is given in Table 4.3.1.0D-2.

Table 4.3.1.0D-1: *locationAndBandwidth* in BWP for FR1

BW (MHz)	SCS (kHz)	L_{RBs} (Note 2)	<i>locationAndBandwidth</i> (Note 1)
5	15	25	6600
5	30	11	2750
5	60	N/A	N/A
10	15	52	14025
10	30	24	6325
10	60	11	2750
15	15	79	21450
15	30	38	10175
15	60	18	4675
20	15	106	28875
20	30	51	13750
20	60	24	6325
25	15	133	36300
25	30	65	17600
25	60	31	8250
30	15	160	32174
30	30	78	21175
30	60	38	10175
40	15	216	16774
40	30	106	28875
40	60	51	13750
45	15	242	9624
45	30	119	32450
45	60	58	15675
50	15	270	1924
50	30	133	36300
50	60	65	17600
60	15	N/A	N/A
60	30	162	31624
60	60	79	21450
70	15	N/A	N/A
70	30	189	24199
70	60	93	25300
80	15	N/A	N/A
80	30	217	16499
80	60	107	29150
90	15	N/A	N/A
90	30	245	8799
90	60	121	33000
100	15	N/A	N/A
100	30	273	1099
100	60	135	36850
Note 1:	The value for <i>locationAndBandwidth</i> parameter is calculated as the RIV value in accordance to TS 38.214 [21] with $N_{BWP}^{size} = 275$, $RB_{start} = 0$ and L_{RBs} for each bandwidth and subcarrier spacing.		
Note 2:	$L_{RBs} = \text{Max } N_{RB}$ is the default configuration, unless explicitly specified.		

Table 4.3.1.0D-2: *locationAndBandwidth* in BWP for FR2

BW (MHz)	SCS (kHz)	L_{RBs} (Note 2)	<i>locationAndBandwidth</i> (Note 1)
50	60	66	17875
50	120	32	8525
100	60	132	36025
100	120	24 ^(Note 3)	6325
100	120	48 ^(Note 3)	12925
100	120	66	17875
200	60	264	3574
200	120	132	36025
400	60	N/A	N/A
400	120	264	3574
<p>Note 1: The value for <i>locationAndBandwidth</i> parameter is calculated as the RIV value in accordance to TS 38.214 [21] with $N_{BWP}^{size} = 275$ and $RB_{start} = 0$ for each bandwidth and subcarrier spacing.</p> <p>Note 2: $L_{RBs} = \text{Max } N_{RB}$ is the default configuration, unless explicitly specified.</p> <p>Note 3: For configurations where the L_{RBs} is explicitly specified to be $L_{RBs} < \text{Max } N_{RB}$.</p>			

4.3.1.0E Void

4.3.1.1 Test frequencies for NR operating bands in FR1

4.3.1.1.1 NR operating bands in FR1

4.3.1.1.1.1 Reference test frequencies for NR operating band n1

Table 4.3.1.1.1.1-1: Test frequencies for NR operating band n1 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	2112.5	422500	2110.25	422050	0	15	5279	422410	0	0	0 (0)	0	
			Mid	2140	428000	2119.39	423878	102		5350	427970	8	1	0 (0)	103	
			High	2167.5	433500	2074.53	414906	504		5418	433470	8	1	0 (0)	505	
		Uplink	Low	1922.5	384500	1920.25	384050	0	-	-	-	-	-	-	-	-
			Mid	1950	390000	1857.03	371406	504		-	-	-	-	-	-	-
			High	1977.5	395500	1974.17	394834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	2115	423000	2110.32	422064	0	15	5280	422430	2	0	0 (0)	0	
			Mid	2140	428000	2116.96	423392	102		5344	427490	10	1	0 (0)	103	
			High	2165	433000	2069.6	413920	504		5405	432490	10	1	0 (0)	505	
		Uplink	Low	1925	385000	1920.32	384064	0	-	-	-	-	-	-	-	-
			Mid	1950	390000	1854.6	370920	504		-	-	-	-	-	-	-
			High	1975	395000	1969.24	393848	6		-	-	-	-	-	-	-
15	79	Downlink	Low	2117.5	423500	2110.39	422078	0	15	5281	422450	4	0	0 (0)	0	
			Mid	2140	428000	2114.53	422906	102		5338	427010	0	0	1 (2)	104	
			High	2162.5	432500	2064.67	412934	504		5395	431570	8	1	1 (2)	507	
		Uplink	Low	1927.5	385500	1920.39	384078	0	-	-	-	-	-	-	-	-
			Mid	1950	390000	1852.17	370434	504		-	-	-	-	-	-	-
			High	1972.5	394500	1964.31	392862	6		-	-	-	-	-	-	-
20	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5	
			Mid	2140	428000	2112.1	422420	102		5332	426530	2	0	1 (2)	104	
			High	2160	432000	2059.74	411948	504		5382	430590	10	1	1 (2)	507	
		Uplink	Low	1930	386000	1920.46	384092	0	-	-	-	-	-	-	-	-
			Mid	1950	390000	1849.74	369948	504		-	-	-	-	-	-	-
			High	1970	394000	1959.38	391876	6		-	-	-	-	-	-	-
25	133	Downlink	Low	2122.5	424500	2110.53	422106	0	15	5283	422670	8	1	2 (4)	5	
			Mid	2140	428000	2109.67	421934	102		5326	426050	4	0	1 (2)	104	
			High	2157.5	431500	2054.81	410962	504		5369	429610	0	0	2 (4)	508	
		Uplink	Low	1932.5	386500	1920.53	384106	0	-	-	-	-	-	-	-	-
			Mid	1950	390000	1847.31	369462	504		-	-	-	-	-	-	-
			High	1967.5	393500	1954.45	390890	6		-	-	-	-	-	-	-
30	160	Downlink	Low	2125	425000	2110.6	422120	0	15	5284	422690	10	1	2 (4)	5	
			Mid	2140	428000	2107.24	421448	102		5320	425570	6	0	1 (2)	104	
			High	2155	431000	2049.88	409976	504		5359	428690	10	1	2 (4)	509	
		Uplink	Low	1935	387000	1920.6	384120	0	-	-	-	-	-	-	-	-
			Mid	1950	390000	1844.88	368976	504		-	-	-	-	-	-	-

40	216	Downlink	High	1965	393000	1949.52	389904	6	15	-	-	-	-	-	-		
			Low	2130	426000	2110.56	422112	0		5283	422670	6	1	2 (4)	5		
			Mid	2140	428000	2102.2	420440	102		5308	424610	10	1	1 (2)	105		
		Uplink	High	2150	430000	2039.84	407968	504	5330	426490	6	0	0 (0)	504			
			Low	1940	388000	1920.56	384112	0	-	-	-	-	-	-			
			Mid	1950	390000	1839.84	367968	504	-	-	-	-	-	-			
		45	242	Downlink	High	1960	392000	1939.48	387896	6	15	-	-	-	-	-	-
					Low	2132.5	426500	2110.72	422144	0		5284	422690	2	1	2(4)	5
					Mid	2140	428000	2099.86	419972	102		5302	424130	6	1	1(2)	105
Uplink	High			2147.5	429500	2035	407000	504	5320	425570	10	1	0(0)	505			
	Low			1942.5	388500	1920.72	384144	0	-	-	-	-	-	-			
	Mid			1950	390000	1837.5	367500	504	-	-	-	-	-	-			
50	270			Downlink	High	1957.5	391500	1934.64	386928	6	15	-	-	-	-	-	-
					Low	2135	427000	2110.7	422140	0		5282	422650	2	0	2 (4)	4
					Mid	2140	428000	2097.34	419468	102		5296	423650	2	0	2 (4)	106
		Uplink	High	2145	429000	2029.98	405996	504	5307	424590	6	0	1 (2)	506			
			Low	1945	389000	1920.7	384140	0	-	-	-	-	-	-			
			Mid	1950	390000	1834.98	366996	504	-	-	-	-	-	-			
					High	1955	391000	1929.62	385924	6	-	-	-	-	-	-	
					Low	2135	427000	2110.7	422140	0	-	-	-	-	-	-	
					Mid	2140	428000	2097.34	419468	102	-	-	-	-	-	-	

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.1-2: Test frequencies for NR operating band n1 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	2115	423000	2110.68	422136	0	15	5286	422910	18	0	0 (5)	10	
			Mid	2140	428000	2098.96	419792	102		5350	427970	14	0	1 (6)	216	
			High	2165	433000	1979.24	395848	504		5411	432970	14	0	1 (6)	1020	
		Uplink	Low	1925	385000	1920.68	384136	0	-	-	-	-	-	-	-	-
			Mid	1950	390000	1764.24	352848	504		-	-	-	-	-	-	-
			High	1975	395000	1968.52	393704	6		-	-	-	-	-	-	-
15	38	Downlink	Low	2117.5	423500	2110.66	422132	0	15	5287	422930	2	0	1 (6)	12	
			Mid	2140	428000	2096.44	419288	102		5344	427490	22	0	1 (6)	216	
			High	2162.5	432500	1974.22	394844	504		5401	432050	18	0	2 (7)	1022	
		Uplink	Low	1927.5	385500	1920.66	384132	0	-	-	-	-	-	-	-	
			Mid	1950	390000	1761.72	352344	504		-	-	-	-	-	-	
			High	1972.5	394500	1963.5	392700	6		-	-	-	-	-	-	
20	51	Downlink	Low	2120	424000	2110.82	422164	0	15	5285	422890	2	0	0 (5)	10	
			Mid	2140	428000	2094.1	418820	102		5338	427010	18	0	1 (6)	216	
			High	2160	432000	1969.38	393876	504		5388	431070	14	0	2 (7)	1022	
		Uplink	Low	1930	386000	1920.82	384164	0	-	-	-	-	-	-	-	
			Mid	1950	390000	1759.38	351876	504		-	-	-	-	-	-	
			High	1970	394000	1958.66	391732	6		-	-	-	-	-	-	
25	65	Downlink	Low	2122.5	424500	2110.8	422160	0	15	5286	422910	10	0	0 (5)	10	
			Mid	2140	428000	2091.58	418316	102		5332	426530	2	0	2 (7)	218	
			High	2157.5	431500	1964.36	392872	504		5375	430090	22	0	2 (7)	1022	
		Uplink	Low	1932.5	386500	1920.8	384160	0	-	-	-	-	-	-	-	
			Mid	1950	390000	1756.86	351372	504		-	-	-	-	-	-	
			High	1967.5	393500	1953.64	390728	6		-	-	-	-	-	-	
30	78	Downlink	Low	2125	425000	2110.96	422192	0	15	5287	422930	6	0	0 (5)	10	
			Mid	2140	428000	2089.24	417848	102		5326	426050	22	0	1 (6)	216	
			High	2155	431000	1959.52	391904	504		5362	428930	6	0	0 (5)	1018	
		Uplink	Low	1935	387000	1920.96	384192	0	-	-	-	-	-	-	-	
			Mid	1950	390000	1754.52	350904	504		-	-	-	-	-	-	
			High	1965	393000	1948.8	389760	6		-	-	-	-	-	-	
40	106	Downlink	Low	2130	426000	2110.92	422184	0	15	5286	422910	2	0	0 (5)	10	
			Mid	2140	428000	2084.2	416840	102		5314	425090	14	0	2 (7)	218	
			High	2150	430000	1949.48	389896	504		5336	426970	22	0	0 (5)	1018	
		Uplink	Low	1940	388000	1920.92	384184	0	-	-	-	-	-	-	-	
			Mid	1950	390000	1749.48	349896	504		-	-	-	-	-	-	

45	119	Downlink	High	1960	392000	1938.76	387752	6	15	-	-	-	-	-	-			
			Low	2132.5	426500	2111.08	422216	0		5290	423170	6	0	3(8)	16			
			Mid	2140	428000	2081.86	416372	102		5308	424610	10	0	2(7)	218			
		Uplink	High	2147.5	429500	1944.64	388928	504		5326	426050	14	0	1(6)	1020			
			Low	1942.5	388500	1921.08	384216	0		-	-	-	-	-	-			
			Mid	1950	390000	1747.14	349428	504		-	-	-	-	-	-			
		50	133	Downlink	High	1957.5	391500	1933.92		386784	6	15	-	-	-	-	-	-
					Low	2135	427000	2111.06		422212	0		5288	423130	18	0	2(7)	14
					Mid	2140	428000	2079.34		415868	102		5302	424130	18	0	2(7)	218
Uplink	High			2145	429000	1939.62	387924	504	5313	425070	22		0	1(6)	1020			
	Low			1945	389000	1921.06	384212	0	-	-	-		-	-	-			
	Mid			1950	390000	1744.62	348924	504	-	-	-		-	-	-			
High	1955			391000	1928.9	385780	6	-	-	-	-		-	-				
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET}0\text{-Carrier}}$ in Annex C expressed in number of common RBs.</p>																		

Table 4.3.1.1.1-3: Test frequencies for NR operating band n1 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	2115	423000	2111.04	422208	0	15	-	422568
			Mid	2140	428000	2062.6	412520	102		-	427568
			High	2165	433000	1798.16	359632	504		-	432568
		Uplink	Low	1925	385000	1921.04	384208	0	-	-	-
			Mid	1950	390000	1583.16	316632	504		-	-
			High	1975	395000	1966.72	393344	6		-	-
15	18	Downlink	Low	2117.5	423500	2111.02	422204	0	15	-	422564
			Mid	2140	428000	2060.08	412016	102		-	427064
			High	2162.5	432500	1793.14	358628	504		-	431564
		Uplink	Low	1927.5	385500	1921.02	384204	0	-	-	-
			Mid	1950	390000	1580.64	316128	504		-	-
			High	1972.5	394500	1961.7	392340	6		-	-
20	24	Downlink	Low	2120	424000	2111.36	422272	0	15	-	422632
			Mid	2140	428000	2057.92	411584	102		-	426632
			High	2160	432000	1788.48	357696	504		-	430632
		Uplink	Low	1930	386000	1921.36	384272	0	-	-	-
			Mid	1950	390000	1578.48	315696	504		-	-
			High	1970	394000	1957.04	391408	6		-	-
25	31	Downlink	Low	2122.5	424500	2111.34	422268	0	15	-	422628
			Mid	2140	428000	2055.4	411080	102		-	426128
			High	2157.5	431500	1783.46	356692	504		-	429628
		Uplink	Low	1932.5	386500	1921.34	384268	0	-	-	-
			Mid	1950	390000	1575.96	315192	504		-	-
			High	1967.5	393500	1952.02	390404	6		-	-
30	38	Downlink	Low	2125	425000	2111.32	422264	0	15	-	422624
			Mid	2140	428000	2052.88	410576	102		-	425624
			High	2155	431000	1778.44	355688	504		-	428624
		Uplink	Low	1935	387000	1921.32	384264	0	-	-	-
			Mid	1950	390000	1573.44	314688	504		-	-
			High	1965	393000	1947	389400	6		-	-
40	51	Downlink	Low	2130	426000	2111.64	422328	0	15	-	422688
			Mid	2140	428000	2048.2	409640	102		-	424688
			High	2150	430000	1768.76	353752	504		-	426688
		Uplink	Low	1940	388000	1921.64	384328	0	-	-	-
			Mid	1950	390000	1568.76	313752	504		-	-
			High	1960	392000	1937.32	387464	6		-	-

45	58	Downlink	Low	2132.5	426500	2111.62	422324	0	15	-	422684
			Mid	2140	428000	2045.68	409136	102		-	424184
			High	2147.5	429500	1763.74	352748	504		-	425684
		Uplink	Low	1942.5	388500	1921.62	384324	0	-	-	-
			Mid	1950	390000	1566.24	313248	504		-	-
			High	1957.5	391500	1932.3	386460	6		-	-
50	65	Downlink	Low	2135	427000	2111.6	422320	0	15	-	422680
			Mid	2140	428000	2043.16	408632	102		-	423680
			High	2145	429000	1758.72	351744	504		-	424680
		Uplink	Low	1945	389000	1921.6	384320	0	-	-	-
			Mid	1950	390000	1563.72	312744	504		-	-
			High	1955	391000	1927.28	385456	6		-	-
<p>Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).</p>											

4.3.1.1.1.2 Reference test frequencies for NR operating band n2

Table 4.3.1.1.1.2-1: Test frequencies for NR operating band n2 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	1932.5	386500	1930.25	386050	0	15	4829	386410	0	0	0 (0)	0	
			Mid	1960	392000	1939.39	387878	102		4900	391970	8	1	0 (0)	103	
			High	1987.5	397500	1894.53	378906	504		4968	397470	8	1	0 (0)	505	
		Uplink	Low	1852.5	370500	1850.25	370050	0	-	-	-	-	-	-	-	-
			Mid	1880	376000	1787.03	357406	504		-	-	-	-	-	-	-
			High	1907.5	381500	1904.17	380834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	1935	387000	1930.32	386064	0	15	4830	386430	2	0	0 (0)	0	
			Mid	1960	392000	1936.96	387392	102		4894	391490	10	1	0 (0)	103	
			High	1985	397000	1889.6	377920	504		4955	396490	10	1	0 (0)	505	
		Uplink	Low	1855	371000	1850.32	370064	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1784.6	356920	504		-	-	-	-	-	-	
			High	1905	381000	1899.24	379848	6		-	-	-	-	-	-	
15	79	Downlink	Low	1937.5	387500	1930.39	386078	0	15	4831	386450	4	0	0 (0)	0	
			Mid	1960	392000	1934.53	386906	102		4888	391010	0	0	1 (2)	104	
			High	1982.5	396500	1884.67	376934	504		4945	395570	8	1	1 (2)	507	
		Uplink	Low	1857.5	371500	1850.39	370078	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1782.17	356434	504		-	-	-	-	-	-	
			High	1902.5	380500	1894.31	378862	6		-	-	-	-	-	-	
20	106	Downlink	Low	1940	388000	1930.46	386092	0	15	4832	386650	6	1	2 (4)	5	
			Mid	1960	392000	1932.1	386420	102		4882	390530	2	0	1 (2)	104	
			High	1980	396000	1879.74	375948	504		4932	394590	10	1	1 (2)	507	
		Uplink	Low	1860	372000	1850.46	370092	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1779.74	355948	504		-	-	-	-	-	-	
			High	1900	380000	1889.38	377876	6		-	-	-	-	-	-	
25	133	Downlink	Low	1942.5	388500	1930.53	386106	0	15	4833	386670	8	1	2 (4)	5	
			Mid	1960	392000	1929.67	385934	102		4876	390050	4	0	1 (2)	104	
			High	1977.5	395500	1874.81	374962	504		4919	393610	0	0	2 (4)	508	
		Uplink	Low	1862.5	372500	1850.53	370106	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1777.31	355462	504		-	-	-	-	-	-	
			High	1897.5	379500	1884.45	376890	6		-	-	-	-	-	-	
30	160	Downlink	Low	1945	389000	1930.6	386120	0	15	4834	386690	10	1	2 (4)	5	
			Mid	1960	392000	1927.24	385448	102		4870	389570	6	0	1 (2)	104	
			High	1975	395000	1869.88	373976	504		4909	392690	10	1	2 (4)	509	
		Uplink	Low	1865	373000	1850.6	370120	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1774.88	354976	504		-	-	-	-	-	-	
			High	1897.5	379500	1884.45	376890	6		-	-	-	-	-	-	

40	216	Downlink	High	1895	379000	1879.52	375904	6	15	-	-	-	-	-	-
			Low	1950	390000	1930.56	386112	0		4833	386670	6	1	2 (4)	5
			Mid	1960	392000	1922.2	384440	102		4858	388610	10	1	1 (2)	105
			High	1970	394000	1859.84	371968	504		4880	390490	6	0	0 (0)	504
		Uplink	Low	1870	374000	1850.56	370112	0	-	-	-	-	-	-	
			Mid	1880	376000	1769.84	353968	504	-	-	-	-	-	-	
			High	1890	378000	1869.48	373896	6	-	-	-	-	-	-	

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.2-2: Test frequencies for NR operating band n2 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	1935	387000	1930.68	386136	0	15	4836	386910	18	0	0 (5)	10	
			Mid	1960	392000	1918.96	383792	102		4900	391970	14	0	1 (6)	216	
			High	1985	397000	1799.24	359848	504		4961	396970	14	0	1 (6)	1020	
		Uplink	Low	1855	371000	1850.68	370136	0	-	-	-	-	-	-	-	-
			Mid	1880	376000	1694.24	338848	504		-	-	-	-	-	-	-
			High	1905	381000	1898.52	379704	6		-	-	-	-	-	-	-
15	38	Downlink	Low	1937.5	387500	1930.66	386132	0	15	4837	386930	2	0	1 (6)	12	
			Mid	1960	392000	1916.44	383288	102		4894	391490	22	0	1 (6)	216	
			High	1982.5	396500	1794.22	358844	504		4951	396050	18	0	2 (7)	1022	
		Uplink	Low	1857.5	371500	1850.66	370132	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1691.72	338344	504		-	-	-	-	-	-	
			High	1902.5	380500	1893.5	378700	6		-	-	-	-	-	-	
20	51	Downlink	Low	1940	388000	1930.82	386164	0	15	4835	386890	2	0	0 (5)	10	
			Mid	1960	392000	1914.1	382820	102		4888	391010	18	0	1 (6)	216	
			High	1980	396000	1789.38	357876	504		4938	395070	14	0	2 (7)	1022	
		Uplink	Low	1860	372000	1850.82	370164	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1689.38	337876	504		-	-	-	-	-	-	
			High	1900	380000	1888.66	377732	6		-	-	-	-	-	-	
25	65	Downlink	Low	1942.5	388500	1930.8	386160	0	15	4836	386910	10	0	0 (5)	10	
			Mid	1960	392000	1911.58	382316	102		4882	390530	2	0	2 (7)	218	
			High	1977.5	395500	1784.36	356872	504		4925	394090	22	0	2 (7)	1022	
		Uplink	Low	1862.5	372500	1850.8	370160	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1686.86	337372	504		-	-	-	-	-	-	
			High	1897.5	379500	1883.64	376728	6		-	-	-	-	-	-	
30	78	Downlink	Low	1945	389000	1930.96	386192	0	15	4837	386930	6	0	0 (5)	10	
			Mid	1960	392000	1909.24	381848	102		4876	390050	22	0	1 (6)	216	
			High	1975	395000	1779.52	355904	504		4912	392930	6	0	0 (5)	1018	
		Uplink	Low	1865	373000	1850.96	370192	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1684.52	336904	504		-	-	-	-	-	-	
			High	1895	379000	1878.8	375760	6		-	-	-	-	-	-	
40	106	Downlink	Low	1950	390000	1930.92	386184	0	15	4836	386910	2	0	0 (5)	10	
			Mid	1960	392000	1904.2	380840	102		4864	389090	14	0	2 (7)	218	
			High	1970	394000	1769.48	353896	504		4886	390970	22	0	0 (5)	1018	
		Uplink	Low	1870	374000	1850.92	370184	0	-	-	-	-	-	-	-	
			Mid	1880	376000	1679.48	335896	504		-	-	-	-	-	-	
			High	1895	379000	1878.8	375760	6		-	-	-	-	-	-	

		High	1890	378000	1868.76	373752	6		-	-	-	-	-	-
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.													
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.													

Table 4.3.1.1.1.2-3: Test frequencies for NR operating band n2 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	1935	387000	1931.04	386208	0	15	-	386568
			Mid	1960	392000	1882.6	376520	102		-	391568
			High	1985	397000	1618.16	323632	504		-	396568
		Uplink	Low	1855	371000	1851.04	370208	0	-	-	-
			Mid	1880	376000	1513.16	302632	504		-	-
			High	1905	381000	1896.72	379344	6		-	-
15	18	Downlink	Low	1937.5	387500	1931.02	386204	0	15	-	386564
			Mid	1960	392000	1880.08	376016	102		-	391064
			High	1982.5	396500	1613.14	322628	504		-	395564
		Uplink	Low	1857.5	371500	1851.02	370204	0	-	-	-
			Mid	1880	376000	1510.64	302128	504		-	-
			High	1902.5	380500	1891.7	378340	6		-	-
20	24	Downlink	Low	1940	388000	1931.36	386272	0	15	-	386632
			Mid	1960	392000	1877.92	375584	102		-	390632
			High	1980	396000	1608.48	321696	504		-	394632
		Uplink	Low	1860	372000	1851.36	370272	0	-	-	-
			Mid	1880	376000	1508.48	301696	504		-	-
			High	1900	380000	1887.04	377408	6		-	-
25	31	Downlink	Low	1942.5	388500	1931.34	386268	0	15	-	386628
			Mid	1960	392000	1875.4	375080	102		-	390128
			High	1977.5	395500	1603.46	320692	504		-	393628
		Uplink	Low	1862.5	372500	1851.34	370268	0	-	-	-
			Mid	1880	376000	1505.96	301192	504		-	-
			High	1897.5	379500	1882.02	376404	6		-	-
30	38	Downlink	Low	1945	389000	1931.32	386264	0	15	-	386624
			Mid	1960	392000	1872.88	374576	102		-	389624
			High	1975	395000	1598.44	319688	504		-	392624
		Uplink	Low	1865	373000	1851.32	370264	0	-	-	-
			Mid	1880	376000	1503.44	300688	504		-	-
			High	1895	379000	1877	375400	6		-	-
40	51	Downlink	Low	1950	390000	1931.64	386328	0	15	-	386688
			Mid	1960	392000	1868.2	373640	102		-	388688
			High	1970	394000	1588.76	317752	504		-	390688
		Uplink	Low	1870	374000	1851.64	370328	0	-	-	-
			Mid	1880	376000	1498.76	299752	504		-	-
			High	1890	378000	1867.32	373464	6		-	-

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, *controlResourceSetZero*=0 and *searchSpaceZero* = 0 (TS 38.213 [22], clause 13).

4.3.1.1.1.3 Reference test frequencies for NR operating band n3

Table 4.3.1.1.1.3-1: Test frequencies for NR operating band n3 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	1807.5	361500	1805.25	361050	0	15	4518	361470	8	1	0 (0)	1	
			Mid	1842.5	368500	1821.89	364378	102		4604	368410	0	0	0 (0)	102	
			High	1877.5	375500	1784.53	356906	504		4693	375410	0	0	0 (0)	504	
		Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	-
			Mid	1747.5	349500	1654.53	330906	504		-	-	-	-	-	-	-
			High	1782.5	356500	1779.17	355834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	1810	362000	1805.32	361064	0	15	4519	361490	10	1	0 (0)	1	
			Mid	1842.5	368500	1819.46	363892	102		4598	367930	2	0	0 (0)	102	
			High	1875	375000	1779.6	355920	504		4680	374430	2	0	0 (0)	504	
		Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-	-
			Mid	1747.5	349500	1652.1	330420	504		-	-	-	-	-	-	-
			High	1780	356000	1774.24	354848	6		-	-	-	-	-	-	-
15	79	Downlink	Low	1812.5	362500	1805.39	361078	0	15	4517	361450	4	0	0 (0)	0	
			Mid	1842.5	368500	1817.03	363406	102		4592	367450	4	0	0 (0)	102	
			High	1872.5	374500	1774.67	354934	504		4667	373450	4	0	0 (0)	504	
		Uplink	Low	1717.5	343500	1710.39	342078	0	-	-	-	-	-	-	-	-
			Mid	1747.5	349500	1649.67	329934	504		-	-	-	-	-	-	-
			High	1777.5	355500	1769.31	353862	6		-	-	-	-	-	-	-
20	106	Downlink	Low	1815	363000	1805.46	361092	0	15	4518	361470	6	0	0 (0)	0	
			Mid	1842.5	368500	1814.6	362920	102		4586	366970	6	0	0 (0)	102	
			High	1870	374000	1769.74	353948	504		4657	372530	2	0	1 (2)	506	
		Uplink	Low	1720	344000	1710.46	342092	0	-	-	-	-	-	-	-	-
			Mid	1747.5	349500	1647.24	329448	504		-	-	-	-	-	-	-
			High	1775	355000	1764.38	352876	6		-	-	-	-	-	-	-
25	133	Downlink	Low	1817.5	363500	1805.53	361106	0	15	4519	361490	8	0	0 (0)	0	
			Mid	1842.5	368500	1812.17	362434	102		4580	366490	8	0	0 (0)	102	
			High	1867.5	373500	1764.81	352962	504		4644	371550	4	0	1 (2)	506	
		Uplink	Low	1722.5	344500	1710.53	342106	0	-	-	-	-	-	-	-	-
			Mid	1747.5	349500	1644.81	328962	504		-	-	-	-	-	-	-
			High	1772.5	354500	1759.45	351890	6		-	-	-	-	-	-	-
30	160	Downlink	Low	1820	364000	1805.6	361120	0	15	4520	361690	10	1	2 (4)	5	
			Mid	1842.5	368500	1809.74	361948	102		4574	366010	10	0	0 (0)	102	
			High	1865	373000	1759.88	351976	504		4631	370570	6	0	1 (2)	506	
		Uplink	Low	1725	345000	1710.6	342120	0	-	-	-	-	-	-	-	-
			Mid	1747.5	349500	1642.38	328476	504		-	-	-	-	-	-	-

40	216	Downlink	High	1770	354000	1754.52	350904	6	15	-	-	-	-	-	-			
			Low	1825	365000	1805.56	361112	0		4519	361490	6	0	0 (0)	0			
			Mid	1842.5	368500	1804.7	360940	102		4562	365050	2	0	1 (2)	104			
		Uplink	High	1860	372000	1749.84	349968	504		4608	368670	6	1	2 (4)	509			
			Low	1730	346000	1710.56	342112	0		-	-	-	-	-	-			
			Mid	1747.5	349500	1637.34	327468	504		-	-	-	-	-	-			
		50	270	Downlink	High	1765	353000	1744.48		348896	6	15	-	-	-	-	-	-
					Low	1830	366000	1805.7		361140	0		4521	361710	10	1	2 (4)	5
					Mid	1842.5	368500	1799.84		359968	102		4550	364090	6	0	1 (2)	104
Uplink	High			1855	371000	1739.98	347996	504	4582	366530	10		0	0 (0)	504			
	Low			1735	347000	1710.7	342140	0	-	-	-		-	-	-			
	Mid			1747.5	349500	1632.48	326496	504	-	-	-		-	-	-			
High	1760			352000	1734.62	346924	6	-	-	-	-		-	-				
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p>																		

Table 4.3.1.1.1.3-2: Test frequencies for NR operating band n3 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	1810	362000	1805.68	361136	0	15	4525	361970	14	0	1 (6)	12	
			Mid	1842.5	368500	1801.46	360292	102		4604	368410	18	0	0 (5)	214	
			High	1875	375000	1689.24	337848	504		4686	374910	18	0	0 (5)	1018	
		Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	-	-
			Mid	1747.5	349500	1561.74	312348	504		-	-	-	-	-	-	-
			High	1780	356000	1773.52	354704	6		-	-	-	-	-	-	-
15	38	Downlink	Low	1812.5	362500	1805.66	361132	0	15	4523	361930	2	0	1 (6)	12	
			Mid	1842.5	368500	1798.94	359788	102		4598	367930	2	0	1 (6)	216	
			High	1872.5	374500	1684.22	336844	504		4673	373930	2	0	1 (6)	1020	
		Uplink	Low	1717.5	343500	1710.66	342132	0	-	-	-	-	-	-	-	
			Mid	1747.5	349500	1559.22	311844	504		-	-	-	-	-	-	
			High	1777.5	355500	1768.5	353700	6		-	-	-	-	-	-	
20	51	Downlink	Low	1815	363000	1805.82	361164	0	15	4524	361950	22	0	0 (5)	10	
			Mid	1842.5	368500	1796.6	359320	102		4592	367450	22	0	0 (5)	214	
			High	1870	374000	1679.38	335876	504		4663	373010	18	0	1 (6)	1020	
		Uplink	Low	1720	344000	1710.82	342164	0	-	-	-	-	-	-	-	
			Mid	1747.5	349500	1556.88	311376	504		-	-	-	-	-	-	
			High	1775	355000	1763.66	352732	6		-	-	-	-	-	-	
25	65	Downlink	Low	1817.5	363500	1805.8	361160	0	15	4525	361970	6	0	1 (6)	12	
			Mid	1842.5	368500	1794.08	358816	102		4586	366970	6	0	1 (6)	216	
			High	1867.5	373500	1674.36	334872	504		4650	372030	2	0	2 (7)	1022	
		Uplink	Low	1722.5	344500	1710.8	342160	0	-	-	-	-	-	-	-	
			Mid	1747.5	349500	1554.36	310872	504		-	-	-	-	-	-	
			High	1772.5	354500	1758.64	351728	6		-	-	-	-	-	-	
30	78	Downlink	Low	1820	364000	1805.96	361192	0	15	4523	361930	6	0	0 (5)	10	
			Mid	1842.5	368500	1791.74	358348	102		4580	366490	2	0	1 (6)	216	
			High	1865	373000	1669.52	333904	504		4637	371050	22	0	1 (6)	1020	
		Uplink	Low	1725	345000	1710.96	342192	0	-	-	-	-	-	-	-	
			Mid	1747.5	349500	1552.02	310404	504		-	-	-	-	-	-	
			High	1770	354000	1753.8	350760	6		-	-	-	-	-	-	
40	106	Downlink	Low	1825	365000	1805.92	361184	0	15	4525	361970	22	0	0 (5)	10	
			Mid	1842.5	368500	1786.7	357340	102		4568	365530	18	0	1 (6)	216	
			High	1860	372000	1659.48	331896	504		4611	368910	2	0	0 (5)	1018	
		Uplink	Low	1730	346000	1710.92	342184	0	-	-	-	-	-	-	-	
			Mid	1747.5	349500	1546.98	309396	504		-	-	-	-	-	-	
			High	1770	354000	1753.8	350760	6		-	-	-	-	-	-	

50	133	Downlink	High	1765	353000	1743.76	348752	6	15	-	-	-	-	-	
			Low	1830	366000	1806.06	361212	0		4524	361950	6	0	0 (5)	10
			Mid	1842.5	368500	1781.84	356368	102		4556	364570	22	0	1 (6)	216
		Uplink	High	1855	371000	1649.62	329924	504	4588	367010	2	0	1(6)	1020	
			Low	1735	347000	1711.06	342212	0	-	-	-	-	-	-	
			Mid	1747.5	349500	1542.12	308424	504	-	-	-	-	-	-	
			High	1760	352000	1733.9	346780	6	-	-	-	-	-	-	
Note 1:		The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.													
Note 2:		The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.													

Table 4.3.1.1.1.3-3: Test frequencies for NR operating band n3 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	1810	362000	1806.04	361208	0	15	-	361568
			Mid	1842.5	368500	1765.1	353020	102		-	368068
			High	1875	375000	1508.16	301632	504		-	374568
		Uplink	Low	1715	343000	1711.04	342208	0	-	-	-
			Mid	1747.5	349500	1380.66	276132	504		-	-
			High	1780	356000	1771.72	354344	6		-	-
15	18	Downlink	Low	1812.5	362500	1806.02	361204	0	15	-	361564
			Mid	1842.5	368500	1762.58	352516	102		-	367564
			High	1872.5	374500	1503.14	300628	504		-	373564
		Uplink	Low	1717.5	343500	1711.02	342204	0	-	-	-
			Mid	1747.5	349500	1378.14	275628	504		-	-
			High	1777.5	355500	1766.7	353340	6		-	-
20	24	Downlink	Low	1815	363000	1806.36	361272	0	15	-	361632
			Mid	1842.5	368500	1760.42	352084	102		-	367132
			High	1870	374000	1498.48	299696	504		-	372632
		Uplink	Low	1720	344000	1711.36	342272	0	-	-	-
			Mid	1747.5	349500	1375.98	275196	504		-	-
			High	1775	355000	1762.04	352408	6		-	-
25	31	Downlink	Low	1817.5	363500	1806.34	361268	0	15	-	361628
			Mid	1842.5	368500	1757.9	351580	102		-	366628
			High	1867.5	373500	1493.46	298692	504		-	371628
		Uplink	Low	1722.5	344500	1711.34	342268	0	-	-	-
			Mid	1747.5	349500	1373.46	274692	504		-	-
			High	1772.5	354500	1757.02	351404	6		-	-
30	38	Downlink	Low	1820	364000	1806.32	361264	0	15	-	361624
			Mid	1842.5	368500	1755.38	351076	102		-	366124
			High	1865	373000	1488.44	297688	504		-	370624
		Uplink	Low	1725	345000	1711.32	342264	0	-	-	-
			Mid	1747.5	349500	1370.94	274188	504		-	-
			High	1770	354000	1752	350400	6		-	-
40	51	Downlink	Low	1825	365000	1806.64	361328	0	15	-	361688
			Mid	1842.5	368500	1750.7	350140	102		-	365188
			High	1860	372000	1478.76	295752	504		-	368688
		Uplink	Low	1730	346000	1711.64	342328	0	-	-	-
			Mid	1747.5	349500	1366.26	273252	504		-	-
			High	1765	353000	1742.32	348464	6		-	-

50	65	Downlink	Low	1830	366000	1806.6	361320	0	15	-	361680
			Mid	1842.5	368500	1745.66	349132	102		-	364180
			High	1855	371000	1468.72	293744	504		-	366680
		Uplink	Low	1735	347000	1711.6	342320	0	-	-	-
			Mid	1747.5	349500	1361.22	272244	504		-	-
			High	1760	352000	1732.28	346456	6		-	-
<p>Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).</p>											

4.3.1.1.1.4 FFS

4.3.1.1.1.5 Reference test frequencies for NR operating band n5

Table 4.3.1.1.1.5-1: Test frequencies for NR operating band n5 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	871.5	174300	869.25	173850	0	15	2178	174270	8	1	0 (0)	1	
			Mid	881.5	176300	860.89	172178	102		2203	176210	0	0	0 (0)	102	
			High	891.5	178300	798.53	159706	504		2228	178330	4	1	1 (2)	507	
		Uplink	Low	826.5	165300	824.25	164850	0	-	-	-	-	-	-	-	-
			Mid	836.5	167300	743.53	148706	504		-	-	-	-	-	-	-
			High	846.5	169300	843.17	168634	6		-	-	-	-	-	-	-
10	52	Downlink	Low	874	174800	869.32	173864	0	15	2179	174290	10	1	0 (0)	1	
			Mid	881.5	176300	858.46	171692	102		2197	175730	2	0	0 (0)	102	
			High	889	177800	793.6	158720	504		2218	177410	2	1	2 (4)	509	
		Uplink	Low	829	165800	824.32	164864	0	-	-	-	-	-	-	-	
			Mid	836.5	167300	741.1	148220	504		-	-	-	-	-	-	
			High	844	168800	838.24	167648	6		-	-	-	-	-	-	
15	79	Downlink	Low	876.5	175300	869.39	173878	0	15	2177	174250	4	0	0 (0)	0	
			Mid	881.5	176300	856.03	171206	102		2191	175250	4	0	0 (0)	102	
			High	886.5	177300	788.67	157734	504		2205	176430	4	1	2 (4)	509	
		Uplink	Low	831.5	166300	824.39	164878	0	-	-	-	-	-	-	-	
			Mid	836.5	167300	738.67	147734	504		-	-	-	-	-	-	
			High	841.5	168300	833.31	166662	6		-	-	-	-	-	-	
20	106	Downlink	Low	879	175800	869.46	173892	0	15	2178	174270	6	0	0 (0)	0	
			Mid	881.5	176300	853.6	170720	102		2185	174770	6	0	0 (0)	102	
			High	884	176800	783.74	156748	504		2192	175450	6	1	2 (4)	509	
		Uplink	Low	834	166800	824.46	164892	0	-	-	-	-	-	-	-	
			Mid	836.5	167300	736.24	147248	504		-	-	-	-	-	-	
			High	839	167800	828.38	165676	6		-	-	-	-	-	-	
25	133	Downlink	Low	881.5	176300	869.53	173906	0	15	2179	174290	8	0	0 (0)	0	
Note 3			Mid													
			High													

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 3: This UE channel bandwidth is applicable only to downlink.

Table 4.3.1.1.1.5-2: Test frequencies for NR operating band n5 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	874	174800	869.68	173936	0	30	2185	174770	14	0	1 (1)	2
			Mid	881.5	176300	840.46	168092	102		2203	176210	18	0	0 (0)	204
			High	889	177800	703.24	140648	504		2224	177890	6	0	3 (3)	1014
		Uplink	Low	829	165800	824.68	164936	0	-	-	-	-	-	-	-
			Mid	836.5	167300	650.74	130148	504		-	-	-	-	-	-
			High	844	168800	837.52	167504	6		-	-	-	-	-	-
15	38	Downlink	Low	876.5	175300	869.66	173932	0	30	2183	174730	2	0	1 (1)	2
			Mid	881.5	176300	837.94	167588	102		2197	175730	2	0	1 (1)	206
			High	886.5	177300	698.22	139644	504		2208	176670	6	0	0 (0)	1008
		Uplink	Low	831.5	166300	824.66	164932	0	-	-	-	-	-	-	-
			Mid	836.5	167300	648.22	129644	504		-	-	-	-	-	-
			High	841.5	168300	832.5	166500	6		-	-	-	-	-	-
20	51	Downlink	Low	879	175800	869.82	173964	0	30	2184	174750	22	0	0 (0)	0
			Mid	881.5	176300	835.6	167120	102		2191	175250	22	0	0 (0)	204
			High	884	176800	693.38	138676	504		2195	175690	2	0	0 (0)	1008
		Uplink	Low	834	166800	824.82	164964	0	-	-	-	-	-	-	-
			Mid	836.5	167300	645.88	129176	504		-	-	-	-	-	-
			High	839	167800	827.66	165532	6		-	-	-	-	-	-
25	65	Downlink	Low	881.5	176300	869.8	173960	0	30	2185	174770	6	0	1 (1)	2
Note 3			Mid												
			High												

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 3: This UE channel bandwidth is applicable only to downlink.

4.3.1.1.1.6 FFS

4.3.1.1.1.7 Reference test frequencies for NR operating band n7

Table 4.3.1.1.1.7-1: Test frequencies for NR operating band n7 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	2622.5	524500	2620.25	524050	0	15	6554	524410	0	0	0 (0)	0	
			Mid	2655	531000	2634.39	526878	102		6636	530910	0	0	0 (0)	102	
			High	2687.5	537500	2594.53	518906	504		6718	537410	0	0	0 (0)	504	
		Uplink	Low	2502.5	500500	2500.25	500050	0	-	-	-	-	-	-	-	-
			Mid	2535	507000	2442.03	488406	504		-	-	-	-	-	-	-
			High	2567.5	513500	2564.17	512834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	2625	525000	2620.32	524064	0	15	6555	524430	2	0	0 (0)	0	
			Mid	2655	531000	2631.96	526392	102		6630	530430	2	0	0 (0)	102	
			High	2685	537000	2589.6	517920	504		6705	536430	2	0	0 (0)	504	
		Uplink	Low	2505	501000	2500.32	500064	0	-	-	-	-	-	-	-	-
			Mid	2535	507000	2439.6	487920	504		-	-	-	-	-	-	-
			High	2565	513000	2559.24	511848	6		-	-	-	-	-	-	-
15	79	Downlink	Low	2627.5	525500	2620.39	524078	0	15	6556	524450	4	0	0 (0)	0	
			Mid	2655	531000	2629.53	525906	102		6624	529950	4	0	0 (0)	102	
			High	2682.5	536500	2584.67	516934	504		6692	535450	4	0	0 (0)	504	
		Uplink	Low	2507.5	501500	2500.39	500078	0	-	-	-	-	-	-	-	-
			Mid	2535	507000	2437.17	487434	504		-	-	-	-	-	-	-
			High	2562.5	512500	2554.31	510862	6		-	-	-	-	-	-	-
20	106	Downlink	Low	2630	526000	2620.46	524092	0	15	6557	524650	6	1	2 (4)	5	
			Mid	2655	531000	2627.1	525420	102		6618	529470	6	0	0 (0)	102	
			High	2680	536000	2579.74	515948	504		6682	534530	2	0	1 (2)	506	
		Uplink	Low	2510	502000	2500.46	500092	0	-	-	-	-	-	-	-	-
			Mid	2535	507000	2434.74	486948	504		-	-	-	-	-	-	-
			High	2560	512000	2549.38	509876	6		-	-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.7-2: Test frequencies for NR operating band n7 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	2625	525000	2620.68	524136	0	15	6561	524910	18	0 (5)	10	
			Mid	2655	531000	2613.96	522792	102		6636	530910	18	0	0 (5)	214
			High	2685	537000	2499.24	499848	504		6711	536910	18	0	0 (5)	1018
		Uplink	Low	2505	501000	2500.68	500136	0	-	-	-	-	-	-	-
			Mid	2535	507000	2349.24	469848	504		-	-	-	-	-	-
			High	2565	513000	2558.52	511704	6		-	-	-	-	-	-
15	38	Downlink	Low	2627.5	525500	2620.66	524132	0	15	6562	524930	2	0	1 (6)	12
			Mid	2655	531000	2611.44	522288	102		6630	530430	2	0	1 (6)	216
			High	2682.5	536500	2494.22	498844	504		6698	535930	2	0	1 (6)	1020
		Uplink	Low	2507.5	501500	2500.66	500132	0	-	-	-	-	-	-	-
			Mid	2535	507000	2346.72	469344	504		-	-	-	-	-	-
			High	2562.5	512500	2553.5	510700	6		-	-	-	-	-	-
20	51	Downlink	Low	2630	526000	2620.82	524164	0	15	6560	524890	2	0	0 (5)	10
			Mid	2655	531000	2609.1	521820	102		6624	529950	22	0	0 (5)	214
			High	2680	536000	2489.38	497876	504		6688	535010	18	0	1 (6)	1020
		Uplink	Low	2510	502000	2500.82	500164	0	-	-	-	-	-	-	-
			Mid	2535	507000	2344.38	468876	504		-	-	-	-	-	-
			High	2560	512000	2548.66	509732	6		-	-	-	-	-	-
Note 1:		The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.													
Note 2:		The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.													

Table 4.3.1.1.1.7-3: Test frequencies for NR operating band n7 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	2625	525000	2621.04	524208	0	15	-	524568
			Mid	2655	531000	2577.6	515520	102		-	530568
			High	2685	537000	2318.16	463632	504		-	536568
		Uplink	Low	2505	501000	2501.04	500208	0	-	-	-
			Mid	2535	507000	2168.16	433632	504		-	-
			High	2565	513000	2556.72	511344	6		-	-
15	18	Downlink	Low	2627.5	525500	2621.02	524204	0	15	-	524564
			Mid	2655	531000	2575.08	515016	102		-	530064
			High	2682.5	536500	2313.14	462628	504		-	535564
		Uplink	Low	2507.5	501500	2501.02	500204	0	-	-	-
			Mid	2535	507000	2165.64	433128	504		-	-
			High	2562.5	512500	2551.7	510340	6		-	-
20	24	Downlink	Low	2630	526000	2621.36	524272	0	15	-	524632
			Mid	2655	531000	2572.92	514584	102		-	529632
			High	2680	536000	2308.48	461696	504		-	534632
		Uplink	Low	2510	502000	2501.36	500272	0	-	-	-
			Mid	2535	507000	2163.48	432696	504		-	-
			High	2560	512000	2547.04	509408	6		-	-

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, *controlResourceSetZero=0* and *searchSpaceZero=0* (TS 38.213 [22], clause 13).

4.3.1.1.1.8 Reference test frequencies for NR operating band n8

Table 4.3.1.1.1.8-1: Test frequencies for NR operating band n8 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	927.5	185500	925.25	185050	0	15	2318	185530	4	1	1 (2)	3
			Mid	942.5	188500	921.89	184378	102		2354	188410	0	0	0 (0)	102
			High	957.5	191500	864.53	172906	504		2393	191530	4	1	1 (2)	507
		Uplink	Low	882.5	176500	880.25	176050	0	-	-	-	-	-	-	-
			Mid	897.5	179500	804.53	160906	504		-	-	-	-	-	-
			High	912.5	182500	909.17	181834	6		-	-	-	-	-	-
10	52	Downlink	Low	930	186000	925.32	185064	0	15	2319	185550	6	1	1 (2)	3
			Mid	942.5	188500	919.46	183892	102		2348	187930	2	0	0 (0)	102
			High	955	191000	859.6	171920	504		2383	190610	2	1	2 (4)	509
		Uplink	Low	885	177000	880.32	176064	0	-	-	-	-	-	-	-
			Mid	897.5	179500	802.1	160420	504		-	-	-	-	-	-
			High	910	182000	904.24	180848	6		-	-	-	-	-	-
15	79	Downlink	Low	932.5	186500	925.39	185078	0	15	2320	185570	8	1	1 (2)	3
			Mid	942.5	188500	917.03	183406	102		2342	187450	4	0	0 (0)	102
			High	952.5	190500	854.67	170934	504		2370	189630	4	1	2 (4)	509
		Uplink	Low	887.5	177500	880.39	176078	0	-	-	-	-	-	-	-
			Mid	897.5	179500	799.67	159934	504		-	-	-	-	-	-
			High	907.5	181500	899.31	179862	6		-	-	-	-	-	-
20	106	Downlink	Low	935	187000	925.46	185092	0	15	2318	185530	2	0	1 (2)	2
			Mid	942.5	188500	914.6	182920	102		2336	186970	6	0	0 (0)	102
			High	950	190000	849.74	169948	504		2357	188650	6	1	2 (4)	509
		Uplink	Low	890	178000	880.46	176092	0	-	-	-	-	-	-	-
			Mid	897.5	179500	797.24	159448	504		-	-	-	-	-	-
			High	905	181000	894.38	178876	6		-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.8-2: Test frequencies for NR operating band n8 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	930	186000	925.68	185136	0	15	2325	186030	10	0	2 (7)	14
			Mid	942.5	188500	901.46	180292	102		2354	188410	18	0	0 (5)	214
			High	955	191000	769.24	153848	504		2389	191090	6	0	3 (8)	1024
		Uplink	Low	885	177000	880.68	176136	0	-	-	-	-	-	-	-
			Mid	897.5	179500	711.74	142348	504		-	-	-	-	-	-
			High	910	182000	903.52	180704	6		-	-	-	-	-	-
15	38	Downlink	Low	932.5	186500	925.66	185132	0	15	2326	186050	18	0	2 (7)	14
			Mid	942.5	188500	898.94	179788	102		2348	187930	2	0	1 (6)	216
			High	952.5	190500	764.22	152844	504		2373	189870	6	0	0 (5)	1018
		Uplink	Low	887.5	177500	880.66	176132	0	-	-	-	-	-	-	-
			Mid	897.5	179500	709.22	141844	504		-	-	-	-	-	-
			High	907.5	181500	898.5	179700	6		-	-	-	-	-	-
20	51	Downlink	Low	935	187000	925.82	185164	0	15	2324	186010	18	0	1 (6)	12
			Mid	942.5	188500	896.6	179320	102		2342	187450	22	0	0 (5)	214
			High	950	190000	759.38	151876	504		2360	188890	2	0	0 (5)	1018
		Uplink	Low	890	178000	880.82	176164	0	-	-	-	-	-	-	-
			Mid	897.5	179500	706.88	141376	504		-	-	-	-	-	-
			High	905	181000	893.66	178732	6		-	-	-	-	-	-
Note 1:		The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.													
Note 2:		The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.													

4.3.1.1.1.9 to 4.3.1.1.1.11 FFS

4.3.1.1.1.12 Reference test frequencies for NR operating band n12

Table 4.3.1.1.1.12-1: Test frequencies for NR operating band n12 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	731.5	146300	729.25	145850	0	15	1828	146210	0	0 (0)	0	
			Mid	737.5	147500	716.89	143378	102		1843	147410	0	0 (0)	102	
			High	743.5	148700	650.53	130106	504		1858	148610	0	0 (0)	504	
		Uplink	Low	701.5	140300	699.25	139850	0	-	-	-	-	-	-	-
			Mid	707.5	141500	614.53	122906	504		-	-	-	-	-	-
			High	713.5	142700	710.17	142034	6		-	-	-	-	-	-
10	52	Downlink	Low	734	146800	729.32	145864	0	15	1829	146410	2	1	2 (4)	5
			Mid	737.5	147500	714.46	142892	102		1837	146930	2	0	0 (0)	102
			High	741	148200	645.6	129120	504		1845	147630	2	0	0 (0)	504
		Uplink	Low	704	140800	699.32	139864	0	-	-	-	-	-	-	-
			Mid	707.5	141500	612.1	122420	504		-	-	-	-	-	-
			High	711	142200	705.24	141048	6		-	-	-	-	-	-
15	79	Downlink	Low	736.5	147300	729.39	145878	0	15	1830	146430	4	1	2 (4)	5
			Mid	737.5	147500	712.03	142406	102		1831	146450	4	0	0 (0)	102
			High	738.5	147700	640.67	128134	504		1832	146650	4	0	0 (0)	504
		Uplink	Low	706.5	141300	699.39	139878	0	-	-	-	-	-	-	-
			Mid	707.5	141500	609.67	121934	504		-	-	-	-	-	-
			High	708.5	141700	700.31	140062	6		-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET}\#0\text{-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.12-2: Test frequencies for NR operating band n12 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	734	146800	729.68	145936	0	15	1835	146890	6	0	3 (8)	16
			Mid	737.5	147500	696.46	139292	102		1843	147410	18	0	0 (5)	214
			High	741	148200	555.24	111048	504		1851	148110	18	0	0 (5)	1018
		Uplink	Low	704	140800	699.68	139936	0	-	-	-	-	-	-	-
			Mid	707.5	141500	521.74	104348	504		-	-	-	-	-	-
			High	711	142200	704.52	140904	6		-	-	-	-	-	-
15	38	Downlink	Low	736.5	147300	729.66	145932	0	15	1833	146670	6	0	0 (5)	10
			Mid	737.5	147500	693.94	138788	102		1837	146930	2	0	1 (6)	216
			High	738.5	147700	550.22	110044	504		1838	147130	2	0	1 (6)	1020
		Uplink	Low	706.5	141300	699.66	139932	0	-	-	-	-	-	-	-
			Mid	707.5	141500	519.22	103844	504		-	-	-	-	-	-
			High	708.5	141700	699.5	139900	6		-	-	-	-	-	-
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdccch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p>															

4.3.1.1.1.13 FFS

4.3.1.1.1.14 Reference test frequencies for NR operating band n14

Table 4.3.1.1.1.14-1: Test frequencies for NR operating band n14 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	760.5	152100	758.25	151650	0	15	1902	152190	0	1	2 (4)	5	
			Mid	763	152600	742.39	148478	102		1909	152690	0	1	2 (4)	107	
			High	765.5	153100	672.53	134506	504		1913	153130	4	1	1 (2)	507	
		Uplink	Low	790.5	158100	788.25	157650	0	-	-	-	-	-	-	-	-
			Mid	793	158600	700.03	140006	504		-	-	-	-	-	-	-
			High	795.5	159100	792.17	158434	6		-	-	-	-	-	-	-
10	52	Downlink	Low	763	152600	758.32	151664	0	15	1903	152210	2	1	2 (4)	5	
			Mid													
			High													
		Uplink	Low	793	158600	788.32	157664	0	-	-	-	-	-	-	-	-
			Mid													
			High													
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcchConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET0Carrier}}$ in Annex C expressed in number of common RBs.</p> <p>Note 3: 10 MHz test channel bandwidth is tested with Low range test frequency only. Low range test frequency shall be used instead of Mid range and High range test frequencies.</p>																

Table 4.3.1.1.1.14-2: Test frequencies for NR operating band n14 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1		
10	24	Downlink	Low	763	152600	758.68	151736	0	15	1909	152690	6	0	3 (8)	16		
			Mid														
			High														
		Uplink	Low	793	158600	788.68	157736	0	-	-	-	-	-	-	-	-	-
			Mid														
			High														
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled controlResourceSetZero (pdcchConfigSIB1 in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET0Carrier}}$ in Annex C expressed in number of common RBs.</p> <p>Note 3: 10 MHz test channel bandwidth is tested with Low range test frequency only. Low range test frequency shall be used instead of Mid range and High range test frequencies.</p>																	

4.3.1.1.1.15 to 4.3.1.1.1.19 FFS

4.3.1.1.1.20 Reference test frequencies for NR operating band n20

Table 4.3.1.1.1.20-1: Test frequencies for NR operating band n20 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	793.5	158700	791.25	158250	0	15	1983	158670	8	1	0 (0)	1	
			Mid	806	161200	785.39	157078	102		2015	161290	0	1	2 (4)	107	
			High	818.5	163700	725.53	145106	504		2047	163730	4	1	1 (2)	507	
		Uplink	Low	834.5	166900	832.25	166450	0	-	-	-	-	-	-	-	-
			Mid	847	169400	754.03	150806	504		-	-	-	-	-	-	-
			High	859.5	171900	856.17	171234	6		-	-	-	-	-	-	-
10	52	Downlink	Low	796	159200	791.32	158264	0	15	1984	158690	10	1	0 (0)	1	
			Mid	806	161200	782.96	156592	102		2009	160810	2	1	2 (4)	107	
			High	816	163200	720.6	144120	504		2034	162750	6	1	1 (2)	507	
		Uplink	Low	837	167400	832.32	166464	0	-	-	-	-	-	-	-	-
			Mid	847	169400	751.6	150320	504		-	-	-	-	-	-	-
			High	857	171400	851.24	170248	6		-	-	-	-	-	-	-
15	79	Downlink	Low	798.5	159700	791.39	158278	0	15	1982	158650	4	0	0 (0)	0	
			Mid	806	161200	780.53	156106	102		2003	160330	4	1	2 (4)	107	
			High	813.5	162700	715.67	143134	504		2021	161770	8	1	1 (2)	507	
		Uplink	Low	839.5	167900	832.39	166478	0	-	-	-	-	-	-	-	-
			Mid	847	169400	749.17	149834	504		-	-	-	-	-	-	-
			High	854.5	170900	846.31	169262	6		-	-	-	-	-	-	-
20	106	Downlink	Low	801	160200	791.46	158292	0	15	1983	158670	6	0	0 (0)	0	
			Mid	806	161200	778.1	155620	102		1997	159850	6	1	2 (4)	107	
			High	811	162200	710.74	142148	504		2011	160850	6	1	2 (4)	509	
		Uplink	Low	842	168400	832.46	166492	0	-	-	-	-	-	-	-	-
			Mid	847	169400	746.74	149348	504		-	-	-	-	-	-	-
			High	852	170400	841.38	168276	6		-	-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.20-2: Test frequencies for NR operating band n20 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	796	159200	791.68	158336	0	15	1990	159170	14	0	1 (6)	12	
			Mid	806	161200	764.96	152992	102		2015	161290	6	0	3 (8)	220	
			High	816	163200	630.24	126048	504		2040	163230	10	0	2 (7)	1022	
		Uplink	Low	837	167400	832.68	166536	0	-	-	-	-	-	-	-	-
			Mid	847	169400	661.24	132248	504		-	-	-	-	-	-	-
			High	857	171400	850.52	170104	6		-	-	-	-	-	-	-
15	38	Downlink	Low	798.5	159700	791.66	158332	0	15	1988	159130	2	0	1 (6)	12	
			Mid	806	161200	762.44	152488	102		2006	160570	6	0	0 (5)	214	
			High	813.5	162700	625.22	125044	504		2027	162250	18	0	2 (7)	1022	
		Uplink	Low	839.5	167900	832.66	166532	0	-	-	-	-	-	-	-	-
			Mid	847	169400	658.72	131744	504		-	-	-	-	-	-	-
			High	854.5	170900	845.5	169100	6		-	-	-	-	-	-	-
20	51	Downlink	Low	801	160200	791.82	158364	0	15	1989	159150	22	0	0 (5)	10	
			Mid	806	161200	760.1	152020	102		2000	160090	2	0	0 (5)	214	
			High	811	162200	620.38	124076	504		2014	161090	2	0	0 (5)	1018	
		Uplink	Low	842	168400	832.82	166564	0	-	-	-	-	-	-	-	-
			Mid	847	169400	656.38	131276	504		-	-	-	-	-	-	-
			High	852	170400	840.66	168132	6		-	-	-	-	-	-	-
Note 1:		The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled controlResourceSetZero (pdcch-ConfigSIB1 in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:		The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

4.3.1.1.1.21 to 4.3.1.1.1.23 FFS

4.3.1.1.1.24 Reference test frequencies for NR operating band n24

Table 4.3.1.1.1.24-1a: Test frequencies for NR operating band n24 and SCS 15 kHz

UL/DL CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 3	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5/5	25	Downlink	Low	1528.5	305700	1526.25	305250	0	15	3822	305790	0	1	2 (4)	5
			Mid	1533.5	306700	1512.89	302578	102		3833	306730	4	1	1 (2)	105
			High	1533.5	306700	1440.53	288106	504		3833	306730	4	1	1 (2)	507
		Uplink	Low	1630.0	326000	1627.75	325550	0	-	-	-	-	-	-	-
			Mid	1635.0	327000	1542.03	308406	504		-	-	-	-	-	-
			High	1654.0	330800	1650.67	330134	6		-	-	-	-	-	-
10/5 (Note 4)	25	Downlink	Low	1528.5	305700	1526.25	305250	0	15	3822	305790	0	1	2 (4)	5
			Mid	1533.5	306700	1440.53	288106	504		3833	306730	4	1	1 (2)	507
	52	Uplink	Low	1632.5	326500	1627.82	325564	0	-	-	-	-	-	-	-
			High	1651.5	330300	1645.74	329148	6		-	-	-	-	-	-
10/10	52	Downlink	Low	1531.0	306200	1526.32	305264	0	15	3823	305810	2	1	2 (4)	5
			Mid	1531.0	306200	1435.6	287120	504		3823	305810	2	1	2 (4)	509
		Uplink	Low	1632.5	326500	1627.82	325564	0	-	-	-	-	-	-	-
			Mid	1651.5	330300	1645.74	329148	6		-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 3: For symmetric CBW combinations, Low and Mid test frequencies are specified using Tx-Rx spacing of -101.5 MHz and High test frequency is specified using Tx-Rx spacing of -120.5 MHz

Note 4: For asymmetric CBW combination UL=10MHz and DL=5MHz, Low and Mid test frequencies are specified using Tx-Rx spacing of -104 MHz and High test frequency is specified using Tx-Rx spacing of -118 MHz.

Table 4.3.1.1.1.24-2a: Test frequencies for NR operating band n24 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 3	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
		Downlink	Low Mid												
10	24	Downlink	Low Mid	1531.0	306200	1526.68	305336	0	30	3829	306290	6	0	3 (3)	6
			High	1531.0	306200	1345.24	269048	504	-	3829	306290	6	0	3 (3)	1014
		Uplink	Low Mid	1632.5	326500	1628.18	325636	0	-	-	-	-	-	-	-
			High	1651.5	330300	1645.02	329004	6	-	-	-	-	-	-	-
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET}0\text{-Carrier}}$ in Annex C expressed in number of common RBs.</p> <p>Note 3: Low and Mid test frequencies are specified using Tx-Rx spacing of -101.5 MHz and High test frequency is specified using Tx-Rx spacing of -120.5 MHz</p>															

Table 4.3.1.1.1.24-3a: Test frequencies for NR operating band n24 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low Mid	1531.0	306200	1527.04	305408	0	15	-	305768
			High	1531.0	306200	1164.16	232832	504	-	305768	
		Uplink	Low Mid	1632.5	326500	1628.54	325708	0	-	-	-
			High	1651.5	330300	1643.22	328644	6	-	-	
<p>Note 1: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, $controlResourceSetZero=0$ and $searchSpaceZero=0$ (TS 38.213 [22], clause 13).</p> <p>Note 2: Low and Mid test frequencies are specified using Tx-Rx spacing of -101.5 MHz and High test frequency is specified using Tx-Rx spacing of -120.5 MHz</p>											

4.3.1.1.1.25 Reference test frequencies for NR operating band n25

Table 4.3.1.1.1.25-1: Test frequencies for NR operating band n25 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	1932.5	386500	1930.25	386050	0	15	4829	386410	0	0	0 (0)	0	
			Mid	1962.5	392500	1941.89	388378	102		4904	392410	0	0	0 (0)	102	
			High	1992.5	398500	1899.53	379906	504		4979	398410	0	0	0 (0)	504	
		Uplink	Low	1852.5	370500	1850.25	370050	0	-	-	-	-	-	-	-	-
			Mid	1882.5	376500	1789.53	357906	504		-	-	-	-	-	-	-
			High	1912.5	382500	1909.17	381834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	1935	387000	1930.32	386064	0	15	4830	386430	2	0	0 (0)	0	
			Mid	1962.5	392500	1939.46	387892	102		4898	391930	2	0	0 (0)	102	
			High	1990	398000	1894.6	378920	504		4969	397490	10	1	0 (0)	505	
		Uplink	Low	1855	371000	1850.32	370064	0	-	-	-	-	-	-	-	-
			Mid	1882.5	376500	1787.1	357420	504		-	-	-	-	-	-	-
			High	1910	382000	1904.24	380848	6		-	-	-	-	-	-	-
15	79	Downlink	Low	1937.5	387500	1930.39	386078	0	15	4831	386450	4	0	0 (0)	0	
			Mid	1962.5	392500	1937.03	387406	102		4892	391450	4	0	0 (0)	102	
			High	1987.5	397500	1889.67	377934	504		4956	396510	0	0	1 (2)	506	
		Uplink	Low	1857.5	371500	1850.39	370078	0	-	-	-	-	-	-	-	-
			Mid	1882.5	376500	1784.67	356934	504		-	-	-	-	-	-	-
			High	1907.5	381500	1899.31	379862	6		-	-	-	-	-	-	-
20	106	Downlink	Low	1940	388000	1930.46	386092	0	15	4832	386650	6	1	2 (4)	5	
			Mid	1962.5	392500	1934.6	386920	102		4886	390970	6	0	0 (0)	102	
			High	1985	397000	1884.74	376948	504		4943	395530	2	0	1 (2)	506	
		Uplink	Low	1860	372000	1850.46	370092	0	-	-	-	-	-	-	-	-
			Mid	1882.5	376500	1782.24	356448	504		-	-	-	-	-	-	-
			High	1905	381000	1894.38	378876	6		-	-	-	-	-	-	-
25	133	Downlink	Low	1942.5	388500	1930.53	386106	0	15	4833	386670	8	1	2 (4)	5	
			Mid	1962.5	392500	1932.17	386434	102		4880	390490	8	0	0 (0)	102	
			High	1982.5	396500	1879.81	375962	504		4933	394610	0	0	2 (4)	508	
		Uplink	Low	1862.5	372500	1850.53	370106	0	-	-	-	-	-	-	-	-
			Mid	1882.5	376500	1779.81	355962	504		-	-	-	-	-	-	-
			High	1902.5	380500	1889.45	377890	6		-	-	-	-	-	-	-
30	160	Downlink	Low	1945	389000	1930.6	386120	0	15	4834	386690	10	1	2 (4)	5	
			Mid	1962.5	392500	1929.74	385948	102		4874	390010	10	0	0 (0)	102	
			High	1980	396000	1874.88	374976	504		4920	393630	2	0	2 (4)	508	
		Uplink	Low	1865	373000	1850.6	370120	0	-	-	-	-	-	-	-	-
			Mid	1882.5	376500	1777.38	355476	504		-	-	-	-	-	-	-

40	216	Downlink	High	1900	380000	1884.52	376904	6	15	-	-	-	-	-	-
			Low	1950	390000	1930.56	386112	0		4833	386670	6	1	2 (4)	5
			Mid	1962.5	392500	1924.7	384940	102		4862	389050	2	0	1 (2)	104
		Uplink	High	1975	395000	1864.84	372968	504	4894	391490	6	0	0 (0)	504	
			Low	1870	374000	1850.56	370112	0	-	-	-	-	-	-	
			Mid	1882.5	376500	1772.34	354468	504	-	-	-	-	-	-	
		High	1895	379000	1874.48	374896	6	-	-	-	-	-	-		

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.25-2: Test frequencies for NR operating band n25 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	1935	387000	1930.68	386136	0	15	4836	386910	18	0	0 (5)	10	
			Mid	1962.5	392500	1921.46	384292	102		4904	392410	18	0	0 (5)	214	
			High	1990	398000	1804.24	360848	504		4975	397970	14	0	1 (6)	1020	
		Uplink	Low	1855	371000	1850.68	370136	0	-	-	-	-	-	-	-	-
			Mid	1882.5	376500	1696.74	339348	504		-	-	-	-	-	-	-
			High	1910	382000	1903.52	380704	6		-	-	-	-	-	-	-
15	38	Downlink	Low	1937.5	387500	1930.66	386132	0	15	4837	386930	2	0	1 (6)	12	
			Mid	1962.5	392500	1918.94	383788	102		4898	391930	2	0	1 (6)	216	
			High	1987.5	397500	1799.22	359844	504		4962	396990	22	0	1 (6)	1020	
		Uplink	Low	1857.5	371500	1850.66	370132	0	-	-	-	-	-	-	-	
			Mid	1882.5	376500	1694.22	338844	504		-	-	-	-	-	-	
			High	1907.5	381500	1898.5	379700	6		-	-	-	-	-	-	
20	51	Downlink	Low	1940	388000	1930.82	386164	0	15	4835	386890	2	0	0 (5)	10	
			Mid	1962.5	392500	1916.6	383320	102		4892	391450	22	0	0 (5)	214	
			High	1985	397000	1794.38	358876	504		4949	396010	18	0	1 (6)	1020	
		Uplink	Low	1860	372000	1850.82	370164	0	-	-	-	-	-	-	-	
			Mid	1882.5	376500	1691.88	338376	504		-	-	-	-	-	-	
			High	1905	381000	1893.66	378732	6		-	-	-	-	-	-	
25	65	Downlink	Low	1942.5	388500	1930.8	386160	0	15	4836	386910	10	0	0 (5)	10	
			Mid	1962.5	392500	1914.08	382816	102		4886	390970	6	0	1 (6)	216	
			High	1982.5	396500	1789.36	357872	504		4939	395090	22	0	2 (7)	1022	
		Uplink	Low	1862.5	372500	1850.8	370160	0	-	-	-	-	-	-	-	
			Mid	1882.5	376500	1689.36	337872	504		-	-	-	-	-	-	
			High	1902.5	380500	1888.64	377728	6		-	-	-	-	-	-	
30	78	Downlink	Low	1945	389000	1930.96	386192	0	15	4837	386930	6	0	0 (5)	10	
			Mid	1962.5	392500	1911.74	382348	102		4880	390490	2	0	1 (6)	216	
			High	1980	396000	1784.52	356904	504		4926	394110	18	0	2 (7)	1022	
		Uplink	Low	1865	373000	1850.96	370192	0	-	-	-	-	-	-	-	
			Mid	1882.5	376500	1687.02	337404	504		-	-	-	-	-	-	
			High	1900	380000	1883.8	376760	6		-	-	-	-	-	-	
40	106	Downlink	Low	1950	390000	1930.92	386184	0	15	4836	386910	2	0	0 (5)	10	
			Mid	1962.5	392500	1906.7	381340	102		4868	389530	18	0	1 (6)	216	
			High	1975	395000	1774.48	354896	504		4900	391970	22	0	0 (5)	1018	
		Uplink	Low	1870	374000	1850.92	370184	0	-	-	-	-	-	-	-	
			Mid	1882.5	376500	1681.98	336396	504		-	-	-	-	-	-	
			High	1900	380000	1883.8	376760	6		-	-	-	-	-	-	

		High	1895	379000	1873.76	374752	6		-	-	-	-	-	-
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.													
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.													

Table 4.3.1.1.1.25-3: Test frequencies for NR operating band n25 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	1935	387000	1931.04	386208	0	15	-	386568
			Mid	1962.5	392500	1885.1	377020	102		-	392068
			High	1990	398000	1623.16	324632	504		-	397568
		Uplink	Low	1855	371000	1851.04	370208	0	-	-	-
			Mid	1882.5	376500	1515.66	303132	504		-	-
			High	1910	382000	1901.72	380344	6		-	-
15	18	Downlink	Low	1937.5	387500	1931.02	386204	0	15	-	386564
			Mid	1962.5	392500	1882.58	376516	102		-	391564
			High	1987.5	397500	1618.14	323628	504		-	396564
		Uplink	Low	1857.5	371500	1851.02	370204	0	-	-	-
			Mid	1882.5	376500	1513.14	302628	504		-	-
			High	1907.5	381500	1896.7	379340	6		-	-
20	24	Downlink	Low	1940	388000	1931.36	386272	0	15	-	386632
			Mid	1962.5	392500	1880.42	376084	102		-	391132
			High	1985	397000	1613.48	322696	504		-	395632
		Uplink	Low	1860	372000	1851.36	370272	0	-	-	-
			Mid	1882.5	376500	1510.98	302196	504		-	-
			High	1905	381000	1892.04	378408	6		-	-
25	31	Downlink	Low	1942.5	388500	1931.34	386268	0	15	-	386628
			Mid	1962.5	392500	1877.9	375580	102		-	390628
			High	1982.5	396500	1608.46	321692	504		-	394628
		Uplink	Low	1862.5	372500	1851.34	370268	0	-	-	-
			Mid	1882.5	376500	1508.46	301692	504		-	-
			High	1902.5	380500	1887.02	377404	6		-	-
30	38	Downlink	Low	1945	389000	1931.32	386264	0	15	-	386624
			Mid	1962.5	392500	1875.38	375076	102		-	390124
			High	1980	396000	1603.44	320688	504		-	393624
		Uplink	Low	1865	373000	1851.32	370264	0	-	-	-
			Mid	1882.5	376500	1505.94	301188	504		-	-
			High	1900	380000	1882	376400	6		-	-
40	51	Downlink	Low	1950	390000	1931.64	386328	0	15	-	386688
			Mid	1962.5	392500	1870.7	374140	102		-	389188
			High	1975	395000	1593.76	318752	504		-	391688
		Uplink	Low	1870	374000	1851.64	370328	0	-	-	-
			Mid	1882.5	376500	1501.26	300252	504		-	-
			High	1895	379000	1872.32	374464	6		-	-

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, *controlResourceSetZero*=0 and *searchSpaceZero* = 0 (TS 38.213 [22], clause 13).

4.3.1.1.1.26

Reference test frequencies for NR operating band n26

Table 4.3.1.1.1.26-1: Test frequencies for NR operating band n26 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink	Low	861.5	172300	859.25	171850	0	15	2153	172330	4	1	1 (2)	3
			Mid	876.5	175300	855.89	171178	102		2189	175210	0	0	0 (0)	102
			High	891.5	178300	798.53	159706	504		2228	178330	4	1	1 (2)	507
		Uplink	Low	816.5	163300	814.25	162850	0	-	-	-	-	-	-	-
			Mid	831.5	166300	738.53	147706	504		-	-	-	-	-	-
			High	846.5	169300	843.17	168634	6		-	-	-	-	-	-
10	52	Downlink	Low	864	172800	859.32	171864	0	15	2154	172350	6	1	1 (2)	3
			Mid	876.5	175300	853.46	170692	102		2183	174730	2	0	0 (0)	102
			High	889	177800	793.6	158720	504		2218	177410	2	1	2 (4)	509
		Uplink	Low	819	163800	814.32	162864	0	-	-	-	-	-	-	-
			Mid	831.5	166300	736.1	147220	504		-	-	-	-	-	-
			High	844	168800	838.24	167648	6		-	-	-	-	-	-
15	79	Downlink	Low	866.5	173300	859.39	171878	0	15	2155	172370	8	1	1 (2)	3
			Mid	876.5	175300	851.03	170206	102		2177	174250	4	0	0 (0)	102
			High	886.5	177300	788.67	157734	504		2205	176430	4	1	2 (4)	509
		Uplink	Low	821.5	164300	814.39	162878	0	-	-	-	-	-	-	-
			Mid	831.5	166300	733.67	146734	504		-	-	-	-	-	-
			High	841.5	168300	833.31	166662	6		-	-	-	-	-	-
20	106	Downlink	Low	869	173800	859.46	171892	0	15	2153	172330	2	0	1 (2)	2
			Mid	876.5	175300	848.6	169720	102		2171	173770	6	0	0 (0)	102
			High	884	176800	783.74	156748	504		2192	175450	6	1	2 (4)	509
		Uplink	Low	824	164800	814.46	162892	0	-	-	-	-	-	-	-
			Mid	831.5	166300	731.24	146248	504		-	-	-	-	-	-
			High	839	167800	828.38	165676	6		-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.26-2: Test frequencies for NR operating band n26 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	864	172800	859.68	171936	0	15	2160	172830	10	0	2 (7)	14	
			Mid	876.5	175300	835.46	167092	102		2189	175210	18	0	0 (5)	214	
			High	889	177800	703.24	140648	504		2224	177890	6	0	3 (8)	1024	
		Uplink	Low	819	163800	814.68	162936	0	-	-	-	-	-	-	-	-
			Mid	831.5	166300	645.74	129148	504		-	-	-	-	-	-	-
			High	844	168800	837.52	167504	6		-	-	-	-	-	-	-
15	38	Downlink	Low	866.5	173300	859.66	171932	0	15	2161	172850	18	0	2 (7)	14	
			Mid	876.5	175300	832.94	166588	102		2183	174730	2	0	1 (6)	216	
			High	886.5	177300	698.22	139644	504		2208	176670	6	0	0 (5)	1018	
		Uplink	Low	821.5	164300	814.66	162932	0	-	-	-	-	-	-	-	-
			Mid	831.5	166300	643.22	128644	504		-	-	-	-	-	-	-
			High	841.5	168300	832.5	166500	6		-	-	-	-	-	-	-
20	51	Downlink	Low	869	173800	859.82	171964	0	15	2159	172810	18	0	1 (6)	12	
			Mid	876.5	175300	830.6	166120	102		2177	174250	22	0	0 (5)	214	
			High	884	176800	693.38	138676	504		2195	175690	2	0	0 (5)	1018	
		Uplink	Low	824	164800	814.82	162964	0	-	-	-	-	-	-	-	-
			Mid	831.5	166300	640.88	128176	504		-	-	-	-	-	-	-
			High	839	167800	827.66	165532	6		-	-	-	-	-	-	-
Note 1:		The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:		The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

4.3.1.1.1.27 FFS

4.3.1.1.1.28 Reference test frequencies for NR operating band n28

Table 4.3.1.1.1.28-1: Test frequencies for NR operating band n28 and SCS 15 kHz when not used in EN-DC configuration DC_21A_n28A or in any EN-DC configuration of a higher order EN-DC configuration including DC_21A_n28A

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 3	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	760.5	152100	758.25	151650	0	15	1902	152190	0	1	2 (4)	5	
			Mid	780.5	156100	759.89	151978	102		1949	156010	0	0	0 (0)	102	
			High	800.5	160100	707.53	141506	504		2002	160130	4	1	1 (2)	507	
		Uplink	Low	705.5	141100	703.25	140650	0	-	-	-	-	-	-	-	-
			Mid	725.5	145100	632.53	126506	504		-	-	-	-	-	-	-
			High	745.5	149100	742.17	148434	6		-	-	-	-	-	-	-
10	52	Downlink	Low	763	152600	758.32	151664	0	15	1903	152210	2	1	2 (4)	5	
			Mid	780.5	156100	757.46	151492	102		1943	155530	2	0	0 (0)	102	
			High	798	159600	702.6	140520	504		1989	159150	6	1	1 (2)	507	
		Uplink	Low	708	141600	703.32	140664	0	-	-	-	-	-	-	-	
			Mid	725.5	145100	630.1	126020	504		-	-	-	-	-	-	
			High	743	148600	737.24	147448	6		-	-	-	-	-	-	
15	79	Downlink	Low	765.5	153100	758.39	151678	0	15	1901	152170	8	1	1 (2)	3	
			Mid	780.5	156100	755.03	151006	102		1937	155050	4	0	0 (0)	102	
			High	795.5	159100	697.67	139534	504		1976	158170	8	1	1 (2)	507	
		Uplink	Low	710.5	142100	703.39	140678	0	-	-	-	-	-	-	-	
			Mid	725.5	145100	627.67	125534	504		-	-	-	-	-	-	
			High	740.5	148100	732.31	146462	6		-	-	-	-	-	-	
20 (Note 2)	106	Downlink	Low	768	153600	758.46	151692	0	15	1902	152190	10	1	1 (2)	3	
			Mid	783	156600	755.1	151020	102		1938	155070	6	0	0 (0)	102	
			High	793	158600	692.74	138548	504		1966	157250	6	1	2 (4)	509	
		Uplink	Low	713	142600	703.46	140692	0	-	-	-	-	-	-	-	
			Mid	728	145600	627.74	125548	504		-	-	-	-	-	-	
			High	738	147600	727.38	145476	6		-	-	-	-	-	-	
30 (Note 4)	160	Downlink	Low	773	154600	758.6	151720	0	15	1901	152170	6	0	1 (2)	2	
			Mid													
			High	788	157600	682.88	136576	504		1940	155290	10	1	2 (4)	509	
		Uplink	Low	718	143600	703.6	140720	0	-	-	-	-	-	-	-	
High	733		146600	717.52	143504	6	-	-		-	-	-	-			

- Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.
- Note 2: Carrier centre frequency moved for Mid Range and CBW=20 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1.
- Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.
- Note 4: No carrier centre frequency specified for Mid Range and CBW=30 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1. For test cases specifying Mid range and CBW=30 MHz to be tested, use Low range and CBW=30 MHz instead.

Table 4.3.1.1.28-1A: Test frequencies for NR operating band n28 and SCS 15 kHz when used in EN-DC configuration DC_21A_n28A or in any EN-DC configuration of a higher order EN-DC configuration including DC_21A_n28A

CBW [MHz]	carrier bandwidth [PRBs]	Range		Carrier centre [MHz] (Note 5)	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPointA [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 3	CORE SET#0 Index (Offset [RBs]) Note 1	offsetToPointA (SIB1) [PRBs] Note 1
5	25	Downlink	Low	785.5	157100	783.25	156650	0	15	1963	157010	0	0	0 (0)	0
			Mid	790.5	158100	697.53	139506	504	1977	158190	0	1	2 (4)	509	
		Uplink	Low	730.5	146100	728.25	145650	0	-	-	-	-	-	-	-
			High	735.5	147100	732.17	146434	6	-	-	-	-	-	-	-
10	52	Downlink	Low	788	157600	764.96	152992	102	15	1964	157210	2	1	2 (4)	107
		Uplink	Low	733	146600	[637.6]	[127520]	[504]	-	-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: Carrier centre frequency moved for Mid Range and CBW=20 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1.

Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 4: No carrier centre frequency specified for Mid Range and CBW=30 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1. For test cases specifying Mid range and CBW=30 MHz to be tested, use Low range and CBW=30 MHz instead.

Note 5: The frequency range in band n28 is restricted for this band combination to 728 - 738 MHz for the UL and 783 - 793 MHz for the DL. This restriction applies also for these band combinations when applicable EN-DC configuration is part of a higher order EN-DC configuration. (Reference: TS 38.101-3 [9], Table 5.5B.4.1-1 for DC_21A_n28 and Note 17)

Table 4.3.1.1.1.28-2: Test frequencies for NR operating band n28 and SCS 30 kHz when not used in EN-DC configuration DC_21A_n28A or in any EN-DC configuration of a higher order EN-DC configuration including DC_21A_n28A

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 3	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	763	152600	758.68	151736	0	15	1909	152690	6	0	3 (8)	16	
			Mid	780.5	156100	739.46	147892	102		1949	156010	18	0	0 (5)	214	
			High	798	159600	612.24	122448	504		1995	159630	10	0	2 (7)	1022	
		Uplink	Low	708	141600	703.68	140736	0	-	-	-	-	-	-	-	-
			Mid	725.5	145100	539.74	107948	504		-	-	-	-	-	-	-
			High	743	148600	736.52	147304	6		-	-	-	-	-	-	-
15	38	Downlink	Low	765.5	153100	758.66	151732	0	15	1907	152650	18	0	2 (7)	14	
			Mid	780.5	156100	736.94	147388	102		1943	155530	2	0	1 (6)	216	
			High	795.5	159100	607.22	121444	504		1982	158650	18	0	2 (7)	1022	
		Uplink	Low	710.5	142100	703.66	140732	0	-	-	-	-	-	-	-	-
			Mid	725.5	145100	537.22	107444	504		-	-	-	-	-	-	-
			High	740.5	148100	731.5	146300	6		-	-	-	-	-	-	-
20 (Note 2)	51	Downlink	Low	768	153600	758.82	151764	0	15	1908	152670	14	0	2 (7)	14	
			Mid	783	156600	737.1	147420	102		1944	155550	22	0	0 (5)	214	
			High	793	158600	602.38	120476	504		1969	157490	2	0	0 (5)	1018	
		Uplink	Low	713	142600	703.82	140764	0	-	-	-	-	-	-	-	-
			Mid	728	145600	537.38	107476	504		-	-	-	-	-	-	-
			High	738	147600	726.66	145332	6		-	-	-	-	-	-	-
30 (Note 4)	78	Downlink	Low Mid	773	154600	758.96	151792	0	15	1907	152650	22	0	1 (6)	12	
			High	788	157600	592.52	118504	504		1943	155530	6	0	0 (5)	1018	
			Low Mid	718	143600	703.96	140792	0		-	-	-	-	-	-	-
		High	733	146600	716.8	143360	6	-	-		-	-	-	-		

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: Carrier centre frequency moved for Mid Range and CBW=20 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1.

Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET#0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 4: No carrier centre frequency specified for Mid Range and CBW=30 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1.

Table 4.3.1.1.1.28-2A: Test frequencies for NR operating band n28 and SCS 30 kHz when used in EN-DC configuration DC_21A_n28A or in any EN-DC configuration of a higher order EN-DC configuration including DC_21A_n28A

CBW [MHz]	carrierBandwidth [PRBs]	Range		Carrier centre [MHz] Note 5	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPointA [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 3	CORE SET#0 Index (Offset [RBs]) Note 1	offsetToPointA (SIB1) [PRBs] Note 1
10	24	Downlink	Low Mid High	788	157600	746.96	149392	102	[30]	1970	157690	6	0	3 (8)	220
		Uplink	Low Mid High	733	146600	[547.24]	[109448]	[504]	-	-	-	-	-	-	-
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: Carrier centre frequency moved for Mid Range and CBW=20 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1.</p> <p>Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p> <p>Note 4: No carrier centre frequency specified for Mid Range and CBW=30 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1. For test cases specifying Mid range and CBW=30 MHz to be tested, use Low range and CBW=30 MHz instead.</p> <p>Note 5: The frequency range in band n28 is restricted for this band combination to 728 - 738 MHz for the UL and 783 - 793 MHz for the DL. This restriction applies also for these band combinations when applicable EN-DC configuration is part of a higher order EN-DC configuration. (Reference: TS 38.101-3 [9], Table 5.5B.4.1-1 for DC_21A_n28 and Note 17)</p>															

4.3.1.1.1.29 Reference test frequencies for NR operating band n29 (SDL)

Table 4.3.1.1.1.29-1: Test frequencies for NR operating band n29 and SCS 15 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
5	25	Downlink	Low	719.5	143900	717.25	143450	0	15	-	143810
			Mid	722.5	144500	701.89	140378	102		-	144410
			High	725.5	145100	632.53	126506	504		-	145010
10	52	Downlink	Low	722	144400	717.32	143464	0	15	-	143824
			Mid	722.5	144500	699.46	139892	102		-	143924
			High	723	144600	627.6	125520	504		-	144024
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, $controlResourceSetZero=0$ and $searchSpaceZero=0$ (TS 38.213 [22], clause 13).											

Table 4.3.1.1.1.29-2: Test frequencies for NR operating band n29 and SCS 30 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	24	Downlink	Low	722	144400	717.68	143536	0	15	-	143896
			Mid	722.5	144500	681.46	136292	102		-	143996
			High	723	144600	537.24	107448	504		-	144096
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, $controlResourceSetZero=0$ and $searchSpaceZero=0$ (TS 38.213 [22], clause 13).											

4.3.1.1.1.30

Reference test frequencies for NR operating band n30

Table 4.3.1.1.1.30-1: Test frequencies for NR operating band n30 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	2352.5	470500	2350.25	470050	0	15	5879	470410	0	0	0 (0)	0	
			Mid	2355	471000	2334.39	466878	102		5886	470910	0	0	0 (0)	102	
			High	2357.5	471500	2264.53	452906	504		5893	471410	0	0	0 (0)	504	
		Uplink	Low	2307.5	461500	2305.25	461050	0	-	-	-	-	-	-	-	-
			Mid	2310	462000	2217.03	443406	504		-	-	-	-	-	-	-
			High	2312.5	462500	2309.17	461834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	2355	471000	2350.32	470064	0	15	5880	470430	2	0	0 (0)	0	
			Mid	2355	471000	2331.96	466392	102		5880	470430	2	0	0 (0)	102	
			High	2355	471000	2259.6	451920	504		5880	470430	2	0	0 (0)	504	
		Uplink	Low	2310	462000	2305.32	461064	0	-	-	-	-	-	-	-	-
			Mid													
			High													

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.30-2: Test frequencies for NR operating band n30 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	2355	471000	2350.68	470136	0	15	5886	470910	18	0	0 (5)	10	
			Mid	2355	471000	2313.96	462792	102		5886	470910	18	0	0 (5)	214	
			High	2355	471000	2169.24	433848	504		5886	470910	18	0	0 (5)	1018	
		Uplink	Low	2310	462000	2305.68	461136	0	-	-	-	-	-	-	-	
			Mid													
			High													
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p>																

4.3.1.1.1.31 to 4.3.1.1.1.33 FFS

4.3.1.1.1.34 Reference test frequencies for NR operating band n34

Table 4.3.1.1.1.34-1: Test frequencies for NR operating band n34 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink & Uplink	Low	2012.5	402500	2010.25	402050	0	15	5032	402530	4	1	1 (2)	3
			Mid	2017.5	403500	1996.89	399378	102		5043	403470	8	1	0 (0)	103
			High	2022.5	404500	1929.53	385906	504		5054	404410	0	0	0 (0)	504
10	52	Downlink & Uplink	Low	2015	403000	2010.32	402064	0	30	5036	402970	2	3	0 (2)	5
			Mid	2017.5	403500	1994.46	398892	102		5043	403470	2	3	0 (2)	107
			High	2020	404000	1924.6	384920	504		5050	403970	2	3	0 (2)	509
15	79	Downlink & Uplink	Low	2017.5	403500	2010.39	402078	0	30	5037	402990	4	3	0 (2)	5
			Mid												
			High												

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.34-2: Test frequencies for NR operating band n34 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	2015	403000	2010.68	402136	0	30	5036	402970	14	0	1 (1)	2
			Mid	2017.5	403500	1976.46	395292	102		5043	403470	14	0	1 (1)	206
			High	2020	404000	1834.24	366848	504		5050	403970	14	0	1 (1)	1010
15	38	Downlink & Uplink	Low	2017.5	403500	2010.66	402132	0	30	5037	402990	22	0	1 (1)	2
			Mid												
			High												

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.34-3: Test frequencies for NR operating band n34 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	2015	403000	2011.04	402208	0	15	-	402568
			Mid	2017.5	403500	1940.1	388020	102		-	403068
			High	2020	404000	1653.16	330632	504		-	403568
15	18	Downlink & Uplink	Low	2017.5	403500	2011.02	402204	0	15	-	402564
			Mid								
			High								

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).

4.3.1.1.1.35 to 4.3.1.1.1.37 FFS

4.3.1.1.1.38 Reference test frequencies for NR operating band n38

Table 4.3.1.1.1.38-1: Test frequencies for NR operating band n38 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink & Uplink	Low	2572.5	514500	2570.25	514050	0	15	6432	514590	0	1	2 (4)	5
			Mid	2592.5	518500	2571.89	514378	102		6479	518410	0	0	0 (0)	102
			High	2617.5	523500	2524.53	504906	504		6543	523470	8	1	0 (0)	505
10	52	Downlink & Uplink	Low	2575	515000	2570.32	514064	0	30	6439	515090	6	2	1 (6)	8
			Mid	2595	519000	2571.96	514392	102		6486	518910	6	1	0 (2)	105
			High	2615	523000	2519.6	503920	504		6536	522970	2	3	0 (2)	509
15	79	Downlink & Uplink	Low	2577.5	515500	2570.39	514078	0	30	6437	515050	0	1	1 (6)	7
			Mid	2595	519000	2569.53	513906	102		6480	518430	8	1	0 (2)	105
			High	2612.5	522500	2514.67	502934	504		6526	522050	0	1	1 (6)	511
20	106	Downlink & Uplink	Low	2580	516000	2570.46	514092	0	30	6438	515070	2	1	1 (6)	7
			Mid	2595	519000	2567.1	513420	102		6474	517950	10	1	0 (2)	105
			High	2610	522000	2509.74	501948	504		6513	521070	2	1	1 (6)	511
25	133	Downlink & Uplink	Low	2582.5	516500	2570.53	514106	0	30	6439	515090	4	1	1 (6)	7
			Mid	2595	519000	2564.67	512934	102		6468	517470	0	2	0 (2)	106
			High	2607.5	521500	2504.81	500962	504		6500	520090	4	1	1 (6)	511
30	160	Downlink & Uplink	Low	2585	517000	2570.6	514120	0	30	6437	515050	10	3	0 (2)	5
			Mid	2595	519000	2562.24	512448	102		6462	516990	2	2	0 (2)	106
			High	2605	521000	2499.88	499976	504		6487	518930	6	0	0 (2)	506
40	216	Downlink & Uplink	Low	2590	518000	2570.56	514112	0	30	6439	515090	2	1	1 (6)	7
			Mid	2595	519000	2557.2	511440	102		6450	516030	6	3	0 (2)	107
			High	2600	520000	2489.84	497968	504		6461	516970	10	1	0 (2)	507

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 for SSB_SCS = 15kHz and Table 13-3 for SSB_SCS=30kHz in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcc-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.38-2: Test frequencies for NR operating band n38 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink & Uplink	Low	2575	515000	2570.68	514136	0	30	6439	515090	6	0	3 (3)	6
			Mid	2595	519000	2553.96	510792	102		6486	518910	18	0	0 (0)	204
			High	2615	523000	2429.24	485848	504		6536	522970	14	0	1 (1)	1010
15	38	Downlink & Uplink	Low	2577.5	515500	2570.66	514132	0	30	6437	515050	18	0	2 (2)	4
			Mid	2595	519000	2551.44	510288	102		6480	518430	2	0	1 (1)	206
			High	2612.5	522500	2424.22	484844	504		6526	522050	18	0	2 (2)	1012
20	51	Downlink & Uplink	Low	2580	516000	2570.82	514164	0	30	6438	515070	14	0	2 (2)	4
			Mid	2595	519000	2549.1	509820	102		6474	517950	22	0	0 (0)	204
			High	2610	522000	2419.38	483876	504		6513	521070	14	0	2 (2)	1012
25	65	Downlink & Uplink	Low	2582.5	516500	2570.8	514160	0	30	6439	515090	22	0	2 (2)	4
			Mid	2595	519000	2546.58	509316	102		6468	517470	6	0	1 (1)	206
			High	2607.5	521500	2414.36	482872	504		6500	520090	22	0	2 (2)	1012
30	78	Downlink & Uplink	Low	2585	517000	2570.96	514192	0	30	6437	515050	22	0	1 (1)	2
			Mid	2595	519000	2544.24	508848	102		6462	516990	2	0	1 (1)	206
			High	2605	521000	2409.52	481904	504		6487	518930	6	0	0 (0)	1008
40	106	Downlink & Uplink	Low	2590	518000	2570.92	514184	0	30	6439	515090	14	0	2 (2)	4
			Mid	2595	519000	2539.2	507840	102		6450	516030	18	0	1 (1)	206
			High	2600	520000	2399.48	479896	504		6461	516970	22	0	0 (0)	1008
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

Table 4.3.1.1.1.38-3: Test frequencies for NR operating band n38 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetToCarrier [PRBs]	SS block SCS [kHz]	GSCN	absoluteFrequency SSB [ARFCN]	
10	11	Downlink & Uplink	Low	2575	515000	2571.04	514208	0	30	-	514928
			Mid	2595	519000	2517.6	503520	102		-	518928
			High	2615	523000	2248.16	449632	504		-	522928
15	18	Downlink & Uplink	Low	2577.5	515500	2571.02	514204	0	30	-	514924
			Mid	2595	519000	2515.08	503016	102		-	518424
			High	2612.5	522500	2243.14	448628	504		-	521924
20	24	Downlink & Uplink	Low	2580	516000	2571.36	514272	0	30	-	514992
			Mid	2595	519000	2512.92	502584	102		-	517992
			High	2610	522000	2238.48	447696	504		-	520992
25	31	Downlink & Uplink	Low	2582.5	516500	2571.34	514268	0	30	-	514988
			Mid	2595	519000	2510.4	502080	102		-	517488
			High	2607.5	521500	2233.46	446692	504		-	519988
30	38	Downlink & Uplink	Low	2585	517000	2571.32	514264	0	30	-	514984
			Mid	2595	519000	2507.88	501576	102		-	516984
			High	2605	521000	2228.44	445688	504		-	518984
40	51	Downlink & Uplink	Low	2590	518000	2571.64	514328	0	15	-	514688
			Mid	2595	519000	2503.2	500640	102		-	515688
			High	2600	520000	2218.76	443752	504		-	516688
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, <i>controlResourceSetZero</i> =0 and <i>searchSpaceZero</i> = 0 (TS 38.213 [22], clause 13).											

4.3.1.1.1.39

Reference test frequencies for NR operating band n39

Table 4.3.1.1.1.39-1: Test frequencies for NR operating band n39 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink & Uplink	Low	1882.5	376500	1880.25	376050	0	15	4707	376590	0	1	2 (4)	5
			Mid	1899.1	379820	1878.49	375698	102		4747	379730	0	0	0 (0)	102
			High	1917.5	383500	1824.53	364906	504		4793	383530	4	1	1 (2)	507
10	52	Downlink & Uplink	Low	1885	377000	1880.32	376064	0	30	4714	377090	6	2	1 (6)	8
			Mid	1900	380000	1876.96	375392	102		4750	379970	2	3	0 (2)	107
			High	1915	383000	1819.6	363920	504		4789	383090	6	2	1 (6)	512
15	79	Downlink & Uplink	Low	1887.5	377500	1880.39	376078	0	30	4712	377050	0	1	1 (6)	7
			Mid	1900	380000	1874.53	374906	102		4744	379490	4	3	0 (2)	107
			High	1912.5	382500	1814.67	362934	504		4773	381870	0	0	0 (2)	506
20	106	Downlink & Uplink	Low	1890	378000	1880.46	376092	0	30	4713	377070	2	1	1 (6)	7
			Mid	1900	380000	1872.1	374420	102		4738	379010	6	3	0 (2)	107
			High	1910	382000	1809.74	361948	504		4760	380890	2	0	0 (2)	506
25	133	Downlink & Uplink	Low	1892.5	378500	1880.53	376106	0	30	4714	377090	4	1	1 (6)	7
			Mid	1900	380000	1869.67	373934	102		4732	378530	8	3	0 (2)	107
			High	1907.5	381500	1804.81	360962	504		4750	379970	0	2	0 (2)	508
30	160	Downlink & Uplink	Low	1895	379000	1880.6	376120	0	30	4712	377050	10	3	0 (2)	5
			Mid	1900	380000	1867.24	373448	102		4726	378050	10	3	0 (2)	107
			High	1905	381000	1799.88	359976	504		4737	378990	2	2	0 (2)	508
40	216	Downlink & Uplink	Low	1900	380000	1880.56	376112	0	30	4714	377090	2	1	1 (6)	7
			Mid												
			High												

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 for SSB_SCS = 15kHz and Table 13-3 for SSB_SCS=30kHz in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET}0\text{-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.39-2: Test frequencies for NR operating band n39 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	1885	377000	1880.68	376136	0	30	4714	377090	6	0	3 (3)	6
			Mid	1900	380000	1858.96	371792	102		4750	379970	14	0	1 (1)	206
			High	1915	383000	1729.24	345848	504		4789	383090	6	0	3 (3)	1014
15	38	Downlink & Uplink	Low	1887.5	377500	1880.66	376132	0	30	4712	377050	18	0	2 (2)	4
			Mid	1900	380000	1856.44	371288	102		4744	379490	22	0	1 (1)	206
			High	1912.5	382500	1724.22	344844	504		4773	381870	6	0	0 (0)	1008
20	51	Downlink & Uplink	Low	1890	378000	1880.82	376164	0	30	4713	377070	14	0	2 (2)	4
			Mid	1900	380000	1854.1	370820	102		4738	379010	18	0	1 (1)	206
			High	1910	382000	1719.38	343876	504		4760	380890	2	0	0 (0)	1008
25	65	Downlink & Uplink	Low	1892.5	378500	1880.8	376160	0	30	4714	377090	22	0	2 (2)	4
			Mid	1900	380000	1851.58	370316	102		4732	378530	2	0	2 (2)	208
			High	1907.5	381500	1714.36	342872	504		4750	379970	6	0	1 (1)	1010
30	78	Downlink & Uplink	Low	1895	379000	1880.96	376192	0	30	4712	377050	22	0	1 (1)	2
			Mid	1900	380000	1849.24	369848	102		4726	378050	22	0	1 (1)	206
			High	1905	381000	1709.52	341904	504		4737	378990	2	0	1 (1)	1010
40	106	Downlink & Uplink	Low	1900	380000	1880.92	376184	0	30	4714	377090	14	0	2 (2)	4
			Mid												
			High												

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.39-3: Test frequencies for NR operating band n39 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	1885	377000	1881.04	376208	0	30	-	376928
			Mid	1900	380000	1822.6	364520	102		-	379928
			High	1915	383000	1548.16	309632	504		-	382928
15	18	Downlink & Uplink	Low	1887.5	377500	1881.02	376204	0	30	-	376924
			Mid	1900	380000	1820.08	364016	102		-	379424
			High	1912.5	382500	1543.14	308628	504		-	381924
20	24	Downlink & Uplink	Low	1890	378000	1881.36	376272	0	30	-	376992
			Mid	1900	380000	1817.92	363584	102		-	378992
			High	1910	382000	1538.48	307696	504		-	380992
25	31	Downlink & Uplink	Low	1892.5	378500	1881.34	376268	0	30	-	376988
			Mid	1900	380000	1815.4	363080	102		-	378488
			High	1907.5	381500	1533.46	306692	504		-	379988
30	38	Downlink & Uplink	Low	1895	379000	1881.32	376264	0	30	-	376984
			Mid	1900	380000	1812.88	362576	102		-	377984
			High	1905	381000	1528.44	305688	504		-	378984
40	51	Downlink & Uplink	Low	1900	380000	1881.64	376328	0	30	-	377048
			Mid								
			High								

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, $controlResourceSetZero=0$ and $searchSpaceZero=0$ (TS 38.213 [22], clause 13).

4.3.1.1.1.40

Reference test frequencies for NR operating band n40

Table 4.3.1.1.1.40-1: Test frequencies for NR operating band n40 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink & Uplink	Low	2302.5	460500	2300.25	460050	0	(Note 3)	-	460770	-	-	-	-
			Mid	2350	470000	2329.39	465878	102		-	470270	-	-	-	-
			High	2397.5	479500	2304.53	460906	504		-	479770	-	-	-	-
10	52	Downlink & Uplink	Low	2305	461000	2300.32	460064	0	30	5764	461090	6	2	1 (6)	8
			Mid	2350	470000	2326.96	465392	102		5875	469970	2	3	0 (2)	107
			High	2395	479000	2299.6	459920	504		5989	479090	6	2	1 (6)	512
15	79	Downlink & Uplink	Low	2307.5	461500	2300.39	460078	0	30	5762	461050	0	1	1 (6)	7
			Mid	2350	470000	2324.53	464906	102		5869	469490	4	3	0 (2)	107
			High	2392.5	478500	2294.67	458934	504		5973	477870	0	0	0 (2)	506
20	106	Downlink & Uplink	Low	2310	462000	2300.46	460092	0	30	5763	461070	2	1	1 (6)	7
			Mid	2350	470000	2322.1	464420	102		5863	469010	6	3	0 (2)	107
			High	2390	478000	2289.74	457948	504		5960	476890	2	0	0 (2)	506
25	133	Downlink & Uplink	Low	2312.5	462500	2300.53	460106	0	30	5764	461090	4	1	1 (6)	7
			Mid	2350	470000	2319.67	463934	102		5857	468530	8	3	0 (2)	107
			High	2387.5	477500	2284.81	456962	504		5950	475970	0	2	0 (2)	508
30	160	Downlink & Uplink	Low	2315	463000	2300.6	460120	0	30	5762	461050	10	3	0 (2)	5
			Mid	2350	470000	2317.24	463448	102		5851	468050	10	3	0 (2)	107
			High	2385	477000	2279.88	455976	504		5937	474990	2	2	0 (2)	508
40	216	Downlink & Uplink	Low	2320	464000	2300.56	460112	0	30	5764	461090	2	1	1 (6)	7
			Mid	2350	470000	2312.2	462440	102		5839	467090	2	1	1 (6)	109
			High	2380	476000	2269.84	453968	504		5914	473090	2	1	1 (6)	511
50	270	Downlink & Uplink	Low	2325	465000	2300.7	460140	0	30	5763	461070	10	3	0 (2)	5
			Mid	2350	470000	2307.34	461468	102		5827	466130	6	1	1 (6)	109
			High	2375	475000	2259.98	451996	504		5888	471130	6	1	1 (6)	511

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta f_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 3: No SS/PBCH block fits within the channel bandwidth. The channel bandwidth can only be used as SCell

Table 4.3.1.1.1.40-2: Test frequencies for NR operating band n40 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	2305	461000	2300.68	460136	0	30	5764	461090	6	0	3 (3)	6
			Mid	2350	470000	2308.96	461792	102		5875	469970	14	0	1 (1)	206
			High	2395	479000	2209.24	441848	504		5989	479090	6	0	3 (3)	1014
15	38	Downlink & Uplink	Low	2307.5	461500	2300.66	460132	0	30	5762	461050	18	0	2 (2)	4
			Mid	2350	470000	2306.44	461288	102		5869	469490	22	0	1 (1)	206
			High	2392.5	478500	2204.22	440844	504		5973	477870	6	0	0 (0)	1008
20	51	Downlink & Uplink	Low	2310	462000	2300.82	460164	0	30	5763	461070	14	0	2 (2)	4
			Mid	2350	470000	2304.1	460820	102		5863	469010	18	0	1 (1)	206
			High	2390	478000	2199.38	439876	504		5960	476890	2	0	0 (0)	1008
25	65	Downlink & Uplink	Low	2312.5	462500	2300.8	460160	0	30	5764	461090	22	0	2 (2)	4
			Mid	2350	470000	2301.58	460316	102		5857	468530	2	0	2 (2)	208
			High	2387.5	477500	2194.36	438872	504		5950	475970	6	0	1 (1)	1010
30	78	Downlink & Uplink	Low	2315	463000	2300.96	460192	0	30	5762	461050	22	0	1 (1)	2
			Mid	2350	470000	2299.24	459848	102		5851	468050	22	0	1 (1)	206
			High	2385	477000	2189.52	437904	504		5937	474990	2	0	1 (1)	1010
40	106	Downlink & Uplink	Low	2320	464000	2300.92	460184	0	30	5764	461090	14	0	2 (2)	4
			Mid	2350	470000	2294.2	458840	102		5839	467090	14	0	2 (2)	208
			High	2380	476000	2179.48	435896	504		5914	473090	14	0	2 (2)	1012
50	133	Downlink & Uplink	Low	2325	465000	2301.06	460212	0	30	5763	461070	22	0	1 (1)	2
			Mid	2350	470000	2289.34	457868	102		5827	466130	18	0	2 (2)	208
			High	2375	475000	2169.62	433924	504		5888	471130	18	0	2 (2)	1012
60	162	Downlink & Uplink	Low	2330	466000	2300.84	460168	0	30	5762	461050	6	0	2 (2)	4
			Mid	2350	470000	2284.12	456824	102		5812	464930	14	0	0 (0)	204
			High	2370	474000	2159.4	431880	504		5862	468990	10	0	1 (1)	1010
80	217	Downlink & Uplink	Low	2340	468000	2300.94	460188	0	30	5763	461070	6	0	2 (2)	4
			Mid	2350	470000	2274.22	454844	102		5788	463010	10	0	1 (1)	206
			High	2360	472000	2139.5	427900	504		5813	465130	2	0	3 (3)	1014

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.40-3: Test frequencies for NR operating band n40 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	2305	461000	2301.04	460208	0	30	-	460928
			Mid	2350	470000	2272.6	454520	102		-	469928
			High	2395	479000	2028.16	405632	504		-	478928
15	18	Downlink & Uplink	Low	2307.5	461500	2301.02	460204	0	30	-	460924
			Mid	2350	470000	2270.08	454016	102		-	469424
			High	2392.5	478500	2023.14	404628	504		-	477924
20	24	Downlink & Uplink	Low	2310	462000	2301.36	460272	0	30	-	460992
			Mid	2350	470000	2267.92	453584	102		-	468992
			High	2390	478000	2018.48	403696	504		-	476992
25	31	Downlink & Uplink	Low	2312.5	462500	2301.34	460268	0	30	-	460988
			Mid	2350	470000	2265.4	453080	102		-	468488
			High	2387.5	477500	2013.46	402692	504		-	475988
30	38	Downlink & Uplink	Low	2315	463000	2301.32	460264	0	30	-	460984
			Mid	2350	470000	2262.88	452576	102		-	467984
			High	2385	477000	2008.44	401688	504		-	474984
40	51	Downlink & Uplink	Low	2320	464000	2301.64	460328	0	30	-	461048
			Mid	2350	470000	2258.2	451640	102		-	467048
			High	2380	476000	1998.76	399752	504		-	473048
50	65	Downlink & Uplink	Low	2325	465000	2301.6	460320	0	30	-	461040
			Mid	2350	470000	2253.16	450632	102		-	466040
			High	2375	475000	1988.72	397744	504		-	471040
60	79	Downlink & Uplink	Low	2330	466000	2301.56	460312	0	30	-	461032
			Mid	2350	470000	2248.12	449624	102		-	465032
			High	2370	474000	1978.68	395736	504		-	469032
80	107	Downlink & Uplink	Low	2340	468000	2301.48	460296	0	30	-	461016
			Mid	2350	470000	2238.04	447608	102		-	463016
			High	2360	472000	1958.6	391720	504		-	465016

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, $controlResourceSetZero=0$ and $searchSpaceZero=0$ (TS 38.213 [22], clause 13).

4.3.1.1.1.41 Reference test frequencies for NR operating band n41

Table 4.3.1.1.1.41-1: Test frequencies for NR operating band n41, SCS 15 kHz and ΔF_{Raster} 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	52	Downlink & Uplink	Low	2501.01	500202	2496.33	499266	0	15	6246	499710	4	0	1 (2)	2
			Mid	2593.005	518601	2569.965	513993	102		6477	518190	7	0	2 (4)	106
			High	2685	537000	2589.6	517920	504		6705	536430	2	0	0 (0)	504
15	79	Downlink & Uplink	Low	2503.5	500700	2496.39	499278	0	15	6246	499710	0	0	1 (2)	2
			Mid	2593.005	518601	2567.535	513507	102		6471	517710	9	0	2 (4)	106
			High	2682.495	536499	2584.665	516933	504		6693	535470	11	0	0 (0)	504
20	106	Downlink & Uplink	Low	2506.005	501201	2496.465	499293	0	15	6246	499710	7	1	0 (0)	1
			Mid	2593.005	518601	2565.105	513021	102		6465	517230	11	0	2 (4)	106
			High	2679.99	535998	2579.73	515946	504		6681	534510	8	1	0 (0)	505
30	160	Downlink & Uplink	Low	2511	502200	2496.6	499320	0	15	6246	499710	10	0	0 (0)	0
			Mid	2593.005	518601	2560.245	512049	102		6453	516270	3	1	2 (4)	107
			High	2674.995	534999	2569.875	513975	504		6657	532590	1	1	1 (2)	507
40	216	Downlink & Uplink	Low	2516.01	503202	2496.57	499314	0	15	6246	499710	0	1	0 (0)	1
			Mid	2593.005	518601	2555.205	511041	102		6441	515310	7	2	2 (4)	108
			High	2670	534000	2559.84	511968	504		6633	530670	6	1	2 (4)	509
50	270	Downlink & Uplink	Low	2521.005	504201	2496.705	499341	0	15	6246	499710	3	0	0 (0)	0
			Mid	2593.005	518601	2550.345	510069	102		6426	514110	3	0	0 (0)	102
			High	2664.99	532998	2549.97	509994	504		6606	528510	4	0	0 (0)	504

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.41-2: Test frequencies for NR operating band n41, SCS 30 kHz and ΔF_{Raster} 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	2501.01	500202	2496.69	499338	0	30	6252	500190	20	0	1 (1)	2
			Mid	2592.99	518598	2551.95	510390	102		6483	518670	0	0	3 (3)	210
			High	2685	537000	2499.24	499848	504		6711	536910	18	0	0 (0)	1008
15	38	Downlink & Uplink	Low	2503.5	500700	2496.66	499332	0	30	6252	500190	22	0	1 (1)	2
			Mid	2592.99	518598	2549.43	509886	102		6474	517950	0	0	0 (0)	204
			High	2682.48	536496	2494.2	498840	504		6699	535950	10	0	1 (1)	1010
20	51	Downlink & Uplink	Low	2506.02	501204	2496.84	499368	0	30	6252	500190	10	0	1 (1)	2
			Mid	2592.99	518598	2547.09	509418	102		6471	517710	4	0	3 (3)	210
			High	2679.99	535998	2489.37	497874	504		6687	534990	12	0	1 (1)	1010
30	78	Downlink & Uplink	Low	2511	502200	2496.96	499392	0	30	6252	500190	2	0	1 (1)	2
			Mid	2592.99	518598	2542.23	508446	102		6456	516510	0	0	0 (0)	204
		Uplink	High	2674.98	534996	2479.5	495900	504		6663	533070	6	0	2 (2)	1012
40	106	Downlink & Uplink	Low	2516.01	503202	2496.93	499386	0	30	6252	500190	4	0	1 (1)	2
			Mid	2592.99	518598	2537.19	507438	102		6444	515550	16	0	0 (0)	204
			High	2670	534000	2469.48	493896	504		6636	530910	2	0	0 (0)	1008
50	133	Downlink & Uplink	Low	2521.02	504204	2497.08	499416	0	30	6252	500190	18	0	0 (0)	0
			Mid	2592.99	518598	2532.33	506466	102		6432	514590	20	0	0 (0)	204
			High	2664.99	532998	2459.61	491922	504		6612	528990	20	0	0 (0)	1008
60	162	Downlink & Uplink	Low	2526	505200	2496.84	499368	0	30	6252	500190	10	0	1 (1)	2
			Mid	2592.99	518598	2527.11	505422	102		6420	513630	0	0	2 (2)	208
			High	2659.98	531996	2449.38	489876	504		6588	527070	14	0	2 (2)	1012
70	189	Downlink & Uplink	Low	2531.01	506202	2496.99	499398	0	30	6252	500190	0	0	1 (1)	2
			Mid	2592.99	518598	2522.25	504450	102		6408	512670	4	0	2 (2)	208
			High	2655	531000	2439.54	487908	504		6564	525150	6	0	3 (3)	1014
80	217	Downlink & Uplink	Low	2536.02	507204	2496.96	499392	0	30	6252	500190	2	0	1 (1)	2
			Mid	2592.99	518598	2517.21	503442	102		6396	511710	20	0	2 (2)	208
			High	2649.99	529998	2429.49	485898	504		6537	522990	4	0	1 (1)	1010
90	245	Downlink & Uplink	Low	2541	508200	2496.9	499380	0	30	6252	500190	6	0	1 (1)	2
			Mid	2592.99	518598	2512.17	502434	102		6381	510510	4	0	0 (0)	204
			High	2644.98	528996	2419.44	483888	504		6513	521070	10	0	2 (2)	1012
100	273	Downlink & Uplink	Low	2546.01	509202	2496.87	499374	0	30	6252	500190	8	0	1 (1)	2
			Mid	2592.99	518598	2507.13	501426	102		6369	509550	20	0	0 (0)	204
			High	2640	528000	2409.42	481884	504		6486	518910	6	0	0 (0)	1008

- Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.
- Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.41-3: Test frequencies for NR operating band n41, SCS 60 kHz and ΔF_{Raster} 15 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	2501.01	500202	2497.05	499410	0	15	-	499770
			Mid	2593.005	518601	2515.605	503121	102		-	518169
			High	2685	537000	2318.16	463632	504		-	536568
15	18	Downlink & Uplink	Low	2503.5	500700	2497.02	499404	0	15	-	499764
			Mid	2593.005	518601	2513.085	502617	102		-	517665
			High	2682.495	536499	2313.135	462627	504		-	535563
20	24	Downlink & Uplink	Low	2506.005	501201	2497.365	499473	0	15	-	499833
			Mid	2593.005	518601	2510.925	502185	102		-	517233
			High	2679.99	535998	2308.47	461694	504		-	534630
30	38	Downlink & Uplink	Low	2511	502200	2497.32	499464	0	15	-	499824
			Mid	2593.005	518601	2505.885	501177	102		-	516225
		Uplink	High	2674.995	534999	2298.435	459687	504		-	532623
40	51	Downlink & Uplink	Low	2516.01	503202	2497.65	499530	0	15	-	499890
			Mid	2593.005	518601	2501.205	500241	102		-	515289
			High	2670	534000	2288.76	457752	504		-	530688
50	65	Downlink & Uplink	Low	2521.005	504201	2497.605	499521	0	15	-	499881
			Mid	2593.005	518601	2496.165	499233	102		-	514281
			High	2664.99	532998	2278.71	455742	504		-	528678
60	79	Downlink & Uplink	Low	2526	505200	2497.56	499512	0	15	-	499872
			Mid	2593.005	518601	2491.125	498225	102		-	513273
			High	2659.995	531999	2268.675	453735	504		-	526671
70	93	Downlink & Uplink	Low	2531.01	506202	2497.53	499506	0	15	-	499866
			Mid	2593.005	518601	2486.085	497217	102		-	512265
			High	2655	531000	2258.64	451728	504		-	524664
80	107	Downlink & Uplink	Low	2536.005	507201	2497.485	499497	0	15	-	499857
			Mid	2593.005	518601	2481.045	496209	102		-	511257
			High	2649.99	529998	2248.59	449718	504		-	522654
90	121	Downlink & Uplink	Low	2541	508200	2497.44	499488	0	15	-	499848
			Mid	2593.005	518601	2476.005	495201	102		-	510249
			High	2644.995	528999	2238.555	447711	504		-	520647
100	135	Downlink & Uplink	Low	2546.01	509202	2497.41	499482	0	15	-	499842
			Mid	2593.005	518601	2470.965	494193	102		-	509241
			High	2640	528000	2228.52	445704	504		-	518640

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{\text{SSB}}=31$, *controlResourceSetZero*=0 and *searchSpaceZero* = 0 (TS 38.213 [22], clause 13).

4.3.1.1.1.42 to 4.3.1.1.1.45 FFS

4.3.1.1.1.46 Reference test frequencies for NR operating band n46

Table 4.3.1.1.1.46-1: Test frequencies for NR operating band n46 and SCS 15 kHz (Note 3)

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN] Note 4	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1										
10	52	Downlink & Uplink	Low	5730	782000	5725.32	781688	0	30	-	781928	31	-	-	-										
			Mid							-															
			High							5830.02						788668	5734.62	782308	504	-	788596	31	-	-	-
20	106	Downlink & Uplink	Low	5160	744000	5150.46	743364	0	30	-	743604	31	-	-	-										
			Mid							5479.98						765332	5452.08	763472	102	-	764936	31	-	-	-
			High							5905.02						793668	5804.76	786984	504	-	793272	31	-	-	-
40	216	Downlink & Uplink	Low	5170.02	744668	5150.58	743372	0	30	-	743612	31	-	-	-										
			Mid							5509.98						767332	5472.18	764812	102	-	766276	31	-	-	-
			High							5895						793000	5784.84	785656	504	-	791944	31	-	-	-
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-3 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																								
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET}0\text{-Carrier}}$ in Annex C expressed in number of common RBs.																								
Note 3:	NR band n46 with SCS =15 kHz is restricted for operation when carrier is configured as an SCell part of a DC or CA configuration. As the bandwidth is limited to SCell then absence of CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, <i>controlResourceSetZero</i> =0 and <i>searchSpaceZero</i> = 0 (TS 38.213 [22], clause 13).																								
Note 4:	The selection of Low, Mid and High test frequencies are restricted to the limited allowed ARFCN values as specified in TS 38.101 [7], Table 5.4.2.3-2.																								

Table 4.3.1.1.1.46-2: Test frequencies for NR operating band n46 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN] Note 4	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1												
10 Note 3	24	Downlink & Uplink	Low	5730	782000	5725.68	781712	0	30	-	781952	31	-	-												
			Mid																							
			High												5830.02	788668	5644.26	776284	504	-	788620	31	-	-	-	
20	51	Downlink & Uplink	Low	5160	744000	5150.82	743388	0	30	8996	743712	12	0	3 (3)	6											
			Mid													5479.98	765332	5434.08	762272	102	9218	765024	16	0	2 (2)	208
			High													5905.02	793668	5714.4	780960	504	9513	793344	0	0	2 (2)	1012
40	106	Downlink & Uplink	Low	5170.02	744668	5150.94	743396	0	30	8996	743712	4	0	3 (3)	6											
			Mid													5509.98	767332	5454.18	763612	102	9232	766368	20	0	2 (2)	208
			High													5895	793000	5694.48	779632	504	9499	792000	8	0	1 (1)	1010
60	162	Downlink (Note 3) (Note 3)	Low	5200.02	746668 Note 5	5170.86	744724	0	30	9010	745056	20	0	3 (3)	6											
			Mid													5500.02	766668	5434.14	762276	102	9218	765024	12	0	2 (2)	208
			High													5884.98	792332	5674.38	778292	504	9485	790656	4	0	1 (1)	1010
80	217	Downlink (Note 3) (Note 3)	Low	5190	746000	5150.94	743396	0	30	8996	743712	4	0	3 (3)	6											
			Mid													5500.02	766668	5424.24	761616	102	9218	765024	0	27	3 (3)	264
			High													5875.02	791668	5654.52	776968	504	9472	789408	8	1	3 (3)	1016
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																									
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.																									
Note 3:	For this bandwidth, the minimum requirements are restricted to operation when carrier is configured as an SCell part of a DC or CA configuration. As the bandwidth is limited to SCell then absence of CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).																									
Note 4:	The selection of Low, Mid and High test frequencies are restricted to the limited allowed ARFCN values as specified in TS 38.101 [7], Table 5.4.2.3-2.																									
Note 5:	The next lowest allowed ARFCN values has been selected as the lowest ARFCN value in TS 38.101 [7], Table 5.4.2.3-2 for CBW=60 MHz will cause the required guardband to exceed the bands lower edge.																									

Table 4.3.1.1.1.46-3: Test frequencies for NR operating band n46 and SCS 60 kHz without CORESET#0 (Note 1)

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN] Note 2	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	
10	11	Downlink & Uplink	Low	5730	782000	5726.04	781736	0	30	-	781976	
			Mid								-	
			High	5830.02	788668	5463.18	764212	504		-	788644	
20	24	Downlink & Uplink	Low	5160	744000	5151.36	743424	0	30	-	743664	
			Mid	5479.98	765332	5397.9	759860	102		-	764996	
			High	5905.02	793668	5533.5	768900	504		-	793332	
40	51	Downlink & Uplink	Low	5170.02	744668	5151.66	743444	0	30	-	743684	
			Mid	5509.98	767332	5418.18	761212	102		-	766348	
			High	5895	793000	5513.76	767584	504		-	792016	
60	79	Downlink & Uplink	Low	5179.98	745332	5151.54	743436	0	30	-	743676	
			Mid	5500.02	766668	5398.14	759876	102		-	765012	
			High	5884.98	792332	5493.66	766244	504		-	790676	
80	107	Downlink & Uplink	Low	5190	746000	5151.48	743432	0	30	-	743672	
			Mid	5500.02	766668	5388.06	759204	102		-	764340	
			High	5875.02	791668	5473.62	764908	504		-	789340	
<p>Note 1: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, <i>controlResourceSetZero</i>=0 and <i>searchSpaceZero</i> = 0 (TS 38.213 [22], clause 13).</p> <p>Note 2: The selection of Low, Mid and High test frequencies are restricted to the limited allowed ARFCN values as specified in TS 38.101 [7], Table 5.4.2.3-2.</p>												

4.3.1.1.1.47 FFS

4.3.1.1.1.48 Reference test frequencies for NR operating band n48

Table 4.3.1.1.1.48-1: Test frequencies for NR operating band n48 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB} (Note 4)	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink	Low	3552.51	636834	3550.26	636684	0	(Note 3)	-	-	-	-	-	-
			Mid	3625.005	641667	3604.395	640293	102		-	-	-	-	-	-
		Uplink	High	3697.5	646500	3604.53	640302	504		-	-	-	-	-	-
10	52	Downlink & Uplink	Low	3555	637000	3550.32	636688	0	30	7884	636960	8	0	0 (2)	2
			Mid	3624.99	641666	3601.95	640130	102		7933	641664	10	3	0 (2)	107
			High	3694.98	646332	3599.58	639972	504		7982	646368	0	3	1 (6)	513
15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2
			Mid	3624.99	641666	3599.52	639968	102		7931	641472	4	1	0 (2)	105
			High	3692.49	646166	3594.66	639644	504		7978	645984	4	2	0 (2)	508
20	106	Downlink & Uplink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9
			Mid	3624.99	641666	3597.09	639806	102		7930	641376	10	2	1 (6)	110
			High	3690	646000	3589.74	639316	504		7975	645696	8	1	1 (6)	511
30	160	Downlink & Uplink	Low	3565.02	637668	3550.62	636708	0	30	7885	637056	0	3	1 (6)	9
			Mid	3624.99	641666	3592.23	639482	102		7926	640992	10	1	0 (2)	105
			High	3684.99	645666	3579.87	638658	504		7968	645024	6	0	1 (6)	510
40	216	Downlink & Uplink	Low	3570	638000	3550.56	636704	0	30	7885	637056	4	3	1 (6)	9
			Mid	3624.99	641666	3587.19	639146	102		7923	640704	10	1	1 (6)	109
			High	3679.98	645332	3569.82	637988	504		7961	644352	4	0	1 (6)	510
50	270	Downlink (Note 4) & Uplink	Low	3575.01	638334	3550.71	636714	0	30		637056	31			
			Mid	3624.99	641666	3582.33	638822	102			640320	31			
			High	3675	645000	3559.98	637332	504			643680	31			
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-3 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p> <p>Note 3: No SS/PBCH block fits within the channel bandwidth. The channel bandwidth can only be used as SCell.</p> <p>Note 4: For this bandwidth, the minimum requirements are restricted to operation when carrier is configured as a downlink only SCell part of a CA configuration. As the bandwidth is limited to SCell then absence of CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).</p>															

Table 4.3.1.1.1.48-2: Test frequencies for NR operating band n48 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0
			Mid	3624.99	641666	3583.95	638930	102		7933	641664	22	0	1 (1)	206
			High	3694.98	646332	3509.22	633948	504		7982	646368	12	0	3 (3)	1014
15	38	Downlink & Uplink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0
			Mid	3624.99	641666	3581.43	638762	102		7931	641472	22	0	0 (0)	204
			High	3692.49	646166	3504.21	633614	504		7978	645984	10	0	1 (1)	1010
20	51	Downlink & Uplink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6
			Mid	3624.99	641666	3579.09	638606	102		7930	641376	10	0	3 (3)	210
			High	3690	646000	3499.38	633292	504		7975	645696	20	0	2 (2)	1012
30	78	Downlink & Uplink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
			Mid	3624.99	641666	3574.23	638282	102		7926	640992	22	0	0 (0)	204
			High	3684.99	645666	3489.51	632634	504		7968	645024	6	0	2 (2)	1012
40	106	Downlink & Uplink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6
			Mid	3624.99	641666	3569.19	637946	102		7923	640704	22	0	2 (2)	208
			High	3679.98	645332	3479.46	631964	504		7961	644352	4	0	2 (2)	1012
50	133	Downlink (Note 3) (Note 3)	Low	3575.01	638334	3551.07	636738	0	30		637056	31			
			Mid	3624.99	641666	3564.33	637622	102			640320	31			
			High	3675	645000	3469.62	631308	504			643680	31			
60	162	Downlink (Note 3) (Note 3)	Low	3580.02	638668	3550.86	636724	0	30		637056	31			
			Mid	3624.99	641666	3559.11	637274	102			640032	31			
			High	3669.99	644666	3459.39	630626	504			643008	31			
70	189	Downlink (Note 3)	Low	3585	639000	3550.98	636732	0	30	-	637056	31	-	-	-
			Mid	3624.99	641666	3554.25	636950	102		-	639648	31	-	-	-
			High	3664.98	644332	3449.52	629968	504		-	642336	31	-	-	-
80	217	Downlink (Note 3) (Note 3)	Low	3590.01	639334	3550.95	636730	0	30		637056	31			
			Mid	3624.99	641666	3549.21	636614	102			639360	31			
			High	3660	644000	3439.5	629300	504			641664	31			
90	245	Downlink (Note 3) (Note 3)	Low	3595.02	639668	3550.92	636728	0	30		637056	31			
			Mid	3624.99	641666	3544.17	636278	102			638976	31			
			High	3654.99	643666	3429.45	628630	504			640992	31			
100	273	Downlink (Note 3) (Note 3)	Low	3600	640000	3550.86	636724	0	30		637056	31			
			Mid	3624.99	641666	3539.13	635942	102			638688	31			
			High	3649.98	643332	3419.4	627960	504			640320	31			

- Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in *controlResourceSetZero* (*pdccch-ConfigSIB1*) in the MIB. The *offsetToPointA* IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.
- Note 2: The parameter *Offset Carrier CORESET#0* specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.
- Note 3: For this bandwidth, the minimum requirements are restricted to operation when carrier is configured as a downlink only SCell part of a CA configuration. As the bandwidth is limited to SCell then absence of CORESET#0 is indicated in the MIB by setting $k_{\text{SSB}} = 31$, *controlResourceSetZero*=0 and *searchSpaceZero* = 0 (TS 38.213 [22], clause 13).

Table 4.3.1.1.1.48-3: Test frequencies for NR operating band n48 and SCS 60 kHz without CORESET#0 (Note 1)

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	3555	637000	3551.04	636736	0	30	-	636976
			Mid	3624.99	641666	3547.59	636506	102		-	641642
			High	3694.98	646332	3328.14	621876	504		-	646308
15	18	Downlink & Uplink	Low	3557.52	637168	3551.04	636736	0	30	-	636976
			Mid	3624.99	641666	3545.07	636338	102		-	641474
			High	3692.49	646166	3323.13	621542	504		-	645974
20	24	Downlink & Uplink	Low	3560.01	637334	3551.37	636758	0	30	-	636998
			Mid	3624.99	641666	3542.91	636194	102		-	641330
			High	3690	646000	3318.48	621232	504		-	645664
30	78	Downlink & Uplink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056
			Mid	3624.99	641666	3574.23	638282	102		7926	640992
			High	3684.99	645666	3489.51	632634	504		7968	645024
40	51	Downlink & Uplink	Low	3570	638000	3551.64	636776	0	30	-	637016
			Mid	3624.99	641666	3533.19	635546	102		-	640682
			High	3679.98	645332	3298.74	619916	504		-	644348
50	65	Downlink (Note 2)	Low	3575.01	638334	3551.61	636774	0	30	-	637014
			Mid	3624.99	641666	3528.15	635210	102		-	640346
			High	3675	645000	3288.72	619248	504		-	643680
60	79	Downlink (Note 2)	Low	3580.02	638668	3551.58	636772	0	30	-	637012
			Mid	3624.99	641666	3523.11	634874	102		-	640010
			High	3669.99	644666	3278.67	618578	504		-	643010
70	93	Downlink (Note 2)	Low	3585	639000	3551.52	636768	0	30	-	637008
			Mid	3624.99	641666	3518.07	634538	102		-	639674
			High	3664.98	644332	3268.62	617908	504		-	642340
80	107	Downlink (Note 2)	Low	3590.01	639334	3551.49	636766	0	30	-	637006
			Mid	3624.99	641666	3513.03	634202	102		-	639338
			High	3660	644000	3258.6	617240	504		-	641672
90	121	Downlink (Note 2)	Low	3595.02	639668	3551.46	636764	0	30	-	637004
			Mid	3624.99	641666	3507.99	633866	102		-	639002
			High	3654.99	643666	3248.55	616570	504		-	641002
100	135	Downlink (Note 2)	Low	3600	640000	3551.4	636760	0	30	-	637000

		Mid	3624.99	641666	3502.95	633530	102		-	638666
		High	3649.98	643332	3238.5	615900	504		-	640332

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).

Note 2: For this bandwidth, the minimum requirements are restricted to operation when carrier is configured as a downlink only SCell part of a CA configuration.

4.3.1.1.1.49 FFS

4.3.1.1.1.50 Reference test frequencies for NR operating band n50

Table 4.3.1.1.1.50-1: Test frequencies for NR operating band n50 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink & Uplink	Low	1434.5	286900	1432.25	286450	0	(Note 3)	-	287170	-	-	-	-
			Mid	1474.5	294900	1453.89	290778	102		-	295170	-	-	-	-
			High	1514.5	302900	1421.53	284306	504		-	303170	-	-	-	-
10	52	Downlink & Uplink	Low	1437	287400	1432.32	286464	0	30	3591	287310	6	1	0 (2)	3
			Mid	1474.5	294900	1451.46	290292	102		3687	294990	6	2	1 (6)	110
			High	1512	302400	1416.6	283320	504		3780	302430	10	0	1 (6)	510
15	79	Downlink & Uplink	Low	1439.5	287900	1432.39	286478	0	30	3592	287330	8	1	0 (2)	3
			Mid	1474.5	294900	1449.03	289806	102		3678	294270	0	0	0 (2)	104
			High	1509.5	301900	1411.67	282334	504		3767	301450	0	1	1 (6)	511
20	106	Downlink & Uplink	Low	1442	288400	1432.46	286492	0	30	3590	287290	2	0	0 (2)	2
			Mid	1474.5	294900	1446.6	289320	102		3672	293790	2	0	0 (2)	104
			High	1507	301400	1406.74	281348	504		3754	300290	2	0	0 (2)	506
40	216	Downlink & Uplink	Low	1452	290400	1432.56	286512	0	30	3591	287310	2	0	0 (2)	2
			Mid	1474.5	294900	1436.7	287340	102		3648	291870	10	1	0 (2)	105
			High	1497	299400	1386.84	277368	504		3705	296430	6	3	0 (2)	509
50	270	Downlink & Uplink	Low	1457	291400	1432.7	286540	0	30	3593	287530	6	1	1 (6)	7
			Mid	1474.5	294900	1431.84	286368	102		3636	290910	2	2	0 (2)	106
			High	1492	298400	1376.98	275396	504		3682	294530	6	1	1 (6)	511
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														
Note 3:	No SS/PBCH block fits within the channel bandwidth. The channel bandwidth can only be used as SCell														

Table 4.3.1.1.1.50-2: Test frequencies for NR operating band n50 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink & Uplink	Low	1437	287400	1432.68	286536	0	30	3591	287310	18	0	0 (0)	0
			Mid	1474.5	294900	1433.46	286692	102		3687	294990	6	0	3 (3)	210
			High	1512	302400	1326.24	265248	504		3780	302430	10	0	2 (2)	1012
15	38	Downlink & Uplink	Low	1439.5	287900	1432.66	286532	0	30	3592	287330	2	0	1 (1)	2
			Mid	1474.5	294900	1430.94	286188	102		3678	294270	6	0	0 (0)	204
			High	1509.5	301900	1321.22	264244	504		3767	301450	18	0	2 (2)	1012
20	51	Downlink & Uplink	Low	1442	288400	1432.82	286564	0	30	3590	287290	2	0	0 (0)	0
			Mid	1474.5	294900	1428.6	285720	102		3672	293790	2	0	0 (0)	204
			High	1507	301400	1316.38	263276	504		3754	300290	2	0	0 (0)	1008
40	106	Downlink & Uplink	Low	1452	290400	1432.92	286584	0	30	3591	287310	2	0	0 (0)	0
			Mid	1474.5	294900	1418.7	283740	102		3648	291870	22	0	0 (0)	204
			High	1497	299400	1296.48	259296	504		3705	296430	18	0	1 (1)	1010
50	133	Downlink & Uplink	Low	1457	291400	1433.06	286612	0	30	3593	287530	18	0	2 (2)	4
			Mid	1474.5	294900	1413.84	282768	102		3636	290910	2	0	1 (1)	206
			High	1492	298400	1286.62	257324	504		3682	294530	18	0	2 (2)	1012
60	162	Downlink & Uplink	Low	1462	292400	1432.84	286568	0	30	3592	287330	14	0	0 (0)	0
			Mid	1474.5	294900	1408.62	281724	102		3624	289950	6	0	2 (2)	208
			High	1487	297400	1276.4	255280	504		3653	292330	14	0	0 (0)	1008
80 (Note 3)	217	Downlink	Low	1472	294400	1432.94	286588	0	30	3593	287530	2	0	3 (3)	6
			Mid	1474.5	294900	1398.72	279744	102		3600	288030	2	0	3 (3)	210
			High	1477	295400	1256.5	251300	504		3607	288530	2	0	3 (3)	1014
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														
Note 3:	This UE channel bandwidth is applicable only to downlink (TS 38.101-1 table 5.3.5-1).														

Table 4.3.1.1.1.50-3: Test frequencies for NR operating band n50 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	1437	287400	1433.04	286608	0	30	-	287328
			Mid	1474.5	294900	1397.1	279420	102		-	294828
			High	1512	302400	1145.16	229032	504		-	302328
15	18	Downlink & Uplink	Low	1439.5	287900	1433.02	286604	0	30	-	287324
			Mid	1474.5	294900	1394.58	278916	102		-	294324
			High	1509.5	301900	1140.14	228028	504		-	301324
20	24	Downlink & Uplink	Low	1442	288400	1433.36	286672	0	30	-	287392
			Mid	1474.5	294900	1392.42	278484	102		-	293892
			High	1507	301400	1135.48	227096	504		-	300392
40	51	Downlink & Uplink	Low	1452	290400	1433.64	286728	0	30	-	287448
			Mid	1474.5	294900	1382.7	276540	102		-	291948
			High	1497	299400	1115.76	223152	504		-	296448
50	65	Downlink & Uplink	Low	1457	291400	1433.6	286720	0	30	-	287440
			Mid	1474.5	294900	1377.66	275532	102		-	290940
			High	1492	298400	1105.72	221144	504		-	294440
60	79	Downlink & Uplink	Low	1462	292400	1433.56	286712	0	30	-	287432
			Mid	1474.5	294900	1372.62	274524	102		-	289932
			High	1487	297400	1095.68	219136	504		-	292432
80 (Note 2)	107	Downlink	Low	1472	294400	1433.48	286696	0	30	-	287416
			Mid	1474.5	294900	1362.54	272508	102		-	287916
			High	1477	295400	1075.6	215120	504		-	288416
<p>Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, <i>controlResourceSetZero</i> = 0 and <i>searchSpaceZero</i> = 0 (TS 38.213 [22], clause 13).</p> <p>Note 2: This UE channel bandwidth is applicable only to downlink (TS 38.101-1 table 5.3.5-1).</p>											

4.3.1.1.1.51 Reference test frequencies for NR operating band n51

Table 4.3.1.1.1.51-1: Test frequencies for NR operating band n51 and SCS 15 kHz

[MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink & Uplink	Low	1429.5	285900	1427.25	285450	0	15	3573	285870	8	1	0 (0)	1
	Mid														
	High														
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p>															

4.3.1.1.1.52 FFS

4.3.1.1.1.53 Reference test frequencies for NR operating band n53

Table 4.3.1.1.1.53-1: Test frequencies for NR operating band n53 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5	25	Downlink & Uplink	Low	2486	497200	2483.75	496750	0	15	6215	497290	0	1	2 (4)	5
			Mid	2489.3	497860	2468.69	493738	102		6221	497770	0	0	0 (0)	102
			High	2492.5	498500	2399.53	479906	504		6232	498530	4	1	1 (2)	507
10	52	Downlink & Uplink	Low	2488.5	497700	2483.82	496764	0	15	6216	497310	2	1	2 (4)	5
			Mid	2489.3	497860	2466.6	493252	102		6215	497290	2	0	0 (0)	102
			High	2490	498000	2394.6	478920	504		6219	497550	6	1	1 (2)	507

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.53-2: Test frequencies for NR operating band n53 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	2488.5	497700	2484.18	496836	0	15	6222	497790	6	0	3 (8)	16
			Mid	2489.3	497860	2448.26	489652	102		6221	497770	18	0	0 (5)	214
			High	2490	498000	2304.24	460848	504		6225	498030	10	0	2 (7)	1022

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.53-3: Test frequencies for NR operating band n53 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	2488.5	497700	2484.54	496908	0	15	-	497268
			Mid	2489.3	497860	2411.9	482380	102		-	497428
			High	2490	498000	2123.16	424632	504		-	497568
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).											

4.3.1.1.1.54 to 4.3.1.1.1.64 FFS

4.3.1.1.1.65 Reference test frequencies for NR operating band n65

Table 4.3.1.1.1.65-1: Test frequencies for NR operating band n65 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	2112.5	422500	2110.25	422050	0	15	5279	422410	0	0	0 (0)	0	
			Mid	2155	431000	2134.39	426878	102		5389	431090	0	1	2 (4)	107	
			High	2197.5	439500	2104.53	420906	504		5493	439470	8	1	0 (0)	505	
		Uplink	Low	1922.5	384500	1920.25	384050	0	-	-	-	-	-	-	-	-
			Mid	1965	393000	1872.03	374406	504		-	-	-	-	-	-	-
			High	2007.5	401500	2004.17	400834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	2115	423000	2110.32	422064	0	15	5280	422430	2	0	0 (0)	0	
			Mid	2155	431000	2131.96	426392	102		5383	430610	2	1	2 (4)	107	
			High	2195	439000	2099.6	419920	504		5480	438490	10	1	0 (0)	505	
		Uplink	Low	1925	385000	1920.32	384064	0	-	-	-	-	-	-	-	-
			Mid	1965	393000	1869.6	373920	504		-	-	-	-	-	-	-
			High	2005	401000	1999.24	399848	6		-	-	-	-	-	-	-
15	79	Downlink	Low	2117.5	423500	2110.39	422078	0	15	5281	422450	4	0	0 (0)	0	
			Mid	2155	431000	2129.53	425906	102		5377	430130	4	1	2 (4)	107	
			High	2192.5	438500	2094.67	418934	504		5470	437570	8	1	1 (2)	507	
		Uplink	Low	1927.5	385500	1920.39	384078	0	-	-	-	-	-	-	-	-
			Mid	1965	393000	1867.17	373434	504		-	-	-	-	-	-	-
			High	2002.5	400500	1994.31	398862	6		-	-	-	-	-	-	-
20	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5	
			Mid	2155	431000	2127.1	425420	102		5371	429650	6	1	2 (4)	107	
			High	2190	438000	2089.74	417948	504		5457	436590	10	1	1 (2)	507	
		Uplink	Low	1930	386000	1920.46	384092	0	-	-	-	-	-	-	-	-
			Mid	1965	393000	1864.74	372948	504		-	-	-	-	-	-	-
			High	2000	400000	1989.38	397876	6		-	-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdccch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.65-2: Test frequencies for NR operating band n65 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	2115	423000	2110.68	422136	0	15	5286	422910	18	0	0 (5)	10	
			Mid	2155	431000	2113.96	422792	102		5389	431090	6	0	3 (8)	220	
			High	2195	439000	2009.24	401848	504		5486	438970	14	0	1 (6)	1020	
		Uplink	Low	1925	385000	1920.68	384136	0	-	-	-	-	-	-	-	-
			Mid	1965	393000	1779.24	355848	504		-	-	-	-	-	-	-
			High	2005	401000	1998.52	399704	6		-	-	-	-	-	-	-
15	38	Downlink	Low	2117.5	423500	2110.66	422132	0	15	5287	422930	2	0	1 (6)	12	
			Mid	2155	431000	2111.44	422288	102		5380	430370	6	0	0 (5)	214	
			High	2192.5	438500	2004.22	400844	504		5476	438050	18	0	2 (7)	1022	
		Uplink	Low	1927.5	385500	1920.66	384132	0	-	-	-	-	-	-	-	-
			Mid	1965	393000	1776.72	355344	504		-	-	-	-	-	-	-
			High	2002.5	400500	1993.5	398700	6		-	-	-	-	-	-	-
20	51	Downlink	Low	2120	424000	2110.82	422164	0	15	5285	422890	2	0	0 (5)	10	
			Mid	2155	431000	2109.1	421820	102		5374	429890	2	0	0 (5)	214	
			High	2190	438000	1999.38	399876	504		5463	437070	14	0	2 (7)	1022	
		Uplink	Low	1930	386000	1920.82	384164	0	-	-	-	-	-	-	-	-
			Mid	1965	393000	1774.38	354876	504		-	-	-	-	-	-	-
			High	2000	400000	1988.66	397732	6		-	-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.65-3: Test frequencies for NR operating band n65 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	2115	423000	2111.04	422208	0	15	-	422568
			Mid	2155	431000	2077.6	415520	102		-	430568
			High	2195	439000	1828.16	365632	504		-	438568
		Uplink	Low	1925	385000	1921.04	384208	0	-	-	-
			Mid	1965	393000	1598.16	319632	504		-	-
			High	2005	401000	1996.72	399344	6		-	-
15	18	Downlink	Low	2117.5	423500	2111.02	422204	0	15	-	422564
			Mid	2155	431000	2075.08	415016	102		-	430064
			High	2192.5	438500	1823.14	364628	504		-	437564
		Uplink	Low	1927.5	385500	1921.02	384204	0	-	-	-
			Mid	1965	393000	1595.64	319128	504		-	-
			High	2002.5	400500	1991.7	398340	6		-	-
20	24	Downlink	Low	2120	424000	2111.36	422272	0	15	-	422632
			Mid	2155	431000	2072.92	414584	102		-	429632
			High	2190	438000	1818.48	363696	504		-	436632
		Uplink	Low	1930	386000	1921.36	384272	0	-	-	-
			Mid	1965	393000	1593.48	318696	504		-	-
			High	2000	400000	1987.04	397408	6		-	-
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, <i>controlResourceSetZero</i> =0 and <i>searchSpaceZero</i> = 0 (TS 38.213 [22], clause 13).											

4.3.1.1.1.66 Reference test frequencies for NR operating band n66

Table 4.3.1.1.1.66-1: Test frequencies for NR operating band n66, uplink and downlink channel bandwidth combinations and SCS 15 kHz

UL/DL CBW Combination (Asymmetric BCS) Note 3	CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute Frequency SSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1		
5/5	5	25	Downlink	Low	2112.5	422500	2110.25	422050	0	15	5279	422410	0	0	0 (0)	0	
				Mid	2145	429000	2124.39	424878	102		5361	428910	0	0	0 (0)	102	
				High	2177.5	435500	2084.53	416906	504		5443	435410	0	0	0 (0)	504	
	5	25	Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	-
				Mid	1745	349000	1652.03	330406	504		-	-	-	-	-	-	-
				High	1777.5	355500	1774.17	354834	6		-	-	-	-	-	-	
5/20 (0,1)	20	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5	
				Mid	2152.5	430500	2124.6	424920	102		5364	429150	6	1	2 (4)	107	
				High	2185	437000	2084.74	416948	504		5446	435650	6	1	2 (4)	509	
	5	25	Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	-
				Mid	1745	349000	1652.03	330406	504		-	-	-	-	-	-	-
				High	1777.5	355500	1774.17	354834	6		-	-	-	-	-	-	
5/25 (1)	25	133	Downlink	Low	2122.5	424500	2110.53	422106	0	15	5283	422670	8	1	2 (4)	5	
				Mid	2155	431000	2124.67	424934	102		5365	429170	8	1	2 (4)	107	
				High	2187.5	437500	2084.81	416962	504		5444	435610	0	0	2 (4)	508	
	5	25	Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	-
				Mid	1745	349000	1652.03	330406	504		-	-	-	-	-	-	-
				High	1777.5	355500	1774.17	354834	6		-	-	-	-	-	-	
5/30 (1)	30	160	Downlink	Low	2125	425000	2110.6	422120	0	15	5284	422690	10	1	2 (4)	5	
				Mid	2155	431000	2122.24	424448	102		5359	428690	10	1	2 (4)	107	
				High	2185	437000	2079.88	415976	504		5434	434690	10	1	2 (4)	509	
	5	25	Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	-
				Mid	1742.5	348500	1649.53	329906	504		-	-	-	-	-	-	-
				High	1772.5	354500	1769.17	353834	6		-	-	-	-	-	-	
5/40 (0,1)	40	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5	
				Mid	2155	431000	2117.2	423440	102		5344	427490	6	0	0 (0)	102	
				High	2180	436000	2069.84	413968	504		5405	432490	6	0	0 (0)	504	
	5	25	Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	-
				Mid	1737.5	347500	1644.53	328906	504		-	-	-	-	-	-	-
				High	1762.5	352500	1759.17	351834	6		-	-	-	-	-	-	
10/10	10	52	Downlink	Low	2115	423000	2110.32	422064	0	15	5280	422430	2	0	0 (0)	0	
				Mid	2145	429000	2121.96	424392	102		5355	428430	2	0	0 (0)	102	
				High	2175	435000	2079.6	415920	504		5430	434430	2	0	0 (0)	504	

	10	52	Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-
				Mid	1745	349000	1649.6	329920	504	-	-	-	-	-	-	
				High	1775	355000	1769.24	353848	6	-	-	-	-	-	-	
10/20 (0,1)	20	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5
				Mid	2150	430000	2122.1	424420	102		5357	428650	6	1	2 (4)	107
				High	2180	436000	2079.74	415948	504		5432	434650	6	1	2 (4)	509
	10	52	Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-
				Mid	1745	349000	1649.6	329920	504		-	-	-	-	-	-
				High	1775	355000	1769.24	353848	6		-	-	-	-	-	-
10/25 (1)	25	133	Downlink	Low	2122.5	424500	2110.53	422106	0	15	5283	422670	8	1	2 (4)	5
				Mid	2152.5	430500	2122.17	424434	102		5358	428670	8	1	2 (4)	107
				High	2182.5	436500	2079.81	415962	504		5433	434670	8	1	2 (4)	509
	10	52	Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-
				Mid	1745	349000	1649.6	329920	504		-	-	-	-	-	-
				High	1775	355000	1769.24	353848	6		-	-	-	-	-	-
10/30 (1)	30	160	Downlink	Low	2125	425000	2110.6	422120	0	15	5284	422690	10	1	2 (4)	5
				Mid	2155	431000	2122.24	424448	102		5359	428690	10	1	2 (4)	107
				High	2185	437000	2079.88	415976	504		5434	434690	10	1	2 (4)	509
	10	52	Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-
				Mid	1745	349000	1649.6	329920	504		-	-	-	-	-	-
				High	1775	355000	1769.24	353848	6		-	-	-	-	-	-
10/40 (0,1)	40	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5
				Mid	2155	431000	2117.2	423440	102		5344	427490	6	0	0 (0)	102
				High	2180	436000	2069.84	413968	504		5405	432490	6	0	0 (0)	504
	10	52	Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-
				Mid	1740	348000	1644.6	328920	504		-	-	-	-	-	-
				High	1765	353000	1759.24	351848	6		-	-	-	-	-	-
15/15	15	79	Downlink	Low	2117.5	423500	2110.39	422078	0	15	5281	422450	4	0	0 (0)	0
				Mid	2145	429000	2119.53	423906	102		5349	427950	4	0	0 (0)	102
				High	2172.5	434500	2074.67	414934	504		5417	433450	4	0	0 (0)	504
	15	79	Uplink	Low	1717.5	343500	1710.39	342078	0	-	-	-	-	-	-	-
				Mid	1745	349000	1647.17	329434	504		-	-	-	-	-	-
				High	1772.5	354500	1764.31	352862	6		-	-	-	-	-	-
20/20	20	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5
				Mid	2145	429000	2117.1	423420	102		5343	427470	6	0	0 (0)	102
				High	2170	434000	2069.74	413948	504		5407	432530	2	0	1 (2)	506
	20	106	Uplink	Low	1720	344000	1710.46	342092	0	-	-	-	-	-	-	-
				Mid	1745	349000	1644.74	328948	504		-	-	-	-	-	-
				High	1770	354000	1759.38	351876	6		-	-	-	-	-	-
20/40 (0,1)	40	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5
				Mid	2155	431000	2117.2	423440	102		5344	427490	6	0	0 (0)	102

	20	106	Uplink	High	2180	436000	2069.84	413968	504	-	5405	432490	6	0	0 (0)	504
				Low	1720	344000	1710.46	342092	0		-	-	-	-	-	
				Mid	1745	349000	1644.74	328948	504		-	-	-	-	-	
				High	1770	354000	1759.38	351876	6		-	-	-	-	-	
25/25	25	133	Downlink	Low	2122.5	424500	2110.53	422106	0	15	5283	422670	8	1	2 (4)	5
				Mid	2145	429000	2114.67	422934	102		5337	426990	8	0	0 (0)	102
				High	2167.5	433500	2064.81	412962	504		5394	431550	4	0	1 (2)	506
	25	133	Uplink	Low	1722.5	344500	1710.53	342106	0	-	-	-	-	-	-	-
				Mid	1745	349000	1642.31	328462	504		-	-	-	-	-	-
				High	1767.5	353500	1754.45	350890	6		-	-	-	-	-	-
25/40 (1)	40	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5
				Mid	2152.5	430500	2114.7	422940	102		5337	426990	6	0	0 (0)	102
				High	2175	435000	2064.84	412968	504		5394	431550	2	0	1 (2)	506
	25	133	Uplink	Low	1722.5	344500	1710.53	342106	0	-	-	-	-	-	-	-
				Mid	1745	349000	1642.31	328462	504		-	-	-	-	-	-
				High	1767.5	353500	1754.45	350890	6		-	-	-	-	-	-
30/30	30	160	Downlink	Low	2125	425000	2110.6	422120	0	15	5284	422690	10	1	2 (4)	5
				Mid	2145	429000	2112.24	422448	102		5331	426510	10	0	0 (0)	102
				High	2165	433000	2059.88	411976	504		5381	430570	6	0	1 (2)	506
	30	160	Uplink	Low	1725	345000	1710.6	342120	0	-	-	-	-	-	-	-
				Mid	1745	349000	1639.88	327976	504		-	-	-	-	-	-
				High	1765	353000	1749.52	349904	6		-	-	-	-	-	-
30/40 (1)	40	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5
				Mid	2150	430000	2112.2	422440	102		5330	426490	6	0	0 (0)	102
				High	2170	434000	2059.84	411968	504		5383	430610	10	1	1 (2)	507
	30	160	Uplink	Low	1725	345000	1710.6	342120	0	-	-	-	-	-	-	-
				Mid	1745	349000	1639.88	327976	504		-	-	-	-	-	-
				High	1765	353000	1749.52	349904	6		-	-	-	-	-	-
40/40	40	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5
				Mid	2145	429000	2107.2	421440	102		5319	425550	2	0	1 (2)	104
				High	2160	432000	2049.84	409968	504		5358	428670	6	1	2 (4)	509
	40	216	Uplink	Low	1730	346000	1710.56	342112	0	-	-	-	-	-	-	-
				Mid	1745	349000	1634.84	326968	504		-	-	-	-	-	-
				High	1760	352000	1739.48	347896	6		-	-	-	-	-	-
<p>Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p> <p>Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p> <p>Note 3: Asymmetric CBW BCS refers to applicable asymmetric UL and DL channel bandwidth combination set as specified in TS 38.101-1 [7], Table 5.3.6-1 for NR band n66.</p>																

Table 4.3.1.1.1.66-1A: Void

Table 4.3.1.1.1.66-2: Test frequencies for NR operating band n66, uplink and downlink channel bandwidth combinations and SCS 30 kHz

UL/DL CBW Combination (Asymmetric BCS) Note 3	CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute Frequency SSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10/10	10	24	Downlink	Low	2115	423000	2110.68	422136	0	15	5286	422910	18	0 (5)	10	
				Mid	2145	429000	2103.96	420792	102		5361	428910	18	0 (5)	214	
				High	2175	435000	1989.24	397848	504		5436	434910	18	0 (5)	1018	
	10	24	Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	-
				Mid	1745	349000	1559.24	311848	504		-	-	-	-	-	-
				High	1775	355000	1768.52	353704	6		-	-	-	-	-	-
10/20 (0,1)	20	51	Downlink	Low	2120	424000	2110.82	422164	0	15	5285	422890	2	0 (5)	10	
				Mid	2150	430000	2104.1	420820	102		5360	428890	2	0 (5)	214	
				High	2180	436000	1989.38	397876	504		5435	434890	2	0 (5)	1018	
	10	24	Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	-
				Mid	1745	349000	1559.24	311848	504		-	-	-	-	-	-
				High	1775	355000	1768.52	353704	6		-	-	-	-	-	-
10/25 (1)	25	65	Downlink	Low	2122.5	424500	2110.8	422160	0	15	5286	422910	10	0 (5)	10	
				Mid	2152.5	430500	2104.08	420816	102		5361	428910	10	0 (5)	214	
				High	2182.5	436500	1989.36	397872	504		5436	434910	10	0 (5)	1018	
	10	24	Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	-
				Mid	1745	349000	1559.24	311848	504		-	-	-	-	-	-
				High	1775	355000	1768.52	353704	6		-	-	-	-	-	-
10/30 (1)	30	78	Downlink	Low	2125	425000	2110.96	422192	0	15	5287	422930	6	0 (5)	10	
				Mid	2155	431000	2104.24	420848	102		5362	428930	6	0 (5)	214	
				High	2185	437000	1989.52	397904	504		5437	434930	6	0 (5)	1018	
	10	24	Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	-
				Mid	1745	349000	1559.24	311848	504		-	-	-	-	-	-
				High	1775	355000	1768.52	353704	6		-	-	-	-	-	-
10/40 (0,1)	40	106	Downlink	Low	2130	426000	2110.92	422184	0	15	5286	422910	2	0 (5)	10	
				Mid	2155	431000	2099.2	419840	102		5350	427970	22	0 (5)	214	
				High	2180	436000	1979.48	395896	504		5411	432970	22	0 (5)	1018	
	10	24	Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	-
				Mid	1740	348000	1554.24	310848	504		-	-	-	-	-	-
				High	1765	353000	1758.52	351704	6		-	-	-	-	-	-
15/15	15	38	Downlink	Low	2117.5	423500	2110.66	422132	0	15	5287	422930	2	0	1 (6)	12
				Mid	2145	429000	2101.44	420288	102		5355	428430	2	0	1 (6)	216
				High	2172.5	434500	1984.22	396844	504		5423	433930	2	0	1 (6)	1020

	15	38	Uplink	Low	1717.5	343500	1710.66	342132	0	-	-	-	-	-	-	
				Mid	1745	349000	1556.72	311344	504	-	-	-	-	-	-	
				High	1772.5	354500	1763.5	352700	6	-	-	-	-	-	-	
20/20	20	51	Downlink	Low	2120	424000	2110.82	422164	0	15	5285	422890	2	0	0 (5)	10
				Mid	2145	429000	2099.1	419820	102	5349	427950	22	0	0 (5)	214	
				High	2170	434000	1979.38	395876	504	5413	433010	18	0	1 (6)	1020	
	20	51	Uplink	Low	1720	344000	1710.82	342164	0	-	-	-	-	-	-	
				Mid	1745	349000	1554.38	310876	504	-	-	-	-	-	-	
				High	1770	354000	1758.66	351732	6	-	-	-	-	-	-	
20/40 (0,1)	40	106	Downlink	Low	2130	426000	2110.92	422184	0	15	5286	422910	2	0	0 (5)	10
				Mid	2155	431000	2099.2	419840	102	5350	427970	22	0	0 (5)	214	
				High	2180	436000	1979.48	395896	504	5411	432970	22	0	0 (5)	1018	
	20	51	Uplink	Low	1720	344000	1710.82	342164	0	-	-	-	-	-	-	
				Mid	1745	349000	1554.38	310876	504	-	-	-	-	-	-	
				High	1770	354000	1758.66	351732	6	-	-	-	-	-	-	
25/25	25	65	Downlink	Low	2122.5	424500	2110.8	422160	0	15	5286	422910	10	0	0 (5)	10
				Mid	2145	429000	2096.58	419316	102	5343	427470	6	0	1 (6)	216	
				High	2167.5	433500	1974.36	394872	504	5400	432030	2	0	2 (7)	1022	
	25	65	Uplink	Low	1722.5	344500	1710.8	342160	0	-	-	-	-	-	-	
				Mid	1745	349000	1551.86	310372	504	-	-	-	-	-	-	
				High	1767.5	353500	1753.64	350728	6	-	-	-	-	-	-	
25/40 (1)	40	106	Downlink	Low	2130	426000	2110.92	422184	0	15	5286	422910	2	0	0 (5)	10
				Mid	2152.5	430500	2096.7	419340	102	5343	427470	22	0	0 (5)	214	
				High	2175	435000	1974.48	394896	504	5400	432030	18	0	1 (6)	1020	
	25	65	Uplink	Low	1722.5	344500	1710.8	342160	0	-	-	-	-	-	-	
				Mid	1745	349000	1551.86	310372	504	-	-	-	-	-	-	
				High	1767.5	353500	1753.64	350728	6	-	-	-	-	-	-	
30/30	30	78	Downlink	Low	2125	425000	2110.96	422192	0	15	5287	422930	6	0	0 (5)	10
				Mid	2145	429000	2094.24	418848	102	5337	426990	2	0	1 (6)	216	
				High	2165	433000	1969.52	393904	504	5387	431050	22	0	1 (6)	1020	
	30	78	Uplink	Low	1725	345000	1710.96	342192	0	-	-	-	-	-	-	
				Mid	1745	349000	1549.52	309904	504	-	-	-	-	-	-	
				High	1765	353000	1748.8	349760	6	-	-	-	-	-	-	
30/40 (1)	40	106	Downlink	Low	2130	426000	2110.92	422184	0	15	5286	422910	2	0	0 (5)	10
				Mid	2150	430000	2094.2	418840	102	5336	426970	22	0	0 (5)	214	
				High	2170	434000	1969.48	393896	504	5389	431090	14	0	2 (7)	1022	
	30	78	Uplink	Low	1725	345000	1710.96	342192	0	-	-	-	-	-	-	
				Mid	1745	349000	1549.52	309904	504	-	-	-	-	-	-	
				High	1765	353000	1748.8	349760	6	-	-	-	-	-	-	
40/40	40	106	Downlink	Low	2130	426000	2110.92	422184	0	15	5286	422910	2	0	0 (5)	10
				Mid	2145	429000	2089.2	417840	102	5325	426030	18	0	1 (6)	216	

				High	2160	432000	1959.48	391896	504		5361	428910	2	0	0 (5)	1018
	40	106	Uplink	Low	1730	346000	1710.92	342184	0	-	-	-	-	-	-	-
				Mid	1745	349000	1544.48	308896	504		-	-	-	-	-	-
				High	1760	352000	1738.76	347752	6		-	-	-	-	-	-

- Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.
- Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.
- Note 3: Asymmetric CBW BCS refers to applicable asymmetric UL and DL channel bandwidth combination set as specified in TS 38.101-1 [7], Table 5.3.6-1 for NR band n66.

Table 4.3.1.1.66-2A: Void

Table 4.3.1.1.1.66-3: Test frequencies for NR operating band n66, uplink and downlink channel bandwidth combinations and SCS 60 kHz without CORESET#0

UL/DL CBW (Asymmetric BCS) Note 2	CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFreq uencyPointA [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute Frequen cySSB [ARFCN]
10/10	10	11	Downlink	Low	2115	423000	2111.04	422208	0	15	-	422568
				Mid	2145	429000	2067.6	413520	102		-	428568
				High	2175	435000	1808.16	361632	504		-	434568
	10	11	Uplink	Low	1715	343000	1711.04	342208	0	-	-	-
				Mid	1745	349000	1378.16	275632	504		-	-
				High	1775	355000	1766.72	353344	6		-	-
10/20	20	24	Downlink	Low	2120	424000	2111.36	422272	0	15	-	422632
				Mid	2150	430000	2067.92	413584	102		-	428632
				High	2180	436000	1808.48	361696	504		-	434632
	10	11	Uplink	Low	1715	343000	1711.04	342208	0	-	-	-
				Mid	1745	349000	1378.16	275632	504		-	-
				High	1775	355000	1766.72	353344	6		-	-
10/25 (1)	25	31	Downlink	Low	2122.5	424500	2111.34	422268	0	15	-	422628
				Mid	2152.5	430500	2067.9	413580	102		-	428628
				High	2182.5	436500	1808.46	361692	504		-	434628
	10	11	Uplink	Low	1715	343000	1711.04	342208	0	-	-	-
				Mid	1745	349000	1378.16	275632	504		-	-
				High	1775	355000	1766.72	353344	6		-	-
10/30 (1)	30	38	Downlink	Low	2125	425000	2111.32	422264	0	15	-	422624
				Mid	2155	431000	2067.88	413576	102		-	428624
				High	2185	437000	1808.44	361688	504		-	434624
	10	11	Uplink	Low	1715	343000	1711.04	342208	0	-	-	-
				Mid	1745	349000	1378.16	275632	504		-	-
				High	1775	355000	1766.72	353344	6		-	-
10/40	40	51	Downlink	Low	2130	426000	2111.64	422328	0	15	-	422688
				Mid	2155	431000	2063.2	412640	102		-	427688
				High	2180	436000	1798.76	359752	504		-	432688
	10	11	Uplink	Low	1715	343000	1711.04	342208	0	-	-	-
				Mid	1740	348000	1373.16	274632	504		-	-
				High	1765	353000	1756.72	351344	6		-	-
15/15	15	18	Downlink	Low	2117.5	423500	2111.02	422204	0	15	-	422564
				Mid	2145	429000	2065.08	413016	102		-	428064
				High	2172.5	434500	1803.14	360628	504		-	433564
	15	18	Uplink	Low	1717.5	343500	1711.02	342204	0	-	-	-
				Mid	1745	349000	1375.64	275128	504		-	-

20/20	20	24	Downlink	High	1772.5	354500	1761.7	352340	6	15	-	-
				Low	2120	424000	2111.36	422272	0		-	422632
				Mid	2145	429000	2062.92	412584	102		-	427632
	20	24	Uplink	High	2170	434000	1798.48	359696	504		-	432632
				Low	1720	344000	1711.36	342272	0		-	-
				Mid	1745	349000	1373.48	274696	504		-	-
20/40	40	51	Downlink	High	1770	354000	1757.04	351408	6	15	-	-
				Low	2130	426000	2111.64	422328	0		-	422688
				Mid	2155	431000	2063.2	412640	102		-	427688
	20	24	Uplink	High	2180	436000	1798.76	359752	504		-	432688
				Low	1720	344000	1711.36	342272	0		-	-
				Mid	1745	349000	1373.48	274696	504		-	-
25/25	25	31	Downlink	High	1770	354000	1757.04	351408	6	15	-	-
				Low	2122.5	424500	2111.34	422268	0		-	422628
				Mid	2145	429000	2060.4	412080	102		-	427128
	25	31	Uplink	High	2167.5	433500	1793.46	358692	504		-	431628
				Low	1722.5	344500	1711.34	342268	0		-	-
				Mid	1745	349000	1370.96	274192	504		-	-
25/40 (1)	40	51	Downlink	High	1767.5	353500	1752.02	350404	6	15	-	-
				Low	2130	426000	2111.64	422328	0		-	422688
				Mid	2152.5	430500	2060.7	412140	102		-	427188
	25	31	Uplink	High	2175	435000	1793.76	358752	504		-	431688
				Low	1722.5	344500	1711.34	342268	0		-	-
				Mid	1745	349000	1370.96	274192	504		-	-
30/30	30	38	Downlink	High	1767.5	353500	1752.02	350404	6	15	-	-
				Low	2125	425000	2111.32	422264	0		-	422624
				Mid	2145	429000	2057.88	411576	102		-	426624
	30	38	Uplink	High	2165	433000	1788.44	357688	504		-	430624
				Low	1725	345000	1711.32	342264	0		-	-
				Mid	1745	349000	1368.44	273688	504		-	-
30/40 (1)	40	51	Downlink	High	1765	353000	1747	349400	6	15	-	-
				Low	2130	426000	2111.64	422328	0		-	422688
				Mid	2150	430000	2058.2	411640	102		-	426688
	30	38	Uplink	High	2170	434000	1788.76	357752	504		-	430688
				Low	1725	345000	1711.32	342264	0		-	-
				Mid	1745	349000	1368.44	273688	504		-	-
40/40	40	51	Downlink	High	1765	353000	1747	349400	6	15	-	-
				Low	2130	426000	2111.64	422328	0		-	422688
				Mid	2145	429000	2053.2	410640	102		-	425688
	40	51	Uplink	High	2160	432000	1778.76	355752	504		-	428688
				Low	1730	346000	1711.64	342328	0		-	-

				Mid	1745	349000	1363.76	272752	504		-	-
				High	1760	352000	1737.32	347464	6		-	-
Note 1:	FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, $controlResourceSetZero=0$ and $searchSpaceZero=0$ (TS 38.213 [22], clause 13).											
Note 2:	Asymmetric CBW BCS refers to applicable asymmetric UL and DL channel bandwidth combination set as specified in TS 38.101-1 [7], Table 5.3.6-1 for NR band n66.											

Table 4.3.1.1.1.66-3A: Void

4.3.1.1.1.67 – 4.3.1.1.1.69 FFS

4.3.1.1.1.70 Reference test frequencies for NR operating band n70

Editor's note: Test frequencies for the Tx-RX frequency separation of 295 Mhz option as specified in TS 38.101-1, Table 5.4.4-1 is FFS.

Table 4.3.1.1.1.70-1: Test frequencies for NR operating band n70, default Tx-RX frequency separation 300MHz, uplink and downlink channel bandwidth combinations and SCS 15 kHz

UL/DL Band width combination	CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
5/5	5	25	Downlink	Low	1997.5	399500	1995.25	399050	0	15	4993	399410	0	0	0 (0)	0
				Mid	2002.5	400500	1981.89	396378	102		5007	400590	0	1	2 (4)	107
				High	2007.5	401500	1914.53	382906	504		5018	401530	4	1	1 (2)	507
	5	25	Uplink	Low	1697.5	339500	1695.25	339050	0	-	-	-	-	-	-	-
				Mid	1702.5	340500	1609.53	321906	504		-	-	-	-	-	-
				High	1707.5	341500	1704.17	340834	6		-	-	-	-	-	-
5/10	10	52	Downlink	Low	2000	400000	1995.32	399064	0	15	4994	399610	2	1	2 (4)	5
				Mid	2005	401000	1981.96	396392	102		5008	400610	2	1	2 (4)	107
				High	2010	402000	1914.6	382920	504		5019	401550	6	1	1 (2)	507
	5	25	Uplink	Low	1697.5	339500	1695.25	339050	0	-	-	-	-	-	-	-
				Mid	1702.5	340500	1609.53	321906	504		-	-	-	-	-	-
				High	1707.5	341500	1704.17	340834	6		-	-	-	-	-	-
5/15	15	79	Downlink	Low	2002.5	400500	1995.39	399078	0	15	4995	399630	4	1	2 (4)	5
				Mid	2007.5	401500	1982.03	396406	102		5006	400570	8	1	1 (2)	105
				High	2012.5	402500	1914.67	382934	504		5020	401570	8	1	1 (2)	507
	5	25	Uplink	Low	1697.5	339500	1695.25	339050	0	-	-	-	-	-	-	-
				Mid	1702.5	340500	1609.53	321906	504		-	-	-	-	-	-
				High	1707.5	341500	1704.17	340834	6		-	-	-	-	-	-
5/20	20	106	Downlink	Low	2005	401000	1995.46	399092	0	15	4996	399650	6	1	2 (4)	5
				Mid	2007.5	401500	1979.6	395920	102		5000	400090	10	1	1 (2)	105
				High	2010	402000	1909.74	381948	504		5007	400590	10	1	1 (2)	507
	5	25	Uplink	Low	1697.5	339500	1695.25	339050	0	-	-	-	-	-	-	-
				Mid	1700	340000	1607.03	321406	504		-	-	-	-	-	-
				High	1702.5	340500	1699.17	339834	6		-	-	-	-	-	-
5/25	25	133	Downlink	Low	2007.5	401500	1995.53	399106	0	15	4994	399610	0	0	2 (4)	4
				Mid												
				High												
	5	25	Uplink	Low	1697.5	339500	1695.25	339050	0	-	-	-	-	-	-	-
				Mid												
				High												
10/10	10	52	Downlink	Low	2000	400000	1995.32	399064	0	15	4994	399610	2	1	2 (4)	5
				Mid	2002.5	400500	1979.46	395892	102		5001	400110	2	1	2 (4)	107
				High	2005	401000	1909.6	381920	504		5008	400610	2	1	2 (4)	509
	10	52	Uplink	Low	1700	340000	1695.32	339064	0	-	-	-	-	-	-	-
				Mid	1702.5	340500	1607.1	321420	504		-	-	-	-	-	-
				High												

10/20	20	106	Downlink	High	1705	341000	1699.24	339848	6	15	-	-	-	-	-	-
				Low	2005	401000	1995.46	399092	0		4996	399650	6	1	2 (4)	5
				Mid	2007.5	401500	1979.6	395920	102		5000	400090	10	1	1 (2)	105
	10	52	Uplink	High	2010	402000	1909.74	381948	504	-	5007	400590	10	1	1 (2)	507
				Low	1700	340000	1695.32	339064	0		-	-	-	-	-	-
				Mid	1702.5	340500	1607.1	321420	504		-	-	-	-	-	-
10/25	25	133	Downlink	High	1705	341000	1699.24	339848	6	15	-	-	-	-	-	-
				Low	2007.5	401500	1995.53	399106	0		4994	399610	0	0	2 (4)	4
				Mid												
	10	52	Uplink	High						-						
				Low	1700	340000	1695.32	339064	0		-	-	-	-	-	-
				Mid												
15/15	15	79	Downlink	High						15						
				Low	2002.5	400500	1995.39	399078	0		4995	399630	4	1	2 (4)	5
				Mid												
	15	79	Uplink	High						-						
				Low	1702.5	340500	1695.39	339078	0		-	-	-	-	-	-
				Mid												
15/20	20	106	Downlink	High						15						
				Low	2005	401000	1995.46	399092	0		4996	399650	6	1	2 (4)	5
				Mid												
	15	79	Uplink	High						-						
				Low	1702.5	340500	1695.39	339078	0		-	-	-	-	-	-
				Mid												
15/25	25	133	Downlink	High						15						
				Low	2007.5	401500	1995.53	399106	0		4994	399610	0	0	2 (4)	4
				Mid												
	15	79	Uplink	High						-						
				Low	1702.5	340500	1695.39	339078	0		-	-	-	-	-	-
				Mid												

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.70-2: Test frequencies for NR operating band n70, default Tx-RX frequency separation 300MHz, uplink and downlink channel bandwidth combinations and SCS 30 kHz

UL/DL Band width combination	CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10/10	10	24	Downlink	Low	2000	400000	1995.68	399136	0	15	5000	400090	6	0	3 (8)	16	
				Mid	2002.5	400500	1961.46	392292	102		5007	400590	6	0	3 (8)	220	
				High	2005	401000	1819.24	363848	504		5014	401090	6	0	3 (8)	1024	
	10	24	Uplink	Low	1700	340000	1695.68	339136	0	-	-	-	-	-	-	-	-
				Mid	1702.5	340500	1516.74	303348	504		-	-	-	-	-	-	-
				High	1705	341000	1698.52	339704	6		-	-	-	-	-	-	
10/20	20	51	Downlink	Low	2005	401000	1995.82	399164	0	15	4999	399890	2	0	0 (5)	10	
				Mid	2007.5	401500	1961.6	392320	102		5006	400570	14	0	2 (7)	218	
				High	2010	402000	1819.38	363876	504		5013	401070	14	0	2 (7)	1022	
	10	24	Uplink	Low	1700	340000	1695.68	339136	0	-	-	-	-	-	-	-	-
				Mid	1702.5	340500	1516.74	303348	504		-	-	-	-	-	-	
				High	1705	341000	1698.52	339704	6		-	-	-	-	-	-	
10/25	25	65	Downlink	Low	2007.5	401500	1995.8	399160	0	15	5000	400090	22	0	2 (7)	14	
				Mid													
				High													
	10	24	Uplink	Low	1700	340000	1695.68	339136	0	-	-	-	-	-	-	-	-
				Mid													
				High													
15/15	15	38	Downlink	Low	2002.5	400500	1995.66	399132	0	15	4998	399870	6	0	0 (5)	10	
				Mid													
				High													
	15	38	Uplink	Low	1702.5	340500	1695.66	339132	0	-	-	-	-	-	-	-	-
				Mid													
				High													
15/20	20	51	Downlink	Low	2005	401000	1995.82	399164	0	15	4999	399890	2	0	0 (5)	10	
				Mid													
				High													
	15	38	Uplink	Low	1702.5	340500	1695.66	339132	0	-	-	-	-	-	-	-	-
				Mid													
				High													
15/25	25	65	Downlink	Low	2007.5	401500	1995.8	399160	0	15	5000	400090	22	0	2 (7)	14	
				Mid													
				High													
	15	38	Uplink	Low	1702.5	340500	1695.66	339132	0	-	-	-	-	-	-	-	-
				Mid													
				High													

				High															
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1 in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																		
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.																		

Table 4.3.1.1.1.70-3: Test frequencies for NR operating band n70, default Tx-RX frequency separation 300MHz, uplink and downlink channel bandwidth combinations and SCS 60 kHz without CORESET#0

UL/DL Band width combination	CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	
10/10	10	11	Downlink	Low	2000	400000	1996.04	399208	0	15	-	399568
				Mid	2002.5	400500	1925.1	385020	102		-	400068
				High	2005	401000	1638.16	327632	504		-	400568
	10	11	Uplink	Low	1700	340000	1696.04	339208	0	-	-	-
				Mid	1702.5	340500	1335.66	267132	504		-	-
				High	1705	341000	1696.72	339344	6		-	-
10/20	20	24	Downlink	Low	2005	401000	1996.36	399272	0	15	-	399632
				Mid	2007.5	401500	1925.42	385084	102		-	400132
				High	2010	402000	1638.48	327696	504		-	400632
	10	11	Uplink	Low	1700	340000	1696.04	339208	0	-	-	-
				Mid	1702.5	340500	1335.66	267132	504		-	-
				High	1705	341000	1696.72	339344	6		-	-
10/25	25	31	Downlink	Low	2007.5	401500	1996.34	399268	0	15	-	399628
				Mid								
				High								
	10	11	Uplink	Low	1700	340000	1696.04	339208	0	-	-	-
				Mid								
				High								
15/15	15	18	Downlink	Low	2002.5	400500	1996.02	399204	0	15	-	399564
				Mid								
				High								
	15	18	Uplink	Low	1702.5	340500	1696.02	339204	0	-	-	-
				Mid								
				High								
15/20	20	24	Downlink	Low	2005	401000	1996.36	399272	0	15	-	399632
				Mid								
				High								
	15	18	Uplink	Low	1702.5	340500	1696.02	339204	0	-	-	-
				Mid								
				High								
15/25	25	31	Downlink	Low	2007.5	401500	1996.34	399268	0	15	-	399628
				Mid								
				High								
	15	18	Uplink	Low	1702.5	340500	1696.02	339204	0	-	-	-
				Mid								
				High								

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, *controlResourceSetZero*=0 and *searchSpaceZero* = 0 (TS 38.213 [22], clause 13).

4.3.1.1.1.71

Reference test frequencies for NR operating band n71

Table 4.3.1.1.1.71-1: Test frequencies for NR operating band n71 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	619.5	123900	617.25	123450	0	15	1548	123870	8	1	0 (0)	1
			Mid	634.5	126900	613.89	122778	102		1587	126990	0	1	2 (4)	107
			High	649.5	129900	556.53	111306	504		1623	129870	8	1	0 (0)	505
		Uplink	Low	665.5	133100	663.25	132650	0	-	-	-	-	-	-	-
			Mid	680.5	136100	587.53	117506	504		-	-	-	-	-	-
			High	695.5	139100	692.17	138434	6		-	-	-	-	-	-
10	52	Downlink	Low	622	124400	617.32	123464	0	15	1549	123890	10	1	0 (0)	1
			Mid	634.5	126900	611.46	122292	102		1581	126510	2	1	2 (4)	107
			High	647	129400	551.6	110320	504		1610	128890	10	1	0 (0)	505
		Uplink	Low	668	133600	663.32	132664	0	-	-	-	-	-	-	-
			Mid	680.5	136100	585.1	117020	504		-	-	-	-	-	-
			High	693	138600	687.24	137448	6		-	-	-	-	-	-
15	79	Downlink	Low	624.5	124900	617.39	123478	0	15	1547	123850	4	0	0 (0)	0
			Mid	634.5	126900	609.03	121806	102		1575	126030	4	1	2 (4)	107
			High	644.5	128900	546.67	109334	504		1600	127970	8	1	1 (2)	507
		Uplink	Low	670.5	134100	663.39	132678	0	-	-	-	-	-	-	-
			Mid	680.5	136100	582.67	116534	504		-	-	-	-	-	-
			High	690.5	138100	682.31	136462	6		-	-	-	-	-	-
20	106	Downlink	Low	627	125400	617.46	123492	0	15	1548	123870	6	0	0 (0)	0
			Mid	634.5	126900	606.6	121320	102		1569	125550	6	1	2 (4)	107
			High	642	128400	541.74	108348	504		1587	126990	10	1	1 (2)	507
		Uplink	Low	673	134600	663.46	132692	0	-	-	-	-	-	-	-
			Mid	680.5	136100	580.24	116048	504		-	-	-	-	-	-
			High	688	137600	677.38	135476	6		-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.71-2: Test frequencies for NR operating band n71 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	622	124400	617.68	123536	0	15	1555	124370	14	0	1 (6)	12
			Mid	634.5	126900	593.46	118692	102		1587	126990	6	0	3 (8)	220
			High	647	129400	461.24	92248	504		1616	129370	14	0	1 (6)	1020
		Uplink	Low	668	133600	663.68	132736	0	-	-	-	-	-	-	-
			Mid	680.5	136100	494.74	98948	504		-	-	-	-	-	-
			High	693	138600	686.52	137304	6		-	-	-	-	-	-
15	38	Downlink	Low	624.5	124900	617.66	123532	0	15	1553	124330	2	0	1 (6)	12
			Mid	634.5	126900	590.94	118188	102		1578	126270	6	0	0 (5)	214
			High	644.5	128900	456.22	91244	504		1606	128450	18	0	2 (7)	1022
		Uplink	Low	670.5	134100	663.66	132732	0	-	-	-	-	-	-	-
			Mid	680.5	136100	492.22	98444	504		-	-	-	-	-	-
			High	690.5	138100	681.5	136300	6		-	-	-	-	-	-
20	51	Downlink	Low	627	125400	617.82	123564	0	15	1554	124350	22	0	0 (5)	10
			Mid	634.5	126900	588.6	117720	102		1572	125790	2	0	0 (5)	214
			High	642	128400	451.38	90276	504		1593	127470	14	0	2 (7)	1022
		Uplink	Low	673	134600	663.82	132764	0	-	-	-	-	-	-	-
			Mid	680.5	136100	489.88	97976	504		-	-	-	-	-	-
			High	688	137600	676.66	135332	6		-	-	-	-	-	-
Note 1:		The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.													
Note 2:		The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.													

4.3.1.1.1.72 – 4.3.1.1.1.73

4.3.1.1.1.74 Reference test frequencies for NR operating band n74

Table 4.3.1.1.1.74-1: Test frequencies for NR operating band n74 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
5	25	Downlink	Low	1477.5	295500	1475.25	295050	0	15	3693	295470	8	1	0 (0)	1	
			Mid	1496.5	299300	1475.89	295178	102		3742	299330	4	1	1 (2)	105	
			High	1515.5	303100	1422.53	284506	504		3788	303130	4	1	1 (2)	507	
		Uplink	Low	1429.5	285900	1427.25	285450	0	-	-	-	-	-	-	-	-
			Mid	1448.5	289700	1355.53	271106	504		-	-	-	-	-	-	-
			High	1467.5	293500	1464.17	292834	6		-	-	-	-	-	-	-
10	52	Downlink	Low	1480	296000	1475.32	295064	0	15	3694	295490	10	1	0 (0)	1	
			Mid	1496.5	299300	1473.46	294692	102		3736	298850	6	1	1 (2)	105	
			High	1513	302600	1417.6	283520	504		3778	302210	2	1	2 (4)	509	
		Uplink	Low	1432	286400	1427.32	285464	0	-	-	-	-	-	-	-	-
			Mid	1448.5	289700	1353.1	270620	504		-	-	-	-	-	-	-
			High	1465	293000	1459.24	291848	6		-	-	-	-	-	-	-
15	79	Downlink	Low	1482.5	296500	1475.39	295078	0	15	3692	295450	4	0	0 (0)	0	
			Mid	1496.5	299300	1471.03	294206	102		3730	298370	8	1	1 (2)	105	
			High	1510.5	302100	1412.67	282534	504		3765	301230	4	1	2 (4)	509	
		Uplink	Low	1434.5	286900	1427.39	285478	0	-	-	-	-	-	-	-	-
			Mid	1448.5	289700	1350.67	270134	504		-	-	-	-	-	-	-
			High	1462.5	292500	1454.31	290862	6		-	-	-	-	-	-	-
20	106	Downlink	Low	1485	297000	1475.46	295092	0	15	3693	295470	6	0	0 (0)	0	
			Mid	1496.5	299300	1468.6	293720	102		3724	297890	10	1	1 (2)	105	
			High	1508	301600	1407.74	281548	504		3752	300250	6	1	2 (4)	509	
		Uplink	Low	1437	287400	1427.46	285492	0	-	-	-	-	-	-	-	-
			Mid	1448.5	289700	1348.24	269648	504		-	-	-	-	-	-	-
			High	1460	292000	1449.38	289876	6		-	-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.74-2: Test frequencies for NR operating band n74 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	24	Downlink	Low	1480	296000	1475.68	295136	0	15	3700	295970	14	0	1 (6)	12	
			Mid	1496.5	299300	1455.46	291092	102		3742	299330	10	0	2 (7)	218	
			High	1513	302600	1327.24	265448	504		3784	302690	6	0	3 (8)	1024	
		Uplink	Low	1432	286400	1427.68	285536	0	-	-	-	-	-	-	-	-
			Mid	1448.5	289700	1262.74	252548	504		-	-	-	-	-	-	-
			High	1465	293000	1458.52	291704	6		-	-	-	-	-	-	-
15	38	Downlink	Low	1482.5	296500	1475.66	295132	0	15	3698	295930	2	0	1 (6)	12	
			Mid	1496.5	299300	1452.94	290588	102		3736	298850	18	0	2 (7)	218	
			High	1510.5	302100	1322.22	264444	504		3768	301470	6	0	0 (5)	1018	
		Uplink	Low	1434.5	286900	1427.66	285532	0	-	-	-	-	-	-	-	-
			Mid	1448.5	289700	1260.22	252044	504		-	-	-	-	-	-	-
			High	1462.5	292500	1453.5	290700	6		-	-	-	-	-	-	-
20	51	Downlink	Low	1485	297000	1475.82	295164	0	15	3699	295950	22	0	0 (5)	10	
			Mid	1496.5	299300	1450.6	290120	102		3730	298370	14	0	2 (7)	218	
			High	1508	301600	1317.38	263476	504		3755	300490	2	0	0 (5)	1018	
		Uplink	Low	1437	287400	1427.82	285564	0	-	-	-	-	-	-	-	-
			Mid	1448.5	289700	1257.88	251576	504		-	-	-	-	-	-	-
			High	1460	292000	1448.66	289732	6		-	-	-	-	-	-	-

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcc-ConfigSIB1 in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.74-3: Test frequencies for NR operating band n74 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	1480	296000	1476.04	295208	0	15	-	295568
			Mid	1496.5	299300	1419.1	283820	102		-	298868
			High	1513	302600	1146.16	229232	504		-	302168
		Uplink	Low	1432	286400	1428.04	285608	0	-	-	-
			Mid	1448.5	289700	1081.66	216332	504		-	-
			High	1465	293000	1456.72	291344	6		-	-
15	18	Downlink	Low	1482.5	296500	1476.02	295204	0	15	-	295564
			Mid	1496.5	299300	1416.58	283316	102		-	298364
			High	1510.5	302100	1141.14	228228	504		-	301164
		Uplink	Low	1434.5	286900	1428.02	285604	0	-	-	-
			Mid	1448.5	289700	1079.14	215828	504		-	-
			High	1462.5	292500	1451.7	290340	6		-	-
20	24	Downlink	Low	1485	297000	1476.36	295272	0	15	-	295632
			Mid	1496.5	299300	1414.42	282884	102		-	297932
			High	1508	301600	1136.48	227296	504		-	300232
		Uplink	Low	1437	287400	1428.36	285672	0	-	-	-
			Mid	1448.5	289700	1076.98	215396	504		-	-
			High	1460	292000	1447.04	289408	6		-	-
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB}=31$, <i>controlResourceSetZero</i> =0 and <i>searchSpaceZero</i> = 0 (TS 38.213 [22], clause 13).											

4.3.1.1.1.75 Reference test frequencies for NR operating band n75 (SDL)

Table 4.3.1.1.1.75-1: Test frequencies for NR operating band n75 and SCS 15 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
5	25	Downlink	Low	1434.5	286900	1432.25	286450	0	15	-	286810
			Mid	1474.5	294900	1453.89	290778	102		-	294810
			High	1514.5	302900	1421.53	284306	504		-	302810
10	52	Downlink	Low	1437	287400	1432.32	286464	0	15	-	286824
			Mid	1474.5	294900	1451.46	290292	102		-	294324
			High	1512	302400	1416.6	283320	504		-	301824
15	79	Downlink	Low	1439.5	287900	1432.39	286478	0	15	-	286838
			Mid	1474.5	294900	1449.03	289806	102		-	293838
			High	1509.5	301900	1411.67	282334	504		-	300838
20	106	Downlink	Low	1442	288400	1432.46	286492	0	15	-	286852
			Mid	1474.5	294900	1446.6	289320	102		-	293352
			High	1507	301400	1406.74	281348	504		-	299852

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).

Table 4.3.1.1.1.75-2: Test frequencies for NR operating band n75 and SCS 30 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	24	Downlink	Low	1437	287400	1432.68	286536	0	15	-	286896
			Mid	1474.5	294900	1433.46	286692	102		-	294396
			High	1512	302400	1326.24	265248	504		-	301896
15	38	Downlink	Low	1439.5	287900	1432.66	286532	0	15	-	286892
			Mid	1474.5	294900	1430.94	286188	102		-	293892
			High	1509.5	301900	1321.22	264244	504		-	300892
20	51	Downlink	Low	1442	288400	1432.82	286564	0	15	-	286924
			Mid	1474.5	294900	1428.6	285720	102		-	293424
			High	1507	301400	1316.38	263276	504		-	299924

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, *controlResourceSetZero*=0 and *searchSpaceZero* = 0 (TS 38.213 [22], clause 13).

Table 4.3.1.1.1.75-3: Test frequencies for NR operating band n75 and SCS 60 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink	Low	1437	287400	1433.04	286608	0	15	-	286968
			Mid	1474.5	294900	1397.1	279420	102		-	294468
			High	1512	302400	1145.16	229032	504		-	301968
15	18	Downlink	Low	1439.5	287900	1433.02	286604	0	15	-	286964
			Mid	1474.5	294900	1394.58	278916	102		-	293964
			High	1509.5	301900	1140.14	228028	504		-	300964
20	24	Downlink	Low	1442	288400	1433.36	286672	0	15	-	287032
			Mid	1474.5	294900	1392.42	278484	102		-	293532
			High	1507	301400	1135.48	227096	504		-	300032

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, *controlResourceSetZero*=0 and *searchSpaceZero* = 0 (TS 38.213 [22], clause 13).

4.3.1.1.1.76 Reference test frequencies for NR operating band n76 (SDL)

Table 4.3.1.1.1.76-1: Test frequencies for NR operating band n76 and SCS 15 kHz without CORESET#0

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
5	25	Downlink	Low, Mid, High	1429.5	285900	1427.25	285450	0	15	-	285810
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).											

4.3.1.1.1.77

Reference test frequencies for NR operating band n77

Table 4.3.1.1.1.77-1: Test frequencies for NR operating band n77, SCS 15 kHz and ΔF_{Raster} 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	52	Downlink & Uplink	Low	3305.01	620334	3300.33	620022	0	30	7711	620352	6	1	1 (6)	7
			Mid	3750	650000	3726.96	648464	102		8020	650016	4	1	1 (6)	109
			High	4194.99	679666	4099.59	673306	504		8329	679680	2	1	1 (6)	511
15	79	Downlink & Uplink	Low	3307.5	620500	3300.39	620026	0	30	7711	620352	2	1	1 (6)	7
			Mid	3750	650000	3724.53	648302	102		8018	649824	10	2	0 (2)	106
			High	4192.5	679500	4094.67	672978	504		8325	679296	6	0	0 (2)	506
20	106	Downlink & Uplink	Low	3310.02	620668	3300.48	620032	0	30	7711	620352	8	0	1 (6)	6
			Mid	3750	650000	3722.1	648140	102		8016	649632	4	0	0 (2)	104
			High	4189.98	679332	4089.72	672648	504		8322	679008	0	0	1 (6)	510
25	133	Downlink & Uplink	Low	3312.51	620834	3300.54	620036	0	30	7711	620352	4	0	1 (6)	6
			Mid	3750	650000	3719.67	647978	102		8015	649536	10	1	1 (6)	109
			High	4187.49	679166	4084.8	672320	504		8319	678720	4	3	1 (6)	513
30	160	Downlink & Uplink	Low	3315	621000	3300.6	620040	0	30	7711	620352	0	0	1 (6)	6
			Mid	3750	650000	3717.24	647816	102		8013	649344	4	3	0 (2)	107
			High	4185	679000	4079.88	671992	504		8315	678336	8	2	0 (2)	508
40	216	Downlink & Uplink	Low	3320.01	621334	3300.57	620038	0	30	7711	620352	2	0	1 (6)	6
			Mid	3750	650000	3712.2	647480	102		8010	649056	4	3	1 (6)	111
			High	4179.99	678666	4069.83	671322	504		8308	677664	6	2	0 (2)	508
50	270	Downlink & Uplink	Low	3325.02	621668	3300.72	620048	0	30	7711	620352	4	3	0 (2)	5
			Mid	3750	650000	3707.34	647156	102		8006	648672	4	2	0 (2)	106
			High	4174.98	678332	4059.96	670664	504		8301	676992	4	1	0 (2)	507
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-3 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

Table 4.3.1.1.1.77-2: Test frequencies for NR operating band n77, SCS 30 kHz and ΔF_{Raster} 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	3305.01	620334	3300.69	620046	0	30	7711	620352	18	0	2 (2)	4
			Mid	3750	650000	3708.96	647264	102		8020	650016	16	0	2 (2)	208
			High	4194.99	679666	4009.23	667282	504		8329	679680	14	0	2 (2)	1012
15	38	Downlink & Uplink	Low	3307.5	620500	3300.66	620044	0	30	7711	620352	20	0	2 (2)	4
			Mid	3750	650000	3706.44	647096	102		8018	649824	16	0	1 (1)	206
			High	4192.5	679500	4004.22	666948	504		8325	679296	12	0	0 (0)	1008
20	51	Downlink & Uplink	Low	3310.02	620668	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4
			Mid	3750	650000	3704.1	646940	102		8016	649632	4	0	0 (0)	204
			High	4189.98	679332	3999.36	666624	504		8322	679008	0	0	2 (2)	1012
25	65	Downlink & Uplink	Low	3312.51	620834	3300.81	620054	0	30	7711	620352	10	0	2 (2)	4
			Mid	3750	650000	3701.58	646772	102		8015	649536	4	0	3 (3)	210
			High	4187.49	679166	3994.35	666290	504		8319	678720	22	0	3 (3)	1014
30	78	Downlink & Uplink	Low	3315	621000	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4
			Mid	3750	650000	3699.24	646616	102		8013	649344	16	0	1 (1)	206
			High	4185	679000	3989.52	665968	504		8315	678336	8	0	1 (1)	1010
40	106	Downlink & Uplink	Low	3320.01	621334	3300.93	620062	0	30	7711	620352	2	0	2 (2)	4
			Mid	3750	650000	3694.2	646280	102		8010	649056	16	0	3 (3)	210
			High	4179.99	678666	3979.47	665298	504		8308	677664	6	0	1 (1)	1010
50	133	Downlink & Uplink	Low	3325.02	621668	3301.08	620072	0	30	7711	620352	16	0	1 (1)	2
			Mid	3750	650000	3689.34	645956	102		8006	648672	4	0	1 (1)	206
			High	4174.98	678332	3969.6	664640	504		8301	676992	16	0	0 (0)	1008
60	162	Downlink & Uplink	Low	3330	622000	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4
			Mid	3750	650000	3684.12	645608	102		8003	648384	16	0	3 (3)	210
			High	4170	678000	3959.4	663960	504		8294	676320	0	0	1 (1)	1010
70	189	Downlink & Uplink	Low	3335.01	622334	3300.99	620066	0	30	7711	620352	22	0	1 (1)	2
			Mid	3750	650000	3679.26	645284	102		7999	648000	4	0	1 (1)	206
			High	4164.99	677666	3949.53	663302	504		8287	675648	10	0	0 (0)	1008
80	217	Downlink & Uplink	Low	3340.02	622668	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4
			Mid	3750	650000	3674.22	644948	102		7996	647712	4	0	3 (3)	210
			High	4159.98	677332	3939.48	662632	504		8280	674976	8	0	0 (0)	1008
90	245	Downlink & Uplink	Low	3345	623000	3300.9	620060	0	30	7711	620352	4	0	2 (2)	4
			Mid	3750	650000	3669.18	644612	102		7992	647328	4	0	1 (1)	206
			High	4155	677000	3929.46	661964	504		8273	674304	4	0	0 (0)	1008
100	273	Downlink & Uplink	Low	3350.01	623334	3300.87	620058	0	30	7711	620352	6	0	2 (2)	4
			Mid	3750	650000	3664.14	644276	102		7989	647040	4	0	3 (3)	210

		Uplink	High	4149.99	676666	3919.41	661294	504		8266	673632	2	0	0 (0)	1008
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

Table 4.3.1.1.1.77-3: Test frequencies for NR operating band n77, SCS 60 kHz and ΔF_{Raster} 30 kHz without CORESET#0

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]
10	11	Downlink & Uplink	Low	3305.01	620334	3301.05	620070	0	30	-	620310
			Mid	3750	650000	3672.6	644840	102		-	649976
			High	4194.99	679666	3828.15	655210	504		-	679642
15	18	Downlink & Uplink	Low	3307.5	620500	3301.02	620068	0	30	-	620308
			Mid	3750	650000	3670.08	644672	102		-	649808
			High	4192.5	679500	3823.14	654876	504		-	679308
20	24	Downlink & Uplink	Low	3310.02	620668	3301.38	620092	0	30	-	620332
			Mid	3750	650000	3667.92	644528	102		-	649664
			High	4189.98	679332	3818.46	654564	504		-	678996
25	31	Downlink & Uplink	Low	3312.51	620834	3301.35	620090	0	30	-	620330
			Mid	3750	650000	3665.4	644360	102		-	649496
			High	4187.49	679166	3813.45	654230	504		-	678662
30	38	Downlink & Uplink	Low	3315	621000	3301.32	620088	0	30	-	620328
			Mid	3750	650000	3662.88	644192	102		-	649328
			High	4185	679000	3808.44	653896	504		-	678328
40	51	Downlink & Uplink	Low	3320.01	621334	3301.65	620110	0	30	-	620350
			Mid	3750	650000	3658.2	643880	102		-	649016
			High	4179.99	678666	3798.75	653250	504		-	677682
50	65	Downlink & Uplink	Low	3325.02	621668	3301.62	620108	0	30	-	620348
			Mid	3750	650000	3653.16	643544	102		-	648680
			High	4174.98	678332	3788.7	652580	504		-	677012
60	79	Downlink & Uplink	Low	3330	622000	3301.56	620104	0	30	-	620344
			Mid	3750	650000	3648.12	643208	102		-	648344
			High	4170	678000	3778.68	651912	504		-	676344
70	93	Downlink	Low	3335.01	622334	3301.53	620102	0	30	-	620342
		&	Mid	3750	650000	3643.08	642872	102		-	648008
		Uplink	High	4164.99	677666	3768.63	651242	504		-	675674
80	107	Downlink & Uplink	Low	3340.02	622668	3301.5	620100	0	30	-	620340
			Mid	3750	650000	3638.04	642536	102		-	647672
			High	4159.98	677332	3758.58	650572	504		-	675004
90	121	Downlink & Uplink	Low	3345	623000	3301.44	620096	0	30	-	620336
			Mid	3750	650000	3633	642200	102		-	647336
			High	4155	677000	3748.56	649904	504		-	674336
100	135	Downlink & Uplink	Low	3350.01	623334	3301.41	620094	0	30	-	620334
			Mid	3750	650000	3627.96	641864	102		-	647000
			High	4149.99	676666	3738.51	649234	504		-	673666

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).

4.3.1.1.1.78 Reference test frequencies for NR operating band n78

Table 4.3.1.1.1.78-1: Test frequencies for NR operating band n78, SCS 15 kHz and ΔF_{Raster} 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
10	52	Downlink & Uplink	Low	3305.01	620334	3300.33	620022	0	30	7711	620352	6	1 (6)	7	
			Mid	3549.99	636666	3526.95	635130	102		7881	636672	6	0	1 (6)	108
			High	3795	653000	3699.6	646640	504		8051	652992	4	3	0 (2)	509
15	79	Downlink & Uplink	Low	3307.5	620500	3300.39	620026	0	30	7711	620352	2	1 (6)	7	
			Mid	3549.99	636666	3524.52	634968	102		7879	636480	0	2	0 (2)	106
			High	3792.48	652832	3694.65	646310	504		8048	652704	10	2	1 (6)	512
20	106	Downlink & Uplink	Low	3310.02	620668	3300.48	620032	0	30	7711	620352	8	0	1 (6)	6
			Mid	3549.99	636666	3522.09	634806	102		7878	636384	6	3	1 (6)	111
			High	3789.99	652666	3689.73	645982	504		8044	652320	2	2	0 (2)	508
25	133	Downlink & Uplink	Low	3312.51	620834	3300.54	620036	0	30	7711	620352	4	0	1 (6)	6
			Mid	3549.99	636666	3519.66	634644	102		7876	636192	0	1	1 (6)	109
			High	3787.5	652500	3684.81	645654	504		8041	652032	6	1	1 (6)	511
30	160	Downlink & Uplink	Low	3315	621000	3300.6	620040	0	30	7711	620352	0	0	1 (6)	6
			Mid	3549.99	636666	3517.23	634482	102		7874	636000	6	2	0 (2)	106
			High	3784.98	652332	3679.86	645324	504		8037	651648	0	1	0 (2)	507
40	216	Downlink & Uplink	Low	3320.01	621334	3300.57	620038	0	30	7711	620352	2	0	1 (6)	6
			Mid	3549.99	636666	3512.19	634146	102		7871	635712	6	2	1 (6)	110
			High	3780	652000	3669.84	644656	504		8030	650976	8	0	0 (2)	506
50	270	Downlink & Uplink	Low	3325.02	621668	3300.72	620048	0	30	7711	620352	4	3	0 (2)	5
			Mid	3549.99	636666	3507.33	633822	102		7867	635328	6	1	0 (2)	105
			High	3774.99	651666	3659.97	643998	504		8024	650400	6	3	1 (6)	513
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-3 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

Table 4.3.1.1.1.78-2: Test frequencies for NR operating band n78, SCS 30 kHz and ΔF_{Raster} 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1
10	24	Downlink & Uplink	Low	3305.01	620334	3300.69	620046	0	30	7711	620352	18	0	2 (2)	4
			Mid	3549.99	636666	3508.95	633930	102		7881	636672	6	0	2 (2)	208
			High	3795	653000	3609.24	640616	504		8051	652992	16	0	1 (1)	1010
15	38	Downlink & Uplink	Low	3307.5	620500	3300.66	620044	0	30	7711	620352	20	0	2 (2)	4
			Mid	3549.99	636666	3506.43	633762	102		7879	636480	6	0	1 (1)	206
			High	3792.48	652832	3604.2	640280	504		8048	652704	16	0	3 (3)	1014
20	51	Downlink & Uplink	Low	3310.02	620668	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4
			Mid	3549.99	636666	3504.09	633606	102		7878	636384	18	0	3 (3)	210
			High	3789.99	652666	3599.37	639958	504		8044	652320	2	0	1 (1)	1010
25	65	Downlink & Uplink	Low	3312.51	620834	3300.81	620054	0	30	7711	620352	10	0	2 (2)	4
			Mid	3549.99	636666	3501.57	633438	102		7876	636192	18	0	2 (2)	208
			High	3787.5	652500	3594.36	639624	504		8041	652032	0	0	3 (3)	1014
30	78	Downlink & Uplink	Low	3315	621000	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4
			Mid	3549.99	636666	3499.23	633282	102		7874	636000	6	0	1 (1)	206
			High	3784.98	652332	3589.5	639300	504		8037	651648	12	0	0 (0)	1008
40	106	Downlink & Uplink	Low	3320.01	621334	3300.93	620062	0	30	7711	620352	2	0	2 (2)	4
			Mid	3549.99	636666	3494.19	632946	102		7871	635712	6	0	3 (3)	210
			High	3780	652000	3579.48	638632	504		8030	650976	8	0	0 (0)	1008
50	133	Downlink & Uplink	Low	3325.02	621668	3301.08	620072	0	30	7711	620352	16	0	1 (1)	2
			Mid	3549.99	636666	3489.33	632622	102		7867	635328	18	0	0 (0)	204
			High	3774.99	651666	3569.61	637974	504		8024	650400	18	0	3 (3)	1014
60	162	Downlink & Uplink	Low	3330	622000	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4
			Mid	3549.99	636666	3484.11	632274	102		7864	635040	6	0	3 (3)	210
			High	3769.98	651332	3559.38	637292	504		8016	649632	4	0	0 (0)	1008
70	189	Downlink & Uplink	Low	3335.01	622334	3300.99	620066	0	30	7711	620352	22	0	1 (1)	2
			Mid	3549.99	636666	3479.25	631950	102		7860	634656	18	0	0 (0)	204
			High	3765	651000	3549.54	636636	504		8010	649056	12	0	3 (3)	1014
80	217	Downlink & Uplink	Low	3340.02	622668	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4
			Mid	3549.99	636666	3474.21	631614	102		7857	634368	18	0	2 (2)	208
			High	3759.99	650666	3539.49	635966	504		8003	648384	10	0	3 (3)	1014
90	245	Downlink & Uplink	Low	3345	623000	3300.9	620060	0	30	7711	620352	4	0	2 (2)	4
			Mid	3549.99	636666	3469.17	631278	102		7853	633984	18	0	0 (0)	204
			High	3754.98	650332	3529.44	635296	504		7996	647712	8	0	3 (3)	1014
100	273	Downlink & Uplink	Low	3350.01	623334	3300.87	620058	0	30	7711	620352	6	0	2 (2)	4
			Mid	3549.99	636666	3464.13	630942	102		7850	633696	18	0	2 (2)	208

		Uplink	High	3750	650000	3519.42	634628	504		7989	647040	4	0	3 (3)	1014
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

Table 4.3.1.1.1.78-3: Test frequencies for NR operating band n78, SCS 60 kHz and ΔF_{Raster} 30 kHz without CORESET#0.

CBW [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	
10	11	Downlink & Uplink	Low	3305.01	620334	3301.05	620070	0	30	-	620310
			Mid	3549.99	636666	3472.59	631506	102		-	636642
			High	3795	653000	3428.16	628544	504		-	652976
15	18	Downlink & Uplink	Low	3307.5	620500	3301.02	620068	0	30	-	620308
			Mid	3549.99	636666	3470.07	631338	102		-	636474
			High	3792.48	652832	3423.12	628208	504		-	652640
20	24	Downlink & Uplink	Low	3310.02	620668	3301.38	620092	0	30	-	620332
			Mid	3549.99	636666	3467.91	631194	102		-	636330
			High	3789.99	652666	3418.47	627898	504		-	652330
25	31	Downlink & Uplink	Low	3312.51	620834	3301.35	620090	0	30	-	620330
			Mid	3549.99	636666	3465.39	631026	102		-	636162
			High	3787.5	652500	3413.46	627564	504		-	651996
30	38	Downlink & Uplink	Low	3315	621000	3301.32	620088	0	30	-	620328
			Mid	3549.99	636666	3462.87	630858	102		-	635994
			High	3784.98	652332	3408.42	627228	504		-	651660
40	51	Downlink & Uplink	Low	3320.01	621334	3301.65	620110	0	30	-	620350
			Mid	3549.99	636666	3458.19	630546	102		-	635682
			High	3780	652000	3398.76	626584	504		-	651016
50	65	Downlink & Uplink	Low	3325.02	621668	3301.62	620108	0	30	-	620348
			Mid	3549.99	636666	3453.15	630210	102		-	635346
			High	3774.99	651666	3388.71	625914	504		-	650346
60	79	Downlink & Uplink	Low	3330	622000	3301.56	620104	0	30	-	620344
			Mid	3549.99	636666	3448.11	629874	102		-	635010
			High	3769.98	651332	3378.66	625244	504		-	649676
70	93	Downlink & Uplink	Low	3335.01	622334	3301.53	620102	0	30	-	620342
			Mid	3549.99	636666	3443.07	629538	102		-	634674
			High	3765	651000	3368.64	624576	504		-	649008
80	107	Downlink & Uplink	Low	3340.02	622668	3301.5	620100	0	30	-	620340
			Mid	3549.99	636666	3438.03	629202	102		-	634338
			High	3759.99	650666	3358.59	623906	504		-	648338
90	121	Downlink & Uplink	Low	3345	623000	3301.44	620096	0	30	-	620336
			Mid	3549.99	636666	3432.99	628866	102		-	634002
			High	3754.98	650332	3348.54	623236	504		-	647668
100	135	Downlink & Uplink	Low	3350.01	623334	3301.41	620094	0	30	-	620334
			Mid	3549.99	636666	3427.95	628530	102		-	633666
			High	3750	650000	3338.52	622568	504		-	647000

Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{SSB} = 31$, $controlResourceSetZero = 0$ and $searchSpaceZero = 0$ (TS 38.213 [22], clause 13).

4.3.1.1.1.79 Reference test frequencies for NR operating band n79

Table 4.3.1.1.1.79-1: Test frequencies for NR operating band n79, SCS 15 kHz and ΔF_{Raster} 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
40	216	Downlink & Uplink	Low	4420.02	694668	4400.58	693372	0	30	8480	694176	0	43	0 (4)	47
			Mid	4699.98	713332	4662.18	710812	102		8672	712608	8	23	0 (4)	129
			High	4980	732000	4869.84	724656	504		8864	731040	0	4	0 (4)	512
50	270	Downlink & Uplink	Low	4425	695000	4400.7	693380	0	30	8480	694176	4	42	0 (4)	46
			Mid	4699.98	713332	4657.32	710488	102		8672	712608	8	50	0 (4)	156
			High	4974.99	731666	4859.97	723998	504		8864	731040	10	58	0 (4)	566

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-5 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in $controlResourceSetZero$ ($pdccch-ConfigSIB1$) in the MIB. The $offsetToPointA$ IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Table 4.3.1.1.1.79-2: Test frequencies for NR operating band n79, SCS 30 kHz and ΔF_{Raster} 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset Carrier CORE SET#0 [RBs] Note 2	CORE SET#0 Index (Offset [RBs]) Note 1	offsetTo PointA (SIB1) [PRBs] Note 1	
40	106	Downlink & Uplink	Low	4420.02	694668	4400.94	693396	0	30	8480	694176	12	18	1 (4)	44
			Mid	4700.01	713334	4644.21	709614	102		8672	712608	18	8	1 (4)	228
			High	4980	732000	4779.48	718632	504		8864	731040	0	3	0 (0)	1014
50	133	Downlink & Uplink	Low	4425	695000	4401.06	693404	0	30	8480	694176	4	18	1 (4)	44
			Mid	4700.01	713334	4639.35	709290	102		8672	712608	6	22	1 (4)	256
			High	4974.99	731666	4769.61	717974	504		8864	731040	10	26	1 (4)	1068
60	162	Downlink & Uplink	Low	4430.01	695334	4400.85	693390	0	30	8480	694176	18	18	1 (4)	44
			Mid	4700.01	713334	4634.13	708942	102		8672	712608	18	36	1 (4)	284
			High	4969.98	731332	4759.38	717292	504		8864	731040	20	54	1 (4)	1124
80	217	Downlink & Uplink	Low	4440	696000	4400.94	693396	0	30	8480	694176	12	18	1 (4)	44
			Mid	4700.01	713334	4624.23	708282	102		8656	711072	6	0	1 (4)	212
			High	4959.99	730666	4739.49	715966	504		8848	729504	2	46	1 (4)	1108
100	273	Downlink & Uplink	Low	4450.02	696668	4400.88	693392	0	30	8480	694176	16	18	1 (4)	44
			Mid	4700.01	713334	4614.15	707610	102		8656	711072	6	28	1 (4)	268
			High	4950	730000	4719.42	714628	504		8832	727968	20	37	1 (4)	1090
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-6 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.														
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.														

Table 4.3.1.1.1.79-3: Test frequencies for NR operating band n79, SCS 60 kHz and ΔF_{Raster} 30 kHz without CORESET#0.

CBW [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetToCarrier [PRBs]	SS block SCS [kHz]	GSCN	absoluteFrequencySSB [ARFCN]	
40	51	Downlink & Uplink	Low	4420.02	694668	4401.66	693444	0	30	-	693684
			Mid	4700.01	713334	4608.21	707214	102		-	712350
			High	4980	732000	4598.76	706584	504		-	731016
50	65	Downlink & Uplink	Low	4425	695000	4401.6	693440	0	30	-	693680
			Mid	4700.01	713334	4603.17	706878	102		-	712014
			High	4974.99	731666	4588.71	705914	504		-	730346
60	79	Downlink & Uplink	Low	4430.01	695334	4401.57	693438	0	30	-	693678
			Mid	4700.01	713334	4598.13	706542	102		-	711678
			High	4969.98	731332	4578.66	705244	504		-	729676
80	107	Downlink & Uplink	Low	4440	696000	4401.48	693432	0	30	-	693672
			Mid	4700.01	713334	4588.05	705870	102		-	711006
			High	4959.99	730666	4558.59	703906	504		-	728338
100	135	Downlink & Uplink	Low	4450.02	696668	4401.42	693428	0	30	-	693668
			Mid	4700.01	713334	4577.97	705198	102		-	710334
			High	4950	730000	4538.52	702568	504		-	727000
Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{\text{SSB}}=31$, $\text{controlResourceSetZero}=0$ and $\text{searchSpaceZero}=0$ (TS 38.213 [22], clause 13).											

4.3.1.1.1.80 Reference test frequencies for NR operating band n80 (SUL)

Table 4.3.1.1.1.80-1: Test frequencies for NR operating band n80 and SCS 15 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolu teFreq uency PointA [ARFC N]	offsetTo Carrier [PRBs]
5	25	Uplink	Low	1712.5	342500	1710.25	342050	0
			Mid	1747.5	349500	1654.53	330906	504
			High	1782.5	356500	1779.17	355834	6
10	52	Uplink	Low	1715	343000	1710.32	342064	0
			Mid	1747.5	349500	1652.1	330420	504
			High	1780	356000	1774.24	354848	6
15	79	Uplink	Low	1717.5	343500	1710.39	342078	0
			Mid	1747.5	349500	1649.67	329934	504
			High	1777.5	355500	1769.31	353862	6
20	106	Uplink	Low	1720	344000	1710.46	342092	0
			Mid	1747.5	349500	1647.24	329448	504
			High	1775	355000	1764.38	352876	6
25	133	Uplink	Low	1722.5	344500	1710.53	342106	0
			Mid	1747.5	349500	1644.81	328962	504
			High	1772.5	354500	1759.45	351890	6
30	160	Uplink	Low	1725	345000	1710.6	342120	0
			Mid	1747.5	349500	1642.38	328476	504
			High	1770	354000	1754.52	350904	6

Table 4.3.1.1.1.80-2: Test frequencies for NR operating band n80 and SCS 30 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolu teFreq uency PointA [ARFC N]	offsetTo Carrier [PRBs]
10	24	Uplink	Low	1715	343000	1710.68	342136	0
			Mid	1747.5	349500	1561.74	312348	504
			High	1780	356000	1773.52	354704	6
15	38	Uplink	Low	1717.5	343500	1710.66	342132	0
			Mid	1747.5	349500	1559.22	311844	504
			High	1777.5	355500	1768.5	353700	6
20	51	Uplink	Low	1720	344000	1710.82	342164	0
			Mid	1747.5	349500	1556.88	311376	504
			High	1775	355000	1763.66	352732	6
25	65	Uplink	Low	1722.5	344500	1710.8	342160	0
			Mid	1747.5	349500	1554.36	310872	504
			High	1772.5	354500	1758.64	351728	6
30	78	Uplink	Low	1725	345000	1710.96	342192	0
			Mid	1747.5	349500	1552.02	310404	504
			High	1770	354000	1753.8	350760	6

Table 4.3.1.1.1.80-3: Test frequencies for NR operating band n80 and SCS 60 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
10	11	Uplink	Low	1715	343000	1711.04	342208	0
			Mid	1747.5	349500	1380.66	276132	504
			High	1780	356000	1771.72	354344	6
15	18	Uplink	Low	1717.5	343500	1711.02	342204	0
			Mid	1747.5	349500	1378.14	275628	504
			High	1777.5	355500	1766.7	353340	6
20	24	Uplink	Low	1720	344000	1711.36	342272	0
			Mid	1747.5	349500	1375.98	275196	504
			High	1775	355000	1762.04	352408	6
25	31	Uplink	Low	1722.5	344500	1711.34	342268	0
			Mid	1747.5	349500	1373.46	274692	504
			High	1772.5	354500	1757.02	351404	6
30	38	Uplink	Low	1725	345000	1711.32	342264	0
			Mid	1747.5	349500	1370.94	274188	504
			High	1770	354000	1752	350400	6

4.3.1.1.1.81 Reference test frequencies for NR operating band n81 (SUL)

Table 4.3.1.1.1.81-1: Test frequencies for NR operating band n81 and SCS 15 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
5	25	Uplink	Low	882.5	176500	880.25	176050	0
			Mid	897.5	179500	804.53	160906	504
			High	912.5	182500	909.17	181834	6
10	52	Uplink	Low	885	177000	880.32	176064	0
			Mid	897.5	179500	802.1	160420	504
			High	910	182000	904.24	180848	6
15	79	Uplink	Low	887.5	177500	880.39	176078	0
			Mid	897.5	179500	799.67	159934	504
			High	907.5	181500	899.31	179862	6
20	106	Uplink	Low	890	178000	880.46	176092	0
			Mid	897.5	179500	797.24	159448	504
			High	905	181000	894.38	178876	6

Table 4.3.1.1.1.81-2: Test frequencies for NR operating band n81 and SCS 30 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]
10	24	Uplink	Low	885	177000	880.68	176136	0
			Mid	897.5	179500	711.74	142348	504
			High	910	182000	903.52	180704	6
15	38	Uplink	Low	887.5	177500	880.66	176132	0
			Mid	897.5	179500	709.22	141844	504
			High	907.5	181500	898.5	179700	6
20	51	Uplink	Low	890	178000	880.82	176164	0
			Mid	897.5	179500	706.88	141376	504
			High	905	181000	893.66	178732	6

4.3.1.1.1.82 Reference test frequencies for NR operating band n82 (SUL)

Table 4.3.1.1.1.82-1: Test frequencies for NR operating band n82 and SCS 15 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]
5	25	Uplink	Low	834.5	166900	832.25	166450	0
			Mid	847	169400	754.03	150806	504
			High	859.5	171900	856.17	171234	6
10	52	Uplink	Low	837	167400	832.32	166464	0
			Mid	847	169400	751.6	150320	504
			High	857	171400	851.24	170248	6
15	79	Uplink	Low	839.5	167900	832.39	166478	0
			Mid	847	169400	749.17	149834	504
			High	854.5	170900	846.31	169262	6
20	106	Uplink	Low	842	168400	832.46	166492	0
			Mid	847	169400	746.74	149348	504
			High	852	170400	841.38	168276	6

Table 4.3.1.1.1.82-2: Test frequencies for NR operating band n82 and SCS 30 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]
10	24	Uplink	Low	837	167400	832.68	166536	0
			Mid	847	169400	661.24	132248	504
			High	857	171400	850.52	170104	6
15	38	Uplink	Low	839.5	167900	832.66	166532	0
			Mid	847	169400	658.72	131744	504
			High	854.5	170900	845.5	169100	6
20	51	Uplink	Low	842	168400	832.82	166564	0
			Mid	847	169400	656.38	131276	504
			High	852	170400	840.66	168132	6

4.3.1.1.1.83 Reference test frequencies for NR operating band n83 (SUL)

Table 4.3.1.1.1.83-1: Test frequencies for NR operating band n83 and SCS 15 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]
5	25	Uplink	Low	705.5	141100	703.25	140650	0
			Mid	725.5	145100	632.53	126506	504
			High	745.5	149100	742.17	148434	6
10	52	Uplink	Low	708	141600	703.32	140664	0
			Mid	725.5	145100	630.1	126020	504
			High	743	148600	737.24	147448	6
15	79	Uplink	Low	710.5	142100	703.39	140678	0
			Mid	725.5	145100	627.67	125534	504
			High	740.5	148100	732.31	146462	6
20	106	Uplink	Low	713	142600	703.46	140692	0
			Mid	725.5	145100	625.24	125048	504
			High	738	147600	727.3	145476	6
30	160	Uplink	Low	718	143600	703.6	140720	0
			(Note 1)	High	733	146600	717.52	143504

Note 1: No carrier centre frequency specified for Mid Range and CBW=30 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1

Table 4.3.1.1.1.83-2: Test frequencies for NR operating band n83 and SCS 30 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]
10	24	Uplink	Low	708	141600	703.68	140736	0
			Mid	725.5	145100	539.7	107948	504
			High	743	148600	736.52	147304	6
15	38	Uplink	Low	710.5	142100	703.66	140732	0
			Mid	725.5	145100	537.22	107444	504
			High	740.5	148100	731.5	146300	6
20	51	Uplink	Low	713	142600	703.82	140764	0
			Mid	725.5	145100	534.88	106976	504
			High	738	147600	726.66	145332	6
30	78	Uplink	Low	718	143600	703.96	140792	0
			(Note 2)	High	733	146600	716.8	143360

Note 2: No carrier centre frequency specified for Mid Range and CBW=30 MHz due to Note 7 in TS 38.101-1 [7], Table 5.3.5-1

4.3.1.1.1.84 Reference test frequencies for NR operating band n84 (SUL)

Table 4.3.1.1.1.84-1: Test frequencies for NR operating band n84 and SCS 15 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
5	25	Uplink	Low	1922.5	384500	1920.25	384050	0
			Mid	1950	390000	1857.03	371406	504
			High	1977.5	395500	1974.17	394834	6
10	52	Uplink	Low	1925	385000	1920.32	384064	0
			Mid	1950	390000	1854.6	370920	504
			High	1975	395000	1969.24	393848	6
15	79	Uplink	Low	1927.5	385500	1920.39	384078	0
			Mid	1950	390000	1852.17	370434	504
			High	1972.5	394500	1964.31	392862	6
20	106	Uplink	Low	1930	386000	1920.46	384092	0
			Mid	1950	390000	1849.74	369948	504
			High	1970	394000	1959.38	391876	6
25	133	Uplink	Low	1932.5	386500	1920.53	384106	0
			Mid	1950	390000	1847.31	369462	504
			High	1967.5	393500	1954.45	390890	6
30	160	Uplink	Low	1935	387000	1920.6	384120	0
			Mid	1950	390000	1844.88	368976	504
			High	1965	393000	1949.52	389904	6
40	216	Uplink	Low	1940	388000	1920.56	384112	0
			Mid	1950	390000	1839.84	367968	504
			High	1960	392000	1939.48	387896	6
50	270	Uplink	Low	1945	389000	1920.7	384140	0
			Mid	1950	390000	1834.98	366996	504
			High	1955	391000	1929.62	385924	6

Table 4.3.1.1.1.84-2: Test frequencies for NR operating band n84 and SCS 30 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
10	24	Uplink	Low	1925	385000	1920.68	384136	0
			Mid	1950	390000	1764.24	352848	504
			High	1975	395000	1968.52	393704	6
15	38	Uplink	Low	1927.5	385500	1920.66	384132	0
			Mid	1950	390000	1761.72	352344	504
			High	1972.5	394500	1963.5	392700	6
20	51	Uplink	Low	1930	386000	1920.82	384164	0
			Mid	1950	390000	1759.38	351876	504
			High	1970	394000	1958.66	391732	6
25	65	Uplink	Low	1932.5	386500	1920.8	384160	0
			Mid	1950	390000	1756.86	351372	504
			High	1967.5	393500	1953.64	390728	6
30	78	Uplink	Low	1935	387000	1920.96	384192	0
			Mid	1950	390000	1754.52	350904	504
			High	1965	393000	1948.8	389760	6
40	106	Uplink	Low	1940	388000	1920.92	384184	0
			Mid	1950	390000	1749.48	349896	504
			High	1960	392000	1938.76	387752	6
50	133	Uplink	Low	1945	389000	1921.06	384212	0
			Mid	1950	390000	1744.62	348924	504
			High	1955	391000	1928.9	385780	6

Table 4.3.1.1.1.84-3: Test frequencies for NR operating band n84 and SCS 60 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
10	11	Uplink	Low	1925	385000	1921.04	384208	0
			Mid	1950	390000	1583.16	316632	504
			High	1975	395000	1966.72	393344	6
15	18	Uplink	Low	1927.5	385500	1921.02	384204	0
			Mid	1950	390000	1580.64	316128	504
			High	1972.5	394500	1961.7	392340	6
20	24	Uplink	Low	1930	386000	1921.36	384272	0
			Mid	1950	390000	1578.48	315696	504
			High	1970	394000	1957.04	391408	6
25	31	Uplink	Low	1932.5	386500	1921.34	384268	0
			Mid	1950	390000	1575.96	315192	504
			High	1967.5	393500	1952.02	390404	6
30	38	Uplink	Low	1935	387000	1921.32	384264	0
			Mid	1950	390000	1573.44	314688	504
			High	1965	393000	1947	389400	6
40	51	Uplink	Low	1940	388000	1921.64	384328	0
			Mid	1950	390000	1568.76	313752	504
			High	1960	392000	1937.32	387464	6
50	65	Uplink	Low	1945	389000	1921.6	384320	0
			Mid	1950	390000	1563.72	312744	504
			High	1955	391000	1927.28	385456	6

4.3.1.1.1.85 FFS

4.3.1.1.1.86 Reference test frequencies for NR operating band n86 (SUL)

Table 4.3.1.1.1.86-1: Test frequencies for NR operating band n86 and SCS 15 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]
5	25	Uplink	Low	1712.5	342500	1710.25	342050	0
			Mid	1745	349000	1652.03	330406	504
			High	1777.5	355500	1774.17	354834	6
10	52	Uplink	Low	1715	343000	1710.32	342064	0
			Mid	1745	349000	1649.6	329920	504
			High	1775	355000	1769.24	353848	6
15	79	Uplink	Low	1717.5	343500	1710.39	342078	0
			Mid	1745	349000	1647.17	329434	504
			High	1772.5	354500	1764.31	352862	6
20	106	Uplink	Low	1720	344000	1710.46	342092	0
			Mid	1745	349000	1644.74	328948	504
			High	1770	354000	1759.38	351876	6
40	216	Uplink	Low	1730	346000	1710.56	342112	0
			Mid	1745	349000	1634.84	326968	504
			High	1760	352000	1739.48	347896	6

Table 4.3.1.1.1.86-2: Test frequencies for NR operating band n86 and SCS 30 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]
10	24	Uplink	Low	1715	343000	1710.68	342136	0
			Mid	1745	349000	1559.24	311848	504
			High	1775	355000	1768.52	353704	6
15	38	Uplink	Low	1717.5	343500	1710.66	342132	0
			Mid	1745	349000	1556.72	311344	504
			High	1772.5	354500	1763.5	352700	6
20	51	Uplink	Low	1720	344000	1710.82	342164	0
			Mid	1745	349000	1554.38	310876	504
			High	1770	354000	1758.66	351732	6
40	106	Uplink	Low	1730	346000	1710.92	342184	0
			Mid	1745	349000	1544.48	308896	504
			High	1760	352000	1738.76	347752	6

Table 4.3.1.1.1.86-3: Test frequencies for NR operating band n86 and SCS 60 kHz

Bandwidth [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
10	11	Uplink	Low	1715	343000	1711.04	342208	0
			Mid	1745	349000	1378.16	275632	504
			High	1775	355000	1766.72	353344	6
15	18	Uplink	Low	1717.5	343500	1711.02	342204	0
			Mid	1745	349000	1375.64	275128	504
			High	1772.5	354500	1761.7	352340	6
20	24	Uplink	Low	1720	344000	1711.36	342272	0
			Mid	1745	349000	1373.48	274696	504
			High	1770	354000	1757.04	351408	6
40	51	Uplink	Low	1730	346000	1711.64	342328	0
			Mid	1745	349000	1363.76	272752	504
			High	1760	352000	1737.32	347464	0

4.3.1.1.1.87 to 4.3.1.1.1.94 FFS

4.3.1.1.1.95 Reference test frequencies for NR operating band n95 (SUL)

Table 4.3.1.1.1.95-1: Test frequencies for NR operating band n95 and SCS 15 kHz

CBW [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
5	25	Uplink	Low	2012.5	402500	2010.25	402050	0
			Mid	2017.5	403500	1924.53	384906	504
			High	2022.5	404500	2019.17	403834	6
10	52	Uplink	Low	2015	403000	2010.32	402064	0
			Mid	2017.5	403500	1922.1	384420	504
			High	2020	404000	2014.24	402848	6
15	79	Uplink	Low, Mid, High	2017.5	403500	2010.39	402078	0

Table 4.3.1.1.1.95-2: Test frequencies for NR operating band n95 and SCS 30 kHz

CBW [MHz]	carrierBand width [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetTo Carrier [PRBs]	
10	24	Uplink	Low	2015	403000	2010.68	402136	0
			Mid	2017.5	403500	1831.74	366348	504
			High	2020	404000	2013.52	402704	6
15	38	Uplink	Low, Mid, High	2017.5	403500	2010.66	402132	0

Table 4.3.1.1.1.95-3: Test frequencies for NR operating band n95 and SCS 60 kHz

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetToCarrier [PRBs]
10	11	Uplink	Low	2015	403000	2011.04	402208	0
			Mid	2017.5	403500	1650.66	330132	504
			High	2020	404000	2011.72	402344	6
15	18	Uplink	Low, Mid, High	2017.5	403500	2011.02	402204	0

4.3.1.1.1.96 Reference test frequencies for NR operating band n96

Table 4.3.1.1.1.96-1: Test frequencies for NR operating band n96 and SCS 15 kHz (Note 3)

CBW [MHz]	carrierBandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN] Note 4	point A [MHz]	absoluteFrequencyPointA [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	G
20	106	Downlink & Uplink	Low	5955	797000	5945.46	796364	0	30	
			Mid	6535.02	835668	6507.12	833808	102		
			High	7114.98	874332	7014.72	867648	504		
40	216	Downlink & Uplink	Low	5965.02	797668	5945.58	796372	0	30	
			Mid	6525	835000	6487.2	832480	102		
			High	7084.98	872332	6974.82	864988	504		
Note 1:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-3 in TS 38.213 [22]. The controlResourceSetZero (pdcc-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks (RBs) for FR2.									
Note 2:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.									
Note 3:	NR band n46 with SCS =15 kHz is restricted for operation when carrier is configured as an SCell part of a DCI then absence of CORESET#0 is indicated in the MIB by setting $k_{\text{SSB}}=31$, <i>controlResourceSetZero</i> =0 and so on.									
Note 4:	The selection of Low, Mid and High test frequencies are restricted to the limited allowed ARFCN values as specified in Table 4.3.1.1.1.96-1.									

Table 4.3.1.1.1.96-2: Test frequencies for NR operating band n96 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN] Note 3	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	SS block SCS [kHz]	G
20	51	Downlink & Uplink	Low	5955	797000	5945.82	796388	0	30	9
			Mid	6535.02	835668	6489.12	832608	102		9
			High	7114.98	874332	6924.36	861624	504		1
40	106	Downlink & Uplink	Low	5965.02	797668	5945.94	796396	0	30	9
			Mid	6525	835000	6469.2	831280	102		9
			High	7084.98	872332	6884.46	858964	504		1
60	162	Downlink (Note 3) & Uplink (Note 3)	Low	5974.98	798332	5945.82	796388	0	30	9
			Mid	6985.02	865668	6919.14	861276	102		1
			High	7095	873000	6884.4	858960	504		1
80	217	Downlink (Note 3) & Uplink (Note 3)	Low	5985	799000	5945.94	796396	0	30	9
			Mid	6544.98	836332	6469.2	831280	102		9
			High	7024.98	868332	6804.48	853632	504		1

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 controlResourceSetZero (pdccch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in unit spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 3: The selection of Low, Mid and High test frequencies are restricted to the limited allowed ARFCN values.

Table 4.3.1.1.1.96-3: Test frequencies for NR operating band n96 and SCS 60 kHz without CORESET#0 (Note 1)

CBW [MHz]	carrierBandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN] Note 2	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]	SS block SCS [kHz]	G
20	24	Downlink & Uplink	Low	5955	797000	5946.36	796424	0	30	
			Mid	6535.02	835668	6452.94	830196	102		
			High	7114.98	874332	6743.46	849564	504		
40	51	Downlink & Uplink	Low	5965.02	797668	5946.66	796444	0	30	
			Mid	6525	835000	6433.2	828880	102		
			High	7084.98	872332	6703.74	846916	504		
60	79	Downlink & Uplink	Low	5974.98	798332	5946.54	796436	0	30	
			Mid	6985.02	865668	6883.14	858876	102		
			High	7095	873000	6703.68	846912	504		
80	107	Downlink & Uplink	Low	5985	799000	5946.48	796432	0	30	
			Mid	6544.98	836332	6433.02	828868	102		
			High	7024.98	868332	6623.58	841572	504		

Note 1: FR1 carrier without CORESET#0 is indicated in the MIB by setting $k_{\text{SSB}}=31$, *controlResourceSetZero=0* and *searchSpaceZero=0* in TS 38.213 [22], clause 13).

Note 2: The selection of Low, Mid and High test frequencies are restricted to the limited allowed ARFCN values as specified in Table 5.4.2.3-3.

4.3.1.1.1.97 Reference test frequencies for NR operating band n97 (SUL)

Table 4.3.1.1.1.97-1: Test frequencies for NR operating band n97 and SCS 15 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]	
5	25	Uplink	Low	2302.5	460500	2300.25	460050	0
			Mid	2350	470000	2329.39	465878	102
			High	2397.5	479500	2304.53	460906	504
10	52	Uplink	Low	2305	461000	2300.32	460064	0
			Mid	2350	470000	2326.96	465392	102
			High	2395	479000	2299.6	459920	504
15	79	Uplink	Low	2307.5	461500	2300.39	460078	0
			Mid	2350	470000	2324.53	464906	102
			High	2392.5	478500	2294.67	458934	504
20	106	Uplink	Low	2310	462000	2300.46	460092	0
			Mid	2350	470000	2322.1	464420	102
			High	2390	478000	2289.74	457948	504
25	133	Uplink	Low	2312.5	462500	2300.53	460106	0
			Mid	2350	470000	2319.67	463934	102
			High	2387.5	477500	2284.81	456962	504
30	160	Uplink	Low	2315	463000	2300.6	460120	0
			Mid	2350	470000	2317.24	463448	102
			High	2385	477000	2279.88	455976	504
40	216	Uplink	Low	2320	464000	2300.56	460112	0
			Mid	2350	470000	2312.2	462440	102
			High	2380	476000	2269.84	453968	504
50	270	Uplink	Low	2325	465000	2300.7	460140	0
			Mid	2350	470000	2307.34	461468	102
			High	2375	475000	2259.98	451996	504

Table 4.3.1.1.1.97-2: Test frequencies for NR operating band n97 and SCS 30 kHz

CBW [MHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetTo Carrier [Carrier PRBs]	
10	24	Uplink	Low	2305	461000	2300.68	460136	0
			Mid	2350	470000	2308.96	461792	102
			High	2395	479000	2209.24	441848	504
15	38	Uplink	Low	2307.5	461500	2300.66	460132	0
			Mid	2350	470000	2306.44	461288	102
			High	2392.5	478500	2204.22	440844	504
20	51	Uplink	Low	2310	462000	2300.82	460164	0
			Mid	2350	470000	2304.1	460820	102
			High	2390	478000	2199.38	439876	504
25	65	Uplink	Low	2312.5	462500	2300.8	460160	0
			Mid	2350	470000	2301.58	460316	102
			High	2387.5	477500	2194.36	438872	504
30	78	Uplink	Low	2315	463000	2300.96	460192	0
			Mid	2350	470000	2299.24	459848	102
			High	2385	477000	2189.52	437904	504
40	106	Uplink	Low	2320	464000	2300.92	460184	0
			Mid	2350	470000	2294.2	458840	102
			High	2380	476000	2179.48	435896	504
50	133	Uplink	Low	2325	465000	2301.06	460212	0
			Mid	2350	470000	2289.34	457868	102
			High	2375	475000	2169.62	433924	504
60	162	Uplink	Low	2330	466000	2300.84	460168	0
			Mid	2350	470000	2284.12	456824	102
			High	2370	474000	2159.4	431880	504
70	189	Uplink	Low	2335	467000	2300.98	460196	0
			Mid	2350	470000	2279.26	455852	102
			High	2365	473000	2149.54	429908	504
80	217	Uplink	Low	2340	468000	2300.94	460188	0
			Mid	2350	470000	2274.22	454844	102
			High	2360	472000	2139.5	427900	504
90	245	Uplink	Low	2345	469000	2300.9	460180	0
			Mid	2350	470000	2269.18	453836	102
			High	2355	471000	2129.46	425892	504
100	273	Uplink	Low	2350	470000	2300.86	460172	0
			Mid	2350	470000	2264.14	452828	102
			High	2350	470000	2119.42	423884	504

Table 4.3.1.1.1.97-3: Test frequencies for NR operating band n97 and SCS 60 kHz

CBW [MHz]	carrierBand width [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [PRBs]
10	11	Uplink	Low	2305	461000	2301.04	460208	0
			Mid	2350	470000	2272.6	454520	102
			High	2395	479000	2028.16	405632	504
15	18	Uplink	Low	2307.5	461500	2301.02	460204	0
			Mid	2350	470000	2270.08	454016	102
			High	2392.5	478500	2023.14	404628	504
20	24	Uplink	Low	2310	462000	2301.36	460272	0
			Mid	2350	470000	2267.92	453584	102
			High	2390	478000	2018.48	403696	504
25	31	Uplink	Low	2312.5	462500	2301.34	460268	0
			Mid	2350	470000	2265.4	453080	102
			High	2387.5	477500	2013.46	402692	504
30	38	Uplink	Low	2315	463000	2301.32	460264	0
			Mid	2350	470000	2262.88	452576	102
			High	2385	477000	2008.44	401688	504
40	51	Uplink	Low	2320	464000	2301.64	460328	0
			Mid	2350	470000	2258.2	451640	102
			High	2380	476000	1998.76	399752	504
50	65	Uplink	Low	2325	465000	2301.6	460320	0
			Mid	2350	470000	2253.16	450632	102
			High	2375	475000	1988.72	397744	504
60	79	Uplink	Low	2330	466000	2301.56	460312	0
			Mid	2350	470000	2248.12	449624	102
			High	2370	474000	1978.68	395736	504
70	93	Uplink	Low	2335	467000	2301.52	460304	0
			Mid	2350	470000	2243.08	448616	102
			High	2365	473000	1968.64	393728	504
80	107	Uplink	Low	2340	468000	2301.48	460296	0
			Mid	2350	470000	2238.04	447608	102
			High	2360	472000	1958.6	391720	504
90	121	Uplink	Low	2345	469000	2301.44	460288	0
			Mid	2350	470000	2233	446600	102
			High	2355	471000	1948.56	389712	504
100	135	Uplink	Low	2350	470000	2301.4	460280	0
			Mid	2350	470000	2227.96	445592	102
			High	2350	470000	1938.52	387704	504

4.3.1.1.1.98 FFS

4.3.1.1.1.99 Reference test frequencies for NR operating band n99 (SUL)

Table 4.3.1.1.1.99-1: Test frequencies for NR operating band n99 and SCS 15 kHz

UL CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]
5	25	Uplink	Low	1630.0	326000	1627.75	325550	0
			Mid	1635.0	327000	1542.03	308406	504
			High	1654.0	330800	1650.67	330134	6
10	52	Uplink	Low	1632.5	326500	1627.82	325564	0
			Mid					
			High	1651.5	330300	1645.74	329148	6

Table 4.3.1.1.1.99-2: Test frequencies for NR operating band n99 and SCS 30 kHz

UL CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]
10	24	Uplink	Low Mid	1632.5	326500	1627.82	325564	0
			High	1651.5	330300	1645.02	329004	6

Table 4.3.1.1.1.99-3: Test frequencies for NR operating band n99 and SCS 60 kHz

UL CBW [MHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetTo Carrier [Carrier PRBs]
10	11	Uplink	Low Mid	1632.5	326500	1628.54	325708	0
			High	1651.5	330300	1643.22	328644	6

4.3.1.1.2 NR inter-band CA configurations in FR1

4.3.1.1.2.1 NR inter-band CA configurations in FR1 (two bands)

Table 4.3.1.1.2.1-1: Inter-band NR CA configurations (FR1, two bands)

NR CA configuration	Uplink NR CA configuration	NR CA downlink configuration band 1 (Note 3)	NR CA downlink configuration band 2	NR CA uplink configuration band 1	NR CA uplink configuration band 2	Applicable for protocol testing (Note 2)
CA_n1A-n3A	CA_n1A-n3A	n1A	n3A	n1A	n3A	Yes
CA_n1A-n8A	CA_n1A-n8A	n1A	n8A	n1A	n8A	Yes
CA_n1(2A)-n3A	-	CA_n1(2A)	n3A	n1A	n3A	No
CA_n1(2A)-n5A	-	CA_n1(2A)	n5A	-	-	No
CA_n1(2A)-n8A	-	CA_n1(2A)	n8A	-	-	No
CA_n1A-n77A	-	n1A	n77A	-	-	Yes
CA_n1A-n78A	CA_n1A-n78A	n1A	n78A	n1A	n78A	Yes
CA_n1A-n78(2A)	CA_n1A-n78A	n1A	CA_n78(2A)	n1A	n78A	No
CA_n1A-n78C	CA_n1A-n78A	n1A	CA_n78C	n1A	n78A	No
CA_n1(2A)-n78A	-	CA_n1(2A)	n78A	-	-	No
CA_n1A-n79A	CA_n1A-n79A	n1A	n79A	n1A	n79A	Yes
CA_n2A-n5A	CA_n2A-n5A	n2A	n5A	n2A	n5A	Yes
CA_n2A-n48A	CA_n2A-n48A	n2A	n48A	n2A	n48A	Yes
CA_n2A-n66A	CA_n2A-n66A	n2A	n66A	n2A	n66A	Yes
CA_n2A-n77A	CA_n2A-n77A	n2A	n77A	n2A	n77A	Yes
CA_n3A-n5A	CA_n3A-n5A	n3A	n5A	n3A	n5A	Yes
CA_n3(2A)-n5A	-	CA_n3(2A)	n5A	-	-	No
CA_n3(2A)-n8A	-	CA_n3(2A)	n8A	-	-	No
CA_n3A-n41A	CA_n3A-n41A	n3A	n41A	n3A	n41A	Yes
CA_n3A-n77A	-	n3A	n77A	-	-	Yes
CA_n3A-n78A	CA_n3A-n78A	n3A	n78A	n3A	n78A	Yes
CA_n3A-n78(2A)	CA_n3A-n78A	n3A	CA_n78(2A)	n3A	n78A	No
	CA_n78(2A)	n3A	CA_n78(2A)	-	CA_n78(2A)	No
CA_n3(2A)-n78A	-	CA_n3(2A)	n78A	-	-	No
CA_n3A-n79A	CA_n3A-n79A	n3A	n79A	n3A	n79A	Yes
CA_n5A-n7A	-	n5A	n7A	-	-	Yes
CA_n5A-n48A	CA_n5A-n48A	n5A	n48A	n5A	n48A	Yes
CA_n5A-n66A	CA_n5A-n66A	n5A	n66A	n5A	n66A	Yes
CA_n5A-n78A	-	n5A	n78A	-	-	Yes
CA_n5A-n78(2A)	CA_n5A-n78A	n5A	CA_n78(2A)	n5A	n78A	No
CA_n7A-n78A	-	n7A	n78A	-	-	Yes
CA_n8A-n75A	-	n8A	n75A	-	-	Yes
CA_n8A-n78A	CA_n8A-n78A	n8A	n78A	n8A	n78A	Yes
CA_n8A-n78(2A)	CA_n8A-n78A	n8A	CA_n78(2A)	n8A	CA_n78(2A)	No
CA_n8A-n79A	CA_n8A-n79A	n8A	n79A	n8A	n79A	Yes
CA_n24A-n41A	CA_n24A-n41A	n24A	n41A	n24A	n41A	Yes

NR CA configuration	Uplink NR CA configuration	NR CA downlink configuration band 1 (Note 3)	NR CA downlink configuration band 2	NR CA uplink configuration band 1	NR CA uplink configuration band 2	Applicable for protocol testing (Note 2)
CA_n24A-n41(2A)	CA_n24A-n41A	n24A	CA_n41(2A)	n24A	n41A	No
CA_n24A-n48A	CA_n24A-n48A	n24A	n48A	n24A	n48A	Yes
CA_n24A-n48B	CA_n24A-n48A	n24A	CA_n48B	n24A	n48A	No
CA_n24A-n48(2A)	CA_n24A-n48A	n24A	CA_n48(2A)	n24A	n48A	No
CA_n24A-n77A	CA_n24A-n77A	n24A	n77A	n24A	n77A	Yes
CA_n24A-n77C	CA_n24A-n77A	n24A	CA_n77C	n24A	n77A	No
CA_n26A-n66A	CA_n26A-n66A	n26A	n66A	n26A	n66A	Yes
CA_n26A-n66(2A)	CA_n26A-n66A	n26A	CA_n66(2A)	n26A	n66A	No
CA_n26A-n70A	CA_n26A-n70A	n26A	n70A	n26A	n70A	Yes
CA_n28A-n41A	CA_n28A-n41A	n28A	n41A	n28A	n41A	Yes
CA_n28A-n75A	-	n28A	n75A	-	-	Yes
CA_n28A-n78A	CA_n28A-n78A	n28A	n78A	n28A	n78A	Yes
CA_n28A-n79A	CA_n28A-n79A	n28A	n79A	n28A	n79A	Yes
CA_n29A-n66A	-	n29A	n66A (Note 1)	-	-	Yes
CA_n29B-n66B	-	n29A	CA_n66B (Note 1)	-	-	No
CA_n29A-n66(2A)	-	n29A	CA_n66(2A) (Note 1)	-	-	No
CA_n29A-n70A	-	n29A	n70A (Note 1)	-	-	Yes
CA_n29A-n71A	-	n29A	n71A (Note 1)	-	-	Yes
CA_n41A-n78A	-	n41A	n78A	-	-	Yes
CA_n41A-n79A	CA_n41A-n79A	n41A	n79A	n41A	n79A	Yes
CA_n41C-n79A	CA_n41A-n79A	CA_n41C	n79A	n41A	n79A	No
	CA_n41C	CA_n41C	n79A	CA_n41C	-	No
CA_n48A-n66A	CA_n48A-n66A	n48A	n66A	n48A	n66A	Yes
CA_n48A-n66(2A)	CA_n48A-n66A	n48A	CA_n66(2A)	n48A	n66A	No
CA_n48A-n70A	CA_n48A-n70A	n48A	n70A	n48A	n70A	Yes
CA_n48A-n71A	CA_n48A-n71A	n48A	n71A	n48A	n71A	Yes
CA_n48A-n71(2A)	CA_n48A-n71A	n48A	CA_n71(2A)	n48A	n71A	No
CA_n48B-n66A	CA_n48A-n66A	CA_n48B	n66A	n48A	n66A	No
CA_n48B-n70A	CA_n48A-n70A	CA_n48B	n70A	n48A	n70A	No
CA_n48B-n71A	CA_n48A-n71A	CA_n48B	n71A	n48A	n71A	No
CA_n48(2A)-n66A	CA_n48A-n66A	CA_n48(2A)	n66A	n48A	n66A	No

NR CA configuration	Uplink NR CA configuration	NR CA downlink configuration band 1 (Note 3)	NR CA downlink configuration band 2	NR CA uplink configuration band 1	NR CA uplink configuration band 2	Applicable for protocol testing (Note 2)
CA_n48(2A)-n66(2A)	CA_n48A-n66A	CA_n48(2A)	CA_n66(2A)	n48A	n66A	No
CA_n48(2A)-n70A	CA_n48A-n70A	CA_n48(2A)	n70A	n48A	n70A	No
CA_n48(2A)-n71A	CA_n48A-n71A	CA_n48(2A)	n71A	n48A	n71A	No
CA_n48(2A)-n71(2A)	CA_n48A-n71A	CA_n48(2A)	CA_n71(2A)	n48A	n71A	No
CA_n66A-n70A	-	n66A	n70A	-	-	Yes
CA_n66B-n70A	-	CA_n66B	n70A	-	-	No
CA_n66(2A)-n70A	-	CA_n66(2A)	n70A	-	-	No
CA_n66A-n71A	CA_n66A-n71A	n66A	n71A	n66A	n71A	Yes
CA_n66A-n71(2A)	CA_n66A-n71A	n66A	CA_n71(2A)	n66A	n71A	No
CA_n66B-n71A	CA_n66A-n71A	CA_n66B	n71A	n66A	n71A	No
CA_n66(2A)-n71A	CA_n66A-n71A	CA_n66(2A)	n71A	n66A	n71A	No
CA_n66(2A)-n71(2A)	CA_n66A-n71A	CA_n66(2A)	CA_n71(2A)	n66A	n71A	No
CA_n70A-n71A	CA_n70A-n71A	n70A	n71A	n70A	n71A	Yes
CA_n70A-n71(2A)	CA_n70A-n71A	n70A	CA_n71(2A)	n70A	n71A	No
CA_n75A-n78A	-	n75A	n78A (Note 1)	-	-	Yes
CA_n76A-n78A	-	n76A	n78A (Note 1)	-	-	Yes
CA_n77A-n79A	-	n77A	n79A	-	-	Yes
CA_n78A-n79A	-	n78A	n79A	-	-	Yes

Note 1: This band is used as PCell.
Note 2: Protocol testing is limited to NR CA configurations with 2CC.
Note 3: PCell is configured on this band unless otherwise stated.

4.3.1.1.2.2 NR inter-band CA configurations in FR1 (three bands)

Table 4.3.1.1.2.2-1: Inter-band NR CA configurations within FR1 (three bands)

NR CA configuration (Note 3)	Uplink NR CA configuration	NR CA downlink configuration band 1 (Note 4)	NR CA downlink configuration band 2	NR CA downlink configuration band 3	NR CA uplink configuration on band 1	NR CA uplink configuration on band 2	NR CA uplink configuration on band 3	Applicable for protocol testing (Note 2)
CA_n26A-n66A-n70A	CA_n26A-n66A	n26A	n66A	n70A	n26A	n66A	-	No
	CA_n26A-n70A	n26A	n66A	n70A	n26A	-	n70A	No
CA_n26A-n66(2A)-n70A	CA_n26A-n66A	n26A	CA_n66(2A)	n70A	n26A	n66A	-	No
	CA_n26A-n70A	n26A	CA_n66(2A)	n70A	n26A	-	n70A	No
CA_n29A-n66A-n70A	-	n29A (Note1)	n66A	n70A	-	-	-	No
CA_n29A-n66B-n70A	-	n29A (Note1)	CA_n66B	n70A	-	-	-	No
CA_n29A-n66(2A)-n70A	-	n29A (Note1)	CA_n66(2A)	n70A	-	-	-	No
CA_n48A-n66A-n70A	CA_n48A-n66A	n48A	n66A	n70A	n48A	n66A	-	No
	CA_n48A-n70A	n48A	n66A	n70A	n48A	-	n70A	No
CA_n48A-n66A-n71A	CA_n48A-n66A	n48A	n66A	n71A	n48A	n66A	-	No
	CA_n48A-n71A	n48A	n66A	n71A	n48A	-	n71A	No
	CA_n66A-n71A	n48A	n66A	n71A	-	n66A	n71A	No
CA_n48A-n66A-n71(2A)	CA_n48A-n66A	n48A	n66A	CA_n71(2A)	n48A	n66A	-	No
	CA_n48A-n71A	n48A	n66A	CA_n71(2A)	n48A	-	n71A	No
	CA_n66A-n71A	n48A	n66A	CA_n71(2A)	-	n66A	n71A	No
CA_n48A-n66(2A)-n70A	CA_n48A-n66A	n48A	CA_n66(2A)	n70A	n48A	n66A	-	No
	CA_n48A-n70A	n48A	CA_n66(2A)	n70A	n48A	-	n70A	No
CA_n48A-n66(2A)-n71A	CA_n48A-n66A	n48A	CA_n66(2A)	n71A	n48A	n66A	-	No
	CA_n48A-n71A	n48A	CA_n66(2A)	n71A	n48A	-	n71A	No
	CA_n66A-n71A	n48A	CA_n66(2A)	n71A	-	n66A	n71A	No
CA_n48A-n70A-n71A	CA_n48A-n70A	n48A	n70A	n71A	n48A	n70A	-	No
	CA_n48A-n71A	n48A	n70A	n71A	n48A	-	n71A	No
	CA_n70A-n71A	n48A	n70A	n71A	-	n70A	n71A	No
CA_n48A-n70A-n71(2A)	CA_n48A-n70A	n48A	n70A	CA_n71(2A)	n48A	n70A	-	No
	CA_n48A-n71A	n48A	n70A	CA_n71(2A)	n48A	-	n71A	No
	CA_n70A-n71A	n48A	n70A	CA_n71(2A)	-	n70A	n71A	No

NR CA configuration (Note 3)	Uplink NR CA configuration	NR CA downlink configuration band 1 (Note 4)	NR CA downlink configuration band 2	NR CA downlink configuration band 3	NR CA uplink configuration on band 1	NR CA uplink configuration on band 2	NR CA uplink configuration on band 3	Applicable for protocol testing (Note 2)
CA_n48B-n66A-n70A	CA_n48A-n66A	CA_n48B	n66A	n70A	n48A	n66A	-	No
	CA_n48A-n70A	CA_n48B	n66A	n70A	n48A	-	n70A	No
CA_n48B-n66A-n71A	CA_n48A-n66A	CA_n48B	n66A	n71A	n48A	n66A	-	No
	CA_n48A-n71A	CA_n48B	n66A	n71A	n48A	-	n71A	No
	CA_n66A-n71A	CA_n48B	n66A	n71A	-	n66A	n71A	No
CA_n48B-n70A-n71A	CA_n48A-n70A	CA_n48B	n70A	n71A	n48A	n70A	-	No
	CA_n48A-n71A	CA_n48B	n70A	n71A	n48A	-	n71A	No
	CA_n70A-n71A	CA_n48B	n70A	n71A	-	n70A	n71A	No
CA_n48(2A)-n66A-n70A	CA_n48A-n66A	CA_n48(2A)	n66A	n70A	n48A	n66A	-	No
	CA_n48A-n70A	CA_n48(2A)	n66A	n70A	n48A	-	n70A	No
CA_n48(2A)-n66A-n71A	CA_n48A-n66A	CA_n48(2A)	n66A	n71A	n48A	n66A	-	No
	CA_n48A-n71A	CA_n48(2A)	n66A	n71A	n48A	-	n71A	No
	CA_n66A-n71A	CA_n48(2A)	n66A	n71A	-	n66A	n71A	No
CA_n48(2A)-n70A-n71A	CA_n48A-n70A	CA_n48(2A)	n70A	n71A	n48A	n70A	-	No
	CA_n48A-n71A	CA_n48(2A)	n70A	n71A	n48A	-	n71A	No
	CA_n70A-n71A	CA_n48(2A)	n70A	n71A	-	n70A	n71A	No
CA_n66A-n70A-n71A	CA_n66A-n71A	n66A	n70A	n71A	n66A	-	n71A	No
	CA_n70A-n71A	n66A	n70A	n71A	-	n70A	n71A	No
CA_n66A-n70A-n71(2A)	CA_n66A-n71A	n66A	n70A	CA_n71(2A)	n66A	-	n71A	No
	CA_n70A-n71A	n66A	n70A	CA_n71(2A)	-	n70A	n71A	No
CA_n66B-n70A-n71A	CA_n66A-n71A	CA_n66B	n70A	n71A	n66A	-	n71A	No
	CA_n70A-n71A	CA_n66B	n70A	n71A	-	n70A	n71A	No
CA_n66(2A)-n70A-n71A	CA_n66A-n71A	CA_n66(2A)	n70A	n71A	n66A	-	n71A	No
	CA_n70A-n71A	CA_n66(2A)	n70A	n71A	-	n70A	n71A	No

NR CA configuration (Note 3)	Uplink NR CA configuration	NR CA downlink configuration band 1 (Note 4)	NR CA downlink configuration band 2	NR CA downlink configuration band 3	NR CA uplink configuration on band 1	NR CA uplink configuration on band 2	NR CA uplink configuration on band 3	Applicable for protocol testing (Note 2)
Note 1: This band cannot be used as PCell. Note 2: Protocol testing is limited to NR CA configurations with 3CC. Note 3: The band with the lowest UL frequency is used as PCell if nothing else is specified for in the table or in the test case for the specific configuration. Note 4: PCell is configured on this band unless otherwise stated.								

4.3.1.1.3 NR intra-band contiguous CA in FR1

4.3.1.1.3.1 – 4.3.1.1.3.39 FFS

4.3.1.1.3.40 NR Intra-band contiguous configurations CA_n40

4.3.1.1.3.40.1 CA_n40B

Editor's note: Test frequencies for CA_n40B with mixed numerology with SCS CC1=15 kHz and SCS CC2=30 kHz or 60 kHz; and SCS CC1=30 kHz and SCS CC2= 15 kHz or 60kHz is FFS.

Table 4.3.1.1.3.40.1-1: NR Intra-Band contiguous CA configuration CA_n40B (PCC=CC1 and SCC=CC2), CC1 SCS = 15kHz, CC2 SCS = 15kHz

CBW combination [MHz]	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORESET#0 [RBs] Note 3	CORESET#0 Index (Offset [RBs]) Note 4	offsetToPointA [PRBs] Note 4	
					Downlink & Uplink	Low Mid High													
50+50	CC1	50	15	270	Downlink & Uplink	Low	2325	465000	2300.7	460140	0	30	5763	461070	10	3	0 (2)	5	
						Mid													
						High													2325.2
	Channel spacing CC1-CC2=49.8 MHz (Note 1)																		
	CC2	50	15	270	Downlink & Uplink	Low	2374.8	474960	2350.5	470100	0	30	5886	470910	6	0	0 (2)	2	
						Mid													
High						2375													475000

Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.

Note 2: CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.

Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 4: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcc-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Table 4.3.1.1.3.40.1-2: NR Intra-Band contiguous CA configuration CA_n40B (PCC=CC1 and SCC=CC2), CC1 SCS = 30kHz, CC2 SCS = 30kHz

CBW combination [MHz]	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORESET#0 [RBs] Note 3	CORESET#0 Index (Offset [RBs]) Note 4	offsetToPointA (SIB1) [PRBs] Note 4	
					Downlink & Uplink	Low Mid High													
20+80	CC1	20	30	51	Downlink & Uplink	Low	2310	462000	2300.82	460164	0	30	5763	461070	14	0	2 (2)	4	
						Mid													
						High													2310.2
	Channel spacing CC1-CC2=49.8 MHz (Note 1)																		
	CC2	80	30	217	Downlink & Uplink	Low	2359.8	471960	2320.74	464148	0	30	5811	464910	14	0	0 (0)	0	
						Mid													
High						2360													472000
50+50	CC1	50	30	133	Downlink & Uplink	Low	2325	465000	2301.06	460212	0	30	5763	461070	22	0	1 (1)	2	
						Mid													
						High													2325.2
	Channel spacing CC1-CC2=49.8 MHz (Note 1)																		
	CC2	50	30	133	Downlink & Uplink	Low	2374.8	474960	2350.86	470172	0	30	5886	470910	6	0	0 (0)	0	
						Mid													
High						2375													475000
80+20	CC1	80	30	217	Downlink & Uplink	Low	2340	468000	2300.94	460188	0	30	5763	461070	6	0	2 (2)	4	
						Mid													
						High													2340.2
	Channel spacing CC1-CC2=49.8 MHz (Note 1)																		
	CC2	20	30	51	Downlink & Uplink	Low	2389.8	477960	2380.62	476124	0	30	5961	476910	22	0	0 (0)	0	
						Mid													
High						2390													478000

Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.

Note 2: CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.

Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 4: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcc-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

4.3.1.1.3.41 NR Intra-band contiguous configurations CA_n41

4.3.1.1.3.41.1 CA_n41C

Editor's note: Test frequencies for CA_n41C with mixed numerology with SCS CC1=15 kHz and SCS CC2=30 kHz or 60 kHz; and SCS CC1=30 kHz and SCS CC2= 30 kHz or 60kHz is FFS.

Table 4.3.1.1.3.41.1-1: NR Intra-Band contiguous CA configuration CA_n41C (PCC=CC1 and SCC=CC2), CC1 SCS = 30kHz, CC2 SCS = 30 kHz

CBW combination	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	carrier CORE SET#0 [RBs] Note 3	CORE SET #0 Index (Offset [RBs]) Note 4	offsetToPoint A (SIB [PRE] Note 5)						
40+80	CC1	40	30	106	Downlink & Uplink	Low	2516.01	503202	2496.93	499386	0	30	6252	500190	4	0	1 (1)	2					
						Mid	2553	510600	2497.2	499440	102		6345	507630	18	0	1 (1)	20					
						High	2590.17	518034	2389.65	477930	504		6438	515070	20	0	1 (1)	101					
					Channel spacing CC1-CC2=59.82 MHz (Note 1)																		
					CC2	80	30	217	Downlink & Uplink	Low	2575.83		515166	2536.77	507354	0	30	6351	508110	12	0	0 (0)	0
										Mid	2612.82		522564	2537.04	507408	102		6444	515550	2	0	1 (1)	20
	High	2649.99	529998	2429.49						485898	504	6537	522990	4	0	1 (1)		101					
	40+100	CC1	40	30	106	Downlink & Uplink	Low	2516.01	503202	2496.93	499386	0	30	6252	500190	4	0	1 (1)	2				
							Mid	2543.01	508602	2487.21	497442	102		6321	505710	20	0	2 (2)	20				
							High	2570.28	514056	2369.76	473952	504		6387	510990	10	0	0 (0)	100				
						Channel spacing CC1-CC2=69.72 MHz (Note 1)																	
						CC2	100	30	273	Downlink & Uplink	Low	2585.73		517146	2536.59	507318	0	30	6351	508110	0	0	1 (1)
Mid											2612.73	522546		2526.87	505374	102	6420		513630	16	0	2 (2)	20
High		2640	528000	2409.42	481884						504	6486	518910	6	0	0 (0)	100						
50+60		CC1	50	30	133	Downlink & Uplink	Low	2521.02	504204	2497.08	499416	0	30	6252	500190	18	0	0 (0)	0				
							Mid	2562.99	512598	2502.33	500466	102		6357	508590	20	0	0 (0)	20				
							High	2605.02	521004	2399.64	479928	504		6462	516990	18	0	0 (0)	100				
						Channel spacing CC1-CC2=54.96 MHz (Note 1)																	
						CC2	60	30	162	Downlink & Uplink	Low	2575.98		515196	2546.82	509364	0	30	6378	510270	14	0	2 (2)
	Mid										2617.95	523590		2552.07	510414	102	6483		518670	16	0	2 (2)	20
	High	2659.98	531996	2449.38	489876						504	6588	527070	14	0	2 (2)	101						
	50+80	CC1	50	30	133	Downlink & Uplink	Low	2521.02	504204	2497.08	499416	0	30	6252	500190	18	0	0 (0)	0				
							Mid	2553	510600	2492.34	498468	102		6333	506670	22	0	1 (1)	20				
							High	2585.13	517026	2379.75	475950	504		6414	513150	16	0	2 (2)	101				
						Channel spacing CC1-CC2=64.86 MHz (Note 1)																	
						CC2	80	30	217	Downlink & Uplink	Low	2585.88		517176	2546.82	509364	0	30	6378	510270	14	0	2 (2)
Mid											2617.86	523572		2542.08	508416	102	6456		516510	10	0	0 (0)	20
High		2649.99	529998	2429.49	485898						504	6537	522990	4	0	1 (1)	101						
50+100		CC1	50	30	133	Downlink & Uplink	Low	2521.02	504204	2497.08	499416	0	30	6252	500190	18	0	0 (0)	0				
							Mid	2543.01	508602	2482.35	496470	102		6309	504750	0	0	3 (3)	21				
							High	2565.24	513048	2359.86	471972	504		6363	509070	6	0	1 (1)	101				
						Channel spacing CC1-CC2=74.76 MHz (Note 1)																	

60+50	CC2	100	30	273	Downlink & Uplink	Low	2595.78	519156	2546.64	509328	0	30	6378	510270	2	0	3(3)	6	
						Mid	2617.77	523554	2531.91	506382	102		6432	514590	0	0	2(2)	20	
						High	2640	528000	2409.42	481884	504		6486	518910	6	0	0(0)	100	
	CC1	60	30	162	Downlink & Uplink	Low	2526	505200	2496.84	499368	0	30	6252	500190	10	0	1(1)	2	
						Mid	2568	513600	2502.12	500424	102		6357	508590	10	0	1(1)	20	
						High	2610.03	522006	2399.43	479886	504		6462	516990	8	0	1(1)	101	
	Channel spacing CC1-CC2=54.96 MHz (Note 1)																		
	CC2	50	30	133	Downlink & Uplink	Low	2580.96	516192	2557.02	511404	0	30	6402	512190	22	0	0(0)	0	
						Mid	2622.96	524592	2562.3	512460	102		6507	520590	22	0	0(0)	20	
High						2664.99	532998	2459.61	491922	504	6612		528990	20	0	0(0)	100		
60+60	CC1	60	30	162	Downlink & Uplink	Low	2526	505200	2496.84	499368	0	30	6252	500190	10	0	1(1)	2	
						Mid	2562.99	512598	2497.11	499422	102		6345	507630	0	0	2(2)	20	
						High	2599.98	519996	2389.38	477876	504		6438	515070	14	0	2(2)	101	
	Channel spacing CC1-CC2=60 MHz (Note 1)																		
	CC2	60	30	162	Downlink & Uplink	Low	2586	517200	2556.84	511368	0	30	6402	512190	10	0	1(1)	2	
						Mid	2622.99	524598	2557.11	511422	102		6495	519630	0	0	2(2)	20	
						High	2659.98	531996	2449.38	489876	504		6588	527070	14	0	2(2)	101	
	60+80	CC1	60	30	162	Downlink & Uplink	Low	2526	505200	2496.84	499368	0	30	6252	500190	10	0	1(1)	2
							Mid	2553	510600	2487.12	497424	102		6321	505710	2	0	3(3)	21
High							2580.09	516018	2369.49	473898	504	6387		510990	4	0	1(1)	101	
Channel spacing CC1-CC2=69.9 MHz (Note 1)																			
CC2		80	30	217	Downlink & Uplink	Low	2595.9	519180	2556.84	511368	0	30	6402	512190	10	0	1(1)	2	
						Mid	2622.9	524580	2547.12	509424	102		6471	517710	2	0	3(3)	21	
						High	2649.99	529998	2429.49	485898	504		6537	522990	4	0	1(1)	101	
60+100		CC1	60	30	162	Downlink & Uplink	Low	2526	505200	2496.84	499368	0	30	6252	500190	10	0	1(1)	2
							Mid	2543.01	508602	2477.13	495426	102		6294	503550	20	0	0(0)	20
	High						2560.2	512040	2349.6	469920	504	6339		507150	2	0	3(3)	101	
	Channel spacing CC1-CC2=79.8 MHz (Note 1)																		
	CC2	100	30	273	Downlink & Uplink	Low	2605.8	521160	2556.66	511332	0	30	6402	512190	22	0	1(1)	2	
						Mid	2622.81	524562	2536.95	507390	102		6444	515550	8	0	1(1)	20	
						High	2640	528000	2409.42	481884	504		6486	518910	6	0	0(0)	100	
	80+40	CC1	80	30	217	Downlink & Uplink	Low	2536.02	507204	2496.96	499392	0	30	6252	500190	2	0	1(1)	2
							Mid	2573.01	514602	2497.23	499446	102		6345	507630	16	0	1(1)	20
High							2610.18	522036	2389.68	477936	504	6438		515070	18	0	1(1)	101	
Channel spacing CC1-CC2=59.82 MHz (Note 1)																			
CC2		40	30	106	Downlink & Uplink	Low	2595.84	519168	2576.76	515352	0	30	6453	516270	18	0	2(2)	4	
						Mid	2632.83	526566	2577.03	515406	102		6543	523470	0	0	0(0)	20	
						High	2670	534000	2469.48	493896	504		6636	530910	2	0	0(0)	100	
80+50		CC1	80	30	217	Downlink & Uplink	Low	2536.02	507204	2496.96	499392	0	30	6252	500190	2	0	1(1)	2
							Mid	2568	513600	2492.22	498444	102		6333	506670	6	0	2(2)	20
	High						2600.13	520026	2379.63	475926	504	6414		513150	0	0	3(3)	101	

Channel spacing CC1-CC2=64.86 MHz (Note 1)																			
80+60	CC2	50	30	133	Downlink & Uplink	Low	2600.88	520176	2576.94	515388	0	30	6453	516270	6	0	2 (2)	4	
						Mid	2632.86	526572	2572.2	514440	102		6531	522510	2	0	0 (0)	20	
						High	2664.99	532998	2459.61	491922	504		6612	528990	20	0	0 (0)	100	
	CC1	80	30	217	Downlink & Uplink	Low	2536.02	507204	2496.96	499392	0	30	6252	500190	2	0	1 (1)	2	
						Mid	2562.99	512598	2487.21	497442	102		6321	505710	20	0	2 (2)	20	
						High	2590.08	518016	2369.58	473916	504		6387	510990	22	0	0 (0)	100	
	Channel spacing CC1-CC2=69.9 MHz (Note 1)																		
	80+80	CC2	60	30	162	Downlink & Uplink	Low	2605.92	521184	2576.76	515352	0	30	6453	516270	18	0	2 (2)	4
							Mid	2632.89	526578	2567.01	513402	102		6519	521550	4	0	1 (1)	20
High							2659.98	531996	2449.38	489876	504	6588		527070	14	0	2 (2)	101	
CC1		80	30	217	Downlink & Uplink	Low	2536.02	507204	2496.96	499392	0	30	6252	500190	2	0	1 (1)	2	
						Mid	2553	510600	2477.22	495444	102		6294	503550	14	0	0 (0)	20	
						High	2570.01	514002	2349.51	469902	504		6336	506910	0	0	0 (0)	100	
Channel spacing CC1-CC2=79.98 MHz (Note 1)																			
80+100		CC2	80	30	217	Downlink & Uplink	Low	2616	523200	2576.94	515388	0	30	6453	516270	6	0	2 (2)	4
							Mid	2632.98	526596	2557.2	511440	102		6495	519630	18	0	1 (1)	20
	High						2649.99	529998	2429.49	485898	504	6537		522990	4	0	1 (1)	101	
	CC1	80	30	217	Downlink & Uplink	Low	2536.02	507204	2496.96	499392	0	30	6252	500190	2	0	1 (1)	2	
						Mid	2543.01	508602	2467.23	493446	102		6270	501630	16	0	1 (1)	20	
						High	2550.12	510024	2329.62	465924	504		6288	503070	22	0	1 (1)	101	
	Channel spacing CC1-CC2=89.88 MHz (Note 1)																		
	100+40	CC2	100	30	273	Downlink & Uplink	Low	2625.9	525180	2576.76	515352	0	30	6453	516270	18	0	2 (2)	4
							Mid	2632.89	526578	2547.03	509406	102		6468	517470	0	0	0 (0)	20
High							2640	528000	2409.42	481884	504	6486		518910	6	0	0 (0)	100	
CC1		100	30	273	Downlink & Uplink	Low	2546.01	509202	2496.87	499374	0	30	6252	500190	8	0	1 (1)	2	
						Mid	2573.01	514602	2487.15	497430	102		6321	505710	0	0	3 (3)	21	
						High	2600.28	520056	2369.7	473940	504		6387	510990	14	0	0 (0)	100	
Channel spacing CC1-CC2=69.72 MHz (Note 1)																			
100+50		CC2	40	30	106	Downlink & Uplink	Low	2615.73	523146	2596.65	519330	0	30	6501	520110	20	0	0 (0)	0
							Mid	2642.73	528546	2586.93	517386	102		6570	525630	12	0	2 (2)	20
	High						2670	534000	2469.48	493896	504	6636		530910	2	0	0 (0)	100	
	CC1	100	30	273	Downlink & Uplink	Low	2546.01	509202	2496.87	499374	0	30	6252	500190	8	0	1 (1)	2	
						Mid	2568	513600	2482.14	496428	102		6306	504510	6	0	0 (0)	20	
						High	2590.23	518046	2359.65	471930	504		6363	509070	20	0	1 (1)	101	
	Channel spacing CC1-CC2=74.76 MHz (Note 1)																		
	100+60	CC2	50	30	133	Downlink & Uplink	Low	2620.77	524154	2596.83	519366	0	30	6501	520110	8	0	0 (0)	0
							Mid	2642.76	528552	2582.1	516420	102		6558	524670	14	0	2 (2)	20
High							2664.99	532998	2459.61	491922	504	6612		528990	20	0	0 (0)	100	
CC1		100	30	273	Downlink & Uplink	Low	2546.01	509202	2496.87	499374	0	30	6252	500190	8	0	1 (1)	2	
						Mid	2562.99	512598	2477.13	495426	102		6294	503550	20	0	0 (0)	20	

					Uplink	High	2580.18	516036	2349.6	469920	504		6339	507150	2	0	3 (3)	101
Channel spacing CC1-CC2=79.8 MHz (Note 1)																		
	CC2	60	30	162	Downlink & Uplink	Low	2625.81	525162	2596.65	519330	0	30	6501	520110	20	0	0 (0)	0
						Mid	2642.79	528558	2576.91	515382	102		6543	523470	8	0	0 (0)	20
						High	2659.98	531996	2449.38	489876	504		6588	527070	14	0	2 (2)	101
100+80	CC1	100	30	273	Downlink & Uplink	Low	2546.01	509202	2496.87	499374	0	30	6252	500190	8	0	1 (1)	2
						Mid	2553	510600	2467.14	493428	102		6270	501630	22	0	1 (1)	20
						High	2560.11	512022	2329.53	465906	504		6288	503070	4	0	2 (2)	101
Channel spacing CC1-CC2=89.88 MHz (Note 1)																		
	CC2	80	30	217	Downlink & Uplink	Low	2635.89	527178	2596.83	519366	0	30	6501	520110	8	0	0 (0)	0
						Mid	2642.88	528576	2567.1	513420	102		6519	521550	22	0	0 (0)	20
						High	2649.99	529998	2429.49	485898	504		6537	522990	4	0	1 (1)	101
Note 1:	Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.																	
Note 2:	CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.																	
Note 3:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.																	
Note 4:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcc-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																	

4.3.1.1.3.42 – 4.3.1.1.3.47 FFS

4.3.1.1.3.48 NR Intra-band contiguous configurations CA_n48

4.3.1.1.3.48.1 CA_n48B

Editor's note: Test frequencies for CA_n48B with mixed numerology with SCS CC1=15 kHz and SCS CC2=30 kHz or 60 kHz; and SCS CC1=30 kHz and SCS CC2= 15 kHz or 60kHz is FFS.

Table 4.3.1.1.3.48.1-1: NR Intra-Band contiguous CA configuration CA_n48B (PCC=CC1 and SCC=CC2), CC1 SCS = 15kHz, CC2 SCS = 15kHz

CBW combination [MHz] (BCS)	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute Frequency SSB [ARFCN]	k_{SSB}	Offset carrier CORE SET#0 [RBs] Note 3	COR ESET #0 Index (Offset [RBs]) Note 4	offsetToCarrier A (SIB1) [PRBs] Note 4	
					Downlink & Uplink	Low Mid High													
10+10 (0,2) Note 6	CC1	10	15	52	Downlink & Uplink	Low	3555	637000	3550.32	636688	0	30	7884	636960	8	0	0 (2)	2	
						Mid	3619.98	641332	3596.94	639796	102		7930	641376	8	3	1 (6)	111	
						High	3685.02	645668	3589.62	639308	504		7975	645696	4	2	1 (6)	512	
	Channel spacing CC1-CC2=9.96 MHz (Note 1)																		
	CC2	10	15	52	Downlink & Uplink	Low	3564.96	637664	3560.28	637352	0	30	7891	637632	4	1	0 (2)	3	
						Mid	3629.94	641996	3606.9	640460	102		7936	641952	4	0	0 (2)	104	
High						3694.98	646332	3599.58	639972	504	7982		646368	0	3	1 (6)	513		
10+15 (0,2) Note 6	CC1	10	15	52	Downlink & Uplink	Low	3555	637000	3550.32	636688	0	30	7884	636960	8	0	0 (2)	2	
						Mid	3617.49	641166	3594.45	639630	102		7928	641184	6	1	1 (6)	109	
						High	3680.01	645334	3584.61	638974	504		7971	645312	2	2	0 (2)	508	
	Channel spacing CC1-CC2=12.48 MHz (Note 1)																		
	CC2	15	15	79	Downlink & Uplink	Low	3567.48	637832	3560.37	637358	0	30	7891	637632	10	0	0 (2)	2	
						Mid	3629.97	641998	3604.5	640300	102		7935	641856	8	1	1 (6)	109	
High						3692.49	646166	3594.66	639644	504	7978		645984	4	2	0 (2)	508		
10+20 (0,2) Note 6	CC1	10	15	52	Downlink & Uplink	Low	3555	637000	3550.32	636688	0	30	7884	636960	8	0	0 (2)	2	
						Mid	3615	641000	3591.96	639464	102		7926	640992	4	3	0 (2)	107	
						High	3675.36	645024	3579.96	638664	504		7968	645024	0	0	1 (6)	510	
	Channel spacing CC1-CC2=14.64 MHz (Note 1)																		
	CC2	20	15	106	Downlink & Uplink	Low	3569.64	637976	3560.1	637340	0	30	7891	637632	4	2	0 (2)	4	
						Mid	3629.64	641976	3601.74	640116	102		7933	641664	0	1	1 (6)	109	
High						3690	646000	3589.74	639316	504	7975		645696	8	1	1 (6)	511		
10+30 (2)	CC1	10	15	52	Downlink & Uplink	Low	3555	637000	3550.32	636688	0	30	7884	636960	8	0	0 (2)	2	
						Mid	3609.99	640666	3586.95	639130	102		7923	640704	2	3	1 (6)	111	
						High	3665.31	644354	3569.91	637994	504		7961	644352	10	3	0 (2)	509	
	Channel spacing CC1-CC2=19.68 MHz (Note 1)																		
	CC2	30	15	160	Downlink	Low	3574.68	638312	3560.28	637352	0	30	7891	637632	4	1	0 (2)	3	
						Mid	3629.67	641978	3596.91	639794	102		7930	641376	10	3	1 (6)	111	
High						3684.99	645666	3579.87	638658	504	7968		645024	6	0	1 (6)	510		
10+40 (2)	CC1	10	15	52	Downlink & Uplink	Low	3555	637000	3550.32	636688	0	30	7884	636960	8	0	0 (2)	2	
						Mid	3604.98	640332	3581.94	638796	102		7919	640320	0	3	0 (2)	107	
						High	3655.62	643708	3560.22	637348	504		7954	643680	8	1	0 (2)	507	

Channel spacing CC1-CC2=24.36 MHz (Note 1)																			
10+50 (1,2)	CC2	40	15	216	Downlink	Low	3579.36	638624	3559.92	637328	0	30	7891	637632	4	3	0 (2)	5	
						Mid	3629.34	641956	3591.54	639436	102		7926	640992	8	1	1 (6)	109	
						High	3679.98	645332	3569.82	637988	504		7961	644352	4	0	1 (6)	510	
	CC1	10	15	52	Downlink & Uplink	Low	3555	637000	3550.32	636688	0	30	7884	636960	8	0	0 (2)	2	
						Mid	3600	640000	3576.96	638464	102		7916	640032	8	2	1 (6)	110	
						High	3645.6	643040	3550.2	636680	504		7947	643008	4	1	0 (2)	507	
	Channel spacing CC1-CC2=29.4 MHz (Note 1)																		
	15+5 (0)	CC2	50	15	270	Downlink	Low	3584.4	638960	3560.1	637340	0	30	7891	637632	4	2	0 (2)	4
							Mid	3629.4	641960	3586.74	639116	102		7922	640608	4	0	0 (2)	104
High							3675	645000	3559.98	637332	504		7954	643680	0	3	0 (2)	509	
CC1		15	15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2	
						Mid	3622.5	641500	3597.03	639802	102		7930	641376	2	3	1 (6)	111	
						High	3687.63	645842	3589.8	639320	504		7975	645696	4	1	1 (6)	511	
Channel spacing CC1-CC2=9.855 MHz (Note 1)																			
15+10 (0)		CC2	5	15	25	Downlink & Uplink	Low	3567.375	637825	3565.125	637675	0	Note 5	-	-	-	-	-	-
							Mid	3632.355	642157	3611.745	640783	102		-	-	-	-	-	-
	High						3697.485	646499	3604.515	640301	504		-	-	-	-	-	-	
	CC1	15	15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2	
						Mid	3619.98	641332	3594.51	639634	102		7928	641184	2	1	1 (6)	109	
						High	3682.5	645500	3584.67	638978	504		7971	645312	10	1	0 (2)	507	
	Channel spacing CC1-CC2=12.48 MHz (Note 1)																		
	15+15 (0,2) Note 6	CC2	10	15	52	Downlink & Uplink	Low	3570	638000	3565.32	637688	0	30	7895	638016	4	1	1 (6)	7
							Mid	3632.46	642164	3609.42	640628	102		7938	642144	4	2	0 (2)	106
High							3694.98	646332	3599.58	639972	504		7982	646368	0	3	1 (6)	513	
CC1		15	15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2	
						Mid	3617.49	641166	3592.02	639468	102		7926	640992	0	3	0 (2)	107	
						High	3677.49	645166	3579.66	638644	504		7968	645024	8	1	1 (6)	511	
Channel spacing CC1-CC2=15 MHz (Note 1)																			
15+20 (0,2) Note 6		CC2	15	15	79	Downlink & Uplink	Low	3572.52	638168	3565.41	637694	0	30	7895	638016	10	0	1 (6)	6
							Mid	3632.49	642166	3607.02	640468	102		7937	642048	8	3	1 (6)	111
	High						3692.49	646166	3594.66	639644	504		7978	645984	4	2	0 (2)	508	
	CC1	15	15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2	
						Mid	3615	641000	3589.53	639302	102		7924	640800	10	0	0 (2)	104	
						High	3672.84	644856	3575.01	638334	504		7965	644736	6	3	1 (6)	513	
	Channel spacing CC1-CC2=17.16 MHz (Note 1)																		
	15+30 (2)	CC2	20	15	106	Downlink & Uplink	Low	3574.68	638312	3565.14	637676	0	30	7895	638016	4	2	1 (6)	8
							Mid	3632.16	642144	3604.26	640284	102		7935	641856	0	3	1 (6)	111
High							3690	646000	3589.74	639316	504		7975	645696	8	1	1 (6)	511	
CC1		15	15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2	
						Mid	3609.99	640666	3584.52	638968	102		7921	640512	8	0	1 (6)	108	

					Uplink	High	3662.79	644186	3564.96	637664	504		7958	644064	4	3	1 (6)	513	
					Channel spacing CC1-CC2=22.2 MHz (Note 1)														
	CC2	30	15	160	Downlink	Low	3579.72	638648	3565.32	637688	0	30	7895	638016	4	1	1 (6)	7	
						Mid	3632.19	642146	3599.43	639962	102		7931	641472	10	1	0 (2)	105	
						High	3684.99	645666	3579.87	638658	504		7968	645024	6	0	1 (6)	510	
15+40 (0,1,2) Note 6	CC1	15	15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2	
						Mid	3604.98	640332	3579.51	638634	102		7917	640128	6	0	0 (2)	104	
						High	3653.1	643540	3555.27	637018	504		7951	643392	2	1	1 (6)	511	
						Channel spacing CC1-CC2=26.88 MHz (Note 1)													
	CC2	40	15	216	Downlink	Low	3584.4	638960	3564.96	637664	0	30	7895	638016	4	3	1 (6)	9	
						Mid	3631.86	642124	3594.06	639604	102		7928	641184	8	3	1 (6)	111	
High						3679.98	645332	3569.82	637988	504		7961	644352	4	0	1 (6)	510		
15+50 (0,1,2) Note 6	CC1	15	15	79	Downlink & Uplink	Low	3557.52	637168	3550.41	636694	0	30	7884	636960	2	0	0 (2)	2	
						Mid	3600	640000	3574.53	638302	102		7914	639840	2	0	1 (6)	108	
						High	3643.08	642872	3545.25	636350	504		7944	642720	10	0	1 (6)	510	
						Channel spacing CC1-CC2=31.92 MHz (Note 1)													
	CC2	50	15	270	Downlink	Low	3589.44	639296	3565.14	637676	0	30	7895	638016	4	2	1 (6)	8	
						Mid	3631.92	642128	3589.26	639284	102		7924	640800	4	2	0 (2)	106	
High						3675	645000	3559.98	637332	504		7954	643680	0	3	0 (2)	509		
20+5 (0)	CC1	20	15	106	Downlink & Uplink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9	
						Mid	3622.5	641500	3594.6	639640	102		7928	641184	8	0	1 (6)	108	
						High	3685.2	645680	3584.94	638996	504		7971	645312	4	0	0 (2)	506	
						Channel spacing CC1-CC2=12.285 MHz (Note 1)													
	CC2	5	15	25	Downlink & Uplink	Low	3572.295	638153	3570.045	638003	0	Note	-	-	-	-	-	-	-
						Mid	3634.785	642319	3614.175	640945	102	5	-	-	-	-	-	-	-
High						3697.485	646499	3604.515	640301	504		-	-	-	-	-	-		
20+10 (0,2) Note 6	CC1	20	15	106	Downlink & Uplink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9	
						Mid	3619.98	641332	3592.08	639472	102		7926	640992	8	2	0 (2)	106	
						High	3680.34	645356	3580.08	638672	504		7968	645024	4	3	0 (2)	509	
						Channel spacing CC1-CC2=14.64 MHz (Note 1)													
	CC2	10	15	52	Downlink & Uplink	Low	3574.65	638310	3569.97	637998	0	30	7898	638304	6	3	0 (2)	5	
						Mid	3634.62	642308	3611.58	640772	102		7940	642336	4	2	1 (6)	110	
High						3694.98	646332	3599.58	639972	504		7982	646368	0	3	1 (6)	513		
20+15 (0,2) Note 6	CC1	20	15	106	Downlink & Uplink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9	
						Mid	3617.49	641166	3589.59	639306	102		7924	640800	6	0	0 (2)	104	
						High	3675.33	645022	3575.07	638338	504		7965	644736	2	3	1 (6)	513	
						Channel spacing CC1-CC2=17.16 MHz (Note 1)													
	CC2	15	15	79	Downlink & Uplink	Low	3577.17	638478	3570.06	638004	0	30	7898	638304	0	3	0 (2)	5	
						Mid	3634.65	642310	3609.18	640612	102		7938	642144	8	3	0 (2)	107	
High						3692.49	646166	3594.66	639644	504		7978	645984	4	2	0 (2)	508		
20+20	CC1	20	15	106	Downlink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9	

(0,2) Note 6					&	Mid	3615	641000	3587.1	639140	102		7923	640704	4	2	1 (6)	110
					Uplink	High	3670.02	644668	3569.76	637984	504		7961	644352	8	0	1 (6)	510
	Channel spacing CC1-CC2=19.98 MHz (Note 1)																	
20+30 (2)	CC2	20	15	106	Downlink & Uplink	Low	3579.99	638666	3570.45	638030	0	30	7898	638304	10	0	0 (2)	2
						Mid	3634.98	642332	3607.08	640472	102		7937	642048	4	3	1 (6)	111
						High	3690	646000	3589.74	639316	504		7975	645696	8	1	1 (6)	511
20+30 (2)	CC1	20	15	106	Downlink & Uplink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9
						Mid	3609.99	640666	3582.09	638806	102		7919	640320	2	2	0 (2)	106
						High	3660.03	644002	3559.77	637318	504		7954	643680	2	0	1 (6)	510
Channel spacing CC1-CC2=24.96 MHz (Note 1)																		
30+30 (2)	CC2	30	15	160	Downlink	Low	3584.97	638998	3570.57	638038	0	30	7898	638304	2	0	0 (2)	2
						Mid	3634.95	642330	3602.19	640146	102		7933	641664	6	2	0 (2)	106
						High	3684.99	645666	3579.87	638658	504		7968	645024	6	0	1 (6)	510
30+30 (2)	CC1	30	15	160	Downlink & Uplink	Low	3565.02	637668	3550.62	636708	0	30	7885	637056	0	3	1 (6)	9
						Mid	3609.99	640666	3577.23	638482	102		7916	640032	2	1	1 (6)	109
						High	3654.99	643666	3549.87	636658	504		7947	643008	2	3	0 (2)	509
Channel spacing CC1-CC2=30 MHz (Note 1)																		
40+30 (2)	CC2	30	15	160	Downlink	Low	3595.02	639668	3580.62	638708	0	30	7905	638976	4	0	0 (2)	2
						Mid	3639.99	642666	3607.23	640482	102		7937	642048	6	2	1 (6)	110
						High	3684.99	645666	3579.87	638658	504		7968	645024	6	0	1 (6)	510
40+30 (2)	CC1	40	15	216	Downlink & Uplink	Low	3570	638000	3550.56	636704	0	30	7885	637056	4	3	1 (6)	9
						Mid	3609.99	640666	3572.19	638146	102		7912	639648	2	1	0 (2)	105
						High	3650.31	643354	3540.15	636010	504		7940	642336	2	1	0 (2)	507
Channel spacing CC1-CC2=34.68 MHz (Note 1)																		
20+40 (1,2)	CC2	30	15	160	Downlink	Low	3604.68	640312	3590.28	639352	0	30	7912	639648	8	2	0 (2)	4
						Mid	3644.67	642978	3611.91	640794	102		7940	642336	6	0	1 (6)	108
						High	3684.99	645666	3579.87	638658	504		7968	645024	6	0	1 (6)	510
20+40 (1,2)	CC1	20	15	106	Downlink & Uplink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9
						Mid	3604.98	640332	3577.08	638472	102		7916	640032	0	2	1 (6)	110
						High	3650.28	643352	3550.02	636668	504		7947	643008	4	2	0 (2)	508
Channel spacing CC1-CC2=29.7 MHz (Note 1)																		
20+50 (1,2)	CC2	40	15	216	Downlink	Low	3589.71	639314	3570.27	638018	0	30	7898	638304	10	1	0 (2)	3
						Mid	3634.68	642312	3596.88	639792	102		7929	641280	0	0	0 (2)	104
						High	3679.98	645332	3569.82	637988	504		7961	644352	4	0	1 (6)	510
20+50 (1,2)	CC1	20	15	106	Downlink & Uplink	Low	3560.01	637334	3550.47	636698	0	30	7885	637056	10	3	1 (6)	9
						Mid	3600	640000	3572.1	638140	102		7912	639648	8	1	0 (2)	105
						High	3640.26	642684	3540	636000	504		7940	642336	0	2	0 (2)	508
Channel spacing CC1-CC2=34.74 MHz (Note 1)																		
20+50 (1,2)	CC2	50	15	270	Downlink	Low	3594.75	639650	3570.45	638030	0	30	7898	638304	10	0	0 (2)	2
						Mid	3634.74	642316	3592.08	639472	102		7926	640992	8	2	0 (2)	106
						High	3675	645000	3559.98	637332	504		7954	643680	0	3	0 (2)	509

40+40 (1,2)	CC1	40	15	216	Downlink	Low	3570	638000	3550.56	636704	0	30	7885	637056	4	3	1 (6)	9
					&	Mid	3604.98	640332	3567.18	637812	102		7909	639360	0	1	1 (6)	109
					Uplink	High	3640.02	642668	3529.86	635324	504		7933	641664	4	2	0 (2)	508
Channel spacing CC1-CC2=39.96 MHz (Note 1)																		
40+50 (1,2)	CC2	40	15	216	Downlink	Low	3609.96	640664	3590.52	639368	0	30	7912	639648	4	1	0 (2)	3
						Mid	3644.94	642996	3607.14	640476	102		7937	642048	0	3	1 (6)	111
						High	3679.98	645332	3569.82	637988	504		7961	644352	4	0	1 (6)	510
40+50 (1,2)	CC1	40	15	216	Downlink	Low	3570	638000	3550.56	636704	0	30	7885	637056	4	3	1 (6)	9
					&	Mid	3600	640000	3562.2	637480	102		7905	638976	8	0	0 (2)	104
					Uplink	High	3630.06	642004	3519.9	634660	504		7926	640992	8	1	0 (2)	507
Channel spacing CC1-CC2=44.94 MHz (Note 1)																		
	CC2	50	15	270	Downlink	Low	3614.94	640996	3590.64	639376	0	30	7912	639648	8	0	0 (2)	2
						Mid	3644.94	642996	3602.28	640152	102		7933	641664	0	2	0 (2)	106
						High	3675	645000	3559.98	637332	504		7954	643680	0	3	0 (2)	509
Note 1:	Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.																	
Note 2:	CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.																	
Note 3:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.																	
Note 4:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-3 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																	
Note 5:	No SS/PBCH block fits within the channel bandwidth. The channel bandwidth can only be used as SCell.																	
Note 6:	UL CA is only supported for BCS0. I.e.the test frequencies for uplink CC2 are only supported for BCS0.																	

Table 4.3.1.1.3.48.1-2: NR Intra-Band contiguous CA configuration CA_n48B (PCC=CC1 and SCC=CC2), CC1 SCS = 30kHz, CC2 SCS = 30kHz

CBW combination [MHz] (BCS)	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offset To Carrier [Carrier PRBs]	SS block SCS [kHz]	GSC N	absolute Frequency SSB [ARFCN]	k_{SSB}	Offset carrier CORESET#0 [RBs] Note 3	CORE SET#0 Index (Offset [RBs]) Note 4	offset of Point A (SIB1) [PRBs] Note 4	
					Downlink & Uplink	Low Mid High													
10+10 (0,2) Note 5	CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3620.01	641334	3578.97	638598	102		7930	641376	18	0	3 (3)	210	
						High	3685.02	645668	3499.26	633284	504		7975	645696	4	0	3 (3)	1014	
	Channel spacing CC1-CC2=9.96 MHz (Note 1)																		
	CC2	10	30	24	Downlink & Uplink	Low	3564.96	637664	3560.64	637376	0	30	7891	637632	16	0	0 (0)	0	
						Mid	3629.97	641998	3588.93	639262	102		7936	641952	2	0	0 (0)	204	
						High	3694.98	646332	3509.22	633948	504		7982	646368	12	0	3 (3)	1014	
	10+15 (0,2) Note 5	CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0
							Mid	3617.49	641166	3576.45	638430	102		7928	641184	18	0	2 (2)	208
							High	3680.01	645334	3494.25	632950	504		7971	645312	2	0	1 (1)	1010
Channel spacing CC1-CC2=12.48 MHz (Note 1)																			
CC2		15	30	38	Downlink & Uplink	Low	3567.48	637832	3560.64	637376	0	30	7891	637632	16	0	0 (0)	0	
						Mid	3629.97	641998	3586.41	639094	102		7935	641856	2	0	3 (3)	210	
						High	3692.49	646166	3504.21	633614	504		7978	645984	10	0	1 (1)	1010	
10+20 (0,2) Note 5		CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0
							Mid	3615	641000	3573.96	638264	102		7926	640992	16	0	1 (1)	206
							High	3675.36	645024	3489.6	632640	504		7968	645024	0	0	2 (2)	1012
	Channel spacing CC1-CC2=14.64 MHz (Note 1)																		
	CC2	20	30	51	Downlink & Uplink	Low	3569.64	637976	3560.46	637364	0	30	7891	637632	4	0	1 (1)	2	
						Mid	3629.64	641976	3583.74	638916	102		7933	641664	12	0	2 (2)	208	
						High	3690	646000	3499.38	633292	504		7975	645696	20	0	2 (2)	1012	
	10+30 (2)	CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0
							Mid	3609.99	640666	3568.95	637930	102		7923	640704	14	0	3 (3)	210
							High	3665.31	644354	3479.55	631970	504		7961	644352	22	0	1 (1)	1010
Channel spacing CC1-CC2=19.68 MHz (Note 1)																			
CC2		30	30	78	Downlink	Low	3574.68	638312	3560.64	637376	0	30	7891	637632	16	0	0 (0)	0	
						Mid	3629.67	641978	3578.91	638594	102		7930	641376	22	0	3 (3)	210	
						High	3684.99	645666	3489.51	632634	504		7968	645024	6	0	2 (2)	1012	
10+40 (2)		CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0
							Mid	3605.01	640334	3563.97	637598	102		7919	640320	10	0	1 (1)	206
							High	3655.62	643708	3469.86	631324	504		7954	643680	20	0	0 (0)	1008
	Channel spacing CC1-CC2=24.36 MHz (Note 1)																		
	CC2	40	30	106	Downlink	Low	3579.36	638624	3560.28	637352	0	30	7891	637632	16	0	1 (1)	2	
						Mid	3629.37	641958	3573.57	638238	102		7926	640992	18	0	2 (2)	208	

10+70 (2)	CC1	10	30	24	Downlink & Uplink	High	3679.98	645332	3479.46	631964	504	30	7961	644352	4	0	2 (2)	1012	
						Low	3555	637000	3550.68	636712	0		7884	636960	8	0	0 (0)	0	
						Mid	3590.01	639334	3548.97	636598	102		7909	639360	2	0	3 (3)	210	
	Channel spacing CC1-CC2=39.48 MHz (Note 1)																		
	CC2	70	30	189	Downlink & Uplink	Low	3594.48	639632	3560.46	637364	0	30	7891	637632	4	0	1 (1)	2	
						Mid	3629.49	641966	3558.75	637250	102		7916	640032	22	0	3 (3)	210	
High						3664.98	644332	3449.52	629968	504	7940		642336	8	0	1 (1)	1010		
10+50 (1,2)	CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3600	640000	3558.96	637264	102		7916	640032	8	0	3 (3)	210	
						High	3645.6	643040	3459.84	630656	504		7947	643008	16	0	0 (0)	1008	
	Channel spacing CC1-CC2=29.4 MHz (Note 1)																		
	CC2	50	30	133	Downlink & Uplink	Low	3584.4	638960	3560.46	637364	0	30	7891	637632	4	0	1 (1)	2	
						Mid	3629.4	641960	3568.74	637916	102		7922	640608	4	0	0 (0)	204	
High						3675	645000	3469.62	631308	504	7954		643680	12	0	1 (1)	1010		
10+60 (1,2)	CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3594.99	639666	3553.95	636930	102		7912	639648	6	0	1 (1)	206	
						High	3635.55	642370	3449.79	629986	504		7940	642336	14	0	0 (0)	1008	
	Channel spacing CC1-CC2=34.44 MHz (Note 1)																		
	CC2	60	30	162	Downlink & Uplink	Low	3589.44	639296	3560.28	637352	0	30	7891	637632	16	0	1 (1)	2	
						Mid	3629.43	641962	3563.55	637570	102		7919	640320	14	0	2 (2)	208	
High						3669.99	644666	3459.39	630626	504	7947		643008	22	0	1 (1)	1010		
10+80 (1,2)	CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3585	639000	3543.96	636264	102		7905	638976	0	0	1 (1)	206	
						High	3615.48	641032	3429.72	628648	504		7926	640992	8	0	0 (0)	1008	
	Channel spacing CC1-CC2=44.52 MHz (Note 1)																		
	CC2	80	30	217	Downlink & Uplink	Low	3599.52	639968	3560.46	637364	0	30	7891	637632	4	0	1 (1)	2	
						Mid	3629.52	641968	3553.74	636916	102		7912	639648	20	0	1 (1)	206	
High						3660	644000	3439.5	629300	504	7933		641664	4	0	1 (1)	1010		
10+90 (1,2)	CC1	10	30	24	Downlink & Uplink	Low	3555	637000	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3579.99	638666	3538.95	635930	102		7902	638688	22	0	2 (2)	208	
						High	3605.43	640362	3419.67	627978	504		7919	640320	6	0	0 (0)	1008	
	Channel spacing CC1-CC2=49.56 MHz (Note 1)																		
	CC2	90	30	245	Downlink & Uplink	Low	3604.56	640304	3560.46	637364	0	30	7891	637632	4	0	1 (1)	2	
						Mid	3629.55	641970	3548.73	636582	102		7909	639360	18	0	3 (3)	210	
High						3654.99	643666	3429.45	628630	504	7926		640992	2	0	1 (1)	1010		
15+10 (0,2) Note 5	CC1	15	30	38	Downlink & Uplink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3620.01	641334	3576.45	638430	102		7928	641184	18	0	2 (2)	208	
						High	3682.5	645500	3494.22	632948	504		7971	645312	4	0	1 (1)	1010	
	Channel spacing CC1-CC2=12.48 MHz (Note 1)																		
	CC2	10	30	24	Downlink	Low	3570	638000	3565.68	637712	0	30	7895	638016	16	0	2 (2)	4	

15+15 (0,2) Note 5	CC1	15	30	38	&	Mid	3632.49	642166	3591.45	639430	102	30	7938	642144	2	0	1 (1)	206	
					Uplink	High	3694.98	646332	3509.22	633948	504		7982	646368	12	0	3 (3)	1014	
					Downlink	Low	3557.52	637168	3550.68	636712	0		7884	636960	8	0	0 (0)	0	
					&	Mid	3617.49	641166	3573.93	638262	102		7926	640992	18	0	1 (1)	206	
	Uplink	High	3677.49	645166	3489.21	632614	504	7968	645024	2	0	3 (3)	1014						
	Channel spacing CC1-CC2=15 MHz (Note 1)																		
	CC2	15	30	38	Downlink	Low	3572.52	638168	3565.68	637712	0	30	7895	638016	16	0	2 (2)	4	
						&	Mid	3632.49	642166	3588.93	639262		102	7936	641952	2	0	0 (0)	204
						Uplink	High	3692.49	646166	3504.21	633614		504	7978	645984	10	0	1 (1)	1010
	15+20 (0,2) Note 5	CC1	15	30	38	Downlink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0
&							Mid	3615	641000	3571.44	638096	102		7924	640800	16	0	0 (0)	204
Uplink							High	3672.84	644856	3484.56	632304	504		7964	644640	0	0	0 (0)	1008
Channel spacing CC1-CC2=17.16 MHz (Note 1)																			
CC2		20	30	51	Downlink	Low	3574.68	638312	3565.5	637700	0	30	7895	638016	4	0	3 (3)	6	
						&	Mid	3632.16	642144	3586.26	639084		102	7935	641856	12	0	3 (3)	210
	Uplink					High	3690	646000	3499.38	633292	504		7975	645696	20	0	2 (2)	1012	
15+30 (2)	CC1	15	30	38	Downlink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						&	Mid	3609.99	640666	3566.43	637762		102	7921	640512	14	0	2 (2)	208
						Uplink	High	3662.79	644186	3474.51	631634		504	7958	644064	22	0	3 (3)	1014
	Channel spacing CC1-CC2=22.2 MHz (Note 1)																		
	CC2	30	30	78	Downlink	Low	3579.72	638648	3565.68	637712	0	30	7895	638016	16	0	2 (2)	4	
						&	Mid	3632.19	642146	3581.43	638762		102	7931	641472	22	0	0 (0)	204
Uplink						High	3684.99	645666	3489.51	632634	504		7968	645024	6	0	2 (2)	1012	
15+70 (2)	CC1	15	30	38	Downlink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						&	Mid	3590.01	639334	3546.45	636430		102	7907	639168	2	0	2 (2)	208
						Uplink	High	3622.98	641532	3434.7	628980		504	7930	641376	12	0	2 (2)	1012
	Channel spacing CC1-CC2=42 MHz (Note 1)																		
	CC2	70	30	189	Downlink	Low	3599.52	639968	3565.5	637700	0	30	7895	638016	4	0	3 (3)	6	
						&	Mid	3632.01	642134	3561.27	637418		102	7917	640128	22	0	0 (0)	204
Uplink						High	3664.98	644332	3449.52	629968	504		7940	642336	8	0	1 (1)	1010	
15+40 (1,2)	CC1	15	30	38	Downlink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						&	Mid	3605.01	640334	3561.45	637430		102	7917	640128	10	0	0 (0)	204
						Uplink	High	3653.1	643540	3464.82	630988		504	7951	643392	20	0	2 (2)	1012
	Channel spacing CC1-CC2=26.88 MHz (Note 1)																		
	CC2	40	30	106	Downlink	Low	3584.4	638960	3565.32	637688	0	30	7895	638016	16	0	3 (3)	6	
						&	Mid	3631.89	642126	3576.09	638406		102	7928	641184	18	0	3 (3)	210
Uplink						High	3679.98	645332	3479.46	631964	504		7961	644352	4	0	2 (2)	1012	
15+50 (1,2)	CC1	15	30	38	Downlink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						&	Mid	3600	640000	3556.44	637096		102	7914	639840	8	0	2 (2)	208
	Uplink	High	3643.08	642872	3454.8	630320	504	7944	642720	16	0	2 (2)	1012						
		Channel spacing CC1-CC2=31.92 MHz (Note 1)																	

15+60 (1,2)	CC2	50	30	133	Downlink	Low	3589.44	639296	3565.5	637700	0	30	7895	638016	4	0	3 (3)	6	
						Mid	3631.92	642128	3571.26	638084	102		7924	640800	4	0	1 (1)	206	
						High	3675	645000	3469.62	631308	504		7954	643680	12	0	1 (1)	1010	
	CC1	15	30	38	Downlink & Uplink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3594.99	639666	3551.43	636762	102		7910	639456	6	0	0 (0)	204	
						High	3633.03	642202	3444.75	629650	504		7937	642048	14	0	2 (2)	1012	
	Channel spacing CC1-CC2=36.96 MHz (Note 1)																		
	15+80 (1,2)	CC2	60	30	162	Downlink	Low	3594.48	639632	3565.32	637688	0	30	7895	638016	16	0	3 (3)	6
							Mid	3631.95	642130	3566.07	637738	102		7921	640512	14	0	3 (3)	210
High							3669.99	644666	3459.39	630626	504	7947		643008	22	0	1 (1)	1010	
CC1		15	30	38	Downlink & Uplink	Low	3557.52	637168	3550.68	636712	0	30	7884	636960	8	0	0 (0)	0	
						Mid	3585	639000	3541.44	636096	102		7903	638784	0	0	0 (0)	204	
						High	3612.96	640864	3424.68	628312	504		7923	640704	8	0	2 (2)	1012	
Channel spacing CC1-CC2=47.04 MHz (Note 1)																			
20+10 (0,2) Note 5		CC2	80	30	217	Downlink	Low	3604.56	640304	3565.5	637700	0	30	7895	638016	4	0	3 (3)	6
							Mid	3632.04	642136	3556.26	637084	102		7914	639840	20	0	2 (2)	208
	High						3660	644000	3439.5	629300	504	7933		641664	4	0	1 (1)	1010	
	CC1	20	30	51	Downlink & Uplink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6	
						Mid	3620.01	641334	3574.11	638274	102		7926	640992	6	0	1 (1)	206	
						High	3680.34	645356	3489.72	632648	504		7968	645024	16	0	1 (1)	1010	
	Channel spacing CC1-CC2=14.64 MHz (Note 1)																		
	20+15 (0,2) Note 5	CC2	10	30	24	Downlink & Uplink	Low	3574.65	638310	3570.33	638022	0	30	7898	638304	18	0	1 (1)	2
							Mid	3634.65	642310	3593.61	639574	102		7940	642336	2	0	3 (3)	210
High							3694.98	646332	3509.22	633948	504	7982		646368	12	0	3 (3)	1014	
CC1		20	30	51	Downlink & Uplink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6	
						Mid	3617.49	641166	3571.59	638106	102		7924	640800	6	0	0 (0)	204	
						High	3675.33	645022	3484.71	632314	504		7965	644736	14	0	3 (3)	1014	
Channel spacing CC1-CC2=17.16 MHz (Note 1)																			
20+20 (0,2) Note 5		CC2	15	30	38	Downlink & Uplink	Low	3577.17	638478	3570.33	638022	0	30	7898	638304	18	0	1 (1)	2
							Mid	3634.65	642310	3591.09	639406	102		7938	642144	2	0	2 (2)	208
	High						3692.49	646166	3504.21	633614	504	7978		645984	10	0	1 (1)	1010	
	CC1	20	30	51	Downlink & Uplink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6	
						Mid	3615	641000	3569.1	637940	102		7923	640704	4	0	3 (3)	210	
						High	3670.02	644668	3479.4	631960	504		7961	644352	8	0	2 (2)	1012	
	Channel spacing CC1-CC2=19.98 MHz (Note 1)																		
	20+30 (2)	CC2	20	30	51	Downlink & Uplink	Low	3579.99	638666	3570.81	638054	0	30	7898	638304	10	0	0 (0)	0
							Mid	3634.98	642332	3589.08	639272	102		7937	642048	16	0	3 (3)	210
High							3690	646000	3499.38	633292	504	7975		645696	20	0	2 (2)	1012	
CC1	20	30	51	Downlink & Uplink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6		
					Mid	3609.99	640666	3564.09	637606	102		7919	640320	2	0	1 (1)	206		
					High	3660.03	644002	3469.41	631294	504		7954	643680	2	0	2 (2)	1012		

		Channel spacing CC1-CC2=24.96 MHz (Note 1)																
	CC2	30	30	78	Downlink	Low	3584.97	638998	3570.93	638062	0	30	7898	638304	2	0	0 (0)	0
						Mid	3634.95	642330	3584.19	638946	102		7933	641664	6	0	1 (1)	206
						High	3684.99	645666	3489.51	632634	504		7968	645024	6	0	2 (2)	1012
20+70 (2)	CC1	20	30	51	Downlink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6
					&	Mid	3590.01	639334	3544.11	636274	102		7905	638976	14	0	0 (0)	204
					Uplink	High	3620.16	641344	3429.54	628636	504		7926	640992	20	0	0 (0)	1008
		Channel spacing CC1-CC2=44.82 MHz (Note 1)																
	CC2	70	30	189	Downlink	Low	3604.83	640322	3570.81	638054	0	30	7898	638304	10	0	0 (0)	0
						Mid	3634.83	642322	3564.09	637606	102		7919	640320	2	0	1 (1)	206
						High	3664.98	644332	3449.52	629968	504		7940	642336	8	0	1 (1)	1010
30+10 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3620.01	641334	3569.25	637950	102		7923	640704	18	0	2 (2)	208
					Uplink	High	3675.3	645020	3479.82	631988	504		7961	644352	4	0	1 (1)	1010
		Channel spacing CC1-CC2=19.68 MHz (Note 1)																
	CC2	10	30	24	Downlink	Low	3584.7	638980	3580.38	638692	0	30	7905	638976	20	0	1 (1)	2
						Mid	3639.69	642646	3598.65	639910	102		7943	642624	2	0	1 (1)	206
						High	3694.98	646332	3509.22	633948	504		7982	646368	12	0	3 (3)	1014
30+15 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3617.49	641166	3566.73	637782	102		7921	640512	18	0	1 (1)	206
					Uplink	High	3670.29	644686	3474.81	631654	504		7958	644064	2	0	3 (3)	1014
		Channel spacing CC1-CC2=22.2 MHz (Note 1)																
	CC2	15	30	38	Downlink	Low	3587.22	639148	3580.38	638692	0	30	7905	638976	20	0	1 (1)	2
						Mid	3639.69	642646	3596.13	639742	102		7941	642432	2	0	0 (0)	204
						High	3692.49	646166	3504.21	633614	504		7978	645984	10	0	1 (1)	1010
30+20 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3615	641000	3564.24	637616	102		7919	640320	16	0	0 (0)	204
					Uplink	High	3665.04	644336	3469.56	631304	504		7954	643680	16	0	1 (1)	1010
		Channel spacing CC1-CC2=24.96 MHz (Note 1)																
	CC2	20	30	51	Downlink	Low	3589.98	639332	3580.8	638720	0	30	7905	638976	16	0	0 (0)	0
						Mid	3639.96	642664	3594.06	639604	102		7940	642336	20	0	1 (1)	206
						High	3690	646000	3499.38	633292	504		7975	645696	20	0	2 (2)	1012
30+30 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3609.99	640666	3559.23	637282	102		7916	640032	14	0	2 (2)	208
					Uplink	High	3654.99	643666	3459.51	630634	504		7947	643008	14	0	1 (1)	1010
		Channel spacing CC1-CC2=30 MHz (Note 1)																
	CC2	30	30	78	Downlink	Low	3595.02	639668	3580.98	638732	0	30	7905	638976	4	0	0 (0)	0
						Mid	3639.99	642666	3589.23	639282	102		7937	642048	6	0	3 (3)	210
						High	3684.99	645666	3489.51	632634	504		7968	645024	6	0	2 (2)	1012
30+40 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3605.01	640334	3554.25	636950	102		7912	639648	10	0	0 (0)	204

					Uplink	High	3645.3	643020	3449.82	629988	504		7940	642336	12	0	0 (0)	1008
					Channel spacing CC1-CC2=34.68 MHz (Note 1)													
	CC2	40	30	106	Downlink	Low	3599.7	639980	3580.62	638708	0	30	7905	638976	4	0	1 (1)	2
						Mid	3639.69	642646	3583.89	638926	102		7933	641664	2	0	2 (2)	208
						High	3679.98	645332	3479.46	631964	504		7961	644352	4	0	2 (2)	1012
30+50 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3600	640000	3549.24	636616	102		7909	639360	8	0	2 (2)	208
					Uplink	High	3635.28	642352	3439.8	629320	504		7933	641664	8	0	0 (0)	1008
					Channel spacing CC1-CC2=39.72 MHz (Note 1)													
	CC2	50	30	133	Downlink	Low	3604.74	640316	3580.8	638720	0	30	7905	638976	16	0	0 (0)	0
						Mid	3639.72	642648	3579.06	638604	102		7930	641376	12	0	3 (3)	210
						High	3675	645000	3469.62	631308	504		7954	643680	12	0	1 (1)	1010
30+60 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3594.99	639666	3544.23	636282	102		7905	638976	6	0	0 (0)	204
					Uplink	High	3625.23	641682	3429.75	628650	504		7926	640992	6	0	0 (0)	1008
					Channel spacing CC1-CC2=44.76 MHz (Note 1)													
	CC2	60	30	162	Downlink	Low	3609.78	640652	3580.62	638708	0	30	7905	638976	4	0	1 (1)	2
						Mid	3639.75	642650	3573.87	638258	102		7926	640992	22	0	1 (1)	206
						High	3669.99	644666	3459.39	630626	504		7947	643008	22	0	1 (1)	1010
30+70 (2)	CC1	30	30	78	Downlink	Low	3565.02	637668	3550.98	636732	0	30	7885	637056	12	0	3 (3)	6
					&	Mid	3590.01	639334	3539.25	635950	102		7902	638688	2	0	2 (2)	208
					Uplink	High	3615.18	641012	3419.7	627980	504		7919	640320	4	0	0 (0)	1008
					Channel spacing CC1-CC2=49.8 MHz (Note 1)													
	CC2	70	30	189	Downlink	Low	3614.82	640988	3580.8	638720	0	30	7905	638976	16	0	0 (0)	0
						Mid	3639.81	642654	3569.07	637938	102		7923	640704	6	0	3 (3)	210
						High	3664.98	644332	3449.52	629968	504		7940	642336	8	0	1 (1)	1010
40+10 (2)	CC1	40	30	106	Downlink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6
					&	Mid	3620.01	641334	3564.21	637614	102		7919	640320	18	0	0 (0)	204
					Uplink	High	3670.62	644708	3470.1	631340	504		7954	643680	4	0	0 (0)	1008
					Channel spacing CC1-CC2=24.36 MHz (Note 1)													
	CC2	10	30	24	Downlink	Low	3594.36	639624	3590.04	639336	0	30	7912	639648	0	0	3 (3)	6
						Mid	3644.37	642958	3603.33	640222	102		7946	642912	2	0	0 (0)	204
						High	3694.98	646332	3509.22	633948	504		7982	646368	12	0	3 (3)	1014
40+15 (2)	CC1	40	30	106	Downlink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6
					&	Mid	3617.49	641166	3561.69	637446	102		7918	640224	18	0	3 (3)	210
					Uplink	High	3665.61	644374	3465.09	631006	504		7951	643392	2	0	2 (2)	1012
					Channel spacing CC1-CC2=26.88 MHz (Note 1)													
	CC2	15	30	38	Downlink	Low	3596.88	639792	3590.04	639336	0	30	7912	639648	0	0	3 (3)	6
						Mid	3644.37	642958	3600.81	640054	102		7945	642816	2	0	3 (3)	210
						High	3692.49	646166	3504.21	633614	504		7978	645984	10	0	1 (1)	1010
40+20	CC1	40	30	106	Downlink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6

(2)					&	Mid	3615	641000	3559.2	637280	102		7916	640032	16	0	2 (2)	208	
					Uplink	High	3660.3	644020	3459.78	630652	504		7947	643008	20	0	0 (0)	1008	
	Channel spacing CC1-CC2=29.7 MHz (Note 1)																		
40+30 (2)	CC2	20	30	51	Downlink	Low	3599.7	639980	3590.52	639368	0	30	7912	639648	16	0	1 (1)	2	
						Mid	3644.7	642980	3598.8	639920	102		7943	642624	16	0	0 (0)	204	
						High	3690	646000	3499.38	633292	504		7975	645696	20	0	2 (2)	1012	
20+40 (1,2)	CC1	40	30	106	Downlink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6	
					&	Mid	3609.99	640666	3554.19	636946	102		7912	639648	14	0	0 (0)	204	
					Uplink	High	3650.31	643354	3449.79	629986	504		7940	642336	14	0	0 (0)	1008	
20+50 (1,2)	Channel spacing CC1-CC2=34.68 MHz (Note 1)																		
	CC2	30	30	78	Downlink	Low	3604.68	640312	3590.64	639376	0	30	7912	639648	8	0	1 (1)	2	
						Mid	3644.67	642978	3593.91	639594	102		7940	642336	6	0	2 (2)	208	
20+60 (1,2)						High	3684.99	645666	3489.51	632634	504		7968	645024	6	0	2 (2)	1012	
	CC1	20	30	51	Downlink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6	
					&	Mid	3605.01	640334	3559.11	637274	102		7916	640032	22	0	2 (2)	208	
20+80 (1,2)					Uplink	High	3650.28	643352	3459.66	630644	504		7947	643008	4	0	1 (1)	1010	
	Channel spacing CC1-CC2=29.7 MHz (Note 1)																		
	CC2	40	30	106	Downlink	Low	3589.71	639314	3570.63	638042	0	30	7898	638304	22	0	0 (0)	0	
20+50 (1,2)						Mid	3634.71	642314	3578.91	638594	102		7930	641376	22	0	3 (3)	210	
						High	3679.98	645332	3479.46	631964	504		7961	644352	4	0	2 (2)	1012	
	CC1	20	30	51	Downlink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6	
20+60 (1,2)					&	Mid	3600	640000	3554.1	636940	102		7912	639648	20	0	0 (0)	204	
					Uplink	High	3640.26	642684	3449.64	629976	504		7940	642336	0	0	1 (1)	1010	
	Channel spacing CC1-CC2=34.74 MHz (Note 1)																		
20+80 (1,2)	CC2	50	30	133	Downlink	Low	3594.75	639650	3570.81	638054	0	30	7898	638304	10	0	0 (0)	0	
						Mid	3634.74	642316	3574.08	638272	102		7926	640992	8	0	1 (1)	206	
						High	3675	645000	3469.62	631308	504		7954	643680	12	0	1 (1)	1010	
20+30 (1,2)	CC1	20	30	51	Downlink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6	
					&	Mid	3594.99	639666	3549.09	636606	102		7909	639360	18	0	2 (2)	208	
					Uplink	High	3630.21	642014	3439.59	629306	504		7933	641664	22	0	0 (0)	1008	
20+40 (1,2)	Channel spacing CC1-CC2=39.78 MHz (Note 1)																		
	CC2	60	30	162	Downlink	Low	3599.79	639986	3570.63	638042	0	30	7898	638304	22	0	0 (0)	0	
						Mid	3634.77	642318	3568.89	637926	102		7923	640704	18	0	3 (3)	210	
20+60 (1,2)						High	3669.99	644666	3459.39	630626	504		7947	643008	22	0	1 (1)	1010	
	CC1	20	30	51	Downlink	Low	3560.01	637334	3550.83	636722	0	30	7885	637056	22	0	3 (3)	6	
					&	Mid	3585	639000	3539.1	635940	102		7902	638688	12	0	2 (2)	208	
20+80 (1,2)					Uplink	High	3610.14	640676	3419.52	627968	504		7919	640320	16	0	0 (0)	1008	
	Channel spacing CC1-CC2=49.86 MHz (Note 1)																		
	CC2	80	30	217	Downlink	Low	3609.87	640658	3570.81	638054	0	30	7898	638304	10	0	0 (0)	0	
20+30 (1,2)						Mid	3634.86	642324	3559.08	637272	102		7916	640032	0	0	3 (3)	210	
						High	3660	644000	3439.5	629300	504		7933	641664	4	0	1 (1)	1010	

40+40 (0,1,2)	CC1	40	30	106	Downlink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6
					&	Mid	3605.01	640334	3549.21	636614	102		7909	639360	10	0	2 (2)	208
					Uplink	High	3640.02	642668	3439.5	629300	504		7933	641664	4	0	1 (1)	1010
Channel spacing CC1-CC2=39.96 MHz (Note 1)																		
40+50 (1,2)	CC2	40	30	106	Downlink	Low	3609.96	640664	3590.88	639392	0	30	7912	639648	16	0	0 (0)	0
						Mid	3644.97	642998	3589.17	639278	102		7937	642048	10	0	3 (3)	210
						High	3679.98	645332	3479.46	631964	504		7961	644352	4	0	2 (2)	1012
40+60 (1,2)	CC1	40	30	106	Downlink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6
					&	Mid	3600	640000	3544.2	636280	102		7905	638976	8	0	0 (0)	204
					Uplink	High	3630.06	642004	3429.54	628636	504		7926	640992	20	0	0 (0)	1008
Channel spacing CC1-CC2=44.94 MHz (Note 1)																		
40+60 (1,2)	CC2	50	30	133	Downlink	Low	3614.94	640996	3591	639400	0	30	7912	639648	8	0	0 (0)	0
						Mid	3644.94	642996	3584.28	638952	102		7933	641664	0	0	1 (1)	206
						High	3675	645000	3469.62	631308	504		7954	643680	12	0	1 (1)	1010
40+60 (1,2)	CC1	40	30	106	Downlink	Low	3570	638000	3550.92	636728	0	30	7885	637056	16	0	3 (3)	6
					&	Mid	3594.99	639666	3539.19	635946	102		7902	638688	6	0	2 (2)	208
					Uplink	High	3620.07	641338	3419.55	627970	504		7919	640320	14	0	0 (0)	1008
Channel spacing CC1-CC2=49.92 MHz (Note 1)																		
40+60 (1,2)	CC2	60	30	162	Downlink	Low	3619.92	641328	3590.76	639384	0	30	7912	639648	0	0	1 (1)	2
						Mid	3644.91	642994	3579.03	638602	102		7930	641376	14	0	3 (3)	210
						High	3669.99	644666	3459.39	630626	504		7947	643008	22	0	1 (1)	1010
Note 1:	Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.																	
Note 2:	CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.																	
Note 3:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.																	
Note 4:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																	
Note 5:	UL CA is only supported for BCS0. I.e. the test frequencies for uplink CC2 are only supported for BCS0.																	

4.3.1.1.3.49 – 4.3.1.1.3.65 FFS

4.3.1.1.3.66 NR Intra-band contiguous configurations CA_n66

4.3.1.1.3.66.1 CA_n66B

Editor's note: Test frequencies for CA_n66B with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.3.66.1-1: NR Intra-Band contiguous CA configuration CA_n66B (PCC=CC1 and SCC=CC2), SCS 15 kHz

CBW combination	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetT oCarrier [Carrier PRBs]	SS block SCS [kHz]	GSC N	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORE SET#0 [RBs] Note 3	COR ESET #0 Index (Offset [RBs]) Note 4	offsetT oPoint A (SIB1) [PRBs] Note 4		
5+20	CC1	5	15	25	Downlink	Low	2112.5	422500	2110.25	422050	0	15	5279	422410	0	0	0 (0)	0	
						Mid	2145	429000	2124.39	424878	102		5361	428910	0	0	0 (0)	102	
						High	2177.5	435500	2084.53	416906	504		5443	435410	0	0	0 (0)	504	
					Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	-
						Mid	1745	349000	1652.03	330406	504		-	-	-	-	-	-	-
						High	1777.5	355500	1774.17	354834	6		-	-	-	-	-	-	-
	Channel spacing CC1-CC2=12 MHz (Note 1)																		
	CC2	20	15	106	Downlink	Low	2124.5	424900	2114.96	422992	0	15	5291	423370	6	0	0 (0)	0	
						Mid	2157	431400	2129.1	425820	102		5373	429870	6	0	0 (0)	102	
						High	2189.5	437900	2089.24	417848	504		5455	436370	6	0	0 (0)	504	
5+40	CC1	5	15	25	Downlink	Low	2112.5	422500	2110.25	422050	0	15	5279	422410	0	0	0 (0)	0	
						Mid	2135.3	427060	2114.69	422938	102		5336	426970	0	0	0 (0)	102	
						High	2158.1	431620	2065.13	413026	504		5393	431530	0	0	0 (0)	504	
					Uplink	Low	1712.5	342500	1710.25	342050	0	-	-	-	-	-	-	-	
						Mid	1735.3	347060	1642.33	328466	504		-	-	-	-	-	-	
						High	1758.1	351620	1754.77	350954	6		-	-	-	-	-	-	
	Channel spacing CC1-CC2=21.9 MHz (Note 1)																		
	CC2	40	15	216	Downlink	Low	2134.4	426880	2114.96	422992	0	15	5291	423370	6	0	0 (0)	0	
						Mid	2157.2	431440	2119.4	423880	102		5348	427930	6	0	0 (0)	102	
						High	2180	436000	2069.84	413968	504		5405	432490	6	0	0 (0)	504	
10+15	CC1	10	15	52	Downlink	Low	2115	423000	2110.32	422064	0	15	5280	422430	2	0	0 (0)	0	
						Mid	2145	429000	2121.96	424392	102		5355	428430	2	0	0 (0)	102	
						High	2175	435000	2079.6	415920	504		5430	434430	2	0	0 (0)	504	
					Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1649.6	329920	504		-	-	-	-	-	-	
						High	1775	355000	1769.24	353848	6		-	-	-	-	-	-	
	Channel spacing CC1-CC2=12.3 MHz (Note 1)																		
	CC2	15	15	79	Downlink	Low	2127.3	425460	2120.19	424038	0	15	5307	424590	4	1	2 (4)	5	
						Mid	2157.3	431460	2131.83	426366	102		5382	430590	4	1	2 (4)	107	
High						2187.3	437460	2089.47	417894	504	5457		436590	4	1	2 (4)	509		
10+20	CC1	10	15	52	Downlink	Low	2115	423000	2110.32	422064	0	15	5280	422430	2	0	0 (0)	0	

						Mid	2145	429000	2121.96	424392	102		5355	428430	2	0	0 (0)	102	
						High	2175	435000	2079.6	415920	504		5430	434430	2	0	0 (0)	504	
					Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1649.6	329920	504		-	-	-	-	-	-	
						High	1775	355000	1769.24	353848	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=14.4 MHz (Note 1)																			
	CC2	20	15	106	Downlink	Low	2129.4	425880	2119.86	423972	0	15	5304	424350	6	0	0 (0)	0	
						Mid	2159.4	431880	2131.5	426300	102		5379	430350	6	0	0 (0)	102	
						High	2189.4	437880	2089.14	417828	504		5454	436350	6	0	0 (0)	504	
10+40	CC1	10	15	52	Downlink	Low	2115	423000	2110.32	422064	0	15	5280	422430	2	0	0 (0)	0	
						Mid	2135.4	427080	2112.36	422472	102		5331	426510	2	0	0 (0)	102	
						High	2155.7	431140	2060.3	412060	504		5381	430570	2	0	0 (0)	504	
					Uplink	Low	1715	343000	1710.32	342064	0	-	-	-	-	-	-	-	
						Mid	1735.4	347080	1640	328000	504		-	-	-	-	-	-	
						High	1755.7	351140	1749.94	349988	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=24.3 MHz (Note 1)																			
	CC2	40	15	216	Downlink	Low	2139.3	427860	2119.86	423972	0	15	5304	424350	6	0	0 (0)	0	
						Mid	2159.7	431940	2121.9	424380	102		5355	428430	6	0	0 (0)	102	
						High	2180	436000	2069.84	413968	504		5405	432490	6	0	0 (0)	504	
15+10	CC1	15	15	79	Downlink	Low	2117.5	423500	2110.39	422078	0	15	5281	422450	4	0	0 (0)	0	
						Mid	2145	429000	2119.53	423906	102		5349	427950	4	0	0 (0)	102	
						High	2172.5	434500	2074.67	414934	504		5417	433450	4	0	0 (0)	504	
					Uplink	Low	1717.5	343500	1710.39	342078	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1647.17	329434	504		-	-	-	-	-	-	
						High	1772.5	354500	1764.31	352862	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=12.3 MHz (Note 1)																			
	CC2	10	15	52	Downlink	Low	2129.8	425960	2125.12	425024	0	15	5320	425570	2	1	2 (4)	5	
						Mid	2157.3	431460	2134.26	426852	102		5388	431070	2	1	2 (4)	107	
						High	2184.8	436960	2089.4	417880	504		5456	436570	2	1	2 (4)	509	
15+15	CC1	15	15	79	Downlink	Low	2117.5	423500	2110.39	422078	0	15	5281	422450	4	0	0 (0)	0	
						Mid	2145	429000	2119.53	423906	102		5349	427950	4	0	0 (0)	102	
						High	2172.5	434500	2074.67	414934	504		5417	433450	4	0	0 (0)	504	
					Uplink	Low	1717.5	343500	1710.39	342078	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1647.17	329434	504		-	-	-	-	-	-	
						High	1772.5	354500	1764.31	352862	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=15 MHz (Note 1)																			
	CC2	15	15	79	Downlink	Low	2132.5	426500	2125.39	425078	0	15	5320	425570	8	1	1 (2)	3	
						Mid	2160	432000	2134.53	426906	102		5388	431070	8	1	1 (2)	105	
						High	2187.5	437500	2089.67	417934	504		5456	436570	8	1	1 (2)	507	
15+20	CC1	15	15	79	Downlink	Low	2117.5	423500	2110.39	422078	0	15	5281	422450	4	0	0 (0)	0	
						Mid	2145	429000	2119.53	423906	102		5349	427950	4	0	0 (0)	102	

						High	2172.5	434500	2074.67	414934	504		5417	433450	4	0	0 (0)	504	
					Uplink	Low	1717.5	343500	1710.39	342078	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1647.17	329434	504		-	-	-	-	-	-	
						High	1772.5	354500	1764.31	352862	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=17.1 MHz (Note 1)																			
	CC2	20	15	106	Downlink	Low	2134.6	426920	2125.06	425012	0	15	5320	425570	6	1	2 (4)	5	
						Mid	2162.1	432420	2134.2	426840	102		5388	431070	6	1	2 (4)	107	
						High	2189.6	437920	2089.34	417868	504		5456	436570	6	1	2 (4)	509	
20+5	CC1	20	15	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5	
						Mid	2145	429000	2117.1	423420	102		5343	427470	6	0	0 (0)	102	
						High	2170	434000	2069.74	413948	504		5407	432530	2	0	1 (2)	506	
					Uplink	Low	1720	344000	1710.46	342092	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1644.74	328948	504		-	-	-	-	-	-	
						High	1770	354000	1759.38	351876	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=12 MHz (Note 1)																			
	CC2	5	15	25	Downlink	Low	2132	426400	2129.75	425950	0	15	5330	426490	0	1	2 (4)	5	
						Mid	2157	431400	2136.39	427278	102		5391	431310	0	0	0 (0)	102	
						High	2182	436400	2089.03	417806	504		5455	436370	8	1	0 (0)	505	
20+10	CC1	20	15	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5	
						Mid	2145	429000	2117.1	423420	102		5343	427470	6	0	0 (0)	102	
						High	2170	434000	2069.74	413948	504		5407	432530	2	0	1 (2)	506	
					Uplink	Low	1720	344000	1710.46	342092	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1644.74	328948	504		-	-	-	-	-	-	
						High	1770	354000	1759.38	351876	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=14.4 MHz (Note 1)																			
	CC2	10	15	52	Downlink	Low	2134.4	426880	2129.72	425944	0	15	5330	426490	2	1	2 (4)	5	
						Mid	2159.4	431880	2136.36	427272	102		5391	431310	2	0	0 (0)	102	
						High	2184.4	436880	2089	417800	504		5455	436370	10	1	0 (0)	505	
20+15	CC1	20	15	106	Downlink	Low	2120	424000	2110.46	422092	0	15	5282	422650	6	1	2 (4)	5	
						Mid	2145	429000	2117.1	423420	102		5343	427470	6	0	0 (0)	102	
						High	2170	434000	2069.74	413948	504		5407	432530	2	0	1 (2)	506	
					Uplink	Low	1720	344000	1710.46	342092	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1644.74	328948	504		-	-	-	-	-	-	
						High	1770	354000	1759.38	351876	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=17.1 MHz (Note 1)																			
	CC2	15	15	79	Downlink	Low	2137.1	427420	2129.99	425998	0	15	5330	426490	8	1	1 (2)	3	
						Mid	2162.1	432420	2136.63	427326	102		5394	431550	4	1	2 (4)	107	
						High	2187.1	437420	2089.27	417854	504		5455	436370	4	0	0 (0)	504	
40+5	CC1	40	15	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5	
						Mid	2145	429000	2107.2	421440	102		5319	425550	2	0	1 (2)	104	
						High	2160	432000	2049.84	409968	504		5358	428670	6	1	2 (4)	509	

					Uplink	Low	1730	346000	1710.56	342112	0	-	-	-	-	-	-	
						Mid	1745	349000	1634.84	326968	504	-	-	-	-	-	-	
						High	1760	352000	1739.48	347896	6	-	-	-	-	-	-	
Channel spacing CC1-CC2=21.9 MHz (Note 1)																		
	CC2	5	15	25	Downlink	Low	2151.9	430380	2149.65	429930	0	15	5379	430350	8	1	0 (0)	1
						Mid	2166.9	433380	2146.29	429258	102		5418	433470	0	1	2 (4)	107
						High	2181.9	436380	2088.93	417786	504		5454	436350	8	1	0 (0)	505
40+10	CC1	40	15	216	Downlink	Low	2130	426000	2110.56	422112	0	15	5283	422670	6	1	2 (4)	5
						Mid	2145	429000	2107.2	421440	102		5319	425550	2	0	1 (2)	104
						High	2160	432000	2049.84	409968	504		5358	428670	6	1	2 (4)	509
					Uplink	Low	1730	346000	1710.56	342112	0	-	-	-	-	-	-	
						Mid	1745	349000	1634.84	326968	504	-	-	-	-	-	-	
						High	1760	352000	1739.48	347896	6	-	-	-	-	-	-	
Channel spacing CC1-CC2=24.3 MHz (Note 1)																		
	CC2	10	15	52	Downlink	Low	2154.3	430860	2149.62	429924	0	15	5379	430350	10	1	0 (0)	1
						Mid	2169.3	433860	2146.26	429252	102		5418	433470	2	1	2 (4)	107
						High	2184.3	436860	2088.9	417780	504		5454	436350	10	1	0 (0)	505
Note 1:	Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.																	
Note 2:	CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.																	
Note 3:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.																	
Note 4:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																	

Table 4.3.1.1.3.66.1-2: NR Intra-Band contiguous CA configuration CA_n66B (PCC=CC1 and SCC=CC2), SCS 30 kHz

CBW combination	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range	Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORE SET#0 [RBs] Note 3	CORESET #0 Index (Offset [RBs]) Note 4	offsetPoint A (SIB [PRE] Note 5)	
10+15	CC1	10	30	24	Downlink	Low	2115	423000	2110.68	422136	0	15	5286	422910	18	0	0 (5)	10
						Mid	2145	429000	2103.96	420792	102		5361	428910	18	0	0 (5)	21
						High	2175	435000	1989.24	397848	504		5436	434910	18	0	0 (5)	101
					Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	-
						Mid	1745	349000	1559.24	311848	504	-	-	-	-	-	-	-
						High	1775	355000	1768.52	353704	6	-	-	-	-	-	-	-
	Channel spacing CC1-CC2=12.3 MHz (Note 1)																	
	CC2	15	30	38	Downlink	Low	2127.3	425460	2120.46	424092	0	15	5310	424830	6	0	0 (5)	10
						Mid	2157.3	431460	2113.74	422748	102		5385	430830	6	0	0 (5)	21
						High	2187.3	437460	1999.02	399804	504		5460	436830	6	0	0 (5)	101
10+20	CC1	10	30	24	Downlink	Low	2115	423000	2110.68	422136	0	15	5286	422910	18	0	0 (5)	10
						Mid	2145	429000	2103.96	420792	102		5361	428910	18	0	0 (5)	21
						High	2175	435000	1989.24	397848	504		5436	434910	18	0	0 (5)	101
					Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	
						Mid	1745	349000	1559.24	311848	504	-	-	-	-	-	-	
						High	1775	355000	1768.52	353704	6	-	-	-	-	-	-	
	Channel spacing CC1-CC2=14.4 MHz (Note 1)																	
	CC2	20	30	51	Downlink	Low	2129.4	425880	2120.22	424044	0	15	5310	424830	22	0	0 (5)	10
						Mid	2159.4	431880	2113.5	422700	102		5385	430830	22	0	0 (5)	21
						High	2189.4	437880	1998.78	399756	504		5460	436830	22	0	0 (5)	101
10+40	CC1	10	30	24	Downlink	Low	2115	423000	2110.68	422136	0	15	5286	422910	18	0	0 (5)	10
						Mid	2135.4	427080	2094.36	418872	102		5337	426990	18	0	0 (5)	21
						High	2155.7	431140	1969.94	393988	504		5387	431050	18	0	0 (5)	101
					Uplink	Low	1715	343000	1710.68	342136	0	-	-	-	-	-	-	
						Mid	1735.4	347080	1549.64	309928	504	-	-	-	-	-	-	
						High	1755.7	351140	1749.22	349844	6	-	-	-	-	-	-	
	Channel spacing CC1-CC2=24.3 MHz (Note 1)																	
	CC2	40	30	106	Downlink	Low	2139.3	427860	2120.22	424044	0	15	5310	424830	22	0	0 (5)	10
						Mid	2159.7	431940	2103.9	420780	102		5361	428910	22	0	0 (5)	21
						High	2180	436000	1979.48	395896	504		5411	432970	22	0	0 (5)	101
15+10	CC1	15	30	38	Downlink	Low	2117.5	423500	2110.66	422132	0	15	5287	422930	2	0	1 (6)	12

						Mid	2145	429000	2101.44	420288	102		5355	428430	2	0	1 (6)	21	
						High	2172.5	434500	1984.22	396844	504		5423	433930	2	0	1 (6)	102	
					Uplink	Low	1717.5	343500	1710.66	342132	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1556.72	311344	504		-	-	-	-	-	-	
						High	1772.5	354500	1763.5	352700	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=12.3 MHz (Note 1)																			
	CC2	10	30	24	Downlink	Low	2129.8	425960	2125.48	425096	0	15	5326	426050	6	0	3 (8)	16	
						Mid	2157.3	431460	2116.26	423252	102		5394	431550	6	0	3 (8)	22	
						High	2184.8	436960	1999.04	399808	504		5462	437050	6	0	3 (8)	102	
15+15	CC1	15	30	38	Downlink	Low	2117.5	423500	2110.66	422132	0	15	5287	422930	2	0	1 (6)	12	
						Mid	2145	429000	2101.44	420288	102		5355	428430	2	0	1 (6)	21	
						High	2172.5	434500	1984.22	396844	504		5423	433930	2	0	1 (6)	102	
					Uplink	Low	1717.5	343500	1710.66	342132	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1556.72	311344	504		-	-	-	-	-	-	
						High	1772.5	354500	1763.5	352700	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=15 MHz (Note 1)																			
	CC2	15	30	38	Downlink	Low	2132.5	426500	2125.66	425132	0	15	5326	426050	18	0	2 (7)	14	
						Mid	2160	432000	2116.44	423288	102		5394	431550	18	0	2 (7)	21	
						High	2187.5	437500	1999.22	399844	504		5462	437050	18	0	2 (7)	102	
15+20	CC1	15	30	38	Downlink	Low	2117.5	423500	2110.66	422132	0	15	5287	422930	2	0	1 (6)	12	
						Mid	2145	429000	2101.44	420288	102		5355	428430	2	0	1 (6)	21	
						High	2172.5	434500	1984.22	396844	504		5423	433930	2	0	1 (6)	102	
					Uplink	Low	1717.5	343500	1710.66	342132	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1556.72	311344	504		-	-	-	-	-	-	
						High	1772.5	354500	1763.5	352700	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=17.1 MHz (Note 1)																			
	CC2	20	30	51	Downlink	Low	2134.6	426920	2125.42	425084	0	15	5323	425810	2	0	0 (5)	10	
						Mid	2162.1	432420	2116.2	423240	102		5391	431310	2	0	0 (5)	21	
						High	2189.6	437920	1998.98	399796	504		5459	436810	2	0	0 (5)	101	
20+10	CC1	20	30	51	Downlink	Low	2120	424000	2110.82	422164	0	15	5285	422890	2	0	0 (5)	10	
						Mid	2145	429000	2099.1	419820	102		5349	427950	22	0	0 (5)	21	
						High	2170	434000	1979.38	395876	504		5413	433010	18	0	1 (6)	102	
					Uplink	Low	1720	344000	1710.82	342164	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1554.38	310876	504		-	-	-	-	-	-	
						High	1770	354000	1758.66	351732	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=14.4 MHz (Note 1)																			
	CC2	10	30	24	Downlink	Low	2134.4	426880	2130.08	426016	0	15	5336	426970	6	0	3 (8)	16	
						Mid	2159.4	431880	2118.36	423672	102		5397	431790	18	0	0 (5)	21	
						High	2184.4	436880	1998.64	399728	504		5461	436850	14	0	1 (6)	102	
20+15	CC1	20	30	51	Downlink	Low	2120	424000	2110.82	422164	0	15	5285	422890	2	0	0 (5)	10	
						Mid	2145	429000	2099.1	419820	102		5349	427950	22	0	0 (5)	21	

						High	2170	434000	1979.38	395876	504		5413	433010	18	0	1 (6)	102	
					Uplink	Low	1720	344000	1710.82	342164	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1554.38	310876	504		-	-	-	-	-	-	
						High	1770	354000	1758.66	351732	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=17.1 MHz (Note 1)																			
	CC2	15	30	38	Downlink	Low	2137.1	427420	2130.26	426052	0	15	5336	426970	18	0	2 (7)	14	
						Mid	2162.1	432420	2118.54	423708	102		5397	431790	6	0	0 (5)	21	
						High	2187.1	437420	1998.82	399764	504		5461	436850	2	0	1 (6)	102	
40+10	CC1	40	30	106	Downlink	Low	2130	426000	2110.92	422184	0	15	5286	422910	2	0	0 (5)	10	
						Mid	2145	429000	2089.2	417840	102		5325	426030	18	0	1 (6)	21	
						High	2160	432000	1959.48	391896	504		5361	428910	2	0	0 (5)	101	
					Uplink	Low	1730	346000	1710.92	342184	0	-	-	-	-	-	-	-	
						Mid	1745	349000	1544.48	308896	504		-	-	-	-	-	-	
						High	1760	352000	1738.76	347752	6		-	-	-	-	-	-	
Channel spacing CC1-CC2=24.3 MHz (Note 1)																			
	CC2	10	30	24	Downlink	Low	2154.3	430860	2149.98	429996	0	15	5385	430830	14	0	1 (6)	12	
						Mid	2169.3	433860	2128.26	425652	102		5424	433950	6	0	3 (8)	22	
						High	2184.3	436860	1998.54	399708	504		5460	436830	14	0	1 (6)	102	
<p>Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.</p> <p>Note 2: CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.</p> <p>Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.</p> <p>Note 4: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-2 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcc-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.</p>																			

4.3.1.1.3.67 – 4.3.1.1.3.76 FFS

4.3.1.1.3.77 NR Intra-band contiguous configurations CA_n77

4.3.1.1.3.77.1 CA_n77C

Editor's note: Test frequencies for CA_n78C with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.3.77.1-1: NR Intra-Band contiguous CA configuration CA_n77C (PCC=CC1 and SCC=CC2), SCS 30 kHz

CBW combination (BCS)	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offset To Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute Frequency SSB [ARFCN]	k_{SSB}	Offset carrier CORE SET#0 [RBs] Note 3	COR ESET #0 Index (Offset [RBs]) Note 4	offset Point A (SIB1 [PRBs]) Note	
					Downlink & Uplink	Low Mid High													
10+100 (1)	CC1	10	30	24	Downlink & Uplink	Low	3305,01	620334	3300,69	620046	0	30	7711	620352	18	0	2 (2)	4	
						Mid	3699,99	646666	3658,95	643930	102		7985	646656	14	0	1 (1)	206	
						High	4095,39	673026	3909,63	660642	504		8260	673056	6	0	3 (3)	1014	
	Channel spacing CC1-CC2=54,6 MHz (Note 1)																		
	CC2	100	30	273	Downlink & Uplink	Low	3359,61	623974	3310,47	620698	0	30	7718	621024	14	0	3 (3)	6	
						Mid	3754,59	650306	3668,73	644582	102		7992	647328	10	0	2 (2)	208	
High						4149,99	676666	3919,41	661294	504	8266		673632	2	0	0 (0)	1008		
15+90 (1)	CC1	15	30	38	Downlink & Uplink	Low	3307,5	620500	3300,66	620044	0	30	7711	620352	20	0	2 (2)	4	
						Mid	3705	647000	3661,44	644096	102		7987	646848	16	0	2 (2)	208	
						High	4102,92	673528	3914,64	660976	504		8263	673344	8	0	1 (1)	1010	
	Channel spacing CC1-CC2=52,08 MHz (Note 1)																		
	CC2	90	30	245	Downlink & Uplink	Low	3359,58	623972	3315,48	621032	0	30	7721	621312	16	0	1 (1)	2	
						Mid	3757,08	650472	3676,26	645084	102		7997	647808	12	0	1 (1)	206	
High						4155	677000	3929,46	661964	504	8273		674304	4	0	0 (0)	1008		
15+100 (1)	CC1	15	30	38	Downlink & Uplink	Low	3307,5	620500	3300,66	620044	0	30	7711	620352	20	0	2 (2)	4	
						Mid	3699,99	646666	3656,43	643762	102		7983	646464	14	0	0 (0)	204	
						High	4092,87	672858	3904,59	660306	504		8256	672672	6	0	1 (1)	1010	
	Channel spacing CC1-CC2=57,12 MHz (Note 1)																		
	CC2	100	30	273	Downlink & Uplink	Low	3364,62	624308	3315,48	621032	0	30	7721	621312	16	0	1 (1)	2	
						Mid	3757,11	650474	3671,25	644750	102		7994	647520	10	0	3 (3)	210	
High						4149,99	676666	3919,41	661294	504	8266		673632	2	0	0 (0)	1008		
20+90 (1)	CC1	20	30	51	Downlink & Uplink	Low	3310,02	620668	3300,84	620056	0	30	7711	620352	8	0	2 (2)	4	
						Mid	3705	647000	3659,1	643940	102		7985	646656	4	0	1 (1)	206	
						High	4100,1	673340	3909,48	660632	504		8260	673056	16	0	3 (3)	1014	
	Channel spacing CC1-CC2=54,9 MHz (Note 1)																		
	CC2	90	30	245	Downlink & Uplink	Low	3364,92	624328	3320,82	621388	0	30	7725	621696	20	0	2 (2)	4	
						Mid	3759,9	650660	3679,08	645272	102		7999	648000	16	0	1 (1)	206	
High						4155	677000	3929,46	661964	504	8273		674304	4	0	0 (0)	1008		
20+100 (1)	CC1	20	30	51	Downlink & Uplink	Low	3310,02	620668	3300,84	620056	0	30	7711	620352	8	0	2 (2)	4	
						Mid	3699,99	646666	3654,09	643606	102		7982	646368	2	0	3 (3)	210	
						High	4090,05	672670	3899,43	659962	504		8253	672384	14	0	3 (3)	1014	
						Channel spacing CC1-CC2=59,94 MHz (Note 1)													

25+80 (1)	CC2	100	30	273	Downlink & Uplink	Low	3369,96	624664	3320,82	621388	0	30	7725	621696	20	0	2 (2)	4	
						Mid	3759,93	650662	3674,07	644938	102		7996	647712	14	0	3 (3)	210	
						High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008	
	CC1	25	30	65	Downlink & Uplink	Low	3312,51	620834	3300,81	620054	0	30	7711	620352	10	0	2 (2)	4	
						Mid	3710,01	647334	3661,59	644106	102		7987	646848	6	0	2 (2)	208	
						High	4107,66	673844	3914,52	660968	504		8263	673344	16	0	1 (1)	1010	
	Channel spacing CC1-CC2=52,32 MHz (Note 1)																		
	CC2	80	30	217	Downlink & Uplink	Low	3364,83	624322	3325,77	621718	0	30	7728	621984	2	0	1 (1)	2	
						Mid	3762,33	650822	3686,55	645770	102		8004	648480	22	0	0 (0)	204	
High						4159,98	677332	3939,48	662632	504	8280		674976	8	0	0 (0)	1008		
25+90 (1)	CC1	25	30	65	Downlink & Uplink	Low	3312,51	620834	3300,81	620054	0	30	7711	620352	10	0	2 (2)	4	
						Mid	3705	647000	3656,58	643772	102		7983	646464	4	0	0 (0)	204	
						High	4097,64	673176	3904,5	660300	504		8256	672672	12	0	1 (1)	1010	
	Channel spacing CC1-CC2=57,36 MHz (Note 1)																		
	CC2	90	30	245	Downlink & Uplink	Low	3369,87	624658	3325,77	621718	0	30	7728	621984	2	0	1 (1)	2	
						Mid	3762,36	650824	3681,54	645436	102		8001	648192	20	0	2 (2)	208	
						High	4155	677000	3929,46	661964	504		8273	674304	4	0	0 (0)	1008	
	25+100 (1)	CC1	25	30	65	Downlink & Uplink	Low	3312,51	620834	3300,81	620054	0	30	7711	620352	10	0	2 (2)	4
							Mid	3699,99	646666	3651,57	643438	102		7980	646176	2	0	2 (2)	208
High							4087,59	672506	3894,45	659630	504	8249		672000	10	0	1 (1)	1010	
Channel spacing CC1-CC2=62,4 MHz (Note 1)																			
CC2		100	30	273	Downlink & Uplink	Low	3374,91	624994	3325,77	621718	0	30	7728	621984	2	0	1 (1)	2	
						Mid	3762,39	650826	3676,53	645102	102		7997	647808	18	0	0 (0)	204	
						High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008	
30+80 (1)		CC1	30	30	78	Downlink & Uplink	Low	3315	621000	3300,96	620064	0	30	7711	620352	0	0	2 (2)	4
							Mid	3710,01	647334	3659,25	643950	102		7985	646656	18	0	0 (0)	204
	High						4105,14	673676	3909,66	660644	504	8260		673056	4	0	3 (3)	1014	
	Channel spacing CC1-CC2=54,84 MHz (Note 1)																		
	CC2	80	30	217	Downlink & Uplink	Low	3369,84	624656	3330,78	622052	0	30	7732	622368	4	0	3 (3)	6	
						Mid	3764,85	650990	3689,07	645938	102		8006	648672	22	0	1 (1)	206	
						High	4159,98	677332	3939,48	662632	504		8280	674976	8	0	0 (0)	1008	
	30+90 (1)	CC1	30	30	78	Downlink & Uplink	Low	3315	621000	3300,96	620064	0	30	7711	620352	0	0	2 (2)	4
							Mid	3705	647000	3654,24	643616	102		7982	646368	16	0	2 (2)	208
High							4095,12	673008	3899,64	659976	504	8253		672384	0	0	3 (3)	1014	
Channel spacing CC1-CC2=59,88 MHz (Note 1)																			
CC2		90	30	245	Downlink & Uplink	Low	3374,88	624992	3330,78	622052	0	30	7732	622368	4	0	3 (3)	6	
						Mid	3764,88	650992	3684,06	645604	102		8003	648384	20	0	3 (3)	210	
						High	4155	677000	3929,46	661964	504		8273	674304	4	0	0 (0)	1008	
30+100 (1)		CC1	30	30	78	Downlink & Uplink	Low	3315	621000	3300,96	620064	0	30	7711	620352	0	0	2 (2)	4
							Mid	3699,99	646666	3649,23	643282	102		7978	645984	14	0	0 (0)	204
	High						4085,07	672338	3889,59	659306	504	8246		671712	22	0	2 (2)	1012	

Channel spacing CC1-CC2=64,92 MHz (Note 1)																				
40+70 (1)	CC2	100	30	273	Downlink & Uplink	Low	3379,92	625328	3330,78	622052	0	30	7732	622368	4	0	3 (3)	6		
						Mid	3764,91	650994	3679,05	645270	102		7999	648000	18	0	1 (1)	206		
						High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008		
	CC1	40	30	106	Downlink & Uplink	Low	3320,01	621334	3300,93	620062	0	30	7711	620352	2	0	2 (2)	4		
						Mid	3714,99	647666	3659,19	643946	102		7985	646656	22	0	0 (0)	204		
						High	4110,15	674010	3909,63	660642	504		8260	673056	6	0	3 (3)	1014		
	Channel spacing CC1-CC2=54,84 MHz (Note 1)																			
	40+80 (1)	CC2	70	30	189	Downlink & Uplink	Low	3374,85	624990	3340,83	622722	0	30	7739	623040	6	0	3 (3)	6	
							Mid	3769,83	651322	3699,09	646606	102		8013	649344	2	0	2 (2)	208	
High							4164,99	677666	3949,53	663302	504	8287		675648	10	0	0 (0)	1008		
CC1		40	30	106	Downlink & Uplink	Low	3320,01	621334	3300,93	620062	0	30	7711	620352	2	0	2 (2)	4		
						Mid	3710,01	647334	3654,21	643614	102		7982	646368	18	0	2 (2)	208		
						High	4100,16	673344	3899,64	659976	504		8253	672384	0	0	3 (3)	1014		
Channel spacing CC1-CC2=59,82 MHz (Note 1)																				
40+90 (1)		CC2	80	30	217	Downlink & Uplink	Low	3379,83	625322	3340,77	622718	0	30	7739	623040	10	0	3 (3)	6	
							Mid	3769,83	651322	3694,05	646270	102		8009	648960	2	0	0 (0)	204	
	High						4159,98	677332	3939,48	662632	504	8280		674976	8	0	0 (0)	1008		
	CC1	40	30	106	Downlink & Uplink	Low	3320,01	621334	3300,93	620062	0	30	7711	620352	2	0	2 (2)	4		
						Mid	3705	647000	3649,2	643280	102		7978	645984	16	0	0 (0)	204		
						High	4090,2	672680	3889,68	659312	504		8246	671712	16	0	2 (2)	1012		
	Channel spacing CC1-CC2=64,8 MHz (Note 1)																			
	40+100 (1)	CC2	90	30	245	Downlink & Uplink	Low	3384,81	625654	3340,71	622714	0	30	7739	623040	14	0	3 (3)	6	
							Mid	3769,8	651320	3688,98	645932	102		8006	648672	4	0	2 (2)	208	
High							4155	677000	3929,46	661964	504	8273		674304	4	0	0 (0)	1008		
CC1		40	30	106	Downlink & Uplink	Low	3320,01	621334	3300,93	620062	0	30	7711	620352	2	0	2 (2)	4		
						Mid	3699,99	646666	3644,19	642946	102		7975	645696	14	0	2 (2)	208		
						High	4080,27	672018	3879,75	658650	504		8239	671040	6	0	2 (2)	1012		
Channel spacing CC1-CC2=69,72 MHz (Note 1)																				
50+60 (0,1)		CC2	100	30	273	Downlink & Uplink	Low	3389,73	625982	3340,59	622706	0	30	7739	623040	22	0	3 (3)	6	
							Mid	3769,71	651314	3683,85	645590	102		8002	648288	10	0	0 (0)	204	
	High						4149,99	676666	3919,41	661294	504	8266		673632	2	0	0 (0)	1008		
	CC1	50	30	133	Downlink & Uplink	Low	3325,02	621668	3301,08	620072	0	30	7711	620352	16	0	1 (1)	2		
						Mid	3720	648000	3659,34	643956	102		7985	646656	12	0	0 (0)	204		
						High	4115,04	674336	3909,66	660644	504		8260	673056	4	0	3 (3)	1014		
	Channel spacing CC1-CC2=54,96 MHz (Note 1)																			
	50+70 (1)	CC2	60	30	162	Downlink & Uplink	Low	3379,98	625332	3350,82	623388	0	30	7746	623712	12	0	3 (3)	6	
							Mid	3774,96	651664	3709,08	647272	102		8020	650016	8	0	2 (2)	208	
High							4170	678000	3959,4	663960	504	8294		676320	0	0	1 (1)	1010		
CC1		50	30	133	Downlink &	Low	3325,02	621668	3301,08	620072	0	30	7711	620352	16	0	1 (1)	2		
						Mid	3714,99	647666	3654,33	643622	102		7982	646368	10	0	2 (2)	208		

					Uplink	High	4105,11	673674	3899,73	659982	504		8253	672384	18	0	2 (2)	1012	
Channel spacing CC1-CC2=59,88 MHz (Note 1)																			
	CC2	70	30	189	Downlink & Uplink	Low	3384,9	625660	3350,88	623392	0	30	7746	623712	8	0	3 (3)	6	
						Mid	3774,87	651658	3704,13	646942	102		8016	649632	2	0	0 (0)	204	
						High	4164,99	677666	3949,53	663302	504		8287	675648	10	0	0 (0)	1008	
50+80 (0,1)	CC1	50	30	133	Downlink & Uplink	Low	3325,02	621668	3301,08	620072	0	30	7711	620352	16	0	1 (1)	2	
						Mid	3710,01	647334	3649,35	643290	102		7978	645984	6	0	0 (0)	204	
						High	4095,12	673008	3889,74	659316	504		8246	671712	12	0	2 (2)	1012	
Channel spacing CC1-CC2=64,86 MHz (Note 1)																			
	CC2	80	30	217	Downlink & Uplink	Low	3389,88	625992	3350,82	623388	0	30	7746	623712	12	0	3 (3)	6	
						Mid	3774,87	651658	3699,09	646606	102		8013	649344	2	0	2 (2)	208	
						High	4159,98	677332	3939,48	662632	504		8280	674976	8	0	0 (0)	1008	
50+90 (1)	CC1	50	30	133	Downlink & Uplink	Low	3325,02	621668	3301,08	620072	0	30	7711	620352	16	0	1 (1)	2	
						Mid	3705	647000	3644,34	642956	102		7975	645696	4	0	2 (2)	208	
						High	4085,16	672344	3879,78	658652	504		8239	671040	4	0	2 (2)	1012	
Channel spacing CC1-CC2=69,84 MHz (Note 1)																			
	CC2	90	30	245	Downlink & Uplink	Low	3394,86	626324	3350,76	623384	0	30	7746	623712	16	0	3 (3)	6	
						Mid	3774,84	651656	3694,02	646268	102		8009	648960	4	0	0 (0)	204	
						High	4155	677000	3929,46	661964	504		8273	674304	4	0	0 (0)	1008	
50+100 (0,1)	CC1	50	30	133	Downlink & Uplink	Low	3325,02	621668	3301,08	620072	0	30	7711	620352	16	0	1 (1)	2	
						Mid	3699,99	646666	3639,33	642622	102		7971	645312	2	0	0 (0)	204	
						High	4075,23	671682	3869,85	657990	504		8232	670368	18	0	1 (1)	1010	
Channel spacing CC1-CC2=74,76 MHz (Note 1)																			
	CC2	100	30	273	Downlink & Uplink	Low	3399,78	626652	3350,64	623376	0	30	7745	623616	0	0	0 (0)	0	
						Mid	3774,75	651650	3688,89	645926	102		8006	648672	10	0	2 (2)	208	
						High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008	
60+60 (0,1)	CC1	60	30	162	Downlink & Uplink	Low	3330	622000	3300,84	620056	0	30	7711	620352	8	0	2 (2)	4	
						Mid	3720	648000	3654,12	643608	102		7982	646368	0	0	3 (3)	210	
						High	4110	674000	3899,4	659960	504		8253	672384	16	0	3 (3)	1014	
Channel spacing CC1-CC2=60 MHz (Note 1)																			
	CC2	60	30	162	Downlink & Uplink	Low	3390	626000	3360,84	624056	0	30	7753	624384	16	0	3 (3)	6	
						Mid	3780	652000	3714,12	647608	102		8023	650304	8	0	0 (0)	204	
						High	4170	678000	3959,4	663960	504		8294	676320	0	0	1 (1)	1010	
60+70 (1)	CC1	60	30	162	Downlink & Uplink	Low	3330	622000	3300,84	620056	0	30	7711	620352	8	0	2 (2)	4	
						Mid	3714,99	647666	3649,11	643274	102		7978	645984	22	0	0 (0)	204	
						High	4100,07	673338	3889,47	659298	504		8246	671712	6	0	3 (3)	1014	
Channel spacing CC1-CC2=64,92 MHz (Note 1)																			
	CC2	70	30	189	Downlink & Uplink	Low	3394,92	626328	3360,9	624060	0	30	7753	624384	12	0	3 (3)	6	
						Mid	3779,91	651994	3709,17	647278	102		8020	650016	2	0	2 (2)	208	
						High	4164,99	677666	3949,53	663302	504		8287	675648	10	0	0 (0)	1008	
60+80	CC1	60	30	162	Downlink	Low	3330	622000	3300,84	620056	0	30	7711	620352	8	0	2 (2)	4	

(0,1)					& Uplink	Mid	3710,01	647334	3644,13	642942	102		7975	645696	18	0	2 (2)	208
						High	4090,08	672672	3879,48	658632	504		8239	671040	0	0	3 (3)	1014
	Channel spacing CC1-CC2=69,9 MHz (Note 1)																	
60+90 (1)	CC2	80	30	217	Downlink & Uplink	Low	3399,9	626660	3360,84	624056	0	30	7753	624384	16	0	3 (3)	6
						Mid	3779,91	651994	3704,13	646942	102		8016	649632	2	0	0 (0)	204
						High	4159,98	677332	3939,48	662632	504		8280	674976	8	0	0 (0)	1008
60+90 (1)	CC1	60	30	162	Downlink & Uplink	Low	3330	622000	3300,84	620056	0	30	7711	620352	8	0	2 (2)	4
						Mid	3705	647000	3639,12	642608	102		7971	645312	16	0	0 (0)	204
						High	4080,12	672008	3869,52	657968	504		8232	670368	16	0	2 (2)	1012
Channel spacing CC1-CC2=74,88 MHz (Note 1)																		
60+100 (0,1)	CC2	90	30	245	Downlink & Uplink	Low	3404,88	626992	3360,78	624052	0	30	7753	624384	20	0	3 (3)	6
						Mid	3779,88	651992	3699,06	646604	102		8013	649344	4	0	2 (2)	208
						High	4155	677000	3929,46	661964	504		8273	674304	4	0	0 (0)	1008
60+100 (0,1)	CC1	60	30	162	Downlink & Uplink	Low	3330	622000	3300,84	620056	0	30	7711	620352	8	0	2 (2)	4
						Mid	3699,99	646666	3634,11	642274	102		7968	645024	14	0	2 (2)	208
						High	4070,19	671346	3859,59	657306	504		8225	669696	6	0	2 (2)	1012
Channel spacing CC1-CC2=79,8 MHz (Note 1)																		
70+60 (1)	CC2	100	30	273	Downlink & Uplink	Low	3409,8	627320	3360,66	624044	0	30	7752	624288	4	0	0 (0)	0
						Mid	3779,79	651986	3693,93	646262	102		8009	648960	10	0	0 (0)	204
						High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008
70+60 (1)	CC1	70	30	189	Downlink & Uplink	Low	3335,01	622334	3300,99	620066	0	30	7711	620352	22	0	1 (1)	2
						Mid	3720	648000	3649,26	643284	102		7978	645984	12	0	0 (0)	204
						High	4105,08	673672	3889,62	659308	504		8246	671712	20	0	2 (2)	1012
Channel spacing CC1-CC2=64,92 MHz (Note 1)																		
70+70 (1)	CC2	60	30	162	Downlink & Uplink	Low	3399,93	626662	3370,77	624718	0	30	7759	624960	2	0	0 (0)	0
						Mid	3784,92	652328	3719,04	647936	102		8027	650688	16	0	2 (2)	208
						High	4170	678000	3959,4	663960	504		8294	676320	0	0	1 (1)	1010
70+70 (1)	CC1	70	30	189	Downlink & Uplink	Low	3335,01	622334	3300,99	620066	0	30	7711	620352	22	0	1 (1)	2
						Mid	3714,99	647666	3644,25	642950	102		7975	645696	10	0	2 (2)	208
						High	4095,03	673002	3879,57	658638	504		8239	671040	18	0	2 (2)	1012
Channel spacing CC1-CC2=69,96 MHz (Note 1)																		
70+80 (1)	CC2	70	30	189	Downlink & Uplink	Low	3404,97	626998	3370,95	624730	0	30	7760	625056	14	0	3 (3)	6
						Mid	3784,95	652330	3714,21	647614	102		8023	650304	2	0	0 (0)	204
						High	4164,99	677666	3949,53	663302	504		8287	675648	10	0	0 (0)	1008
70+80 (1)	CC1	70	30	189	Downlink & Uplink	Low	3335,01	622334	3300,99	620066	0	30	7711	620352	22	0	1 (1)	2
						Mid	3710,01	647334	3639,27	642618	102		7971	645312	6	0	0 (0)	204
						High	4085,04	672336	3869,58	657972	504		8232	670368	12	0	2 (2)	1012
Channel spacing CC1-CC2=74,94 MHz (Note 1)																		
70+80 (1)	CC2	80	30	217	Downlink & Uplink	Low	3409,95	627330	3370,89	624726	0	30	7760	625056	18	0	3 (3)	6
						Mid	3784,95	652330	3709,17	647278	102		8020	650016	2	0	2 (2)	208
						High	4159,98	677332	3939,48	662632	504		8280	674976	8	0	0 (0)	1008

70+90 (1)	CC1	70	30	189	Downlink & Uplink	Low	3335,01	622334	3300,99	620066	0	30	7711	620352	22	0	1 (1)	2
						Mid	3705	647000	3634,26	642284	102		7968	645024	4	0	2 (2)	208
						High	4075,08	671672	3859,62	657308	504		8225	669696	4	0	2 (2)	1012
	Channel spacing CC1-CC2=79,92 MHz (Note 1)																	
CC2	90	30	245	Downlink & Uplink	Low	3414,93	627662	3370,83	624722	0	30	7760	625056	22	0	3 (3)	6	
					Mid	3784,92	652328	3704,1	646940	102		8016	649632	4	0	0 (0)	204	
					High	4155	677000	3929,46	661964	504		8273	674304	4	0	0 (0)	1008	
70+100 (1)	CC1	70	30	189	Downlink & Uplink	Low	3335,01	622334	3300,99	620066	0	30	7711	620352	22	0	1 (1)	2
						Mid	3699,99	646666	3629,25	641950	102		7964	644640	2	0	0 (0)	204
						High	4065,15	671010	3849,69	656646	504		8218	669024	18	0	1 (1)	1010
	Channel spacing CC1-CC2=84,84 MHz (Note 1)																	
CC2	100	30	273	Downlink & Uplink	Low	3419,85	627990	3370,71	624714	0	30	7759	624960	6	0	0 (0)	0	
					Mid	3784,83	652322	3698,97	646598	102		8013	649344	10	0	2 (2)	208	
					High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008	
80+60 (1)	CC1	80	30	217	Downlink & Uplink	Low	3340,02	622668	3300,96	620064	0	30	7711	620352	0	0	2 (2)	4
						Mid	3720	648000	3644,22	642948	102		7975	645696	12	0	2 (2)	208
						High	4100,1	673340	3879,6	658640	504		8239	671040	16	0	2 (2)	1012
	Channel spacing CC1-CC2=69,9 MHz (Note 1)																	
CC2	60	30	162	Downlink & Uplink	Low	3409,92	627328	3380,76	625384	0	30	7766	625632	8	0	0 (0)	0	
					Mid	3789,9	652660	3724,02	648268	102		8030	650976	20	0	0 (0)	204	
					High	4170	678000	3959,4	663960	504		8294	676320	0	0	1 (1)	1010	
80+70 (1)	CC1	80	30	217	Downlink & Uplink	Low	3340,02	622668	3300,96	620064	0	30	7711	620352	0	0	2 (2)	4
						Mid	3714,99	647666	3639,21	642614	102		7971	645312	10	0	0 (0)	204
						High	4090,05	672670	3869,55	657970	504		8232	670368	14	0	2 (2)	1012
	Channel spacing CC1-CC2=74,94 MHz (Note 1)																	
CC2	70	30	189	Downlink & Uplink	Low	3414,96	627664	3380,94	625396	0	30	7767	625728	20	0	3 (3)	6	
					Mid	3789,93	652662	3719,19	647946	102		8027	650688	6	0	2 (2)	208	
					High	4164,99	677666	3949,53	663302	504		8287	675648	10	0	0 (0)	1008	
80+80 (0,1)	CC1	80	30	217	Downlink & Uplink	Low	3340,02	622668	3300,96	620064	0	30	7711	620352	0	0	2 (2)	4
						Mid	3710,01	647334	3634,23	642282	102		7968	645024	6	0	2 (2)	208
						High	4080	672000	3859,5	657300	504		8225	669696	12	0	2 (2)	1012
	Channel spacing CC1-CC2=79,98 MHz (Note 1)																	
CC2	80	30	217	Downlink & Uplink	Low	3420	628000	3380,94	625396	0	30	7767	625728	20	0	3 (3)	6	
					Mid	3789,99	652666	3714,21	647614	102		8023	650304	2	0	0 (0)	204	
					High	4159,98	677332	3939,48	662632	504		8280	674976	8	0	0 (0)	1008	
80+90 (1)	CC1	80	30	217	Downlink & Uplink	Low	3340,02	622668	3300,96	620064	0	30	7711	620352	0	0	2 (2)	4
						Mid	3705	647000	3629,22	641948	102		7964	644640	4	0	0 (0)	204
						High	4070,04	671336	3849,54	656636	504		8218	669024	4	0	2 (2)	1012
	Channel spacing CC1-CC2=84,96 MHz (Note 1)																	
CC2	90	30	245	Downlink &	Low	3424,98	628332	3380,88	625392	0	30	7766	625632	0	0	0 (0)	0	
					Mid	3789,96	652664	3709,14	647276	102		8020	650016	4	0	2 (2)	208	

80+100 (0,1)	CC1	80	30	217	Uplink	High	4155	677000	3929,46	661964	504	30	8273	674304	4	0	0 (0)	1008	
					Downlink & Uplink	Low	3340,02	622668	3300,96	620064	0		7711	620352	0	0	2 (2)	4	
						Mid	3699,99	646666	3624,21	641614	102		7961	644352	2	0	2 (2)	208	
						High	4060,11	670674	3839,61	655974	504		8211	668352	18	0	1 (1)	1010	
	Channel spacing CC1-CC2=89,88 MHz (Note 1)																		
	CC2	100	30	273	Downlink & Uplink	Low	3429,9	628660	3380,76	625384	0	30	7766	625632	8	0	0 (0)	0	
						Mid	3789,87	652658	3704,01	646934	102		8016	649632	10	0	0 (0)	204	
						High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008	
	90+60 (1)	CC1	90	30	245	Downlink & Uplink	Low	3345	623000	3300,9	620060	0	30	7711	620352	4	0	2 (2)	4
							Mid	3720	648000	3639,18	642612	102		7971	645312	12	0	0 (0)	204
						High	4095,12	673008	3869,58	657972	504	8232		670368	12	0	2 (2)	1012	
Channel spacing CC1-CC2=74,88 MHz (Note 1)																			
CC2		60	30	162	Downlink & Uplink	Low	3419,88	627992	3390,72	626048	0	30	7773	626304	16	0	0 (0)	0	
						Mid	3794,88	652992	3729	648600	102		8034	651360	0	0	3 (3)	210	
						High	4170	678000	3959,4	663960	504		8294	676320	0	0	1 (1)	1010	
90+70 (1)		CC1	90	30	245	Downlink & Uplink	Low	3345	623000	3300,9	620060	0	30	7711	620352	4	0	2 (2)	4
							Mid	3714,99	647666	3634,17	642278	102		7968	645024	10	0	2 (2)	208
							High	4085,07	672338	3859,53	657302	504		8225	669696	10	0	2 (2)	1012
	Channel spacing CC1-CC2=79,92 MHz (Note 1)																		
	CC2	70	30	189	Downlink & Uplink	Low	3424,92	628328	3390,9	626060	0	30	7773	626304	4	0	0 (0)	0	
						Mid	3794,91	652994	3724,17	648278	102		8030	650976	10	0	0 (0)	204	
						High	4164,99	677666	3949,53	663302	504		8287	675648	10	0	0 (0)	1008	
	90+80 (1)	CC1	90	30	245	Downlink & Uplink	Low	3345	623000	3300,9	620060	0	30	7711	620352	4	0	2 (2)	4
							Mid	3710,01	647334	3629,19	641946	102		7964	644640	6	0	0 (0)	204
							High	4075,02	671668	3849,48	656632	504		8218	669024	8	0	2 (2)	1012
Channel spacing CC1-CC2=84,96 MHz (Note 1)																			
CC2		80	30	217	Downlink & Uplink	Low	3429,96	628664	3390,9	626060	0	30	7773	626304	4	0	0 (0)	0	
						Mid	3794,97	652998	3719,19	647946	102		8027	650688	6	0	2 (2)	208	
						High	4159,98	677332	3939,48	662632	504		8280	674976	8	0	0 (0)	1008	
90+90 (1)		CC1	90	30	245	Downlink & Uplink	Low	3345	623000	3300,9	620060	0	30	7711	620352	4	0	2 (2)	4
							Mid	3705	647000	3624,18	641612	102		7961	644352	4	0	2 (2)	208
							High	4065	671000	3839,46	655964	504		8211	668352	4	0	2 (2)	1012
	Channel spacing CC1-CC2=90 MHz (Note 1)																		
	CC2	90	30	245	Downlink & Uplink	Low	3435	629000	3390,9	626060	0	30	7773	626304	4	0	0 (0)	0	
						Mid	3795	653000	3714,18	647612	102		8023	650304	4	0	0 (0)	204	
						High	4155	677000	3929,46	661964	504		8273	674304	4	0	0 (0)	1008	
	90+100 (1)	CC1	90	30	245	Downlink & Uplink	Low	3345	623000	3300,9	620060	0	30	7711	620352	4	0	2 (2)	4
							Mid	3699,99	646666	3619,17	641278	102		7957	643968	2	0	0 (0)	204
							High	4055,07	670338	3829,53	655302	504		8204	667680	18	0	1 (1)	1010
Channel spacing CC1-CC2=94,92 MHz (Note 1)																			
CC2		100	30	273	Downlink	Low	3439,92	629328	3390,78	626052	0	30	7773	626304	12	0	0 (0)	0	

100+60 (1)	CC1	100	30	273	& Downlink & Uplink	Mid	3794,91	652994	3709,05	647270	102	30	8020	650016	10	0	2 (2)	208							
						High	4149,99	676666	3919,41	661294	504		8266	673632	2	0	0 (0)	1008							
						Low	3350,01	623334	3300,87	620058	0		7711	620352	6	0	2 (2)	4							
						Mid	3720	648000	3634,14	642276	102		7968	645024	12	0	2 (2)	208							
						High	4090,2	672680	3859,62	657308	504		8225	669696	4	0	2 (2)	1012							
	Channel spacing CC1-CC2=79,8 MHz (Note 1)																								
	CC2	60	30	162	Downlink & Uplink	Low	3429,81	628654	3400,65	626710	0	30	7780	626976	2	0	1 (1)	2							
						Mid	3799,8	653320	3733,92	648928	102		8037	651648	8	0	1 (1)	206							
						High	4170	678000	3959,4	663960	504		8294	676320	0	0	1 (1)	1010							
	100+70 (1)	CC1	100	30	273	Downlink & Uplink	Low	3350,01	623334	3300,87	620058	0	30	7711	620352	6	0	2 (2)	4						
Mid							3714,99	647666	3629,13	641942	102	7964		644640	10	0	0 (0)	204							
High							4080,15	672010	3849,57	656638	504	8218		669024	2	0	2 (2)	1012							
Channel spacing CC1-CC2=84,84 MHz (Note 1)																									
CC2							70	30	189	Downlink & Uplink	Low	3434,85		628990	3400,83	626722	0	30	7780	626976	14	0	0 (0)	0	
		Mid	3799,83	653322	3729,09	648606					102	8034	651360	18	0	2 (2)	208								
		High	4164,99	677666	3949,53	663302					504	8287	675648	10	0	0 (0)	1008								
100+80 (1)		CC1	100	30	273	Downlink & Uplink	Low	3350,01	623334	3300,87	620058	0	30	7711	620352	6	0	2 (2)	4						
							Mid	3710,01	647334	3624,15	641610	102		7961	644352	6	0	2 (2)	208						
							High	4070,1	671340	3839,52	655968	504		8211	668352	0	0	2 (2)	1012						
	Channel spacing CC1-CC2=89,88 MHz (Note 1)																								
	CC2						80	30	217	Downlink & Uplink	Low	3439,89		629326	3400,83	626722	0	30	7780	626976	14	0	0 (0)	0	
		Mid	3799,89	653326	3724,11	648274					102	8030	650976	14	0	0 (0)	204								
		High	4159,98	677332	3939,48	662632					504	8280	674976	8	0	0 (0)	1008								
	100+90 (1)	CC1	100	30	273	Downlink & Uplink	Low	3350,01	623334	3300,87	620058	0	30	7711	620352	6	0	2 (2)	4						
							Mid	3705	647000	3619,14	641276	102		7957	643968	4	0	0 (0)	204						
							High	4060,08	670672	3829,5	655300	504		8204	667680	20	0	1 (1)	1010						
Channel spacing CC1-CC2=94,92 MHz (Note 1)																									
CC2							90	30	245	Downlink & Uplink	Low	3444,93		629662	3400,83	626722	0	30	7780	626976	14	0	0 (0)	0	
		Mid	3799,92	653328	3719,1	647940					102	8027	650688	12	0	2 (2)	208								
		High	4155	677000	3929,46	661964					504	8273	674304	4	0	0 (0)	1008								
100 +100 (0,1)		CC1	100	30	273	Downlink & Uplink	Low	3350,01	623334	3300,87	620058	0	30	7711	620352	6	0	2 (2)	4						
							Mid	3699,99	646666	3614,13	640942	102		7954	643680	2	0	2 (2)	208						
							High	4050,03	670002	3819,45	654630	504		8197	667008	18	0	1 (1)	1010						
	Channel spacing CC1-CC2=99,96 MHz (Note 1)																								
	CC2						100	30	273	Downlink & Uplink	Low	3449,97		629998	3400,83	626722	0	30	7780	626976	14	0	0 (0)	0	
		Mid	3799,95	653330	3714,09	647606					102	8023	650304	10	0	0 (0)	204								
		High	4149,99	676666	3919,41	661294					504	8266	673632	2	0	0 (0)	1008								

Note 1:	Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.
Note 2:	CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.
Note 3:	The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.
Note 4:	The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

4.3.1.1.3.78 NR Intra-band contiguous configurations CA_n78

4.3.1.1.3.78.1 CA_n78C

Editor's note: Test frequencies for CA_n78C with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.3.78.1-1: NR Intra-Band contiguous CA configuration CA_n78C (PCC=CC1 and SCC=CC2), SCS 30 kHz

CBW combination	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offset To Carrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute Frequency SSB [ARFCN]	k_{SSB}	Offset carrier CORE SET#0 [RBs] Note 3	COR ESET #0 Index (Offset [RBs]) Note 4	offset Point A (SIB1 [PRBs] Note 5)	
					Downlink & Uplink	Low Mid High													
50+60	CC1	50	30	133	Downlink & Uplink	Low	3325.02	621668	3301.08	620072	0	30	7711	620352	16	0	1 (1)	2	
						Mid	3519.99	634666	3459.33	630622	102		7846	633312	2	0	0 (0)	204	
						High	3715.02	647668	3509.64	633976	504		7982	646368	8	0	2 (2)	1012	
	Channel spacing CC1-CC2=54.96 MHz (Note 1)																		
	CC2	60	30	162	Downlink & Uplink	Low	3379.98	625332	3350.82	623388	0	30	7746	623712	12	0	3 (3)	6	
						Mid	3574.95	638330	3509.07	633938	102		7881	636672	22	0	1 (1)	206	
						High	3769.98	651332	3559.38	637292	504		8016	649632	4	0	0 (0)	1008	
	50+80	CC1	50	30	133	Downlink & Uplink	Low	3325.02	621668	3301.08	620072	0	30	7711	620352	16	0	1 (1)	2
							Mid	3510	634000	3449.34	629956	102		7840	632736	20	0	3 (3)	210
							High	3695.13	646342	3489.75	632650	504		7968	645024	14	0	1 (1)	1010
Channel spacing CC1-CC2=64.86 MHz (Note 1)																			
CC2		80	30	217	Downlink & Uplink	Low	3389.88	625992	3350.82	623388	0	30	7746	623712	12	0	3 (3)	6	
						Mid	3574.86	638324	3499.08	633272	102		7874	636000	16	0	1 (1)	206	
						High	3759.99	650666	3539.49	635966	504		8003	648384	10	0	3 (3)	1014	
50+100		CC1	50	30	133	Downlink & Uplink	Low	3325.02	621668	3301.08	620072	0	30	7711	620352	16	0	1 (1)	2
							Mid	3500.01	633334	3439.35	629290	102		7833	632064	14	0	3 (3)	210
							High	3675.24	645016	3469.86	631324	504		7954	643680	20	0	0 (0)	1008
	Channel spacing CC1-CC2=74.76 MHz (Note 1)																		
	CC2	100	30	273	Downlink & Uplink	Low	3399.78	626652	3350.64	623376	0	30	7745	623616	0	0	0 (0)	0	
						Mid	3574.77	638318	3488.91	632594	102		7867	635328	22	0	1 (1)	206	
						High	3750	650000	3519.42	634628	504		7989	647040	4	0	3 (3)	1014	
	60+50	CC1	60	30	162	Downlink & Uplink	Low	3330	622000	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4
							Mid	3525	635000	3459.12	630608	102		7846	633312	16	0	0 (0)	204
							High	3720.03	648002	3509.43	633962	504		7982	646368	22	0	2 (2)	1012
Channel spacing CC1-CC2=54.96 MHz (Note 1)																			
CC2		50	30	133	Downlink & Uplink	Low	3384.96	625664	3361.02	624068	0	30	7753	624384	4	0	3 (3)	6	
						Mid	3579.96	638664	3519.3	634620	102		7888	637344	12	0	1 (1)	206	
						High	3774.99	651666	3569.61	637974	504		8024	650400	18	0	3 (3)	1014	
60+60		CC1	60	30	162	Downlink & Uplink	Low	3330	622000	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4
							Mid	3519.99	634666	3454.11	630274	102		7843	633024	14	0	2 (2)	208
							High	3709.98	647332	3499.38	633292	504		7975	645696	20	0	2 (2)	1012
	Channel spacing CC1-CC2=60 MHz (Note 1)																		

60+80	CC2	60	30	162	Downlink & Uplink	Low	3390	626000	3360.84	624056	0	30	7753	624384	16	0	3 (3)	6	
						Mid	3579.99	638666	3514.11	634274	102		7885	637056	22	0	3 (3)	210	
						High	3769.98	651332	3559.38	637292	504		8016	649632	4	0	0 (0)	1008	
	CC1	60	30	162	Downlink & Uplink	Low	3330	622000	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4	
						Mid	3510	634000	3444.12	629608	102		7836	632352	8	0	2 (2)	208	
						High	3690.09	646006	3479.49	631966	504		7961	644352	2	0	2 (2)	1012	
	Channel spacing CC1-CC2=69.9 MHz (Note 1)																		
	60+100	CC2	80	30	217	Downlink & Uplink	Low	3399.9	626660	3360.84	624056	0	30	7753	624384	16	0	3 (3)	6
							Mid	3579.9	638660	3504.12	633608	102		7878	636384	16	0	3 (3)	210
High							3759.99	650666	3539.49	635966	504	8003		648384	10	0	3 (3)	1014	
CC1		60	30	162	Downlink & Uplink	Low	3330	622000	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4	
						Mid	3500.01	633334	3434.13	628942	102		7829	631680	2	0	2 (2)	208	
						High	3670.2	644680	3459.6	630640	504		7947	643008	8	0	1 (1)	1010	
Channel spacing CC1-CC2=79.8 MHz (Note 1)																			
80+50		CC2	100	30	273	Downlink & Uplink	Low	3409.8	627320	3360.66	624044	0	30	7752	624288	4	0	0 (0)	0
							Mid	3579.81	638654	3493.95	632930	102		7871	635712	22	0	3 (3)	210
	High						3750	650000	3519.42	634628	504	7989		647040	4	0	3 (3)	1014	
	CC1	80	30	217	Downlink & Uplink	Low	3340.02	622668	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4	
						Mid	3525	635000	3449.22	629948	102		7839	632640	4	0	0 (0)	204	
						High	3710.13	647342	3489.63	632642	504		7968	645024	22	0	1 (1)	1010	
	Channel spacing CC1-CC2=64.86 MHz (Note 1)																		
	80+60	CC2	50	30	133	Downlink & Uplink	Low	3404.88	626992	3380.94	625396	0	30	7767	625728	20	0	3 (3)	6
							Mid	3589.86	639324	3529.2	635280	102		7895	638016	0	0	2 (2)	208
High							3774.99	651666	3569.61	637974	504	8024		650400	18	0	3 (3)	1014	
CC1		80	30	217	Downlink & Uplink	Low	3340.02	622668	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4	
						Mid	3519.99	634666	3444.21	629614	102		7836	632352	2	0	2 (2)	208	
						High	3700.08	646672	3479.58	631972	504		7961	644352	20	0	1 (1)	1010	
Channel spacing CC1-CC2=69.9 MHz (Note 1)																			
80+80		CC2	60	30	162	Downlink & Uplink	Low	3409.92	627326	3380.76	625384	0	30	7766	625632	8	0	0 (0)	0
							Mid	3589.89	639326	3524.01	634934	102		7891	637632	10	0	0 (0)	204
	High						3769.98	651332	3559.38	637292	504	8016		649632	4	0	0 (0)	1008	
	CC1	80	30	217	Downlink & Uplink	Low	3340.02	622668	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4	
						Mid	3510	634000	3434.22	628948	102		7829	631680	20	0	1 (1)	206	
						High	3680.01	645334	3459.51	630634	504		7947	643008	14	0	1 (1)	1010	
	Channel spacing CC1-CC2=79.98 MHz (Note 1)																		
	80+100	CC2	80	30	217	Downlink & Uplink	Low	3420	628000	3380.94	625396	0	30	7767	625728	20	0	3 (3)	6
							Mid	3589.98	639332	3514.2	634280	102		7885	637056	16	0	3 (3)	210
High							3759.99	650666	3539.49	635966	504	8003		648384	10	0	3 (3)	1014	
CC1		80	30	217	Downlink & Uplink	Low	3340.02	622668	3300.96	620064	0	30	7711	620352	0	0	2 (2)	4	
						Mid	3500.01	633334	3424.23	628282	102		7822	631008	14	0	1 (1)	206	
						High	3660.12	644008	3439.62	629308	504		7933	641664	20	0	0 (0)	1008	

Channel spacing CC1-CC2=89.88 MHz (Note 1)																			
100+50	CC2	100	30	273	Downlink & Uplink	Low	3429.9	628660	3380.76	625384	0	30	7766	625632	8	0	0 (0)	0	
						Mid	3589.89	639326	3504.03	633602	102		7878	636384	22	0	3 (3)	210	
						High	3750	650000	3519.42	634628	504		7989	647040	4	0	3 (3)	1014	
	CC1	100	30	273	Downlink & Uplink	Low	3350.01	623334	3300.87	620058	0	30	7711	620352	6	0	2 (2)	4	
						Mid	3525	635000	3439.14	629276	102		7832	631968	4	0	0 (0)	204	
						High	3700.23	646682	3469.65	631310	504		7954	643680	10	0	1 (1)	1010	
	Channel spacing CC1-CC2=74.76 MHz (Note 1)																		
	100+60	CC2	50	30	133	Downlink & Uplink	Low	3424.77	628318	3400.83	626722	0	30	7780	626976	14	0	0 (0)	0
							Mid	3599.76	639984	3539.1	635940	102		7902	638688	12	0	2 (2)	208
High							3774.99	651666	3569.61	637974	504	8024		650400	18	0	3 (3)	1014	
CC1		100	30	273	Downlink & Uplink	Low	3350.01	623334	3300.87	620058	0	30	7711	620352	6	0	2 (2)	4	
						Mid	3519.99	634666	3434.13	628942	102		7829	631680	2	0	2 (2)	208	
						High	3690.18	646012	3459.6	630640	504		7947	643008	8	0	1 (1)	1010	
Channel spacing CC1-CC2=79.8 MHz (Note 1)																			
100+80		CC2	60	30	162	Downlink & Uplink	Low	3429.81	628654	3400.65	626710	0	30	7780	626976	2	0	1 (1)	2
							Mid	3599.79	639986	3533.91	635594	102		7898	638304	22	0	0 (0)	204
	High						3769.98	651332	3559.38	637292	504	8016		649632	4	0	0 (0)	1008	
	CC1	100	30	273	Downlink & Uplink	Low	3350.01	623334	3300.87	620058	0	30	7711	620352	6	0	2 (2)	4	
						Mid	3510	634000	3424.14	628276	102		7822	631008	20	0	1 (1)	206	
						High	3670.11	644674	3439.53	629302	504		7933	641664	2	0	1 (1)	1010	
	Channel spacing CC1-CC2=89.88 MHz (Note 1)																		
	100+100	CC2	80	30	217	Downlink & Uplink	Low	3439.89	629326	3400.83	626722	0	30	7780	626976	14	0	0 (0)	0
							Mid	3599.88	639992	3524.1	634940	102		7891	637632	4	0	0 (0)	204
High							3759.99	650666	3539.49	635966	504	8003		648384	10	0	3 (3)	1014	
CC1		100	30	273	Downlink & Uplink	Low	3350.01	623334	3300.87	620058	0	30	7711	620352	6	0	2 (2)	4	
						Mid	3500.01	633334	3414.15	627610	102		7815	630336	14	0	1 (1)	206	
						High	3650.04	643336	3419.46	627964	504		7919	640320	20	0	0 (0)	1008	
Channel spacing CC1-CC2=99.96 MHz (Note 1)																			
CC2		100	30	273	Downlink & Uplink	Low	3449.97	629998	3400.83	626722	0	30	7780	626976	14	0	0 (0)	0	
						Mid	3599.97	639998	3514.11	634274	102		7885	637056	22	0	3 (3)	210	
	High					3750	650000	3519.42	634628	504	7989		647040	4	0	3 (3)	1014		

Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.

Note 2: CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.

Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.

Note 4: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

4.3.1.1.3.78.2 CA_n78B

Editor's note: Test frequencies for CA_n78B with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.3.78.2-1: NR Intra-Band contiguous CA configuration CA_n78B (PCC=CC1 and SCC=CC2), SCS 15 kHz and ΔF_{Raster} 15 kHz

CBW combination	CC Note 2	CBW [MHz]	SCS [kHz]	carrierBandwidth [PRBs]	Range	Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute FrequencyPoint A [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORESET#0 [RBs] Note 3	CORESET#0 Index (Offset [RBs]) Note 4	offsetToPointA (SIB1) [PRBs] Note 4		
20+50	CC1	20	15	106	Downlink & Uplink	Low	3310.005	620667	3300.465	620031	0	30	7711	620352	9	0	1 (6)	6	
						Mid	3525	635000	3497.1	633140	102		7860	634656	4	2	0 (2)	10	
						High	3740.25	649350	3639.99	642666	504		8010	649056	6	2	1 (6)	51	
	Channel spacing CC1-CC2=34.74 MHz (Note 1)																		
	CC2	50	15	270	Downlink & Uplink	Low	3344.745	622983	3320.445	621363	0	30	7725	621696	9	1	1 (6)	7	
						Mid	3559.74	637316	3517.08	634472	102		7874	636000	4	3	0 (2)	10	
						High	3774.99	651666	3659.97	643998	504		8024	650400	6	3	1 (6)	51	
	50+20	CC1	50	15	270	Downlink & Uplink	Low	3325.005	621667	3300.705	620047	0	30	7711	620352	5	3	0 (2)	5
							Mid	3540	636000	3497.34	633156	102		7860	634656	0	1	0 (2)	10
High							3755.25	650350	3640.23	642682	504	8010		649056	2	1	1 (6)	51	
Channel spacing CC1-CC2=34.74 MHz (Note 1)																			
CC2		20	15	106	Downlink & Uplink	Low	3359.745	623983	3350.205	623347	0	30	7745	623616	5	0	0 (2)	2	
						Mid	3574.74	638316	3546.84	636456	102		7895	638016	0	2	1 (6)	11	
						High	3789.99	652666	3689.73	645982	504		8044	652320	2	2	0 (2)	50	

- Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.
- Note 2: CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.
- Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.
- Note 4: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcc-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Table 4.3.1.1.3.78.2-2: NR Intra-Band contiguous CA configuration CA_n78B (PCC=CC1 and SCC=CC2), SCS 30 kHz and ΔF_{Raster} 30 kHz

CBW combination	CC Note 2	CBW [MHz]	SCS [kHz]	carrier Bandwidth [PRBs]	Range		Carrier centre [MHz] Note 2	Carrier centre [ARFCN]	point A [MHz]	absolute Frequency Point A [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absolute FrequencySSB [ARFCN]	k_{SSB}	Offset carrier CORESET#0 [RBs] Note 3	CORESET#0 Index (Offset [RBs]) Note 4	offsetToPointA [PRBs] Note 4	
					Downlink & Uplink	Low Mid High													
20+50	CC1	20	30	51	Downlink & Uplink	Low	3310.02	620668	3300.84	620056	0	30	7711	620352	8	0	2 (2)	4	
						Mid	3525	635000	3479.1	631940	102		7860	634656	4	0	1 (1)	20	
						High	3740.25	649350	3549.63	636642	504		8010	649056	6	0	3 (3)	101	
	Channel spacing CC1-CC2=34.74 MHz (Note 1)																		
	CC2	50	30	133	Downlink & Uplink	Low	3344.76	622984	3320.82	621388	0	30	7725	621696	20	0	2 (2)	4	
						Mid	3559.74	637316	3499.08	633272	102		7874	636000	16	0	1 (1)	20	
						High	3774.99	651666	3569.61	637974	504		8024	650400	18	0	3 (3)	101	
	50+20	CC1	50	30	133	Downlink & Uplink	Low	3325.02	621668	3301.08	620072	0	30	7711	620352	16	0	1 (1)	2
							Mid	3540	636000	3479.34	631956	102		7860	634656	12	0	0 (0)	20
							High	3755.25	650350	3549.87	636658	504		8010	649056	14	0	2 (2)	101
Channel spacing CC1-CC2=34.74 MHz (Note 1)																			
CC2		20	30	51	Downlink & Uplink	Low	3359.76	623984	3350.58	623372	0	30	7745	623616	4	0	0 (0)	0	
						Mid	3574.74	638316	3528.84	635256	102		7895	638016	0	0	3 (3)	21	
						High	3789.99	652666	3599.37	639958	504		8044	652320	2	0	1 (1)	101	
Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-1 [7], clause 5.4A.1 for the CC1 and CC2 channel bandwidth combination.																			
Note 2: CCs are specified in increasing frequency order. CC1 is used as PCell if nothing else is specified in the test case.																			
Note 3: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter $\Delta F_{\text{OffsetCORESET-0-Carrier}}$ in Annex C expressed in number of common RBs.																			
Note 4: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.																			

4.3.1.1.4 Void

4.3.1.1.5 NR intra-band non-contiguous CA configurations in FR1

4.3.1.1.5.1 – 4.3.1.1.5.47 FFS

4.3.1.1.5.48 CA_n48(2A)

Editor's note: Test frequencies for CA_n48(2A) with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.5.48-1: NR Intra-Band non-contiguous CA configuration CA_n48(2A) without UL CA, SCS=15 kHz, Max Wgap

SB CBW combination	SB	Band width [MHz]	carrier Bandw idth [PRBs]	Range (Note 1)	Gap	Test frequencies and signalling parameters
CA_n48(2A); n48A (10MHz) + n48A (10-50MHz)						
10+10	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=10 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=10 MHz
10+15	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=10 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=15 MHz
10+20	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=10 MHz
	SB2	20	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=20 MHz
10+40	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=10 MHz
	SB2	40	216	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=40 MHz
10+50	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=10 MHz
	SB2	50	270	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=50 MHz
CA_n48(2A); n48A (15MHz) + n48A (10-50MHz)						
15+10	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=15 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=10 MHz
15+15	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=15 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=15 MHz
15+20	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=15 MHz
	SB2	20	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=20 MHz
15+40	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=15 MHz
	SB2	40	216	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=40 MHz
15+50	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=15 MHz
	SB2	50	270	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=50 MHz
CA_n48(2A); n48A (20MHz) + n48A (10-50MHz)						
20+10	SB1	20	106	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=20 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=10 MHz
20+15	SB1	20	106	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=20 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=15 MHz
20+20	SB1	20	106	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=20 MHz
	SB2	20	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=20 MHz
20+40	SB1	20	106	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=20 MHz
	SB2	40	216	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=40 MHz
20+50	SB1	20	106	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=20 MHz
	SB2	50	270	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=50 MHz
CA_n48(2A); n48A (40MHz) + n48A (10-50MHz)						
40+10	SB1	40	216	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=40 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=10 MHz
40+15	SB1	40	216	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=40 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=15 MHz
40+20	SB1	40	216	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=40 MHz
	SB2	20	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=20 MHz
40+40	SB1	40	216	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=40 MHz
	SB2	40	216	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=40 MHz
40+50	SB1	40	216	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=40 MHz
	SB2	50	270	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=50 MHz

CA_n48(2A); n48A (50MHz) + n48A (10-50MHz)						
50+10	SB1	50	270	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=50 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=10 MHz
50+15	SB1	50	270	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=50 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=15 MHz
50+20	SB1	50	270	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=50 MHz
	SB2	20	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=20 MHz
50+40	SB1	50	270	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=50 MHz
	SB2	40	216	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=40 MHz
50+50	SB1	50	270	Downlink & Uplink	Max	Table 4.3.1.1.1.48-1: Low range for CBW=50 MHz
	SB2	50	270	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-1: High range for CBW=50 MHz

Note 1: CA_n48(2A) is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.

Table 4.3.1.1.5.48-2: NR Intra-Band non-contiguous CA configuration CA_n48(2A) without UL CA, SCS=30 kHz, Max Wgap

CBW combination	SB	Band width [MHz]	carrier Bandwidth [PRBs]	Range (Note 1)	Gap	Test frequencies and signalling parameters
CA_n48(2A); n48A (10MHz) + n48A (10-100MHz)						
10+10	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=10 MHz
10+15	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	15	38	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=15 MHz
10+20	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	20	51	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=20 MHz
10+40	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	40	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=40 MHz
10+50	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	50	133	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=50 MHz
10+60	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	60	162	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=60 MHz
10+80	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	80	217	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=80 MHz
10+90	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	90	245	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=90 MHz
10+100	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=10 MHz
	SB2	100	273	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=100 MHz
CA_n48(2A); n48A (15MHz) + n48A (10-100MHz)						
15+10	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=10 MHz
15+15	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	15	38	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=15 MHz
15+20	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	20	51	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=20 MHz
15+40	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	40	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=40 MHz
15+50	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	50	133	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=50 MHz
15+60	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	60	162	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=60 MHz
15+80	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	80	217	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=80 MHz
15+90	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	90	245	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=90 MHz
15+100	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=15 MHz
	SB2	100	273	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=100 MHz
CA_n48(2A); n48A (20MHz) + n48A (10-100MHz)						
20+10	SB1	20	51	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=20 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=10 MHz

60+60	SB1	60	162	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=60 MHz
	SB2	60	162	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=60 MHz
60+80	SB1	60	162	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=60 MHz
	SB2	80	217	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=80 MHz
CA_n48(2A); n48A (80MHz) + n48A (10-60MHz)						
80+10	SB1	80	217	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=80 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=10 MHz
80+15	SB1	80	217	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=80 MHz
	SB2	15	38	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=15 MHz
80+20	SB1	80	217	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=80 MHz
	SB2	20	51	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=20 MHz
80+40	SB1	80	217	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=80 MHz
	SB2	40	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=40 MHz
80+50	SB1	80	217	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=80 MHz
	SB2	50	133	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=50 MHz
80+60	SB1	80	217	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=80 MHz
	SB2	60	162	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=60 MHz
CA_n48(2A); n48A (90MHz) + n48A (10-50MHz)						
90+10	SB1	90	245	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=90 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=10 MHz
90+15	SB1	90	245	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=90 MHz
	SB2	15	38	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=15 MHz
90+20	SB1	90	245	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=90 MHz
	SB2	20	51	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=20 MHz
90+40	SB1	90	245	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=90 MHz
	SB2	40	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=40 MHz
90+50	SB1	90	245	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=90 MHz
	SB2	50	133	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=50 MHz
CA_n48(2A); n48A (100MHz) + n48A (10-40MHz)						
100+10	SB1	100	273	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=100 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=10 MHz
100+15	SB1	100	273	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=100 MHz
	SB2	15	38	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=15 MHz
100+20	SB1	100	273	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=100 MHz
	SB2	20	51	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=20 MHz
100+40	SB1	100	273	Downlink & Uplink	Max	Table 4.3.1.1.1.48-2: Low range for CBW=100 MHz
	SB2	40	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.48-2: High range for CBW=40 MHz
Note 1: CA_n48(2A) is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.						

4.3.1.1.5.49 – 4.3.1.1.5.65 FFS

4.3.1.1.5.66 CA_n66(2A)

Editor's note: Test frequencies for CA_n66(2A) with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.5.66-1: NR Intra-Band non-contiguous CA configuration CA_n66(2A) without UL CA, SCS=15 kHz, Max Wgap

CBW combination (BCS)	SB	Bandwidth [MHz]	carrier Bandwidth [PRBs]	Range (Note 1)	Gap	Test frequencies and signalling parameters
CA_n66(2A); n66A (5MHz) + n66A(5-40MHz)						
5+5 (0,1,2)	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/5
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/5
5+10 (0,1,2)	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/5
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 10/10
5+15 (0,1,2)	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/5
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 15/15
5+20 (0,1,2)	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/5
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
5+25 (1)	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/5
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
5+30 (1)	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/5
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
5+40 (0,1,2)	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/5
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (10MHz) + n66A(5-40MHz)						
10+5 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 10/10
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/5
10+10 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 10/10
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 10/10
10+15 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 10/10
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 15/15

10+20 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 10/10
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
10+25 (1)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 10/10
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
10+30 (1)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 10/10
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
10+40 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 10/10
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (15MHz) + n66A(5-40MHz)						
15+5 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 15/15
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/5
15+10 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 15/15
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 10/10
15+15 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 15/15
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 15/15
15+20 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 15/15
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
15+25 (1)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 15/15
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
15+30 (1)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 15/15
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
15+40 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 15/15
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (20MHz) + n66A(5-40MHz)						
20+5 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 5/5
20+10 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 10/10

20+15 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 15/15
20+20 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
20+25 (1)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
20+30 (1)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
20+40 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (25MHz) + n66A(5-40MHz)						
25+5 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 5/5
25+10 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 10/10
25+15 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 15/15
25+20 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
25+25 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
25+30 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth

25+40 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (30MHz) + n66A(5-40MHz)						
30+5 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 5/5
30+10 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 10/10
30+15 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 15/15
30+20 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
30+25 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
30+30 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
30+40 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (40MHz) + n66A(5-40MHz)						
40+5 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 5/5
40+10 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 10/10
40+15 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination 15/15

40+20 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
40+25 (1)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
40+30 (1)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
40+40 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-1: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-1: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
Note 1: CA_n66(2A) is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.						

Table 4.3.1.1.5.66-2: NR Intra-Band non-contiguous CA configuration CA_n66(2A) without UL CA, SCS=30 kHz, Max Wgap

CBW combination (BCS)	SB	Band width [MHz]	carrier Bandwidth [PRBs]	Range	Gap	Test frequencies and signalling parameters
CA_n66(2A); n66A (10MHz) + n66A(10-40MHz)						
10+10 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/10
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 10/10
10+15 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/10
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 15/15
10+20 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/10
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 10/20 or 20/20 depending on required UL bandwidth
10+25 (1)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/10
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
10+30 (1)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/10
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
10+40 (0,1,2)	SB1	10	52	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/10
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 20/40 or 40/40 depending on required UL bandwidth

CA_n66(2A); n66A (15MHz) +n66A(10-40MHz)						
15+10 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 15/15
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 10/10
15+15 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 15/15
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 15/15
15+20 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 15/15
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 20/20
15+25 (1)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 15/15
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
15+30 (1)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 15/15
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
15+40 (0,1,2)	SB1	15	79	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 15/15
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (20MHz) + n66A(10-40MHz)						
20+10 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/20 or 20/20 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 10/10
20+15 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/20 or 20/20 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 15/15
20+20 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/20 or 20/20 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 10/20 or 20/20 depending on required UL bandwidth
20+25 (1)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
20+30 (1)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
20+40 (0,1,2)	SB1	20	106	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/20 or 20/20 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 20/40 or 40/40 depending on required UL bandwidth

CA_n66(2A); n66A (25MHz) + n66A(10-40MHz)						
25+10 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 10/10
25+15 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 15/15
25+20 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
25+25 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
25+30 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
25+40 (1)	SB1	25	133	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (30MHz) + n66A(10-40MHz)						
30+10 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 10/10
30+15 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 15/15
30+20 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for for UL/DL Bandwidth combination = 5/20, 10/20 or 20/20 depending on required UL bandwidth
30+25 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
30+30 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth

30+40 (1)	SB1	30	160	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
CA_n66(2A); n66A (40MHz) + n66A(10-40MHz)						
40+10 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 20/40 or 40/40 depending on required UL bandwidth
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 10/10
40+15 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 10/40 or 20/40 depending on required UL bandwidth
	SB2	15	79	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination 15/15
40+20 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 20/40 or 40/40 depending on required UL bandwidth
	SB2	20	106	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 10/20 or 20/20 depending on required UL bandwidth
40+25 (1)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	25	133	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/25, 10/25 or 25/25 depending on required UL bandwidth
40+30 (1)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	30	160	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/30, 10/30 or 30/30 depending on required UL bandwidth
40+40 (1,2)	SB1	40	216	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.66-2: Low range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
	SB2	40	216	Downlink & Uplink		Table 4.3.1.1.1.66-2: High range for UL/DL Bandwidth combination = 5/40, 10/40, 20/40 or 40/40 depending on required UL bandwidth
Note 1: CA_n66(2A) is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.						

4.3.1.1.5.67 – 4.3.1.1.5.70 FFS

4.3.1.1.5.71 CA_n71(2A)

Editor's note: Test frequencies for CA_n71(2A) with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz; and SCS CC1=30kHz and SCS CC2=15 kHz is FFS.

Table 4.3.1.1.5.71-1: NR Intra-Band non-contiguous CA configuration CA_n71(2A) without UL CA, SCS=15 kHz, Max Wgap

CBW combination	SB	Band width [MHz]	carrier Bandwidth [PRBs]	Range	Gap	Test frequencies and signalling parameters
CA_n71(2A); n71A (5MHz) + n71A (5-20MHz)						
5+5	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.71-1: Low range for CBW=5 MHz
	SB2	5	25	Downlink & Uplink		Table 4.3.1.1.1.71-1: High range for CBW=5 MHz
5+10	SB1	5	25	Downlink & Uplink	Max Wgap	Table 4.3.1.1.1.71-1: Low range for CBW=5 MHz
	SB2	10	52	Downlink & Uplink		Table 4.3.1.1.1.71-1: High range for CBW=10 MHz

5+15	SB1	5	25	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=5 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=15 MHz
5+20	SB1	5	25	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=5 MHz
	SB2	20	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=20 MHz
CA_n71(2A); n71A (10MHz) + n71A (5-20MHz)						
10+5	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=10 MHz
	SB2	5	25	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=5 MHz
10+10	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=10 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=10 MHz
10+15	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=10 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=15 MHz
10+20	SB1	10	52	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=10 MHz
	SB2	20	106	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=20 MHz
CA_n71(2A); n71A (15MHz) + n71A (5-15MHz)						
15+5	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=15 MHz
	SB2	5	25	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=5 MHz
15+10	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=15 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=10 MHz
15+15	SB1	15	79	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=15 MHz
	SB2	15	79	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=15 MHz
CA_n71(2A); n71A (20MHz) + n71A (5-10MHz)						
20+5	SB1	20	106	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=20 MHz
	SB2	5	25	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=5 MHz
20+10	SB1	20	106	Downlink & Uplink	Max	Table 4.3.1.1.1.71-1: Low range for CBW=20 MHz
	SB2	10	52	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-1: High range for CBW=10 MHz
Note 1:	CA_n71(2A) is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.					

Table 4.3.1.1.5.71-2: NR Intra-Band non-contiguous CA configuration CA_n71(2A) without UL CA, SCS=30 kHz, Max Wgap

SB CBW combination	SB	Band width [MHz]	carrier Bandw idth [PRBs]	Range	Gap	Test frequencies and signalling parameters
CA_n71(2A); n71A (10MHz) + n71A (10-20MHz)						
10+10	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.71-2: Low range for CBW=10 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-2: High range for CBW=10 MHz
10+15	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.71-2: Low range for CBW=10 MHz
	SB2	15	38	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-2: High range for CBW=15 MHz
10+20	SB1	10	24	Downlink & Uplink	Max	Table 4.3.1.1.1.71-2: Low range for CBW=10 MHz
	SB2	20	51	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-2: High range for CBW=20 MHz
CA_n71(2A); n71A (15MHz) + n71A (10-15MHz)						
15+10	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.71-2: Low range for CBW=15 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-2: High range for CBW=10 MHz
15+15	SB1	15	38	Downlink & Uplink	Max	Table 4.3.1.1.1.71-2: Low range for CBW=15 MHz
	SB2	15	38	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-2: High range for CBW=15 MHz
CA_n71(2A); n71A (20MHz) + n71A (10MHz)						
20+10	SB1	20	51	Downlink & Uplink	Max	Table 4.3.1.1.1.71-2: Low range for CBW=20 MHz
	SB2	10	24	Downlink & Uplink	Wgap	Table 4.3.1.1.1.71-2: High range for CBW=10 MHz
Note 1:	CA_n71(2A) is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.					

4.3.1.1.5.72 – 4.3.1.1.5.76 FFS

4.3.1.1.5.77 CA_n77(2A)

Editor's note: Test frequencies for CA_n77(2A) with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.5.77-1: NR Intra-Band non-contiguous CA configuration CA_n77(2A) without UL CA, SCS=15 kHz, Max Wgap

CBW combination	SB	Bandwidth [MHz]	Range (Note 1)	Gap	Test frequencies and signalling parameters
CA_n77(2A); n77A(20-40MHz) + n77A(20-40MHz)					
CBW1+CBW2	SB1	CBW1	Downlink & Uplink	Max Wgap	For CBW1, use Table 4.3.1.1.1.77-1: Low range for CBW = 20 OR 40 MHz
	SB2	CBW2	Downlink & Uplink		For CBW2, use Table 4.3.1.1.1.77-1: High range for CBW = 20 OR 40 MHz
Note 1: CA_n77(2A) BCS0 is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.					

Table 4.3.1.1.5.77-2: NR Intra-Band non-contiguous CA configuration CA_n77(2A) without UL CA, SCS=30 kHz, Max Wgap

CBW combination	SB	Bandwidth [MHz]	Range (Note 1)	Gap	Test frequencies and signalling parameters
CA_n77(2A); n77A(20-100MHz) + n77A(20-100MHz)					
CBW1+CBW2	SB1	CBW1	Downlink & Uplink	Max Wgap	For CBW1, use Table 4.3.1.1.1.77-2: Low range for CBW = 20, 40, 80 OR 100 MHz
	SB2	CBW2	Downlink & Uplink		For CBW2, use Table 4.3.1.1.1.77-2: High range for CBW = 20, 40, 80 OR 100 MHz
Note 1: CA_n77(2A) BCS0 is specified in [7] 38.101-1 without uplink CA. PCC is configured on SB1 unless otherwise stated. The test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.					

4.3.1.1.5.78 CA_n78(2A)

Editor's note: Test frequencies for CA_n78(2A) with mixed numerology with SCS CC1=15kHz and SCS CC2=30 kHz or 60kHz; and SCS CC1=30kHz and SCS CC2=15 kHz or 60 kHz is FFS.

Table 4.3.1.1.5.78-1: NR Intra-Band non-contiguous CA configuration CA_n78(2A) without UL CA, SCS=15 kHz, Max Wgap

CBW combination	SB	Bandwidth [MHz]	Range	Gap	Test frequencies and signalling parameters
CA_n78(2A); n78A(10-50MHz) + n78A(10-50MHz)					
CBW1+CBW2	SB1	CBW1	Downlink & Uplink	Max Wgap	For CBW1, use Table 4.3.1.1.1.78-1: Low range for CBW = 10, 20, 25, 30, 40 OR 50 MHz
	SB2	CBW2	Downlink & Uplink		For CBW2, use Table 4.3.1.1.1.78-1: High range for CBW = 10, 20, 25, 30, 40 OR 50 MHz
Note 1: CA_n78(2A) is specified in [7] 38.101-1 with and without uplink CA. PCC is configured on SB1 unless otherwise stated. This table is applicable for the case of without UL CA but test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.					

Table 4.3.1.1.5.78-1A: NR Intra-Band non-contiguous CA configuration CA_n78(2A) with UL CA, SCS=15 kHz, Max Wgap

FFS

Table 4.3.1.1.5.78-2: NR Intra-Band non-contiguous CA configuration CA_n78(2A) without UL CA, SCS=30 kHz, Max Wgap

CBW combination	SB	Bandwidth [MHz]	Range	Gap	Test frequencies and signalling parameters
CA_n78(2A); n78A(10-100MHz) + n78A(10-100MHz)					
CBW1+CBW2	SB1	CBW1	Downlink & Uplink	Max Wgap	For CBW1, use Table 4.3.1.1.1.78-2: Low range for CBW = 10, 20, 25, 30, 40, 50, 60, 70, 80, 90 OR 100 MHz
	SB2	CBW2	Downlink & Uplink		For CBW2, use Table 4.3.1.1.1.78-2: High range for CBW = 10, 20, 25, 30, 40, 50, 60, 70, 80, 90 OR 100 MHz
Note 1: CA_n78(2A) is specified in [7] 38.101-1 with and without uplink CA. PCC is configured on SB1 unless otherwise stated. This table is applicable for the case of without UL CA but test frequencies for both SB1 and SB2 have been specified for both downlink and uplink to enable that the CC of either SB1 or SB2 can be used as PCC.					

Table 4.3.1.1.5.78-2A: NR Intra-Band non-contiguous CA configuration CA_n78(2A) with UL CA, SCS=30 kHz, Max Wgap

FFS

4.3.1.1.6 NR Operating SUL band combinations in FR1

For SUL band combinations specified in TS 38.101-1 [7] Table 5.5C-1, the test frequencies and signalling parameters in clause 4.3.1.1.1 apply for each operating bands.

For SUL band combinations with intra-band non-contiguous CA specified in TS 38.101-1 [7] Table 5.5C-2, the test frequencies and signalling parameters in clause 4.3.1.1.1 apply for SUL band. The test frequencies and signalling parameters in clause 4.3.1.1.5 apply for each DL CA component carrier.

For SUL band combinations with intra-band contiguous CA specified in TS 38.101-1 [7] Table 5.5C-3, the test frequencies and signalling parameters in clause 4.3.1.1.1 apply for SUL band. The test frequencies and signalling parameters in clause 4.3.1.1.3 apply for each DL CA component carrier.

For SUL band combinations with inter-band CA specified in TS 38.101-1 [7] Table 5.5C-4, the test frequencies and signalling parameters in clause 4.3.1.1.1 apply for each operating bands.

4.3.1.1.7 NR inter-band NR-DC configurations in FR1

4.3.1.1.7.1 NR inter-band NR-DC configurations in FR1 (two bands)

Table 4.3.1.1.7.1-1: Inter-band NR-DC configurations (FR1, two bands)

NR-DC configuration	Uplink NR-DC configuration	NR-DC downlink configuration band 1	NR-DC downlink configuration band 2	NR-DC uplink configuration band 1	NR-DC uplink configuration band 2	Applicable for protocol testing (Note 1)
DC_n48A-n70A	DC_n48A-n70A	n48A	n70A	n48A	n70A	Yes
Note 1: Protocol testing is limited to NR-DC configurations with 2CC.						