#### 4.3.1.2 Test frequencies for NR operating bands in FR2

##### 4.3.1.2.1 NR operating bands in FR2

###### 4.3.1.2.1.1 Reference test frequencies for NR operating band n257

Table 4.3.1.2.1.1-1: Test frequencies for NR operating band n257, SCS 60 kHz and ΔFRaster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 66 | Downlink | Low | 26525.04 | 2054583 | 26501.28 | 2054187 | 0 | 120 | 22388 | 2054683 | 4 | 13 | 1 (8) | 21 |
|  |  | & | Mid | 27999.96 | 2079165 | 27902.76 | 2077545 | 102 |  | 22473 | 2079163 | 10 | 4 | 1 (8) | 114 |
|  |  | Uplink | High | 29475 | 2103749 | 29088.36 | 2097305 | 504 |  | 22558 | 2103643 | 2 | 4 | 0 (0) | 508 |
| 100 | 132 | Downlink | Low | 26550 | 2054999 | 26502.48 | 2054207 | 0 | 120 | 22388 | 2054683 | 8 | 11 | 1 (8) | 19 |
|  |  | & | Mid | 27999.96 | 2079165 | 27879 | 2077149 | 102 |  | 22472 | 2078875 | 10 | 13 | 1 (8) | 123 |
|  |  | Uplink | High | 29449.92 | 2103331 | 29039.52 | 2096491 | 504 |  | 22555 | 2102779 | 0 | 0 | 0 (0) | 504 |
| 200 | 264 | Downlink | Low | 26600.04 | 2055833 | 26505 | 2054249 | 0 | 120 | 22388 | 2054683 | 2 | 8 | 1 (8) | 16 |
|  |  | & | Mid | 27999.96 | 2079165 | 27831.48 | 2076357 | 102 |  | 22469 | 2078011 | 10 | 7 | 1 (8) | 117 |
|  |  | Uplink | High | 29400 | 2102499 | 28942.08 | 2094867 | 504 |  | 22550 | 2101339 | 4 | 7 | 1 (8) | 519 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-7 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.2.1.1-2: Test frequencies for NR operating band n257, SCS 120kHz and ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 32 | Downlink | Low | 26525.04 | 2054583 | 26502 | 2054199 | 0 | 120 | 22388 | 2054683 | 2 | 6 | 1 (4) | 20 |
|  |  | & | Mid | 27999.96 | 2079165 | 27830.04 | 2076333 | 102 |  | 22473 | 2079163 | 11 | 1 | 1 (4) | 214 |
|  |  | Uplink | High | 29475 | 2103749 | 28726.2 | 2091269 | 504 |  | 22558 | 2103643 | 7 | 1 | 0 (0) | 1010 |
| 100 | 66 | Downlink | Low | 26550 | 2054999 | 26502.48 | 2054207 | 0 | 120 | 22388 | 2054683 | 10 | 5 | 1 (4) | 18 |
|  |  | & | Mid | 27999.96 | 2079165 | 27805.56 | 2075925 | 102 |  | 22472 | 2078875 | 11 | 6 | 1 (4) | 224 |
|  |  | Uplink | High | 29449.92 | 2103331 | 28676.64 | 2090443 | 504 |  | 22555 | 2102779 | 0 | 0 | 0 (0) | 1008 |
| 200 | 132 | Downlink | Low | 26600.04 | 2055833 | 26505 | 2054249 | 0 | 120 | 22388 | 2054683 | 1 | 4 | 1 (4) | 16 |
|  |  | & | Mid | 27999.96 | 2079165 | 27758.04 | 2075133 | 102 |  | 22469 | 2078011 | 11 | 3 | 1 (4) | 218 |
|  |  | Uplink | High | 29400 | 2102499 | 28579.2 | 2088819 | 504 |  | 22550 | 2101339 | 8 | 3 | 1 (4) | 1022 |
| 400 | 264 | Downlink | Low | 26700 | 2057499 | 26509.92 | 2054331 | 0 | 120 | 22388 | 2054683 | 8 | 0 | 1 (4) | 8 |
|  |  | & | Mid | 27999.96 | 2079165 | 27663 | 2073549 | 102 |  | 22463 | 2076283 | 11 | 1 | 0 (0) | 206 |
|  |  | Uplink | High | 29299.92 | 2100831 | 28384.08 | 2085567 | 504 |  | 22539 | 2098171 | 2 | 7 | 1 (4) | 1030 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-8 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

###### 4.3.1.2.1.2 Reference test frequencies for NR operating band n258

Table 4.3.1.2.1.2-1: Test frequencies for NR operating band n258, SCS 60 kHz and ΔFRaster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz] | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| 50 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | 22257 | 2016955 | 4 | 2 | 0 (0) | 2 |
|  |  | & | Mid | 25875 | 2043749 | 25777.8 | 2042129 | 102 |  | 22350 | 2043739 | 2 | 4 | 1 (8) | 114 |
|  |  | Uplink | High | 27474.96 | 2070415 | 27088.32 | 2063971 | 504 |  | 22443 | 2070523 | 0 | 14 | 1 (8) | 526 |
| 100 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | 22257 | 2016955 | 8 | 0 | 0 (0) | 0 |
|  |  | & | Mid | 25875 | 2043749 | 25754.04 | 2041733 | 102 |  | 22349 | 2043451 | 2 | 13 | 1 (8) | 123 |
|  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | 22440 | 2069659 | 8 | 9 | 1 (8) | 521 |
| 200 | 264 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | 22258 | 2017243 | 2 | 13 | 1 (8) | 21 |
|  |  | & | Mid | 25875 | 2043749 | 25706.52 | 2040941 | 102 |  | 22346 | 2042587 | 2 | 7 | 1 (8) | 117 |
|  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 |  | 22434 | 2067931 | 2 | 1 | 1 (8) | 513 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-7 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.2.1.2: Test frequencies for NR operating band n258, SCS 120kHz and ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz] | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| 50 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | 22257 | 2016955 | 8 | 0 | 0 (0) | 0 |
|  |  | & | Mid | 25875 | 2043749 | 25705.08 | 2040917 | 102 |  | 22350 | 2043739 | 7 | 1 | 1 (4) | 214 |
|  |  | Uplink | High | 27474.96 | 2070415 | 26726.16 | 2057935 | 504 |  | 22443 | 2070523 | 6 | 6 | 1 (4) | 1028 |
| 100 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | 22257 | 2016955 | 4 | 0 | 0 (0) | 0 |
|  |  | & | Mid | 25875 | 2043749 | 25680.6 | 2040509 | 102 |  | 22349 | 2043451 | 7 | 6 | 1 (4) | 224 |
|  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | 22440 | 2069659 | 10 | 4 | 1 (4) | 1024 |
| 200 | 132 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | 22258 | 2017243 | 7 | 6 | 1 (4) | 20 |
|  |  | & | Mid | 25875 | 2043749 | 25633.08 | 2039717 | 102 |  | 22346 | 2042587 | 7 | 3 | 1 (4) | 218 |
|  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | 22434 | 2067931 | 7 | 0 | 1 (4) | 1016 |
| 400 | 264 | Downlink | Low | 24450 | 2019999 | 24259.92 | 2016831 | 0 | 120 | 22258 | 2017243 | 2 | 3 | 1 (4) | 14 |
|  |  | & | Mid | 25875 | 2043749 | 25538.04 | 2038133 | 102 |  | 22340 | 2040859 | 7 | 1 | 0 (0) | 206 |
|  |  | Uplink | High | 27300 | 2067499 | 26384.16 | 2052235 | 504 |  | 22423 | 2064763 | 0 | 4 | 1 (4) | 1024 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-8 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

###### 4.3.1.2.1.3 Reference test frequencies for NR operating band n259

Table 4.3.1.2.1.3-1: Test frequencies for NR operating band n259, SCS 60 kHz and ΔFRaster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 66 | Downlink | Low | 39525 | 2271249 | 39501.24 | 2270853 | 0 | 120 | 23140 | 2271259 | 10 | 5 | 1 (8) | 13 |
|  |  | & | Mid | 41499.96 | 2304165 | 41402.76 | 2302545 | 102 |  | 23254 | 2304091 | 10 | 6 | 0 (0) | 108 |
|  |  | Uplink | High | 43474.92 | 2337081 | 43088.28 | 2330637 | 504 |  | 23369 | 2337211 | 10 | 15 | 1 (8) | 527 |
| 100 | 132 | Downlink | Low | 39550.08 | 2271667 | 39502.56 | 2270875 | 0 | 120 | 23140 | 2271259 | 0 | 4 | 1 (8) | 12 |
|  |  | & | Mid | 41499.96 | 2304165 | 41379 | 2302149 | 102 |  | 23253 | 2303803 | 10 | 7 | 1 (8) | 117 |
|  |  | Uplink | High | 43449.96 | 2336665 | 43039.56 | 2329825 | 504 |  | 23366 | 2336347 | 6 | 11 | 1 (8) | 523 |
| 200 | 264 | Downlink | Low | 39600 | 2272499 | 39504.96 | 2270915 | 0 | 120 | 23140 | 2271259 | 8 | 0 | 1 (8) | 8 |
|  |  | & | Mid | 41499.96 | 2304165 | 41331.48 | 2301357 | 102 |  | 23250 | 2302939 | 10 | 1 | 1 (8) | 111 |
|  |  | Uplink | High | 43399.92 | 2335831 | 42942 | 2328199 | 504 |  | 23360 | 2334619 | 0 | 3 | 1 (8) | 515 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-7 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.2.1.3-2: Test frequencies for NR operating band n259, SCS 120kHz and ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 32 | Downlink | Low | 39525 | 2271249 | 39501.96 | 2270865 | 0 | 120 | 23140 | 2271259 | 5 | 2 | 1 (4) | 12 |
|  |  | & | Mid | 41499.96 | 2304165 | 41330.04 | 2301333 | 102 |  | 23254 | 2304091 | 11 | 2 | 0 (0) | 208 |
|  |  | Uplink | High | 43474.92 | 2337081 | 42726.12 | 2324601 | 504 |  | 23369 | 2337211 | 5 | 7 | 1 (4) | 1030 |
| 100 | 66 | Downlink | Low | 39550.08 | 2271667 | 39502.56 | 2270875 | 0 | 120 | 23140 | 2271259 | 0 | 2 | 1 (4) | 12 |
|  |  | & | Mid | 41499.96 | 2304165 | 41305.56 | 2300925 | 102 |  | 23253 | 2303803 | 11 | 3 | 1 (4) | 218 |
|  |  | Uplink | High | 43449.96 | 2336665 | 42676.68 | 2323777 | 504 |  | 23366 | 2336347 | 9 | 5 | 1 (4) | 1026 |
| 200 | 132 | Downlink | Low | 39600 | 2272499 | 39504.96 | 2270915 | 0 | 120 | 23140 | 2271259 | 4 | 0 | 1 (4) | 8 |
|  |  | & | Mid | 41499.96 | 2304165 | 41258.04 | 2300133 | 102 |  | 23250 | 2302939 | 11 | 0 | 1 (4) | 212 |
|  |  | Uplink | High | 43399.92 | 2335831 | 42579.12 | 2322151 | 504 |  | 23360 | 2334619 | 6 | 1 | 1 (4) | 1018 |
| 400 | 264 | Downlink | Low | 39700.08 | 2274167 | 39510 | 2270999 | 0 | 120 | 23140 | 2271259 | 10 | 0 | 0 (0) | 0 |
|  |  | & | Mid | 41499.96 | 2304165 | 41163 | 2298549 | 102 |  | 23245 | 2301499 | 11 | 6 | 1 (4) | 224 |
|  |  | Uplink | High | 43299.96 | 2334165 | 42384.12 | 2318901 | 504 |  | 23349 | 2331451 | 11 | 4 | 1 (4) | 1024 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-8 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

###### 4.3.1.2.1.4 Reference test frequencies for NR operating band n260

Table 4.3.1.2.1.4-1: Test frequencies for NR operating band n260, SCS 60 kHz and ΔFRaster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | 22995 | 2229499 | 0 | 6 | 0 (0) | 6 |
|  |  | & | Mid | 38499.96 | 2254165 | 38402.76 | 2252545 | 102 |  | 23081 | 2254267 | 6 | 13 | 1 (8) | 123 |
|  |  | Uplink | High | 39975 | 2278749 | 39588.36 | 2272305 | 504 |  | 23166 | 2278747 | 10 | 4 | 1 (8) | 516 |
| 100 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | 22995 | 2229499 | 4 | 4 | 0 (0) | 4 |
|  |  | & | Mid | 38499.96 | 2254165 | 38379 | 2252149 | 102 |  | 23079 | 2253691 | 6 | 6 | 0 (0) | 108 |
|  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | 23163 | 2277883 | 8 | 0 | 1 (8) | 512 |
| 200 | 264 | Downlink | Low | 37100.04 | 2230833 | 37005 | 2229249 | 0 | 120 | 22995 | 2229499 | 10 | 0 | 0 (0) | 0 |
|  |  | & | Mid | 38499.96 | 2254165 | 38331.48 | 2251357 | 102 |  | 23076 | 2252827 | 6 | 0 | 0 (0) | 102 |
|  |  | Uplink | High | 39900 | 2277499 | 39442.08 | 2269867 | 504 |  | 23157 | 2276155 | 0 | 0 | 0 (0) | 504 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-7 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.2.1.4-2: Test frequencies for NR operating band n260, SCS 120kHz and ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | 22995 | 2229499 | 6 | 2 | 0 (0) | 4 |
|  |  | & | Mid | 38499.96 | 2254165 | 38330.04 | 2251333 | 102 |  | 23081 | 2254267 | 3 | 6 | 1 (4) | 224 |
|  |  | Uplink | High | 39975 | 2278749 | 39226.2 | 2266269 | 504 |  | 23166 | 2278747 | 11 | 1 | 1 (4) | 1018 |
| 100 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | 22995 | 2229499 | 2 | 2 | 0 (0) | 4 |
|  |  | & | Mid | 38499.96 | 2254165 | 38305.56 | 2250925 | 102 |  | 23079 | 2253691 | 3 | 3 | 0 (0) | 210 |
|  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | 23163 | 2277883 | 4 | 0 | 1 (4) | 1016 |
| 200 | 132 | Downlink | Low | 37100.04 | 2230833 | 37005 | 2229249 | 0 | 120 | 22995 | 2229499 | 5 | 0 | 0 (0) | 0 |
|  |  | & | Mid | 38499.96 | 2254165 | 38258.04 | 2250133 | 102 |  | 23076 | 2252827 | 3 | 0 | 0 (0) | 204 |
|  |  | Uplink | High | 39900 | 2277499 | 39079.2 | 2263819 | 504 |  | 23157 | 2276155 | 0 | 0 | 0 (0) | 1008 |
| 400 | 264 | Downlink | Low | 37200 | 2232499 | 37009.92 | 2229331 | 0 | 120 | 22996 | 2229787 | 0 | 5 | 1 (4) | 18 |
|  |  | & | Mid | 38499.96 | 2254165 | 38163 | 2248549 | 102 |  | 23071 | 2251387 | 3 | 2 | 1 (4) | 216 |
|  |  | Uplink | High | 39799.92 | 2275831 | 38884.08 | 2260567 | 504 |  | 23146 | 2272987 | 6 | 3 | 0 (0) | 1014 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-8 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

###### 4.3.1.2.1.5 Reference test frequencies for NR operating band n261

Table 4.3.1.2.1.5-1: Test frequencies for NR operating band n261, SCS 60 kHz and ΔFRaster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 66 | Downlink | Low | 27525 | 2071249 | 27501.24 | 2070853 | 0 | 120 | 22446 | 2071387 | 6 | 16 | 1 (8) | 24 |
|  |  | & | Mid | 27924.96 | 2077915 | 27827.76 | 2076295 | 102 |  | 22469 | 2078011 | 0 | 13 | 1 (8) | 123 |
|  |  | Uplink | High | 28324.92 | 2084581 | 27938.28 | 2078137 | 504 |  | 22492 | 2084635 | 6 | 9 | 1 (8) | 521 |
| 100 | 132 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | 22446 | 2071387 | 8 | 14 | 1 (8) | 22 |
|  |  | & | Mid | 27924.96 | 2077915 | 27804 | 2075899 | 102 |  | 22467 | 2077435 | 0 | 6 | 0 (0) | 108 |
|  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | 22489 | 2083771 | 2 | 5 | 1 (8) | 517 |
| 200 | 264 | Downlink | Low | 27600 | 2072499 | 27504.96 | 2070915 | 0 | 120 | 22446 | 2071387 | 4 | 11 | 1 (8) | 19 |
|  |  | & | Mid | 27924.96 | 2077915 | 27756.48 | 2075107 | 102 |  | 22464 | 2076571 | 0 | 0 | 0 (0) | 102 |
|  |  | Uplink | High | 28249.92 | 2083331 | 27792 | 2075699 | 504 |  | 22483 | 2082043 | 8 | 4 | 0 (0) | 508 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-7 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.2.1.5-2: Test frequencies for NR operating band n261, SCS 120kHz and ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 50 | 32 | Downlink | Low | 27525 | 2071249 | 27501.96 | 2070865 | 0 | 120 | 22446 | 2071387 | 9 | 7 | 1 (4) | 22 |
|  |  | & | Mid | 27924.96 | 2077915 | 27755.04 | 2075083 | 102 |  | 22469 | 2078011 | 0 | 6 | 1 (4) | 224 |
|  |  | Uplink | High | 28324.92 | 2084581 | 27576.12 | 2072101 | 504 |  | 22492 | 2084635 | 3 | 4 | 1 (4) | 1024 |
| 100 | 66 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | 22446 | 2071387 | 4 | 7 | 1 (4) | 22 |
|  |  | & | Mid | 27924.96 | 2077915 | 27730.56 | 2074675 | 102 |  | 22467 | 2077435 | 0 | 3 | 0 (0) | 210 |
|  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | 22489 | 2083771 | 7 | 2 | 1 (4) | 1020 |
| 200 | 132 | Downlink | Low | 27600 | 2072499 | 27504.96 | 2070915 | 0 | 120 | 22446 | 2071387 | 8 | 5 | 1 (4) | 18 |
|  |  | & | Mid | 27924.96 | 2077915 | 27683.04 | 2073883 | 102 |  | 22464 | 2076571 | 0 | 0 | 0 (0) | 204 |
|  |  | Uplink | High | 28249.92 | 2083331 | 27429.12 | 2069651 | 504 |  | 22483 | 2082043 | 4 | 2 | 0 (0) | 1012 |
| 400 | 264 | Downlink | Low | 27700.08 | 2074167 | 27510 | 2070999 | 0 | 120 | 22446 | 2071387 | 2 | 2 | 1 (4) | 12 |
|  |  | & | Mid | 27924.96 | 2077915 | 27588 | 2072299 | 102 |  | 22459 | 2075131 | 0 | 2 | 1 (4) | 216 |
|  |  | Uplink | High | 28149.96 | 2081665 | 27234.12 | 2066401 | 504 |  | 22472 | 2078875 | 9 | 1 | 1 (4) | 1018 |
| Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-8 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

##### 4.3.1.2.2 NR inter-band CA configurations in FR2

Table 4.3.1.2.2-1: NR inter-band CA configurations in FR2

| NR CA  configuration | Uplink NR CA  configuration | NR CA downlink configuration band 1 | NR CA downlink configuration band 2 | NR CA uplink configuration band 1 | NR CA uplink configuration band 2 | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| CA\_n260A-n261A | - | n260A | n261A | - | - | Yes |
| Note 1: Protocol testing is limited to NR CA configurations with 2CC. | | | | | | |

##### 4.3.1.2.3 NR intra-band contiguous CA configurations in FR2

###### 4.3.1.2.3.1 NR Intra-band contiguous CA configurations for CA\_n257

4.3.1.2.3.1.1 CA\_n257B

Editor’s note: CA\_n257B Test frequencies are FFS.

Table 4.3.1.2.3.1.1-1: NR Intra-Band contiguous CA configuration CA\_n257B, SCS=120 kHz, ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  | |  | |  |  |  |

4.3.1.2.3.1.2 CA\_n257C

Editor’s note: CA\_n257C Test frequencies are FFS.

Table 4.3.1.2.3.1.2-1: NR Intra-Band contiguous CA configuration CA\_n257C, SCS=120 kHz, ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.1.3 CA\_n257D

Editor’s note: CA\_n257D Test frequencies are FFS.

Table 4.3.1.2.3.1.3-1: NR Intra-Band contiguous CA configuration CA\_n257D, SCS=60 kHz, ΔFRaster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  | |  | |  |  |  |

Table 4.3.1.2.3.1.3-2: NR Intra-Band contiguous CA configuration CA\_n257D, SCS=120 kHz, ΔFRaster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | | Carrier centre  [ARFCN] | | point A [MHz] | | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  | |  | |  | |  | |  |  | |  |  | |  | |  |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  | |  | |  |  | |  |  | |  | |  |  |  |
|  |  | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  | |  | |  | |  |  |  | |  |  | |  | |  |  |  |
|  | | | | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.1.4 CA\_n257E

**Table 4.3.1.2.3.1.4-1: NR Intra-Band contiguous CA configuration CA\_n257E, SCS=60 kHz, ΔFRaster 60 kHz.**

**FFS**

**Table 4.3.1.2.3.1.4-2: NR Intra-Band contiguous CA configuration CA\_n257E, SCS=120 kHz, ΔFRaster 120 kHz.**

**FFS**

4.3.1.2.3.1.5 CA\_n257F

**Table 4.3.1.2.3.1.5-1: NR Intra-Band contiguous CA configuration CA\_n257F, SCS=60 kHz, ΔFRaster 60 kHz.**

**FFS**

**Table 4.3.1.2.3.1.5-2: NR Intra-Band contiguous CA configuration CA\_n257F, SCS=120 kHz, ΔFRaster 120 kHz.**

**FFS**

4.3.1.2.3.1.6 CA\_n257G

Table 4.3.1.2.3.1.6-1: Void

Table 4.3.1.2.3.1.6-2: NR Intra-Band contiguous CA configuration CA\_n257G, SCS=60 kHz, ΔFRaster 60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 | |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | | 26525.04 | 2054583 | 26501.28 | 2054187 | 0 | 120 | | | 22388 | 2054683 | | 4 | 13 | 1 (8) | | 21 |
|  |  |  |  |  | & | Mid | | 27949.92 | 2078331 | 27852.72 | 2076711 | 102 |  | | | 22470 | 2078299 | | 4 | 2 | 1 (8) | | 112 |
|  |  |  |  |  | Uplink | High | | 29375.52 | 2102091 | 28988.88 | 2095647 | 504 |  | | | 22553 | 2102203 | | 4 | 14 | 1 (8) | | 526 |
|  | Channel spacing CC1-CC2=74.40 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | | 26599.44 | 2055823 | 26551.92 | 2055031 | 0 | 120 | | | 22391 | 2055547 | | 0 | 15 | 1 (8) | | 23 |
|  |  |  |  |  | & | Mid | | 28024.32 | 2079571 | 27903.36 | 2077555 | 102 |  | | | 22473 | 2079163 | | 0 | 4 | 1 (8) | | 114 |
|  |  |  |  |  | Uplink | High | | 29449.92 | 2103331 | 29039.52 | 2096491 | 504 |  | | | 22555 | 2102779 | | 0 | 0 | 0 (0) | | 504 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | | Low | 26550 | 2054999 | 26502.48 | 2054207 | 0 | 120 | | 22388 | | 2054683 | | 8 | 11 | | 1 (8) | 19 | |
|  |  |  |  |  | & | | Mid | 27949.92 | 2078331 | 27828.96 | 2076315 | 102 |  | | 22469 | | 2078011 | | 4 | 11 | | 1 (8) | 121 | |
|  |  |  |  |  | Uplink | | High | 29349.96 | 2101665 | 28939.56 | 2094825 | 504 |  | | 22550 | | 2101339 | | 10 | 10 | | 1 (8) | 522 | |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | | Low | 26649.96 | 2056665 | 26602.44 | 2055873 | 0 | 120 | | 22393 | | 2056123 | | 10 | 0 | | 0 (0) | 0 | |
|  |  |  |  |  | & | | Mid | 28049.88 | 2079997 | 27928.92 | 2077981 | 102 |  | | 22474 | | 2079451 | | 6 | 0 | | 0 (0) | 102 | |
|  |  |  |  |  | Uplink | | High | 29449.92 | 2103331 | 29039.52 | 2096491 | 504 |  | | 22555 | | 2102779 | | 0 | 0 | | 0 (0) | 504 | |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.1.6-3: Void

Table 4.3.1.2.3.1.6-4: NR Intra-Band contiguous CA configuration CA\_n257G, SCS=120 kHz, ΔFRaster 120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | | | *carrierBandwidth*  *[PRBs]* | Range | | | Carrier centre  [MHz]  Note 2 | | Carrier centre  [ARFCN] | point A [MHz] | | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 | |
| 50+100 | CC1 | 50 | | 120 | 32 | | Downlink | Low | | | 26525.04 | 2054583 | 26502 | 2054199 | | 0 | 120 | | 22388 | | | 2054683 | | 2 | 6 | 1 (4) | | 20 |
|  |  |  | |  |  | | & | Mid | | | 27950.04 | 2078333 | 27780.12 | 2075501 | | 102 |  | | 22470 | | | 2078299 | | 7 | 0 | 1 (4) | | 212 |
|  |  |  | |  |  | | Uplink | High | | | 29375.52 | 2102091 | 28626.72 | 2089611 | | 504 |  | | 22553 | | | 2102203 | | 8 | 6 | 1 (4) | | 1028 |
|  | Channel spacing CC1-CC2=74.40 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | | 120 | 66 | | Downlink | Low | | | 26599.44 | 2055823 | 26551.92 | 2055031 | | 0 | 120 | | 22391 | | | 2055547 | | 6 | 7 | 1 (4) | | 22 |
|  |  |  | |  |  | | & | Mid | | | 28024.44 | 2079573 | 27830.04 | 2076333 | | 102 |  | | 22473 | | | 2079163 | | 11 | 1 | 1 (4) | | 214 |
|  |  |  | |  |  | | Uplink | High | | | 29449.92 | 2103331 | 28676.64 | 2090443 | | 504 |  | | 22555 | | | 2102779 | | 0 | 0 | 0 (0) | | 1008 |
| 100+100 | CC1 | 100 | 120 | | | 66 | Downlink | | Low | 26550 | | 2054999 | 26502.48 | | 2054207 | 0 | 120 | | | 22388 | 2054683 | | 10 | | 5 | | 1 (4) | 18 | |
|  |  |  |  | | |  | & | | Mid | 27950.04 | | 2078333 | 27755.64 | | 2075093 | 102 |  | | | 22469 | 2078011 | | 7 | | 5 | | 1 (4) | 222 | |
|  |  |  |  | | |  | Uplink | | High | 29349.96 | | 2101665 | 28576.68 | | 2088777 | 504 |  | | | 22550 | 2101339 | | 5 | | 5 | | 1 (4) | 1026 | |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | | | 66 | Downlink | | Low | 26649.96 | | 2056665 | 26602.44 | | 2055873 | 0 | 120 | | | 22393 | 2056123 | | 5 | | 0 | | 0 (0) | 0 | |
|  |  |  |  | | |  | & | | Mid | 28050 | | 2079999 | 27855.6 | | 2076759 | 102 |  | | | 22474 | 2079451 | | 2 | | 0 | | 0 (0) | 204 | |
|  |  |  |  | | |  | Uplink | | High | 29449.92 | | 2103331 | 28676.64 | | 2090443 | 504 |  | | | 22555 | 2102779 | | 0 | | 0 | | 0 (0) | 1008 | |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.1.7 CA\_n257H

Table 4.3.1.2.3.1.7-1: Void

Table 4.3.1.2.3.1.7-2: NR Intra-Band contiguous CA configuration CA\_n257H, SCS=60 kHz, ΔFRaster 60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | | Range | | Carrier centre  [MHz]  Note 2 | | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | | | 66 | Downlink | Low | | 26525.04 | 2054583 | 26501.28 | 2054187 | 0 | 120 | | 22388 | | | 2054683 | 4 | | | 13 | 1 (8) | 21 |
| +100 |  |  |  | | |  | & | Mid | | 27900 | 2077499 | 27802.8 | 2075879 | 102 |  | | 22467 | | | 2077435 | 8 | | | 7 | 0 (0) | 109 |
|  |  |  |  | | |  | Uplink | High | | 29275.56 | 2100425 | 28888.92 | 2093981 | 504 |  | | 22547 | | | 2100475 | 2 | | | 9 | 1 (8) | 521 |
|  | Channel spacing CC1-CC2=74.40 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | | | 132 | Downlink | Low | | 26599.44 | 2055823 | 26551.92 | 2055031 | 0 | 120 | | 22391 | | | 2055547 | 0 | | | 15 | 1 (8) | 23 |
|  |  |  |  | | |  | & | Mid | | 27974.4 | 2078739 | 27853.44 | 2076723 | 102 |  | | 22470 | | | 2078299 | 4 | | | 1 | 1 (8) | 111 |
|  |  |  |  | | |  | Uplink | High | | 29349.96 | 2101665 | 28939.56 | 2094825 | 504 |  | | 22550 | | | 2101339 | 10 | | | 10 | 1 (8) | 522 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1l) | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | | | 132 | Downlink | Low | | 26699.4 | 2057489 | 26651.88 | 2056697 | 0 | 120 | | 22396 | | | 2056987 | 2 | | | 4 | 0 (0) | 4 |
|  |  |  |  | | |  | & | Mid | | 28074.36 | 2080405 | 27953.4 | 2078389 | 102 |  | | 22476 | | | 2080027 | 6 | | | 6 | 1 (8) | 116 |
|  |  |  |  | | |  | Uplink | High | | 29449.92 | 2103331 | 29039.52 | 2096491 | 504 |  | | 22555 | | | 2102779 | 0 | | | 0 | 0 (0) | 504 |
| 100+100 | CC1 | 100 | | 60 | 132 | | Downlink | Low | 26550 | | 2054999 | 26502.48 | 2054207 | 0 | 120 | | | 22388 | 2054683 | | 8 | | 11 | | 1 (8) | 19 |
| +100 |  |  | |  |  | | & | Mid | 27900 | | 2077499 | 27779.04 | 2075483 | 102 |  | | | 22466 | 2077147 | | 8 | | 8 | | 1 (8) | 118 |
|  |  |  | |  |  | | Uplink | High | 29250 | | 2099999 | 28839.6 | 2093159 | 504 |  | | | 22544 | 2099611 | | 8 | | 5 | | 1 (8) | 517 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | | 60 | 132 | | Downlink | Low | 26649.96 | | 2056665 | 26602.44 | 2055873 | 0 | 120 | | | 22393 | 2056123 | | 10 | | 0 | | 0 (0) | 0 |
|  |  |  | |  |  | | & | Mid | 27999.96 | | 2079165 | 27879 | 2077149 | 102 |  | | | 22472 | 2078875 | | 10 | | 13 | | 1 (8) | 123 |
|  |  |  | |  |  | | Uplink | High | 29349.96 | | 2101665 | 28939.56 | 2094825 | 504 |  | | | 22550 | 2101339 | | 10 | | 10 | | 1 (8) | 522 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | | 60 | 132 | | Downlink | Low | 26749.92 | | 2058331 | 26702.4 | 2057539 | 0 | 120 | | | 22399 | 2057851 | | 0 | | 6 | | 0 (0) | 6 |
|  |  |  | |  |  | | & | Mid | 28099.92 | | 2080831 | 27978.96 | 2078815 | 102 |  | | | 22477 | 2080315 | | 0 | | 3 | | 0 (0) | 105 |
|  |  |  | |  |  | | Uplink | High | 29449.92 | | 2103331 | 29039.52 | 2096491 | 504 |  | | | 22555 | 2102779 | | 0 | | 0 | | 0 (0) | 504 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.1.7-3: Void

Table 4.3.1.2.3.1.7-4: NR Intra-Band contiguous CA configuration CA\_n257H, SCS=120 kHz, ΔFRaster 120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | | SCS  [kHz] | | *carrierBandwidth*  *[PRBs]* | | Range | | | Carrier centre  [MHz]  Note 2 | | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | | SS block SCS  [kHz] | | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 | |
| 50+100 | CC1 | | 50 | | 120 | | 32 | Downlink | Low | | | 26525.04 | 2054583 | 26502 | 2054199 | | 0 | | | 120 | 22388 | | | 2054683 | | 2 | 6 | 1 (4) | | 20 |
| +100 |  | |  | |  | |  | & | Mid | | | 27900 | 2077499 | 27730.08 | 2074667 | | 102 | | |  | 22467 | | | 2077435 | | 4 | 3 | 0 (0) | | 210 |
|  |  | |  | |  | |  | Uplink | High | | | 29275.56 | 2100425 | 28526.76 | 2087945 | | 504 | | |  | 22547 | | | 2100475 | | 1 | 4 | 1 (4) | | 1024 |
|  | Channel spacing CC1-CC2=74.40 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | | 100 | | 120 | | 66 | Downlink | Low | | | 26599.44 | 2055823 | 26551.92 | 2055031 | | 0 | | | 120 | 22391 | | | 2055547 | | 6 | 7 | 1 (4) | | 22 |
|  |  | |  | |  | |  | & | Mid | | | 27974.4 | 2078739 | 27780 | 2075499 | | 102 | | |  | 22470 | | | 2078299 | | 8 | 0 | 1 (4) | | 212 |
|  |  | |  | |  | |  | Uplink | High | | | 29349.96 | 2101665 | 28576.68 | 2088777 | | 504 | | |  | 22550 | | | 2101339 | | 5 | 5 | 1 (4) | | 1026 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | | 100 | | 120 | | 66 | Downlink | Low | | | 26699.4 | 2057489 | 26651.88 | 2056697 | | 0 | | | 120 | 22396 | | | 2056987 | | 1 | 2 | 0 (0) | | 4 |
|  |  | |  | |  | |  | & | Mid | | | 28074.36 | 2080405 | 27879.96 | 2077165 | | 102 | | |  | 22476 | | | 2080027 | | 3 | 3 | 1 (4) | | 218 |
|  |  | |  | |  | |  | Uplink | High | | | 29449.92 | 2103331 | 28676.64 | 2090443 | | 504 | | |  | 22555 | | | 2102779 | | 0 | 0 | 0 (0) | | 1008 |
| 100+100 | CC1 | 100 | | 120 | | 66 | | Downlink | | Low | 26550 | | 2054999 | 26502.48 | 2054207 | 0 | | 120 | | | 22388 | 2054683 | | | 10 | | 5 | 1 (4) | 18 | |
| +100 |  |  | |  | |  | | & | | Mid | 27900 | | 2077499 | 27705.6 | 2074259 | 102 | |  | | | 22466 | 2077147 | | | 4 | | 4 | 1 (4) | 220 | |
|  |  |  | |  | |  | | Uplink | | High | 29250 | | 2099999 | 28476.72 | 2087111 | 504 | |  | | | 22544 | 2099611 | | | 10 | | 2 | 1 (4) | 1020 | |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | | 120 | | 66 | | Downlink | | Low | 26649.96 | | 2056665 | 26602.44 | 2055873 | 0 | | 120 | | | 22393 | 2056123 | | | 5 | | 0 | 0 (0) | 0 | |
|  |  |  | |  | |  | | & | | Mid | 27999.96 | | 2079165 | 27805.56 | 2075925 | 102 | |  | | | 22472 | 2078875 | | | 11 | | 6 | 1 (4) | 224 | |
|  |  |  | |  | |  | | Uplink | | High | 29349.96 | | 2101665 | 28576.68 | 2088777 | 504 | |  | | | 22550 | 2101339 | | | 5 | | 5 | 1 (4) | 1026 | |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | | 120 | | 66 | | Downlink | | Low | 26749.92 | | 2058331 | 26702.4 | 2057539 | 0 | | 120 | | | 22399 | 2057851 | | | 0 | | 3 | 0 (0) | 6 | |
|  |  |  | |  | |  | | & | | Mid | 28099.92 | | 2080831 | 27905.52 | 2077591 | 102 | |  | | | 22477 | 2080315 | | | 6 | | 1 | 0 (0) | 206 | |
|  |  |  | |  | |  | | Uplink | | High | 29449.92 | | 2103331 | 28676.64 | 2090443 | 504 | |  | | | 22555 | 2102779 | | | 0 | | 0 | 0 (0) | 1008 | |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.1.8 CA\_n257I

Table 4.3.1.2.3.1.8-1: Void

Table 4.3.1.2.3.1.8-2: NR Intra-Band contiguous CA configuration CA\_n257I, SCS=60 kHz, ΔFRaster 60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | | *carrierBandwidth*  *[PRBs]* | | Range | | Carrier centre  [MHz]  Note 2 | | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | | SS block SCS  [kHz] | | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | | CORESET#0 Index (Offset  [RBs])  Note 4 | | offsetToPointA (SIB1)  [PRBs]  Note 4 | |
| 50+100 | CC1 | | 50 | 60 | 66 | | Downlink | | Low | 26525.04 | 2054583 | | 26501.28 | 2054187 | | 0 | | | 120 | 22388 | | 2054683 | 4 | | | 13 | | 1 (8) | 21 |
| +100+100 |  | |  |  |  | | & | | Mid | 27849.96 | 2076665 | | 27752.76 | 2075045 | | 102 | | |  | 22464 | | 2076571 | 2 | | | 5 | | 0 (0) | 107 |
|  |  | |  |  |  | | Uplink | | High | 29175.6 | 2098759 | | 28788.96 | 2092315 | | 504 | | |  | 22541 | | 2098747 | 0 | | | 4 | | 1 (8) | 516 |
|  | Channel spacing CC1-CC2=74.40 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | | 100 | 60 | 132 | | Downlink | | Low | 26599.44 | 2055823 | | 26551.92 | 2055031 | | 0 | | | 120 | 22391 | | 2055547 | 0 | | | 15 | | 1 (8) | 23 |
|  |  | |  |  |  | | & | | Mid | 27924.36 | 2077905 | | 27803.4 | 2075889 | | 102 | | |  | 22467 | | 2077435 | 10 | | | 6 | | 0 (0) | 108 |
|  |  | |  |  |  | | Uplink | | High | 29250 | 2099999 | | 28839.6 | 2093159 | | 504 | | |  | 22544 | | 2099611 | 8 | | | 5 | | 1 (8) | 517 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | | 100 | 60 | 132 | | Downlink | | Low | 26699.4 | 2057489 | | 26651.88 | 2056697 | | 0 | | | 120 | 22396 | | 2056987 | 2 | | | 4 | | 0 (0) | 4 |
|  |  | |  |  |  | | & | | Mid | 28024.32 | 2079571 | | 27903.36 | 2077555 | | 102 | | |  | 22473 | | 2079163 | 0 | | | 4 | | 1 (8) | 114 |
|  |  | |  |  |  | | Uplink | | High | 29349.96 | 2101665 | | 28939.56 | 2094825 | | 504 | | |  | 22550 | | 2101339 | 10 | | | 10 | | 1 (8) | 522 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | | 100 | 60 | 132 | | Downlink | | Low | 26799.36 | 2059155 | | 26751.84 | 2058363 | | 0 | | | 120 | 22402 | | 2058715 | 4 | | | 1 | | 1 (8) | 9 |
|  |  | |  |  |  | | & | | Mid | 28124.28 | 2081237 | | 28003.32 | 2079221 | | 102 | | |  | 22479 | | 2080891 | 2 | | | 9 | | 1 (8) | 119 |
|  |  | |  |  |  | | Uplink | | High | 29449.92 | 2103331 | | 29039.52 | 2096491 | | 504 | | |  | 22555 | | 2102779 | 0 | | | 0 | | 0 (0) | 504 |
| 100+100 | | CC1 | 100 | 60 | | 132 | | Downlink | Low | 26550 | | 2054999 | 26502.48 | 2054207 | 0 | | 120 | | | 22388 | 2054683 | | 8 | | 11 | | 1 (8) | | 19 | |
| +100+100 | |  |  |  | |  | | & | Mid | 27849.96 | | 2076665 | 27729 | 2074649 | 102 | |  | | | 22463 | 2076283 | | 2 | | 6 | | 1 (8) | | 116 | |
|  | |  |  |  | |  | | Uplink | High | 29150.04 | | 2098333 | 28739.64 | 2091493 | 504 | |  | | | 22538 | 2097883 | | 6 | | 0 | | 1 (8) | | 512 | |
|  | | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | CC2 | 100 | 60 | | 132 | | Downlink | Low | 26649.96 | | 2056665 | 26602.44 | 2055873 | 0 | | 120 | | | 22393 | 2056123 | | 10 | | 0 | | 0 (0) | | 0 | |
|  | |  |  |  | |  | | & | Mid | 27949.92 | | 2078331 | 27828.96 | 2076315 | 102 | |  | | | 22469 | 2078011 | | 4 | | 11 | | 1 (8) | | 121 | |
|  | |  |  |  | |  | | Uplink | High | 29250 | | 2099999 | 28839.6 | 2093159 | 504 | |  | | | 22544 | 2099611 | | 8 | | 5 | | 1 (8) | | 517 | |
|  | | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | CC3 | 100 | 60 | | 132 | | Downlink | Low | 26749.92 | | 2058331 | 26702.4 | 2057539 | 0 | | 120 | | | 22399 | 2057851 | | 0 | | 6 | | 0 (0) | | 6 | |
|  | |  |  |  | |  | | & | Mid | 28049.88 | | 2079997 | 27928.92 | 2077981 | 102 | |  | | | 22474 | 2079451 | | 6 | | 0 | | 0 (0) | | 102 | |
|  | |  |  |  | |  | | Uplink | High | 29349.96 | | 2101665 | 28939.56 | 2094825 | 504 | |  | | | 22550 | 2101339 | | 10 | | 10 | | 1 (8) | | 522 | |
|  | | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | CC4 | 100 | 60 | | 132 | | Downlink | Low | 26849.88 | | 2059997 | 26802.36 | 2059205 | 0 | | 120 | | | 22405 | 2059579 | | 2 | | 3 | | 1 (8) | | 11 | |
|  | |  |  |  | |  | | & | Mid | 28149.84 | | 2081663 | 28028.88 | 2079647 | 102 | |  | | | 22480 | 2081179 | | 8 | | 5 | | 0 (0) | | 107 | |
|  | |  |  |  | |  | | Uplink | High | 29449.92 | | 2103331 | 29039.52 | 2096491 | 504 | |  | | | 22555 | 2102779 | | 0 | | 0 | | 0 (0) | | 504 | |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.1.8-3: Void

Table 4.3.1.2.3.1.8-4: NR Intra-Band contiguous CA configuration CA\_n257I, SCS=120 kHz, ΔFRaster 120 kHz nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | | | Carrier centre  [MHz]  Note 2 | | Carrier centre  [ARFCN] | point A [MHz] | | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | | CC1 | 50 | 120 | 32 | | Downlink | | Low | 26525.04 | 2054583 | | | 26502 | 2054199 | | 0 | 120 | | 22388 | | 2054683 | | 2 | | 6 | 1 (4) | 20 |
| +100+100 | |  |  |  |  | | & | | Mid | 27849.96 | 2076665 | | | 27680.04 | 2073833 | | 102 |  | | 22464 | | 2076571 | | 1 | | 2 | 0 (0) | 208 |
|  | |  |  |  |  | | Uplink | | High | 29175.6 | 2098759 | | | 28426.8 | 2086279 | | 504 |  | | 22541 | | 2098747 | | 6 | | 1 | 1 (4) | 1018 |
|  | | Channel spacing CC1-CC2=74.40 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | CC2 | 100 | 120 | 66 | | Downlink | | Low | 26599.44 | 2055823 | | | 26551.92 | 2055031 | | 0 | 120 | | 22391 | | 2055547 | | 6 | | 7 | 1 (4) | 22 |
|  | |  |  |  |  | | & | | Mid | 27924.36 | 2077905 | | | 27729.96 | 2074665 | | 102 |  | | 22467 | | 2077435 | | 5 | | 3 | 0 (0) | 210 |
|  | |  |  |  |  | | Uplink | | High | 29250 | 2099999 | | | 28476.72 | 2087111 | | 504 |  | | 22544 | | 2099611 | | 10 | | 2 | 1 (4) | 1020 |
|  | | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | CC3 | 100 | 120 | 66 | | Downlink | | Low | 26699.4 | 2057489 | | | 26651.88 | 2056697 | | 0 | 120 | | 22396 | | 2056987 | | 1 | | 2 | 0 (0) | 4 |
|  | |  |  |  |  | | & | | Mid | 28024.32 | 2079571 | | | 27829.92 | 2076331 | | 102 |  | | 22473 | | 2079163 | | 0 | | 2 | 1 (4) | 216 |
|  | |  |  |  |  | | Uplink | | High | 29349.96 | 2101665 | | | 28576.68 | 2088777 | | 504 |  | | 22550 | | 2101339 | | 5 | | 5 | 1 (4) | 1026 |
|  | | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | CC4 | 100 | 120 | 66 | | Downlink | | Low | 26799.36 | 2059155 | | | 26751.84 | 2058363 | | 0 | 120 | | 22402 | | 2058715 | | 8 | | 0 | 1 (4) | 8 |
|  | |  |  |  |  | | & | | Mid | 28124.28 | 2081237 | | | 27929.88 | 2077997 | | 102 |  | | 22479 | | 2080891 | | 7 | | 4 | 1 (4) | 220 |
|  | |  |  |  |  | | Uplink | | High | 29449.92 | 2103331 | | | 28676.64 | 2090443 | | 504 |  | | 22555 | | 2102779 | | 0 | | 0 | 0 (0) | 1008 |
| 100+100 | CC1 | | 100 | 120 | 66 | Downlink | | Low | | 26550 | | 2054999 | 26502.48 | | 2054207 | 0 | | 120 | | 22388 | 2054683 | | 10 | | 5 | | 1 (4) | 18 |
| +100+100 |  | |  |  |  | & | | Mid | | 27849.96 | | 2076665 | 27655.56 | | 2073425 | 102 | |  | | 22463 | 2076283 | | 1 | | 3 | | 1 (4) | 218 |
|  |  | |  |  |  | Uplink | | High | | 29150.04 | | 2098333 | 28376.76 | | 2085445 | 504 | |  | | 22538 | 2097883 | | 3 | | 0 | | 1 (4) | 1016 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | | 100 | 120 | 66 | Downlink | | Low | | 26649.96 | | 2056665 | 26602.44 | | 2055873 | 0 | | 120 | | 22393 | 2056123 | | 5 | | 0 | | 0 (0) | 0 |
|  |  | |  |  |  | & | | Mid | | 27949.92 | | 2078331 | 27755.52 | | 2075091 | 102 | |  | | 22469 | 2078011 | | 8 | | 5 | | 1 (4) | 222 |
|  |  | |  |  |  | Uplink | | High | | 29250 | | 2099999 | 28476.72 | | 2087111 | 504 | |  | | 22544 | 2099611 | | 10 | | 2 | | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | | 100 | 120 | 66 | Downlink | | Low | | 26749.92 | | 2058331 | 26702.4 | | 2057539 | 0 | | 120 | | 22399 | 2057851 | | 0 | | 3 | | 0 (0) | 6 |
|  |  | |  |  |  | & | | Mid | | 28049.88 | | 2079997 | 27855.48 | | 2076757 | 102 | |  | | 22474 | 2079451 | | 3 | | 0 | | 0 (0) | 204 |
|  |  | |  |  |  | Uplink | | High | | 29349.96 | | 2101665 | 28576.68 | | 2088777 | 504 | |  | | 22550 | 2101339 | | 5 | | 5 | | 1 (4) | 1026 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | | 100 | 120 | 66 | Downlink | | Low | | 26849.88 | | 2059997 | 26802.36 | | 2059205 | 0 | | 120 | | 22405 | 2059579 | | 7 | | 1 | | 1 (4) | 10 |
|  |  | |  |  |  | & | | Mid | | 28149.84 | | 2081663 | 27955.44 | | 2078423 | 102 | |  | | 22480 | 2081179 | | 10 | | 2 | | 0 (0) | 208 |
|  |  | |  |  |  | Uplink | | High | | 29449.92 | | 2103331 | 28676.64 | | 2090443 | 504 | |  | | 22555 | 2102779 | | 0 | | 0 | | 0 (0) | 1008 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.1.9 CA\_n257J

Editor’s note: CA\_n257J Test frequencies are FFS.

Table 4.3.1.2.3.1.9-1:Void

Table 4.3.1.2.3.1.9-2: NR Intra-Band contiguous CA configuration CA\_n257J, SCS=60 kHz, ΔFRaster 60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.1.9-3: Void

Table 4.3.1.2.3.1.9-4: NR Intra-Band contiguous CA configuration CA\_n257J, SCS=120 kHz, ΔFRaster 120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.1.10 CA\_n257K

Editor’s note: CA\_n257K Test frequencies are FFS.

Table 4.3.1.2.3.1.10-1: Void

Table 4.3.1.2.3.1.10-2: NR Intra-Band contiguous CA configuration CA\_n257K, SCS=60 kHz, ΔFRaster 60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.1.10-3: Void

Table 4.3.1.2.3.1.10-4: NR Intra-Band contiguous CA configuration CA\_n257K, SCS=120 kHz, ΔFRaster 120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.1.11 CA\_n257L

Editor’s note: CA\_n257L Test frequencies are FFS.

Table 4.3.1.2.3.1.11-1: Void

Table 4.3.1.2.3.1.11-2: NR Intra-Band contiguous CA configuration CA\_n257L, SCS=60 kHz, ΔFRaster 60 kHz, nominal channel

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.1.11-3: Void

Table 4.3.1.2.3.1.11-4: NR Intra-Band contiguous CA configuration CA\_n257L, SCS=120 kHz, ΔFRaster 120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.1.12 CA\_n257M

Editor’s note: CA\_n257M Test frequencies are FFS.

Table 4.3.1.2.3.1.12-1: Void

Table 4.3.1.2.3.1.12-2: NR Intra-Band contiguous CA configuration CA\_n257M, SCS=60 kHz, ΔFRaster 60 kHz, nominal channel

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.1.12-3: Void

Table 4.3.1.2.3.1.12-4: NR Intra-Band contiguous CA configuration CA\_n257M, SCS=120 kHz, ΔFRaster 120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | CORESET#1 Offset from  [RBs] | CORESET#0 Index (Offset  [RBs])  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

###### 4.3.1.2.3.2 NR Intra-band contiguous CA configurations for CA\_n258

4.3.1.2.3.2.1 CA\_n258B

Table 4.3.1.2.3.2.1-1: Void

Table 4.3.1.2.3.2.1-2: NR Intra-Band contiguous CA configuration CA\_n258B (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+400 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25505.04 | 2037583 | 102 |  | | 22338 | 2040283 | | 6 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 27083.04 | 2063883 | 26334.24 | 2051403 | 504 |  | | 22420 | 2063899 | | 8 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC1-CC2=216.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 400 | 120 | 264 | Downlink | Low | 24492 | 2020699 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25891.92 | 2044031 | 25554.96 | 2038415 | 102 |  | | 22341 | 2041147 | | 10 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27300 | 2067499 | 26384.16 | 2052235 | 504 |  | | 22423 | 2064763 | | 0 | | 4 | 1 (4) | 1024 |
| 100+400 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25480.56 | 2037175 | 102 |  | | 22337 | 2039995 | | 6 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27057.48 | 2063457 | 26284.2 | 2050569 | 504 |  | | 22417 | 2063035 | | 5 | | 1 | 1 (4) | 1018 |
|  | Channel spacing CC1-CC2=242.52 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 400 | 120 | 264 | Downlink | Low | 24542.52 | 2021541 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25917.48 | 2044457 | 25580.52 | 2038841 | 102 |  | | 22343 | 2041723 | | 1 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27300 | 2067499 | 26384.16 | 2052235 | 504 |  | | 22423 | 2064763 | | 0 | | 4 | 1 (4) | 1024 |
| 200+400 | CC1 | 200 | 120 | 132 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | | 22258 | 2017243 | | 7 | | 6 | 1 (4) | 20 |
|  |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25433.04 | 2036383 | 102 |  | | 22334 | 2039131 | | 6 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 27005.04 | 2062583 | 26184.24 | 2048903 | 504 |  | | 22411 | 2061307 | | 10 | | 2 | 0 (0) | 1012 |
|  | Channel spacing CC1-CC2=294.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 400 | 120 | 264 | Downlink | Low | 24645 | 2023249 | 24454.92 | 2020081 | 0 | 120 | | 22269 | 2020411 | | 9 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 25969.92 | 2045331 | 25632.96 | 2039715 | 102 |  | | 22346 | 2042587 | | 8 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 27300 | 2067499 | 26384.16 | 2052235 | 504 |  | | 22423 | 2064763 | | 0 | | 4 | 1 (4) | 1024 |
| 400+400 | CC1 | 400 | 120 | 264 | Downlink | Low | 24450 | 2019999 | 24259.92 | 2016831 | 0 | 120 | | 22258 | 2017243 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25338 | 2034799 | 102 |  | | 22329 | 2037691 | | 6 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 26900.04 | 2060833 | 25984.2 | 2045569 | 504 |  | | 22400 | 2058139 | | 9 | | 5 | 1 (4) | 1026 |
|  | Channel spacing CC1-CC2=399.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 400 | 120 | 264 | Downlink | Low | 24849.96 | 2026665 | 24659.88 | 2023497 | 0 | 120 | | 22281 | 2023867 | | 5 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 26074.92 | 2047081 | 25737.96 | 2041465 | 102 |  | | 22352 | 2044315 | | 9 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 27300 | 2067499 | 26384.16 | 2052235 | 504 |  | | 22423 | 2064763 | | 0 | | 4 | 1 (4) | 1024 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.2 CA\_n258C

FFS

4.3.1.2.3.2.3 CA\_n258D

Table 4.3.1.2.3.2.3-1: NR Intra-Band contiguous CA configuration CA\_n258D (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+200 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | | 120 | 22257 | | 2016955 | 4 | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25677.72 | 2040461 | 102 | |  | 22344 | | 2042011 | 2 | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 27278.04 | 2067133 | 26891.4 | 2060689 | 504 | |  | 22431 | | 2067067 | 6 | 7 | 0 (0) | 511 |
|  | Channel spacing CC1-CC2=121.92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24396.96 | 2019115 | 24301.92 | 2017531 | 0 | | 120 | 22260 | | 2017819 | 0 | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25896.84 | 2044113 | 25728.36 | 2041305 | 102 | |  | 22347 | | 2042875 | 10 | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 | |  | 22434 | | 2067931 | 2 | 1 | 1 (8) | 513 |
| 100+200 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | | 120 | 22257 | | 2016955 | 8 | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25653.96 | 2040065 | 102 | |  | 22343 | | 2041723 | 2 | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27252.48 | 2066707 | 26842.08 | 2059867 | 504 | |  | 22428 | | 2066203 | 0 | 4 | 0 (0) | 508 |
|  | Channel spacing CC1-CC2=147.48 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24447.48 | 2019957 | 24352.44 | 2018373 | 0 | | 120 | 22263 | | 2018683 | 10 | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25922.4 | 2044539 | 25753.92 | 2041731 | 102 | |  | 22349 | | 2043451 | 4 | 13 | 1 (8) | 123 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 | |  | 22434 | | 2067931 | 2 | 1 | 1 (8) | 513 |
| 200+200 | CC1 | 200 | 60 | 264 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | | 120 | 22258 | | 2017243 | 2 | 13 | 1 (8) | 21 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25606.44 | 2039273 | 102 | |  | 22340 | | 2040859 | 2 | 2 | 1 (8) | 112 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26742.12 | 2058201 | 504 | |  | 22423 | | 2064763 | 10 | 14 | 1 (8) | 526 |
|  | Channel spacing CC1-CC2=199.92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24549.96 | 2021665 | 24454.92 | 2020081 | 0 | | 120 | 22269 | | 2020411 | 6 | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25806.36 | 2042605 | 102 | |  | 22352 | | 2044315 | 6 | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 | |  | 22434 | | 2067931 | 2 | 1 | 1 (8) | 513 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.3-2: NR Intra-Band contiguous CA configuration CA\_n258D (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+200 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | 22257 | 2016955 | 8 | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25775.04 | 2042083 | 25605.12 | 2039251 | 102 |  | 22344 | 2042011 | 0 | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27278.04 | 2067133 | 26529.24 | 2054653 | 504 |  | 22431 | 2067067 | 3 | 3 | 0 (0) | 1014 |
|  | Channel spacing CC1-CC2=121.92 MHz (Note 1) | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24396.96 | 2019115 | 24301.92 | 2017531 | 0 | 120 | 22260 | 2017819 | 0 | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25896.96 | 2044115 | 25655.04 | 2040083 | 102 |  | 22347 | 2042875 | 4 | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | 22434 | 2067931 | 7 | 0 | 1 (4) | 1016 |
| 100+200 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | 22257 | 2016955 | 4 | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25775.04 | 2042083 | 25580.64 | 2038843 | 102 |  | 22343 | 2041723 | 0 | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27252.48 | 2066707 | 26479.2 | 2053819 | 504 |  | 22428 | 2066203 | 0 | 2 | 0 (0) | 1012 |
|  | Channel spacing CC1-CC2=147.48 MHz (Note 1) | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24447.48 | 2019957 | 24352.44 | 2018373 | 0 | 120 | 22263 | 2018683 | 11 | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25922.52 | 2044541 | 25680.6 | 2040509 | 102 |  | 22349 | 2043451 | 7 | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | 22434 | 2067931 | 7 | 0 | 1 (4) | 1016 |
| 200+200 | CC1 | 200 | 120 | 132 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | 22258 | 2017243 | 7 | 6 | 1 (4) | 20 |
|  |  |  |  |  | & | Mid | 25775.04 | 2042083 | 25533.12 | 2038051 | 102 |  | 22340 | 2040859 | 0 | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26379.24 | 2052153 | 504 |  | 22423 | 2064763 | 5 | 7 | 1 (4) | 1030 |
|  | Channel spacing CC1-CC2=199.92 MHz (Note 1) | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24549.96 | 2021665 | 24454.92 | 2020081 | 0 | 120 | 22269 | 2020411 | 9 | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 25974.96 | 2045415 | 25733.04 | 2041383 | 102 |  | 22352 | 2044315 | 2 | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | 22434 | 2067931 | 7 | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.4 CA\_n258E

Table 4.3.1.2.3.2.4-1: NR Intra-Band contiguous CA configuration CA\_n258E (PCC=CC1), SCS 60 kHz and frequency raster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 200 + 200 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | | 22257 | 2016955 | | 4 | | 2 | 0 (0) | 2 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25577.76 | 2038795 | 102 |  | | 22338 | 2040283 | | 0 | | 2 | 0 (0) | 104 |
|  |  |  |  |  | Uplink | High | 27078.12 | 2063801 | 26691.48 | 2057357 | 504 |  | | 22420 | 2063899 | | 2 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC1-CC2=121,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24396.96 | 2019115 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25796.88 | 2042447 | 25628.4 | 2039639 | 102 |  | | 22341 | 2041147 | | 8 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26742.12 | 2058201 | 504 |  | | 22423 | 2064763 | | 10 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 60 | 264 | Downlink | Low | 24596.88 | 2022447 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 4 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 25996.8 | 2045779 | 25828.32 | 2042971 | 102 |  | | 22353 | 2044603 | | 0 | | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 |  | | 22434 | 2067931 | | 2 | | 1 | 1 (8) | 513 |
| 100 + 200 + 200 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25554 | 2038399 | 102 |  | | 22337 | 2039995 | | 0 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 27052.56 | 2063375 | 26642.16 | 2056535 | 504 |  | | 22417 | 2063035 | | 8 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC1-CC2=147,48 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24447.48 | 2019957 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25822.44 | 2042873 | 25653.96 | 2040065 | 102 |  | | 22343 | 2041723 | | 2 | | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26742.12 | 2058201 | 504 |  | | 22423 | 2064763 | | 10 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 60 | 264 | Downlink | Low | 24647.4 | 2023289 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 2 | | 8 | 1 (8) | 16 |
|  |  |  |  |  | & | Mid | 26022.36 | 2046205 | 25853.88 | 2043397 | 102 |  | | 22354 | 2044891 | | 6 | | 2 | 0 (0) | 104 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 |  | | 22434 | 2067931 | | 2 | | 1 | 1 (8) | 513 |
| 200 + 200 + 200 | CC1 | 200 | 60 | 264 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | | 22258 | 2017243 | | 2 | | 13 | 1 (8) | 21 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25506.48 | 2037607 | 102 |  | | 22334 | 2039131 | | 0 | | 5 | 0 (0) | 107 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26542.2 | 2054869 | 504 |  | | 22411 | 2061307 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC1-CC2=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24549.96 | 2021665 | 24454.92 | 2020081 | 0 | 120 | | 22269 | 2020411 | | 6 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 25874.88 | 2043747 | 25706.4 | 2040939 | 102 |  | | 22346 | 2042587 | | 4 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26742.12 | 2058201 | 504 |  | | 22423 | 2064763 | | 10 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 60 | 264 | Downlink | Low | 24749.88 | 2024997 | 24654.84 | 2023413 | 0 | 120 | | 22281 | 2023867 | | 10 | | 9 | 1 (8) | 17 |
|  |  |  |  |  | & | Mid | 26074.8 | 2047079 | 25906.32 | 2044271 | 102 |  | | 22357 | 2045755 | | 8 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 |  | | 22434 | 2067931 | | 2 | | 1 | 1 (8) | 513 |
| 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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.4-2: NR Intra-Band contiguous CA configuration CA\_n258E (PCC=CC1), SCS 120 kHz and frequency raster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 200 + 200 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25505.04 | 2037583 | 102 |  | | 22338 | 2040283 | | 6 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 27078.12 | 2063801 | 26329.32 | 2051321 | 504 |  | | 22420 | 2063899 | | 1 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC1-CC2=121,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24396.96 | 2019115 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25796.88 | 2042447 | 25554.96 | 2038415 | 102 |  | | 22341 | 2041147 | | 10 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26379.24 | 2052153 | 504 |  | | 22423 | 2064763 | | 5 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 120 | 132 | Downlink | Low | 24596.88 | 2022447 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25996.8 | 2045779 | 25754.88 | 2041747 | 102 |  | | 22353 | 2044603 | | 0 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | | 22434 | 2067931 | | 7 | | 0 | 1 (4) | 1016 |
| 100 + 200 + 200 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25480.56 | 2037175 | 102 |  | | 22337 | 2039995 | | 6 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27052.56 | 2063375 | 26279.28 | 2050487 | 504 |  | | 22417 | 2063035 | | 10 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC1-CC2=147,48 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24447.48 | 2019957 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25822.44 | 2042873 | 25580.52 | 2038841 | 102 |  | | 22343 | 2041723 | | 1 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26379.24 | 2052153 | 504 |  | | 22423 | 2064763 | | 5 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 120 | 132 | Downlink | Low | 24647.4 | 2023289 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 1 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 26022.36 | 2046205 | 25780.44 | 2042173 | 102 |  | | 22354 | 2044891 | | 3 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | | 22434 | 2067931 | | 7 | | 0 | 1 (4) | 1016 |
| 200 + 200 + 200 | CC1 | 200 | 120 | 132 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | | 22258 | 2017243 | | 7 | | 6 | 1 (4) | 20 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25433.04 | 2036383 | 102 |  | | 22334 | 2039131 | | 6 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26179.32 | 2048821 | 504 |  | | 22411 | 2061307 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC1-CC2=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24549.96 | 2021665 | 24454.92 | 2020081 | 0 | 120 | | 22269 | 2020411 | | 9 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 25874.88 | 2043747 | 25632.96 | 2039715 | 102 |  | | 22346 | 2042587 | | 8 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26379.24 | 2052153 | 504 |  | | 22423 | 2064763 | | 5 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 120 | 132 | Downlink | Low | 24749.88 | 2024997 | 24654.84 | 2023413 | 0 | 120 | | 22281 | 2023867 | | 11 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 26074.8 | 2047079 | 25832.88 | 2043047 | 102 |  | | 22357 | 2045755 | | 10 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | | 22434 | 2067931 | | 7 | | 0 | 1 (4) | 1016 |
| 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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.5 CA\_n258F

Table 4.3.1.2.3.2.5-1: NR Intra-Band contiguous CA configuration CA\_n258F (PCC=CC1), SCS 60 kHz and frequency raster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 200 + 200 + 200 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | | 22257 | 2016955 | | 4 | | 2 | 0 (0) | 2 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25477.8 | 2037129 | 102 |  | | 22333 | 2038843 | | 10 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 26878.2 | 2060469 | 26491.56 | 2054025 | 504 |  | | 22408 | 2060443 | | 10 | | 2 | 1 (8) | 514 |
|  | Channel spacing CC1-CC2=121,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24396.96 | 2019115 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25696.92 | 2040781 | 25528.44 | 2037973 | 102 |  | | 22336 | 2039707 | | 6 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26542.2 | 2054869 | 504 |  | | 22411 | 2061307 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 60 | 264 | Downlink | Low | 24596.88 | 2022447 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 4 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 25896.84 | 2044113 | 25728.36 | 2041305 | 102 |  | | 22347 | 2042875 | | 10 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26742.12 | 2058201 | 504 |  | | 22423 | 2064763 | | 10 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC3-CC4=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 200 | 60 | 264 | Downlink | Low | 24796.8 | 2025779 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 8 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 26096.76 | 2047445 | 25928.28 | 2044637 | 102 |  | | 22359 | 2046331 | | 2 | | 11 | 1 (8) | 121 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 |  | | 22434 | 2067931 | | 2 | | 1 | 1 (8) | 513 |
| 100 + 200 + 200 + 200 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25454.04 | 2036733 | 102 |  | | 22331 | 2038267 | | 10 | | 5 | 0 (0) | 107 |
|  |  |  |  |  | Uplink | High | 26852.64 | 2060043 | 26442.24 | 2053203 | 504 |  | | 22405 | 2059579 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC1-CC2=147,48 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24447.48 | 2019957 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25722.48 | 2041207 | 25554 | 2038399 | 102 |  | | 22337 | 2039995 | | 0 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26542.2 | 2054869 | 504 |  | | 22411 | 2061307 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 60 | 264 | Downlink | Low | 24647.4 | 2023289 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 2 | | 8 | 1 (8) | 16 |
|  |  |  |  |  | & | Mid | 25922.4 | 2044539 | 25753.92 | 2041731 | 102 |  | | 22349 | 2043451 | | 4 | | 13 | 1 (8) | 123 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26742.12 | 2058201 | 504 |  | | 22423 | 2064763 | | 10 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC3-CC4=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 200 | 60 | 264 | Downlink | Low | 24847.32 | 2026621 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 6 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26122.32 | 2047871 | 25953.84 | 2045063 | 102 |  | | 22360 | 2046619 | | 8 | | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 |  | | 22434 | 2067931 | | 2 | | 1 | 1 (8) | 513 |
| 200 + 200 + 200 + 200 | CC1 | 200 | 60 | 264 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | | 22258 | 2017243 | | 2 | | 13 | 1 (8) | 21 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25406.52 | 2035941 | 102 |  | | 22329 | 2037691 | | 10 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 26800.2 | 2059169 | 26342.28 | 2051537 | 504 |  | | 22399 | 2057851 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC1-CC2=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 60 | 264 | Downlink | Low | 24549.96 | 2021665 | 24454.92 | 2020081 | 0 | 120 | | 22269 | 2020411 | | 6 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25606.44 | 2039273 | 102 |  | | 22340 | 2040859 | | 2 | | 2 | 1 (8) | 112 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26542.2 | 2054869 | 504 |  | | 22411 | 2061307 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 60 | 264 | Downlink | Low | 24749.88 | 2024997 | 24654.84 | 2023413 | 0 | 120 | | 22281 | 2023867 | | 10 | | 9 | 1 (8) | 17 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25806.36 | 2042605 | 102 |  | | 22352 | 2044315 | | 6 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26742.12 | 2058201 | 504 |  | | 22423 | 2064763 | | 10 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC3-CC4=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 200 | 60 | 264 | Downlink | Low | 24949.8 | 2028329 | 24854.76 | 2026745 | 0 | 120 | | 22292 | 2027035 | | 2 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 26174.76 | 2048745 | 26006.28 | 2045937 | 102 |  | | 22363 | 2047483 | | 10 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26942.04 | 2061533 | 504 |  | | 22434 | 2067931 | | 2 | | 1 | 1 (8) | 513 |
| 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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.5-2 NR Intra-Band contiguous CA configuration CA\_n258F (PCC=CC1), SCS 120 kHz and frequency raster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 200 + 200 + 200 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25405.08 | 2035917 | 102 |  | | 22333 | 2038843 | | 11 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 26878.2 | 2060469 | 26129.4 | 2047989 | 504 |  | | 22408 | 2060443 | | 11 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC1-CC2=121,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24396.96 | 2019115 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25696.92 | 2040781 | 25455 | 2036749 | 102 |  | | 22336 | 2039707 | | 3 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26179.32 | 2048821 | 504 |  | | 22411 | 2061307 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 120 | 132 | Downlink | Low | 24596.88 | 2022447 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25896.84 | 2044113 | 25654.92 | 2040081 | 102 |  | | 22347 | 2042875 | | 5 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26379.24 | 2052153 | 504 |  | | 22423 | 2064763 | | 5 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC3-CC4=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 200 | 120 | 132 | Downlink | Low | 24796.8 | 2025779 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 4 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 26096.76 | 2047445 | 25854.84 | 2043413 | 102 |  | | 22359 | 2046331 | | 7 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | | 22434 | 2067931 | | 7 | | 0 | 1 (4) | 1016 |
| 100 + 200 + 200 + 200 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25380.6 | 2035509 | 102 |  | | 22331 | 2038267 | | 11 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 26852.64 | 2060043 | 26079.36 | 2047155 | 504 |  | | 22405 | 2059579 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC1-CC2=147,48 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24447.48 | 2019957 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25722.48 | 2041207 | 25480.56 | 2037175 | 102 |  | | 22337 | 2039995 | | 6 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26179.32 | 2048821 | 504 |  | | 22411 | 2061307 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 120 | 132 | Downlink | Low | 24647.4 | 2023289 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 1 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 25922.4 | 2044539 | 25680.48 | 2040507 | 102 |  | | 22349 | 2043451 | | 8 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26379.24 | 2052153 | 504 |  | | 22423 | 2064763 | | 5 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC3-CC4=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 200 | 120 | 132 | Downlink | Low | 24847.32 | 2026621 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 3 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26122.32 | 2047871 | 25880.4 | 2043839 | 102 |  | | 22360 | 2046619 | | 10 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | | 22434 | 2067931 | | 7 | | 0 | 1 (4) | 1016 |
| 200 + 200 + 200 + 200 | CC1 | 200 | 120 | 132 | Downlink | Low | 24350.04 | 2018333 | 24255 | 2016749 | 0 | 120 | | 22258 | 2017243 | | 7 | | 6 | 1 (4) | 20 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25333.08 | 2034717 | 102 |  | | 22329 | 2037691 | | 11 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 26800.2 | 2059169 | 25979.4 | 2045489 | 504 |  | | 22399 | 2057851 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC1-CC2=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 200 | 120 | 132 | Downlink | Low | 24549.96 | 2021665 | 24454.92 | 2020081 | 0 | 120 | | 22269 | 2020411 | | 9 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25533 | 2038049 | 102 |  | | 22340 | 2040859 | | 1 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27000.12 | 2062501 | 26179.32 | 2048821 | 504 |  | | 22411 | 2061307 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 200 | 120 | 132 | Downlink | Low | 24749.88 | 2024997 | 24654.84 | 2023413 | 0 | 120 | | 22281 | 2023867 | | 11 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25732.92 | 2041381 | 102 |  | | 22352 | 2044315 | | 3 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27200.04 | 2065833 | 26379.24 | 2052153 | 504 |  | | 22423 | 2064763 | | 5 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC3-CC4=199,92 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 200 | 120 | 132 | Downlink | Low | 24949.8 | 2028329 | 24854.76 | 2026745 | 0 | 120 | | 22292 | 2027035 | | 1 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 26174.76 | 2048745 | 25932.84 | 2044713 | 102 |  | | 22363 | 2047483 | | 5 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27399.96 | 2069165 | 26579.16 | 2055485 | 504 |  | | 22434 | 2067931 | | 7 | | 0 | 1 (4) | 1016 |
| 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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.6 CA\_n258G

Table 4.3.1.2.3.2.6-1: NR Intra-Band contiguous CA configuration CA\_n258G (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | 22257 | 2016955 | 4 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 25824.96 | 2042915 | 25727.76 | 2041295 | 102 |  | 22347 | 2042875 | 8 | | 1 | 1 (8) | 111 |
|  |  |  |  |  | Uplink | High | 27375.6 | 2068759 | 26988.96 | 2062315 | 504 |  | 22437 | 2068795 | 0 | | 8 | 1 (8) | 520 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | 22260 | 2017819 | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25899.36 | 2044155 | 25778.4 | 2042139 | 102 |  | 22350 | 2043739 | 4 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | 22440 | 2069659 | 8 | | 9 | 1 (8) | 521 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | 22257 | 2016955 | 8 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25824.96 | 2042915 | 25704 | 2040899 | 102 |  | 22346 | 2042587 | 8 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | 22434 | 2067931 | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | 22263 | 2018683 | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25924.92 | 2044581 | 25803.96 | 2042565 | 102 |  | 22352 | 2044315 | 10 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | 22440 | 2069659 | 8 | | 9 | 1 (8) | 521 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.6-2: NR Intra-Band contiguous CA configuration CA\_n258G (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | 22257 | 2016955 | 8 | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25824.96 | 2042915 | 25655.04 | 2040083 | 102 |  | 22347 | 2042875 | 4 | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 27375.6 | 2068759 | 26626.8 | 2056279 | 504 |  | 22437 | 2068795 | 6 | 3 | 1 (4) | 1022 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | 22260 | 2017819 | 0 | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25899.36 | 2044155 | 25704.96 | 2040915 | 102 |  | 22350 | 2043739 | 8 | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | 22440 | 2069659 | 10 | 4 | 1 (4) | 1024 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | 22257 | 2016955 | 4 | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25824.96 | 2042915 | 25630.56 | 2039675 | 102 |  | 22346 | 2042587 | 4 | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | 22434 | 2067931 | 3 | 2 | 1 (4) | 1020 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | 22263 | 2018683 | 11 | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25924.92 | 2044581 | 25730.52 | 2041341 | 102 |  | 22352 | 2044315 | 11 | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | 22440 | 2069659 | 10 | 4 | 1 (4) | 1024 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.7 CA\_n258H

Table 4.3.1.2.3.2.7-1: NR Intra-Band contiguous CA configuration CA\_n258H (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | | *absoluteFrequencyPointA [ARFCN]* | | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | | 0 | | 120 | | 22257 | 2016955 | 4 | 2 | 0 (0) | 2 |
| +100 |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25677.72 | 2040461 | | 102 | |  | | 22344 | 2042011 | 2 | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 27275.64 | 2067093 | 26889 | 2060649 | | 504 | |  | | 22431 | 2067067 | 10 | 2 | 1 (8) | 514 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | | 0 | | 120 | 22260 | | 2017819 | 0 | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25849.32 | 2043321 | 25728.36 | 2041305 | | 102 | |  | 22347 | | 2042875 | 10 | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | | 504 | |  | 22434 | | 2067931 | 6 | 4 | 1 (8) | 516 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | | 0 | | 120 | 22266 | | 2019547 | 2 | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 25949.28 | 2044987 | 25828.32 | 2042971 | | 102 | |  | 22353 | | 2044603 | 0 | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | | 504 | |  | 22440 | | 2069659 | 8 | 9 | 1 (8) | 521 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | | 0 | | 120 | | 22257 | 2016955 | 8 | 0 | 0 (0) | 0 |
| +100 |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25653.96 | 2040065 | | 102 | |  | | 22343 | 2041723 | 2 | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | | 504 | |  | | 22428 | 2066203 | 4 | 7 | 0 (0) | 511 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | | 0 | | 120 | 22263 | | 2018683 | 10 | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25874.88 | 2043747 | 25753.92 | 2041731 | | 102 | |  | 22349 | | 2043451 | 4 | 13 | 1 (8) | 123 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | | 504 | |  | 22434 | | 2067931 | 6 | 4 | 1 (8) | 516 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | | 0 | | 120 | 22269 | | 2020411 | 0 | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25853.88 | 2043397 | | 102 | |  | 22354 | | 2044891 | 6 | 2 | 0 (0) | 104 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | | 504 | |  | 22440 | | 2069659 | 8 | 9 | 1 (8) | 521 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.7-2: NR Intra-Band contiguous CA configuration CA\_n258H (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | 8 | 0 | 0 (0) | 0 |
| +100 |  |  |  |  | & | Mid | 25775.04 | | 2042083 | 25605.12 | 2039251 | 102 |  | | 22344 | 2042011 | 0 | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27275.64 | | 2067093 | 26526.84 | 2054613 | 504 |  | | 22431 | 2067067 | 11 | 0 | 1 (4) | 1016 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24349.44 | | 2018323 | 24301.92 | 2017531 | 0 | 120 | 22260 | | 2017819 | 0 | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25849.44 | | 2043323 | 25655.04 | 2040083 | 102 |  | 22347 | | 2042875 | 4 | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 27350.04 | | 2068333 | 26576.76 | 2055445 | 504 |  | 22434 | | 2067931 | 3 | 2 | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24449.4 | | 2019989 | 24401.88 | 2019197 | 0 | 120 | 22266 | | 2019547 | 7 | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 25949.4 | | 2044989 | 25755 | 2041749 | 102 |  | 22353 | | 2044603 | 11 | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 27450 | | 2069999 | 26676.72 | 2057111 | 504 |  | 22440 | | 2069659 | 10 | 4 | 1 (4) | 1024 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | 4 | 0 | 0 (0) | 0 |
| +100 |  |  |  |  | & | Mid | 25775.04 | | 2042083 | 25580.64 | 2038843 | 102 |  | | 22343 | 2041723 | 0 | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27250.08 | | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | 8 | 3 | 0 (0) | 1014 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24399.96 | | 2019165 | 24352.44 | 2018373 | 0 | 120 | 22263 | | 2018683 | 11 | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25875 | | 2043749 | 25680.6 | 2040509 | 102 |  | 22349 | | 2043451 | 7 | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27350.04 | | 2068333 | 26576.76 | 2055445 | 504 |  | 22434 | | 2067931 | 3 | 2 | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24499.92 | | 2020831 | 24452.4 | 2020039 | 0 | 120 | 22269 | | 2020411 | 6 | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 25974.96 | | 2045415 | 25780.56 | 2042175 | 102 |  | 22354 | | 2044891 | 2 | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27450 | | 2069999 | 26676.72 | 2057111 | 504 |  | 22440 | | 2069659 | 10 | 4 | 1 (4) | 1024 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.8 CA\_n258I

Table 4.3.1.2.3.2.8-1: NR Intra-Band contiguous CA configuration CA\_n258I (PCC=CC1), SCS 60 kHz and frequency raster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | | 22257 | 2016955 | | 4 | | 2 | 0 (0) | 2 |
| (0) |  |  |  |  | & | Mid | 25725 | 2041249 | 25627.8 | 2039629 | 102 |  | | 22341 | 2041147 | | 6 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 27175.68 | 2065427 | 26789.04 | 2058983 | 504 |  | | 22425 | 2065339 | | 8 | | 5 | 0 (0) | 509 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25799.4 | 2042489 | 25678.44 | 2040473 | 102 |  | | 22344 | 2042011 | | 2 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 2 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 25899.36 | 2044155 | 25778.4 | 2042139 | 102 |  | | 22350 | 2043739 | | 4 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 4 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 25999.32 | 2045821 | 25878.36 | 2043805 | 102 |  | | 22356 | 2045467 | | 6 | | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 100 + 100 + 100 + 100 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25725 | 2041249 | 25604.04 | 2039233 | 102 |  | | 22340 | 2040859 | | 6 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25824.96 | 2042915 | 25704 | 2040899 | 102 |  | | 22346 | 2042587 | | 8 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 0 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 25924.92 | 2044581 | 25803.96 | 2042565 | 102 |  | | 22352 | 2044315 | | 10 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 2 | | 8 | 1 (8) | 16 |
|  |  |  |  |  | & | Mid | 26024.88 | 2046247 | 25903.92 | 2044231 | 102 |  | | 22357 | 2045755 | | 0 | | 5 | 0 (0) | 107 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.8-2: NR Intra-Band contiguous CA configuration CA\_n258I (PCC=CC1), SCS 120 kHz and frequency raster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25725 | 2041249 | 25555.08 | 2038417 | 102 |  | | 22341 | 2041147 | | 9 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27175.68 | 2065427 | 26426.88 | 2052947 | 504 |  | | 22425 | 2065339 | | 4 | | 2 | 0 (0) | 1012 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25799.4 | 2042489 | 25605 | 2039249 | 102 |  | | 22344 | 2042011 | | 1 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 7 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 25899.36 | 2044155 | 25704.96 | 2040915 | 102 |  | | 22350 | 2043739 | | 8 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25999.32 | 2045821 | 25804.92 | 2042581 | 102 |  | | 22356 | 2045467 | | 3 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 100 + 100 + 100 + 100 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25725 | 2041249 | 25530.6 | 2038009 | 102 |  | | 22340 | 2040859 | | 9 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25824.96 | 2042915 | 25630.56 | 2039675 | 102 |  | | 22346 | 2042587 | | 4 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 6 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 25924.92 | 2044581 | 25730.52 | 2041341 | 102 |  | | 22352 | 2044315 | | 11 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 1 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 26024.88 | 2046247 | 25830.48 | 2043007 | 102 |  | | 22357 | 2045755 | | 6 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.9 CA\_n258J

Table 4.3.1.2.3.2.9-1: NR Intra-Band contiguous CA configuration CA\_n258J (PCC=CC1), SCS 60 kHz and frequency raster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 + 100 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | | 22257 | 2016955 | | 4 | | 2 | 0 (0) | 2 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25577.76 | 2038795 | 102 |  | | 22338 | 2040283 | | 0 | | 2 | 0 (0) | 104 |
|  |  |  |  |  | Uplink | High | 27075.72 | 2063761 | 26689.08 | 2057317 | 504 |  | | 22419 | 2063611 | | 6 | | 0 | 0 (0) | 504 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25749.36 | 2041655 | 25628.4 | 2039639 | 102 |  | | 22341 | 2041147 | | 8 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 2 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 25849.32 | 2043321 | 25728.36 | 2041305 | 102 |  | | 22347 | 2042875 | | 10 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 4 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 25949.28 | 2044987 | 25828.32 | 2042971 | 102 |  | | 22353 | 2044603 | | 0 | | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 6 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 26049.24 | 2046653 | 25928.28 | 2044637 | 102 |  | | 22359 | 2046331 | | 2 | | 11 | 1 (8) | 121 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25554 | 2038399 | 102 |  | | 22337 | 2039995 | | 0 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26639.76 | 2056495 | 504 |  | | 22417 | 2063035 | | 0 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25653.96 | 2040065 | 102 |  | | 22343 | 2041723 | | 2 | | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 0 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 25874.88 | 2043747 | 25753.92 | 2041731 | 102 |  | | 22349 | 2043451 | | 4 | | 13 | 1 (8) | 123 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 2 | | 8 | 1 (8) | 16 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25853.88 | 2043397 | 102 |  | | 22354 | 2044891 | | 6 | | 2 | 0 (0) | 104 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 4 | | 13 | 1 (8) | 21 |
|  |  |  |  |  | & | Mid | 26074.8 | 2047079 | 25953.84 | 2045063 | 102 |  | | 22360 | 2046619 | | 8 | | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.9-2: NR Intra-Band contiguous CA configuration CA\_n258J (PCC=CC1), SCS 120 kHz and frequency raster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 + 100 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25505.04 | 2037583 | 102 |  | | 22338 | 2040283 | | 6 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 27075.72 | 2063761 | 26326.92 | 2051281 | 504 |  | | 22420 | 2063899 | | 9 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25749.36 | 2041655 | 25554.96 | 2038415 | 102 |  | | 22341 | 2041147 | | 10 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 7 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 25849.32 | 2043321 | 25654.92 | 2040081 | 102 |  | | 22347 | 2042875 | | 5 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25949.28 | 2044987 | 25754.88 | 2041747 | 102 |  | | 22353 | 2044603 | | 0 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 9 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 26049.24 | 2046653 | 25854.84 | 2043413 | 102 |  | | 22359 | 2046331 | | 7 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25480.56 | 2037175 | 102 |  | | 22337 | 2039995 | | 6 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26276.88 | 2050447 | 504 |  | | 22417 | 2063035 | | 6 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25580.52 | 2038841 | 102 |  | | 22343 | 2041723 | | 1 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 6 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 25874.88 | 2043747 | 25680.48 | 2040507 | 102 |  | | 22349 | 2043451 | | 8 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 1 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25780.44 | 2042173 | 102 |  | | 22354 | 2044891 | | 3 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 8 | | 6 | 1 (4) | 20 |
|  |  |  |  |  | & | Mid | 26074.8 | 2047079 | 25880.4 | 2043839 | 102 |  | | 22360 | 2046619 | | 10 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.10 CA\_n258K

Table 4.3.1.2.3.2.10-1: NR Intra-Band contiguous CA configuration CA\_n258K (PCC=CC1), SCS 60 kHz and frequency raster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination  (BCS) | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | carrierBandwidth  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | absoluteFrequencyPointA [ARFCN] | offsetToCarrier [Carrier PRBs] | | SS block SCS  [kHz] | GSCN | | absoluteFrequencySSB  [ARFCN] | |  | Offset carrier CORESET#0 [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50 + 100 + 100 + 100 + 100 + 100 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | | 22257 | 2016955 | | 4 | | 2 | 0 (0) | 2 |
| (0) |  |  |  |  | & | Mid | 25624.92 | 2039581 | 25527.72 | 2037961 | 102 |  | | 22336 | 2039707 | | 6 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 26975.76 | 2062095 | 26589.12 | 2055651 | 504 |  | | 22414 | 2062171 | | 4 | | 11 | 1 (8) | 523 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25699.32 | 2040821 | 25578.36 | 2038805 | 102 |  | | 22338 | 2040283 | | 2 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26639.76 | 2056495 | 504 |  | | 22417 | 2063035 | | 0 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 2 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 25799.28 | 2042487 | 25678.32 | 2040471 | 102 |  | | 22344 | 2042011 | | 4 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 4 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 25899.24 | 2044153 | 25778.28 | 2042137 | 102 |  | | 22350 | 2043739 | | 6 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 6 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 25999.2 | 2045819 | 25878.24 | 2043803 | 102 |  | | 22356 | 2045467 | | 8 | | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 24749.28 | 2024987 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 8 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 26099.16 | 2047485 | 25978.2 | 2045469 | 102 |  | | 22362 | 2047195 | | 10 | | 13 | 1 (8) | 123 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25624.92 | 2039581 | 25503.96 | 2037565 | 102 |  | | 22334 | 2039131 | | 6 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26539.8 | 2054829 | 504 |  | | 22411 | 2061307 | | 10 | | 7 | 1 (8) | 519 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25724.88 | 2041247 | 25603.92 | 2039231 | 102 |  | | 22340 | 2040859 | | 8 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26639.76 | 2056495 | 504 |  | | 22417 | 2063035 | | 0 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 0 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 25824.84 | 2042913 | 25703.88 | 2040897 | 102 |  | | 22346 | 2042587 | | 10 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 2 | | 8 | 1 (8) | 16 |
|  |  |  |  |  | & | Mid | 25924.8 | 2044579 | 25803.84 | 2042563 | 102 |  | | 22351 | 2044027 | | 0 | | 0 | 0 (0) | 102 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 4 | | 13 | 1 (8) | 21 |
|  |  |  |  |  | & | Mid | 26024.76 | 2046245 | 25903.8 | 2044229 | 102 |  | | 22357 | 2045755 | | 2 | | 5 | 0 (0) | 107 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 24799.8 | 2025829 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 6 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26124.72 | 2047911 | 26003.76 | 2045895 | 102 |  | | 22363 | 2047483 | | 4 | | 2 | 1 (8) | 112 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.10-2: NR Intra-Band contiguous CA configuration CA\_n258K (PCC=CC1), SCS 120 kHz and frequency raster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination  (BCS) | CC  Note 2 | CBW  [MHz] | SCS  [kHz] | carrierBandwidth  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | absoluteFrequencyPointA [ARFCN] | offsetToCarrier [Carrier PRBs] | | SS block SCS  [kHz] | GSCN | | absoluteFrequencySSB  [ARFCN] | |  | Offset carrier CORESET#0 [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50 + 100 + 100 + 100 + 100 + 100 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25625.04 | 2039583 | 25455.12 | 2036751 | 102 |  | | 22336 | 2039707 | | 2 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 26975.76 | 2062095 | 26226.96 | 2049615 | 504 |  | | 22414 | 2062171 | | 2 | | 5 | 1 (4) | 1026 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25699.44 | 2040823 | 25505.04 | 2037583 | 102 |  | | 22338 | 2040283 | | 6 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26276.88 | 2050447 | 504 |  | | 22417 | 2063035 | | 6 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 7 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 25799.4 | 2042489 | 25605 | 2039249 | 102 |  | | 22344 | 2042011 | | 1 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25899.36 | 2044155 | 25704.96 | 2040915 | 102 |  | | 22350 | 2043739 | | 8 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 9 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 25999.32 | 2045821 | 25804.92 | 2042581 | 102 |  | | 22356 | 2045467 | | 3 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 24749.28 | 2024987 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 4 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 26099.28 | 2047487 | 25904.88 | 2044247 | 102 |  | | 22362 | 2047195 | | 10 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25625.04 | 2039583 | 25430.64 | 2036343 | 102 |  | | 22334 | 2039131 | | 2 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26176.92 | 2048781 | 504 |  | | 22411 | 2061307 | | 11 | | 3 | 1 (4) | 1022 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25725 | 2041249 | 25530.6 | 2038009 | 102 |  | | 22340 | 2040859 | | 9 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26276.88 | 2050447 | 504 |  | | 22417 | 2063035 | | 6 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 6 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 25824.96 | 2042915 | 25630.56 | 2039675 | 102 |  | | 22346 | 2042587 | | 4 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 1 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 25924.92 | 2044581 | 25730.52 | 2041341 | 102 |  | | 22352 | 2044315 | | 11 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 8 | | 6 | 1 (4) | 20 |
|  |  |  |  |  | & | Mid | 26024.88 | 2046247 | 25830.48 | 2043007 | 102 |  | | 22357 | 2045755 | | 6 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 24799.8 | 2025829 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 3 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26124.84 | 2047913 | 25930.44 | 2044673 | 102 |  | | 22363 | 2047483 | | 1 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.11 CA\_n258L

Table 4.3.1.2.3.2.11-1: NR Intra-Band contiguous CA configuration CA\_n258L (PCC=CC1), SCS 60 kHz and frequency raster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | | 22257 | 2016955 | | 4 | | 2 | 0 (0) | 2 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25477.8 | 2037129 | 102 |  | | 22333 | 2038843 | | 10 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 26875.8 | 2060429 | 26489.16 | 2053985 | 504 |  | | 22408 | 2060443 | | 2 | | 6 | 1 (8) | 518 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25649.4 | 2039989 | 25528.44 | 2037973 | 102 |  | | 22336 | 2039707 | | 6 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26539.8 | 2054829 | 504 |  | | 22411 | 2061307 | | 10 | | 7 | 1 (8) | 519 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 2 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 25749.36 | 2041655 | 25628.4 | 2039639 | 102 |  | | 22341 | 2041147 | | 8 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26639.76 | 2056495 | 504 |  | | 22417 | 2063035 | | 0 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 4 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 25849.32 | 2043321 | 25728.36 | 2041305 | 102 |  | | 22347 | 2042875 | | 10 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 6 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 25949.28 | 2044987 | 25828.32 | 2042971 | 102 |  | | 22353 | 2044603 | | 0 | | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 24749.28 | 2024987 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 8 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 26049.24 | 2046653 | 25928.28 | 2044637 | 102 |  | | 22359 | 2046331 | | 2 | | 11 | 1 (8) | 121 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 24849.24 | 2026653 | 24801.72 | 2025861 | 0 | 120 | | 22289 | 2026171 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 26149.2 | 2048319 | 26028.24 | 2046303 | 102 |  | | 22364 | 2047771 | | 4 | | 0 | 0 (0) | 102 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 100 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25454.04 | 2036733 | 102 |  | | 22331 | 2038267 | | 10 | | 5 | 0 (0) | 107 |
|  |  |  |  |  | Uplink | High | 26850.24 | 2060003 | 26439.84 | 2053163 | 504 |  | | 22405 | 2059579 | | 8 | | 2 | 1 (8) | 514 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25554 | 2038399 | 102 |  | | 22337 | 2039995 | | 0 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26539.8 | 2054829 | 504 |  | | 22411 | 2061307 | | 10 | | 7 | 1 (8) | 519 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 0 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25653.96 | 2040065 | 102 |  | | 22343 | 2041723 | | 2 | | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26639.76 | 2056495 | 504 |  | | 22417 | 2063035 | | 0 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 2 | | 8 | 1 (8) | 16 |
|  |  |  |  |  | & | Mid | 25874.88 | 2043747 | 25753.92 | 2041731 | 102 |  | | 22349 | 2043451 | | 4 | | 13 | 1 (8) | 123 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 4 | | 13 | 1 (8) | 21 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25853.88 | 2043397 | 102 |  | | 22354 | 2044891 | | 6 | | 2 | 0 (0) | 104 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 24799.8 | 2025829 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 6 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26074.8 | 2047079 | 25953.84 | 2045063 | 102 |  | | 22360 | 2046619 | | 8 | | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 24899.76 | 2027495 | 24852.24 | 2026703 | 0 | 120 | | 22292 | 2027035 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 26174.76 | 2048745 | 26053.8 | 2046729 | 102 |  | | 22366 | 2048347 | | 10 | | 4 | 1 (8) | 114 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.11-2: NR Intra-Band contiguous CA configuration CA\_n258L (PCC=CC1), SCS 120 kHz and frequency raster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25405.08 | 2035917 | 102 |  | | 22333 | 2038843 | | 11 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 26875.8 | 2060429 | 26127 | 2047949 | 504 |  | | 22408 | 2060443 | | 7 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25649.4 | 2039989 | 25455 | 2036749 | 102 |  | | 22336 | 2039707 | | 3 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26176.92 | 2048781 | 504 |  | | 22411 | 2061307 | | 11 | | 3 | 1 (4) | 1022 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 7 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 25749.36 | 2041655 | 25554.96 | 2038415 | 102 |  | | 22341 | 2041147 | | 10 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26276.88 | 2050447 | 504 |  | | 22417 | 2063035 | | 6 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25849.32 | 2043321 | 25654.92 | 2040081 | 102 |  | | 22347 | 2042875 | | 5 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 9 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 25949.28 | 2044987 | 25754.88 | 2041747 | 102 |  | | 22353 | 2044603 | | 0 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 24749.28 | 2024987 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 4 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 26049.24 | 2046653 | 25854.84 | 2043413 | 102 |  | | 22359 | 2046331 | | 7 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 24849.24 | 2026653 | 24801.72 | 2025861 | 0 | 120 | | 22289 | 2026171 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 26149.2 | 2048319 | 25954.8 | 2045079 | 102 |  | | 22364 | 2047771 | | 2 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 100 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25575 | 2038749 | 25380.6 | 2035509 | 102 |  | | 22331 | 2038267 | | 11 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 26850.24 | 2060003 | 26076.96 | 2047115 | 504 |  | | 22405 | 2059579 | | 4 | | 1 | 1 (4) | 1018 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25674.96 | 2040415 | 25480.56 | 2037175 | 102 |  | | 22337 | 2039995 | | 6 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26176.92 | 2048781 | 504 |  | | 22411 | 2061307 | | 11 | | 3 | 1 (4) | 1022 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 6 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 25774.92 | 2042081 | 25580.52 | 2038841 | 102 |  | | 22343 | 2041723 | | 1 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26276.88 | 2050447 | 504 |  | | 22417 | 2063035 | | 6 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 1 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 25874.88 | 2043747 | 25680.48 | 2040507 | 102 |  | | 22349 | 2043451 | | 8 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 8 | | 6 | 1 (4) | 20 |
|  |  |  |  |  | & | Mid | 25974.84 | 2045413 | 25780.44 | 2042173 | 102 |  | | 22354 | 2044891 | | 3 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 24799.8 | 2025829 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 3 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26074.8 | 2047079 | 25880.4 | 2043839 | 102 |  | | 22360 | 2046619 | | 10 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 24899.76 | 2027495 | 24852.24 | 2026703 | 0 | 120 | | 22292 | 2027035 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 26174.76 | 2048745 | 25980.36 | 2045505 | 102 |  | | 22366 | 2048347 | | 5 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.2.12 CA\_n258M

Table 4.3.1.2.3.2.12-1: NR Intra-Band contiguous CA configuration CA\_n258M (PCC=CC1), SCS 60 kHz and frequency raster 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 50 | 60 | 66 | Downlink | Low | 24275.04 | 2017083 | 24251.28 | 2016687 | 0 | 120 | | 22257 | 2016955 | | 4 | | 2 | 0 (0) | 2 |
| (0) |  |  |  |  | & | Mid | 25524.96 | 2037915 | 25427.76 | 2036295 | 102 |  | | 22330 | 2037979 | | 4 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 26775.84 | 2058763 | 26389.2 | 2052319 | 504 |  | | 22402 | 2058715 | | 0 | | 1 | 1 (8) | 513 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25599.36 | 2039155 | 25478.4 | 2037139 | 102 |  | | 22333 | 2038843 | | 0 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 26850.24 | 2060003 | 26439.84 | 2053163 | 504 |  | | 22405 | 2059579 | | 8 | | 2 | 1 (8) | 514 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 2 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 25699.32 | 2040821 | 25578.36 | 2038805 | 102 |  | | 22338 | 2040283 | | 2 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26539.8 | 2054829 | 504 |  | | 22411 | 2061307 | | 10 | | 7 | 1 (8) | 519 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 4 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 25799.28 | 2042487 | 25678.32 | 2040471 | 102 |  | | 22344 | 2042011 | | 4 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26639.76 | 2056495 | 504 |  | | 22417 | 2063035 | | 0 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 6 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 25899.24 | 2044153 | 25778.28 | 2042137 | 102 |  | | 22350 | 2043739 | | 6 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 24749.28 | 2024987 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 8 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25999.2 | 2045819 | 25878.24 | 2043803 | 102 |  | | 22356 | 2045467 | | 8 | | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 24849.24 | 2026653 | 24801.72 | 2025861 | 0 | 120 | | 22289 | 2026171 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 26099.16 | 2047485 | 25978.2 | 2045469 | 102 |  | | 22362 | 2047195 | | 10 | | 13 | 1 (8) | 123 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC7-CC8=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 60 | 132 | Downlink | Low | 24949.2 | 2028319 | 24901.68 | 2027527 | 0 | 120 | | 22295 | 2027899 | | 0 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 26199.12 | 2049151 | 26078.16 | 2047135 | 102 |  | | 22367 | 2048635 | | 0 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 60 | 132 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25524.96 | 2037915 | 25404 | 2035899 | 102 |  | | 22328 | 2037403 | | 4 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 26750.28 | 2058337 | 26339.88 | 2051497 | 504 |  | | 22399 | 2057851 | | 6 | | 5 | 0 (0) | 509 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 10 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 25624.92 | 2039581 | 25503.96 | 2037565 | 102 |  | | 22334 | 2039131 | | 6 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 26850.24 | 2060003 | 26439.84 | 2053163 | 504 |  | | 22405 | 2059579 | | 8 | | 2 | 1 (8) | 514 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 0 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 25724.88 | 2041247 | 25603.92 | 2039231 | 102 |  | | 22340 | 2040859 | | 8 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26539.8 | 2054829 | 504 |  | | 22411 | 2061307 | | 10 | | 7 | 1 (8) | 519 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 2 | | 8 | 1 (8) | 16 |
|  |  |  |  |  | & | Mid | 25824.84 | 2042913 | 25703.88 | 2040897 | 102 |  | | 22346 | 2042587 | | 10 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26639.76 | 2056495 | 504 |  | | 22417 | 2063035 | | 0 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 4 | | 13 | 1 (8) | 21 |
|  |  |  |  |  | & | Mid | 25924.8 | 2044579 | 25803.84 | 2042563 | 102 |  | | 22351 | 2044027 | | 0 | | 0 | 0 (0) | 102 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26739.72 | 2058161 | 504 |  | | 22422 | 2064475 | | 2 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 24799.8 | 2025829 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 6 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26024.76 | 2046245 | 25903.8 | 2044229 | 102 |  | | 22357 | 2045755 | | 2 | | 5 | 0 (0) | 107 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26839.68 | 2059827 | 504 |  | | 22428 | 2066203 | | 4 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 24899.76 | 2027495 | 24852.24 | 2026703 | 0 | 120 | | 22292 | 2027035 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 26124.72 | 2047911 | 26003.76 | 2045895 | 102 |  | | 22363 | 2047483 | | 4 | | 2 | 1 (8) | 112 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26939.64 | 2061493 | 504 |  | | 22434 | 2067931 | | 6 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC7-CC8=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 60 | 132 | Downlink | Low | 24999.72 | 2029161 | 24952.2 | 2028369 | 0 | 120 | | 22298 | 2028763 | | 10 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 26224.68 | 2049577 | 26103.72 | 2047561 | 102 |  | | 22369 | 2049211 | | 6 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 27039.6 | 2063159 | 504 |  | | 22440 | 2069659 | | 8 | | 9 | 1 (8) | 521 |
| 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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.2.12-2: NR Intra-Band contiguous CA configuration CA\_n258M (PCC=CC1), SCS 120 kHz and frequency raster 120 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW combination**  **(BCS)** | **CC**  **Note 2** | **CBW**  **[MHz]** | **SCS**  **[kHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | | **SS block SCS**  **[kHz]** | **GSCN** | | **absoluteFrequencySSB**  **[ARFCN]** | |  | **Offset carrier CORESET#0 [RBs]**  **Note 3** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 4** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 4** |
| 50 + 100 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 50 | 120 | 32 | Downlink | Low | 24275.04 | 2017083 | 24252 | 2016699 | 0 | 120 | | 22257 | 2016955 | | 8 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25524.96 | 2037915 | 25355.04 | 2035083 | 102 |  | | 22330 | 2037979 | | 8 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 26775.84 | 2058763 | 26027.04 | 2046283 | 504 |  | | 22402 | 2058715 | | 0 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC1-CC2=74,4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24349.44 | 2018323 | 24301.92 | 2017531 | 0 | 120 | | 22260 | 2017819 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25599.36 | 2039155 | 25404.96 | 2035915 | 102 |  | | 22333 | 2038843 | | 0 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 26850.24 | 2060003 | 26076.96 | 2047115 | 504 |  | | 22405 | 2059579 | | 4 | | 1 | 1 (4) | 1018 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24449.4 | 2019989 | 24401.88 | 2019197 | 0 | 120 | | 22266 | 2019547 | | 7 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 25699.32 | 2040821 | 25504.92 | 2037581 | 102 |  | | 22338 | 2040283 | | 7 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26176.92 | 2048781 | 504 |  | | 22411 | 2061307 | | 11 | | 3 | 1 (4) | 1022 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24549.36 | 2021655 | 24501.84 | 2020863 | 0 | 120 | | 22272 | 2021275 | | 2 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 25799.28 | 2042487 | 25604.88 | 2039247 | 102 |  | | 22344 | 2042011 | | 2 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26276.88 | 2050447 | 504 |  | | 22417 | 2063035 | | 6 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24649.32 | 2023321 | 24601.8 | 2022529 | 0 | 120 | | 22278 | 2023003 | | 9 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 25899.24 | 2044153 | 25704.84 | 2040913 | 102 |  | | 22350 | 2043739 | | 9 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 24749.28 | 2024987 | 24701.76 | 2024195 | 0 | 120 | | 22283 | 2024443 | | 4 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 25999.2 | 2045819 | 25804.8 | 2042579 | 102 |  | | 22356 | 2045467 | | 4 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 24849.24 | 2026653 | 24801.72 | 2025861 | 0 | 120 | | 22289 | 2026171 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 26099.16 | 2047485 | 25904.76 | 2044245 | 102 |  | | 22362 | 2047195 | | 11 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC7-CC8=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 120 | 66 | Downlink | Low | 24949.2 | 2028319 | 24901.68 | 2027527 | 0 | 120 | | 22295 | 2027899 | | 6 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 26199.12 | 2049151 | 26004.72 | 2045911 | 102 |  | | 22367 | 2048635 | | 6 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 | CC1 | 100 | 120 | 66 | Downlink | Low | 24300 | 2017499 | 24252.48 | 2016707 | 0 | 120 | | 22257 | 2016955 | | 4 | | 0 | 0 (0) | 0 |
| (0) |  |  |  |  | & | Mid | 25524.96 | 2037915 | 25330.56 | 2034675 | 102 |  | | 22328 | 2037403 | | 8 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 26750.28 | 2058337 | 25977 | 2045449 | 504 |  | | 22399 | 2057851 | | 9 | | 2 | 0 (0) | 1012 |
|  | Channel spacing CC1-CC2=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 24399.96 | 2019165 | 24352.44 | 2018373 | 0 | 120 | | 22263 | 2018683 | | 11 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 25624.92 | 2039581 | 25430.52 | 2036341 | 102 |  | | 22334 | 2039131 | | 3 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 26850.24 | 2060003 | 26076.96 | 2047115 | 504 |  | | 22405 | 2059579 | | 4 | | 1 | 1 (4) | 1018 |
|  | Channel spacing CC2-CC3=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 24499.92 | 2020831 | 24452.4 | 2020039 | 0 | 120 | | 22269 | 2020411 | | 6 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 25724.88 | 2041247 | 25530.48 | 2038007 | 102 |  | | 22340 | 2040859 | | 10 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 26950.2 | 2061669 | 26176.92 | 2048781 | 504 |  | | 22411 | 2061307 | | 11 | | 3 | 1 (4) | 1022 |
|  | Channel spacing CC3-CC4=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 24599.88 | 2022497 | 24552.36 | 2021705 | 0 | 120 | | 22275 | 2022139 | | 1 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 25824.84 | 2042913 | 25630.44 | 2039673 | 102 |  | | 22346 | 2042587 | | 5 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 27050.16 | 2063335 | 26276.88 | 2050447 | 504 |  | | 22417 | 2063035 | | 6 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC4-CC5=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 24699.84 | 2024163 | 24652.32 | 2023371 | 0 | 120 | | 22281 | 2023867 | | 8 | | 6 | 1 (4) | 20 |
|  |  |  |  |  | & | Mid | 25924.8 | 2044579 | 25730.4 | 2041339 | 102 |  | | 22351 | 2044027 | | 0 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 27150.12 | 2065001 | 26376.84 | 2052113 | 504 |  | | 22422 | 2064475 | | 1 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC5-CC6=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 24799.8 | 2025829 | 24752.28 | 2025037 | 0 | 120 | | 22286 | 2025307 | | 3 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 26024.76 | 2046245 | 25830.36 | 2043005 | 102 |  | | 22357 | 2045755 | | 7 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 27250.08 | 2066667 | 26476.8 | 2053779 | 504 |  | | 22428 | 2066203 | | 8 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC6-CC7=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 24899.76 | 2027495 | 24852.24 | 2026703 | 0 | 120 | | 22292 | 2027035 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 26124.72 | 2047911 | 25930.32 | 2044671 | 102 |  | | 22363 | 2047483 | | 2 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 27350.04 | 2068333 | 26576.76 | 2055445 | 504 |  | | 22434 | 2067931 | | 3 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC7-CC8=99,96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 120 | 66 | Downlink | Low | 24999.72 | 2029161 | 24952.2 | 2028369 | 0 | 120 | | 22298 | 2028763 | | 5 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 26224.68 | 2049577 | 26030.28 | 2046337 | 102 |  | | 22369 | 2049211 | | 9 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 27450 | 2069999 | 26676.72 | 2057111 | 504 |  | | 22440 | 2069659 | | 10 | | 4 | 1 (4) | 1024 |
| 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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

###### 4.3.1.2.3.3 FFS

###### 4.3.1.2.3.4 NR Intra-band contiguous CA configurations for CA\_n260

4.3.1.2.3.4.1 CA\_n260B

Editor’s note: CA\_n260B Test frequencies are FFS.

Table 4.3.1.2.3.4.1-1: NR Intra-Band contiguous CA configuration CA\_n260B (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.4.2 CA\_n260C

Editor’s note: CA\_n260C Test frequencies are FFS.

Table 4.3.1.2.3.4.2-1: NR Intra-Band contiguous CA configuration CA\_n260C (PCC=CC1 and SCC=CC2, CC3), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.4.3 CA\_n260D

Editor’s note: CA\_n260D Test frequencies are FFS.

Table 4.3.1.2.3.4.3-1: NR Intra-Band contiguous CA configuration CA\_n260D (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.4.3-2: NR Intra-Band contiguous CA configuration CA\_n260D (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.4.4 CA\_n260E

Table 4.3.1.2.3.4.4-1: NR Intra-Band contiguous CA configuration CA\_n260E (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

FFS

Table 4.3.1.2.3.4.4-2: NR Intra-Band contiguous CA configuration CA\_n260E (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

FFS

4.3.1.2.3.4.5 CA\_n260F

Table 4.3.1.2.3.4.5-1: NR Intra-Band contiguous CA configuration CA\_n260F (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

FFS

Table 4.3.1.2.3.4.5-2: NR Intra-Band contiguous CA configuration CA\_n260F (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

FFS

4.3.1.2.3.4.6 CA\_n260G

Table 4.3.1.2.3.4.6-1: NR Intra-Band contiguous CA configuration CA\_n260G (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | | 22995 | 2229499 | | 0 | | 6 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38449.92 | 2253331 | 38352.72 | 2251711 | 102 |  | | 23078 | 2253403 | | 0 | | 11 | 1 (8) | 121 |
|  |  |  |  |  | Uplink | High | 39875.52 | 2277091 | 39488.88 | 2270647 | 504 |  | | 23160 | 2277019 | | 0 | | 7 | 0 (0) | 511 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 38524.32 | 2254571 | 38403.36 | 2252555 | 102 |  | | 23081 | 2254267 | | 8 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 4 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38449.92 | 2253331 | 38328.96 | 2251315 | 102 |  | | 23076 | 2252827 | | 0 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38549.88 | 2254997 | 38428.92 | 2252981 | 102 |  | | 23082 | 2254555 | | 2 | | 1 | 1 (8) | 111 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.4.6-2: NR Intra-Band contiguous CA configuration CA\_n260G (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | | 22995 | 2229499 | | 6 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38450.04 | 2253333 | 38280.12 | 2250501 | 102 |  | | 23078 | 2253403 | | 11 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 39875.52 | 2277091 | 39126.72 | 2264611 | 504 |  | | 23160 | 2277019 | | 0 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38524.44 | 2254573 | 38330.04 | 2251333 | 102 |  | | 23081 | 2254267 | | 3 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 2 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38450.04 | 2253333 | 38255.64 | 2250093 | 102 |  | | 23076 | 2252827 | | 11 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38550 | 2254999 | 38355.6 | 2251759 | 102 |  | | 23082 | 2254555 | | 6 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.4.7 CA\_n260H

Table 4.3.1.2.3.4.7-1: NR Intra-Band contiguous CA configuration CA\_n260H (PCC=CC1 and SCC=CC2, CC3), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | | 22995 | 2229499 | | 0 | | 6 | 0 (0) | 6 |
| +100 |  |  |  |  | & | Mid | 38400 | 2252499 | 38302.8 | 2250879 | 102 |  | | 23075 | 2252539 | | 4 | | 8 | 1 (8) | 118 |
|  |  |  |  |  | Uplink | High | 39775.56 | 2275425 | 39388.92 | 2268981 | 504 |  | | 23154 | 2275291 | | 10 | | 1 | 0 (0) | 505 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 38474.4 | 2253739 | 38353.44 | 2251723 | 102 |  | | 23078 | 2253403 | | 0 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 10 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 38574.36 | 2255405 | 38453.4 | 2253389 | 102 |  | | 23084 | 2255131 | | 2 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 4 | | 4 | 0 (0) | 4 |
| +100 |  |  |  |  | & | Mid | 38400 | 2252499 | 38279.04 | 2250483 | 102 |  | | 23073 | 2251963 | | 4 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38499.96 | 2254165 | 38379 | 2252149 | 102 |  | | 23079 | 2253691 | | 6 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 8 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 38599.92 | 2255831 | 38478.96 | 2253815 | 102 |  | | 23085 | 2255419 | | 8 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.4.7-2: NR Intra-Band contiguous CA configuration CA\_n260H (PCC=CC1 and SCC=CC2, CC3), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | | 22995 | 2229499 | | 6 | | 2 | 0 (0) | 4 |
| +100 |  |  |  |  | & | Mid | 38400 | 2252499 | 38230.08 | 2249667 | 102 |  | | 23075 | 2252539 | | 8 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 39775.56 | 2275425 | 39026.76 | 2262945 | 504 |  | | 23154 | 2275291 | | 5 | | 0 | 0 (0) | 1008 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38474.4 | 2253739 | 38280 | 2250499 | 102 |  | | 23078 | 2253403 | | 0 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 5 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 38574.36 | 2255405 | 38379.96 | 2252165 | 102 |  | | 23084 | 2255131 | | 7 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 2 | | 2 | 0 (0) | 4 |
| +100 |  |  |  |  | & | Mid | 38400 | 2252499 | 38205.6 | 2249259 | 102 |  | | 23073 | 2251963 | | 8 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38499.96 | 2254165 | 38305.56 | 2250925 | 102 |  | | 23079 | 2253691 | | 3 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 4 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 38599.92 | 2255831 | 38405.52 | 2252591 | 102 |  | | 23085 | 2255419 | | 10 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.4.8 CA\_n260I

Table 4.3.1.2.3.4.8-1: NR Intra-Band contiguous CA configuration CA\_n260I (PCC=CC1, SCC=CC2, CC3, CC4), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | | 22995 | 2229499 | | 0 | | 6 | 0 (0) | 6 |
| +100+100 |  |  |  |  | & | Mid | 38349.96 | 2251665 | 38252.76 | 2250045 | 102 |  | | 23072 | 2251675 | | 10 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 39675.6 | 2273759 | 39288.96 | 2267315 | 504 |  | | 23149 | 2273851 | | 8 | | 12 | 1 (8) | 524 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 38424.36 | 2252905 | 38303.4 | 2250889 | 102 |  | | 23075 | 2252539 | | 6 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 10 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 38524.32 | 2254571 | 38403.36 | 2252555 | 102 |  | | 23081 | 2254267 | | 8 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 10 | 1 (8) | 18 |
|  |  |  |  |  | & | Mid | 38624.28 | 2256237 | 38503.32 | 2254221 | 102 |  | | 23086 | 2255707 | | 10 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 4 | | 4 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38349.96 | 2251665 | 38229 | 2249649 | 102 |  | | 23071 | 2251387 | | 10 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38449.92 | 2253331 | 38328.96 | 2251315 | 102 |  | | 23076 | 2252827 | | 0 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 8 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 38549.88 | 2254997 | 38428.92 | 2252981 | 102 |  | | 23082 | 2254555 | | 2 | | 1 | 1 (8) | 111 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 10 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 38649.84 | 2256663 | 38528.88 | 2254647 | 102 |  | | 23088 | 2256283 | | 4 | | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.4.8-2: NR Intra-Band contiguous CA configuration CA\_n260I (PCC=CC1, SCC=CC2, CC3,CC4), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | | 22995 | 2229499 | | 6 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38349.96 | 2251665 | 38180.04 | 2248833 | 102 |  | | 23072 | 2251675 | | 5 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 39675.6 | 2273759 | 38926.8 | 2261279 | 504 |  | | 23149 | 2273851 | | 10 | | 5 | 1 (4) | 1026 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38424.36 | 2252905 | 38229.96 | 2249665 | 102 |  | | 23075 | 2252539 | | 9 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 5 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 38524.32 | 2254571 | 38329.92 | 2251331 | 102 |  | | 23081 | 2254267 | | 4 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38624.28 | 2256237 | 38429.88 | 2252997 | 102 |  | | 23086 | 2255707 | | 11 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 2 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38349.96 | 2251665 | 38155.56 | 2248425 | 102 |  | | 23071 | 2251387 | | 5 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38449.92 | 2253331 | 38255.52 | 2250091 | 102 |  | | 23076 | 2252827 | | 0 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 4 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 38549.88 | 2254997 | 38355.48 | 2251757 | 102 |  | | 23082 | 2254555 | | 7 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 11 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38649.84 | 2256663 | 38455.44 | 2253423 | 102 |  | | 23088 | 2256283 | | 2 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.4.9 CA\_n260J

Table 4.3.1.2.3.4.9-1: NR Intra-Band contiguous CA configuration CA\_n260J (PCC=CC1, SCC=CC2, CC3, CC4, CC5), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | | 22995 | 2229499 | | 0 | | 6 | 0 (0) | 6 |
| +100+100 |  |  |  |  | & | Mid | 38299.92 | 2250831 | 38202.72 | 2249211 | 102 |  | | 23069 | 2250811 | | 4 | | 3 | 1 (8) | 113 |
| +100 |  |  |  |  | Uplink | High | 39575.64 | 2272093 | 39189 | 2265649 | 504 |  | | 23143 | 2272123 | | 6 | | 7 | 1 (8) | 519 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 38374.32 | 2252071 | 38253.36 | 2250055 | 102 |  | | 23072 | 2251675 | | 0 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 10 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 38474.28 | 2253737 | 38353.32 | 2251721 | 102 |  | | 23078 | 2253403 | | 2 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 10 | 1 (8) | 18 |
|  |  |  |  |  | & | Mid | 38574.24 | 2255403 | 38453.28 | 2253387 | 102 |  | | 23084 | 2255131 | | 4 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 2 | | 15 | 1 (8) | 23 |
|  |  |  |  |  | & | Mid | 38674.2 | 2257069 | 38553.24 | 2255053 | 102 |  | | 23089 | 2256571 | | 6 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 4 | | 4 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38299.92 | 2250831 | 38178.96 | 2248815 | 102 |  | | 23068 | 2250523 | | 4 | | 12 | 1 (8) | 122 |
| +100 |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 39139.68 | 2264827 | 504 |  | | 23140 | 2271259 | | 0 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38399.88 | 2252497 | 38278.92 | 2250481 | 102 |  | | 23073 | 2251963 | | 6 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 8 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 38499.84 | 2254163 | 38378.88 | 2252147 | 102 |  | | 23079 | 2253691 | | 8 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 10 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 38599.8 | 2255829 | 38478.84 | 2253813 | 102 |  | | 23085 | 2255419 | | 10 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 0 | | 1 | 0 (0) | 1 |
|  |  |  |  |  | & | Mid | 38699.76 | 2257495 | 38578.8 | 2255479 | 102 |  | | 23091 | 2257147 | | 0 | | 9 | 1 (8) | 119 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.4.9-2: NR Intra-Band contiguous CA configuration CA\_n260J (PCC=CC1, SCC=CC2, CC3, CC4, CC5), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | | 22995 | 2229499 | | 6 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38300.04 | 2250833 | 38130.12 | 2248001 | 102 |  | | 23069 | 2250811 | | 1 | | 1 | 1 (4) | 214 |
| +100 |  |  |  |  | Uplink | High | 39575.64 | 2272093 | 38826.84 | 2259613 | 504 |  | | 23143 | 2272123 | | 3 | | 3 | 1 (4) | 1022 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38374.44 | 2252073 | 38180.04 | 2248833 | 102 |  | | 23072 | 2251675 | | 5 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 5 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 38474.4 | 2253739 | 38280 | 2250499 | 102 |  | | 23078 | 2253403 | | 0 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38574.36 | 2255405 | 38379.96 | 2252165 | 102 |  | | 23084 | 2255131 | | 7 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 7 | | 7 | 1 (4) | 22 |
|  |  |  |  |  | & | Mid | 38674.32 | 2257071 | 38479.92 | 2253831 | 102 |  | | 23089 | 2256571 | | 2 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 2 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38300.04 | 2250833 | 38105.64 | 2247593 | 102 |  | | 23068 | 2250523 | | 1 | | 6 | 1 (4) | 224 |
| +100 |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 38776.8 | 2258779 | 504 |  | | 23140 | 2271259 | | 0 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38400 | 2252499 | 38205.6 | 2249259 | 102 |  | | 23073 | 2251963 | | 8 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 4 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 38499.96 | 2254165 | 38305.56 | 2250925 | 102 |  | | 23079 | 2253691 | | 3 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 11 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38599.92 | 2255831 | 38405.52 | 2252591 | 102 |  | | 23085 | 2255419 | | 10 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 6 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 38699.88 | 2257497 | 38505.48 | 2254257 | 102 |  | | 23091 | 2257147 | | 5 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.4.10 CA\_n260K

**Table 4.3.1.2.3.4.10-1: NR Intra-Band contiguous CA configuration CA\_n260K (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6), SCS=60 kHz, nominal channel spacing**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | | 22995 | 2229499 | | 0 | | 6 | 0 (0) | 6 |
| +100+100 |  |  |  |  | & | Mid | 38250 | 2249999 | 38152.8 | 2248379 | 102 |  | | 23066 | 2249947 | | 8 | | 0 | 1 (8) | 110 |
| +100+100 |  |  |  |  | Uplink | High | 39475.68 | 2270427 | 39089.04 | 2263983 | 504 |  | | 23137 | 2270395 | | 4 | | 2 | 1 (8) | 514 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 38324.4 | 2251239 | 38203.44 | 2249223 | 102 |  | | 23069 | 2250811 | | 4 | | 2 | 1 (8) | 112 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 39139.68 | 2264827 | 504 |  | | 23140 | 2271259 | | 0 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 10 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 38424.36 | 2252905 | 38303.4 | 2250889 | 102 |  | | 23075 | 2252539 | | 6 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 10 | 1 (8) | 18 |
|  |  |  |  |  | & | Mid | 38524.32 | 2254571 | 38403.36 | 2252555 | 102 |  | | 23081 | 2254267 | | 8 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 2 | | 15 | 1 (8) | 23 |
|  |  |  |  |  | & | Mid | 38624.28 | 2256237 | 38503.32 | 2254221 | 102 |  | | 23086 | 2255707 | | 10 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 37499.28 | 2237487 | 37451.76 | 2236695 | 0 | 120 | | 23021 | 2236987 | | 4 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38724.24 | 2257903 | 38603.28 | 2255887 | 102 |  | | 23092 | 2257435 | | 0 | | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 4 | | 4 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38250 | 2249999 | 38129.04 | 2247983 | 102 |  | | 23065 | 2249659 | | 8 | | 9 | 1 (8) | 119 |
| +100+100 |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 39039.72 | 2263161 | 504 |  | | 23134 | 2269531 | | 10 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38349.96 | 2251665 | 38229 | 2249649 | 102 |  | | 23071 | 2251387 | | 10 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 39139.68 | 2264827 | 504 |  | | 23140 | 2271259 | | 0 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 8 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 38449.92 | 2253331 | 38328.96 | 2251315 | 102 |  | | 23076 | 2252827 | | 0 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 10 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 38549.88 | 2254997 | 38428.92 | 2252981 | 102 |  | | 23082 | 2254555 | | 2 | | 1 | 1 (8) | 111 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 0 | | 1 | 0 (0) | 1 |
|  |  |  |  |  | & | Mid | 38649.84 | 2256663 | 38528.88 | 2254647 | 102 |  | | 23088 | 2256283 | | 4 | | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 37549.8 | 2238329 | 37502.28 | 2237537 | 0 | 120 | | 23024 | 2237851 | | 2 | | 6 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38749.8 | 2258329 | 38628.84 | 2256313 | 102 |  | | 23094 | 2258011 | | 6 | | 11 | 1 (8) | 121 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.4.10-2: NR Intra-Band contiguous CA configuration CA\_n260K (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | | 22995 | 2229499 | | 6 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38250 | 2249999 | 38080.08 | 2247167 | 102 |  | | 23066 | 2249947 | | 10 | | 3 | 0 (0) | 210 |
| +100+100 |  |  |  |  | Uplink | High | 39475.68 | 2270427 | 38726.88 | 2257947 | 504 |  | | 23137 | 2270395 | | 8 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38324.4 | 2251239 | 38130 | 2247999 | 102 |  | | 23069 | 2250811 | | 2 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 38776.8 | 2258779 | 504 |  | | 23140 | 2271259 | | 0 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 5 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 38424.36 | 2252905 | 38229.96 | 2249665 | 102 |  | | 23075 | 2252539 | | 9 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38524.32 | 2254571 | 38329.92 | 2251331 | 102 |  | | 23081 | 2254267 | | 4 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 7 | | 7 | 1 (4) | 22 |
|  |  |  |  |  | & | Mid | 38624.28 | 2256237 | 38429.88 | 2252997 | 102 |  | | 23086 | 2255707 | | 11 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 37499.28 | 2237487 | 37451.76 | 2236695 | 0 | 120 | | 23021 | 2236987 | | 2 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38724.24 | 2257903 | 38529.84 | 2254663 | 102 |  | | 23092 | 2257435 | | 6 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 2 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38250 | 2249999 | 38055.6 | 2246759 | 102 |  | | 23065 | 2249659 | | 10 | | 4 | 1 (4) | 220 |
| +100+100 |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 38676.84 | 2257113 | 504 |  | | 23134 | 2269531 | | 5 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38349.96 | 2251665 | 38155.56 | 2248425 | 102 |  | | 23071 | 2251387 | | 5 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 38776.8 | 2258779 | 504 |  | | 23140 | 2271259 | | 0 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 4 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 38449.92 | 2253331 | 38255.52 | 2250091 | 102 |  | | 23076 | 2252827 | | 0 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 11 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38549.88 | 2254997 | 38355.48 | 2251757 | 102 |  | | 23082 | 2254555 | | 7 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 6 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 38649.84 | 2256663 | 38455.44 | 2253423 | 102 |  | | 23088 | 2256283 | | 2 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 37549.8 | 2238329 | 37502.28 | 2237537 | 0 | 120 | | 23024 | 2237851 | | 1 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38749.8 | 2258329 | 38555.4 | 2255089 | 102 |  | | 23094 | 2258011 | | 9 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.4.11 CA\_n260L

Table 4.3.1.2.3.4.11-1: NR Intra-Band contiguous CA configuration CA\_n260L (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6, CC7), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | | 22995 | 2229499 | | 0 | | 6 | 0 (0) | 6 |
| +100+100 |  |  |  |  | & | Mid | 38199.96 | 2249165 | 38102.76 | 2247545 | 102 |  | | 23063 | 2249083 | | 2 | | 6 | 0 (0) | 108 |
| +100+100 |  |  |  |  | Uplink | High | 39375.72 | 2268761 | 38989.08 | 2262317 | 504 |  | | 23131 | 2268667 | | 2 | | 5 | 0 (0) | 509 |
| +100 | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 38274.36 | 2250405 | 38153.4 | 2248389 | 102 |  | | 23066 | 2249947 | | 10 | | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 39039.72 | 2263161 | 504 |  | | 23134 | 2269531 | | 10 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 10 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 38374.32 | 2252071 | 38253.36 | 2250055 | 102 |  | | 23072 | 2251675 | | 0 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 39139.68 | 2264827 | 504 |  | | 23140 | 2271259 | | 0 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 10 | 1 (8) | 18 |
|  |  |  |  |  | & | Mid | 38474.28 | 2253737 | 38353.32 | 2251721 | 102 |  | | 23078 | 2253403 | | 2 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 2 | | 15 | 1 (8) | 23 |
|  |  |  |  |  | & | Mid | 38574.24 | 2255403 | 38453.28 | 2253387 | 102 |  | | 23084 | 2255131 | | 4 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 37499.28 | 2237487 | 37451.76 | 2236695 | 0 | 120 | | 23021 | 2236987 | | 4 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38674.2 | 2257069 | 38553.24 | 2255053 | 102 |  | | 23089 | 2256571 | | 6 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 37599.24 | 2239153 | 37551.72 | 2238361 | 0 | 120 | | 23027 | 2238715 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38774.16 | 2258735 | 38653.2 | 2256719 | 102 |  | | 23095 | 2258299 | | 8 | | 1 | 1 (8) | 111 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 4 | | 4 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38199.96 | 2249165 | 38079 | 2247149 | 102 |  | | 23062 | 2248795 | | 2 | | 7 | 1 (8) | 117 |
| +100+100 |  |  |  |  | Uplink | High | 39350.16 | 2268335 | 38939.76 | 2261495 | 504 |  | | 23128 | 2267803 | | 8 | | 1 | 0 (0) | 505 |
| +100 | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38299.92 | 2250831 | 38178.96 | 2248815 | 102 |  | | 23068 | 2250523 | | 4 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 39039.72 | 2263161 | 504 |  | | 23134 | 2269531 | | 10 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 8 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 38399.88 | 2252497 | 38278.92 | 2250481 | 102 |  | | 23073 | 2251963 | | 6 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 39139.68 | 2264827 | 504 |  | | 23140 | 2271259 | | 0 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 10 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 38499.84 | 2254163 | 38378.88 | 2252147 | 102 |  | | 23079 | 2253691 | | 8 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 0 | | 1 | 0 (0) | 1 |
|  |  |  |  |  | & | Mid | 38599.8 | 2255829 | 38478.84 | 2253813 | 102 |  | | 23085 | 2255419 | | 10 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 37549.8 | 2238329 | 37502.28 | 2237537 | 0 | 120 | | 23024 | 2237851 | | 2 | | 6 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38699.76 | 2257495 | 38578.8 | 2255479 | 102 |  | | 23091 | 2257147 | | 0 | | 9 | 1 (8) | 119 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 37649.76 | 2239995 | 37602.24 | 2239203 | 0 | 120 | | 23030 | 2239579 | | 4 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 38799.72 | 2259161 | 38678.76 | 2257145 | 102 |  | | 23097 | 2258875 | | 2 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.4.11-2: NR Intra-Band contiguous CA configuration CA\_n260L (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6, CC7), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | | 22995 | 2229499 | | 6 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38199.96 | 2249165 | 38030.04 | 2246333 | 102 |  | | 23063 | 2249083 | | 7 | | 2 | 0 (0) | 208 |
| +100+100 |  |  |  |  | Uplink | High | 39375.72 | 2268761 | 38626.92 | 2256281 | 504 |  | | 23131 | 2268667 | | 1 | | 2 | 0 (0) | 1012 |
| +100 | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38274.36 | 2250405 | 38079.96 | 2247165 | 102 |  | | 23066 | 2249947 | | 11 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 38676.84 | 2257113 | 504 |  | | 23134 | 2269531 | | 5 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 5 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 38374.32 | 2252071 | 38179.92 | 2248831 | 102 |  | | 23072 | 2251675 | | 6 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 38776.8 | 2258779 | 504 |  | | 23140 | 2271259 | | 0 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38474.28 | 2253737 | 38279.88 | 2250497 | 102 |  | | 23078 | 2253403 | | 1 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 7 | | 7 | 1 (4) | 22 |
|  |  |  |  |  | & | Mid | 38574.24 | 2255403 | 38379.84 | 2252163 | 102 |  | | 23084 | 2255131 | | 8 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 37499.28 | 2237487 | 37451.76 | 2236695 | 0 | 120 | | 23021 | 2236987 | | 2 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38674.2 | 2257069 | 38479.8 | 2253829 | 102 |  | | 23089 | 2256571 | | 3 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 37599.24 | 2239153 | 37551.72 | 2238361 | 0 | 120 | | 23027 | 2238715 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38774.16 | 2258735 | 38579.76 | 2255495 | 102 |  | | 23095 | 2258299 | | 10 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 2 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38199.96 | 2249165 | 38005.56 | 2245925 | 102 |  | | 23062 | 2248795 | | 7 | | 3 | 1 (4) | 218 |
| +100+100 |  |  |  |  | Uplink | High | 39350.16 | 2268335 | 38576.88 | 2255447 | 504 |  | | 23128 | 2267803 | | 10 | | 0 | 0 (0) | 1008 |
| +100 | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38299.92 | 2250831 | 38105.52 | 2247591 | 102 |  | | 23068 | 2250523 | | 2 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 38676.84 | 2257113 | 504 |  | | 23134 | 2269531 | | 5 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 4 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 38399.88 | 2252497 | 38205.48 | 2249257 | 102 |  | | 23073 | 2251963 | | 9 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 38776.8 | 2258779 | 504 |  | | 23140 | 2271259 | | 0 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 11 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38499.84 | 2254163 | 38305.44 | 2250923 | 102 |  | | 23079 | 2253691 | | 4 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 6 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 38599.8 | 2255829 | 38405.4 | 2252589 | 102 |  | | 23085 | 2255419 | | 11 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 37549.8 | 2238329 | 37502.28 | 2237537 | 0 | 120 | | 23024 | 2237851 | | 1 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38699.76 | 2257495 | 38505.36 | 2254255 | 102 |  | | 23091 | 2257147 | | 6 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 37649.76 | 2239995 | 37602.24 | 2239203 | 0 | 120 | | 23030 | 2239579 | | 8 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 38799.72 | 2259161 | 38605.32 | 2255921 | 102 |  | | 23097 | 2258875 | | 1 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.4.12 CA\_n260M

Table 4.3.1.2.3.4.12-1: NR Intra-Band contiguous CA configuration CA\_n260M (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6, CC7, CC8), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 37025.04 | 2229583 | 37001.28 | 2229187 | 0 | 120 | | 22995 | 2229499 | | 0 | | 6 | 0 (0) | 6 |
| +100+100 |  |  |  |  | & | Mid | 38149.92 | 2248331 | 38052.72 | 2246711 | 102 |  | | 23060 | 2248219 | | 8 | | 3 | 0 (0) | 105 |
| +100+100 |  |  |  |  | Uplink | High | 39275.76 | 2267095 | 38889.12 | 2260651 | 504 |  | | 23125 | 2266939 | | 0 | | 0 | 0 (0) | 504 |
| +100+100 | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 8 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 38224.32 | 2249571 | 38103.36 | 2247555 | 102 |  | | 23063 | 2249083 | | 4 | | 5 | 0 (0) | 107 |
|  |  |  |  |  | Uplink | High | 39350.16 | 2268335 | 38939.76 | 2261495 | 504 |  | | 23128 | 2267803 | | 8 | | 1 | 0 (0) | 505 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 10 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 38324.28 | 2251237 | 38203.32 | 2249221 | 102 |  | | 23069 | 2250811 | | 6 | | 2 | 1 (8) | 112 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 39039.72 | 2263161 | 504 |  | | 23134 | 2269531 | | 10 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 10 | 1 (8) | 18 |
|  |  |  |  |  | & | Mid | 38424.24 | 2252903 | 38303.28 | 2250887 | 102 |  | | 23075 | 2252539 | | 8 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 39139.68 | 2264827 | 504 |  | | 23140 | 2271259 | | 0 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 2 | | 15 | 1 (8) | 23 |
|  |  |  |  |  | & | Mid | 38524.2 | 2254569 | 38403.24 | 2252553 | 102 |  | | 23081 | 2254267 | | 10 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 37499.28 | 2237487 | 37451.76 | 2236695 | 0 | 120 | | 23021 | 2236987 | | 4 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38624.16 | 2256235 | 38503.2 | 2254219 | 102 |  | | 23086 | 2255707 | | 0 | | 2 | 0 (0) | 104 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 37599.24 | 2239153 | 37551.72 | 2238361 | 0 | 120 | | 23027 | 2238715 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38724.12 | 2257901 | 38603.16 | 2255885 | 102 |  | | 23092 | 2257435 | | 2 | | 7 | 0 (0) | 109 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 60 | 132 | Downlink | Low | 37699.2 | 2240819 | 37651.68 | 2240027 | 0 | 120 | | 23033 | 2240443 | | 8 | | 6 | 1 (8) | N/A |
|  |  |  |  |  | & | Mid | 38824.08 | 2259567 | 38703.12 | 2257551 | 102 |  | | 23098 | 2259163 | | 4 | | 4 | 1 (8) | 114 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 4 | | 4 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38149.92 | 2248331 | 38028.96 | 2246315 | 102 |  | | 23059 | 2247931 | | 8 | | 4 | 1 (8) | 114 |
| +100+100 |  |  |  |  | Uplink | High | 39250.2 | 2266669 | 38839.8 | 2259829 | 504 |  | | 23123 | 2266363 | | 6 | | 12 | 1 (8) | 524 |
| +100+100 | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 6 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 38249.88 | 2249997 | 38128.92 | 2247981 | 102 |  | | 23065 | 2249659 | | 10 | | 9 | 1 (8) | 119 |
|  |  |  |  |  | Uplink | High | 39350.16 | 2268335 | 38939.76 | 2261495 | 504 |  | | 23128 | 2267803 | | 8 | | 1 | 0 (0) | 505 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 8 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 38349.84 | 2251663 | 38228.88 | 2249647 | 102 |  | | 23071 | 2251387 | | 0 | | 15 | 1 (8) | 125 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 39039.72 | 2263161 | 504 |  | | 23134 | 2269531 | | 10 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 10 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 38449.8 | 2253329 | 38328.84 | 2251313 | 102 |  | | 23076 | 2252827 | | 2 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 39139.68 | 2264827 | 504 |  | | 23140 | 2271259 | | 0 | | 4 | 1 (8) | 516 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 0 | | 1 | 0 (0) | 1 |
|  |  |  |  |  | & | Mid | 38549.76 | 2254995 | 38428.8 | 2252979 | 102 |  | | 23082 | 2254555 | | 4 | | 1 | 1 (8) | 111 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 39239.64 | 2266493 | 504 |  | | 23146 | 2272987 | | 2 | | 9 | 1 (8) | 521 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 37549.8 | 2238329 | 37502.28 | 2237537 | 0 | 120 | | 23024 | 2237851 | | 2 | | 6 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38649.72 | 2256661 | 38528.76 | 2254645 | 102 |  | | 23088 | 2256283 | | 6 | | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 39339.6 | 2268159 | 504 |  | | 23152 | 2274715 | | 4 | | 14 | 1 (8) | 526 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 37649.76 | 2239995 | 37602.24 | 2239203 | 0 | 120 | | 23030 | 2239579 | | 4 | | 3 | 1 (8) | 11 |
|  |  |  |  |  | & | Mid | 38749.68 | 2258327 | 38628.72 | 2256311 | 102 |  | | 23094 | 2258011 | | 8 | | 11 | 1 (8) | 121 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39439.56 | 2269825 | 504 |  | | 23157 | 2276155 | | 6 | | 3 | 0 (0) | 507 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 60 | 132 | Downlink | Low | 37749.72 | 2241661 | 37702.2 | 2240869 | 0 | 120 | | 23036 | 2241307 | | 6 | | 8 | 1 (8) | N/A |
|  |  |  |  |  | & | Mid | 38849.64 | 2259993 | 38728.68 | 2257977 | 102 |  | | 23099 | 2259451 | | 10 | | 0 | 0 (0) | 102 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39539.52 | 2271491 | 504 |  | | 23163 | 2277883 | | 8 | | 0 | 1 (8) | 512 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.4.12-2: NR Intra-Band contiguous CA configuration CA\_n260M (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6, CC7, CC8), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 37025.04 | 2229583 | 37002 | 2229199 | 0 | 120 | | 22995 | 2229499 | | 6 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38150.04 | 2248333 | 37980.12 | 2245501 | 102 |  | | 23060 | 2248219 | | 3 | | 1 | 0 (0) | 206 |
| +100+100 |  |  |  |  | Uplink | High | 39275.76 | 2267095 | 38526.96 | 2254615 | 504 |  | | 23126 | 2267227 | | 6 | | 7 | 1 (4) | 1030 |
| +100+100 | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37099.44 | 2230823 | 37051.92 | 2230031 | 0 | 120 | | 22998 | 2230363 | | 10 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38224.44 | 2249573 | 38030.04 | 2246333 | 102 |  | | 23063 | 2249083 | | 7 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 39350.16 | 2268335 | 38576.88 | 2255447 | 504 |  | | 23128 | 2267803 | | 10 | | 0 | 0 (0) | 1008 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37199.4 | 2232489 | 37151.88 | 2231697 | 0 | 120 | | 23004 | 2232091 | | 5 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 38324.4 | 2251239 | 38130 | 2247999 | 102 |  | | 23069 | 2250811 | | 2 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 38676.84 | 2257113 | 504 |  | | 23134 | 2269531 | | 5 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37299.36 | 2234155 | 37251.84 | 2233363 | 0 | 120 | | 23010 | 2233819 | | 0 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38424.36 | 2252905 | 38229.96 | 2249665 | 102 |  | | 23075 | 2252539 | | 9 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 38776.8 | 2258779 | 504 |  | | 23140 | 2271259 | | 0 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37399.32 | 2235821 | 37351.8 | 2235029 | 0 | 120 | | 23016 | 2235547 | | 7 | | 7 | 1 (4) | 22 |
|  |  |  |  |  | & | Mid | 38524.32 | 2254571 | 38329.92 | 2251331 | 102 |  | | 23081 | 2254267 | | 4 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 37499.28 | 2237487 | 37451.76 | 2236695 | 0 | 120 | | 23021 | 2236987 | | 2 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 38624.28 | 2256237 | 38429.88 | 2252997 | 102 |  | | 23086 | 2255707 | | 11 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 37599.24 | 2239153 | 37551.72 | 2238361 | 0 | 120 | | 23027 | 2238715 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38724.24 | 2257903 | 38529.84 | 2254663 | 102 |  | | 23092 | 2257435 | | 6 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 120 | 66 | Downlink | Low | 37699.2 | 2240819 | 37651.68 | 2240027 | 0 | 120 | | 23033 | 2240443 | | 4 | | 3 | 1 (4) | N/A |
|  |  |  |  |  | & | Mid | 38824.2 | 2259569 | 38629.8 | 2256329 | 102 |  | | 23098 | 2259163 | | 1 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 37050 | 2229999 | 37002.48 | 2229207 | 0 | 120 | | 22995 | 2229499 | | 2 | | 2 | 0 (0) | 4 |
| +100+100 |  |  |  |  | & | Mid | 38150.04 | 2248333 | 37955.64 | 2245093 | 102 |  | | 23059 | 2247931 | | 3 | | 2 | 1 (4) | 216 |
| +100+100 |  |  |  |  | Uplink | High | 39250.2 | 2266669 | 38476.92 | 2253781 | 504 |  | | 23123 | 2266363 | | 3 | | 6 | 1 (4) | 1028 |
| +100+100 | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 37149.96 | 2231665 | 37102.44 | 2230873 | 0 | 120 | | 23001 | 2231227 | | 9 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 38250 | 2249999 | 38055.6 | 2246759 | 102 |  | | 23065 | 2249659 | | 10 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 39350.16 | 2268335 | 38576.88 | 2255447 | 504 |  | | 23128 | 2267803 | | 10 | | 0 | 0 (0) | 1008 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 37249.92 | 2233331 | 37202.4 | 2232539 | 0 | 120 | | 23007 | 2232955 | | 4 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 38349.96 | 2251665 | 38155.56 | 2248425 | 102 |  | | 23071 | 2251387 | | 5 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 39450.12 | 2270001 | 38676.84 | 2257113 | 504 |  | | 23134 | 2269531 | | 5 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 37349.88 | 2234997 | 37302.36 | 2234205 | 0 | 120 | | 23013 | 2234683 | | 11 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 38449.92 | 2253331 | 38255.52 | 2250091 | 102 |  | | 23076 | 2252827 | | 0 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 39550.08 | 2271667 | 38776.8 | 2258779 | 504 |  | | 23140 | 2271259 | | 0 | | 2 | 1 (4) | 1020 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 37449.84 | 2236663 | 37402.32 | 2235871 | 0 | 120 | | 23018 | 2236123 | | 6 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 38549.88 | 2254997 | 38355.48 | 2251757 | 102 |  | | 23082 | 2254555 | | 7 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 39650.04 | 2273333 | 38876.76 | 2260445 | 504 |  | | 23146 | 2272987 | | 7 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 37549.8 | 2238329 | 37502.28 | 2237537 | 0 | 120 | | 23024 | 2237851 | | 1 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 38649.84 | 2256663 | 38455.44 | 2253423 | 102 |  | | 23088 | 2256283 | | 2 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 39750 | 2274999 | 38976.72 | 2262111 | 504 |  | | 23152 | 2274715 | | 2 | | 7 | 1 (4) | 1030 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 37649.76 | 2239995 | 37602.24 | 2239203 | 0 | 120 | | 23030 | 2239579 | | 8 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 38749.8 | 2258329 | 38555.4 | 2255089 | 102 |  | | 23094 | 2258011 | | 9 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 39849.96 | 2276665 | 39076.68 | 2263777 | 504 |  | | 23157 | 2276155 | | 9 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 120 | 66 | Downlink | Low | 37749.72 | 2241661 | 37702.2 | 2240869 | 0 | 120 | | 23036 | 2241307 | | 3 | | 4 | 1 (4) | N/A |
|  |  |  |  |  | & | Mid | 38849.76 | 2259995 | 38655.36 | 2256755 | 102 |  | | 23099 | 2259451 | | 4 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 39949.92 | 2278331 | 39176.64 | 2265443 | 504 |  | | 23163 | 2277883 | | 4 | | 0 | 1 (4) | 1016 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.4.13 CA\_n260O

Editor’s note: CA\_n260O Test frequencies are FFS.

Table 4.3.1.2.3.4.13-1: NR Intra-Band contiguous CA configuration CA\_n260O (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  | |  | |  |  |  |  | |  |  | |  | |  |  |  |  |
|  |  |  |  |  |  |  |  | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  |  |  |  | |  |  | |  | |  |  |  |
|  |  | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  | |  |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  |  | |  |  |  |  | |  |  | |  | |  |  |  |
|  |  |  |  |  |  |  |  | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | |

Table 4.3.1.2.3.4.13-2: NR Intra-Band contiguous CA configuration CA\_n260O (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier  CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.4.14 CA\_n260P

Editor’s note: CA\_n260P Test frequencies are FFS.

Table 4.3.1.2.3.4.14-1: NR Intra-Band contiguous CA configuration CA\_n260P (PCC=CC1 and SCC=CC2, CC3), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.4.14-2: NR Intra-Band contiguous CA configuration CA\_n260P (PCC=CC1 and SCC=CC2, CC3), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.4.15 CA\_n260Q

FFS

###### 4.3.1.2.3.5 NR Intra-band contiguous CA configurations for CA\_n261

4.3.1.2.3.5.1 CA\_n261B

Editor’s note: CA\_n261B Test frequencies are FFS.

Table 4.3.1.2.3.5.1-1: NR Intra-Band contiguous CA configuration CA\_n261B (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.5.2 CA\_n261C

Editor’s note: CA\_n261C Test frequencies are FFS.

Table 4.3.1.2.3.5.2-1: NR Intra-Band contiguous CA configuration CA\_n261C (PCC=CC1 and SCC=CC2, CC3), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |

4.3.1.2.3.5.3 CA\_n261D

Editor’s note: CA\_n261D Test frequencies are FFS.

Table 4.3.1.2.3.5.3-1: NR Intra-Band contiguous CA configuration CA\_n261D (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.5.3-2: NR Intra-Band contiguous CA configuration CA\_n261D (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.5.4 CA\_n261E

Table 4.3.1.2.3.5.4-1: NR Intra-Band contiguous CA configuration CA\_n261E (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing.

FFS

Table 4.3.1.2.3.5.4-2: NR Intra-Band contiguous CA configuration CA\_n261E (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing.

FFS

4.3.1.2.3.5.5 CA\_n261F

Table 4.3.1.2.3.5.5-1: NR Intra-Band contiguous CA configuration CA\_n261F (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing.

FFS

Table 4.3.1.2.3.5.5-2: NR Intra-Band contiguous CA configuration CA\_n261F (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing.

FFS

4.3.1.2.3.5.6 CA\_n261G

Table 4.3.1.2.3.5.6-1: NR Intra-Band contiguous CA configuration CA\_n261G (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 27525 | 2071249 | 27501.24 | 2070853 | 0 | 120 | | 22446 | 2071387 | | 6 | | 16 | 1 (8) | 24 |
|  |  |  |  |  | & | Mid | 27874.92 | 2077081 | 27777.72 | 2075461 | 102 |  | | 22466 | 2077147 | | 6 | | 10 | 1 (8) | 120 |
|  |  |  |  |  | Uplink | High | 28225.56 | 2082925 | 27838.92 | 2076481 | 504 |  | | 22486 | 2082907 | | 6 | | 3 | 1 (8) | 515 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 2 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27949.32 | 2078321 | 27828.36 | 2076305 | 102 |  | | 22469 | 2078011 | | 2 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 8 | | 14 | 1 (8) | 22 |
|  |  |  |  |  | & | Mid | 27874.92 | 2077081 | 27753.96 | 2075065 | 102 |  | | 22464 | 2076571 | | 6 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (8) | 512 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 10 | | 3 | 0 (0) | 3 |
|  |  |  |  |  | & | Mid | 27974.88 | 2078747 | 27853.92 | 2076731 | 102 |  | | 22470 | 2078299 | | 8 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.5.6-2: NR Intra-Band contiguous CA configuration CA\_n261G (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 27525 | 2071249 | 27501.96 | 2070865 | 0 | 120 | | 22446 | 2071387 | | 9 | | 7 | 1 (4) | 22 |
|  |  |  |  |  | & | Mid | 27875.04 | 2077083 | 27705.12 | 2074251 | 102 |  | | 22466 | 2077147 | | 8 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 28225.56 | 2082925 | 27476.76 | 2070445 | 504 |  | | 22486 | 2082907 | | 3 | | 1 | 1 (4) | 1018 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 1 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27949.44 | 2078323 | 27755.04 | 2075083 | 102 |  | | 22469 | 2078011 | | 0 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | | 2 | 1 (4) | 1020 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 4 | | 7 | 1 (4) | 22 |
|  |  |  |  |  | & | Mid | 27875.04 | 2077083 | 27680.64 | 2073843 | 102 |  | | 22464 | 2076571 | | 8 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 11 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27975 | 2078749 | 27780.6 | 2075509 | 102 |  | | 22470 | 2078299 | | 3 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | | 2 | 1 (4) | 1020 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.5.7 CA\_n261H

Table 4.3.1.2.3.5.7-1: NR Intra-Band contiguous CA configuration CA\_n261H (PCC=CC1 and SCC=CC2, CC3), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 27525 | 2071249 | 27501.24 | 2070853 | 0 | 120 | | 22446 | 2071387 | | 6 | | 16 | 1 (8) | 24 |
| +100 |  |  |  |  | & | Mid | 27825 | 2076249 | 27727.8 | 2074629 | 102 |  | | 22463 | 2076283 | | 10 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 28125.6 | 2081259 | 27738.96 | 2074815 | 504 |  | | 22480 | 2081179 | | 4 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 2 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27899.4 | 2077489 | 27778.44 | 2075473 | 102 |  | | 22466 | 2077147 | | 6 | | 9 | 1 (8) | 119 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (8) | 512 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | | 4 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 27999.36 | 2079155 | 27878.4 | 2077139 | 102 |  | | 22472 | 2078875 | | 8 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 8 | | 14 | 1 (8) | 22 |
| +100 |  |  |  |  | & | Mid | 27825 | 2076249 | 27704.04 | 2074233 | 102 |  | | 22461 | 2075707 | | 10 | | 0 | 0 (0) | 102 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27689.64 | 2073993 | 504 |  | | 22477 | 2080315 | | 10 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 10 | | 3 | 0 (0) | 3 |
|  |  |  |  |  | & | Mid | 27924.96 | 2077915 | 27804 | 2075899 | 102 |  | | 22467 | 2077435 | | 0 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (8) | 512 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | | 0 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 28024.92 | 2079581 | 27903.96 | 2077565 | 102 |  | | 22473 | 2079163 | | 2 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.5.7-2: NR Intra-Band contiguous CA configuration CA\_n261H (PCC=CC1 and SCC=CC2, CC3), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 27525 | 2071249 | 27501.96 | 2070865 | 0 | 120 | | 22446 | 2071387 | | 9 | 7 | 1 (4) | 22 |
| +100 |  |  |  |  | & | Mid | 27825 | 2076249 | 27655.08 | 2073417 | 102 |  | | 22463 | 2076283 | | 5 | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 28125.6 | 2081259 | 27376.8 | 2068779 | 504 |  | | 22480 | 2081179 | | 8 | 2 | 0 (0) | 1012 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 1 | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27899.4 | 2077489 | 27705 | 2074249 | 102 |  | | 22466 | 2077147 | | 9 | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | | 0 | 0 | 1 (4) | 1016 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | | 8 | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 27999.36 | 2079155 | 27804.96 | 2075915 | 102 |  | | 22472 | 2078875 | | 4 | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | 2 | 1 (4) | 1020 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 4 | 7 | 1 (4) | 22 |
| +100 |  |  |  |  | & | Mid | 27825 | 2076249 | 27630.6 | 2073009 | 102 |  | | 22461 | 2075707 | | 5 | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27326.76 | 2067945 | 504 |  | | 22477 | 2080315 | | 5 | 1 | 0 (0) | 1010 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 11 | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27924.96 | 2077915 | 27730.56 | 2074675 | 102 |  | | 22467 | 2077435 | | 0 | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | | 0 | 0 | 1 (4) | 1016 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | | 6 | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 28024.92 | 2079581 | 27830.52 | 2076341 | 102 |  | | 22473 | 2079163 | | 7 | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | 2 | 1 (4) | 1020 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.5.8 CA\_n261I

Table 4.3.1.2.3.5.8-1: NR Intra-Band contiguous CA configuration CA\_n261I (PCC=CC1, SCC=CC2, CC3, CC4), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 27525 | 2071249 | 27501.24 | 2070853 | 0 | 120 | | 22446 | 2071387 | | 6 | | 16 | 1 (8) | 24 |
| +100+100 |  |  |  |  | & | Mid | 27774.96 | 2075415 | 27677.76 | 2073795 | 102 |  | | 22460 | 2075419 | | 4 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 28025.64 | 2079593 | 27639 | 2073149 | 504 |  | | 22474 | 2079451 | | 2 | | 1 | 0 (0) | 505 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 2 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27849.36 | 2076655 | 27728.4 | 2074639 | 102 |  | | 22463 | 2076283 | | 0 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27689.64 | 2073993 | 504 |  | | 22477 | 2080315 | | 10 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | | 4 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 27949.32 | 2078321 | 27828.36 | 2076305 | 102 |  | | 22469 | 2078011 | | 2 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (8) | 512 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 27799.32 | 2075821 | 27751.8 | 2075029 | 0 | 120 | | 22460 | 2075419 | | 6 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 28049.28 | 2079987 | 27928.32 | 2077971 | 102 |  | | 22474 | 2079451 | | 4 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 8 | | 14 | 1 (8) | 22 |
| +100+100 |  |  |  |  | & | Mid | 27774.96 | 2075415 | 27654 | 2073399 | 102 |  | | 22459 | 2075131 | | 4 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27589.68 | 2072327 | 504 |  | | 22472 | 2078875 | | 8 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 10 | | 3 | 0 (0) | 3 |
|  |  |  |  |  | & | Mid | 27874.92 | 2077081 | 27753.96 | 2075065 | 102 |  | | 22464 | 2076571 | | 6 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27689.64 | 2073993 | 504 |  | | 22477 | 2080315 | | 10 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | | 0 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 27974.88 | 2078747 | 27853.92 | 2076731 | 102 |  | | 22470 | 2078299 | | 8 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (8) | 512 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 27849.96 | 2076665 | 27802.44 | 2075873 | 0 | 120 | | 22463 | 2076283 | | 2 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 28074.84 | 2080413 | 27953.88 | 2078397 | 102 |  | | 22476 | 2080027 | | 10 | | 5 | 1 (8) | 115 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.5.8-2: NR Intra-Band contiguous CA configuration CA\_n261I (PCC=CC1, SCC=CC2, CC3,CC4), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 27525 | 2071249 | 27501.96 | 2070865 | 0 | 120 | | 22446 | 2071387 | | 9 | | 7 | 1 (4) | 22 |
| +100+100 |  |  |  |  | & | Mid | 27774.96 | 2075415 | 27605.04 | 2072583 | 102 |  | | 22460 | 2075419 | | 2 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 28025.64 | 2079593 | 27276.84 | 2067113 | 504 |  | | 22474 | 2079451 | | 1 | | 0 | 0 (0) | 1008 |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 1 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27849.36 | 2076655 | 27654.96 | 2073415 | 102 |  | | 22463 | 2076283 | | 6 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27326.76 | 2067945 | 504 |  | | 22477 | 2080315 | | 5 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | | 8 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 27949.32 | 2078321 | 27754.92 | 2075081 | 102 |  | | 22469 | 2078011 | | 1 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 27799.32 | 2075821 | 27751.8 | 2075029 | 0 | 120 | | 22460 | 2075419 | | 3 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 28049.28 | 2079987 | 27854.88 | 2076747 | 102 |  | | 22474 | 2079451 | | 8 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | | 2 | 1 (4) | 1020 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 4 | | 7 | 1 (4) | 22 |
| +100+100 |  |  |  |  | & | Mid | 27774.96 | 2075415 | 27580.56 | 2072175 | 102 |  | | 22459 | 2075131 | | 2 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27226.8 | 2066279 | 504 |  | | 22472 | 2078875 | | 10 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 11 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27874.92 | 2077081 | 27680.52 | 2073841 | 102 |  | | 22464 | 2076571 | | 9 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27326.76 | 2067945 | 504 |  | | 22477 | 2080315 | | 5 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | | 6 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 27974.88 | 2078747 | 27780.48 | 2075507 | 102 |  | | 22470 | 2078299 | | 4 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 27849.96 | 2076665 | 27802.44 | 2075873 | 0 | 120 | | 22463 | 2076283 | | 1 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 28074.84 | 2080413 | 27880.44 | 2077173 | 102 |  | | 22476 | 2080027 | | 11 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | | 2 | 1 (4) | 1020 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.5.9 CA\_n261J

Table 4.3.1.2.3.5.9-1: NR Intra-Band contiguous CA configuration CA\_n261J (PCC=CC1, SCC=CC2, CC3, CC4), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | | CORESET#0 Index (Offset  [RBs])  Note 4 | | offsetToPointA (SIB1)  [PRBs]  Note 4 | |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 27525 | 2071249 | 27501.24 | 2070853 | 0 | 120 | | 22446 | 2071387 | 6 | | 16 | | 1 (8) | | 24 | |
| +100+100 |  |  |  |  | & | Mid | 27724.92 | 2074581 | 27627.72 | 2072961 | 102 |  | | 22457 | 2074555 | 10 | | 2 | | 1 (8) | | 112 | |
| +100 |  |  |  |  | Uplink | High | 27925.68 | 2077927 | 27539.04 | 2071483 | 504 |  | | 22469 | 2078011 | 0 | | 12 | | 1 (8) | | 524 | |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | 2 | | 2 | | 0 (0) | | 2 | |
|  |  |  |  |  | & | Mid | 27799.32 | 2075821 | 27678.36 | 2073805 | 102 |  | | 22460 | 2075419 | 6 | | 4 | | 1 (8) | | 114 | |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27589.68 | 2072327 | 504 |  | | 22472 | 2078875 | 8 | | 13 | | 1 (8) | | 525 | |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | 4 | | 7 | | 0 (0) | | 7 | |
|  |  |  |  |  | & | Mid | 27899.28 | 2077487 | 27778.32 | 2075471 | 102 |  | | 22466 | 2077147 | 8 | | 9 | | 1 (8) | | 119 | |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27689.64 | 2073993 | 504 |  | | 22477 | 2080315 | 10 | | 2 | | 0 (0) | | 506 | |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 27799.32 | 2075821 | 27751.8 | 2075029 | 0 | 120 | | 22460 | 2075419 | 6 | | 4 | | 1 (8) | | 12 | |
|  |  |  |  |  | & | Mid | 27999.24 | 2079153 | 27878.28 | 2077137 | 102 |  | | 22472 | 2078875 | 10 | | 14 | | 1 (8) | | 124 | |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | 0 | | 0 | | 1 (8) | | 512 | |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 27899.28 | 2077487 | 27851.76 | 2076695 | 0 | 120 | | 22466 | 2077147 | 8 | | 9 | | 1 (8) | | 17 | |
|  |  |  |  |  | & | Mid | 28099.2 | 2080819 | 27978.24 | 2078803 | 102 |  | | 22477 | 2080315 | 0 | | 4 | | 0 (0) | | 106 | |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | 2 | | 5 | | 1 (8) | | 517 | |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | 8 | | 14 | | 1 (8) | | 22 | |
| +100+100 |  |  |  |  | & | Mid | 27724.92 | 2074581 | 27603.96 | 2072565 | 102 |  | | 22456 | 2074267 | 10 | | 11 | | 1 (8) | | 121 | |
| +100 |  |  |  |  | Uplink | High | 27900.12 | 2077501 | 27489.72 | 2070661 | 504 |  | | 22466 | 2077147 | 6 | | 8 | | 1 (8) | | 520 | |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | 10 | | 3 | | 0 (0) | | 3 | |
|  |  |  |  |  | & | Mid | 27824.88 | 2076247 | 27703.92 | 2074231 | 102 |  | | 22461 | 2075707 | 0 | | 1 | | 0 (0) | | 103 | |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27589.68 | 2072327 | 504 |  | | 22472 | 2078875 | 8 | | 13 | | 1 (8) | | 525 | |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | 0 | | 1 | | 1 (8) | | 9 | |
|  |  |  |  |  | & | Mid | 27924.84 | 2077913 | 27803.88 | 2075897 | 102 |  | | 22467 | 2077435 | 2 | | 6 | | 0 (0) | | 108 | |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27689.64 | 2073993 | 504 |  | | 22477 | 2080315 | 10 | | 2 | | 0 (0) | | 506 | |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 27849.96 | 2076665 | 27802.44 | 2075873 | 0 | 120 | | 22463 | 2076283 | 2 | | 6 | | 1 (8) | | 14 | |
|  |  |  |  |  | & | Mid | 28024.8 | 2079579 | 27903.84 | 2077563 | 102 |  | | 22473 | 2079163 | 4 | | 3 | | 1 (8) | | 113 | |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | 0 | | 0 | | 1 (8) | | 512 | |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 27949.92 | 2078331 | 27902.4 | 2077539 | 0 | 120 | | 22469 | 2078011 | 4 | | 11 | | 1 (8) | | 19 | |
|  |  |  |  |  | & | Mid | 28124.76 | 2081245 | 28003.8 | 2079229 | 102 |  | | 22479 | 2080891 | 6 | | 8 | | 1 (8) | | 118 | |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | 2 | | 5 | | 1 (8) | | 517 | |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.5.9-2: NR Intra-Band contiguous CA configuration CA\_n261J (PCC=CC1, SCC=CC2, CC3, CC4), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | | CORESET#0 Index (Offset  [RBs])  Note 4 | | offsetToPointA (SIB1)  [PRBs]  Note 4 | |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 27525 | 2071249 | 27501.96 | 2070865 | 0 | 120 | | 22446 | 2071387 | 9 | | 7 | | 1 (4) | | 22 | |
| +100+100 |  |  |  |  | & | Mid | 27725.04 | 2074583 | 27555.12 | 2071751 | 102 |  | | 22457 | 2074555 | 10 | | 0 | | 1 (4) | | 212 | |
| +100 |  |  |  |  | Uplink | High | 27925.68 | 2077927 | 27176.88 | 2065447 | 504 |  | | 22469 | 2078011 | 6 | | 5 | | 1 (4) | | 1026 | |
|  | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | 1 | | 1 | | 0 (0) | | 2 | |
|  |  |  |  |  | & | Mid | 27799.44 | 2075823 | 27605.04 | 2072583 | 102 |  | | 22460 | 2075419 | 2 | | 2 | | 1 (4) | | 216 | |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27226.8 | 2066279 | 504 |  | | 22472 | 2078875 | 10 | | 6 | | 1 (4) | | 1028 | |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | 8 | | 3 | | 0 (0) | | 6 | |
|  |  |  |  |  | & | Mid | 27899.4 | 2077489 | 27705 | 2074249 | 102 |  | | 22466 | 2077147 | 9 | | 4 | | 1 (4) | | 220 | |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27326.76 | 2067945 | 504 |  | | 22477 | 2080315 | 5 | | 1 | | 0 (0) | | 1010 | |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 27799.32 | 2075821 | 27751.8 | 2075029 | 0 | 120 | | 22460 | 2075419 | 3 | | 2 | | 1 (4) | | 12 | |
|  |  |  |  |  | & | Mid | 27999.36 | 2079155 | 27804.96 | 2075915 | 102 |  | | 22472 | 2078875 | 4 | | 7 | | 1 (4) | | 226 | |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | 0 | | 0 | | 1 (4) | | 1016 | |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 27899.28 | 2077487 | 27851.76 | 2076695 | 0 | 120 | | 22466 | 2077147 | 10 | | 4 | | 1 (4) | | 16 | |
|  |  |  |  |  | & | Mid | 28099.32 | 2080821 | 27904.92 | 2077581 | 102 |  | | 22477 | 2080315 | 11 | | 1 | | 0 (0) | | 206 | |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | 7 | | 2 | | 1 (4) | | 1020 | |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | 4 | | 7 | | 1 (4) | | 22 | |
| +100+100 |  |  |  |  | & | Mid | 27725.04 | 2074583 | 27530.64 | 2071343 | 102 |  | | 22456 | 2074267 | 10 | | 5 | | 1 (4) | | 222 | |
| +100 |  |  |  |  | Uplink | High | 27900.12 | 2077501 | 27126.84 | 2064613 | 504 |  | | 22466 | 2077147 | 3 | | 4 | | 1 (4) | | 1024 | |
|  | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | 11 | | 1 | | 0 (0) | | 2 | |
|  |  |  |  |  | & | Mid | 27825 | 2076249 | 27630.6 | 2073009 | 102 |  | | 22461 | 2075707 | 5 | | 0 | | 0 (0) | | 204 | |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27226.8 | 2066279 | 504 |  | | 22472 | 2078875 | 10 | | 6 | | 1 (4) | | 1028 | |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | 6 | | 0 | | 1 (4) | | 8 | |
|  |  |  |  |  | & | Mid | 27924.96 | 2077915 | 27730.56 | 2074675 | 102 |  | | 22467 | 2077435 | 0 | | 3 | | 0 (0) | | 210 | |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27326.76 | 2067945 | 504 |  | | 22477 | 2080315 | 5 | | 1 | | 0 (0) | | 1010 | |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 27849.96 | 2076665 | 27802.44 | 2075873 | 0 | 120 | | 22463 | 2076283 | 1 | | 3 | | 1 (4) | | 14 | |
|  |  |  |  |  | & | Mid | 28024.92 | 2079581 | 27830.52 | 2076341 | 102 |  | | 22473 | 2079163 | 7 | | 1 | | 1 (4) | | 214 | |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | 0 | | 0 | | 1 (4) | | 1016 | |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 27949.92 | 2078331 | 27902.4 | 2077539 | 0 | 120 | | 22469 | 2078011 | 8 | | 5 | | 1 (4) | | 18 | |
|  |  |  |  |  | & | Mid | 28124.88 | 2081247 | 27930.48 | 2078007 | 102 |  | | 22479 | 2080891 | 2 | | 4 | | 1 (4) | | 220 | |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | 7 | | 2 | | 1 (4) | | 1020 | |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.5.10 CA\_n261K

FFS

4.3.1.2.3.5.11 CA\_n261L

FFS

4.3.1.2.3.5.12 CA\_n261M

Table 4.3.1.2.3.5.12-1: NR Intra-Band contiguous CA configuration CA\_n261M (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6, CC7, CC8), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | carrierBandwidth  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | absoluteFrequencyPointA [ARFCN] | offsetToCarrier [Carrier PRBs] | | SS block SCS  [kHz] | GSCN | | absoluteFrequencySSB  [ARFCN] | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 60 | 66 | Downlink | Low | 27525 | 2071249 | 27501.24 | 2070853 | 0 | 120 | | 22446 | 2071387 | | 6 | | 16 | 1 (8) | 24 |
| +100+100 |  |  |  |  | & | Mid | 27574.92 | 2072081 | 27477.72 | 2070461 | 102 |  | | 22448 | 2071963 | | 2 | | 3 | 0 (0) | 105 |
| +100+100 |  |  |  |  | Uplink | High | 27625.8 | 2072929 | 27239.16 | 2066485 | 504 |  | | 22451 | 2072827 | | 6 | | 4 | 0 (0) | 508 |
| +100+100 | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 2 | | 2 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27649.32 | 2073321 | 27528.36 | 2071305 | 102 |  | | 22451 | 2072827 | | 10 | | 4 | 0 (0) | 106 |
|  |  |  |  |  | Uplink | High | 27700.2 | 2074169 | 27289.8 | 2067329 | 504 |  | | 22454 | 2073691 | | 2 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | | 4 | | 7 | 0 (0) | 7 |
|  |  |  |  |  | & | Mid | 27749.28 | 2074987 | 27628.32 | 2072971 | 102 |  | | 22457 | 2074555 | | 0 | | 2 | 1 (8) | 112 |
|  |  |  |  |  | Uplink | High | 27800.16 | 2075835 | 27389.76 | 2068995 | 504 |  | | 22460 | 2075419 | | 4 | | 3 | 1 (8) | 515 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 27799.32 | 2075821 | 27751.8 | 2075029 | 0 | 120 | | 22460 | 2075419 | | 6 | | 4 | 1 (8) | 12 |
|  |  |  |  |  | & | Mid | 27849.24 | 2076653 | 27728.28 | 2074637 | 102 |  | | 22463 | 2076283 | | 2 | | 7 | 1 (8) | 117 |
|  |  |  |  |  | Uplink | High | 27900.12 | 2077501 | 27489.72 | 2070661 | 504 |  | | 22466 | 2077147 | | 6 | | 8 | 1 (8) | 520 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 27899.28 | 2077487 | 27851.76 | 2076695 | 0 | 120 | | 22466 | 2077147 | | 8 | | 9 | 1 (8) | 17 |
|  |  |  |  |  | & | Mid | 27949.2 | 2078319 | 27828.24 | 2076303 | 102 |  | | 22469 | 2078011 | | 4 | | 12 | 1 (8) | 122 |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27589.68 | 2072327 | 504 |  | | 22472 | 2078875 | | 8 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 27999.24 | 2079153 | 27951.72 | 2078361 | 0 | 120 | | 22472 | 2078875 | | 10 | | 14 | 1 (8) | 22 |
|  |  |  |  |  | & | Mid | 28049.16 | 2079985 | 27928.2 | 2077969 | 102 |  | | 22474 | 2079451 | | 6 | | 1 | 0 (0) | 103 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27689.64 | 2073993 | 504 |  | | 22477 | 2080315 | | 10 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 28099.2 | 2080819 | 28051.68 | 2080027 | 0 | 120 | | 22477 | 2080315 | | 0 | | 4 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 28149.12 | 2081651 | 28028.16 | 2079635 | 102 |  | | 22480 | 2081179 | | 8 | | 6 | 0 (0) | 108 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (8) | 512 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 60 | 132 | Downlink | Low | 28199.16 | 2082485 | 28151.64 | 2081693 | 0 | 120 | | 22483 | 2082043 | | 2 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 28249.08 | 2083317 | 28128.12 | 2081301 | 102 |  | | 22486 | 2082907 | | 10 | | 3 | 1 (8) | 113 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| 100+100 | CC1 | 100 | 60 | 132 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 8 | | 14 | 1 (8) | 22 |
| +100+100 |  |  |  |  | & | Mid | 27574.92 | 2072081 | 27453.96 | 2070065 | 102 |  | | 22447 | 2071675 | | 2 | | 4 | 1 (8) | 114 |
| +100+100 |  |  |  |  | Uplink | High | 27600.24 | 2072503 | 27189.84 | 2065663 | 504 |  | | 22448 | 2071963 | | 0 | | 1 | 0 (0) | 505 |
| +100+100 | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 60 | 132 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 10 | | 3 | 0 (0) | 3 |
|  |  |  |  |  | & | Mid | 27674.88 | 2073747 | 27553.92 | 2071731 | 102 |  | | 22453 | 2073403 | | 4 | | 9 | 1 (8) | 119 |
|  |  |  |  |  | Uplink | High | 27700.2 | 2074169 | 27289.8 | 2067329 | 504 |  | | 22454 | 2073691 | | 2 | | 6 | 0 (0) | 510 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 60 | 132 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | | 0 | | 1 | 1 (8) | 9 |
|  |  |  |  |  | & | Mid | 27774.84 | 2075413 | 27653.88 | 2073397 | 102 |  | | 22459 | 2075131 | | 6 | | 14 | 1 (8) | 124 |
|  |  |  |  |  | Uplink | High | 27800.16 | 2075835 | 27389.76 | 2068995 | 504 |  | | 22460 | 2075419 | | 4 | | 3 | 1 (8) | 515 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 60 | 132 | Downlink | Low | 27849.96 | 2076665 | 27802.44 | 2075873 | 0 | 120 | | 22463 | 2076283 | | 2 | | 6 | 1 (8) | 14 |
|  |  |  |  |  | & | Mid | 27874.8 | 2077079 | 27753.84 | 2075063 | 102 |  | | 22464 | 2076571 | | 8 | | 3 | 0 (0) | 105 |
|  |  |  |  |  | Uplink | High | 27900.12 | 2077501 | 27489.72 | 2070661 | 504 |  | | 22466 | 2077147 | | 6 | | 8 | 1 (8) | 520 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 60 | 132 | Downlink | Low | 27949.92 | 2078331 | 27902.4 | 2077539 | 0 | 120 | | 22469 | 2078011 | | 4 | | 11 | 1 (8) | 19 |
|  |  |  |  |  | & | Mid | 27974.76 | 2078745 | 27853.8 | 2076729 | 102 |  | | 22470 | 2078299 | | 10 | | 0 | 1 (8) | 110 |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27589.68 | 2072327 | 504 |  | | 22472 | 2078875 | | 8 | | 13 | 1 (8) | 525 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 60 | 132 | Downlink | Low | 28049.88 | 2079997 | 28002.36 | 2079205 | 0 | 120 | | 22474 | 2079451 | | 6 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 28074.72 | 2080411 | 27953.76 | 2078395 | 102 |  | | 22476 | 2080027 | | 0 | | 6 | 1 (8) | 116 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27689.64 | 2073993 | 504 |  | | 22477 | 2080315 | | 10 | | 2 | 0 (0) | 506 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 60 | 132 | Downlink | Low | 28149.84 | 2081663 | 28102.32 | 2080871 | 0 | 120 | | 22480 | 2081179 | | 8 | | 5 | 0 (0) | 5 |
|  |  |  |  |  | & | Mid | 28174.68 | 2082077 | 28053.72 | 2080061 | 102 |  | | 22482 | 2081755 | | 2 | | 11 | 1 (8) | 121 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27789.6 | 2075659 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (8) | 512 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 60 | 132 | Downlink | Low | 28249.8 | 2083329 | 28202.28 | 2082537 | 0 | 120 | | 22486 | 2082907 | | 10 | | 2 | 1 (8) | 10 |
|  |  |  |  |  | & | Mid | 28274.64 | 2083743 | 28153.68 | 2081727 | 102 |  | | 22487 | 2083195 | | 4 | | 0 | 0 (0) | 102 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27889.56 | 2077325 | 504 |  | | 22489 | 2083771 | | 2 | | 5 | 1 (8) | 517 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-7 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 4.3.1.2.3.5.12-2: NR Intra-Band contiguous CA configuration CA\_n261M (PCC=CC1, SCC=CC2, CC3, CC4, CC5, CC6, CC7, CC8), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | carrierBandwidth  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | absoluteFrequencyPointA [ARFCN] | offsetToCarrier [Carrier PRBs] | | SS block SCS  [kHz] | GSCN | | absoluteFrequencySSB  [ARFCN] | |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
| 50+100 | CC1 | 50 | 120 | 32 | Downlink | Low | 27525 | 2071249 | 27501.96 | 2070865 | 0 | 120 | | 22446 | 2071387 | | 9 | | 7 | 1 (4) | 22 |
| +100+100 |  |  |  |  | & | Mid | 27575.04 | 2072083 | 27405.12 | 2069251 | 102 |  | | 22448 | 2071963 | | 0 | | 1 | 0 (0) | 206 |
| +100+100 |  |  |  |  | Uplink | High | 27625.8 | 2072929 | 26877 | 2060449 | 504 |  | | 22451 | 2072827 | | 9 | | 1 | 0 (0) | 1010 |
| +100+100 | Channel spacing CC1-CC2=74.4 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27599.4 | 2072489 | 27551.88 | 2071697 | 0 | 120 | | 22448 | 2071963 | | 1 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27649.44 | 2073323 | 27455.04 | 2070083 | 102 |  | | 22451 | 2072827 | | 4 | | 2 | 0 (0) | 208 |
|  |  |  |  |  | Uplink | High | 27700.2 | 2074169 | 26926.92 | 2061281 | 504 |  | | 22454 | 2073691 | | 1 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27699.36 | 2074155 | 27651.84 | 2073363 | 0 | 120 | | 22454 | 2073691 | | 8 | | 3 | 0 (0) | 6 |
|  |  |  |  |  | & | Mid | 27749.4 | 2074989 | 27555 | 2071749 | 102 |  | | 22457 | 2074555 | | 11 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 27800.16 | 2075835 | 27026.88 | 2062947 | 504 |  | | 22460 | 2075419 | | 8 | | 1 | 1 (4) | 1018 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 27799.32 | 2075821 | 27751.8 | 2075029 | 0 | 120 | | 22460 | 2075419 | | 3 | | 2 | 1 (4) | 12 |
|  |  |  |  |  | & | Mid | 27849.36 | 2076655 | 27654.96 | 2073415 | 102 |  | | 22463 | 2076283 | | 6 | | 3 | 1 (4) | 218 |
|  |  |  |  |  | Uplink | High | 27900.12 | 2077501 | 27126.84 | 2064613 | 504 |  | | 22466 | 2077147 | | 3 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 27899.28 | 2077487 | 27851.76 | 2076695 | 0 | 120 | | 22466 | 2077147 | | 10 | | 4 | 1 (4) | 16 |
|  |  |  |  |  | & | Mid | 27949.32 | 2078321 | 27754.92 | 2075081 | 102 |  | | 22469 | 2078011 | | 1 | | 6 | 1 (4) | 224 |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27226.8 | 2066279 | 504 |  | | 22472 | 2078875 | | 10 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 27999.24 | 2079153 | 27951.72 | 2078361 | 0 | 120 | | 22472 | 2078875 | | 5 | | 7 | 1 (4) | 22 |
|  |  |  |  |  | & | Mid | 28049.28 | 2079987 | 27854.88 | 2076747 | 102 |  | | 22474 | 2079451 | | 8 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27326.76 | 2067945 | 504 |  | | 22477 | 2080315 | | 5 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 28099.2 | 2080819 | 28051.68 | 2080027 | 0 | 120 | | 22477 | 2080315 | | 0 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 28149.24 | 2081653 | 27954.84 | 2078413 | 102 |  | | 22480 | 2081179 | | 3 | | 3 | 0 (0) | 210 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 120 | 66 | Downlink | Low | 28199.16 | 2082485 | 28151.64 | 2081693 | 0 | 120 | | 22483 | 2082043 | | 7 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 28249.2 | 2083319 | 28054.8 | 2080079 | 102 |  | | 22486 | 2082907 | | 10 | | 1 | 1 (4) | 214 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | | 2 | 1 (4) | 1020 |
| 100+100 | CC1 | 100 | 120 | 66 | Downlink | Low | 27550.08 | 2071667 | 27502.56 | 2070875 | 0 | 120 | | 22446 | 2071387 | | 4 | | 7 | 1 (4) | 22 |
| +100+100 |  |  |  |  | & | Mid | 27575.04 | 2072083 | 27380.64 | 2068843 | 102 |  | | 22447 | 2071675 | | 0 | | 2 | 1 (4) | 216 |
| +100+100 |  |  |  |  | Uplink | High | 27600.24 | 2072503 | 26826.96 | 2059615 | 504 |  | | 22448 | 2071963 | | 6 | | 0 | 0 (0) | 1008 |
| +100+100 | Channel spacing CC1-CC2=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC2 | 100 | 120 | 66 | Downlink | Low | 27650.04 | 2073333 | 27602.52 | 2072541 | 0 | 120 | | 22451 | 2072827 | | 11 | | 1 | 0 (0) | 2 |
|  |  |  |  |  | & | Mid | 27675 | 2073749 | 27480.6 | 2070509 | 102 |  | | 22453 | 2073403 | | 7 | | 4 | 1 (4) | 220 |
|  |  |  |  |  | Uplink | High | 27700.2 | 2074169 | 26926.92 | 2061281 | 504 |  | | 22454 | 2073691 | | 1 | | 3 | 0 (0) | 1014 |
|  | Channel spacing CC2-CC3=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC3 | 100 | 120 | 66 | Downlink | Low | 27750 | 2074999 | 27702.48 | 2074207 | 0 | 120 | | 22457 | 2074555 | | 6 | | 0 | 1 (4) | 8 |
|  |  |  |  |  | & | Mid | 27774.96 | 2075415 | 27580.56 | 2072175 | 102 |  | | 22459 | 2075131 | | 2 | | 7 | 1 (4) | 226 |
|  |  |  |  |  | Uplink | High | 27800.16 | 2075835 | 27026.88 | 2062947 | 504 |  | | 22460 | 2075419 | | 8 | | 1 | 1 (4) | 1018 |
|  | Channel spacing CC3-CC4=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC4 | 100 | 120 | 66 | Downlink | Low | 27849.96 | 2076665 | 27802.44 | 2075873 | 0 | 120 | | 22463 | 2076283 | | 1 | | 3 | 1 (4) | 14 |
|  |  |  |  |  | & | Mid | 27874.92 | 2077081 | 27680.52 | 2073841 | 102 |  | | 22464 | 2076571 | | 9 | | 1 | 0 (0) | 206 |
|  |  |  |  |  | Uplink | High | 27900.12 | 2077501 | 27126.84 | 2064613 | 504 |  | | 22466 | 2077147 | | 3 | | 4 | 1 (4) | 1024 |
|  | Channel spacing CC4-CC5=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC5 | 100 | 120 | 66 | Downlink | Low | 27949.92 | 2078331 | 27902.4 | 2077539 | 0 | 120 | | 22469 | 2078011 | | 8 | | 5 | 1 (4) | 18 |
|  |  |  |  |  | & | Mid | 27974.88 | 2078747 | 27780.48 | 2075507 | 102 |  | | 22470 | 2078299 | | 4 | | 0 | 1 (4) | 212 |
|  |  |  |  |  | Uplink | High | 28000.08 | 2079167 | 27226.8 | 2066279 | 504 |  | | 22472 | 2078875 | | 10 | | 6 | 1 (4) | 1028 |
|  | Channel spacing CC5-CC6=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC6 | 100 | 120 | 66 | Downlink | Low | 28049.88 | 2079997 | 28002.36 | 2079205 | 0 | 120 | | 22474 | 2079451 | | 3 | | 0 | 0 (0) | 0 |
|  |  |  |  |  | & | Mid | 28074.84 | 2080413 | 27880.44 | 2077173 | 102 |  | | 22476 | 2080027 | | 11 | | 2 | 1 (4) | 216 |
|  |  |  |  |  | Uplink | High | 28100.04 | 2080833 | 27326.76 | 2067945 | 504 |  | | 22477 | 2080315 | | 5 | | 1 | 0 (0) | 1010 |
|  | Channel spacing CC6-CC7=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC7 | 100 | 120 | 66 | Downlink | Low | 28149.84 | 2081663 | 28102.32 | 2080871 | 0 | 120 | | 22480 | 2081179 | | 10 | | 2 | 0 (0) | 4 |
|  |  |  |  |  | & | Mid | 28174.8 | 2082079 | 27980.4 | 2078839 | 102 |  | | 22482 | 2081755 | | 6 | | 5 | 1 (4) | 222 |
|  |  |  |  |  | Uplink | High | 28200 | 2082499 | 27426.72 | 2069611 | 504 |  | | 22483 | 2082043 | | 0 | | 0 | 1 (4) | 1016 |
|  | Channel spacing CC7-CC8=99.96 MHz (Note 1) | | | | | | | | | | | | | | | | | | | | |
|  | CC8 | 100 | 120 | 66 | Downlink | Low | 28249.8 | 2083329 | 28202.28 | 2082537 | 0 | 120 | | 22486 | 2082907 | | 5 | | 1 | 1 (4) | 10 |
|  |  |  |  |  | & | Mid | 28274.76 | 2083745 | 28080.36 | 2080505 | 102 |  | | 22487 | 2083195 | | 1 | | 0 | 0 (0) | 204 |
|  |  |  |  |  | Uplink | High | 28299.96 | 2084165 | 27526.68 | 2071277 | 504 |  | | 22489 | 2083771 | | 7 | | 2 | 1 (4) | 1020 |
| Note 1: Corresponds to nominal channel spacing in accordance with TS 38.101-2 [8], clause 5.4A.1 for the channel bandwidths of the two respective NR component carriers.  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 ΔFOffsetCORESET-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 13-8 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. | | | | | | | | | | | | | | | | | | | | | |

4.3.1.2.3.5.13 CA\_n261O

Editor’s note: CA\_n261O Test frequencies are FFS.

Table 4.3.1.2.3.5.13-1: NR Intra-Band contiguous CA configuration CA\_n261O (PCC=CC1 and SCC=CC2), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.5.13-2: NR Intra-Band contiguous CA configuration CA\_n261O (PCC=CC1 and SCC=CC2), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.5.14 CA\_n261P

Editor’s note: CA\_n261P Test frequencies are FFS.

Table 4.3.1.2.3.5.14-1: NR Intra-Band contiguous CA configuration CA\_n261P (PCC=CC1 and SCC=CC2, CC3), SCS=60 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.3.5.14-2: NR Intra-Band contiguous CA configuration CA\_n261P (PCC=CC1 and SCC=CC2, CC3), SCS=120 kHz, nominal channel spacing

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | CC | CBW  [MHz] | SCS  [kHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

4.3.1.2.3.5.15 CA\_n261Q

FFS

##### 4.3.1.2.4 NR intra-band non-contiguous CA configurations in FR2

###### 4.3.1.2.4.1 NR Intra-band non-contiguous CA configurations for CA\_n257

###### 4.3.1.2.4.2 NR Intra-band non-contiguous CA configurations for CA\_n258

###### 4.3.1.2.4.3 FFS

###### 4.3.1.2.4.4 NR Intra-band non-contiguous CA configurations for CA\_n260

4.3.1.2.4.4.1 CA\_n260(XA)

Editor's note: This clause is reserved for test frequencies for CA\_n260(XA) configurations where x is >= 2, e.g. CA\_n260(2A), CA\_n260(3A) and CA\_n260(4A)

4.3.1.2.4.4.2 CA\_n260(A-I)

Editor’s note: CA\_n260(A-I) Test frequencies are FFS.

Table 4.3.1.2.4.4.2-1: NR Intra-Band non-contiguous CA configuration CA\_n260(A-I) without UL CA, SCS=120 kHz, Max Wgap

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | Sub-block  Note 2 | CC within Sub-Block  Note 2 | Bandwidth [MHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz] | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | carrier CORESET#0 [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 4.3.1.2.4.4.2-2: NR Intra-Band non-contiguous CA configuration CA\_n260(A-I) with UL CA, SCS=120 kHz, Max Wgap

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBW combination | Sub-block  Note 2 | CC within Sub-Block  Note 2 | Bandwidth [MHz] | *carrierBandwidth*  *[PRBs]* | Range | Carrier centre  [MHz] | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA [ARFCN]* | *offsetToCarrier [Carrier PRBs]* | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  *[ARFCN]* |  | carrier CORESET#0 [RBs]  Note 3 | CORESET#0 Index (Offset  [RBs])  Note 4 | offsetToPointA (SIB1)  [PRBs]  Note 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

###### 4.3.1.2.4.5 NR Intra-band non-contiguous CA configurations for CA\_n261

4.3.1.2.4.5.1 CA\_n261(XA)

Table 4.3.1.2.4.5.1-1: NR Intra-Band non-contiguous CA configuration CA\_n261(2A), SCS=120 kHz, Max Wgap

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CBW combination | CC | Bandwidth [MHz] | Range | | Test frequencies and signalling parameters |
| CA\_n261(2A); A (50-400MHz) - A (50-400MHz) | | | | | |
| CBW1+  CBW2 | CC1 | CBW1 | Downlink  &  Uplink | Max  Wgap | Table 4.3.1.2.1.5-2: Low range for CBW=CBW1, where CBW1= 50 MHz, 100 MHz, 200 MHz or 400 MHz |
| CC2 | CBW2 | Downlink  &  Uplink |  | Table 4.3.1.2.1.5-2: High range for CBW=CBW2, where CBW2= 50 MHz, 100 MHz, 200 MHz or 400 MHz |

#### 4.3.1.3 Test frequencies for NR band combinations between FR1 and FR2

##### 4.3.1.3.1 NR inter-band CA configurations between FR1 and FR2

Table 4.3.1.3.1-1: NR-CA configurations between FR1 and FR2 (two bands)

| NR-CAconfiguration | Uplink NR-CA configuration | NR FR1 downlink configuration | NR FR2 downlink configuration | NR FR1 uplink configuration | NR FR2 uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| CA\_n1A-n258A | CA\_n1A-n258A | n1A | n258A | n1A | n258A | Yes |
| CA\_n1A-n258D | CA\_n1A-n258A | n1A | CA\_n258D | n1A | n258A | No |
| CA\_n1A-n258E | CA\_n1A-n258A | n1A | CA\_n258E | n1A | n258A | No |
| CA\_n1A-n258F | CA\_n1A-n258A | n1A | CA\_n258F | n1A | n258A | No |
| CA\_n1A-n258G | CA\_n1A-n258A | n1A | CA\_n258G | n1A | n258A | No |
| CA\_n1A-n258H | CA\_n1A-n258A | n1A | CA\_n258H | n1A | n258A | No |
| CA\_n1A-n258I | CA\_n1A-n258A | n1A | CA\_n258I | n1A | n258A | No |
| CA\_n1A-n258J | CA\_n1A-n258A | n1A | CA\_n258J | n1A | n258A | No |
| CA\_n1A-n258K | CA\_n1A-n258A | n1A | CA\_n258K | n1A | n258A | No |
| CA\_n1A-n258L | CA\_n1A-n258A | n1A | CA\_n258L | n1A | n258A | No |
| CA\_n1A-n258M | CA\_n1A-n258A | n1A | CA\_n258M | n1A | n258A | No |
| CA\_n2A-n260A | CA\_n2A-n260A | n2A | n260A | n2A | n260A | Yes |
| CA\_n2A-n261A | CA\_n2A-n261A | n2A | n261A | n2A | n261A | Yes |
| CA\_n5A-n260A | CA\_n5A-n260A | n5A | n260A | n5A | n260A | Yes |
| CA\_n5A-n261A | CA\_n5A-n261A | n5A | n261A | n5A | n261A | Yes |
| CA\_n77A-n260A | CA\_n77A-n260A | n77A | n260A | n77A | n260A | Yes |
| CA\_n77A-n261A | CA\_n77A-n261A | n77A | n261A | n77A | n261A | Yes |
| CA\_n78A-n258D | CA\_n78A-n258A | n78A | CA\_n258D | n78A | n258A | No |
| CA\_n78A-n258E | CA\_n78A-n258A | n78A | CA\_n258E | n78A | n258A | No |
| CA\_n78A-n258F | CA\_n78A-n258A | n78A | CA\_n257F | n78A | n258A | No |
| Note 1: Protocol testing is limited to NR-CA configurations with 2CC. | | | | | | |

##### 4.3.1.3.2 Inter-band NR-DC configurations between FR1 and FR2

###### 4.3.1.3.2.1 NR-DC configurations between FR1 and FR2 (two bands)

Table 4.3.1.3.2.1-1: NR-DC configurations between FR1 and FR2 (two bands)

| NR-DC configuration | Uplink NR-DC configuration | NR FR1 downlink configuration | NR FR2 downlink configuration | NR FR1 uplink configuration | NR FR2 uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_n1A-n258A | DC\_n1A-n258A | n1A | n258A | n1A | n258A | Yes |
| DC\_n1A-n258G | DC\_n1A-n258A | n1A | CA\_n258G | n1A | n258A | Yes (NR CA 2CC) |
| DC\_n1A-n258H | DC\_n1A-n258A | n1A | CA\_n258H | n1A | n258A | No |
| DC\_n1A-n258I | DC\_n1A-n258A | n1A | CA\_n258I | n1A | n258A | No |
| DC\_n1A-n258J | DC\_n1A-n258A | n1A | CA\_n258J | n1A | n258A | No |
| DC\_n1A-n258K | DC\_n1A-n258A | n1A | CA\_n258K | n1A | n258A | No |
| DC\_n1A-n258L | DC\_n1A-n258A | n1A | CA\_n258L | n1A | n258A | No |
| DC\_n1A-n258M | DC\_n1A-n258A | n1A | CA\_n258M | n1A | n258A | No |
| DC\_n2A-n260A | DC\_n2A-n260A | n2A | n260A | n2A | n260A | Yes |
| DC\_n2A-n261A | DC\_n2A-n261A | n2A | n261A | n2A | n261A | Yes |
| DC\_n5A-n260A | DC\_n5A-n260A | n5A | n260A | n5A | n260A | Yes |
| DC\_n5A-n261A | DC\_n5A-n261A | n5A | n261A | n5A | n261A | Yes |
| DC\_n77A-n260A | DC\_n77A-n260A | n77A | n260A | n77A | n260A | Yes |
| DC\_n77A-n261A | DC\_n77A-n261A | n77A | n261A | n77A | n261A | Yes |
| DC\_n78A-n257A | DC\_n78A-n257A | n78A | n257A | n78A | n257A | Yes |
| DC\_n78A-n257G | DC\_n78A-n257A | n78A | CA\_n257G | n78A | n257A | Yes (NR CA 2CC) |
| DC\_n78A-n257H | DC\_n78A-n257A | n78A | CA\_n257H | n78A | n257A | No |
| DC\_n78A-n257I | DC\_n78A-n257A | n78A | CA\_n257I | n78A | n257A | No |
| DC\_n78A-n258A | DC\_n78A-n258A | n78A | n258A | n78A | n258A | Yes |
| DC\_n78A-n258G | DC\_n78A-n258A | n78A | CA\_n258G | n78A | n258A | Yes (NR CA 2CC) |
| DC\_n78A-n258H | DC\_n78A-n258A | n78A | CA\_n258H | n78A | n258A | No |
| DC\_n78A-n258I | DC\_n78A-n258A | n78A | CA\_n258I | n78A | n258A | No |
| DC\_n78A-n258J | DC\_n78A-n258A | n78A | CA\_n258J | n78A | n258A | No |
| DC\_n78A-n258K | DC\_n78A-n258A | n78A | CA\_n258K | n78A | n258A | No |
| DC\_n78A-n258L | DC\_n78A-n258A | n78A | CA\_n258L | n78A | n258A | No |
| DC\_n78A-n258M | DC\_n78A-n258A | n78A | CA\_n258M | n78A | n258A | No |
| DC\_n79A-n257A | DC\_n79A-n257A | n79A | n257A | n79A | n257A | Yes |
| DC\_n79A-n257G | DC\_n79A-n257A | n79A | CA\_n257G | n79A | n257A | Yes (NR CA 2CC) |
| DC\_n79A-n257H | DC\_n79A-n257A | n79A | CA\_n257H | n79A | n257A | No |
| DC\_n79A-n257I | DC\_n79A-n257A | n79A | CA\_n257I | n79A | n257A | No |
| Note 1: Protocol testing is limited to NR-DC configurations with 2CC and NR-DC with NR CA 2CC. | | | | | | |

#### 4.3.1.4 Test frequencies for EN-DC band combinations within FR1

##### 4.3.1.4.1 Inter-band EN-DC configurations within FR1

###### 4.3.1.4.1.1 General

For inter-band EN-DC configurations as listed in this clause, the following apply:

For the E-UTRA band and E-UTRA CA configurations, test frequencies as specified in TS 36.508 [2], clause 4.3.1 are used.

For the NR band and NR CA configurations, test frequencies as specified in clause 4.3.1.1 are used.

For the EN-DC inter-band configuration that includes an EN-DC contiguous configuration (e.g. DC\_2A-(n)71AA) the EN-DC contiguous configuration is listed in the NR configuration column and the test frequencies as specified in clause 4.3.1.4.2 are used.

For the secondary NR band in inter-band signalling test cases, the band selected is based on the subset of NR bands supported within the EN-DC configurations specified in Table 4.3.1.4.1.2-1 for NR FR1.

###### 4.3.1.4.1.2 Inter-band EN-DC configurations within FR1 (two bands)

Table 4.3.1.4.1.2-1: Inter-band EN-DC configurations within FR1 (two bands)

| EN-DC  configuration | Uplink EN-DC  Configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A\_n3A | DC\_1A\_n3A | 1A | n3A | 1A | n3A | Yes |
| DC\_1A\_n5A | DC\_1A\_n5A | 1A | n5A | 1A | n5A | Yes |
| DC\_1A\_n7A | DC\_1A\_n7A | 1A | n7A | 1A | n7A | Yes |
| DC\_1A\_n28A | DC\_1A\_n28A | 1A | n28A | 1A | n28A | Yes |
| DC\_1A\_n41A | DC\_1A\_n41A | 1A | n41A | 1A | n41A | Yes |
| DC\_1A\_n77A | DC\_1A\_n77A | 1A | n77A | 1A | n77A | Yes |
| DC\_1A\_n78A | DC\_1A\_n78A | 1A | n78A | 1A | n78A | Yes |
| DC\_1A\_n78C | DC\_1A\_n78A | 1A | CA\_n78C | 1A | n78A | Yes (NR 2CC) |
| DC\_1A-1A\_n78A | DC\_1A\_n78A | CA\_1A-1A | n78A | 1A | n78A | No |
| DC\_1A\_n79A | DC\_1A\_n79A | 1A | n79A | 1A | n79A | Yes |
| DC\_1A\_n79C | DC\_1A\_n79A | 1A | CA\_n79C | 1A | n79A | FFS (NR 2CC) |
| DC\_2A\_n5A | DC\_2A\_n5A | 2A | n5A | 2A | n5A | Yes |
| DC\_2A-2A\_n5A | DC\_2A\_n5A | CA\_2A-2A | n5A | 2A | n5A | No | |
| DC\_2A\_n41A | DC\_2A\_n41A | 2A | n41A | 2A | n41A | Yes |
| DC\_2C\_n41A | DC\_2A\_n41A | CA\_2C | n41A | 2A | n41A | No |
|  | DC\_2C\_n41A | CA\_2C | n41A | CA\_2C | n41A | No |
| DC\_2A\_n48A | DC\_2A\_n48A | 2A | n48A | 2A | n48A | Yes |
| DC\_2A\_n66A | DC\_2A\_n66A | 2A | n66A | 2A | n66A | Yes |
| DC\_2A\_n71A | DC\_2A\_n71A | 2A | n71A | 2A | n71A | Yes |
| DC\_2A\_n77A | DC\_2A\_n77A | 2A | n77A | 2A | n77A | Yes |
| DC\_2A\_n77(2A) | DC\_2A\_n77A | 2A | CA\_n77(2A) | 2A | n77A | Yes (NR 2CC) | |
| DC\_2A-2A\_n77A | DC\_2A\_n77A | CA\_2A-2A | n77A | 2A | n77A | No | |
| DC\_2A-2A\_n77(2A) | DC\_2A\_n77A | CA\_2A-2A | CA\_n77(2A) | 2A | n77A | No | |
| DC\_2A\_n78A | DC\_2A\_n78A | 2A | n78A | 2A | n78A | Yes |
| DC\_3A\_n1A | DC\_3A\_n1A | 3A | n1A | 3A | n1A | Yes |
| DC\_3A\_n5A | DC\_3A\_n5A | 3A | n5A | 3A | n5A | Yes |
| DC\_3A\_n7A | DC\_3A\_n7A | 3A | n7A | 3A | n7A | Yes |
| DC\_3A\_n28A | DC\_3A\_n28A | 3A | n28A | 3A | n28A | Yes |
| DC\_3A\_n41A | DC\_3A\_n41A | 3A | n41A | 3A | n41A | Yes |
| DC\_3A\_n77A | DC\_3A\_n77A | 3A | n77A | 3A | n77A | Yes |
| DC\_3A\_n78A | DC\_3A\_n78A | 3A | n78A | 3A | n78A | Yes |
| DC\_3A\_n78C | DC\_3A\_n78A | 3A | CA\_n78C | 3A | n78A | Yes (NR 2CC) |
| DC\_3C\_n77A | DC\_3A\_n77A | CA\_3C | n77A | 3A | n77A | No | |
| DC\_3C\_n77(2A) | DC\_3A\_n77A | CA\_3C | n77(2A) | 3A | n77A | No | |
| DC\_3C\_n78A | DC\_3A\_n78A | CA\_3C | n78A | 3A | n78A | No |
| DC\_3A\_n79A | DC\_3A\_n79A | 3A | n79A | 3A | n79A | Yes |
| DC\_3A\_n79C | DC\_3A\_n79A | 3A | CA\_n79C | 3A | n79A | FFS (NR 2CC) |
| DC\_5A\_n2A | DC\_5A\_n2A | 5A | n2A | 5A | n2A | Yes |
| DC\_5A\_n66A | DC\_5A\_n66A | 5A | n66A | 5A | n66A | Yes |
| DC\_5A\_n77A | DC\_5A\_n77A | 5A | n77A | 5A | n77A | Yes |
| DC\_5A\_n78A | DC\_5A\_n78A | 5A | n78A | 5A | n78A | Yes |
| DC\_5A\_n78C | DC\_5A\_n78A | 5A | CA\_n78C | 5A | n78A | Yes (NR 2CC) |
| DC\_7A-7A\_n78A | DC\_7A\_n78A | CA\_7A-7A | n78A | 7A | n78A | No |
| DC\_7A\_n1A | DC\_7A\_n1A | 7A | n1A | 7A | n1A | Yes |
| DC\_7A\_n3A | DC\_7A\_n3A | 7A | n3A | 7A | n3A | Yes |
| DC\_7A\_n5A | DC\_7A\_n5A | 7A | n5A | 7A | n5A | Yes |
| DC\_7A\_n28A | DC\_7A\_n28A | 7A | n28A | 7A | n28A | Yes |
| DC\_7A\_n66A | DC\_7A\_n66A | 7A | n66A | 7A | n66A | Yes |
| DC\_7A\_n78A | DC\_7A\_n78A | 7A | n78A | 7A | n78A | Yes |
| DC\_7C\_n66A | DC\_7A\_n66A | CA\_7C | n66A | 7A | n66A | No |
| DC\_7C\_n78A | DC\_7A\_n78A | CA\_7C | n78A | 7A | n78A | No |
|  | DC\_7C\_n78A | CA\_7C | n78A | 7C | n78A | No |
| DC\_8A\_n1A | DC\_8A\_n1A | 8A | n1A | 8A | n1A | Yes |
| DC\_8A\_n3A | DC\_8A\_n3A | 8A | n3A | 8A | n3A | Yes |
| DC\_8A\_n20A | DC\_8A\_n20A | 8A | n20A | 8A | n20A | Yes |
| DC\_8A\_n41A | DC\_8A\_n41A | 8A | n41A | 8A | n41A | Yes |
| DC\_8A\_n77A | DC\_8A\_n77A | 8A | n77A | 8A | n77A | Yes |
| DC\_8A\_n77(2A) | DC\_8A\_n77A | 8A | CA\_n77(2A) | 8A | n77A | Yes (NR 2CC) |
| DC\_8A\_n78A | DC\_8A\_n78A | 8A | n78A | 8A | n78A | Yes |
| DC\_11A\_n77A | DC\_11A\_n77A | 11A | n77A | 11A | n77A | Yes |
| DC\_11A\_n78A | DC\_11A\_n78A | 11A | n78A | 11A | n78A | Yes |
| DC\_11A\_n79A | DC\_11A\_n79A | 11A | n79A | 11A | n79A | Yes |
| DC\_12A\_n2A | DC\_12A\_n2A | 12A | n2A | 12A | n2A | Yes |
| DC\_12A\_n5A | DC\_12A\_n5A | 12A | n5A | 12A | n5A | Yes |
| DC\_12A\_n66A | DC\_12A\_n66A | 12A | n66A | 12A | n66A | Yes |
| DC\_12A\_n77A | DC\_12A\_n77A | 12A | n77A | 12A | n77A | Yes | |
| DC\_12A\_n77(2A) | DC\_12A\_n77(2A) | 12A | CA\_n77(2A) | 12A | n77A | Yes (NR 2CC) | |
| DC\_12A\_n78A | DC\_12A\_n78A | 12A | n78A | 12A | n78A | Yes |
| DC\_13A\_n2A | DC\_13A\_n2A | 13A | n2A | 13A | n2A | Yes |
| DC\_13A\_n66A | DC\_13A\_n66A | 13A | n66A | 13A | n66A | Yes |
| DC\_13A\_n77A | DC\_13A\_n77A | 13A | n77A | 13A | n77A | Yes |
| DC\_14A\_n2A | DC\_14A\_n2A | 14A | n2A | 14A | n2A | Yes |
| DC\_14A\_n66A | DC\_14A\_n66A | 14A | n66A | 14A | n66A | Yes |
| DC\_14A\_n77A | DC\_14A\_n77A | 14A | n77A | 14A | n77A | Yes | |
| DC\_14A\_n77(2A) | DC\_14A\_n77(2A) | 14A | CA\_n77(2A) | 14A | n77A | Yes (NR 2CC) | |
| DC\_18A\_n77A | DC\_18A\_n77A | 18A | n77A | 18A | n77A | Yes |
| DC\_18A\_n78A | DC\_18A\_n78A | 18A | n78A | 18A | n78A | Yes |
| DC\_18A\_n79A | DC\_18A\_n79A | 18A | n79A | 18A | n79A | Yes |
| DC\_19A\_n1A | DC\_19A\_n1A | 19A | n1A | 19A | n1A | Yes |
| DC\_19A\_n77A | DC\_19A\_n77A | 19A | n77A | 19A | n77A | Yes |
| DC\_19A\_n77(2A) | DC\_19A\_n77A | 19A | CA\_n77(2A) | 19A | n77A | Yes (NR 2CC) |
| DC\_19A\_n78A | DC\_19A\_n78A | 19A | n78A | 19A | n78A | Yes |
| DC\_19A\_n78(2A) | DC\_19A\_n78A | 19A | CA\_n78(2A) | 19A | n78A | Yes (NR 2CC) |
| DC\_19A\_n78C | DC\_19A\_n78A | 19A | CA\_n78C | 19A | n78A | Yes (NR 2CC) |
| DC\_19A\_n79A | DC\_19A\_n79A | 19A | n79A | 19A | n79A | Yes |
| DC\_19A\_n79C | DC\_19A\_n79A | 19A | CA\_n79C | 19A | n79A | FFS (NR 2CC) |
| DC\_20A\_n1A | DC\_20A\_n1A | 20A | n1A | 20A | n1A | Yes |
| DC\_20A\_n3A | DC\_20A\_n3A | 20A | n3A | 20A | n3A | Yes |
| DC\_20A\_n7A | DC\_20A\_n7A | 20A | n7A | 20A | n7A | Yes |
| DC\_20A\_n8A | DC\_20A\_n8A | 20A | n8A | 20A | n8A | Yes |
| DC\_20A\_n28A | DC\_20A\_n28A | 20A | n28A | 20A | n28A | Yes |
| DC\_20A\_n78A | DC\_20A\_n78A | 20A | n78A | 20A | n78A | Yes |
| DC\_21A\_n1A | DC\_21A\_n1A | 21A | n1A | 21A | n1A | Yes |
| DC\_21A\_n28A | DC\_21A\_n28A | 21A | n28A | 21A | n28A | Yes |
| DC\_21A\_n77A | DC\_21A\_n77A | 21A | n77A | 21A | n77A | Yes |
| DC\_21A\_n77(2A) | DC\_21A\_n77A | 21A | CA\_n77(2A) | 21A | n77A | Yes (NR 2CC) |
| DC\_21A\_n78A | DC\_21A\_n78A | 21A | n78A | 21A | n78A | Yes |
| DC\_21A\_n78(2A) | DC\_21A\_n78A | 21A | CA\_n78(2A) | 21A | n78A | Yes (NR 2CC) |
| DC\_21A\_n78C | DC\_21A\_n78A | 21A | CA\_n78C | 21A | n78A | Yes (NR 2CC) |
| DC\_21A\_n79A | DC\_21A\_n79A | 21A | n79A | 21A | n79A | Yes |
| DC\_21A\_n79C | DC\_21A\_n79A | 21A | CA\_n79C | 21A | n79A | FFS (NR 2CC) |
| DC\_25A\_n41A | DC\_25A\_n41A | 25A | n41A | 25A | n41A | Yes |
| DC\_26A\_n41A | DC\_26A\_n41A | 26A | n41A | 26A | n41A | Yes |
| DC\_26A\_n77A | DC\_26A\_n77A | 26A | n77A | 26A | n77A | Yes |
| DC\_26A\_n78A | DC\_26A\_n78A | 26A | n78A | 26A | n78A | Yes |
| DC\_26A\_n79A | DC\_26A\_n79A | 26A | n79A | 26A | n79A | Yes |
| DC\_28A\_n3A | DC\_28A\_n3A | 28A | n3A | 28A | n3A | Yes |
| DC\_28A\_n5A | DC\_28A\_n5A | 28A | n5A | 28A | n5A | Yes |
| DC\_28A\_n7A | DC\_28A\_n7A | 28A | n7A | 28A | n7A | Yes |
| DC\_28A\_n77A | DC\_28A\_n77A | 28A | n77A | 28A | n77A | Yes |
| DC\_28A\_n78A | DC\_28A\_n78A | 28A | n78A | 28A | n78A | Yes |
| DC\_28A\_n78C | DC\_28A\_n78A | 28A | CA\_n78C | 28A | n78A | Yes (NR 2CC) |
| DC\_28A\_n79A | DC\_28A\_n79A | 28A | n79A | 28A | n79A | Yes |
| DC\_30A\_n2A | DC\_30A\_n2A | 30A | n2A | 30A | n2A | Yes | |
| DC\_30A\_n5A | DC\_30A\_n5A | 30A | n5A | 30A | n5A | Yes |
| DC\_30A\_n66A | DC\_30A\_n66A | 30A | n66A | 30A | n66A | Yes |
| DC\_38A\_n78A | - | 38A | n78A | - | - | Yes |
| DC\_30A\_n77A | DC\_30A\_n77A | 30A | n77A | 30A | n77A | Yes | |
| DC\_30A\_n77(2A) | DC\_30A\_n77(2A) | 30A | CA\_n77(2A) | 30A | n77A | Yes (NR 2CC) | |
| DC\_39A\_n41A | DC\_39A\_n41A | 39A | n41A | 39A | n41A | Yes |
| DC\_39A\_n79A | DC\_39A\_n79A | 39A | n79A | 39A | n79A | Yes |
| DC\_40A\_n1A | DC\_40A\_n1A | 40A | n1A | 40A | n1A | Yes |
| DC\_40A\_n41A | DC\_40A\_n41A | 40A | n41A | 40A | n41A | Yes |
| DC\_40A\_n78A | DC\_40A\_n78A | 40A | n78A | 40A | n78A | Yes |
| DC\_40C\_n78A | DC\_40A\_n78A | CA\_40C | n78A | 40A | n78A | No |
|  | DC\_40C\_n78A | CA\_40C | n78A | CA\_40C | n78A | No |
| DC\_40A\_n79A | DC\_40A\_n79A | 40A | n79A | 40A | n79A | Yes |
| DC\_40C\_n79A | DC\_40A\_n79A | CA\_40C | n79A | 40A | n79A | No |
| DC\_41A\_n28A | DC\_41A\_n28A | 41A | n28A | 41A | n28A | Yes |
| DC\_41A\_n77A | DC\_41A\_n77A | 41A | n77A | 41A | n77A | Yes |
| DC\_41C\_n77A | DC\_41A\_n77A | CA\_41C | n77A | 41A | n77A | No |
| DC\_41A\_n78A | DC\_41A\_n78A | 41A | n78A | 41A | n78A | Yes |
| DC\_41C\_n78A | DC\_41A\_n78A | CA\_41C | n78A | 41A | n78A | No |
| DC\_41A\_n79A | DC\_41A\_n79A | 41A | n79A | 41A | n79A | Yes |
| DC\_42A\_n1A | DC\_42A\_n1A | 42A | n1A | 42A | n1A | Yes |
| DC\_42C\_n1A | DC\_42C\_n1A | CA\_42C | n1A | CA\_42C | n1A | No |
| DC\_42A\_n77A | - | 42A | n77A | - | - | Yes |
| DC\_42C\_n77A | - | CA\_42C | n77A | - | - | No |
| DC\_42D\_n77A | - | CA\_42D | n77A | - | - | No |
| DC\_42A\_n78A | - | 42A | n78A | - | - | Yes |
| DC\_42A\_n78C | - | 42A | CA\_n78C | - | - | Yes (NR 2CC) |
| DC\_42C\_n78A | - | CA\_42C | n78A | - | - | No |
| DC\_42C\_n78C | - | CA\_42C | CA\_n78C | - | - | No |
| DC\_42D\_n78A | - | CA\_42D | n78A | - | - | No |
| DC\_42E\_n78A | - | CA\_42E | n78A | - | - | No |
| DC\_42A\_n79A | - | 42A | n79A | - | - | Yes |
| DC\_42A\_n79C | - | 42A | CA\_n79C | - | - | FFS (NR 2CC) |
| DC\_42C\_n79A | - | CA\_42C | n79A | - | - | No |
| DC\_42C\_n79C | - | CA\_42C | CA\_n79C | - | - | No |
| DC\_42D\_n79A | - | CA\_42D | n79A | - | - | No |
| DC\_42E\_n79A | - | CA\_42E | n79A | - | - | No |
| DC\_48A\_n5A | DC\_48A\_n5A | 48A | n5A | 48A | n5A | Yes |
| DC\_48A\_n46A | DC\_48A\_n46A | 48A | n46A | 48A | n46A | Yes |
| DC\_48A\_n66A | DC\_48A\_n66A | 48A | n66A | 48A | n66A | Yes |
| DC\_66A\_n2A | DC\_66A\_n2A | 66A | n2A | 66A | n2A | Yes |
| DC\_66A\_n5A | DC\_66A\_n5A | 66A | n5A | 66A | n5A | Yes |
| DC\_66A-66A\_n5A | DC\_66A-66A\_n5A | CA\_66A-66A | n5A | 66A | n5A | No | |
| DC\_66A\_n41A | DC\_66A\_n41A | 66A | n41A | 66A | n41A | Yes |
| DC\_66A\_n71A | DC\_66A\_n71A | 66A | n71A | 66A | n71A | Yes |
| DC\_66A\_n77A | DC\_66A\_n77A | 66A | n77A | 66A | n77A | Yes |
| DC\_66A\_n77(2A) | DC\_66A\_n77A | 66A | CA\_n77(2A) | 66A | n77A | Yes (NR 2CC) | |
| DC\_66A-66A\_n77A | DC\_66A\_n77A | CA\_66A-66A | n77A | 66A | n77A | No | |
| DC\_66A-66A \_n77(2A) | DC\_66A\_n77A | CA\_66A-66A | CA\_n77(2A) | 66A | n77A | No | |
| DC\_66A\_n78A | DC\_66A\_n78A | 66A | n78A | 66A | n78A | Yes |
| DC\_71A\_n2A | DC\_71A\_n2A | 71A | n2A | 71A | n2A | Yes |
| DC\_71A\_n66A | DC\_71A\_n66A | 71A | n66A | 71A | n66A | Yes |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

###### 4.3.1.4.1.3 Inter-band EN-DC configurations within FR1 (three bands)

Table 4.3.1.4.1.3-1: Inter-band EN-DC configurations within FR1 (three bands)

| EN-DC  configuration | Uplink EN-DC  Configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A\_n28A | DC\_1A\_n28A | CA\_1A-3A | n28A | 1A | n28A | No |
|  | DC\_3A\_n28A | CA\_1A-3A | n28A | 3A | n28A | No |
| DC\_1A-3A\_n41A | DC\_1A\_n41A | CA\_1A-3A | n41A | 1A | n41A | No |
|  | DC\_3A\_n41A | CA\_1A-3A | n41A | 3A | n41A | No |
| DC\_1A-3A\_n77A | DC\_1A\_n77A | CA\_1A-3A | n77A | 1A | n77A | No |
|  | DC\_3A\_n77A | CA\_1A-3A | n77A | 3A | n77A | No |
| DC\_1A-3A\_n78A | DC\_1A\_n78A | CA\_1A-3A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A | n78A | 3A | n78A | No |
| DC\_1A-3C\_n77A | DC\_1A\_n77A | CA\_1A-3C | n77A | 1A | n77A | No | |
| DC\_3A\_n77A | CA\_1A-3C | n77A | 3A | n77A | No | |
| DC\_1A-3C\_n77(2A) | DC\_1A\_n77A | CA\_1A-3C | CA\_n77(2A) | 1A | n77A | No | |
| DC\_3A\_n77A | CA\_1A-3C | CA\_n77(2A) | 3A | n77A | No | |
| DC\_1A-3C\_n78A | DC\_1A\_n78A | CA\_1A-3C | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3C | n78A | 3A | n78A | No |
| DC\_1A-3C\_n78(2A) | DC\_1A\_n78A | CA\_1A-3C | CA\_n78(2A) | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3C | CA\_n78(2A) | 3A | n78A | No |
|  | DC\_3C\_n78A | CA\_1A-3C | CA\_n78(2A) | CA\_3C | n78A | No |
| DC\_1A-1A-3A\_n78A | DC\_1A\_n78A | CA\_1A-1A-3A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-1A-3A | n78A | 3A | n78A | No |
| DC\_1A-1A-5A\_n78A | DC\_1A\_n78A | CA\_1A-1A-5A | n78A | 1A | n78A | No |
|  | DC\_5A\_n78A | CA\_1A-1A-5A | n78A | 5A | n78A | No |
| DC\_1A-1A-3C\_n78A | DC\_1A\_n78A | CA\_1A-1A-3C | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-1A-3C | n78A | 3A | n78A | No |
|  | DC\_3C\_n78A | CA\_1A-1A-3C | n78A | CA\_3C | n78A | No |
| DC\_1A-3A\_n79A | DC\_1A\_n79A | CA\_1A-3A | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A | n79A | 3A | n79A | No |
| DC\_1A-5A\_n78C | DC\_1A\_n78A | CA\_1A-5A | CA\_n78C | 1A | n78A | No |
|  | DC\_5A\_n78A | CA\_1A-5A | CA\_n78C | 5A | n78A | No |
| DC\_1A-7A\_n3A | DC\_1A\_n3A | CA\_1A-7A | n3A | 1A | n3A | No |
| DC\_7A\_n3A | CA\_1A-7A | n3A | 7A | n3A | No |
| DC\_1A-7A\_n28A | DC\_1A\_n28A | CA\_1A-7A | n28A | 1A | n28A | No |
|  | DC\_7A\_n28A | CA\_1A-7A | n28A | 7A | n28A | No |
| DC\_1A-7A\_n78A | DC\_1A\_n78A | CA\_1A-7A | n78A | 1A | n78A | No |
|  | DC\_7A\_n78A | CA\_1A-7A | n78A | 7A | n78A | No |
| DC\_1A-8A\_n3A | DC\_1A\_n3A | CA\_1A-8A | n3A | 1A | n3A | No |
| DC\_8A\_n3A | CA\_1A-8A | n3A | 8A | n3A | No |
| DC\_1A-8A\_n77A | DC\_1A\_n77A | CA\_1A-8A | n77A | 1A | n77A | No |
|  | DC\_8A\_n77A | CA\_1A-8A | n77A | 8A | n77A | No |
| DC\_1A-8A\_n77(2A) | DC\_1A\_n77A | CA\_1A-8A | CA\_n77(2A) | 1A | n77A | No |
|  | DC\_8A\_n77A | CA\_1A-8A | CA\_n77(2A) | 8A | n77A | No |
| DC\_1A-8A\_n78A | DC\_1A\_n78A | CA\_1A-8A | n78A | 1A | n78A | No |
|  | DC\_8A\_n78A | CA\_1A-8A | n78A | 8A | n78A | No |
| DC\_1A-8A\_n78(2A) | DC\_1A\_n78A | CA\_1A-8A | CA\_n78(2A) | 1A | n78A | No |
|  | DC\_8A\_n78A | CA\_1A-8A | CA\_n78(2A) | 8A | n78A | No |
| DC\_1A-18A\_n77A | DC\_1A\_n77A | CA\_1A-18A | n77A | 1A | n77A | No |
|  | DC\_18A\_n77A | CA\_1A-18A | n77A | 18A | n77A | No |
| DC\_1A-19A\_n77(2A) | DC\_1A\_n77A | CA\_1A-19A | CA\_n77(2A) | 1A | n77A | No |
|  | DC\_19A\_n77A | CA\_1A-19A | CA\_n77(2A) | 19A | n77A | No |
| DC\_1A-19A\_n78A | DC\_1A\_n78A | CA\_1A-19A | n78A | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A | n78A | 19A | n78A | No |
| DC\_1A-19A\_n78(2A) | DC\_1A\_n78A | CA\_1A-19A | CA\_n78(2A) | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A | CA\_n78(2A) | 19A | n78A | No |
| DC\_1A-19A\_n79A | DC\_1A\_n79A | CA\_1A-19A | n79A | 1A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-19A | n79A | 19A | n79A | No |
| DC\_1A-20A\_n3A | DC\_1A\_n3A | CA\_1A-20A | n3A | 1A | n3A | No |
|  | DC\_20A\_n3A | CA\_1A-20A | n3A | 20A | n3A | No |
| DC\_1A-20A\_n8A | DC\_1A\_n8A | CA\_1A-20A | n8A | 1A | n8A | No |
|  | DC\_20A\_n8A | CA\_1A-20A | n8A | 20A | n8A | No |
| DC\_1A-20A\_n28A | DC\_1A\_n28A | CA\_1A-20A | n28A | 1A | n28A | No |
|  | DC\_20A\_n28A | CA\_1A-20A | n28A | 20A | n28A | No |
| DC\_1A-20A\_n78A | DC\_1A\_n78A | CA\_1A-20A | n78A | 1A | n78A | No |
|  | DC\_20A\_n78A | CA\_1A-20A | n78A | 20A | n78A | No |
| DC\_1A-21A\_n28A | DC\_1A\_n28A | CA\_1A-21A | n28A | 1A | n28A | No |
|  | DC\_21A\_n28A | CA\_1A-21A | n28A | 21A | n28A | No |
| DC\_1A-21A\_n77(2A) | DC\_1A\_n77A | CA\_1A-21A | CA\_n77(2A) | 1A | n77A | No |
|  | DC\_21A\_n77A | CA\_1A-21A | CA\_n77(2A) | 21A | n77A | No |
| DC\_1A-21A\_n78A | DC\_1A\_n78A | CA\_1A-21A | n78A | 1A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-21A | n78A | 21A | n78A | No |
| DC\_1A-21A\_n78(2A) | DC\_1A\_n78A | CA\_1A-21A | CA\_n78(2A) | 1A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-21A | CA\_n78(2A) | 21A | n78A | No |
| DC\_1A-21A\_n79A | DC\_1A\_n79A | CA\_1A-21A | n79A | 1A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-21A | n79A | 21A | n79A | No |
| DC\_1A-28A\_n3A | DC\_1A\_n3A | CA\_1A-28A | n3A | 1A | n3A | No |
|  | DC\_28A\_n3A | CA\_1A-28A | n3A | 28A | n3A | No |
| DC\_1A-28A\_n5A2 | DC\_1A\_n5A | CA\_1A-28A | n5A | 1A | n5A | No |
|  | DC\_28A\_n5A | CA\_1A-28A | n5A | 28A | n5A | No |
| DC\_1A-28A\_n78C | DC\_1A\_n78A | CA\_1A-28A | CA\_n78C | 1A | n78A | No |
|  | DC\_28A\_n78A | CA\_1A-28A | CA\_n78C | 28A | n78A | No |
| DC\_1A\_n28A-n78A | DC\_1A\_n28A | 1A | CA\_n28A-n78A | 1A | n28A | Yes (NR 2CC) |
|  | DC\_1A\_n78A | 1A | CA\_n28A-n78A | 1A | n78A | No |
| DC\_1A\_n28A-n79A | DC\_1A\_n28A | 1A | CA\_n28A-n79A | 1A | n28A | Yes (NR 2CC) |
|  | DC\_1A\_n79A | 1A | CA\_n28A-n79A | 1A | n79A | No |
| DC\_1A-41A\_n28A | DC\_1A\_n28A | CA\_1A-41A | n28A | 1A | n28A | No |
|  | DC\_41A\_n28A | CA\_1A-41A | n28A | 41A | n28A | No |
| DC\_1A-41C\_n28A | DC\_1A\_n28A | CA\_1A-41C | n28A | 1A | n28A | No |
|  | DC\_41A\_n28A | CA\_1A-41C | n28A | 41A | n28A | No |
|  | DC\_41C\_n28A | CA\_1A-41C | n28A | CA\_41C | n28A | No |
| DC\_1A-41A\_n41A | DC\_1A\_n41A | CA\_1A-41A | n41A | 1A | n41A | No |
| DC\_1A-41A\_n77A | DC\_1A\_n77A | CA\_1A-41A | n77A | 1A | n77A | No |
|  | DC\_41A\_n77A | CA\_1A-41A | n77A | 41A | n77A | No |
| DC\_1A-42A\_n78A | DC\_1A\_n78A | CA\_1A-42A | n78A | 1A | n78A | No |
| DC\_1A-42C\_n78A | DC\_1A\_n78A | CA\_1A-42C | n78A | 1A | n78A | No |
| DC\_1A-42D\_n78A | DC\_1A\_n78A | CA\_1A-42D | n78A | 1A | n78A | No |
| DC\_1A-42E\_n78A | DC\_1A\_n78A | CA\_1A-42E | n78A | 1A | n78A | No |
| DC\_1A-42A\_n79A | DC\_1A\_n79A | CA\_1A-42A | n79A | 1A | n79A | No |
| DC\_1A-42C\_n79A | DC\_1A\_n79A | CA\_1A-42C | n79A | 1A | n79A | No |
| DC\_1A-42D\_n79A | DC\_1A\_n79A | CA\_1A-42D | n79A | 1A | n79A | No |
| DC\_1A-42E\_n79A | DC\_1A\_n79A | CA\_1A-42E | n79A | 1A | n79A | No |
| DC\_1A\_n78A-n79A | DC\_1A\_n78A | 1A | CA\_n78A-n79A | 1A | n78A | Yes (NR 2CC) |
|  | DC\_1A\_n79A | 1A | CA\_n78A-n79A | 1A | n79A | No |
| DC\_2A\_n5A-n77A | DC\_2A\_n5A | 2A | CA\_n5A-n77A | 2A | n5A | Yes (NR 2CC) | |
|  | DC\_2A\_n77A | 2A | CA\_n5A-n77A | 2A | n77A | No | |
| DC\_2A-13A\_n77A | DC\_2A\_n77A | CA\_2A-13A | n77A | 2A | n77A | No | |
|  | DC\_13A\_n77A | CA\_2A-13A | n77A | 13A | n77A | No | |
| DC\_2A-2A-14A\_n66A | DC\_2A\_n66A | CA\_2A-2A-14A | n66A | 2A | n66A | No |
|  | DC\_14A\_n66A | CA\_2A-2A-14A | n66A | 14A | n66A | No |
| DC\_2A-14A\_n2A | DC\_2A\_n2A | CA\_2A-14A | n2A | 2A | n2A | No |
| DC\_14A\_n2A | CA\_2A-14A | n2A | 14A | n2A | No |
| DC\_2A-14A\_n66A | DC\_2A\_n66A | CA\_2A-14A | n66A | 2A | n66A | No |
| DC\_14A\_n66A | CA\_2A-14A | n66A | 14A | n66A | No |
| DC\_2A-66A\_n5A | DC\_2A\_n5A | CA\_2A-66A | n5A | 2A | n5A | No |
| DC\_66A\_n5A | CA\_2A-66A | n5A | 66A | n5A | No |
| DC\_2A-66A\_n41A | DC\_2A\_n41A | CA\_2A-66A | n41A | 2A | n41A | No |
|  | DC\_66A\_n41A | CA\_2A-66A | n41A | 66A | n41A | No |
| DC\_2A-66A\_n71A | DC\_2A\_n71A | CA\_2A-66A | n71A | 2A | n71A | No |
|  | DC\_66A\_n71A | CA\_2A-66A | n71A | 66A | n71A | No |
| DC\_2A-66A\_n77A | DC\_2A\_n77A | CA\_2A-66A | n77A | 2A | n77A | No | |
|  | DC\_66A\_n77A | CA\_2A-66A | n77A | 66A | n77A | No | |
| DC\_2A-(n)71AA | DC\_2A\_n71A | 2A | DC\_(n)71AA | 2A | n71A | No |
|  | DC\_(n)71AA | 2A | DC\_(n)71AA | - | DC\_(n)71AA | No |
| DC\_3A-5A\_n78C | DC\_3A\_n78A | CA\_3A-5A | CA\_n78C | 3A | n78A | No |
|  | DC\_5A\_n78A | CA\_3A-5A | CA\_n78C | 5A | n78A | No |
| DC\_3A\_n1A-n78A | DC\_3A\_n1A | 3A | CA\_n1A-n78A | 3A | n1A | Yes (NR 2CC) |
|  | DC\_3A\_n78A | 3A | CA\_n1A-n78A | 3A | n78A | No |
| DC\_3A\_n1A-n79A | DC\_3A\_n1A | 3A | CA\_n1A-n79A | 3A | n1A | Yes (NR 2CC) |
|  | DC\_3A\_n79A | 3A | CA\_n1A-n79A | 3A | n79A | No |
| DC\_3A-7A\_n1A | DC\_3A\_n1A | CA\_3A-7A | n1A | 3A | n1A | No |
|  | DC\_7A\_n1A | CA\_3A-7A | n1A | 7A | n1A | No |
| DC\_3A-7A\_n5A | DC\_3A\_n5A | CA\_3A-7A | n5A | 3A | n5A | No |
|  | DC\_7A\_n5A | CA\_3A-7A | n5A | 7A | n5A | No |
| DC\_3A-7A\_n28A | DC\_3A\_n28A | CA\_3A-7A | n28A | 3A | n28A | No |
|  | DC\_7A\_n28A | CA\_3A-7A | n28A | 7A | n28A | No |
| DC\_3A-7A\_n78A | DC\_3A\_n78A | CA\_3A-7A | n78A | 1A | n78A | No |
|  | DC\_7A\_n78A | CA\_3A-7A | n78A | 7A | n78A | No |
| DC\_3A-8A\_n1A | DC\_3A\_n1A | CA\_3A-8A | n1A | 3A | n1A | No |
|  | DC\_8A\_n1A | CA\_3A-8A | n1A | 8A | n1A | No |
| DC\_3A-8A\_n28A | DC\_3A\_n28A | CA\_3A-8A | n28A | 3A | n28A | No |
|  | DC\_8A\_n28A | CA\_3A-8A | n28A | 8A | n28A | No |
| DC\_3A-8A\_n77A | DC\_3A\_n77A | CA\_3A-8A | n77A | 3A | n77A | No |
| DC\_8A\_n77A | CA\_3A-8A | n77A | 8A | n77A | No |
| DC\_3A-8A\_n77(2A) | DC\_3A\_n77A | CA\_3A-8A | CA\_n77(2A) | 3A | n77A | No |
|  | DC\_8A\_n77A | CA\_3A-8A | CA\_n77(2A) | 8A | n77A | No |
| DC\_3A-8A\_n78A | DC\_3A\_n78A | CA\_3A-8A | n78A | 3A | n78A | No |
|  | DC\_8A\_n78A | CA\_3A-8A | n78A | 8A | n78A | No |
| DC\_3A-8A\_n78(2A) | DC\_3A\_n78A | CA\_3A-8A | CA\_n78(2A) | 3A | n78A | No |
|  | DC\_8A\_n78A | CA\_3A-8A | CA\_n78(2A) | 8A | n78A | No |
| DC\_3A-18A\_n77A | DC\_3A\_n77A | CA\_3A-18A | n77A | 3A | n77A | No |
|  | DC\_18A\_n77A | CA\_3A-18A | n77A | 18A | n77A | No |
| DC\_3A-18A\_n78A | DC\_3A\_n78A | CA\_3A-18A | n78A | 3A | n78A | No |
|  | DC\_18A\_n78A | CA\_3A-18A | n78A | 18A | n78A | No |
| DC\_3A-19A\_n1A | DC\_3A\_n1A | CA\_3A-19A | n1A | 3A | n1A | No |
|  | DC\_19A\_n1A | CA\_3A-19A | n1A | 19A | n1A | No |
| DC\_3A-19A\_n77(2A) | DC\_3A\_n77A | CA\_3A-19A | CA\_n77(2A) | 3A | n77A | No |
|  | DC\_19A\_n77A | CA\_3A-19A | CA\_n77(2A) | 19A | n77A | No |
| DC\_3A-19A\_n78A | DC\_3A\_n78A | CA\_3A-19A | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_3A-19A | n78A | 19A | n78A | No |
| DC\_3A-19A\_n78(2A) | DC\_3A\_n78A | CA\_3A-19A | CA\_n78(2A) | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_3A-19A | CA\_n78(2A) | 19A | n78A | No |
| DC\_3A-19A\_n79A | DC\_3A\_n79A | CA\_3A-19A | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_3A-19A | n79A | 19A | n79A | No |
| DC\_3A-20A\_n1A | DC\_3A\_n1A | CA\_3A-20A | n1A | 3A | n1A | No |
| DC\_20A\_n1A | CA\_3A-20A | n1A | 20A | n1A | No |
| DC\_3A-20A\_n28A | DC\_3A\_n28A | CA\_3A-20A | n28A | 3A | n28A | No |
|  | DC\_20A\_n28A | CA\_3A-20A | n28A | 20A | n28A | No |
| DC\_3A-21A\_n1A | DC\_3A\_n1A | CA\_3A-21A | n1A | 3A | n1A | No |
|  | DC\_21A\_n1A | CA\_3A-21A | n1A | 21A | n1A | No |
| DC\_3A-21A\_n28A | DC\_3A\_n28A | CA\_3A-21A | n28A | 3A | n28A | No |
|  | DC\_21A\_n28A | CA\_3A-21A | n28A | 21A | n28A | No |
| DC\_3A-21A\_n77(2A) | DC\_3A\_n77A | CA\_3A-21A | CA\_n77(2A) | 3A | n77A | No |
|  | DC\_21A\_n77A | CA\_3A-21A | CA\_n77(2A) | 21A | n77A | No |
| DC\_3A-21A\_n78A | DC\_3A\_n78A | CA\_3A-21A | n78A | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_3A-21A | n78A | 21A | n78A | No |
| DC\_3A-21A\_n78(2A) | DC\_3A\_n78A | CA\_3A-21A | CA\_n78(2A) | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_3A-21A | CA\_n78(2A) | 21A | n78A | No |
| DC\_3A-21A\_n79A | DC\_3A\_n79A | CA\_3A-21A | n79A | 3A | n79A | No |
|  | DC\_21A\_n79A | CA\_3A-21A | n79A | 21A | n79A | No |
| DC\_3A-28A\_n78A | DC\_3A\_n78A | CA\_3A-28A | n78A | 3A | n78A | No |
|  | DC\_28A\_n78A | CA\_3A-28A | n78A | 28A | n78A | No |
| DC\_3A\_n28A-n78A | DC\_3A\_n28A | 3A | CA\_n28A-n78A | 3A | n28A | Yes (NR 2CC) |
|  | DC\_3A\_n78A | 3A | CA\_n28A-n78A | 3A | n78A | No |
| DC\_3A\_n28A-n79A | DC\_3A\_n28A | 3A | CA\_n28A-n79A | 3A | n28A | Yes (NR 2CC) |
|  | DC\_3A\_n79A | 3A | CA\_n28A-n79A | 3A | n79A | No |
| DC\_3A-40A\_n1A | DC\_3A\_n1A | CA\_3A-40A | n1A | 3A | n1A | No |
|  | DC\_40A\_n1A | CA\_3A-40A | n1A | 40A | n1A | No |
| DC\_3A-41A\_n28A | DC\_3A\_n28A | CA\_3A-41A | n28A | 3A | n28A | No |
|  | DC\_41A\_n28A | CA\_3A-41A | n28A | 41A | n28A | No |
| DC\_3A-41C\_n28A | DC\_3A\_n28A | CA\_3A-41C | n28A | 3A | n28A | No |
|  | DC\_41A\_n28A | CA\_3A-41C | n28A | 41A | n28A | No |
|  | DC\_41C\_n28A | CA\_3A-41C | n28A | CA\_41C | n28A | No |
| DC\_3A-41A\_n41A | DC\_3A\_n41A | CA\_3A-41A | n41A | 3A | n41A | No |
| DC\_3A-41A\_n77A | DC\_3A\_n77A | CA\_3A-41A | n77A | 3A | n77A | No |
|  | DC\_41A\_n77A | CA\_3A-41A | n77A | 41A | n77A | No |
| DC\_3A-41A\_n77(2A) | DC\_3A\_n77A | CA\_3A-41A | CA\_n77(2A) | 3A | n77A | No |
|  | DC\_41A\_n77A | CA\_3A-41A | CA\_n77(2A) | 41A | n77A | No |
| DC\_3A-41C\_n77A | DC\_3A\_n77A | CA\_3A-41C | n77A | 3A | n77A | No |
|  | DC\_41A\_n77A | CA\_3A-41C | n77A | CA\_41C | n77A | No |
| DC\_3A-42A\_n1A | DC\_3A\_n1A | CA\_3A-42A | n1A | 3A | n1A | No |
| DC\_3A-42C\_n1A | DC\_3A\_n1A | CA\_3A-42C | n1A | 3A | n1A | No |
| DC\_3A-42A\_n78A | DC\_3A\_n78A | CA\_3A-42A | n78A | 3A | n78A | No |
| DC\_3A-42C\_n78A | DC\_3A\_n78A | CA\_3A-42C | n78A | 3A | n78A | No |
| DC\_3A-42D\_n78A | DC\_3A\_n78A | CA\_3A-42D | n78A | 3A | n78A | No |
| DC\_3A-42E\_n78A | DC\_3A\_n78A | CA\_3A-42E | n78A | 3A | n78A | No |
| DC\_3A-42A\_n79A | DC\_3A\_n79A | CA\_3A-42A | n79A | 3A | n79A | No |
| DC\_3A-42C\_n79A | DC\_3A\_n79A | CA\_3A-42C | n79A | 3A | n79A | No |
| DC\_3A-42D\_n79A | DC\_3A\_n79A | CA\_3A-42D | n79A | 3A | n79A | No |
| DC\_3A-42E\_n79A | DC\_3A\_n79A | CA\_3A-42E | n79A | 3A | n79A | No |
| DC\_3A\_n78A-n79A | DC\_3A\_n78A | 3A | CA\_n78A-n79A | 3A | n78A | Yes (NR 2CC) |
|  | DC\_3A\_n79A | 3A | CA\_n78A-n79A | 3A | n79A | No |
| DC\_3C-8A\_n77A | DC\_3A\_n77A | CA\_3C-8A | n77A | 3A | n77A | No | |
| DC\_8A\_n77A | CA\_3C-8A | n77A | 8A | n77A | No | |
| DC\_3C-8A\_n77(2A) | DC\_3A\_n77A | CA\_3A-8A | CA\_n77(2A) | 3A | n77A | No | |
| DC\_8A\_n77A | CA\_3A-8A | CA\_n77(2A) | 8A | n77A | No | |
| DC\_5A-7A\_n78A | DC\_5A\_n78A | CA\_5A-7A | n78A | 5A | n78A | No |
|  | DC\_7A\_n78A | CA\_5A-7A | n78A | 7A | n78A | No |
| DC\_7A-8A\_n1A | DC\_7A\_n1A | CA\_7A-8A | n1A | 7A | n1A | No |
|  | DC\_8A\_n1A | CA\_7A-8A | n1A | 8A | n1A | No |
| DC\_7A-8A\_n3A | DC\_7A\_n3A | CA\_7A-8A | n3A | 7A | n3A | No |
|  | DC\_8A\_n3A | CA\_7A-8A | n3A | 8A | n3A | No |
| DC\_7A-20A\_n1A | DC\_7A\_n1A | CA\_7A-20A | n1A | 7A | n1A | No |
|  | DC\_20A\_n1A | CA\_7A-20A | n1A | 20A | n1A | No |
| DC\_7A-20A\_n3A | DC\_7A\_n3A | CA\_7A-20A | n3A | 7A | n3A | No |
| DC\_20A\_n3A | CA\_7A-20A | n3A | 20A | n3A | No |
| DC\_7A-20A\_n8A | DC\_7A\_n8A | CA\_7A-20A | n8A | 7A | n8A | No |
|  | DC\_20A\_n8A | CA\_7A-20A | n8A | 20A | n8A | No |
| DC\_7A-20A\_n28A | DC\_7A\_n28A | CA\_7A-20A | n28A | 7A | n28A | No |
|  | DC\_20A\_n28A | CA\_7A-20A | n28A | 20A | n28A | No |
| DC\_7A-20A\_n78A | DC\_7A\_n78A | CA\_7A-20A | n78A | 7A | n78A | No |
|  | DC\_20A\_n78A | CA\_7A-20A | n78A | 20A | n78A | No |
| DC\_7A-28A\_n3A | DC\_7A\_n3A | CA\_7A-28A | n3A | 7A | n3A | No |
|  | DC\_28A\_n3A | CA\_7A-28A | n3A | 28A | n3A | No |
| DC\_7A-28A\_n5A2 | DC\_7A\_n5A | CA\_7A-28A | n5A | 7A | n5A | No |
|  | DC\_28A\_n5A | CA\_7A-28A | n5A | 28A | n5A | No |
| DC\_7A\_n5A-n78A | DC\_7A\_n5A | 7A | CA\_n5A-n78A | 7A | n5A | Yes (NR 2CC) |
|  | DC\_7A\_n78A | 7A | CA\_n5A-n78A | 7A | n78A | No |
| DC\_7A\_n28A-n78A | DC\_7A\_n28A | 7A | CA\_n28A-n78A | 7A | n28A | Yes (NR 2CC) |
|  | DC\_7A\_n78A | 7A | CA\_n28A-n78A | 7A | n78A | No |
| DC\_7C\_n5A-n78A | DC\_7A\_n5A | CA\_7C | CA\_n5A-n78A | 7A | n5A | No |
|  | DC\_7A\_n78A | CA\_7C | CA\_n5A-n78A | 7A | n78A | No |
|  | DC\_7C\_n5A | CA\_7C | CA\_n5A-n78A | CA\_7C | n5A | No |
|  | DC\_7C\_n78A | CA\_7C | CA\_n5A-n78A | CA\_7C | n78A | No |
| DC\_7C\_n28A-n78A | DC\_7A\_n28A | CA\_7C | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_7C | CA\_n28A-n78A | 7A | n78A | No |
|  | DC\_7C\_n28A | CA\_7C | CA\_n28A-n78A | CA\_7C | n28A | No |
|  | DC\_7C\_n78A | CA\_7C | CA\_n28A-n78A | CA\_7C | n78A | No |
| DC\_13A\_n2A-n77A | DC\_13A\_n2A | 13A | CA\_n2A-n77A | 13A | n2A | Yes (NR 2CC) |
|  | DC\_13A\_n77A | 13A | CA\_n2A-n77A | 13A | n77A | No |
| DC\_13A-66A\_n2A | DC\_13A\_n2A | CA\_13A-66A | n2A | 13A | n2A | No |
|  | DC\_66A\_n2A | CA\_13A-66A | n2A | 66A | n2A | No |
| DC\_13A-66A\_n77A | DC\_13A\_n77A | CA\_13A-66A | n77A | 13A | n77A | No |
|  | DC\_66A\_n77A | CA\_13A-66A | n77A | 66A | n77A | No |
| DC\_14A-66A\_n2A | DC\_14A\_n2A | CA\_14A-66A | n2A | 14A | n2A | No |
|  | DC\_66A\_n2A | CA\_14A-66A | n2A | 66A | n2A | No |
| DC\_14A-66A\_n66A | DC\_14A\_n66A | CA\_14A-66A | n66A | 14A | n66A | No |
|  | DC\_66A\_n66A | CA\_14A-66A | n66A | 66A | n66A | No |
| DC\_14A-66A-66A\_n2A | DC\_14A\_n2A | CA\_14A-66A-66A | n2A | 14A | n2A | No |
|  | DC\_66A\_n2A | CA\_14A-66A-66A | n2A | 66A | n2A | No |
| DC\_18A-41C\_n3A | DC\_18A\_n3A | CA\_18A-41C | n3A | 18A | n3A | No |
|  | DC\_41A\_n3A | CA\_18A-41C | n3A | 41A | n3A | No |
|  | DC\_41C\_n3A | CA\_18A-41C | n3A | CA\_41C | n3A | No |
| DC\_18A-41A\_n77A | DC\_18A\_n77A | CA\_18A-41A | n77A | 18A | n77A | No |
|  | DC\_41A\_n77A | CA\_18A-41A | n77A | 41A | n77A | No |
| DC\_18A-41C\_n77A | DC\_18A\_n77A | CA\_18A-41C | n77A | 18A | n77A | No |
|  | DC\_41A\_n77A | CA\_18A-41C | n77A | 41A | n77A | No |
|  | DC\_41C\_ n77A | CA\_18A-41C | n77A | CA\_41C | n77A | No |
| DC\_18A-41A\_n78A | DC\_18A\_n78A | CA\_18A-41A | n78A | 18A | n78A | No |
|  | DC\_41A\_n78A | CA\_18A-41A | n78A | 41A | n78A | No |
| DC\_18A-41C\_n78A | DC\_18A\_n78A | CA\_18A-41C | n78A | 18A | n78A | No |
|  | DC\_41A\_n78A | CA\_18A-41C | n78A | 41A | n78A | No |
|  | DC\_41C\_n78A | CA\_18A-41C | n78A | CA\_41C | n78A | No |
| DC\_19A\_n1A-n78A | DC\_19A\_n1A | 19A | CA\_n1A-n78A | 19A | n1A | Yes (NR 2CC) |
|  | DC\_19A\_n78A | 19A | CA\_n1A-n78A | 19A | n78A | No |
| DC\_19A\_n1A-n79A | DC\_19A\_n1A | 19A | CA\_n1A-n79A | 19A | n1A | Yes (NR 2CC) |
|  | DC\_19A\_n79A | 19A | CA\_n1A-n79A | 19A | n79A | No |
| DC\_19A-21A\_n1A | DC\_19A\_n1A | CA\_19A-21A | n1A | 19A | n1A | No |
|  | DC\_21A\_n1A | CA\_19A-21A | n1A | 21A | n1A | No |
| DC\_19A-21A\_n77(2A) | DC\_19A\_n77A | CA\_19A-21A | CA\_n77(2A) | 19A | n77A | No |
|  | DC\_21A\_n77A | CA\_19A-21A | CA\_n77(2A) | 21A | n77A | No |
| DC\_19A-21A\_n78A | DC\_19A\_n78A | CA\_19A-21A | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_19A-21A | n78A | 21A | n78A | No |
| DC\_19A-21A\_n78(2A) | DC\_19A\_n78A | CA\_19A-21A | CA\_n78(2A) | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_19A-21A | CA\_n78(2A) | 21A | n78A | No |
| DC\_19A-21A\_n79A | DC\_19A\_n79A | CA\_19A-21A | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_19A-21A | n79A | 21A | n79A | No |
| DC\_19A-42A\_n1A | DC\_19A\_n1A | CA\_19A-42A | n1A | 19A | n1A | No |
| DC\_19A-42A\_n78A | DC\_19A\_n78A | CA\_19A-42A | n78A | 19A | n78A | No |
| DC\_19A-42A\_n79A | DC\_19A\_n79A | CA\_19A-42A | n79A | 19A | n79A | No |
| DC\_19A-42C\_n1A | DC\_19A\_n1A | CA\_19A-42C | n1A | 19A | n1A | No |
| DC\_19A-42C\_n78A | DC\_19A\_n78A | CA\_19A-42C | n78A | 19A | n78A | No |
| DC\_19A-42C\_n79A | DC\_19A\_n79A | CA\_19A-42C | n79A | 19A | n79A | No |
| DC\_19A\_n78A-n79A | DC\_19A\_n78A | 19A | CA\_n78A-n79A | 19A | n78A | Yes (NR 2CC) |
|  | DC\_19A\_n79A | 19A | CA\_n78A-n79A | 19A | n79A | No |
| DC\_20A\_n28A-n78A | DC\_20A\_n28A | 20A | CA\_n28A-n78A | 20A | n28A | Yes (NR 2CC) |
|  | DC\_20A\_n78A | 20A | CA\_n28A-n78A | 20A | n78A | No |
| DC\_21A\_n1A-n78A | DC\_21A\_n1A | 21A | CA\_n1A-n78A | 21A | n1A | Yes (NR 2CC) |
|  | DC\_21A\_n78A | 21A | CA\_n1A-n78A | 21A | n78A | No |
| DC\_21A\_n1A-n79A | DC\_21A\_n1A | 21A | CA\_n1A-n79A | 21A | n1A | Yes (NR 2CC) |
|  | DC\_21A\_n79A | 21A | CA\_n1A-n79A | 21A | n79A | No |
| DC\_21A\_n28A-n77A | DC\_21A\_n28A | 21A | CA\_n28A-n77A | 21A | n28A | Yes (NR 2CC) |
|  | DC\_21A\_n77A | 21A | CA\_n28A-n77A | 21A | n77A | No |
| DC\_21A\_n28A-n78A | DC\_21A\_n28A | 21A | CA\_n28A-n78A | 21A | n28A | Yes (NR 2CC) |
|  | DC\_21A\_n78A | 21A | CA\_n28A-n78A | 21A | n78A | No |
| DC\_21A\_n28A-n79A | DC\_21A\_n28A | 21A | CA\_n28A-n79A | 21A | n28A | Yes (NR 2CC) |
|  | DC\_21A\_n79A | 21A | CA\_n28A-n79A | 21A | n79A | No |
| DC\_21A-42A\_n1A | DC\_21A\_n1A | CA\_21A-42A | n1A | 21A | n1A | No |
| DC\_21A-42C\_n1A | DC\_21A\_n1A | CA\_21A-42C | n1A | 21A | n1A | No |
| DC\_21A-42A\_n78A | DC\_21A\_n78A | CA\_21A-42A | n78A | 21A | n78A | No |
| DC\_21A-42C\_n78A | DC\_21A\_n78A | CA\_21A-42C | n78A | 21A | n78A | No |
| DC\_21A-42A\_n79A | DC\_21A\_n79A | CA\_21A-42A | n79A | 21A | n79A | No |
| DC\_21A-42C\_n79A | DC\_21A\_n79A | CA\_21A-42C | n79A | 21A | n79A | No |
| DC\_21A\_n78A-n79A | DC\_21A\_n78A | 21A | CA\_n78A-n79A | 21A | n78A | Yes (NR 2CC) |
|  | DC\_21A\_n79A | 21A | CA\_n78A-n79A | 21A | n79A | No |
| DC\_28A\_n7A-n78A | DC\_28A\_n7A | 28A | CA\_n7A-n78A | 28A | n7A | Yes (NR 2CC) |
|  | DC\_28A\_n7A | 28A | CA\_n7A-n78A | 28A | n78A | No |
| DC\_66A\_n2A-n77A | DC\_66A\_n2A | 66A | CA\_n2A-n77A | 66A | n2A | Yes (NR 2CC) |
|  | DC\_66A\_n77A | 66A | CA\_n2A-n77A | 66A | n77A | No |
| DC\_66A\_n5A-n77A | DC\_66A\_n5A | 66A | CA\_n5A-n77A | 66A | n5A | Yes (NR 2CC) |
|  | DC\_66A\_n77A | 66A | CA\_n5A-n77A | 66A | n77A | No |
| DC\_66A\_(n)71AA | DC\_66A\_n71A | 66A | DC\_(n)71AA | 66A | n71A | No |
|  | DC\_(n)71AA | 66A | DC\_(n)71AA | - | DC\_(n)71AA | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations.  Note 2: The frequency range in band 28 is restricted for this band combination to 703-733 MHz for the UL and 758 – 788 MHz for the DL. | | | | | | |

###### 4.3.1.4.1.4 Inter-band EN-DC configurations within FR1 (four bands)

Table 4.3.1.4.1.4-1: Inter-band EN-DC configurations within FR1 (four bands)

| EN-DC  configuration | Uplink EN-DC  Configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A-7A\_n28A | DC\_1A\_n28A | CA\_1A-3A-7A | n28A | 1A | n28A | No |
|  | DC\_3A\_n28A | CA\_1A-3A-7A | n28A | 3A | n28A | No |
|  | DC\_7A\_n28A | CA\_1A-3A-7A | n28A | 7A | n28A | No |
| DC\_1A-3A-7A\_n78A | DC\_1A\_n78A | CA\_1A-3A-7A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-7A | n78A | 3A | n78A | No |
|  | DC\_7A\_n78A | CA\_1A-3A-7A | n78A | 7A | n78A | No |
| DC\_1A-3A-8A\_n77A | DC\_1A\_n77A | CA\_1A-3A-8A | n77A | 1A | n77A | No |
| DC\_3A\_n77A | CA\_1A-3A-8A | n77A | 3A | n77A | No |
| DC\_8A\_n77A | CA\_1A-3A-8A | n77A | 8A | n77A | No |
| DC\_1A-3A-8A\_n77(2A) | DC\_1A\_n77A | CA\_1A-3A-8A | CA\_n77(2A) | 1A | n77A | No |
|  | DC\_3A\_n77A | CA\_1A-3A-8A | CA\_n77(2A) | 3A | n77A | No |
|  | DC\_8A\_n77A | CA\_1A-3A-8A | CA\_n77(2A) | 8A | n77A | No |
| DC\_1A-3A-8A\_n78A | DC\_1A\_n78A | CA\_1A-3A-8A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-8A | n78A | 3A | n78A | No |
|  | DC\_8A\_n78A | CA\_1A-3A-8A | n78A | 8A | n78A | No |
| DC\_1A-3A-19A\_n77(2A) | DC\_1A\_n77A | CA\_1A-3A-19A | CA\_n77A(2A) | 1A | n77A | No |
|  | DC\_3A\_n77A | CA\_1A-3A-19A | CA\_n77A(2A) | 3A | n77A | No |
|  | DC\_19A\_n77A | CA\_1A-3A-19A | CA\_n77A(2A) | 19A | n77A | No |
| DC\_1A-3A-19A\_n78A | DC\_1A\_n78A | CA\_1A-3A-19A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-19A | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-3A-19A | n78A | 19A | n78A | No |
| DC\_1A-3A-19A\_n78(2A) | DC\_1A\_n78A | CA\_1A-3A-19A | CA\_n78A(2A) | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-19A | CA\_n78A(2A) | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-3A-19A | CA\_n78A(2A) | 19A | n78A | No |
| DC\_1A-3A-19A\_n79A | DC\_1A\_n79A | CA\_1A-3A-19A | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-19A | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-3A-19A | n79A | 19A | n79A | No |
| DC\_1A-3A-20A\_n28A | DC\_1A\_n28A | CA\_1A-3A-20A | n28A | 1A | n28A | No |
|  | DC\_3A\_n28A | CA\_1A-3A-20A | n28A | 3A | n28A | No |
|  | DC\_20A\_n28A | CA\_1A-3A-20A | n28A | 20A | n28A | No |
| DC\_1A-3A-20A\_n78A | DC\_1A\_n78A | CA\_1A-3A-20A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-20A | n78A | 3A | n78A | No |
|  | DC\_20A\_n78A | CA\_1A-3A-20A | n78A | 20A | n78A | No |
| DC\_1A-3A-21A\_n77(2A) | DC\_1A\_n77A | CA\_1A-3A-21A | CA\_n77A(2A) | 1A | n77A | No |
|  | DC\_3A\_n77A | CA\_1A-3A-21A | CA\_n77A(2A) | 3A | n77A | No |
|  | DC\_21A\_n77A | CA\_1A-3A-21A | CA\_n77A(2A) | 21A | n77A | No |
| DC\_1A-3A-21A\_n78A | DC\_1A\_n78A | CA\_1A-3A-21A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-21A | n78A | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-3A-21A | n78A | 21A | n78A | No |
| DC\_1A-3A-21A\_n78(2A) | DC\_1A\_n78A | CA\_1A-3A-21A | CA\_n78A(2A) | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-21A | CA\_n78A(2A) | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-3A-21A | CA\_n78A(2A) | 21A | n78A | No |
| DC\_1A-3A-21A\_n79A | DC\_1A\_n79A | CA\_1A-3A-21A | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-21A | n79A | 3A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-3A-21A | n79A | 21A | n79A | No |
| DC\_1A-3A-28A\_n78A | DC\_1A\_n78A | CA\_1A-3A-28A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-28A | n78A | 3A | n78A | No |
|  | DC\_28A\_n78A | CA\_1A-3A-28A | n78A | 28A | n78A | No |
| DC\_1A-3A\_n28A-n78A | DC\_1A\_n28A | CA\_1A-3A | CA\_n28A-n78A | 1A | n28A | No |
|  | DC\_1A\_n78A | CA\_1A-3A | CA\_n28A-n78A | 1A | n78A | No |
|  | DC\_3A\_n28A | CA\_1A-3A | CA\_n28A-n78A | 3A | n28A | No |
|  | DC\_3A\_n78A | CA\_1A-3A | CA\_n28A-n78A | 3A | n78A | No |
| DC\_1A-3A-42A\_n78A | DC\_1A\_n78A | CA\_1A-3A-42A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-42A | n78A | 3A | n78A | No |
| DC\_1A-3A-42C\_n78A | DC\_1A\_n78A | CA\_1A-3A-42C | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-42C | n78A | 3A | n78A | No |
| DC\_1A-3A-42D\_n78A | DC\_1A\_n78A | CA\_1A-3A-42D | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-42D | n78A | 3A | n78A | No |
| DC\_1A-3A-42A\_n79A | DC\_1A\_n79A | CA\_1A-3A-42A | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-42A | n79A | 3A | n79A | No |
| DC\_1A-3A-42C\_n79A | DC\_1A\_n79A | CA\_1A-3A-42C | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-42C | n79A | 3A | n79A | No |
| DC\_1A-3A-42D\_n79A | DC\_1A\_n79A | CA\_1A-3A-42D | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-42D | n79A | 3A | n79A | No |
| DC\_1A-3C-8A\_n77A | DC\_1A\_n77A | CA\_1A-3C-8A | n77A | 1A | n77A | No |
| DC\_3A\_n77A | CA\_1A-3C-8A | n77A | 3A | n77A | No |
| DC\_8A\_n77A | CA\_1A-3C-8A | n77A | 8A | n77A | No |
| DC\_1A-3C-8A\_n77(2A) | DC\_1A\_n77A | CA\_1A-3C-8A | CA\_n77(2A) | 1A | n77A | No |
| DC\_3A\_n77A | CA\_1A-3C-8A | CA\_n77(2A) | 3A | n77A | No |
| DC\_8A\_n77A | CA\_1A-3C-8A | CA\_n77(2A) | 8A | n77A | No |
| DC\_1A-7A-20A\_n28A | DC\_1A\_n28A | CA\_1A-7A-20A | n28A | 1A | n28A | No |
|  | DC\_7A\_n28A | CA\_1A-7A-20A | n28A | 7A | n28A | No |
|  | DC\_20A\_n28A | CA\_1A-7A-20A | n28A | 20A | n28A | No |
| DC\_1A-7A-20A\_n78A | DC\_1A\_n78A | CA\_1A-7A-20A | n78A | 1A | n78A | No |
|  | DC\_7A\_n78A | CA\_1A-7A-20A | n78A | 7A | n78A | No |
|  | DC\_20A\_n78A | CA\_1A-7A-20A | n78A | 20A | n78A | No |
| DC\_1A-7A-28A\_n78A | DC\_1A\_n78A | CA\_1A-7A-28A | n78A | 1A | n78A | No |
|  | DC\_7A\_n78A | CA\_1A-7A-28A | n78A | 7A | n78A | No |
|  | DC\_28A\_n78A | CA\_1A-7A-28A | n78A | 28A | n78A | No |
| DC\_1A-7A\_n28A-n78A | DC\_1A\_n28A | CA\_1A-7A | CA\_n28A-n78A | 1A | n28A | No |
|  | DC\_1A\_n78A | CA\_1A-7A | CA\_n28A-n78A | 1A | n78A | No |
|  | DC\_7A\_n28A | CA\_1A-7A | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_1A-7A | CA\_n28A-n78A | 7A | n78A | No |
| DC\_1A-19A-21A\_n77(2A) | DC\_1A\_n77A | CA\_1A-19A-21A | CA\_n77(2A) | 1A | n77A | No |
|  | DC\_19A\_n77A | CA\_1A-19A-21A | CA\_n77(2A) | 19A | n77A | No |
|  | DC\_21A\_n77(2A) | CA\_1A-19A-21A | CA\_n77(2A) | 21A | n77A | No |
| DC\_1A-19A-21A\_n78A | DC\_1A\_n78A | CA\_1A-19A-21A | n78A | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A-21A | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-19A-21A | n78A | 21A | n78A | No |
| DC\_1A-19A-21A\_n78(2A) | DC\_1A\_n78A | CA\_1A-19A-21A | CA\_n78(2A) | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A-21A | CA\_n78(2A) | 19A | n78A | No |
|  | DC\_21A\_n78(2A) | CA\_1A-19A-21A | CA\_n78(2A) | 21A | n78A | No |
| DC\_1A-19A-21A\_n79A | DC\_1A\_n79A | CA\_1A-19A-21A | n79A | 1A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-19A-21A | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-19A-21A | n79A | 21A | n79A | No |
| DC\_1A-19A-42A\_n78A | DC\_1A\_n78A | CA\_1A-19A-42A | n78A | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A-42A | n78A | 19A | n78A | No |
| DC\_1A-19A-42C\_n78A | DC\_1A\_n78A | CA\_1A-19A-42C | n78A | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A-42C | n78A | 19A | n78A | No |
| DC\_1A-19A-42A\_n79A | DC\_1A\_n79A | CA\_1A-19A-42A | n79A | 1A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-19A-42A | n79A | 19A | n79A | No |
| DC\_1A-19A-42C\_n79A | DC\_1A\_n79A | CA\_1A-19A-42C | n79A | 1A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-19A-42C | n79A | 19A | n79A | No |
| DC\_1A-20A\_n28A-n78A | DC\_1A\_n28A | CA\_1A-20A | CA\_n28A-n78A | 1A | n28A | No |
|  | DC\_1A\_n78A | CA\_1A-20A | CA\_n28A-n78A | 1A | n78A | No |
|  | DC\_20A\_n28A | CA\_1A-20A | CA\_n28A-n78A | 20A | n28A | No |
|  | DC\_20A\_n78A | CA\_1A-20A | CA\_n28A-n78A | 20A | n78A | No |
| DC\_1A-21A-42A\_n78A | DC\_1A\_n78A | CA\_1A-21A-42A | n78A | 1A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-21A-42A | n78A | 21A | n78A | No |
| DC\_1A-21A-42C\_n78A | DC\_1A\_n78A | CA\_1A-21A-42C | n78A | 1A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-21A-42C | n78A | 21A | n78A | No |
| DC\_1A-21A-42A\_n79A | DC\_1A\_n79A | CA\_1A-21A-42A | n79A | 1A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-21A-42A | n79A | 21A | n79A | No |
| DC\_1A-21A-42C\_n79A | DC\_1A\_n79A | CA\_1A-21A-42C | n79A | 1A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-21A-42C | n79A | 21A | n79A | No |
| DC\_2A-2A-14A-66A\_n66A | DC\_2A\_n66A | CA\_2A-2A-14A-66A | n66A | 2A | n66A | No |
|  | DC\_14A\_n66A | CA\_2A-2A-14A-66A | n66A | 14A | n66A | No |
|  | DC\_66A\_n66A | CA\_2A-2A-14A-66A | n66A | 66A | n66A | No |
| DC\_2A-7A-7A-13A\_n66A | DC\_2A\_n66A | CA\_2A-7A-7A-13A | n66A | 2A | n66A | No |
|  | DC\_7A\_n66A | CA\_2A-7A-7A-13A | n66A | 7A | n66A | No |
|  | DC\_13A\_n66A | CA\_2A-7A-7A-13A | n66A | 13A | n66A | No |
| DC\_2A-7A-7A-66A\_n66A | DC\_2A\_n66A | CA\_2A-7A-7A-66A | n66A | 2A | n66A | No |
|  | DC\_7A\_n66A | CA\_2A-7A-7A-66A | n66A | 7A | n66A | No |
|  | DC\_66A\_n66A | CA\_2A-7A-7A-66A | n66A | 66A | n66A | No |
| DC\_2A-7A-7A-66A\_n78A | DC\_2A\_n78A | CA\_2A-7A-7A-66A | n78A | 2A | n78A | No |
| DC\_7A\_n78A | CA\_2A-7A-7A-66A | n78A | 7A | n78A | No |
| DC\_66A\_n78A | CA\_2A-7A-7A-66A | n78A | 66A | n78A | No |
| DC\_2A-7A-13A\_n66A | DC\_2A\_n66A | CA\_2A-7A-13A | n66A | 2A | n66A | No |
|  | DC\_7A\_n66A | CA\_2A-7A-13A | n66A | 7A | n66A | No |
|  | DC\_13A\_n66A | CA\_2A-7A-13A | n66A | 13A | n66A | No |
| DC\_2A-7A-66A\_n66A | DC\_2A\_n66A | CA\_2A-7A-66A | n66A | 2A | n66A | No |
|  | DC\_7A\_n66A | CA\_2A-7A-66A | n66A | 7A | n66A | No |
|  | DC\_66A\_n66A | CA\_2A-7A-66A | n66A | 66A | n66A | No |
| DC\_2A-7C-13A\_n66A | DC\_2A\_n66A | CA\_2A-7C-13A | n66A | 2A | n66A | No |
|  | DC\_7A\_n66A | CA\_2A-7C-13A | n66A | 7A | n66A | No |
|  | DC\_13A\_n66A | CA\_2A-7C-13A | n66A | 13A | n66A | No |
| DC\_2A-7C-66A\_n66A | DC\_2A\_n66A | CA\_2A-7C-66A | n66A | 2A | n66A | No |
|  | DC\_7A\_n66A | CA\_2A-7C-66A | n66A | 7A | n66A | No |
|  | DC\_66A\_n66A | CA\_2A-7C-66A | n66A | 66A | n66A | No |
| DC\_2A-7C-66A\_n78A | DC\_2A\_n78A | CA\_2A-7C-66A | n78A | 2A | n78A | No |
| DC\_7A\_n78A | CA\_2A-7C-66A | n78A | 7A | n78A | No |
| DC\_66A\_n78A | CA\_2A-7C-66A | n78A | 66A | n78A | No |
| DC\_2A-13A-66A\_n77A | DC\_2A\_n77A | CA\_2A-13A-66A | n77A | 2A | n77A | No |
|  | DC\_13A\_n77A | CA\_2A-13A-66A | n77A | 13A | n77A | No |
|  | DC\_66A\_n77A | CA\_2A-13A-66A | n77A | 66A | n77A | No |
| DC\_2A-14A-66A\_n2A | DC\_2A\_n2A | CA\_2A-14A-66A | n2A | 2A | n2A | No |
|  | DC\_14A\_n2A | CA\_2A-14A-66A | n2A | 14A | n2A | No |
|  | DC\_66A\_n2A | CA\_2A-14A-66A | n2A | 66A | n2A | No |
| DC\_2A-14A-66A-66A\_n2A | DC\_2A\_n2A | CA\_2A-14A-66A-66A | n2A | 2A | n2A | No |
|  | DC\_14A\_n2A | CA\_2A-14A-66A-66A | n2A | 14A | n2A | No |
|  | DC\_66A\_n2A | CA\_2A-14A-66A-66A | n2A | 66A | n2A | No |
| DC\_2A-14A-66A\_n66A | DC\_2A\_n66A | CA\_2A-14A-66A | n66A | 2A | n66A | No |
|  | DC\_14A\_n66A | CA\_2A-14A-66A | n66A | 14A | n66A | No |
|  | DC\_66A\_n66A | CA\_2A-14A-66A | n66A | 66A | n66A | No |
| DC\_2A-66A-(n)71AA | DC\_2A\_n71A | CA\_2A-66A | DC-(n)71AA | 2A | n71A | No |
|  | DC\_66A\_n71A | CA\_2A-66A | DC-(n)71AA | 66A | n71A | No |
|  | DC\_(n)71AA | CA\_2A-66A | DC-(n)71AA | - | (n)71AA | No |
|  | DC\_2A\_n5A | CA\_2A-66A | CA\_n5A-n77A | 2A | n5A | No |
| DC\_2A-66A\_n5A-n77A | DC\_2A\_n77A | CA\_2A-66A | CA\_n5A-n77A | 2A | n77A | No |
|  | DC\_66A\_n5A | CA\_2A-66A | CA\_n5A-n77A | 66A | n5A | No |
|  | DC\_66A\_n77A | CA\_2A-66A | CA\_n5A-n77A | 66A | n77A | No |
| DC\_3A-7A-20A\_n1A | DC\_3A\_n1A | CA\_3A-7A-20A | n1A | 3A | n1A | No |
|  | DC\_7A\_n1A | CA\_3A-7A-20A | n1A | 7A | n1A | No |
|  | DC\_20A\_n1A | CA\_3A-7A-20A | n1A | 20A | n1A | No |
| DC\_3A-7A-20A\_n8A | DC\_3A\_n8A | CA\_3A-7A-20A | n8A | 3A | n8A | No |
|  | DC\_7A\_n8A | CA\_3A-7A-20A | n8A | 7A | n8A | No |
|  | DC\_20A\_n8A | CA\_3A-7A-20A | n8A | 20A | n8A | No |
| DC\_3A-7A-20A\_n28A | DC\_3A\_n28A | CA\_3A-7A-20A | n28A | 3A | n28A | No |
|  | DC\_7A\_n28A | CA\_3A-7A-20A | n28A | 7A | n28A | No |
|  | DC\_20A\_n28A | CA\_3A-7A-20A | n28A | 20A | n28A | No |
| DC\_3A-7A-20A\_n78A | DC\_3A\_n78A | CA\_3A-7A-20A | n78A | 3A | n78A | No |
|  | DC\_7A\_n78A | CA\_3A-7A-20A | n78A | 7A | n78A | No |
|  | DC\_20A\_n78A | CA\_3A-7A-20A | n78A | 20A | n78A | No |
| DC\_3A-7A-28A\_n78A | DC\_3A\_n78A | CA\_3A-7A-28A | n78A | 3A | n78A | No |
|  | DC\_7A\_n78A | CA\_3A-7A-28A | n78A | 7A | n78A | No |
|  | DC\_28A\_n78A | CA\_3A-7A-28A | n78A | 28A | n78A | No |
| DC\_3A-7A\_n28A-n78A | DC\_3A\_n28A | CA\_3A-7A | CA\_n28A-n78A | 3A | n28A | No |
|  | DC\_3A\_n78A | CA\_3A-7A | CA\_n28A-n78A | 3A | n78A | No |
|  | DC\_7A\_n28A | CA\_3A-7A | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_3A-7A | CA\_n28A-n78A | 7A | n78A | No |
| DC\_3A-19A\_n1A-n78A | DC\_3A\_n1A | CA\_3A-19A | CA\_n1A-n78A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-19A | CA\_n1A-n78A | 3A | n78A | No |
|  | DC\_19A\_n1A | CA\_3A-19A | CA\_n1A-n78A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_3A-19A | CA\_n1A-n78A | 19A | n78A | No |
| DC\_3A-19A\_n1A-n79A | DC\_3A\_n1A | CA\_3A-19A | CA\_n1A-n79A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-19A | CA\_n1A-n79A | 3A | n79A | No |
|  | DC\_19A\_n1A | CA\_3A-19A | CA\_n1A-n79A | 19A | n1A | No |
|  | DC\_19A\_n79A | CA\_3A-19A | CA\_n1A-n79A | 19A | n79A | No |
| DC\_3A-19A-21A\_n78A | DC\_3A\_n78A | CA\_3A-19A-21A | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_3A-19A-21A | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_3A-19A-21A | n78A | 21A | n78A | No |
| DC\_3A-19A-21A\_n79A | DC\_3A\_n79A | CA\_3A-19A-21A | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_3A-19A-21A | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_3A-19A-21A | n79A | 21A | n79A | No |
| DC\_3A-19A-42A\_n1A | DC\_3A\_n1A | CA\_3A-19A-42A | n1A | 3A | n1A | No |
|  | DC\_19A\_n1A | CA\_3A-19A-42A | n1A | 19A | n1A | No |
| DC\_3A-19A-42C\_n1A | DC\_3A\_n1A | CA\_3A-19A-42C | n1A | 3A | n1A | No |
|  | DC\_19A\_n1A | CA\_3A-19A-42C | n1A | 19A | n1A | No |
| DC\_3A-19A-42A\_n78A | DC\_3A\_n78A | CA\_3A-19A-42A | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_3A-19A-42A | n78A | 19A | n78A | No |
| DC\_3A-19A-42C\_n78A | DC\_3A\_n78A | CA\_3A-19A-42C | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_3A-19A-42C | n78A | 19A | n78A | No |
| DC\_3A-19A-42A\_n79A | DC\_3A\_n79A | CA\_3A-19A-42A | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_3A-19A-42A | n79A | 19A | n79A | No |
| DC\_3A-19A-42C\_n79A | DC\_3A\_n79A | CA\_3A-19A-42C | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_3A-19A-42C | n79A | 19A | n79A | No |
| DC\_3A-20A\_n28A-n78A | DC\_3A\_n28A | CA\_3A-20A | CA\_n28A-n78A | 3A | n28A | No |
|  | DC\_3A\_n78A | CA\_3A-20A | CA\_n28A-n78A | 3A | n78A | No |
|  | DC\_20A\_n28A | CA\_3A-20A | CA\_n28A-n78A | 20A | n28A | No |
|  | DC\_20A\_n78A | CA\_3A-20A | CA\_n28A-n78A | 20A | n78A | No |
| DC\_3A-21A\_n1A-n78A | DC\_3A\_n1A | CA\_3A-21A | CA\_n1A-n78A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-21A | CA\_n1A-n78A | 3A | n78A | No |
|  | DC\_21A\_n1A | CA\_3A-21A | CA\_n1A-n78A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_3A-21A | CA\_n1A-n78A | 21A | n78A | No |
| DC\_3A-21A\_n1A-n79A | DC\_3A\_n1A | CA\_3A-21A | CA\_n1A-n79A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-21A | CA\_n1A-n79A | 3A | n79A | No |
|  | DC\_21A\_n1A | CA\_3A-21A | CA\_n1A-n79A | 21A | n1A | No |
|  | DC\_21A\_n79A | CA\_3A-21A | CA\_n1A-n79A | 21A | n79A | No |
| DC\_3A-21A-42A\_n78A | DC\_3A\_n78A | CA\_3A-21A-42A | n78A | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_3A-21A-42A | n78A | 21A | n78A | No |
| DC\_3A-21A-42C\_n78A | DC\_3A\_n78A | CA\_3A-21A-42C | n78A | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_3A-21A-42C | n78A | 21A | n78A | No |
| DC\_3A-21A-42A\_n79A | DC\_3A\_n79A | CA\_3A-21A-42A | n79A | 3A | n79A | No |
|  | DC\_21A\_n79A | CA\_3A-21A-42A | n79A | 21A | n79A | No |
| DC\_3A-21A-42C\_n79A | DC\_3A\_n79A | CA\_3A-21A-42C | n79A | 3A | n79A | No |
|  | DC\_21A\_n79A | CA\_3A-21A-42C | n79A | 21A | n79A | No |
| DC\_3A-42A\_n1A-n78A | DC\_3A\_n1A | CA\_3A-42A | n1A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-42A | n78A | 3A | n78A | No |
| DC\_3A-42C\_n1A-n78A | DC\_3A\_n1A | CA\_3A-42C | n1A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-42C | n78A | 3A | n78A | No |
| DC\_3A-42A\_n1A-n79A | DC\_3A\_n1A | CA\_3A-42A | n1A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-42A | n79A | 3A | n79A | No |
| DC\_3A-42C\_n1A-n79A | DC\_3A\_n1A | CA\_3A-42C | n1A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-42C | n79A | 3A | n79A | No |
| DC\_7A-20A\_n28A-n78A | DC\_7A\_n28A | CA\_7A-20A | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_7A-20A | CA\_n28A-n78A | 7A | n78A | No |
|  | DC\_20A\_n28A | CA\_7A-20A | CA\_n28A-n78A | 20A | n28A | No |
|  | DC\_20A\_n78A | CA\_7A-20A | CA\_n28A-n78A | 20A | n78A | No |
| r | DC\_13A\_n2A | CA\_13A-66A | CA\_n2A-n77A | 13A | n2A | No |
| DC\_13A-66A\_n2A-n77A | DC\_13A\_n77A | CA\_13A-66A | CA\_n2A-n77A | 13A | n77A | No |
|  | DC\_66A\_n2A | CA\_13A-66A | CA\_n2A-n77A | 66A | n2A | No |
|  | DC\_66A\_n77A | CA\_13A-66A | CA\_n2A-n77A | 66A | n77A | No |
| DC\_19A-21A\_n1A-n78A | DC\_19A\_n1A | CA\_19A-21A | CA\_n1A-n78A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_19A-21A | CA\_n1A-n78A | 19A | n78A | No |
|  | DC\_21A\_n1A | CA\_19A-21A | CA\_n1A-n78A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_19A-21A | CA\_n1A-n78A | 21A | n78A | No |
| DC\_19A-21A\_n1A-n79A | DC\_19A\_n1A | CA\_19A-21A | CA\_n1A-n79A | 19A | n1A | No |
|  | DC\_19A\_n79A | CA\_19A-21A | CA\_n1A-n79A | 19A | n79A | No |
|  | DC\_21A\_n1A | CA\_19A-21A | CA\_n1A-n79A | 21A | n1A | No |
|  | DC\_21A\_n79A | CA\_19A-21A | CA\_n1A-n79A | 21A | n79A | No |
| DC\_19A-21A-42A\_n1A | DC\_19A\_n1A | CA\_19A-21A-42A | n1A | 19A | n1A | No |
|  | DC\_21A\_n1A | CA\_19A-21A-42A | n1A | 21A | n1A | No |
| DC\_19A-21A-42C\_n1A | DC\_19A\_n1A | CA\_19A-21A-42C | n1A | 19A | n1A | No |
|  | DC\_21A\_n1A | CA\_19A-21A-42C | n1A | 21A | n1A | No |
| DC\_19A-21A-42A\_n78A | DC\_19A\_n78A | CA\_19A-21A-42A | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_19A-21A-42A | n78A | 21A | n78A | No |
| DC\_19A-21A-42C\_n78A | DC\_19A\_n78A | CA\_19A-21A-42C | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_19A-21A-42C | n78A | 21A | n78A | No |
| DC\_19A-21A-42A\_n79A | DC\_19A\_n79A | CA\_19A-21A-42A | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_19A-21A-42A | n79A | 21A | n79A | No |
| DC\_19A-21A-42C\_n79A | DC\_19A\_n79A | CA\_19A-21A-42C | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_19A-21A-42C | n79A | 21A | n79A | No |
| DC\_19A-42A\_n1A-n78A | DC\_19A\_n1A | CA\_19A-42A | n1A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_19A-42A | n78A | 19A | n78A | No |
| DC\_19A-42C\_n1A-n78A | DC\_19A\_n1A | CA\_19A-42C | n1A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_19A-42C | n78A | 19A | n78A | No |
| DC\_19A-42A\_n1A-n79A | DC\_19A\_n1A | CA\_19A-42A | n1A | 19A | n1A | No |
|  | DC\_19A\_n79A | CA\_19A-42A | n79A | 19A | n79A | No |
| DC\_19A-42C\_n1A-n79A | DC\_19A\_n1A | CA\_19A-42C | n1A | 19A | n1A | No |
|  | DC\_19A\_n79A | CA\_19A-42C | n79A | 19A | n79A | No |
| DC\_21A-42A\_n1A-n78A | DC\_21A\_n1A | CA\_21A-42A | n1A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_21A-42A | n78A | 21A | n78A | No |
| DC\_21A-42C\_n1A-n78A | DC\_21A\_n1A | CA\_21A-42C | n1A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_21A-42C | n78A | 21A | n78A | No |
| DC\_21A-42A\_n1A-n79A | DC\_21A\_n1A | CA\_21A-42A | n1A | 21A | n1A | No |
|  | DC\_21A\_n79A | CA\_21A-42A | n79A | 21A | n79A | No |
| DC\_21A-42C\_n1A-n79A | DC\_21A\_n1A | CA\_21A-42C | n1A | 21A | n1A | No |
|  | DC\_21A\_n79A | CA\_21A-42C | n79A | 21A | n79A | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

4.3.1.4.1.5 Inter-band EN-DC configurations within FR1 (five bands)

Table 4.3.1.4.1.5-1: Inter-band EN-DC configurations within FR1 (five bands)

| EN-DC  configuration | Uplink EN-DC  Configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A-7A-20A\_n28A | DC\_1A\_n28A | CA\_1A-3A-7A-20A | n28A | 1A | n28A | No |
|  | DC\_3A\_n28A | CA\_1A-3A-7A-20A | n28A | 3A | n28A | No |
|  | DC\_7A\_n28A | CA\_1A-3A-7A-20A | n28A | 7A | n28A | No |
|  | DC\_20A\_n28A | CA\_1A-3A-7A-20A | n28A | 20A | n28A | No |
| DC\_1A-3A-7A-20A\_n78A | DC\_1A\_n78A | CA\_1A-3A-7A-20A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-7A-20A | n78A | 3A | n78A | No |
|  | DC\_7A\_n78A | CA\_1A-3A-7A-20A | n78A | 7A | n78A | No |
|  | DC\_20A\_n78A | CA\_1A-3A-7A-20A | n78A | 20A | n78A | No |
| DC\_1A-3A-7A-28A\_n78A | DC\_1A\_n78A | CA\_1A-3A-7A-28A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-7A-28A | n78A | 3A | n78A | No |
|  | DC\_7A\_n78A | CA\_1A-3A-7A-28A | n78A | 7A | n78A | No |
|  | DC\_28A\_n78A | CA\_1A-3A-7A-28A | n78A | 28A | n78A | No |
| DC\_1A-3A-7A\_n28A-n78A | DC\_1A\_n28A | CA\_1A-3A-7A | CA\_n28A-n78A | 1A | n28A | No |
|  | DC\_1A\_n78A | CA\_1A-3A-7A | CA\_n28A-n78A | 1A | n78A | No |
|  | DC\_3A\_n28A | CA\_1A-3A-7A | CA\_n28A-n78A | 3A | n28A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-7A | CA\_n28A-n78A | 3A | n78A | No |
|  | DC\_7A\_n28A | CA\_1A-3A-7A | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_1A-3A-7A | CA\_n28A-n78A | 7A | n78A | No |
| DC\_1A-3A-19A-42A\_n78A | DC\_1A\_n78A | CA\_1A-3A-19A-42A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-19A-42A | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-3A-19A-42A | n78A | 19A | n78A | No |
| DC\_1A-3A-19A-42C\_n78A | DC\_1A\_n78A | CA\_1A-3A-19A-42C | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-19A-42C | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-3A-19A-42C | n78A | 19A | n78A | No |
| DC\_1A-3A-19A-42A\_n79A | DC\_1A\_n79A | CA\_1A-3A-19A-42A | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-19A-42A | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-3A-19A-42A | n79A | 19A | n79A | No |
| DC\_1A-3A-19A-42C\_n79A | DC\_1A\_n79A | CA\_1A-3A-19A-42C | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-19A-42C | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-3A-19A-42C | n79A | 19A | n79A | No |
| DC\_1A-3A-20A\_n28A-n78A | DC\_1A\_n28A | CA\_1A-3A-20A | CA\_n28A-n78A | 1A | n28A | No |
|  | DC\_1A\_n78A | CA\_1A-3A-20A | CA\_n28A-n78A | 1A | n78A | No |
|  | DC\_3A\_n28A | CA\_1A-3A-20A | CA\_n28A-n78A | 3A | n28A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-20A | CA\_n28A-n78A | 3A | n78A | No |
|  | DC\_20A\_n28A | CA\_1A-3A-20A | CA\_n28A-n78A | 20A | n28A | No |
|  | DC\_20A\_n78A | CA\_1A-3A-20A | CA\_n28A-n78A | 20A | n78A | No |
| DC\_1A-3A-21A-42A\_n78A | DC\_1A\_n78A | CA\_1A-3A-21A-42A | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-21A-42A | n78A | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-3A-21A-42A | n78A | 21A | n78A | No |
| DC\_1A-3A-21A-42C\_n78A | DC\_1A\_n78A | CA\_1A-3A-21A-42C | n78A | 1A | n78A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-21A-42C | n78A | 3A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-3A-21A-42C | n78A | 21A | n78A | No |
| DC\_1A-3A-21A-42A\_n79A | DC\_1A\_n79A | CA\_1A-3A-21A-42A | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-21A-42A | n79A | 3A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-3A-21A-42A | n79A | 21A | n79A | No |
| DC\_1A-3A-21A-42C\_n79A | DC\_1A\_n79A | CA\_1A-3A-21A-42C | n79A | 1A | n79A | No |
|  | DC\_3A\_n79A | CA\_1A-3A-21A-42C | n79A | 3A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-3A-21A-42C | n79A | 21A | n79A | No |
| DC\_1A-7A-20A\_n28A-n78A | DC\_1A\_n28A | CA\_1A-7A-20A | CA\_n28A-n78A | 1A | n28A | No |
|  | DC\_1A\_n78A | CA\_1A-7A-20A | CA\_n28A-n78A | 1A | n78A | No |
|  | DC\_7A\_n28A | CA\_1A-7A-20A | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_1A-7A-20A | CA\_n28A-n78A | 7A | n78A | No |
|  | DC\_20A\_n28A | CA\_1A-7A-20A | CA\_n28A-n78A | 20A | n28A | No |
|  | DC\_20A\_n78A | CA\_1A-7A-20A | CA\_n28A-n78A | 20A | n78A | No |
| DC\_1A-19A-21A-42A\_n78A | DC\_1A\_n78A | CA\_1A-19A-21A-42A | n78A | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A-21A-42A | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-19A-21A-42A | n78A | 21A | n78A | No |
| DC\_1A-19A-21A-42C\_n78A | DC\_1A\_n78A | CA\_1A-19A-21A-42C | n78A | 1A | n78A | No |
|  | DC\_19A\_n78A | CA\_1A-19A-21A-42C | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_1A-19A-21A-42C | n78A | 21A | n78A | No |
| DC\_1A-19A-21A-42A\_n79A | DC\_1A\_n79A | CA\_1A-19A-21A-42A | n79A | 1A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-19A-21A-42A | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-19A-21A-42A | n79A | 21A | n79A | No |
| DC\_1A-19A-21A-42C\_n79A | DC\_1A\_n79A | CA\_1A-19A-21A-42C | n79A | 1A | n79A | No |
|  | DC\_19A\_n79A | CA\_1A-19A-21A-42C | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_1A-19A-21A-42C | n79A | 21A | n79A | No |
| DC\_3A-7A-20A\_n28A-n78A | DC\_3A\_n28A | CA\_3A-7A-20A | CA\_n28A-n78A | 3A | n28A | No |
|  | DC\_3A\_n78A | CA\_3A-7A-20A | CA\_n28A-n78A | 3A | n78A | No |
|  | DC\_7A\_n28A | CA\_3A-7A-20A | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_3A-7A-20A | CA\_n28A-n78A | 7A | n78A | No |
|  | DC\_20A\_n28A | CA\_3A-7A-20A | CA\_n28A-n78A | 20A | n28A | No |
|  | DC\_20A\_n78A | CA\_3A-7A-20A | CA\_n28A-n78A | 20A | n78A | No |
| DC\_3A-19A-21A-42A\_n78A | DC\_3A\_n78A | CA\_3A-19A-21A-42A | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_3A-19A-21A-42A | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_3A-19A-21A-42A | n78A | 21A | n78A | No |
| DC\_3A-19A-21A-42C\_n78A | DC\_3A\_n78A | CA\_3A-19A-21A-42C | n78A | 3A | n78A | No |
|  | DC\_19A\_n78A | CA\_3A-19A-21A-42C | n78A | 19A | n78A | No |
|  | DC\_21A\_n78A | CA\_3A-19A-21A-42C | n78A | 21A | n78A | No |
| DC\_3A-19A-21A-42A\_n79A | DC\_3A\_n79A | CA\_3A-19A-21A-42A | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_3A-19A-21A-42A | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_3A-19A-21A-42A | n79A | 21A | n79A | No |
| DC\_3A-19A-21A-42C\_n79A | DC\_3A\_n79A | CA\_3A-19A-21A-42C | n79A | 3A | n79A | No |
|  | DC\_19A\_n79A | CA\_3A-19A-21A-42C | n79A | 19A | n79A | No |
|  | DC\_21A\_n79A | CA\_3A-19A-21A-42C | n79A | 21A | n79A | No |
| DC\_3A-19A-42A\_n1A-n78A | DC\_3A\_n1A | CA\_3A-19A-42A | CA\_n1A-n78A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-19A-42A | CA\_n1A-n78A | 3A | n78A | No |
|  | DC\_19A\_n1A | CA\_3A-19A-42A | CA\_n1A-n78A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_3A-19A-42A | CA\_n1A-n78A | 19A | n78A | No |
| DC\_3A-19A-42C\_n1A-n78A | DC\_3A\_n1A | CA\_3A-19A-42C | CA\_n1A-n78A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-19A-42C | CA\_n1A-n78A | 3A | n78A | No |
|  | DC\_19A\_n1A | CA\_3A-19A-42C | CA\_n1A-n78A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_3A-19A-42C | CA\_n1A-n78A | 19A | n78A | No |
| DC\_3A-19A-42A\_n1A-n79A | DC\_3A\_n1A | CA\_3A-19A-42A | CA\_n1A-n79A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-19A-42A | CA\_n1A-n79A | 3A | n79A | No |
|  | DC\_19A\_n1A | CA\_3A-19A-42A | CA\_n1A-n79A | 19A | n1A | No |
|  | DC\_19A\_n79A | CA\_3A-19A-42A | CA\_n1A-n79A | 19A | n79A | No |
| DC\_3A-19A-42C\_n1A-n79A | DC\_3A\_n1A | CA\_3A-19A-42C | CA\_n1A-n79A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-19A-42C | CA\_n1A-n79A | 3A | n79A | No |
|  | DC\_19A\_n1A | CA\_3A-19A-42C | CA\_n1A-n79A | 19A | n1A | No |
|  | DC\_19A\_n79A | CA\_3A-19A-42C | CA\_n1A-n79A | 19A | n79A | No |
| DC\_3A-21A-42A\_n1A-n78A | DC\_3A\_n1A | CA\_3A-21A-42A | CA\_n1A-n78A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-21A-42A | CA\_n1A-n78A | 3A | n78A | No |
|  | DC\_21A\_n1A | CA\_3A-21A-42A | CA\_n1A-n78A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_3A-21A-42A | CA\_n1A-n78A | 21A | n78A | No |
| DC\_3A-21A-42C\_n1A-n78A | DC\_3A\_n1A | CA\_3A-21A-42C | CA\_n1A-n78A | 3A | n1A | No |
|  | DC\_3A\_n78A | CA\_3A-21A-42C | CA\_n1A-n78A | 3A | n78A | No |
|  | DC\_21A\_n1A | CA\_3A-21A-42C | CA\_n1A-n78A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_3A-21A-42C | CA\_n1A-n78A | 21A | n78A | No |
| DC\_3A-21A-42A\_n1A-n79A | DC\_3A\_n1A | CA\_3A-21A-42A | CA\_n1A-n79A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-21A-42A | CA\_n1A-n79A | 3A | n79A | No |
|  | DC\_21A\_n1A | CA\_3A-21A-42A | CA\_n1A-n79A | 21A | n1A | No |
|  | DC\_21A\_n79A | CA\_3A-21A-42A | CA\_n1A-n79A | 21A | n79A | No |
| DC\_3A-21A-42C\_n1A-n79A | DC\_3A\_n1A | CA\_3A-21A-42C | CA\_n1A-n79A | 3A | n1A | No |
|  | DC\_3A\_n79A | CA\_3A-21A-42C | CA\_n1A-n79A | 3A | n79A | No |
|  | DC\_21A\_n1A | CA\_3A-21A-42C | CA\_n1A-n79A | 21A | n1A | No |
|  | DC\_21A\_n79A | CA\_3A-21A-42C | CA\_n1A-n79A | 21A | n79A | No |
| DC\_19A-21A-42A\_n1A-n78A | DC\_19A\_n1A | CA\_19A-21A-42A | CA\_n1A-n78A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_19A-21A-42A | CA\_n1A-n78A | 19A | n78A | No |
|  | DC\_21A\_n1A | CA\_19A-21A-42A | CA\_n1A-n78A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_19A-21A-42A | CA\_n1A-n78A | 21A | n78A | No |
| DC\_19A-21A-42C\_n1A-n78A | DC\_19A\_n1A | CA\_19A-21A-42C | CA\_n1A-n78A | 19A | n1A | No |
|  | DC\_19A\_n78A | CA\_19A-21A-42C | CA\_n1A-n78A | 19A | n78A | No |
|  | DC\_21A\_n1A | CA\_19A-21A-42C | CA\_n1A-n78A | 21A | n1A | No |
|  | DC\_21A\_n78A | CA\_19A-21A-42C | CA\_n1A-n78A | 21A | n78A | No |
| DC\_19A-21A-42A\_n1A-n79A | DC\_19A\_n1A | CA\_19A-21A-42A | CA\_n1A-n79A | 19A | n1A | No |
|  | DC\_19A\_n79A | CA\_19A-21A-42A | CA\_n1A-n79A | 19A | n79A | No |
|  | DC\_21A\_n1A | CA\_19A-21A-42A | CA\_n1A-n79A | 21A | n1A | No |
|  | DC\_21A\_n79A | CA\_19A-21A-42A | CA\_n1A-n79A | 21A | n79A | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

###### 4.3.1.4.1.6 Inter-band EN-DC configurations within FR1 (six bands)

Table 4.3.1.4.1.6-1: Inter-band EN-DC configurations within FR1 (six bands)

| EN-DC  configuration | Uplink EN-DC  Configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A-7A-20A\_n28A-n78A | DC\_1A\_n28A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 1A | n28A | No |
|  | DC\_1A\_n78A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 1A | n78A | No |
|  | DC\_3A\_n28A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 3A | n28A | No |
|  | DC\_3A\_n78A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 3A | n78A | No |
|  | DC\_7A\_n28A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 7A | n28A | No |
|  | DC\_7A\_n78A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 7A | n78A | No |
|  | DC\_20A\_n28A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 20A | n28A | No |
|  | DC\_20A\_n78A | CA\_1A-3A-7A-20A | CA\_n28A-n78A | 20A | n78A | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

##### 4.3.1.4.2 Intra-band contiguous EN-DC configurations within FR1

###### 4.3.1.4.2.1 – 4.3.1.4.2.40 FFS

###### 4.3.1.4.2.41 Intra-band contiguous EN-DC configurations DC\_(n)41

4.3.1.4.2.41.1 DC\_(n)41AA

Table 4.3.1.4.2.41.1-1: EN-DC combination DC\_(n)41AA, intra-band contiguous, SCS 15 kHz, 15 kHz NR raster, NR CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  **(Offset[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 10MHz + NR: 20MHz | E-UTRA | 10 | 50 | Downlink | Low | 2521.200 | 39902 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2664.900 | 41339 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1 = 15 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 20 | 106 | Downlink | Low | 2506.200 | 501240 | 2496.66 | 499332 | 0 | 15 | 6246 | 499710 | 6 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2560.2 | 512040 | 102 |  | 6453 | 516270 | 6 | 1 | 2 (4) | 107 |
|  |  |  | Uplink | High | 2679.900 | 535980 | 2579.64 | 515928 | 504 |  | 6681 | 534510 | 2 | 0 | 1 (2) | 506 |
| E-UTRA: 10MHz + NR: 40MHz | E-UTRA | 10 | 50 | Downlink | Low | 2541.300 | 40103 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2644.800 | 41138 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1 = 25.005 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 216 | Downlink | Low | 2516.295 | 503259 | 2496.855 | 499371 | 0 | 15 | 6249 | 499950 | 1 | 2 | 2 (4) | 6 |
| CC1 |  |  | & | Mid | 2587.995 | 517599 | 2550.195 | 510039 | 102 |  | 6426 | 514110 | 1 | 1 | 0 (0) | 103 |
|  |  |  | Uplink | High | 2669.805 | 533961 | 2559.645 | 511929 | 504 |  | 6633 | 530670 | 7 | 2 | 2 (4) | 510 |
| E-UTRA: 10MHz + NR: 50MHz | E-UTRA | 10 | 50 | Downlink | Low | 2551.200 | 40202 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2618.100 | 40871 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2634.900 | 41039 | - | - | - | - | - | - | - | - | - | - |
| NR | 50 | 270 | Downlink | Low | 2521.200 | 504240 | 2496.9 | 499380 | 0 | 15 | 6249 | 499950 | 10 | 1 | 2 (4) | 5 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2545.44 | 509088 | 102 |  | 6414 | 513150 | 10 | 0 | 0 (0) | 102 |
|  |  |  | Uplink | High | 2664.900 | 532980 | 2549.88 | 509976 | 504 |  | 6606 | 528510 | 10 | 0 | 0 (0) | 504 |
| E-UTRA: 20MHz + NR: 10MHz | E-UTRA | 20 | 100 | Downlink | Low | 2516.100 | 39851 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2598.000 | 40670 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2670.000 | 41390 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1 = 15 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 10 | 52 | Downlink | Low | 2501.100 | 500220 | 2496.42 | 499284 | 0 | 15 | 6246 | 499710 | 10 | 1 | 0 (0) | 1 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2559.96 | 511992 | 102 |  | 6450 | 516030 | 2 | 0 | 0 (0) | 102 |
|  |  |  | Uplink | High | 2685.000 | 537000 | 2589.6 | 517920 | 504 |  | 6705 | 536430 | 2 | 0 | 0 (0) | 504 |
| E-UTRA: 20MHz + NR: 20MHz | E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=19.995 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 20 | 106 | Downlink | Low | 2506.005 | 501201 | 2496.465 | 499293 | 0 | 15 | 6246 | 499710 | 7 | 1 | 0 (0) | 1 |
| CC1 |  |  | & | Mid | 2583.105 | 516621 | 2555.205 | 511041 | 102 |  | 6441 | 515310 | 7 | 2 | 2 (4) | 108 |
|  |  |  | Uplink | High | 2679.795 | 535959 | 2579.535 | 515907 | 504 |  | 6681 | 534510 | 9 | 0 | 1 (2) | 506 |
| E-UTRA: 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2546.100 | 40151 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2640.000 | 41090 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 216 | Downlink | Low | 2516.100 | 503220 | 2496.66 | 499332 | 0 | 15 | 6246 | 499710 | 6 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2545.2 | 509040 | 102 |  | 6414 | 513150 | 2 | 0 | 1 (2) | 104 |
|  |  |  | Uplink | High | 2670.000 | 534000 | 2559.84 | 511968 | 504 |  | 6633 | 530670 | 6 | 1 | 2 (4) | 509 |
| E-UTRA: 20MHz + NR: 50MHz | E-UTRA | 20 | 100 | Downlink | Low | 2556.000 | 40250 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2618.100 | 40871 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2629.800 | 40988 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=34.995 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 50 | 270 | Downlink | Low | 2521.005 | 504201 | 2496.705 | 499341 | 0 | 15 | 6246 | 499710 | 3 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2583.105 | 516621 | 2540.445 | 508089 | 102 |  | 6402 | 512190 | 11 | 1 | 0 (0) | 103 |
|  |  |  | Uplink | High | 2664.795 | 532959 | 2549.775 | 509955 | 504 |  | 6606 | 528510 | 5 | 1 | 0 (0) | 505 |
| 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.1. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.1-1A: EN-DC combination DC\_(n)41AA, intra-band contiguous, SCS 15 kHz, 15 kHz NR raster, E-UTRA CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  **[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 216 | Downlink | Low | 2536.200 | 507240 | 2516.76 | 503352 | 0 | 15 | 6297 | 503790 | 2 | 0 | 1 (2) | 2 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2545.2 | 509040 | 102 |  | 6414 | 513150 | 2 | 0 | 1 (2) | 104 |
|  |  |  | Uplink | High | 2649.900 | 529980 | 2539.74 | 507948 | 504 |  | 6582 | 526590 | 10 | 1 | 1 (2) | 512 |
| 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.1-2: EN-DC combination DC\_(n)41AA, intra-band contiguous, SCS 30 kHz, 30 kHz NR raster, NR CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  **[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 10MHz + NR: 20MHz | E-UTRA | 10 | 50 | Downlink | Low | 2521.200 | 39902 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2664.900 | 41339 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=15 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 20 | 51 | Downlink | Low | 2506.200 | 501240 | 2497.02 | 499404 | 0 | 30 | 6252 | 500190 | 22 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2542.2 | 508440 | 102 |  | 6456 | 516510 | 2 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2679.900 | 535980 | 2489.28 | 497856 | 504 |  | 6687 | 534990 | 18 | 0 | 1 (1) | 1010 |
| E-UTRA: 10MHz + NR: 40MHz | E-UTRA | 10 | 50 | Downlink | Low | 2541.000 | 40100 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2644.800 | 41138 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=24.99 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 106 | Downlink | Low | 2516.010 | 503202 | 2496.93 | 499386 | 0 | 30 | 6252 | 500190 | 4 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2588.010 | 517602 | 2532.21 | 506442 | 102 |  | 6432 | 514590 | 4 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2669.790 | 533958 | 2469.27 | 493854 | 504 |  | 6636 | 530910 | 16 | 0 | 0 (0) | 1008 |
| E-UTRA: 10MHz + NR: 50MHz | E-UTRA | 10 | 50 | Downlink | Low | 2551.200 | 40202 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2618.100 | 40871 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2634.900 | 41039 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 50 | 133 | Downlink | Low | 2521.200 | 504240 | 2497.26 | 499452 | 0 | 30 | 6252 | 500190 | 6 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2527.44 | 505488 | 102 |  | 6420 | 513630 | 2 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2664.900 | 532980 | 2459.52 | 491904 | 504 |  | 6612 | 528990 | 2 | 0 | 1 (1) | 1010 |
| E-UTRA: 10MHz + NR: 60MHz | E-UTRA | 10 | 50 | Downlink | Low | 2561.100 | 40301 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2624.700 | 40937 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=35.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 60 | 162 | Downlink | Low | 2526.090 | 505218 | 2496.93 | 499386 | 0 | 30 | 6252 | 500190 | 4 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2587.890 | 517578 | 2522.01 | 504402 | 102 |  | 6408 | 512670 | 20 | 0 | 2 (2) | 208 |
|  |  |  | Uplink | High | 2659.710 | 531942 | 2449.11 | 489822 | 504 |  | 6585 | 526830 | 0 | 0 | 0 (0) | 1008 |
| E-UTRA: 10MHz + NR: 80MHz | E-UTRA | 10 | 50 | Downlink | Low | 2581.200 | 40502 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2604.900 | 40739 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=45 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 80 | 217 | Downlink | Low | 2536.200 | 507240 | 2497.14 | 499428 | 0 | 30 | 6252 | 500190 | 14 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2512.32 | 502464 | 102 |  | 6384 | 510750 | 2 | 0 | 3 (3) | 210 |
|  |  |  | Uplink | High | 2649.900 | 529980 | 2429.4 | 485880 | 504 |  | 6537 | 522990 | 10 | 0 | 1 (1) | 1010 |
| E-UTRA: 10MHz + NR: 100MHz | E-UTRA | 10 | 50 | Downlink | Low | 2601.000 | 40700 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2643.000 | 41120 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2584.800 | 40538 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=54.99 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 100 | 273 | Downlink | Low | 2546.010 | 509202 | 2496.87 | 499374 | 0 | 30 | 6252 | 500190 | 8 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2588.010 | 517602 | 2502.15 | 500430 | 102 |  | 6357 | 508590 | 8 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2639.790 | 527958 | 2409.21 | 481842 | 504 |  | 6486 | 518910 | 20 | 0 | 0 (0) | 1008 |
| E-UTRA: 20MHz + NR: 10MHz | E-UTRA | 20 | 100 | Downlink | Low | 2516.100 | 39851 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2598.000 | 40670 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2670.000 | 41390 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=15 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 10 | 24 | Downlink | Low | 2501.100 | 500220 | 2496.78 | 499356 | 0 | 30 | 6252 | 500190 | 14 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2541.96 | 508392 | 102 |  | 6456 | 516510 | 18 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2685.000 | 537000 | 2499.24 | 499848 | 504 |  | 6711 | 536910 | 18 | 0 | 0 (0) | 1008 |
| E-UTRA: 20MHz + NR: 20MHz | E-UTRA | 20 | 100 | Downlink | Low | 2526.300 | 39953 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=20.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 20 | 51 | Downlink | Low | 2506.290 | 501258 | 2497.11 | 499422 | 0 | 30 | 6252 | 500190 | 16 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2583.090 | 516618 | 2537.19 | 507438 | 102 |  | 6444 | 515550 | 16 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2679.810 | 535962 | 2489.19 | 497838 | 504 |  | 6687 | 534990 | 0 | 0 | 2 (2) | 1012 |
| E-UTRA: 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2546.100 | 40151 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2640.000 | 41090 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 106 | Downlink | Low | 2516.100 | 503220 | 2497.02 | 499404 | 0 | 30 | 6252 | 500190 | 22 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2527.2 | 505440 | 102 |  | 6420 | 513630 | 18 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2670.000 | 534000 | 2469.48 | 493896 | 504 |  | 6636 | 530910 | 2 | 0 | 0 (0) | 1008 |
| E-UTRA: 20MHz + NR: 50MHz | E-UTRA | 20 | 100 | Downlink | Low | 2556.300 | 40253 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2618.100 | 40871 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2629.800 | 40988 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=35.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 50 | 133 | Downlink | Low | 2521.290 | 504258 | 2497.35 | 499470 | 0 | 30 | 6252 | 500190 | 0 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2583.090 | 516618 | 2522.43 | 504486 | 102 |  | 6408 | 512670 | 16 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2664.810 | 532962 | 2459.43 | 491886 | 504 |  | 6612 | 528990 | 8 | 0 | 1 (1) | 1010 |
| E-UTRA: 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2566.200 | 40352 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2619.900 | 40889 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=39.99 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 60 | 162 | Downlink | Low | 2526.210 | 505242 | 2497.05 | 499410 | 0 | 30 | 6252 | 500190 | 20 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2582.910 | 516582 | 2517.03 | 503406 | 102 |  | 6393 | 511470 | 0 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2659.890 | 531978 | 2449.29 | 489858 | 504 |  | 6588 | 527070 | 20 | 0 | 2 (2) | 1012 |
| E-UTRA: 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2586.300 | 40553 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2599.800 | 40688 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=50.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 80 | 217 | Downlink | Low | 2536.290 | 507258 | 2497.23 | 499446 | 0 | 30 | 6252 | 500190 | 8 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2583.090 | 516618 | 2507.31 | 501462 | 102 |  | 6369 | 509550 | 8 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2649.810 | 529962 | 2429.31 | 485862 | 504 |  | 6537 | 522990 | 16 | 0 | 1 (1) | 1010 |
| E-UTRA: 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2606.100 | 40751 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2643.000 | 41120 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2580.000 | 40490 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 100 | 273 | Downlink | Low | 2546.100 | 509220 | 2496.96 | 499392 | 0 | 30 | 6252 | 500190 | 2 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2497.14 | 499428 | 102 |  | 6345 | 507630 | 22 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2640.000 | 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.1-2A: EN-DC combination DC\_(n)41AA, intra-band contiguous, SCS 30 kHz, 30 kHz NR raster, E-UTRA CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  **(Offset[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 106 | Downlink | Low | 2536.200 | 507240 | 2517.12 | 503424 | 0 | 30 | 6303 | 504270 | 18 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2527.2 | 505440 | 102 |  | 6420 | 513630 | 18 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2649.900 | 529980 | 2449.38 | 489876 | 504 |  | 6588 | 527070 | 14 | 0 | 2 (2) | 1012 |
| E-UTRA: 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=39.99 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 60 | 162 | Downlink | Low | 2546.190 | 509238 | 2517.03 | 503406 | 0 | 30 | 6303 | 504270 | 0 | 0 | 2 (2) | 4 |
| CC1 |  |  | & | Mid | 2582.910 | 516582 | 2517.03 | 503406 | 102 |  | 6393 | 511470 | 0 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2639.910 | 527982 | 2429.31 | 485862 | 504 |  | 6537 | 522990 | 16 | 0 | 1 (1) | 1010 |
| E-UTRA: 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=50.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 80 | 217 | Downlink | Low | 2556.210 | 511242 | 2517.15 | 503430 | 0 | 30 | 6303 | 504270 | 16 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2583.090 | 516618 | 2507.31 | 501462 | 102 |  | 6369 | 509550 | 8 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2629.890 | 525978 | 2409.39 | 481878 | 504 |  | 6486 | 518910 | 8 | 0 | 0 (0) | 1008 |
| E-UTRA: 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2643.000 | 41120 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 100 | 273 | Downlink | Low | 2566.200 | 513240 | 2517.06 | 503412 | 0 | 30 | 6303 | 504270 | 22 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2497.14 | 499428 | 102 |  | 6345 | 507630 | 22 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2619.900 | 523980 | 2389.32 | 477864 | 504 |  | 6438 | 515070 | 18 | 0 | 2 (2) | 1012 |
| 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.1-3: EN-DC combination DC\_(n)41AA, intra-band contiguous, SCS 60 kHz, 15 kHz NR raster, NR CC at the band edges without CORESET#0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 1 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |
| E-UTRA: 10MHz + NR: 20MHz | E-UTRA | 10 | 50 | Downlink | Low | 2521.200 | 39902 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2664.900 | 41339 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=15 MHz (Note 2) | | | | | | | | | | | | |
| NR | 20 | 24 | Downlink | Low | 2506.200 | 501240 | 2497.56 | 499512 | 0 | 15 | - | 499872 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2506.02 | 501204 | 102 |  | - | 516252 |
|  |  |  | Uplink | High | 2679.900 | 535980 | 2308.38 | 461676 | 504 |  | - | 534612 |
| E-UTRA: 10MHz + NR: 40MHz | E-UTRA | 10 | 50 | Downlink | Low | 2541.300 | 40103 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2644.800 | 41138 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=25.005 MHz (Note 2) | | | | | | | | | | | | |
| NR | 40 | 51 | Downlink | Low | 2516.295 | 503259 | 2497.935 | 499587 | 0 | 15 | - | 499947 |
| CC1 |  |  | & | Mid | 2587.995 | 517599 | 2496.195 | 499239 | 102 |  | - | 514287 |
|  |  |  | Uplink | High | 2669.805 | 533961 | 2288.565 | 457713 | 504 |  | - | 530649 |
| E-UTRA: 10MHz + NR: 50MHz | E-UTRA | 10 | 50 | Downlink | Low | 2551.200 | 40202 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2618.100 | 40871 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2634.900 | 41039 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | |
| NR | 50 | 65 | Downlink | Low | 2521.200 | 504240 | 2497.8 | 499560 | 0 | 15 | - | 499920 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2491.26 | 498252 | 102 |  | - | 513300 |
|  |  |  | Uplink | High | 2664.900 | 532980 | 2278.62 | 455724 | 504 |  | - | 528660 |
| E-UTRA: 10MHz + NR: 60MHz | E-UTRA | 10 | 50 | Downlink | Low | 2561.100 | 40301 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2625.000 | 40940 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=34.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 60 | 79 | Downlink | Low | 2526.105 | 505221 | 2497.665 | 499533 | 0 | 15 | - | 499893 |
| CC1 |  |  | & | Mid | 2587.905 | 517581 | 2486.025 | 497205 | 102 |  | - | 512253 |
|  |  |  | Uplink | High | 2659.995 | 531999 | 2268.675 | 453735 | 504 |  | - | 526671 |
| E-UTRA: 10MHz + NR: 80MHz | E-UTRA | 10 | 50 | Downlink | Low | 2581.200 | 40502 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2604.900 | 40739 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=45 MHz (Note 2) | | | | | | | | | | | | |
| NR | 80 | 107 | Downlink | Low | 2536.200 | 507240 | 2497.68 | 499536 | 0 | 15 | - | 499896 |
| CC1 |  |  | & | Mid | 2588.100 | 517620 | 2476.14 | 495228 | 102 |  | - | 510276 |
|  |  |  | Uplink | High | 2649.900 | 529980 | 2248.5 | 449700 | 504 |  | - | 522636 |
| E-UTRA: 10MHz + NR: 100MHz | E-UTRA | 10 | 50 | Downlink | Low | 2601.300 | 40703 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2643.000 | 41120 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2584.800 | 40538 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=55.005 MHz (Note 2) | | | | | | | | | | | | |
| NR | 100 | 135 | Downlink | Low | 2546.295 | 509259 | 2497.695 | 499539 | 0 | 15 | - | 499899 |
| CC1 |  |  | & | Mid | 2587.995 | 517599 | 2465.955 | 493191 | 102 |  | - | 508239 |
|  |  |  | Uplink | High | 2639.805 | 527961 | 2228.325 | 445665 | 504 |  | - | 518601 |
| E-UTRA: 20MHz + NR: 10MHz | E-UTRA | 20 | 100 | Downlink | Low | 2516.100 | 39851 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2598.000 | 40670 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2670.000 | 41390 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=15 MHz (Note 2) | | | | | | | | | | | | |
| NR | 10 | 11 | Downlink | Low | 2501.100 | 500220 | 2497.14 | 499428 | 0 | 15 | - | 499788 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2505.6 | 501120 | 102 |  | - | 516168 |
|  |  |  | Uplink | High | 2685.000 | 537000 | 2318.16 | 463632 | 504 |  | - | 536568 |
| E-UTRA: 20MHz + NR: 20MHz | E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=19.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 20 | 24 | Downlink | Low | 2506.005 | 501201 | 2497.365 | 499473 | 0 | 15 | - | 499833 |
| CC1 |  |  | & | Mid | 2583.105 | 516621 | 2501.025 | 500205 | 102 |  | - | 515253 |
|  |  |  | Uplink | High | 2679.795 | 535959 | 2308.275 | 461655 | 504 |  | - | 534591 |
| E-UTRA: 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2546.100 | 40151 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2640.000 | 41090 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | |
| NR | 40 | 51 | Downlink | Low | 2516.100 | 503220 | 2497.74 | 499548 | 0 | 15 | - | 499908 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2491.2 | 498240 | 102 |  | - | 513288 |
|  |  |  | Uplink | High | 2670.000 | 534000 | 2288.76 | 457752 | 504 |  | - | 530688 |
| E-UTRA: 20MHz + NR: 50MHz | E-UTRA | 20 | 100 | Downlink | Low | 2556.000 | 40250 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2618.100 | 40871 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2629.800 | 40988 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=34.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 50 | 65 | Downlink | Low | 2521.005 | 504201 | 2497.605 | 499521 | 0 | 15 | - | 499881 |
| CC1 |  |  | & | Mid | 2583.105 | 516621 | 2486.265 | 497253 | 102 |  | - | 512301 |
|  |  |  | Uplink | High | 2664.795 | 532959 | 2278.515 | 455703 | 504 |  | - | 528639 |
| E-UTRA: 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2566.200 | 40352 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2619.900 | 40889 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=40.005 MHz (Note 2) | | | | | | | | | | | | |
| NR | 60 | 79 | Downlink | Low | 2526.195 | 505239 | 2497.755 | 499551 | 0 | 15 | - | 499911 |
| CC1 |  |  | & | Mid | 2582.895 | 516579 | 2481.015 | 496203 | 102 |  | - | 511251 |
|  |  |  | Uplink | High | 2659.905 | 531981 | 2268.585 | 453717 | 504 |  | - | 526653 |
| E-UTRA: 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2586.000 | 40550 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2599.800 | 40688 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=49.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 80 | 107 | Downlink | Low | 2536.005 | 507201 | 2497.485 | 499497 | 0 | 15 | - | 499857 |
| CC1 |  |  | & | Mid | 2583.105 | 516621 | 2471.145 | 494229 | 102 |  | - | 509277 |
|  |  |  | Uplink | High | 2649.795 | 529959 | 2248.395 | 449679 | 504 |  | - | 522615 |
| E-UTRA: 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2606.100 | 40751 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2643.000 | 41120 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2580.000 | 40490 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | |
| NR | 100 | 135 | Downlink | Low | 2546.100 | 509220 | 2497.5 | 499500 | 0 | 15 | - | 499860 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2460.96 | 492192 | 102 |  | - | 507240 |
|  |  |  | Uplink | High | 2640.000 | 528000 | 2228.52 | 445704 | 504 |  | - | 518640 |
| Note 1: The nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1.  Note 2: FR1 carrier without CORESET#0 is indicated in the MIB by setting =31, *controlResourceSetZero*=0 and *searchSpaceZero = 0* (TS 38.213 [22], clause 13). | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.1-3A: EN-DC combination DC\_(n)41AA, intra-band contiguous, SCS 60 kHz, 15 kHz NR raster, E-UTRA CC at the band edges without CORESET#0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 1 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |
| E-UTRA: 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.000 | 40820 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | |
| NR | 40 | 51 | Downlink | Low | 2536.200 | 507240 | 2517.84 | 503568 | 0 | 15 | - | 503928 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2491.2 | 498240 | 102 |  | - | 513288 |
|  |  |  | Uplink | High | 2649.900 | 529980 | 2268.66 | 453732 | 504 |  | - | 526668 |
| E-UTRA: 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=40.005 MHz (Note 2) | | | | | | | | | | | | |
| NR | 60 | 79 | Downlink | Low | 2546.205 | 509241 | 2517.765 | 503553 | 0 | 15 | - | 503913 |
| CC1 |  |  | & | Mid | 2582.895 | 516579 | 2481.015 | 496203 | 102 |  | - | 511251 |
|  |  |  | Uplink | High | 2639.895 | 527979 | 2248.575 | 449715 | 504 |  | - | 522651 |
| E-UTRA: 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=49.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 80 | 107 | Downlink | Low | 2556.195 | 511239 | 2517.675 | 503535 | 0 | 15 | - | 503895 |
| CC1 |  |  | & | Mid | 2583.105 | 516621 | 2471.145 | 494229 | 102 |  | - | 509277 |
|  |  |  | Uplink | High | 2629.905 | 525981 | 2228.505 | 445701 | 504 |  | - | 518637 |
| E-UTRA: 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2643.000 | 41120 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.900 | 41489 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | |
| NR | 100 | 135 | Downlink | Low | 2566.200 | 513240 | 2517.6 | 503520 | 0 | 15 | - | 503880 |
| CC1 |  |  | & | Mid | 2583.000 | 516600 | 2460.96 | 492192 | 102 |  | - | 507240 |
|  |  |  | Uplink | High | 2619.900 | 523980 | 2208.42 | 441684 | 504 |  | - | 514620 |
| Note 1: The nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1.  Note 2: FR1 carrier without CORESET#0 is indicated in the MIB by setting =31, *controlResourceSetZero*=0 and *searchSpaceZero = 0* (TS 38.213 [22], clause 13). | | | | | | | | | | | | | |

4.3.1.4.2.41.2 DC\_(n)41CA

Table 4.3.1.4.2.41.2-1: EN-DC combination DC\_(n)41CA, intra-band contiguous, SCS 15 kHz, 15 kHz NR raster, NR CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  **(Offset[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 20MHz + 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2546.100 | 40151 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2620.2 | 40892 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA  CC2 | 20 | 100 | Downlink  &  Uplink | Low | 2565.900 | 40349 | - | - | - | - | - | - | - | - | - | - |
| Mid | 2622.900 | 40919 | - | - | - | - | - | - | - | - | - | - |
| High | 2640.000 | 41090 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 216 | Downlink | Low | 2516.100 | 503220 | 2496.66 | 499332 | 0 | 15 | 6246 | 499710 | 6 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2535.30 | 507060 | 102 |  | 6390 | 511230 | 10 | 1 | 1 (2) | 105 |
|  |  |  | Uplink | High | 2670.000 | 534000 | 2559.84 | 511968 | 504 |  | 6633 | 530670 | 6 | 1 | 2 (4) | 509 |
| E-UTRA: 20MHz + 20MHz + NR: 50MHz | E-UTRA | 20 | 100 | Downlink | Low | 2556.000 | 40250 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2608.100 | 40771 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2610.00 | 40790 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA  CC2 | 20 | 100 | Downlink  &  Uplink | Low | 2575.800 | 40448 | - | - | - | - | - | - | - | - | - | - |
| Mid | 2627.900 | 40969 | - | - | - | - | - | - | - | - | - | - |
| High | 2629.800 | 40988 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=34.995 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 50 | 270 | Downlink | Low | 2521.005 | 504201 | 2496.705 | 499341 | 0 | 15 | 6246 | 499710 | 3 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.1 | 514620 | 2530.440 | 506088 | 102 |  | 6738 | 510270 | 2 | 0 | 2 (4) | 106 |
|  |  |  | Uplink | High | 2664.795 | 532959 | 2549.775 | 509955 | 504 |  | 6606 | 528510 | 5 | 1 | 0 (0) | 505 |
| 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs.  Note 4: The nominal carrier spacing between the E-UTRA carriers is set in accordance to TS 36.101 [48], clause 5.7.1A. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.2-1A: EN-DC combination DC\_(n)41CA, intra-band contiguous, SCS 15 kHz, 15 kHz NR raster, E-UTRA CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  **[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 20MHz + 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA  CC2 | 20 | 100 | Downlink  &  Uplink | Low | 2526.000 | 39950 | - | - | - | - | - | - | - | - | - | - |
| Mid | 2622.900 | 40919 | - | - | - | - | - | - | - | - | - | - |
| High | 2679.600 | 41486 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 216 | Downlink | Low | 2556.000 | 511200 | 2536.56 | 507312 | 0 | 15 | 6348 | 507870 | 6 | 1 | 2 (4) | 5 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2535.3 | 507060 | 102 |  | 6390 | 511230 | 10 | 1 | 1 (2) | 105 |
|  |  |  | Uplink | High | 2629.800 | 525960 | 2519.64 | 503928 | 504 |  | 6531 | 522510 | 2 | 0 | 1 (2) | 506 |
| 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs.  Note 4: The nominal carrier spacing between the E-UTRA carriers is set in accordance to TS 36.101 [48], clause 5.7.1A. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.2-2: EN-DC combination DC\_(n)41CA, intra-band contiguous, SCS 30 kHz, 30 kHz NR raster, NR CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index (Offset  **[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 20MHz + 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2546.100 | 40151 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2620.200 | 40892 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2565.900 | 40349 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2640.000 | 41090 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 106 | Downlink | Low | 2516.100 | 503220 | 2497.02 | 499404 | 0 | 30 | 6252 | 500190 | 22 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2517.30 | 503460 | 102 |  | 6396 | 511710 | 14 | 0 | 2 (2) | 208 |
|  |  |  | Uplink | High | 2670.000 | 534000 | 2469.48 | 493896 | 504 |  | 6636 | 530910 | 2 | 0 | 0 (0) | 1008 |
| E-UTRA: 20MHz + 20MHz + NR: 50MHz | E-UTRA | 20 | 100 | Downlink | Low | 2556.300 | 40253 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2608.100 | 40771 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2610.000 | 40790 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2576.100 | 40451 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2627.900 | 40969 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2629.800 | 40988 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=35.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 50 | 133 | Downlink | Low | 2521.290 | 504258 | 2497.35 | 499470 | 0 | 30 | 6252 | 500190 | 0 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2512.44 | 502488 | 102 |  | 6384 | 510750 | 18 | 0 | 2 (2) | 208 |
|  |  |  | Uplink | High | 2664.810 | 532962 | 2459.43 | 491886 | 504 |  | 6612 | 528990 | 8 | 0 | 1 (1) | 1010 |
| E-UTRA: 20MHz + 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2566.200 | 40352 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2600.100 | 40691 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2586.000 | 40550 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2632.900 | 41019 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2619.900 | 40889 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=39.99 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 60 | 162 | Downlink | Low | 2526.210 | 505242 | 2497.05 | 499410 | 0 | 30 | 6252 | 500190 | 20 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2507.22 | 501444 | 102 |  | 6369 | 509550 | 14 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2659.890 | 531978 | 2449.29 | 489858 | 504 |  | 6588 | 527070 | 20 | 0 | 2 (2) | 1012 |
| E-UTRA: 20MHz + 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2586.300 | 40553 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2623.100 | 40921 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2580.000 | 40490 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2606.100 | 40751 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2642.900 | 41119 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2599.800 | 40688 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=50.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 80 | 217 | Downlink | Low | 2536.290 | 507258 | 2497.23 | 499446 | 0 | 30 | 6252 | 500190 | 8 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2497.32 | 499464 | 102 |  | 6345 | 507630 | 10 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2649.810 | 529962 | 2429.31 | 485862 | 504 |  | 6537 | 522990 | 16 | 0 | 1 (1) | 1010 |
| E-UTRA: 20MHz + 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2606.100 | 40751 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2560.200 | 40292 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2625.900 | 40949 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2652.900 | 41219 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2580.000 | 40490 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 100 | 273 | Downlink | Low | 2546.100 | 509220 | 2496.96 | 499392 | 0 | 30 | 6252 | 500190 | 2 | 0 | 1 (1) | 2 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2487.24 | 497448 | 102 |  | 6321 | 505710 | 18 | 0 | 2 (2) | 208 |
|  |  |  | Uplink | High | 2640.000 | 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs.  Note 4: The nominal carrier spacing between the E-UTRA carriers is set in accordance to TS 36.101 [48], clause 5.7.1A. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.2-2A: EN-DC combination DC\_(n)41CA, intra-band contiguous, SCS 30 kHz, 30 kHz NR raster, E-UTRA CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  **(Offset[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 20MHz + 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 40 | 106 | Downlink | Low | 2556.000 | 511200 | 2536.92 | 507384 | 0 | 30 | 6351 | 508110 | 16 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2517.3 | 503460 | 102 |  | 6396 | 511710 | 14 | 0 | 2 (2) | 208 |
|  |  |  | Uplink | High | 2629.800 | 525960 | 2429.28 | 485856 | 504 |  | 6537 | 522990 | 16 | 0 | 0 (0) | 1008 |
| E-UTRA: 20MHz + 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.500 | 39755 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.100 | 40821 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.300 | 39953 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2632.900 | 41019 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=39.99 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 60 | 162 | Downlink | Low | 2566.290 | 513258 | 2537.13 | 507426 | 0 | 30 | 6354 | 508350 | 20 | 0 | 2 (2) | 4 |
| CC1 |  |  | & | Mid | 2573.1 | 514620 | 2507.22 | 501444 | 102 |  | 6369 | 509550 | 14 | 0 | 0 (0) | 204 |
|  |  |  | Uplink | High | 2619.810 | 523962 | 2409.21 | 481842 | 504 |  | 6486 | 518910 | 20 | 0 | 0 (0) | 1008 |
| E-UTRA: 20MHz + 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2623.100 | 40921 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2642.9 | 41119 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=50.01 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 80 | 217 | Downlink | Low | 2576.010 | 515202 | 2536.95 | 507390 | 0 | 30 | 6351 | 508110 | 0 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.1 | 514620 | 2497.32 | 499464 | 102 |  | 6345 | 576300 | 10 | 0 | 1 (1) | 206 |
|  |  |  | Uplink | High | 2609.790 | 521958 | 2389.29 | 477858 | 504 |  | 6438 | 515070 | 20 | 0 | 2 (2) | 1012 |
| E-UTRA: 20MHz + 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 4) | | | | | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2652.900 | 41219 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | | | | | |
| NR | 100 | 273 | Downlink | Low | 2586.000 | 517200 | 2536.86 | 507372 | 0 | 30 | 6351 | 508110 | 6 | 0 | 0 (0) | 0 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2487.24 | 497448 | 102 |  | 6321 | 505710 | 18 | 0 | 2 (2) | 208 |
|  |  |  | Uplink | High | 2599.800 | 519960 | 2369.22 | 473844 | 504 |  | 6387 | 510990 | 22 | 0 | 1 (1) | 1010 |
| 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B.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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs.  Note 4: The nominal carrier spacing between the E-UTRA carriers is set in accordance to TS 36.101 [48], clause 5.7.1A. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.2-3: EN-DC combination DC\_(n)41CA, intra-band contiguous, SCS 60 kHz, 15 kHz NR raster, NR CC at the band edges without CORESET#0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 1 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |
| E-UTRA: 20MHz + 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2546.100 | 40151 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2620.200 | 40892 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2565.900 | 40349 |  |  |  |  |  |  |
| CC2 |  |  | & | Mid | 2622.900 | 40919 |  |  |  |  |  |  |
|  |  |  | Uplink | High | 2640.000 | 41090 |  |  |  |  |  |  |
| Channel spacing E-UTRA CC2- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | |
| NR | 40 | 51 | Downlink | Low | 2516.100 | 503220 | 2497.74 | 499548 | 0 | 15 | - | 499908 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2481.3 | 496260 | 102 |  | - | 511308 |
|  |  |  | Uplink | High | 2670.000 | 534000 | 2288.76 | 457752 | 504 |  | - | 530688 |
| E-UTRA: 20MHz + 20MHz + NR: 50MHz | E-UTRA | 20 | 100 | Downlink | Low | 2556.000 | 40250 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2608.100 | 40771 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2610.000 | 40790 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2575.800 | 40448 |  |  |  |  |  |  |
| CC2 |  |  | & | Mid | 2627.900 | 40969 |  |  |  |  |  |  |
|  |  |  | Uplink | High | 2629.800 | 40988 |  |  |  |  |  |  |
| Channel spacing E-UTRA CC2- NR CC1=34.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 50 | 65 | Downlink | Low | 2521.005 | 504201 | 2497.605 | 499521 | 0 | 15 | - | 499881 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2476.26 | 495252 | 102 |  | - | 510300 |
|  |  |  | Uplink | High | 2664.795 | 532959 | 2278.515 | 455703 | 504 |  | - | 528639 |
| E-UTRA: 20MHz + 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2566.200 | 40352 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.100 | 40821 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2600.100 | 40691 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2586.000 | 40550 | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2632.9 | 41019 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2619.900 | 40889 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=40.005 MHz (Note 2) | | | | | | | | | | | | |
| NR | 60 | 79 | Downlink | Low | 2526.195 | 505239 | 2497.755 | 499551 | 0 | 15 | - | 499911 |
| CC1 |  |  | & | Mid | 2573.1 | 514620 | 2471.22 | 494244 | 102 |  | - | 509292 |
|  |  |  | Uplink | High | 2659.905 | 531981 | 2268.585 | 453717 | 504 |  | - | 526653 |
| E-UTRA: 20MHz + 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2586.000 | 40550 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2623.100 | 40921 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2580.000 | 40490 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2605.800 | 40748 | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2642.900 | 41119 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2599.800 | 40688 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=49.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 80 | 107 | Downlink | Low | 2536.005 | 507201 | 2497.485 | 499497 | 0 | 15 | - | 499857 |
| CC1 |  |  | & | Mid | 2573.1 | 514620 | 2461.14 | 492228 | 102 |  | - | 507276 |
|  |  |  | Uplink | High | 2649.795 | 529959 | 2248.395 | 449679 | 504 |  | - | 522615 |
| E-UTRA: 20MHz + 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2606.100 | 40751 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2560.2 | 40292 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2625.900 | 40949 | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2652.900 | 41219 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2580.000 | 40490 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | |
| NR | 100 | 135 | Downlink | Low | 2546.100 | 509220 | 2497.5 | 499500 | 0 | 15 | - | 499860 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2451.06 | 490212 | 102 |  | - | 505260 |
|  |  |  | Uplink | High | 2640.000 | 528000 | 2228.52 | 445704 | 504 |  | - | 518640 |
| Note 1: The nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1.  Note 2: FR1 carrier without CORESET#0 is indicated in the MIB by setting =31, *controlResourceSetZero*=0 and *searchSpaceZero = 0* (TS 38.213 [22], clause 13).  Note 3: The nominal carrier spacing between the E-UTRA carriers is set in accordance to TS 36.101 [48], clause 5.7.1A. | | | | | | | | | | | | | |

Table 4.3.1.4.2.41.2-3A: EN-DC combination DC\_(n)41CA, intra-band contiguous, SCS 60 kHz, 15 kHz NR raster, E-UTRA CC at the band edges without CORESET#0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 1 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |
| E-UTRA: 20MHz + 20MHz + NR: 40MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2603.100 | 40721 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2622.900 | 40919 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=30 MHz (Note 2) | | | | | | | | | | | | |
| NR | 40 | 51 | Downlink | Low | 2556.000 | 511200 | 2537.64 | 507528 | 0 | 15 | - | 507888 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2481.3 | 496260 | 102 |  | - | 511308 |
|  |  |  | Uplink | High | 2629.800 | 525960 | 2248.56 | 449712 | 504 |  | - | 522648 |
| E-UTRA: 20MHz + 20MHz + NR: 60MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2613.100 | 40821 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2632.9 | 41019 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=40.005 MHz (Note 2) | | | | | | | | | | | | |
| NR | 60 | 79 | Downlink | Low | 2566.005 | 513201 | 2537.565 | 507513 | 0 | 15 | - | 507873 |
| CC1 |  |  | & | Mid | 2573.1 | 514620 | 2471.22 | 494244 | 102 |  | - | 510300 |
|  |  |  | Uplink | High | 2619.795 | 523959 | 2228.475 | 445695 | 504 |  | - | 518631 |
| E-UTRA: 20MHz + 20MHz + NR: 80MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.500 | 39755 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2623.100 | 40921 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.300 | 39953 | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2642.9 | 41119 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=49.995 MHz (Note 2) | | | | | | | | | | | | |
| NR | 80 | 107 | Downlink | Low | 2576.295 | 515259 | 2537.775 | 507555 | 0 | 15 | - | 507915 |
| CC1 |  |  | & | Mid | 2573.1 | 514620 | 2461.14 | 492228 | 102 |  | - | 507276 |
|  |  |  | Uplink | High | 2609.805 | 521961 | 2208.405 | 441681 | 504 |  | - | 514617 |
| E-UTRA: 20MHz + 20MHz + NR: 100MHz | E-UTRA | 20 | 100 | Downlink | Low | 2506.200 | 39752 | - | - | - | - | - | - |
| CC1 |  |  | & | Mid | 2633.100 | 41021 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2659.800 | 41288 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC1- E-UTRA CC2=19.8 MHz (Note 3) | | | | | | | | | | | | |
| E-UTRA | 20 | 100 | Downlink | Low | 2526.000 | 39950 | - | - | - | - | - | - |
| CC2 |  |  | & | Mid | 2652.900 | 41219 | - | - | - | - | - | - |
|  |  |  | Uplink | High | 2679.600 | 41486 | - | - | - | - | - | - |
| Channel spacing E-UTRA CC2- NR CC1=60 MHz (Note 2) | | | | | | | | | | | | |
| NR | 100 | 135 | Downlink | Low | 2586.000 | 517200 | 2537.4 | 507480 | 0 | 15 | - | 507840 |
| CC1 |  |  | & | Mid | 2573.100 | 514620 | 2451.06 | 490212 | 102 |  | - | 505260 |
|  |  |  | Uplink | High | 2599.800 | 519960 | 2188.32 | 437664 | 504 |  | - | 510600 |
| Note 1: The nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1.  Note 2: FR1 carrier without CORESET#0 is indicated in the MIB by setting =31, *controlResourceSetZero*=0 and *searchSpaceZero = 0* (TS 38.213 [22], clause 13).  Note 3: The nominal carrier spacing between the E-UTRA carriers is set in accordance to TS 36.101 [48], clause 5.7.1A. | | | | | | | | | | | | | |

4.3.1.4.2.42.to 4.3.1.4.2.70 FFS

4.3.1.4.2.71 Intra-band contiguous EN-DC configurations DC\_(n)71

4.3.1.4.2.71.1 DC\_(n)71AA

Table 4.3.1.4.2.71.1-1: EN-DC combination DC\_(n)71AA, intra-band contiguous, SCS 15 kHz, 100 kHz NR raster, NR CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  **(Offset[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 5MHz + NR: 5MHz | E-UTRA | 5 | 25 | Downlink | Low | 624.500 | 68661 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 644.500 | 68861 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 670.500 | 133197 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 690.500 | 133397 | - | - | - | - | - | - | - | - | - | - |
| NR | 5 | 25 | Downlink | Low | 619.500 | 123900 | 617.25 | 123450 | 0 | 15 | 1548 | 123870 | 8 | 1 | 0 (0) | 1 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 611.39 | 122278 | 102 |  | 1580 | 126490 | 0 | 1 | 2 (4) | 107 |
|  |  |  |  | High | 649.500 | 129900 | 556.53 | 111306 | 504 |  | 1623 | 129870 | 8 | 1 | 0 (0) | 505 |
|  |  |  | Uplink | Low | 665.500 | 133100 | 663.25 | 132650 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 585.03 | 117006 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 695.500 | 139100 | 692.17 | 138434 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 5MHz + NR: 10MHz | E-UTRA | 5 | 25 | Downlink | Low | 629.500 | 68711 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 675.500 | 133247 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
| NR | 10 | 52 | Downlink | Low | 622.000 | 124400 | 617.32 | 123464 | 0 | 15 | 1549 | 123890 | 10 | 1 | 0 (0) | 1 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 608.96 | 121792 | 102 |  | 1574 | 126010 | 2 | 1 | 2 (4) | 107 |
|  |  |  |  | High | 647.000 | 129400 | 551.6 | 110320 | 504 |  | 1610 | 128890 | 10 | 1 | 0 (0) | 505 (0) |
|  |  |  | Uplink | Low | 668.000 | 133600 | 663.32 | 132664 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 582.6 | 116520 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 693.000 | 138600 | 687.24 | 137448 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 5MHz + NR: 15MHz | E-UTRA | 5 | 25 | Downlink | Low | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 642.000 | 68836 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 688.000 | 133372 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
| NR | 15 | 79 | Downlink | Low | 624.500 | 124900 | 617.39 | 123478 | 0 | 15 | 1547 | 123850 | 4 | 0 | 0 | 0 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 606.53 | 121306 | 102 |  | 1568 | 125530 | 4 | 1 | 2 (4) | 107 |
|  |  |  |  | High | 644.500 | 128900 | 546.67 | 109334 | 504 |  | 1600 | 127970 | 8 | 1 | 1 (2) | 507 (0) |
|  |  |  | Uplink | Low | 670.500 | 134100 | 663.39 | 132678 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 580.17 | 116034 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 690.500 | 138100 | 682.31 | 136462 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 5MHz + NR: 20MHz | E-UTRA | 5 | 25 | Downlink | Low | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 644.500 | 68861 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 629.500 | 68711 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 690.500 | 133397 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 675.500 | 133247 | - | - | - | - | - | - | - | - | - | - |
| NR | 20 | 106 | Downlink | Low | 627.000 | 125400 | 617.46 | 123492 | 0 | 15 | 1548 | 123870 | 6 | 0 | 0 | 0 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 604.1 | 120820 | 102 |  | 1562 | 125050 | 6 | 1 | 2 (4) | 107 |
|  |  |  |  | High | 642.000 | 128400 | 541.74 | 108348 | 504 |  | 1587 | 126990 | 10 | 1 | 1 (2) | 507 |
|  |  |  | Uplink | Low | 673.000 | 134600 | 663.46 | 132692 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 577.74 | 115548 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 688.000 | 137600 | 677.38 | 135476 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 10MHz + NR: 5MHz | E-UTRA | 10 | 50 | Downlink | Low | 627.000 | 68686 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 642.000 | 68836 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 673.000 | 133222 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 688.000 | 133372 | - | - | - | - | - | - | - | - | - | - |
| NR | 5 | 25 | Downlink | Low | 619.500 | 123900 | 617.25 | 123450 | 0 | 15 | 1548 | 123870 | 8 | 1 | 0 (0) | 1 (0) |
| CC1 |  |  |  | Mid | 629.500 | 125900 | 608.89 | 121778 | 102 |  | 1573 | 125810 | 0 | 0 | 0 | 102 |
|  |  |  |  | High | 649.500 | 129900 | 556.53 | 111306 | 504 |  | 1623 | 129870 | 8 | 1 | 0 (0) | 505 |
|  |  |  | Uplink | Low | 665.500 | 133100 | 663.25 | 132650 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 675.500 | 135100 | 582.53 | 116506 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 695.500 | 139100 | 692.17 | 138434 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 10MHz + NR: 10MHz | E-UTRA | 10 | 50 | Downlink | Low | 632.000 | 68736 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 678.000 | 133272 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
| NR | 10 | 52 | Downlink | Low | 622.000 | 124400 | 617.32 | 123464 | 0 | 15 | 1549 | 123890 | 10 | 1 | 0 (0) | 1 (0) |
| CC1 |  |  |  | Mid | 629.500 | 125900 | 606.46 | 121292 | 102 |  | 1567 | 125330 | 2 | 0 | 0 | 102 |
|  |  |  |  | High | 647.000 | 129400 | 551.6 | 110320 | 504 |  | 1610 | 128890 | 10 | 1 | 0 (0) | 505 |
|  |  |  | Uplink | Low | 668.000 | 133600 | 663.32 | 132664 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 675.500 | 135100 | 580.1 | 116020 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 693.000 | 138600 | 687.24 | 137448 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 10MHz + NR: 15MHz | E-UTRA | 10 | 50 | Downlink | Low | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 642.000 | 68836 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 632.000 | 68736 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 688.000 | 133372 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 678.000 | 133272 | - | - | - | - | - | - | - | - | - | - |
| NR | 15 | 79 | Downlink | Low | 624.500 | 124900 | 617.39 | 123478 | 0 | 15 | 1547 | 123850 | 4 | 0 | 0 (0) | 0 |
| CC1 |  |  |  | Mid | 629.500 | 125900 | 604.03 | 120806 | 102 |  | 1561 | 124850 | 4 | 0 | 0 (0) | 102 |
|  |  |  |  | High | 644.500 | 128900 | 546.67 | 109334 | 504 |  | 1600 | 127970 | 8 | 1 | 1 (1) | 507 |
|  |  |  | Uplink | Low | 670.500 | 134100 | 663.39 | 132678 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 675.500 | 135100 | 577.67 | 115534 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 690.500 | 138100 | 682.31 | 136462 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 15MHz + NR: 5MHz | E-UTRA | 15 | 75 | Downlink | Low | 629.500 | 68711 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 675.500 | 133247 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
| NR | 5 | 25 | Downlink | Low | 619.500 | 123900 | 617.25 | 123450 | 0 | 15 | 1548 | 123870 | 8 | 1 | 0 (0) | 1 |
| CC1 |  |  |  | Mid | 627.000 | 125400 | 606.39 | 121278 | 102 |  | 1566 | 125310 | 0 | 0 | 0 (0) | 102 |
|  |  |  |  | High | 649.500 | 129900 | 556.53 | 111306 | 504 |  | 1623 | 129870 | 8 | 1 | 0 (0) | 505 |
|  |  |  | Uplink | Low | 665.500 | 133100 | 663.25 | 132650 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 673.000 | 134600 | 580.03 | 116006 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 695.500 | 139100 | 692.17 | 138434 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 15MHz + NR: 10MHz | E-UTRA | 15 | 75 | Downlink | Low | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
| NR | 10 | 52 | Downlink | Low | 622.000 | 124400 | 617.32 | 123464 | 0 | 15 | 1549 | 123890 | 10 | 1 | 0 (0) | 1 |
| CC1 |  |  |  | Mid | 627.000 | 125400 | 603.96 | 120792 | 102 |  | 1560 | 124830 | 2 | 0 | 0 (0) | 102 |
|  |  |  |  | High | 647.000 | 129400 | 551.6 | 110320 | 504 |  | 1610 | 128890 | 10 | 1 | 0 (0) | 505 |
|  |  |  | Uplink | Low | 668.000 | 133600 | 663.32 | 132664 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 673.000 | 134600 | 577.6 | 115520 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 693.000 | 138600 | 687.24 | 137448 | 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1.  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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.71.1-1A: EN-DC combination DC\_(n)71AA, intra-band contiguous, SCS 15 kHz, 100 kHz NR raster, E-UTRA CC at the band edges

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  **(Offset[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 5MHz + NR: 5MHz | E-UTRA | 5 | 25 | Downlink | Low | 619.500 | 68611 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 649.500 | 68911 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 665.500 | 133147 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 695.500 | 133447 | - | - | - | - | - | - | - | - | - | - |
| NR | 5 | 25 | Downlink | Low | 624.500 | 124900 | 622.25 | 124450 | 0 | 15 | 1559 | 124810 | 0 | 0 | 0 (0) | 0 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 611.39 | 122278 | 102 |  | 1580 | 126490 | 0 | 1 | 2 (4) | 112 |
|  |  |  |  | High | 644.500 | 128900 | 551.53 | 110306 | 504 |  | 1612 | 128930 | 4 | 1 | 1 (2) | 507 |
|  |  |  | Uplink | Low | 670.500 | 134100 | 668.25 | 133650 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 585.03 | 117006 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 690.500 | 138100 | 687.17 | 137434 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 5MHz + NR: 15MHz | E-UTRA | 5 | 25 | Downlink | Low | 619.500 | 68611 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 642.000 | 68836 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 649.500 | 68911 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 665.500 | 133147 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 688.000 | 133372 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 695.500 | 133447 | - | - | - | - | - | - | - | - | - | - |
| NR | 15 | 79 | Downlink | Low | 629.500 | 125900 | 622.39 | 124478 | 0 | 15 | 1561 | 124850 | 4 | 0 | 0 (0) | 0 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 606.53 | 121306 | 102 |  | 1568 | 125530 | 4 | 1 | 2 (4) | 107 |
|  |  |  |  | High | 639.500 | 127900 | 541.67 | 108334 | 504 |  | 1586 | 126970 | 8 | 1 | 1 (2) | 507 |
|  |  |  | Uplink | Low | 675.500 | 135100 | 668.39 | 133678 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 580.17 | 116034 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 685.500 | 137100 | 677.31 | 135462 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 10MHz + NR: 10MHz | E-UTRA | 10 | 50 | Downlink | Low | 622.000 | 68636 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 647.000 | 68886 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 668.000 | 133172 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 693.000 | 133422 | - | - | - | - | - | - | - | - | - | - |
| NR | 10 | 52 | Downlink | Low | 632.000 | 126400 | 627.32 | 125464 | 0 | 15 | 1574 | 126010 | 2 | 1 | 2 (4) | 5 |
| CC1 |  |  |  | Mid | 629.500 | 125900 | 606.46 | 121292 | 102 |  | 1567 | 125330 | 2 | 0 | 0 (0) | 102 |
|  |  |  |  | High | 637.000 | 127400 | 541.6 | 108320 | 504 |  | 1588 | 127010 | 2 | 1 | 2 (4) | 509 |
|  |  |  | Uplink | Low | 678.000 | 135600 | 673.32 | 134664 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 675.500 | 135100 | 580.1 | 116020 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 683.000 | 136600 | 677.24 | 135448 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 15MHz + NR: 5MHz | E-UTRA | 15 | 75 | Downlink | Low | 624.500 | 68661 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 644.500 | 68861 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 670.500 | 133197 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 690.500 | 133397 | - | - | - | - | - | - | - | - | - | - |
| NR | 5 | 25 | Downlink | Low | 634.500 | 126900 | 632.25 | 126450 | 0 | 15 | 1587 | 126990 | 0 | 1 | 2 (4) | 5 |
| CC1 |  |  |  | Mid | 627.000 | 125400 | 606.39 | 121278 | 102 |  | 1566 | 125310 | 0 | 0 | 0 (0) | 102 |
|  |  |  |  | High | 634.500 | 126900 | 541.53 | 108306 | 504 |  | 1587 | 126990 | 0 | 1 | 2 (4) | 509 |
|  |  |  | Uplink | Low | 680.500 | 136100 | 678.25 | 135650 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 673.000 | 134600 | 580.03 | 116006 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 680.500 | 136100 | 677.17 | 135434 | 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1.  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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.71.1-2: EN-DC combination DC\_(n)71AA, intra-band contiguous, SCS 30 kHz, 100 kHz NR raster, NR CC at the band edge

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC channel bandwidth combination | CC | Bandwidth [MHz] | *carrierBandwidth*  [PRBs] | Range | | Carrier centre  [MHz]  Note 2 | Carrier centre  [ARFCN] | point A [MHz] | *absoluteFrequencyPointA* [ARFCN] | *offsetToCarrier* [Carrier PRBs] | SS block SCS  [kHz] | GSCN | *absoluteFrequencySSB*  [ARFCN] |  | Offset Carrier CORESET#0  [RBs]  Note 3 | CORESET#0 Index  **(Offset[RBs])**  Note 1 | offsetToPointA (SIB1)  [PRBs]  Note 1 |
| E-UTRA: 5MHz + NR: 10MHz | E-UTRA | 5 | 25 | Downlink | Low | 629.500 | 68711 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 675.500 | 133247 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
| NR | 10 | 24 | Downlink | Low | 622.000 | 124400 | 617.68 | 123536 | 0 | 15 | 1555 | 124370 | 14 | 0 | 1 (6) | 12 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 590.96 | 118192 | 102 |  | 1580 | 126490 | 6 | 0 | 3 (8) | 220 |
|  |  |  |  | High | 647.000 | 129400 | 461.24 | 92248 | 504 |  | 1616 | 129370 | 14 | 0 | 1 (6) | 1020 |
|  |  |  | Uplink | Low | 668.000 | 133600 | 663.68 | 132736 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 492.24 | 98448 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 693.000 | 138600 | 686.52 | 137304 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 5MHz + NR: 15MHz | E-UTRA | 5 | 25 | Downlink | Low | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 642.000 | 68836 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 688.000 | 133372 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
| NR | 15 | 38 | Downlink | Low | 624.500 | 124900 | 617.66 | 123532 | 0 | 15 | 1553 | 124330 | 2 | 0 | 1 (6) | 12 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 588.44 | 117688 | 102 |  | 1571 | 125770 | 6 | 0 | 0 (5) | 214 |
|  |  |  |  | High | 644.500 | 128900 | 456.22 | 91244 | 504 |  | 1606 | 128450 | 18 | 0 | 2 (7) | 1022 |
|  |  |  | Uplink | Low | 670.500 | 134100 | 663.66 | 132732 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 489.72 | 97944 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 690.500 | 138100 | 681.5 | 136300 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 5MHz + NR: 20MHz | E-UTRA | 5 | 25 | Downlink | Low | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 644.500 | 68861 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 629.500 | 68711 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 690.500 | 133397 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 675.500 | 133247 | - | - | - | - | - | - | - | - | - | - |
| NR | 20 | 51 | Downlink | Low | 627.000 | 125400 | 617.82 | 123564 | 0 | 15 | 1554 | 124350 | 22 | 0 | 0 (5) | 10 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 586.1 | 117220 | 102 |  | 1565 | 125290 | 2 | 0 | 0 (5) | 214 |
|  |  |  |  | High | 642.000 | 128400 | 451.38 | 90276 | 504 |  | 1593 | 127470 | 14 | 0 | 2 (7) | 1022 |
|  |  |  | Uplink | Low | 673.000 | 134600 | 663.82 | 132764 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 487.38 | 97476 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 688.000 | 137600 | 676.66 | 135332 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 10MHz + NR: 10MHz | E-UTRA | 10 | 50 | Downlink | Low | 632.000 | 68736 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 678.000 | 133272 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
| NR | 10 | 24 | Downlink | Low | 622.000 | 124400 | 617.68 | 123536 | 0 | 15 | 1555 | 124370 | 14 | 0 | 1 (6) | 12 |
| CC1 |  |  |  | Mid | 629.500 | 125900 | 588.46 | 117692 | 102 |  | 1573 | 125810 | 18 | 0 | 0 (5) | 214 |
|  |  |  |  | High | 647.000 | 129400 | 461.24 | 92248 | 504 |  | 1616 | 129370 | 14 | 0 | 1 (6) | 1020 |
|  |  |  | Uplink | Low | 668.000 | 133600 | 663.68 | 132736 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 675.500 | 135100 | 489.74 | 97948 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 693.000 | 138600 | 686.52 | 137304 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 10MHz + NR: 15MHz | E-UTRA | 10 | 50 | Downlink | Low | 637.000 | 68786 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 642.000 | 68836 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 632.000 | 68736 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 683.000 | 133322 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 688.000 | 133372 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 678.000 | 133272 | - | - | - | - | - | - | - | - | - | - |
| NR | 15 | 38 | Downlink | Low | 624.500 | 124900 | 617.66 | 123532 | 0 | 15 | 1553 | 124330 | 2 | 0 | 1 (6) | 12 |
| CC1 |  |  |  | Mid | 629.500 | 125900 | 585.94 | 117188 | 102 |  | 1567 | 125330 | 2 | 0 | 1 (6) | 216 |
|  |  |  |  | High | 644.500 | 128900 | 456.22 | 91244 | 504 |  | 1606 | 128450 | 18 | 0 | 2 (7) | 1022 |
|  |  |  | Uplink | Low | 670.500 | 134100 | 663.66 | 132732 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 675.500 | 135100 | 487.22 | 97444 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 690.500 | 138100 | 681.5 | 136300 | 6 |  | - | - | - | - | - | - |
| E-UTRA: 15MHz + NR: 10MHz | E-UTRA | 15 | 75 | Downlink | Low | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 639.500 | 68811 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 634.500 | 68761 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 685.500 | 133347 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 680.500 | 133297 | - | - | - | - | - | - | - | - | - | - |
| NR | 10 | 24 | Downlink | Low | 622.000 | 124400 | 617.68 | 123536 | 0 | 15 | 1555 | 124370 | 14 | 0 | 1 (6) | 12 |
| CC1 |  |  |  | Mid | 627.000 | 125400 | 585.96 | 117192 | 102 |  | 1566 | 125310 | 18 | 0 | 0 (5) | 214 |
|  |  |  |  | High | 647.000 | 129400 | 461.24 | 92248 | 504 |  | 1616 | 129370 | 14 | 0 | 1 (6) | 1020 |
|  |  |  | Uplink | Low | 668.000 | 133600 | 663.68 | 132736 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 673.000 | 134600 | 487.24 | 97448 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 693.000 | 138600 | 686.52 | 137304 | 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1.  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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | | | |

Table 4.3.1.4.2.71.1-2A: EN-DC combination DC\_(n)71AA, intra-band contiguous, SCS 30 kHz, 100 kHz NR raster, E-UTRA CC at the band edge

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **EN-DC channel bandwidth combination** | **CC** | **Bandwidth [MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]**  **Note 2** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | ***absoluteFrequencySSB***  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 3** | **CORESET#0**  **(Offset [RBs])**  **Index**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| E-UTRA: 5MHz + NR: 15MHz | E-UTRA | 5 | 25 | Downlink | Low | 619.500 | 68611 | - | - | - | - | - | - | - | - | - | - |
| CC1 |  |  |  | Mid | 642.000 | 68836 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 649.500 | 68911 | - | - | - | - | - | - | - | - | - | - |
|  |  |  | Uplink | Low | 665.500 | 133147 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 688.000 | 133372 | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  | High | 695.500 | 133447 | - | - | - | - | - | - | - | - | - | - |
| NR | 15 | 38 | Downlink | Low | 629.500 | 125900 | 622.66 | 124532 | 0 | 15 | 1567 | 125330 | 2 | 0 | 1 (6) | 12 |
| CC1 |  |  |  | Mid | 632.000 | 126400 | 588.44 | 117688 | 102 |  | 1571 | 125770 | 6 | 0 | 0 (5) | 214 |
|  |  |  |  | High | 639.500 | 127900 | 451.22 | 90244 | 504 |  | 1592 | 127450 | 18 | 0 | 2 (7) | 1022 |
|  |  |  | Uplink | Low | 675.500 | 135100 | 668.66 | 133732 | 0 | - | - | - | - | - | - | - |
|  |  |  |  | Mid | 678.000 | 135600 | 489.72 | 97944 | 504 |  | - | - | - | - | - | - |
|  |  |  |  | High | 685.500 | 137100 | 676.5 | 135300 | 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 nominal carrier spacing between the E-UTRA and the NR carriers is set in accordance to TS 38.101-3 [9], clause 5.4B1. | | | | | | | | | | | | | | | | | |

##### 4.3.1.4.3 Intra-band non-contiguous EN-DC configurations within FR1

##### 4.3.1.4.3.1 FFS

4.3.1.4.3.2 Intra-band non-contiguous EN-DC configurations DC\_2\_n2

4.3.1.4.3.2.1 DC\_2A\_n2A

Table 4.3.1.4.3.2.1-1: Test frequencies for EN-DC combination DC\_2A\_n2A, Max Wgap

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Frequency ID** | **NR channel bandwidth [MHz]** | **NR SCS**  **[kHz]** | **NR test frequency range**  **(Note 1)** | **E-UTRA channel bandwidth [MHz]** | **E-UTRA**  **frequency range**  **(Note 2)** |
| Low with maxWgap | 5 | 15 | Low | 20 | High |
| (NR – E-UTRA) | 10 |  |  |  |  |
|  | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 35 |  |  |  |  |
|  | 40 |  |  |  |  |
| High with maxWgap | 5 |  | High | 20 | Low |
| (E-UTRA - NR) | 10 |  |  |  |  |
|  | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 35 |  |  |  |  |
|  | 40 |  |  |  |  |
| Low with maxWgap | 10 | 30 | Low | 20 | High |
| (NR – E-UTRA) | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 35 |  |  |  |  |
|  | 40 |  |  |  |  |
| High with maxWgap | 10 |  | High | 20 | Low |
| (E-UTRA - NR) | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 35 |  |  |  |  |
|  | 40 |  |  |  |  |
| Note 1: The NR test frequencies are specified in clause 4.3.1.1.1.2 for the NR Channel Bandwidth, NR SCS and NR test frequency range as given in the table.  Note 2: The E-UTRA test frequencies are specified in TS 36.508 [2], clause 4.3.1.1.2 for the E-UTRA channel bandwidth and E-UTRA test frequency range as given in the table. | | | | | |

4.3.1.4.3.3– 4.3.1.4.3.40 FFS

##### 4.3.1.4.3.41 Intra-band non-contiguous EN-DC configurations DC\_41\_n41

##### 4.3.1.4.3.41.1 DC\_41A\_n41A

Table 4.3.1.4.3.41.1-1: Test frequencies for EN-DC combination DC\_41A\_n41A, Max Wgap

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Frequency ID | NR channel bandwidth [MHz] | NR SCS  [kHz] | NR test frequency range  (Note 1) | E-UTRA channel bandwidth [MHz] | E-UTRA  frequency range  (Note 2) |
| Low with maxWgap | 40 | 30 | Low | 20 | High |
| (NR – E-UTRA) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| High with maxWgap | 40 |  | High | 20 | Low |
| (E-UTRA - NR) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| Low with maxWgap | 40 | 60 | Low | 20 | High |
| (NR – E-UTRA) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| High with maxWgap | 40 |  | High | 20 | Low |
| (E-UTRA - NR) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| Note 1: The NR test frequencies are specified in clause 4.3.1.1.1.41 for the NR Channel Bandwidth, NR SCS and NR test frequency range as given in the table.  Note 2: The E-UTRA test frequencies are specified in TS 36.508 [2], clause 4.3.1.2.9 for the E-UTRA channel bandwidth and E-UTRA test frequency range as given in the table. | | | | | |

##### 4.3.1.4.3.41.2 DC\_41C\_n41A

Table 4.3.1.4.3.41.2-1: Test frequencies for EN-DC combination DC\_41C\_n41A, SCS=30kHz, Max Wgap

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Frequency ID | NR channel bandwidth [MHz] | NR SCS  [kHz] | NR test frequency range  (Note 1) | E-UTRA CC Combo / NRB\_agg [MHz] | E-UTRA  frequency range  (Note 2) |
| Low with maxWgap | 40 | 30 | Low | 20 + 20 | High |
| (NR – E-UTRA) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| High with maxWgap | 40 |  | High | 20 + 20 | Low |
| (E-UTRA - NR) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| Low with maxWgap | 40 | 60 | Low | 20 + 20 | High |
| (NR – E-UTRA) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| High with maxWgap | 40 |  | High | 20 + 20 | Low |
| (E-UTRA - NR) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| Note 1: The NR test frequencies are specified in clause 4.3.1.1.1.41 for the NR Channel Bandwidth, NR SCS and NR test frequency range as given in the table.  Note 2: The E-UTRA test frequencies are specified in TS 36.508 [2], clause 4.3.1.2.9A for the E-UTRA CC Combo and E-UTRA test frequency range as given in the table. | | | | | |

4.3.1.4.3.41.3 DC\_41D\_n41A

Table 4.3.1.4.3.41.3-1: Test frequencies for EN-DC combination DC\_41D\_n41A, SCS=30kHz, Max Wgap

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Frequency ID | NR channel bandwidth [MHz] | NR SCS  [kHz] | NR test frequency range  (Note 1) | E-UTRA CC Combo / NRB\_agg [MHz] | E-UTRA  frequency range  (Note 2) |
| Low with maxWgap | 40 | 30 | Low | 20 + 20 + 20 | High |
| (NR – E-UTRA) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| High with maxWgap | 40 |  | High | 20 + 20 + 20 | Low |
| (E-UTRA - NR) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| Low with maxWgap | 40 | 60 | Low | 20 + 20 + 20 | High |
| (NR – E-UTRA) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| High with maxWgap | 40 |  | High | 20 + 20 + 20 | Low |
| (E-UTRA - NR) | 50 |  |  |  |  |
|  | 60 |  |  |  |  |
|  | 80 |  |  |  |  |
|  | 100 |  |  |  |  |
| Note 1: The NR test frequencies are specified in clause 4.3.1.1.1.41 for the NR Channel Bandwidth, NR scs and NR test frequency range as given in the table.  Note 2: The E-UTRA test frequencies are specified in TS 36.508 [2], clause 4.3.1.2.9A for the E-UTRA CC Combo and E-UTRA test frequency range as given in the table. | | | | | |

4.3.1.4.3.42– 4.3.1.4.3.65 FFS

4.3.1.4.3.66 Intra-band non-contiguous EN-DC configurations DC\_66\_n66

4.3.1.4.3.66.1 DC\_66A\_n66A

Table 4.3.1.4.3.66.1-1: Test frequencies for EN-DC combination DC\_66A\_n66A, Max Wgap

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Frequency ID** | **NR channel bandwidth [MHz]** | **NR SCS**  **[kHz]** | **NR test frequency range**  **(Note 1)** | **E-UTRA channel bandwidth [MHz]** | **E-UTRA**  **frequency range**  **(Note 2)** |
| Low with maxWgap | 5 | 15 | Low | 20 | High |
| (NR – E-UTRA) | 10 |  |  |  |  |
|  | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 40 |  |  |  |  |
|  | 45 |  |  |  |  |
| High with maxWgap | 5 |  | High | 20 | Low |
| (E-UTRA - NR) | 10 |  |  |  |  |
|  | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 40 |  |  |  |  |
|  | 45 |  |  |  |  |
| Low with maxWgap | 5 | 30 | Low | 20 | High |
| (NR – E-UTRA) | 10 |  |  |  |  |
|  | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 40 |  |  |  |  |
|  | 45 |  |  |  |  |
| High with maxWgap | 5 |  | High | 20 | Low |
| (E-UTRA - NR) | 10 |  |  |  |  |
|  | 15 |  |  |  |  |
|  | 20 |  |  |  |  |
|  | 25 |  |  |  |  |
|  | 30 |  |  |  |  |
|  | 40 |  |  |  |  |
|  | 45 |  |  |  |  |
| Note 1: The NR test frequencies are specified in clause 4.3.1.1.1.66 for the NR Channel Bandwidth, NR SCS and NR test frequency range as given in the table.  Note 2: The E-UTRA test frequencies are specified in TS 36.508 [2], clause 4.3.1.1.66 for the E-UTRA channel bandwidth and E-UTRA test frequency range as given in the table. | | | | | |

#### 4.3.1.4a Test frequencies for NE-DC band combinations within FR1

##### 4.3.1.4a.1 Inter-band NE-DC configurations within FR1

4.3.1.4a.1.1 General

For inter-band NE-DC configurations as listed in this clause, the following apply:

For the NR band and NR CA configurations, test frequencies as specified in clause 4.3.1.1 are used.

For the E-UTRA band and E-UTRA CA configurations, test frequencies as specified in TS 36.508 [2], clause 4.3.1 are used.

For the primary NR band in inter-band signalling test cases, the band selected is based on the subset of NR bands supported within the NE-DC configurations specified in Table 4.3.1.4a.1.2-1 for NR FR1.

4.3.1.4a.1.2 Inter-band NE-DC configurations within FR1 (two bands)

Table 4.3.1.4a.1.2-1: Inter-band NE-DC configurations within FR1 (two bands)

| NE-DC  configuration | Uplink NE-DC  Configuration | NR downlink configuration | E-UTRA downlink configuration | NR uplink configuration | E-UTRA uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_n28A\_3A | DC\_n28A\_3A | n28A | 3A | n28A | 3A | Yes |
| DC\_n28A\_3C | DC\_n28A\_3A | n28A | CA\_3C | n28A | 3A | No |
| DC\_n28A\_39A | DC\_n28A\_39A | n28A | 39A | n28A | 39A | Yes |
| DC\_n28A\_39C | DC\_n28A\_39A | n28A | CA\_39C | n28A | 39A | No |

#### 4.3.1.5 Test frequencies for EN-DC band combinations including FR2

##### 4.3.1.5.1 Inter-band EN-DC configurations including FR2

4.3.1.5.1.1 General

For inter-band EN-DC configurations as listed in this clause, the following apply:

For the E-UTRA band and E-UTRA CA configurations, test frequencies as specified in TS 36.508 [2], clause 4.3.1 are used.

For the NR band and NR CA configurations, test frequencies as specified in clause 4.3.1.2 are used.

For the secondary NR band in inter-band signalling test cases, the band selected is based on the subset of NR bands supported within the EN-DC configurations specified in Table 4.3.1.4.1.2-1 for NR FR1 and 4.3.1.5.1.2-1 for NR FR2.

4.3.1.5.1.2 Inter-band EN-DC configurations including FR2 (two bands)

Table 4.3.1.5.1.2-1: Inter-band EN-DC configurations including FR2 (two bands)

| EN-DC  configuration | Uplink EN-DC  Configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A\_n257A | DC\_1A\_n257A | 1A | n257A | 1A | n257A | Yes |
| DC\_1A\_n257G | DC\_1A\_n257A | 1A | CA\_n257G | 1A | n257A | Yes (NR 2CC) |
| DC\_1A\_n257G | 1A | CA\_n257G | 1A | CA\_n257G | No |
| DC\_1A\_n257H | DC\_1A\_n257A | 1A | CA\_n257H | 1A | n257A | No |
| DC\_1A\_n257G | 1A | CA\_n257H | 1A | CA\_n257G | No |
| DC\_1A\_n257H | 1A | CA\_n257H | 1A | CA\_n257H | No |
| DC\_1A\_n257I | DC\_1A\_n257A | 1A | CA\_n257I | 1A | n257A | No |
| DC\_1A\_n257G | 1A | CA\_n257I | 1A | CA\_n257G | No |
| DC\_1A\_n257H | 1A | CA\_n257I | 1A | CA\_n257H | No |
| DC\_1A\_n257I | 1A | CA\_n257I | 1A | CA\_n257I | No |
| DC\_2A\_n257A | DC\_2A\_n257A | 2A | n257A | 2A | n257A | Yes |
| DC\_2A\_n257(2A) | DC\_2A\_n257A | 2A | CA\_n257(2A) | 2A | n257A | FFS (NR 2CC) |
| DC\_2A\_n260A | DC\_2A\_n260A | 2A | n260A | 2A | n260A | Yes |
| DC\_2A\_n260G | DC\_2A\_n260A | 2A | CA\_n260G | 2A | n260A | Yes (NR 2CC) |
| DC\_2A\_n260H | DC\_2A\_n260A | 2A | CA\_n260H | 2A | n260A | No |
| DC\_2A\_n260I | DC\_2A\_n260A | 2A | CA\_n260I | 2A | n260A | No |
| DC\_2A\_n260J | DC\_2A\_n260A | 2A | CA\_n260J | 2A | n260A | No |
| DC\_2A\_n260K | DC\_2A\_n260A | 2A | CA\_n260K | 2A | n260A | No |
| DC\_2A\_n260L | DC\_2A\_n260A | 2A | CA\_n260L | 2A | n260A | No |
| DC\_2A\_n260M | DC\_2A\_n260A | 2A | CA\_n260M | 2A | n260A | No |
| DC\_2C\_n260A | DC\_2A\_n260A | CA\_2C | n260A | 2A | n260A | No |
| DC\_2A\_n260(2A) | DC\_2A\_n260A | 2A | CA\_n260(2A) | 2A | n260A | FFS (NR 2CC) |
| DC\_2A-2A\_n260A | DC\_2A\_n260A | CA\_2A-2A | n260A | 2A | n260A | No |
| DC\_2A-2A\_n260G | DC\_2A\_n260A | CA\_2A-2A | CA\_n260G | 2A | n260A | No |
| DC\_2A-2A\_n260H | DC\_2A\_n260A | CA\_2A-2A | CA\_n260H | 2A | n260A | No |
| DC\_2A-2A\_n260I | DC\_2A\_n260A | CA\_2A-2A | CA\_n260I | 2A | n260A | No |
| DC\_2A-2A\_n260J | DC\_2A\_n260A | CA\_2A-2A | CA\_n260J | 2A | n260A | No |
| DC\_2A-2A\_n260K | DC\_2A\_n260A | CA\_2A-2A | CA\_n260K | 2A | n260A | No |
| DC\_2A-2A\_n260L | DC\_2A\_n260A | CA\_2A-2A | CA\_n260L | 2A | n260A | No |
| DC\_2A-2A\_n260M | DC\_2A\_n260A | CA\_2A-2A | CA\_n260M | 2A | n260A | No |
| DC\_3A\_n257A | DC\_3A\_n257A | 3A | n257A | 3A | n257A | Yes |
| DC\_3A\_n257D | DC\_3A\_n257A | 3A | CA\_n257D | 3A | n257A | FFS (NR 2CC) |
| DC\_3A\_n257G | DC\_3A\_n257A | 3A | CA\_n257G | 3A | n257A | Yes (NR 2CC) | |
|  | DC\_3A\_n257B | 3A | CA\_n257G | 3A | CA\_n257B | No | |
|  | DC\_3A\_n257D | 3A | CA\_n257G | 3A | CA\_n257D | No | |
|  | DC\_3A\_n257G | 3A | CA\_n257G | 3A | CA\_n257G | No | |
| DC\_3A\_n257H | DC\_3A\_n257A | 3A | CA\_n257H | 3A | n257A | No | |
|  | DC\_3A\_n257B | 3A | CA\_n257H | 3A | CA\_n257B | No | |
|  | DC\_3A\_n257D | 3A | CA\_n257H | 3A | CA\_n257D | No | |
|  | DC\_3A\_n257G | 3A | CA\_n257H | 3A | CA\_n257G | No | |
|  | DC\_3A\_n257H | 3A | CA\_n257H | 3A | CA\_n257H | No | |
| DC\_3A\_n257I | DC\_3A\_n257A | 3A | CA\_n257I | 3A | n257A | No | |
|  | DC\_3A\_n257B | 3A | CA\_n257I | 3A | CA\_n257B | No | |
|  | DC\_3A\_n257D | 3A | CA\_n257I | 3A | CA\_n257D | No | |
|  | DC\_3A\_n257G | 3A | CA\_n257I | 3A | CA\_n257G | No | |
|  | DC\_3A\_n257H | 3A | CA\_n257I | 3A | CA\_n257H | No | |
|  | DC\_3A\_n257I | 3A | CA\_n257I | 3A | CA\_n257I | No | |
| DC\_5A\_n257A | DC\_5A\_n257A | 5A | n257A | 5A | n257A | Yes |
| DC\_5A\_n260A | DC\_5A\_n260A | 5A | n260A | 5A | n260A | Yes |
| DC\_5A\_n260B | DC\_5A\_n260A | 5A | CA\_n260B | 5A | n260A | FFS (NR 2CC) |
| DC\_5A\_n260C | DC\_5A\_n260A | 5A | CA\_n260C | 5A | n260A | No |
| DC\_5A\_n260D | DC\_5A\_n260A | 5A | CA\_n260D | 5A | n260A | FFS (NR 2CC) |
| DC\_5A\_n260E | DC\_5A\_n260A | 5A | CA\_n260E | 5A | n260A | No |
| DC\_5A\_n260F | DC\_5A\_n260A | 5A | CA\_n260F | 5A | n260A | No |
| DC\_5A\_n260G | DC\_5A\_n260A | 5A | CA\_n260G | 5A | n260A | Yes (NR 2CC) |
| DC\_5A\_n260H | DC\_5A\_n260A | 5A | CA\_n260H | 5A | n260A | No |
| DC\_5A\_n260I | DC\_5A\_n260A | 5A | CA\_n260I | 5A | n260A | No |
| DC\_5A\_n260J | DC\_5A\_n260A | 5A | CA\_n260J | 5A | n260A | No |
| DC\_5A\_n260K | DC\_5A\_n260A | 5A | CA\_n260K | 5A | n260A | No |
| DC\_5A\_n260L | DC\_5A\_n260A | 5A | CA\_n260L | 5A | n260A | No |
| DC\_5A\_n260M | DC\_5A\_n260A | 5A | CA\_n260M | 5A | n260A | No |
| DC\_5A\_n260O | DC\_5A\_n260A | 5A | CA\_n260O | 5A | n260A | FFS (NR 2CC) |
| DC\_5B\_n260A | DC\_5A\_n260A | CA\_5B | n260A | 5A | n260A | No |
|  | DC\_5B\_n260A | CA\_5B | n260A | CA\_5B | n260A | No |
| DC\_5A\_n260(2A) | DC\_5A\_n260A | 5A | CA\_n260(2A) | 5A | n260A | FFS (NR 2CC) |
| DC\_5A\_n260(3A) | DC\_5A\_n260A | 5A | CA\_n260(3A) | 5A | n260A | No |
| DC\_5A\_n260(4A) | DC\_5A\_n260A | 5A | n260(4A) | 5A | n260A | No |
| DC\_5A\_n260(A-I) | DC\_5A\_n260A | 5A | CA\_n260(A-I) | 5A | n260A | No |
| DC\_5A\_n260(G-I) | DC\_5A\_n260A | 5A | CA\_n260(G-I) | 5A | n260A | No |
| DC\_5A-5A\_n260A | DC\_5A\_n260A | CA\_5A-5A | n260A | 5A | n260A | No |
| DC\_5A\_n261A | DC\_5A\_n261A | 5A | n261A | 5A | n261A | Yes |
| DC\_5A\_n261B | DC\_5A\_n261A | 5A | CA\_n261B | 5A | n261A | FFS (NR 2CC) |
| DC\_5A\_n261C | DC\_5A\_n261A | 5A | CA\_n261C | 5A | n261A | No |
| DC\_5A\_n261D | DC\_5A\_n261A | 5A | CA\_n261D | 5A | n261A | FFS (NR 2CC) |
| DC\_5A\_n261E | DC\_5A\_n261A | 5A | CA\_n261E | 5A | n261A | No |
| DC\_5A\_n261F | DC\_5A\_n261A | 5A | CA\_n261F | 5A | n261A | No |
| DC\_5A\_n261G | DC\_5A\_n261A | 5A | CA\_n261G | 5A | n261A | Yes (NR 2CC) |
| DC\_5A\_n261H | DC\_5A\_n261A | 5A | CA\_n261H | 5A | n261A | No |
| DC\_5A\_n261I | DC\_5A\_n261A | 5A | CA\_n261I | 5A | n261A | No |
| DC\_5A\_n261J | DC\_5A\_n261A | 5A | CA\_n261J | 5A | n261A | No |
| DC\_5A\_n261K | DC\_5A\_n261A | 5A | CA\_n261K | 5A | n261A | No |
| DC\_5A\_n261L | DC\_5A\_n261A | 5A | CA\_n261L | 5A | n261A | No |
| DC\_5A\_n261M | DC\_5A\_n261A | 5A | CA\_n261M | 5A | n261A | No |
| DC\_5A\_n261O | DC\_5A\_n261A | 5A | CA\_n261O | 5A | n261A | FFS (NR 2CC) |
| DC\_5A\_n261P | DC\_5A\_n261A | 5A | CA\_n261P | 5A | n261A | No |
| DC\_5A\_n261Q | DC\_5A\_n261A | 5A | CA\_n261Q | 5A | n261A | No |
| DC\_5A\_n261(2A) | DC\_5A\_n261A | 5A | CA\_n261(2A) | 5A | n261A | Yes (NR 2CC) |
| DC\_5A\_n261(3A) | DC\_5A\_n261A | 5A | CA\_n261(3A) | 5A | n261A | No |
| DC\_5A\_n261(4A) | DC\_5A\_n261A | 5A | CA\_n261(4A) | 5A | n261A | No |
| DC\_5A\_n261(D-G) | DC\_5A\_n261A | 5A | CA\_n261(D-G) | 5A | n261A | No |
| DC\_5A\_n261(D-H) | DC\_5A\_n261A | 5A | CA\_n261(D-H) | 5A | n261A | No |
| DC\_5A\_n261(D-I) | DC\_5A\_n261A | 5A | CA\_n261(D-I) | 5A | n261A | No |
| DC\_5A\_n261(D-O) | DC\_5A\_n261A | 5A | CA\_n261(D-O) | 5A | n261A | No |
| DC\_5A\_n261(D-P) | DC\_5A\_n261A | 5A | CA\_n261(D-P) | 5A | n261A | No |
| DC\_5A\_n261(D-Q) | DC\_5A\_n261A | 5A | CA\_n261(D-Q) | 5A | n261A | No |
| DC\_5A\_n261(E-O) | DC\_5A\_n261A | 5A | CA\_n261(E-O) | 5A | n261A | No |
| DC\_5A\_n261(E-P) | DC\_5A\_n261A | 5A | CA\_n261(E-P) | 5A | n261A | No |
| DC\_5A\_n261(E-Q) | DC\_5A\_n261A | 5A | CA\_n261(E-Q) | 5A | n261A | No |
| DC\_7A\_n257A | DC\_7A\_n257A | 7A | n257A | 7A | n257A | Yes |
| DC\_7A-7A\_n257A | DC\_7A\_n257A | CA\_7A-7A | n257A | 7A | n257A | No |
| DC\_8A\_n257A | DC\_8A\_n257A | 8A | n257A | 8A | n257A | Yes |
| DC\_8A\_n257D | DC\_8A\_n257A | 8A | CA\_n257D | 8A | n257A | FFS (NR 2CC) |
| DC\_8A\_n257E | DC\_8A\_n257A | 8A | CA\_n257E | 8A | n257A | No |
| DC\_8A\_n257F | DC\_8A\_n257A | 8A | CA\_n257F | 8A | n257A | No |
| DC\_8A\_n257G | DC\_8A\_n257A | 8A | CA\_n257G | 8A | n257A | Yes (NR 2CC) |
| DC\_8A\_n257H | DC\_8A\_n257A | 8A | CA\_n257H | 8A | n257A | No |
| DC\_8A\_n257I | DC\_8A\_n257A | 8A | CA\_n257I | 8A | n257A | No |
| DC\_8A\_n257J | DC\_8A\_n257A | 8A | CA\_n257J | 8A | n257A | No |
| DC\_8A\_n257K | DC\_8A\_n257A | 8A | CA\_n257K | 8A | n257A | No |
| DC\_8A\_n257L | DC\_8A\_n257A | 8A | CA\_n257L | 8A | n257A | No |
| DC\_8A\_n257M | DC\_8A\_n257A | 8A | CA\_n257M | 8A | n257A | No |
| DC\_8A\_n258A | DC\_8A\_n258A | 8A | n258A | 8A | n258A | Yes |
| DC\_11A\_n257A | DC\_11A\_n257A | 11A | n257A | 11A | n257A | Yes |
| DC\_12A\_n260A | DC\_12A\_n260A | 12A | n260A | 12A | n260A | Yes |
| DC\_14A\_n260A | DC\_14A\_n260A | 14A | n260A | 14A | n260A | Yes |
| DC\_14A\_n260G | DC\_14A\_n260A | 14A | CA\_n260G | 14A | n260A | Yes (NR 2CC) |
|  | DC\_14A\_n260G | 14A | CA\_n260G | 14A | CA\_n260G | No |
| DC\_14A\_n260H | DC\_14A\_n260A | 14A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | 14A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | 14A | CA\_n260H | 14A | CA\_n260H | No |
| DC\_14A\_n260I | DC\_14A\_n260A | 14A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | 14A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | 14A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | 14A | CA\_n260I | 14A | CA\_n260I | No |
| DC\_12A\_n260G | DC\_12A\_n260A | 12A | CA\_n260G | 12A | n260A | Yes (NR 2CC) |
| DC\_12A\_n260H | DC\_12A\_n260A | 12A | CA\_n260H | 12A | n260A | No |
| DC\_12A\_n260I | DC\_12A\_n260A | 12A | CA\_n260I | 12A | n260A | No |
| DC\_12A\_n260J | DC\_12A\_n260A | 12A | CA\_n260J | 12A | n260A | No |
| DC\_12A\_n260K | DC\_12A\_n260A | 12A | CA\_n260K | 12A | n260A | No |
| DC\_12A\_n260L | DC\_12A\_n260A | 12A | CA\_n260L | 12A | n260A | No |
| DC\_12A\_n260M | DC\_12A\_n260A | 12A | CA\_n260M | 12A | n260A | No |
| DC\_13A\_n257A | DC\_13A\_n257A | 13A | n257A | 13A | n257A | Yes |
| DC\_13A\_n260A | DC\_13A\_n260A | 13A | n260A | 13A | n260A | Yes |
| DC\_18A\_n257A | DC\_18A\_n257A | 18A | n257A | 18A | n257A | Yes |
| DC\_18A\_n257G | DC\_18A\_n257G | 18A | CA\_n257G | 18A | CA\_n257G | FFS (NR 2CC) |
| DC\_18A\_n257I | DC\_18A\_n257I | 18A | CA\_n257I | 18A | CA\_n257I | No |
| DC\_19A\_n257A | DC\_19A\_n257A | 19A | n257A | 19A | n257A | Yes |
| DC\_19A\_n257D | DC\_19A\_n257A | 19A | CA\_n257D | 19A | n257A | FFS (NR 2CC) |
| DC\_19A\_n257G | DC\_19A\_n257A | 19A | CA\_n257G | 19A | n257A | Yes (NR 2CC) | |
|  | DC\_19A\_n257G | 19A | CA\_n257G | 19A | CA\_n257G | No | |
| DC\_19A\_n257H | DC\_19A\_n257A | 19A | CA\_n257H | 19A | n257A | No | |
|  | DC\_19A\_n257G | 19A | CA\_n257H | 19A | CA\_n257G | No | |
|  | DC\_19A\_n257H | 19A | CA\_n257H | 19A | CA\_n257H | No | |
| DC\_19A\_n257I | DC\_19A\_n257A | 19A | CA\_n257I | 19A | n257A | No | |
|  | DC\_19A\_n257G | 19A | CA\_n257I | 19A | CA\_n257G | No | |
|  | DC\_19A\_n257H | 19A | CA\_n257I | 19A | CA\_n257H | No | |
|  | DC\_19A\_n257I | 19A | CA\_n257I | 19A | CA\_n257I | No | |
| DC\_20A\_n257A | DC\_20A\_n257A | 20A | n257A | 20A | n257A | Yes | |
| DC\_21A\_n257A | DC\_21A\_n257A | 21A | n257A | 21A | n257A | Yes |
| DC\_21A\_n257D | DC\_21A\_n257A | 21A | CA\_n257D | 21A | n257A | FFS (NR 2CC) |
| DC\_21A\_n257G | DC\_21A\_n257A | 21A | CA\_n257G | 21A | n257A | Yes (NR 2CC) | |
|  | DC\_21A\_n257G | 21A | CA\_n257G | 21A | CA\_n257G | No | |
| DC\_21A\_n257H | DC\_21A\_n257A | 21A | CA\_n257H | 21A | n257A | No | |
|  | DC\_21A\_n257G | 21A | CA\_n257H | 21A | CA\_n257G | No | |
|  | DC\_21A\_n257H | 21A | CA\_n257H | 21A | CA\_n257H | No | |
| DC\_21A\_n257I | DC\_21A\_n257A | 21A | CA\_n257I | 21A | n257A | No | |
|  | DC\_21A\_n257G | 21A | CA\_n257I | 21A | CA\_n257G | No | |
|  | DC\_21A\_n257H | 21A | CA\_n257I | 21A | CA\_n257H | No | |
|  | DC\_21A\_n257I | 21A | CA\_n257I | 21A | CA\_n257I | No | |
| DC\_28A\_n257A | DC\_28A\_n257A | 28A | n257A | 28A | n257A | Yes |
| DC\_30A\_n260A | DC\_30A\_n260A | 30A | n260A | 30A | n260A | Yes |
| DC\_30A\_n260G | DC\_30A\_n260A | 30A | CA\_n260G | 30A | n260A | Yes (NR 2CC) |
| DC\_30A\_n260H | DC\_30A\_n260A | 30A | CA\_n260H | 30A | n260A | No |
| DC\_30A\_n260I | DC\_30A\_n260A | 30A | CA\_n260I | 30A | n260A | No |
| DC\_30A\_n260J | DC\_30A\_n260A | 30A | CA\_n260J | 30A | n260A | No |
| DC\_30A\_n260K | DC\_30A\_n260A | 30A | CA\_n260K | 30A | n260A | No |
| DC\_30A\_n260L | DC\_30A\_n260A | 30A | CA\_n260L | 30A | n260A | No |
| DC\_30A\_n260M | DC\_30A\_n260A | 30A | CA\_n260M | 30A | n260A | No |
| DC\_41A\_n257A | DC\_41A\_n257A | 41A | n257A | 41A | n257A | Yes |
| DC\_42A\_n257A | DC\_42A\_n257A | 42A | n257A | 42A | n257A | Yes |
| DC\_42C\_n257A | DC\_42A\_n257A | CA\_42C | n257A | 42A | n257A | No |
|  | DC\_42C\_n257A | CA\_42C | n257A | CA\_42C | n257A | No |
| DC\_42A\_n257D | DC\_42A\_n257A | 42A | CA\_n257D | 42A | n257A | FFS (NR 2CC) |
| DC\_42C\_n257D | DC\_42A\_n257A | CA\_42C | CA\_n257D | 42A | n257A | No |
|  | DC\_42C\_n257A | CA\_42C | CA\_n257D | CA\_42C | n257A | No |
| DC\_42D\_n257A | DC\_42A\_n257A | CA\_42D | n257A | 42A | n257A | No |
|  | DC\_42C\_n257A | CA\_42D | n257A | CA\_42C | n257A | No |
| DC\_42E\_n257A | DC\_42A\_n257A | CA\_42E | n257A | 42A | n257A | No |
|  | DC\_42C\_n257A | CA\_42E | n257A | CA\_42C | n257A | No |
| DC\_48A\_n260A | DC\_48A\_n260A | 48A | n260A | 48A | n260A | Yes |
| DC\_48C\_n260A | DC\_48A\_n260A | CA\_48C | n260A | 48A | n260A | No |
|  | DC\_48C\_n260A | CA\_48C | n260A | CA\_48C | n260A | No |
| DC\_66A\_n257A | DC\_66A\_n257A | 66A | n257A | 66A | n257A | Yes |
| DC\_66A\_n257(2A) | DC\_66A\_n257A | 66A | CA\_n257(2A) | 66A | n257A | FFS (NR 2CC) |
| DC\_66A-66A\_n257A | DC\_66A\_n257A | CA\_66A-66A | n257A | 66A | n257A | No |
| DC\_66A\_n260A | DC\_66A\_n260A | 66A | n260A | 66A | n260A | Yes |
| DC\_66A\_n260D | DC\_66A\_n260A | 66A | CA\_n260D | 66A | n260A | FFS (NR 2CC) |
| DC\_66A\_n260E | DC\_66A\_n260A | 66A | CA\_n260E | 66A | n260A | No |
| DC\_66A\_n260F | DC\_66A\_n260A | 66A | CA\_n260F | 66A | n260A | No |
| DC\_66A\_n260G | DC\_66A\_n260A | 66A | CA\_n260G | 66A | n260A | Yes (NR 2CC) |
| DC\_66A\_n260H | DC\_66A\_n260A | 66A | CA\_n260H | 66A | n260A | No |
| DC\_66A\_n260I | DC\_66A\_n260A | 66A | CA\_n260I | 66A | n260A | No |
| DC\_66A\_n260J | DC\_66A\_n260A | 66A | CA\_n260J | 66A | n260A | No |
| DC\_66A\_n260K | DC\_66A\_n260A | 66A | CA\_n260K | 66A | n260A | No |
| DC\_66A\_n260L | DC\_66A\_n260A | 66A | CA\_n260L | 66A | n260A | No |
| DC\_66A\_n260M | DC\_66A\_n260A | 66A | CA\_n260M | 66A | n260A | No |
| DC\_66A\_n260O | DC\_66A\_n260A | 66A | CA\_n260O | 66A | n260A | FFS (NR 2CC) |
| DC\_66A\_n260(2A) | DC\_66A\_n260A | 66A | CA\_n260(2A) | 66A | n260A | FFS (NR 2CC) |
| DC\_66A\_n260(3A) | DC\_66A\_n260A | 66A | CA\_n260(3A) | 66A | n260A | No |
| DC\_66A\_n260(4A) | DC\_66A\_n260A | 66A | CA\_n260(4A) | 66A | n260A | No |
| DC\_66A\_n260(A-I) | DC\_66A\_n260A | 66A | CA\_n260(A-I) | 66A | n260A | No |
| DC\_66A\_n260(G-I) | DC\_66A\_n260A | 66A | CA\_n260(G-I) | 66A | n260A | No |
| DC\_66A-66A\_n260A | DC\_66A\_n260A | CA\_66A-66A | n260A | 66A | n260A | No |
| DC\_66A-66A\_n260G | DC\_66A\_n260A | CA\_66A-66A | CA\_n260G | 66A | n260A | No |
| DC\_66A-66A\_n260H | DC\_66A\_n260A | CA\_66A-66A | CA\_n260H | 66A | n260A | No |
| DC\_66A-66A\_n260I | DC\_66A\_n260A | CA\_66A-66A | CA\_n260I | 66A | n260A | No |
| DC\_66A-66A\_n260J | DC\_66A\_n260A | CA\_66A-66A | CA\_n260J | 66A | n260A | No |
| DC\_66A-66A\_n260K | DC\_66A\_n260A | CA\_66A-66A | CA\_n260K | 66A | n260A | No |
| DC\_66A-66A\_n260L | DC\_66A\_n260A | CA\_66A-66A | CA\_n260L | 66A | n260A | No |
| DC\_66A-66A\_n260M | DC\_66A\_n260A | CA\_66A-66A | CA\_n260M | 66A | n260A | No |
| DC\_66A\_n261A | DC\_66A\_n261A | 66A | n261A | 66A | n261A | Yes |
| DC\_66A\_n261D | DC\_66A\_n261A | 66A | CA\_n261D | 66A | n261A | FFS (NR 2CC) |
| DC\_66A\_n261E | DC\_66A\_n261A | 66A | CA\_n261E | 66A | n261A | No |
| DC\_66A\_n261F | DC\_66A\_n261A | 66A | CA\_n261F | 66A | n261A | No |
| DC\_66A\_n261G | DC\_66A\_n261A | 66A | CA\_n261G | 66A | n261A | Yes (NR 2CC) |
| DC\_66A\_n261H | DC\_66A\_n261A | 66A | CA\_n261H | 66A | n261A | No |
| DC\_66A\_n261I | DC\_66A\_n261A | 66A | CA\_n261I | 66A | n261A | No |
| DC\_66A\_n261J | DC\_66A\_n261A | 66A | CA\_n261J | 66A | n261A | No |
| DC\_66A\_n261K | DC\_66A\_n261A | 66A | CA\_n261K | 66A | n261A | No |
| DC\_66A\_n261L | DC\_66A\_n261A | 66A | CA\_n261L | 66A | n261A | No |
| DC\_66A\_n261M | DC\_66A\_n261A | 66A | CA\_n261M | 66A | n261A | No |
| DC\_66A\_n261O | DC\_66A\_n261A | 66A | CA\_n261O | 66A | n261A | FFS (NR 2CC) |
| DC\_66A\_n261P | DC\_66A\_n261A | 66A | CA\_n261P | 66A | n261A | No |
| DC\_66A\_n261Q | DC\_66A\_n261A | 66A | CA\_n261Q | 66A | n261A | No |
| DC\_66A\_n261(2A) | DC\_66A\_n261A | 66A | CA\_n261(2A) | 66A | n261A | Yes (NR 2CC) |
| DC\_66A\_n261(3A) | DC\_66A\_n261A | 66A | CA\_n261(3A) | 66A | n261A | No |
| DC\_66A\_n261(4A) | DC\_66A\_n261A | 66A | CA\_n261(4A) | 66A | n261A | No |
| DC\_66A\_n261(D-G) | DC\_66A\_n261A | 66A | CA\_n261(D-G) | 66A | n261A | No |
| DC\_66A\_n261(D-H) | DC\_66A\_n261A | 66A | CA\_n261(D-H) | 66A | n261A | No |
| DC\_66A\_n261(D-I) | DC\_66A\_n261A | 66A | CA\_n261(D-I) | 66A | n261A | No |
| DC\_66A\_n261(D-O) | DC\_66A\_n261A | 66A | CA\_n261(D-O) | 66A | n261A | No |
| DC\_66A\_n261(D-P) | DC\_66A\_n261A | 66A | CA\_n261(D-P) | 66A | n261A | No |
| DC\_66A\_n261(D-Q) | DC\_66A\_n261A | 66A | CA\_n261(D-Q) | 66A | n261A | No |
| DC\_66A\_n261(E-O) | DC\_66A\_n261A | 66A | CA\_n261(E-O) | 66A | n261A | No |
| DC\_66A\_n261(E-P) | DC\_66A\_n261A | 66A | CA\_n261(E-P) | 66A | n261A | No |
| DC\_66A\_n261(E-Q) | DC\_66A\_n261A | 66A | CA\_n261(E-Q) | 66A | n261A | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

4.3.1.5.1.3 Inter-band EN-DC configurations including FR2 (three bands)

Table 4.3.1.5.1.3-1: Inter-band EN-DC configurations including FR2 (three bands)

| EN-DC  configuration | Uplink EN-DC  Configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A\_n257A | DC\_1A\_n257A | CA\_1A-3A | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A | n257A | 3A | n257A | No |
| DC\_1A-3A\_n257G | DC\_1A\_n257A | CA\_1A-3A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-3A | CA\_n257G | 1A | CA\_n257D | No |
|  | DC\_3A\_n257A | CA\_1A-3A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_1A-3A | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_1A-3A | CA\_n257G | 3A | CA\_n257G | No |
| DC\_1A-3A\_n257H | DC\_1A\_n257A | CA\_1A-3A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-3A | CA\_n257H | 1A | CA\_n257D | No |
|  | DC\_3A\_n257A | CA\_1A-3A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_1A-3A | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_1A-3A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A | CA\_n257H | 3A | CA\_n257H | No |
| DC\_1A-3A\_n257I | DC\_1A\_n257A | CA\_1A-3A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-3A | CA\_n257I | 1A | CA\_n257D | No |
|  | DC\_3A\_n257A | CA\_1A-3A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_1A-3A | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_1A-3A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A | CA\_n257I | 3A | CA\_n257I | No |
| DC\_1A-18A\_n257A | DC\_1A\_n257A | CA\_1A-18A | n257A | 1A | n257A | No |
| DC\_18A\_n257A | CA\_1A-18A | n257A | 18A | n257A | No |
| DC\_1A-18A\_n257I | DC\_1A\_n257I | CA\_1A-18A | CA\_n257I | 1A | CA\_n257I | No |
| DC\_18A\_n257I | CA\_1A-18A | CA\_n257I | 18A | CA\_n257I | No |
| DC\_1A-19A\_n257A | DC\_1A\_n257A | CA\_1A-19A | n257A | 1A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-19A | n257A | 19A | n257A | No |
| DC\_1A-19A\_n257G | DC\_1A\_n257A | CA\_1A-19A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-19A | CA\_n257G | 1A | CA\_n257D | No |
|  | DC\_1A\_n257G | CA\_1A-19A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-19A | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_1A-19A | CA\_n257G | 19A | CA\_n257D | No |
| DC\_1A-19A\_n257H | DC\_1A\_n257A | CA\_1A-19A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-19A | CA\_n257H | 1A | CA\_n257D | No |
|  | DC\_1A\_n257G | CA\_1A-19A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-19A | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_1A-19A | CA\_n257H | 19A | CA\_n257D | No |
| DC\_1A-19A\_n257I | DC\_1A\_n257A | CA\_1A-19A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-19A | CA\_n257I | 1A | CA\_n257D | No |
|  | DC\_1A\_n257G | CA\_1A-19A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-19A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-19A | CA\_n257I | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_1A-19A | CA\_n257I | 19A | CA\_n257D | No |
| DC\_1A-21A\_n257A | DC\_1A\_n257A | CA\_1A-21A | n257A | 1A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-21A | n257A | 21A | n257A | No |
| DC\_1A-21A\_n257G | DC\_1A\_n257A | CA\_1A-21A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_1A-21A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A | CA\_n257G | 21A | CA\_n257G | No |
| DC\_1A-21A\_n257H | DC\_1A\_n257A | CA\_1A-21A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-21A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_1A-21A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-21A | CA\_n257H | 21A | CA\_n257H | No |
| DC\_1A-21A\_n257I | DC\_1A\_n257A | CA\_1A-21A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-21A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-21A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_1A-21A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-21A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_1A-21A | CA\_n257I | 21A | CA\_n257I | No |
| DC\_1A-41A\_n257A | DC\_1A\_n257A | CA\_1A-41A | n257A | 1A | n257A | No |
| DC\_41A\_n257A | CA\_1A-41A | n257A | 41A | n257A | No |
| DC\_1A-41A\_n257I | DC\_1A\_n257I | CA\_1A-41A | CA\_n257I | 1A | CA\_n257I | No |
| DC\_41A\_n257I | CA\_1A-41A | CA\_n257I | 41A | CA\_n257I | No |
| DC\_1A-42A\_n257A | DC\_1A\_n257A | CA\_1A-42A | n257A | 1A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-42A | n257A | 42A | n257A | No |
| DC\_1A-42A\_n257G | DC\_1A\_n257A | CA\_1A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-42A | CA\_n257G | 1A | CA\_n257D | No |
|  | DC\_1A\_n257A | CA\_1A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-42A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_1A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-42A | CA\_n257G | 42A | CA\_n257D | No |
| DC\_1A-42A\_n257H | DC\_1A\_n257A | CA\_1A-42A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-42A | CA\_n257H | 1A | CA\_n257D | No |
|  | DC\_1A\_n257A | CA\_1A-42A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-42A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-42A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_1A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-42A | CA\_n257H | 42A | CA\_n257D | No |
| DC\_1A-42A\_n257I | DC\_1A\_n257A | CA\_1A-42A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-42A | CA\_n257I | 1A | CA\_n257D | No |
|  | DC\_1A\_n257A | CA\_1A-42A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-42A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-42A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-42A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_1A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-42A | CA\_n257I | 42A | CA\_n257D | No |
| DC\_1A-42C\_n257A | DC\_1A\_n257A | CA\_1A-42C | n257A | 1A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-42C | n257A | 42A | n257A | No |
| DC\_1A-42D\_n257A | DC\_1A\_n257A | CA\_1A-42D | n257A | 1A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-42D | n257A | 42A | n257A | No |
| DC\_1A-42E\_n257A | DC\_1A\_n257A | CA\_1A-42E | n257A | 1A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-42E | n257A | 42A | n257A | No |
| DC\_1A-42E\_n257G | DC\_1A\_n257A | CA\_1A-42E | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-42E | CA\_n257G | 1A | CA\_n257D | No |
|  | DC\_1A\_n257A | CA\_1A-42E | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-42E | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_1A-42E | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-42E | CA\_n257G | 42A | CA\_n257D | No |
| DC\_1A-42E\_n257H | DC\_1A\_n257A | CA\_1A-42E | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-42E | CA\_n257H | 1A | CA\_n257D | No |
|  | DC\_1A\_n257A | CA\_1A-42E | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-42E | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-42E | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_1A-42E | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-42E | CA\_n257H | 42A | CA\_n257D | No |
| DC\_1A-42E\_n257I | DC\_1A\_n257A | CA\_1A-42E | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257D | CA\_1A-42E | CA\_n257I | 1A | CA\_n257D | No |
|  | DC\_1A\_n257A | CA\_1A-42E | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-42E | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-42E | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-42E | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_1A-42E | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-42E | CA\_n257I | 42A | CA\_n257D | No |
| DC\_2A-5A\_n257A | DC\_2A\_n257A | CA\_2A-5A | n257A | 2A | n257A | No |
|  | DC\_5A\_n257A | CA\_2A-5A | n257A | 5A | n257A | No |
| DC\_2A-5A\_n260A | DC\_2A\_n260A | CA\_2A-5A | n260A | 2A | n260A | No |
|  | DC\_5A\_n260A | CA\_2A-5A | n260A | 5A | n260A | No |
| DC\_2A-12A\_n260A | DC\_2A\_n260A | CA\_2A-12A | n260A | 2A | n260A | No |
|  | DC\_12A\_n260A | CA\_2A-12A | n260A | 12A | n260A | No |
| DC\_2A-14A\_n260A | DC\_2A\_n260A | CA\_2A-14A | n260A | 2A | n260A | No |
|  | DC\_14A\_n260A | CA\_2A-14A | n260A | 14A | n260A | No |
| DC\_2A-14A\_n260G | DC\_2A\_n260A | CA\_2A-14A | CA\_n260G | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A | CA\_n260G | 2A | CA\_n260G | No |
|  | DC\_14A\_n260A | CA\_2A-14A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A | CA\_n260G | 14A | CA\_n260G | No |
| DC\_2A-14A\_n260H | DC\_2A\_n260A | CA\_2A-14A | CA\_n260H | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A | CA\_n260H | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A | CA\_n260H | 2A | CA\_n260H | No |
|  | DC\_14A\_n260A | CA\_2A-14A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A | CA\_n260H | 14A | CA\_n260H | No |
| DC\_2A-14A\_n260I | DC\_2A\_n260A | CA\_2A-14A | CA\_n260I | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A | CA\_n260I | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A | CA\_n260I | 2A | CA\_n260H | No |
|  | DC\_2A\_n260I | CA\_2A-14A | CA\_n260I | 2A | CA\_n260I | No |
|  | DC\_14A\_n260A | CA\_2A-14A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_2A-14A | CA\_n260I | 14A | CA\_n260I | No |
| DC\_2A-2A-14A\_n260A | DC\_2A\_n260A | CA\_2A-2A-14A | n260A | 2A | n260A | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A | n260A | 14A | n260A | No |
| DC\_2A-2A-14A\_n260G | DC\_2A\_n260A | CA\_2A-2A-14A | CA\_n260G | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-2A-14A | CA\_n260G | 2A | CA\_n260G | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-2A-14A | CA\_n260G | 14A | CA\_n260G | No |
| DC\_2A-2A-14A\_n260H | DC\_2A\_n260A | CA\_2A-2A-14A | CA\_n260H | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-2A-14A | CA\_n260H | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-2A-14A | CA\_n260H | 2A | CA\_n260H | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-2A-14A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-2A-14A | CA\_n260H | 14A | CA\_n260H | No |
| DC\_2A-2A-14A\_n260I | DC\_2A\_n260A | CA\_2A-2A-14A | CA\_n260I | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-2A-14A | CA\_n260I | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-2A-14A | CA\_n260I | 2A | CA\_n260H | No |
|  | DC\_2A\_n260I | CA\_2A-2A-14A | CA\_n260I | 2A | CA\_n260I | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-2A-14A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-2A-14A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_2A-2A-14A | CA\_n260I | 14A | CA\_n260I | No |
| DC\_2A-30A\_n260A | DC\_2A\_n260A | CA\_2A-30A | n260A | 2A | n260A | No |
|  | DC\_30A\_n260A | CA\_2A-30A | n260A | 30A | n260A | No |
| DC\_2A-66A\_n257A | DC\_2A\_n257A | CA\_2A-66A | n257A | 2A | n257A | No |
|  | DC\_66A\_n257A | CA\_2A-66A | n257A | 66A | n257A | No |
| DC\_2A-66A\_n260A | DC\_2A\_n260A | CA\_2A-66A | n260A | 2A | n260A | No |
|  | DC\_66A\_n260A | CA\_2A-66A | n260A | 66A | n260A | No |
| DC\_3A-18A\_n257A | DC\_3A\_n257A | CA\_3A-18A | n257A | 3A | n257A | No |
| DC\_18A\_n257A | CA\_3A-18A | n257A | 18A | n257A | No |
| DC\_3A-18A\_n257I | DC\_3A\_n257I | CA\_3A-18A | CA\_n257I | 3A | CA\_n257I | No |
| DC\_18A\_n257I | CA\_3A-18A | CA\_n257I | 18A | CA\_n257I | No |
| DC\_3A-19A\_n257A | DC\_3A\_n257A | CA\_3A-19A | n257A | 3A | n257A | No |
|  | DC\_19A\_n257A | CA\_3A-19A | n257A | 19A | n257A | No |
| DC\_3A-19A\_n257G | DC\_3A\_n257A | CA\_3A-19A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_3A-19A | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A | CA\_n257G | 19A | CA\_n257D | No |
| DC\_3A-19A\_n257H | DC\_3A\_n257A | CA\_3A-19A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-19A | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_3A-19A | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A | CA\_n257H | 19A | CA\_n257D | No |
| DC\_3A-19A\_n257I | DC\_3A\_n257A | CA\_3A-19A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-19A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-19A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_3A-19A | CA\_n257I | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A | CA\_n257I | 19A | CA\_n257D | No |
| DC\_3A-21A\_n257A | DC\_3A\_n257A | CA\_3A-21A | n257A | 3A | n257A | No |
|  | DC\_21A\_n257A | CA\_3A-21A | n257A | 21A | n257A | No |
| DC\_3A-21A\_n257G | DC\_3A\_n257A | CA\_3A-21A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_3A-21A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A | CA\_n257G | 21A | CA\_n257D | No |
| DC\_3A-21A\_n257H | DC\_3A\_n257A | CA\_3A-21A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-21A | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_3A-21A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A | CA\_n257H | 21A | CA\_n257D | No |
| DC\_3A-21A\_n257I | DC\_3A\_n257A | CA\_3A-21A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-21A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-21A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_3A-21A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A | CA\_n257I | 21A | CA\_n257D | No |
| DC\_3A-41A\_n257A | DC\_3A\_n257A | CA\_3A-41A | n257A | 3A | n257A | No |
| DC\_41A\_n257A | CA\_3A-41A | n257A | 41A | n257A | No |
| DC\_3A-41A\_n257I | DC\_3A\_n257I | CA\_3A-41A | CA\_n257I | 3A | CA\_n257I | No |
| DC\_41A\_n257I | CA\_3A-41A | CA\_n257I | 41A | CA\_n257I | No |
| DC\_3A-42A\_n257A | DC\_3A\_n257A | CA\_3A-42A | n257A | 3A | n257A | No |
|  | DC\_42A\_n257A | CA\_3A-42A | n257A | 42A | n257A | No |
| DC\_3A-42A\_n257G | DC\_3A\_n257A | CA\_3A-42A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42A | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42A | CA\_n257G | 42A | CA\_n257D | No |
| DC\_3A-42A\_n257H | DC\_3A\_n257A | CA\_3A-42A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42A | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42A | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42A | CA\_n257H | 42A | CA\_n257D | No |
| DC\_3A-42A\_n257I | DC\_3A\_n257A | CA\_3A-42A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42A | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-42A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42A | CA\_n257I | 42A | CA\_n257D | No |
| DC\_3A-42C\_n257A | DC\_3A\_n257A | CA\_3A-42C | n257A | 3A | n257A | No |
|  | DC\_42A\_n257A | CA\_3A-42C | n257A | 42A | n257A | No |
| DC\_3A-42C\_n257G | DC\_3A\_n257A | CA\_3A-42C | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42C | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42C | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-42C | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42C | CA\_n257G | 42A | CA\_n257D | No |
| DC\_3A-42C\_n257H | DC\_3A\_n257A | CA\_3A-42C | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42C | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42C | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42C | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-42C | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42C | CA\_n257H | 42A | CA\_n257D | No |
| DC\_3A-42C\_n257I | DC\_3A\_n257A | CA\_3A-42C | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42C | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42C | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42C | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-42C | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-42C | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42C | CA\_n257I | 42A | CA\_n257D | No |
| DC\_3A-42D\_n257G | DC\_3A\_n257A | CA\_3A-42D | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42D | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42D | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-42D | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42D | CA\_n257G | 42A | CA\_n257D | No |
| DC\_3A-42D\_n257H | DC\_3A\_n257A | CA\_3A-42D | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42D | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42D | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42D | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-42D | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42D | CA\_n257H | 42A | CA\_n257D | No |
| DC\_3A-42D\_n257I | DC\_3A\_n257A | CA\_3A-42D | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42D | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42D | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42D | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-42D | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-42D | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42D | CA\_n257I | 42A | CA\_n257D | No |
| DC\_3A-42E\_n257G | DC\_3A\_n257A | CA\_3A-42E | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42E | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42E | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-42E | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42E | CA\_n257G | 42A | CA\_n257D | No |
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|  | DC\_3A\_n257D | CA\_3A-42E | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42E | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42E | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-42E | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42E | CA\_n257H | 42A | CA\_n257D | No |
| DC\_3A-42E\_n257I | DC\_3A\_n257A | CA\_3A-42E | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-42E | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-42E | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-42E | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-42E | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-42E | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-42E | CA\_n257I | 42A | CA\_n257D | No |
| DC\_5A-7A\_n257A | DC\_5A\_n257A | CA\_5A-7A | n257A | 5A | n257A | No |
|  | DC\_7A\_n257A | CA\_5A-7A | n257A | 7A | n257A | No |
| DC\_5A-30A\_n260A | DC\_5A\_n260A | CA\_5A-30A | n260A | 5A | n260A | No |
|  | DC\_30A\_n260A | CA\_5A-30A | n260A | 30A | n260A | No |
| DC\_5A-66A\_n257A | DC\_5A\_n257A | CA\_5A-66A | n257A | 5A | n257A | No |
|  | DC\_66A\_n257A | CA\_5A-66A | n257A | 66A | n257A | No |
| DC\_5A-66A\_n260A | DC\_5A\_n260A | CA\_5A-66A | n260A | 5A | n260A | No |
|  | DC\_66A\_n260A | CA\_5A-66A | n260A | 66A | n260A | No |
| DC\_12A-30A\_n260A | DC\_12A\_n260A | CA\_12A-30A | n260A | 12A | n260A | No |
|  | DC\_30A\_n260A | CA\_12A-30A | n260A | 30A | n260A | No |
| DC\_12A-66A\_n260A | DC\_12A\_n260A | CA\_12A-66A | n260A | 12A | n260A | No |
|  | DC\_66A\_n260A | CA\_12A-66A | n260A | 66A | n260A | No |
| DC\_14A-30A\_n260A | DC\_14A\_n260A | CA\_14A-30A | n260A | 14A | n260A | No |
|  | DC\_30A\_n260A | CA\_14A-30A | n260A | 30A | n260A | No |
| DC\_14A-30A\_n260G | DC\_14A\_n260A | CA\_14A-30A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_30A\_n260A | CA\_14A-30A | CA\_n260G | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A | CA\_n260G | 30A | CA\_n260G | No |
| DC\_14A-30A\_n260H | DC\_14A\_n260A | CA\_14A-30A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-30A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_30A\_n260A | CA\_14A-30A | CA\_n260H | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A | CA\_n260H | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_14A-30A | CA\_n260H | 30A | CA\_n260H | No |
| DC\_14A-30A\_n260I | DC\_14A\_n260A | CA\_14A-30A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-30A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_14A-30A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_30A\_n260A | CA\_14A-30A | CA\_n260I | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A | CA\_n260I | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_14A-30A | CA\_n260I | 30A | CA\_n260H | No |
|  | DC\_30A\_n260I | CA\_14A-30A | CA\_n260I | 30A | CA\_n260I | No |
| DC\_14A-66A\_n260A | DC\_14A\_n260A | CA\_14A-66A | n260A | 14A | n260A | No |
|  | DC\_66A\_n260A | CA\_14A-66A | n260A | 66A | n260A | No |
| DC\_14A-66A\_n260G | DC\_14A\_n260A | CA\_14A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_14A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_14A-66A\_n260H | DC\_14A\_n260A | CA\_14A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_14A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_14A-66A\_n260I | DC\_14A\_n260A | CA\_14A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_14A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_14A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_14A-66A | CA\_n260I | 66A | CA\_n260I | No |
| DC\_14A-66A-66A\_n260A | DC\_14A\_n260A | CA\_14A-66A-66A | n260A | 14A | n260A | No |
|  | DC\_66A\_n260A | CA\_14A-66A-66A | n260A | 66A | n260A | No |
| DC\_14A-66A-66a\_n260G | DC\_14A\_n260A | CA\_14A-66A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-66A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_14A-66A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-66A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_14A-66A-66a\_n260H | DC\_14A\_n260A | CA\_14A-66A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-66A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-66A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_14A-66A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-66A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-66A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_14A-66A-66A\_n260I | DC\_14A\_n260A | CA\_14A-66A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-66A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-66A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_14A-66A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_14A-66A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-66A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-66A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_14A-66A-66A | CA\_n260I | 66A | CA\_n260I | No |
| DC\_19A-21A\_n257A | DC\_19A\_n257A | CA\_19A-21A | n257A | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_19A-21A | n257A | 21A | n257A | No |
| DC\_19A-21A\_n257G | DC\_19A\_n257A | CA\_19A-21A | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A | CA\_n257G | 19A | CA\_n257D | No |
|  | DC\_21A\_n257A | CA\_19A-21A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A | CA\_n257G | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A | CA\_n257G | 21A | CA\_n257G | No |
| DC\_19A-21A\_n257H | DC\_19A\_n257A | CA\_19A-21A | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A | CA\_n257H | 19A | CA\_n257D | No |
|  | DC\_21A\_n257A | CA\_19A-21A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A | CA\_n257H | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A | CA\_n257H | 21A | CA\_n257G | No |
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|  | DC\_19A\_n257D | CA\_19A-21A | CA\_n257I | 19A | CA\_n257D | No |
|  | DC\_21A\_n257A | CA\_19A-21A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A | CA\_n257I | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_19A-21A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_19A-21A | CA\_n257I | 21A | CA\_n257I | No |
| DC\_19A-42A\_n257A | DC\_19A\_n257A | CA\_19A-42A | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_19A-42A | n257A | 42A | n257A | No |
| DC\_19A-42A\_n257G | DC\_19A\_n257A | CA\_19A-42A | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-42A | CA\_n257G | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-42A | CA\_n257G | 19A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_19A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-42A | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-42A | CA\_n257G | 42A | CA\_n257G | No |
| DC\_19A-42A\_n257H | DC\_19A\_n257A | CA\_19A-42A | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-42A | CA\_n257H | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-42A | CA\_n257H | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-42A | CA\_n257H | 19A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_19A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-42A | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-42A | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-42A | CA\_n257H | 42A | CA\_n257H | No |
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|  | DC\_19A\_n257G | CA\_19A-42A | CA\_n257I | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-42A | CA\_n257I | 19A | CA\_n257H | No |
|  | DC\_19A\_n257I | CA\_19A-42A | CA\_n257I | 19A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_19A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-42A | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-42A | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-42A | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_19A-42A | CA\_n257I | 42A | CA\_n257I | No |
| DC\_19A-42C\_n257A | DC\_19A\_n257A | CA\_19A-42C | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_19A-42C | n257A | 42A | n257A | No |
| DC\_19A-42C\_n257G | DC\_19A\_n257A | CA\_19A-42C | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-42C | CA\_n257G | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-42C | CA\_n257G | 19A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_19A-42C | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-42C | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-42C | CA\_n257G | 42A | CA\_n257G | No |
| DC\_19A-42C\_n257H | DC\_19A\_n257A | CA\_19A-42C | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-42C | CA\_n257H | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-42C | CA\_n257H | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-42C | CA\_n257H | 19A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_19A-42C | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-42C | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-42C | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-42C | CA\_n257H | 42A | CA\_n257H | No |
| DC\_19A-42C\_n257I | DC\_19A\_n257A | CA\_19A-42C | CA\_n257I | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-42C | CA\_n257I | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-42C | CA\_n257I | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-42C | CA\_n257I | 19A | CA\_n257H | No |
|  | DC\_19A\_n257I | CA\_19A-42C | CA\_n257I | 19A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_19A-42C | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-42C | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-42C | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-42C | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_19A-42C | CA\_n257I | 42A | CA\_n257I | No |
| DC\_21A-42A\_n257A | DC\_21A\_n257A | CA\_21A-42A | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_21A-42A | n257A | 42A | n257A | No |
| DC\_21A-42A\_n257G | DC\_21A\_n257A | CA\_21A-42A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_21A-42A | CA\_n257G | 21A | CA\_n257D | No |
|  | DC\_42A\_n257A | CA\_21A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_21A-42A | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_21A-42A | CA\_n257G | 21A | CA\_n257G | No |
| DC\_21A-42A\_n257H | DC\_21A\_n257A | CA\_21A-42A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_21A-42A | CA\_n257H | 21A | CA\_n257D | No |
|  | DC\_42A\_n257A | CA\_21A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_21A-42A | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_21A-42A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_21A-42A | CA\_n257H | 21A | CA\_n257H | No |
| DC\_21A-42A\_n257I | DC\_21A\_n257A | CA\_21A-42A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_21A-42A | CA\_n257I | 21A | CA\_n257D | No |
|  | DC\_42A\_n257A | CA\_21A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_21A-42A | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_21A-42A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_21A-42A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_21A-42A | CA\_n257I | 21A | CA\_n257I | No |
| DC\_21A-42C\_n257A | DC\_21A\_n257A | CA\_21A-42C | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_21A-42C | n257A | 42A | n257A | No |
| DC\_21A-42C\_n257G | DC\_21A\_n257A | CA\_21A-42C | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_21A-42C | CA\_n257G | 21A | CA\_n257D | No |
|  | DC\_42A\_n257A | CA\_21A-42C | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_21A-42C | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_21A-42C | CA\_n257G | 21A | CA\_n257G | No |
| DC\_21A-42C\_n257H | DC\_21A\_n257A | CA\_21A-42C | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_21A-42C | CA\_n257H | 21A | CA\_n257D | No |
|  | DC\_42A\_n257A | CA\_21A-42C | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_21A-42C | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_21A-42C | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_21A-42C | CA\_n257H | 21A | CA\_n257H | No |
| DC\_21A-42C\_n257I | DC\_21A\_n257A | CA\_21A-42C | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_21A-42C | CA\_n257I | 21A | CA\_n257D | No |
|  | DC\_42A\_n257A | CA\_21A-42C | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_21A-42C | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_21A-42C | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_21A-42C | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_21A-42C | CA\_n257I | 21A | CA\_n257I | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

4.3.1.5.1.4 Inter-band EN-DC configurations including FR2 (four bands)

Table 4.3.1.5.1.4-1: Inter-band EN-DC configurations including FR2 (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A-18A\_n257A | DC\_1A\_n257A | CA\_1A-3A-18A | n257A | 1A | n257A | No |
| DC\_3A\_n257A | CA\_1A-3A-18A | n257A | 3A | n257A | No |
| DC\_18A\_n257A | CA\_1A-3A-18A | n257A | 18A | n257A | No |
| DC\_1A-3A-18A\_n257I | DC\_1A\_n257I | CA\_1A-3A-18A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_3A\_n257I | CA\_1A-3A-18A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_18A\_n257I | CA\_1A-3A-18A | CA\_n257I | 18A | CA\_n257I | No |
| DC\_1A-3A-19A\_n257A | DC\_1A\_n257A | CA\_1A-3A-19A | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A | n257A | 3A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A | n257A | 19A | n257A | No |
| DC\_1A-3A-19A\_n257G | DC\_1A\_n257A | CA\_1A-3A-19A | CA\_n257G | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-19A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A | CA\_n257G | 19A | n257A | No |
| DC\_1A-3A-19A\_n257H | DC\_1A\_n257A | CA\_1A-3A-19A | CA\_n257H | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-19A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-19A | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A | CA\_n257H | 19A | n257A | No |
| DC\_1A-3A-19A\_n257I | DC\_1A\_n257A | CA\_1A-3A-19A | CA\_n257I | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-19A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-19A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A-19A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A | CA\_n257I | 19A | n257A | No |
| DC\_1A-3A-21A\_n257A | DC\_1A\_n257A | CA\_1A-3A-21A | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A | n257A | 3A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A | n257A | 21A | n257A | No |
| DC\_1A-3A-21A\_n257G | DC\_1A\_n257A | CA\_1A-3A-21A | CA\_n257G | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-21A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A | CA\_n257G | 21A | n257A | No |
| DC\_1A-3A-21A\_n257H | DC\_1A\_n257A | CA\_1A-3A-21A | CA\_n257H | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-21A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-21A | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A | CA\_n257H | 21A | n257A | No |
| DC\_1A-3A-21A\_n257I | DC\_1A\_n257A | CA\_1A-3A-21A | CA\_n257I | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-21A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-21A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A-21A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A | CA\_n257I | 21A | n257A | No |
| DC\_1A-3A-41A\_n257A | DC\_1A\_n257A | CA\_1A-3A-41A | n257A | 1A | n257A | No |
| DC\_3A\_n257A | CA\_1A-3A-41A | n257A | 3A | n257A | No |
| DC\_41A\_n257A | CA\_1A-3A-41A | n257A | 41A | n257A | No |
| DC\_1A-3A-41A\_n257I | DC\_1A\_n257I | CA\_1A-3A-41A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_3A\_n257I | CA\_1A-3A-41A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_41A\_n257I | CA\_1A-3A-41A | CA\_n257I | 41A | CA\_n257I | No |
| DC\_1A-3A-42A\_n257A | DC\_1A\_n257A | CA\_1A-3A-42A | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42A | n257A | 3A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-42A | n257A | 42A | n257A | No |
| DC\_1A-3A-42A\_n257G | DC\_1A\_n257A | CA\_1A-3A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42A | CA\_n257G | 3A | CA\_n257G | No |
| DC\_1A-3A-42A\_n257H | DC\_1A\_n257A | CA\_1A-3A-42A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-3A-42A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-42A | CA\_n257H | 3A | CA\_n257H | No |
| DC\_1A-3A-42A\_n257I | DC\_1A\_n257A | CA\_1A-3A-42A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-3A-42A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-3A-42A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-42A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A-42A | CA\_n257I | 3A | CA\_n257I | No |
| DC\_1A-3A-42C\_n257A | DC\_1A\_n257A | CA\_1A-3A-42C | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42C | n257A | 3A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-42C | n257A | 42A | n257A | No |
| DC\_1A-3A-42C\_n257G | DC\_1A\_n257A | CA\_1A-3A-42C | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42C | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42C | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42C | CA\_n257G | 3A | CA\_n257G | No |
| DC\_1A-3A-42C\_n257H | DC\_1A\_n257A | CA\_1A-3A-42C | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42C | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-3A-42C | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42C | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42C | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-42C | CA\_n257H | 3A | CA\_n257H | No |
| DC\_1A-3A-42C\_n257I | DC\_1A\_n257A | CA\_1A-3A-42C | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42C | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-3A-42C | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-3A-42C | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42C | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42C | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-42C | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A-42C | CA\_n257I | 3A | CA\_n257I | No |
| DC\_1A-3A-42D\_n257G | DC\_1A\_n257A | CA\_1A-3A-42D | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42D | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42D | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42D | CA\_n257G | 3A | CA\_n257G | No |
| DC\_1A-3A-42D\_n257H | DC\_1A\_n257A | CA\_1A-3A-42D | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42D | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-3A-42D | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42D | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42D | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-42D | CA\_n257H | 3A | CA\_n257H | No |
| DC\_1A-3A-42D\_n257I | DC\_1A\_n257A | CA\_1A-3A-42D | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-3A-42D | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-3A-42D | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-3A-42D | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_3A\_n257A | CA\_1A-3A-42D | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-42D | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-42D | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A-42D | CA\_n257I | 3A | CA\_n257I | No |
| DC\_1A-19A-21A\_n257A | DC\_1A\_n257A | CA\_1A-19A-21A | n257A | 1A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A | n257A | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A | n257A | 21A | n257A | No |
| DC\_1A-19A-21A\_n257G | DC\_1A\_n257A | CA\_1A-19A-21A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A | CA\_n257G | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A | CA\_n257G | 21A | CA\_n257G | No |
| DC\_1A-19A-21A\_n257H | DC\_1A\_n257A | CA\_1A-19A-21A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A | CA\_n257H | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A | CA\_n257H | 21A | CA\_n257H | No |
| DC\_1A-19A-21A\_n257I | DC\_1A\_n257A | CA\_1A-19A-21A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-19A-21A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A | CA\_n257I | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_1A-19A-21A | CA\_n257I | 21A | CA\_n257I | No |
| DC\_1A-19A-42A\_n257A | DC\_1A\_n257A | CA\_1A-19A-42A | n257A | 1A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42A | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42A | n257A | 42A | n257A | No |
| DC\_1A-19A-42A\_n257G | DC\_1A\_n257A | CA\_1A-19A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-42A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42A | CA\_n257G | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42A | CA\_n257G | 42A | n257A | No |
| DC\_1A-19A-42A\_n257H | DC\_1A\_n257A | CA\_1A-19A-42A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-42A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-42A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42A | CA\_n257H | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42A | CA\_n257H | 42A | n257A | No |
| DC\_1A-19A-42A\_n257I | DC\_1A\_n257A | CA\_1A-19A-42A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-42A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-42A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-19A-42A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42A | CA\_n257I | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42A | CA\_n257I | 42A | n257A | No |
| DC\_1A-19A-42C\_n257A | DC\_1A\_n257A | CA\_1A-19A-42C | n257A | 1A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42C | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42C | n257A | 42A | n257A | No |
| DC\_1A-19A-42C\_n257G | DC\_1A\_n257A | CA\_1A-19A-42C | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-42C | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42C | CA\_n257G | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42C | CA\_n257G | 42A | n257A | No |
| DC\_1A-19A-42C\_n257H | DC\_1A\_n257A | CA\_1A-19A-42C | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-42C | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-42C | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42C | CA\_n257H | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42C | CA\_n257H | 42A | n257A | No |
| DC\_1A-19A-42C\_n257I | DC\_1A\_n257A | CA\_1A-19A-42C | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-42C | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-42C | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-19A-42C | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-19A-42C | CA\_n257I | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-42C | CA\_n257I | 42A | n257A | No |
| DC\_1A-21A-42A\_n257A | DC\_1A\_n257A | CA\_1A-21A-42A | n257A | 1A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42A | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42A | n257A | 42A | n257A | No |
| DC\_1A-21A-42A\_n257G | DC\_1A\_n257A | CA\_1A-21A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A-42A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A-42A | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-21A-42A | CA\_n257G | 42A | CA\_n257D | No |
| DC\_1A-21A-42A\_n257H | DC\_1A\_n257A | CA\_1A-21A-42A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A-42A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-21A-42A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A-42A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-21A-42A | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-21A-42A | CA\_n257H | 42A | CA\_n257D | No |
| DC\_1A-21A-42A\_n257I | DC\_1A\_n257A | CA\_1A-21A-42A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A-42A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-21A-42A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-21A-42A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A-42A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-21A-42A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_1A-21A-42A | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-21A-42A | CA\_n257I | 42A | CA\_n257D | No |
| DC\_1A-21A-42C\_n257A | DC\_1A\_n257A | CA\_1A-21A-42C | n257A | 1A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42C | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42C | n257A | 42A | n257A | No |
| DC\_1A-21A-42C\_n257G | DC\_1A\_n257A | CA\_1A-21A-42C | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A-42C | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42C | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A-42C | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42C | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-21A-42C | CA\_n257G | 42A | CA\_n257D | No |
| DC\_1A-21A-42C\_n257H | DC\_1A\_n257A | CA\_1A-21A-42C | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A-42C | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-21A-42C | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42C | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A-42C | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-21A-42C | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42C | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-21A-42C | CA\_n257H | 42A | CA\_n257D | No |
| DC\_1A-21A-42C\_n257I | DC\_1A\_n257A | CA\_1A-21A-42C | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-21A-42C | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-21A-42C | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-21A-42C | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_1A-21A-42C | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-21A-42C | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-21A-42C | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_1A-21A-42C | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_1A-21A-42C | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_1A-21A-42C | CA\_n257I | 42A | CA\_n257D | No |
| DC\_2A-2A-14A-66A\_n260A | DC\_2A\_n260A | CA\_2A-2A-14A-66A | n260A | 2A | n260A | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A-66A | n260A | 14A | n260A | No |
|  | DC\_66A\_n260A | CA\_2A-2A-14A-66A | n260A | 66A | n260A | No |
| DC\_2A-2A-14A-66A\_n260G | DC\_2A\_n260A | CA\_2A-2A-14A-66A | CA\_n260G | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-2A-14A-66A | CA\_n260G | 2A | CA\_n260G | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-2A-14A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_2A-2A-14A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-2A-14A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_2A-2A-14A-66A\_n260H | DC\_2A\_n260A | CA\_2A-2A-14A-66A | CA\_n260H | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-2A-14A-66A | CA\_n260H | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-2A-14A-66A | CA\_n260H | 2A | CA\_n260H | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-2A-14A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-2A-14A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_2A-2A-14A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-2A-14A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-2A-14A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_2A-2A-14A-66A\_n260I | DC\_2A\_n260A | CA\_2A-2A-14A-66A | CA\_n260I | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-2A-14A-66A | CA\_n260I | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-2A-14A-66A | CA\_n260I | 2A | CA\_n260H | No |
|  | DC\_2A\_n260I | CA\_2A-2A-14A-66A | CA\_n260I | 2A | CA\_n260I | No |
|  | DC\_14A\_n260A | CA\_2A-2A-14A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-2A-14A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-2A-14A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_2A-2A-14A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_2A-2A-14A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-2A-14A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-2A-14A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_2A-2A-14A-66A | CA\_n260I | 66A | CA\_n260I | No |
| DC\_2A-14A-30A\_n260A | DC\_2A\_n260A | CA\_2A-14A-30A | n260A | 2A | n260A | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A | n260A | 14A | n260A | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A | n260A | 30A | n260A | No |
| DC\_2A-14A-30A\_n260G | DC\_2A\_n260A | CA\_2A-14A-30A | CA\_n260G | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-30A | CA\_n260G | 2A | CA\_n260G | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-30A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A | CA\_n260G | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_2A-14A-30A | CA\_n260G | 30A | CA\_n260G | No |
| DC\_2A-14A-30A\_n260H | DC\_2A\_n260A | CA\_2A-14A-30A | CA\_n260H | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-30A | CA\_n260H | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-30A | CA\_n260H | 2A | CA\_n260H | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-30A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-30A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A | CA\_n260H | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_2A-14A-30A | CA\_n260H | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_2A-14A-30A | CA\_n260H | 30A | CA\_n260H | No |
| DC\_2A-14A-30A\_n260I | DC\_2A\_n260A | CA\_2A-14A-30A | CA\_n260I | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-30A | CA\_n260I | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-30A | CA\_n260I | 2A | CA\_n260H | No |
|  | DC\_2A\_n260I | CA\_2A-14A-30A | CA\_n260I | 2A | CA\_n260I | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-30A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-30A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_2A-14A-30A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A | CA\_n260I | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_2A-14A-30A | CA\_n260I | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_2A-14A-30A | CA\_n260I | 30A | CA\_n260H | No |
|  | DC\_30A\_n260I | CA\_2A-14A-30A | CA\_n260I | 30A | CA\_n260I | No |
| DC\_2A-14A-66A\_n260A | DC\_2A\_n260A | CA\_2A-14A-66A | n260A | 2A | n260A | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A | n260A | 14A | n260A | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A | n260A | 66A | n260A | No |
| DC\_2A-14A-66A\_n260G | DC\_2A\_n260A | CA\_2A-14A-66A | CA\_n260G | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-66A | CA\_n260G | 2A | CA\_n260G | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_2A-14A-66A\_n260H | DC\_2A\_n260A | CA\_2A-14A-66A | CA\_n260H | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-66A | CA\_n260H | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-66A | CA\_n260H | 2A | CA\_n260H | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-14A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_2A-14A-66A\_n260I | DC\_2A\_n260A | CA\_2A-14A-66A | CA\_n260I | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-66A | CA\_n260I | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-66A | CA\_n260I | 2A | CA\_n260H | No |
|  | DC\_2A\_n260I | CA\_2A-14A-66A | CA\_n260I | 2A | CA\_n260I | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_2A-14A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-14A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_2A-14A-66A | CA\_n260I | 66A | CA\_n260I | No |
| DC\_2A-14A-66A-66A\_n260A | DC\_2A\_n260A | CA\_2A-14A-66A-66A | n260A | 2A | n260A | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A-66A | n260A | 14A | n260A | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A-66A | n260A | 66A | n260A | No |
| DC\_2A-14A-66A-66A\_n260G | DC\_2A\_n260A | CA\_2A-14A-66A-66A | CA\_n260G | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-66A-66A | CA\_n260G | 2A | CA\_n260G | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-66A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-66A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_2A-14A-66A-66A\_n260H | DC\_2A\_n260A | CA\_2A-14A-66A-66A | CA\_n260H | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-66A-66A | CA\_n260H | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-66A-66A | CA\_n260H | 2A | CA\_n260H | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-66A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-66A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-66A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-14A-66A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_2A-14A-66A-66A\_n260I | DC\_2A\_n260A | CA\_2A-14A-66A-66A | CA\_n260I | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-66A-66A | CA\_n260I | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-66A-66A | CA\_n260I | 2A | CA\_n260H | No |
|  | DC\_2A\_n260I | CA\_2A-14A-66A-66A | CA\_n260I | 2A | CA\_n260I | No |
|  | DC\_14A\_n260A | CA\_2A-14A-66A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-66A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-66A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_2A-14A-66A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_2A-14A-66A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-66A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-14A-66A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_2A-14A-66A-66A | CA\_n260I | 66A | CA\_n260I | No |
| DC\_3A-19A-21A\_n257A | DC\_3A\_n257A | CA\_3A-19A-21A | n257A | 3A | n257A | No |
|  | DC\_19A\_n257A | CA\_3A-19A-21A | n257A | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_3A-19A-21A | n257A | 21A | n257A | No |
| DC\_3A-19A-42A\_n257A | DC\_3A\_n257A | CA\_3A-19A-42A | n257A | 3A | n257A | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42A | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42A | n257A | 42A | n257A | No |
| DC\_3A-19A-42A\_n257G | DC\_3A\_n257A | CA\_3A-19A-42A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A-42A | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A-42A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42A | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A-42A | CA\_n257G | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_3A-19A-42A | CA\_n257G | 19A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-19A-42A | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-19A-42A | CA\_n257G | 42A | CA\_n257G | No |
| DC\_3A-19A-42A\_n257H | DC\_3A\_n257A | CA\_3A-19A-42A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A-42A | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A-42A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-19A-42A | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42A | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A-42A | CA\_n257H | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_3A-19A-42A | CA\_n257H | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_3A-19A-42A | CA\_n257H | 19A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-19A-42A | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-19A-42A | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-19A-42A | CA\_n257H | 42A | CA\_n257H | No |
| DC\_3A-19A-42A\_n257I | DC\_3A\_n257A | CA\_3A-19A-42A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A-42A | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A-42A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-19A-42A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-19A-42A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42A | CA\_n257I | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A-42A | CA\_n257I | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_3A-19A-42A | CA\_n257I | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_3A-19A-42A | CA\_n257I | 19A | CA\_n257H | No |
|  | DC\_19A\_n257I | CA\_3A-19A-42A | CA\_n257I | 19A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-19A-42A | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-19A-42A | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-19A-42A | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_3A-19A-42A | CA\_n257I | 42A | CA\_n257I | No |
| DC\_3A-19A-42C\_n257A | DC\_3A\_n257A | CA\_3A-19A-42C | n257A | 3A | n257A | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42C | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42C | n257A | 42A | n257A | No |
| DC\_3A-19A-42C\_n257G | DC\_3A\_n257A | CA\_3A-19A-42C | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A-42C | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A-42C | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42C | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A-42C | CA\_n257G | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_3A-19A-42C | CA\_n257G | 19A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42C | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-19A-42C | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-19A-42C | CA\_n257G | 42A | CA\_n257G | No |
| DC\_3A-19A-42C\_n257H | DC\_3A\_n257A | CA\_3A-19A-42C | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A-42C | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A-42C | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-19A-42C | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42C | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A-42C | CA\_n257H | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_3A-19A-42C | CA\_n257H | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_3A-19A-42C | CA\_n257H | 19A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42C | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-19A-42C | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-19A-42C | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-19A-42C | CA\_n257H | 42A | CA\_n257H | No |
| DC\_3A-19A-42C\_n257I | DC\_3A\_n257A | CA\_3A-19A-42C | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-19A-42C | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-19A-42C | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-19A-42C | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-19A-42C | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_3A-19A-42C | CA\_n257I | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_3A-19A-42C | CA\_n257I | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_3A-19A-42C | CA\_n257I | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_3A-19A-42C | CA\_n257I | 19A | CA\_n257H | No |
|  | DC\_19A\_n257I | CA\_3A-19A-42C | CA\_n257I | 19A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-19A-42C | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-19A-42C | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-19A-42C | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-19A-42C | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_3A-19A-42C | CA\_n257I | 42A | CA\_n257I | No |
| DC\_3A-21A-42A\_n257A | DC\_3A\_n257A | CA\_3A-21A-42A | n257A | 3A | n257A | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42A | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42A | n257A | 42A | n257A | No |
| DC\_3A-21A-42A\_n257G | DC\_3A\_n257A | CA\_3A-21A-42A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A-42A | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A-42A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A-42A | CA\_n257G | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_3A-21A-42A | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-21A-42A | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-21A-42A | CA\_n257G | 42A | CA\_n257G | No |
| DC\_3A-21A-42A\_n257H | DC\_3A\_n257A | CA\_3A-21A-42A | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A-42A | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A-42A | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-21A-42A | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A-42A | CA\_n257H | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_3A-21A-42A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_3A-21A-42A | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-21A-42A | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-21A-42A | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-21A-42A | CA\_n257H | 42A | CA\_n257H | No |
| DC\_3A-21A-42A\_n257I | DC\_3A\_n257A | CA\_3A-21A-42A | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A-42A | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A-42A | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-21A-42A | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-21A-42A | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A-42A | CA\_n257I | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_3A-21A-42A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_3A-21A-42A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_3A-21A-42A | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-21A-42A | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-21A-42A | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-21A-42A | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_3A-21A-42A | CA\_n257I | 42A | CA\_n257I | No |
| DC\_3A-21A-42C\_n257A | DC\_3A\_n257A | CA\_3A-21A-42C | n257A | 3A | n257A | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42C | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42C | n257A | 42A | n257A | No |
| DC\_3A-21A-42C\_n257G | DC\_3A\_n257A | CA\_3A-21A-42C | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A-42C | CA\_n257G | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A-42C | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42C | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A-42C | CA\_n257G | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_3A-21A-42C | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42C | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-21A-42C | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-21A-42C | CA\_n257G | 42A | CA\_n257G | No |
| DC\_3A-21A-42C\_n257H | DC\_3A\_n257A | CA\_3A-21A-42C | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A-42C | CA\_n257H | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A-42C | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-21A-42C | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42C | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A-42C | CA\_n257H | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_3A-21A-42C | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_3A-21A-42C | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42C | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-21A-42C | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-21A-42C | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-21A-42C | CA\_n257H | 42A | CA\_n257H | No |
| DC\_3A-21A-42C\_n257I | DC\_3A\_n257A | CA\_3A-21A-42C | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257D | CA\_3A-21A-42C | CA\_n257I | 3A | CA\_n257D | No |
|  | DC\_3A\_n257G | CA\_3A-21A-42C | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_3A-21A-42C | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_3A-21A-42C | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_3A-21A-42C | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_3A-21A-42C | CA\_n257I | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_3A-21A-42C | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_3A-21A-42C | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_3A-21A-42C | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_3A-21A-42C | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_3A-21A-42C | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_3A-21A-42C | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_3A-21A-42C | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_3A-21A-42C | CA\_n257I | 42A | CA\_n257I | No |
| DC\_14A-30A-66A\_n260A | DC\_14A\_n260A | CA\_14A-30A-66A | n260A | 14A | n260A | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A | n260A | 30A | n260A | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A | n260A | 66A | n260A | No |
| DC\_14A-30A-66A\_n260G | DC\_14A\_n260A | CA\_14A-30A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A | CA\_n260G | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A-66A | CA\_n260G | 30A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-30A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_14A-30A-66A\_n260H | DC\_14A\_n260A | CA\_14A-30A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-30A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A | CA\_n260H | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A-66A | CA\_n260H | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_14A-30A-66A | CA\_n260H | 30A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-30A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-30A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_14A-30A-66A\_n260I | DC\_14A\_n260A | CA\_14A-30A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-30A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_14A-30A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A | CA\_n260I | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A-66A | CA\_n260I | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_14A-30A-66A | CA\_n260I | 30A | CA\_n260H | No |
|  | DC\_30A\_n260I | CA\_14A-30A-66A | CA\_n260I | 30A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-30A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-30A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_14A-30A-66A | CA\_n260I | 66A | CA\_n260I | No |
| DC\_14A-30A-66A-66A\_n260A | DC\_14A\_n260A | CA\_14A-30A-66A-66A | n260A | 14A | n260A | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A-66A | n260A | 30A | n260A | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A-66A | n260A | 66A | n260A | No |
| DC\_14A-30A-66A-66A\_n260G | DC\_14A\_n260A | CA\_14A-30A-66A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A-66A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A-66A | CA\_n260G | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A-66A-66A | CA\_n260G | 30A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-30A-66A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_14A-30A-66A-66A\_n260H | DC\_14A\_n260A | CA\_14A-30A-66A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A-66A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-30A-66A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A-66A | CA\_n260H | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A-66A-66A | CA\_n260H | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_14A-30A-66A-66A | CA\_n260H | 30A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-30A-66A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-30A-66A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_14A-30A-66A-66A\_n260I | DC\_14A\_n260A | CA\_14A-30A-66A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_14A-30A-66A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_14A-30A-66A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_14A-30A-66A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_30A\_n260A | CA\_14A-30A-66A-66A | CA\_n260I | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_14A-30A-66A-66A | CA\_n260I | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_14A-30A-66A-66A | CA\_n260I | 30A | CA\_n260H | No |
|  | DC\_30A\_n260I | CA\_14A-30A-66A-66A | CA\_n260I | 30A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_14A-30A-66A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_14A-30A-66A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_14A-30A-66A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_14A-30A-66A-66A | CA\_n260I | 66A | CA\_n260I | No |
| DC\_19A-21A-42A\_n257A | DC\_19A\_n257A | CA\_19A-21A-42A | n257A | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42A | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42A | n257A | 42A | n257A | No |
| DC\_19A-21A-42A\_n257G | DC\_19A\_n257A | CA\_19A-21A-42A | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A-42A | CA\_n257G | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-21A-42A | CA\_n257G | 19A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A-42A | CA\_n257G | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A-42A | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42A | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-21A-42A | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-21A-42A | CA\_n257G | 42A | CA\_n257G | No |
| DC\_19A-21A-42A\_n257H | DC\_19A\_n257A | CA\_19A-21A-42A | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A-42A | CA\_n257H | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-21A-42A | CA\_n257H | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-21A-42A | CA\_n257H | 19A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A-42A | CA\_n257H | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A-42A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_19A-21A-42A | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42A | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-21A-42A | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-21A-42A | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-21A-42A | CA\_n257H | 42A | CA\_n257H | No |
| DC\_19A-21A-42A\_n257I | DC\_19A\_n257A | CA\_19A-21A-42A | CA\_n257I | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A-42A | CA\_n257I | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-21A-42A | CA\_n257I | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-21A-42A | CA\_n257I | 19A | CA\_n257H | No |
|  | DC\_19A\_n257I | CA\_19A-21A-42A | CA\_n257I | 19A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A-42A | CA\_n257I | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A-42A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_19A-21A-42A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_19A-21A-42A | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42A | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-21A-42A | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-21A-42A | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-21A-42A | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_19A-21A-42A | CA\_n257I | 42A | CA\_n257I | No |
| DC\_19A-21A-42C\_n257A | DC\_19A\_n257A | CA\_19A-21A-42C | n257A | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42C | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42C | n257A | 42A | n257A | No |
| DC\_19A-21A-42C\_n257G | DC\_19A\_n257A | CA\_19A-21A-42C | CA\_n257G | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A-42C | CA\_n257G | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-21A-42C | CA\_n257G | 19A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42C | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A-42C | CA\_n257G | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A-42C | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42C | CA\_n257G | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-21A-42C | CA\_n257G | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-21A-42C | CA\_n257G | 42A | CA\_n257G | No |
| DC\_19A-21A-42C\_n257H | DC\_19A\_n257A | CA\_19A-21A-42C | CA\_n257H | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A-42C | CA\_n257H | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-21A-42C | CA\_n257H | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-21A-42C | CA\_n257H | 19A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42C | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A-42C | CA\_n257H | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A-42C | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_19A-21A-42C | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42C | CA\_n257H | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-21A-42C | CA\_n257H | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-21A-42C | CA\_n257H | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-21A-42C | CA\_n257H | 42A | CA\_n257H | No |
| DC\_19A-21A-42C\_n257I | DC\_19A\_n257A | CA\_19A-21A-42C | CA\_n257I | 19A | n257A | No |
|  | DC\_19A\_n257D | CA\_19A-21A-42C | CA\_n257I | 19A | CA\_n257D | No |
|  | DC\_19A\_n257G | CA\_19A-21A-42C | CA\_n257I | 19A | CA\_n257G | No |
|  | DC\_19A\_n257H | CA\_19A-21A-42C | CA\_n257I | 19A | CA\_n257H | No |
|  | DC\_19A\_n257I | CA\_19A-21A-42C | CA\_n257I | 19A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_19A-21A-42C | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257D | CA\_19A-21A-42C | CA\_n257I | 21A | CA\_n257D | No |
|  | DC\_21A\_n257G | CA\_19A-21A-42C | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_19A-21A-42C | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_19A-21A-42C | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_19A-21A-42C | CA\_n257I | 42A | n257A | No |
|  | DC\_42A\_n257D | CA\_19A-21A-42C | CA\_n257I | 42A | CA\_n257D | No |
|  | DC\_42A\_n257G | CA\_19A-21A-42C | CA\_n257I | 42A | CA\_n257G | No |
|  | DC\_42A\_n257H | CA\_19A-21A-42C | CA\_n257I | 42A | CA\_n257H | No |
|  | DC\_42A\_n257I | CA\_19A-21A-42C | CA\_n257I | 42A | CA\_n257I | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

4.3.1.5.1.5 Inter-band EN-DC configurations including FR2 (five bands)

Table 4.3.1.5.1.5-1: Inter-band EN-DC configurations including FR2 (five bands)

| EN-DC  Configuration | Uplink EN-DC  configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A-19A-42A\_n257A | DC\_1A\_n257A | CA\_1A-3A-19A-42A | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A-42A | n257A | 3A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A-42A | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-19A-42A | n257A | 42A | n257A | No |
| DC\_1A-3A-19A-42A\_n257G | DC\_1A\_n257A | CA\_1A-3A-19A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A-42A | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-19A-42A | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A-42A | CA\_n257G | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-19A-42A | CA\_n257G | 42A | n257A | No |
| DC\_1A-3A-19A-42C\_n257A | DC\_1A\_n257A | CA\_1A-3A-19A-42C | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A-42C | n257A | 3A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A-42C | n257A | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-19A-42C | n257A | 42A | n257A | No |
| DC\_1A-3A-19A-42C\_n257G | DC\_1A\_n257A | CA\_1A-3A-19A-42C | CA\_n257G | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A-42C | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-19A-42C | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A-42C | CA\_n257G | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-19A-42C | CA\_n257G | 42A | n257A | No |
| DC\_1A-3A-19A-42C\_n257H | DC\_1A\_n257A | CA\_1A-3A-19A-42C | CA\_n257H | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A-42C | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-19A-42C | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-19A-42C | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A-42C | CA\_n257H | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-19A-42C | CA\_n257H | 42A | n257A | No |
| DC\_1A-3A-19A-42C\_n257I | DC\_1A\_n257A | CA\_1A-3A-19A-42C | CA\_n257I | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-19A-42C | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-19A-42C | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-19A-42C | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A-19A-42C | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-3A-19A-42C | CA\_n257I | 19A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-19A-42C | CA\_n257I | 42A | n257A | No |
| DC\_1A-3A-21A-42A\_n257A | DC\_1A\_n257A | CA\_1A-3A-21A-42A | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A-42A | n257A | 3A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A-42A | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-21A-42A | n257A | 42A | n257A | No |
| DC\_1A-3A-21A-42C\_n257A | DC\_1A\_n257A | CA\_1A-3A-21A-42C | n257A | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A-42C | n257A | 3A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A-42C | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-21A-42C | n257A | 42A | n257A | No |
| DC\_1A-3A-21A-42C\_n257G | DC\_1A\_n257A | CA\_1A-3A-21A-42C | CA\_n257G | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A-42C | CA\_n257G | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-21A-42C | CA\_n257G | 3A | CA\_n257G | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A-42C | CA\_n257G | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-21A-42C | CA\_n257G | 42A | n257A | No |
| DC\_1A-3A-21A-42C\_n257H | DC\_1A\_n257A | CA\_1A-3A-21A-42C | CA\_n257H | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A-42C | CA\_n257H | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-21A-42C | CA\_n257H | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-21A-42C | CA\_n257H | 3A | CA\_n257H | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A-42C | CA\_n257H | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-21A-42C | CA\_n257H | 42A | n257A | No |
| DC\_1A-3A-21A-42C\_n257I | DC\_1A\_n257A | CA\_1A-3A-21A-42C | CA\_n257I | 1A | n257A | No |
|  | DC\_3A\_n257A | CA\_1A-3A-21A-42C | CA\_n257I | 3A | n257A | No |
|  | DC\_3A\_n257G | CA\_1A-3A-21A-42C | CA\_n257I | 3A | CA\_n257G | No |
|  | DC\_3A\_n257H | CA\_1A-3A-21A-42C | CA\_n257I | 3A | CA\_n257H | No |
|  | DC\_3A\_n257I | CA\_1A-3A-21A-42C | CA\_n257I | 3A | CA\_n257I | No |
|  | DC\_21A\_n257A | CA\_1A-3A-21A-42C | CA\_n257I | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-3A-21A-42C | CA\_n257I | 42A | n257A | No |
| DC\_1A-19A-21A-42A\_n257A | DC\_1A\_n257A | CA\_1A-19A-21A-42A | n257A | 1A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42A | n257A | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42A | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42A | n257A | 42A | n257A | No |
| DC\_1A-19A-21A-42A\_n257G | DC\_1A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42A | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 42A | n257A | No |
| DC\_1A-19A-21A-42A\_n257H | DC\_1A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A-42A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A-42A | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 42A | n257A | No |
| DC\_1A-19A-21A-42A\_n257I | DC\_1A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A-42A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-19A-21A-42A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A-42A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_1A-19A-21A-42A | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 42A | n257A | No |
| DC\_1A-19A-21A-42C\_n257A | DC\_1A\_n257A | CA\_1A-19A-21A-42C | n257A | 1A | n257A | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42C | n257A | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42C | n257A | 21A | n257A | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42C | n257A | 42A | n257A | No |
| DC\_1A-19A-21A-42A\_n257G | DC\_1A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42A | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42A | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42A | CA\_n257G | 42A | n257A | No |
| DC\_1A-19A-21A-42A\_n257H | DC\_1A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42A | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A-42A | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42A | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A-42A | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42A | CA\_n257H | 42A | n257A | No |
| DC\_1A-19A-21A-42A\_n257I | DC\_1A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42A | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A-42A | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-19A-21A-42A | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42A | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A-42A | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_1A-19A-21A-42A | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42A | CA\_n257I | 42A | n257A | No |
| DC\_1A-19A-21A-42C\_n257G | DC\_1A\_n257A | CA\_1A-19A-21A-42C | CA\_n257G | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42C | CA\_n257G | 1A | CA\_n257G | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42C | CA\_n257G | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42C | CA\_n257G | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42C | CA\_n257G | 21A | CA\_n257G | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42C | CA\_n257G | 42A | n257A | No |
| DC\_1A-19A-21A-42C\_n257H | DC\_1A\_n257A | CA\_1A-19A-21A-42C | CA\_n257H | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42C | CA\_n257H | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A-42C | CA\_n257H | 1A | CA\_n257H | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42C | CA\_n257H | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42C | CA\_n257H | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42C | CA\_n257H | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A-42C | CA\_n257H | 21A | CA\_n257H | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42C | CA\_n257H | 42A | n257A | No |
| DC\_1A-19A-21A-42C\_n257I | DC\_1A\_n257A | CA\_1A-19A-21A-42C | CA\_n257I | 1A | n257A | No |
|  | DC\_1A\_n257G | CA\_1A-19A-21A-42C | CA\_n257I | 1A | CA\_n257G | No |
|  | DC\_1A\_n257H | CA\_1A-19A-21A-42C | CA\_n257I | 1A | CA\_n257H | No |
|  | DC\_1A\_n257I | CA\_1A-19A-21A-42C | CA\_n257I | 1A | CA\_n257I | No |
|  | DC\_19A\_n257A | CA\_1A-19A-21A-42C | CA\_n257I | 19A | n257A | No |
|  | DC\_21A\_n257A | CA\_1A-19A-21A-42C | CA\_n257I | 21A | n257A | No |
|  | DC\_21A\_n257G | CA\_1A-19A-21A-42C | CA\_n257I | 21A | CA\_n257G | No |
|  | DC\_21A\_n257H | CA\_1A-19A-21A-42C | CA\_n257I | 21A | CA\_n257H | No |
|  | DC\_21A\_n257I | CA\_1A-19A-21A-42C | CA\_n257I | 21A | CA\_n257I | No |
|  | DC\_42A\_n257A | CA\_1A-19A-21A-42C | CA\_n257I | 42A | n257A | No |
| DC\_2A-14A-30A-66A\_n260A | DC\_2A\_n260A | CA\_2A-14A-30A-66A | n260A | 2A | n260A | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A-66A | n260A | 14A | n260A | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A-66A | n260A | 30A | n260A | No |
|  | DC\_66A\_n260A | CA\_2A-14A-30A-66A | n260A | 66A | n260A | No |
| DC\_2A-14A-30A-66A\_n260G | DC\_2A\_n260A | CA\_2A-14A-30A-66A | CA\_n260G | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-30A-66A | CA\_n260G | 2A | CA\_n260G | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A-66A | CA\_n260G | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-30A-66A | CA\_n260G | 14A | CA\_n260G | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A-66A | CA\_n260G | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_2A-14A-30A-66A | CA\_n260G | 30A | CA\_n260G | No |
|  | DC\_66A\_n260A | CA\_2A-14A-30A-66A | CA\_n260G | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-30A-66A | CA\_n260G | 66A | CA\_n260G | No |
| DC\_2A-14A-30A-66A\_n260H | DC\_2A\_n260A | CA\_2A-14A-30A-66A | CA\_n260H | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-30A-66A | CA\_n260H | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-30A-66A | CA\_n260H | 2A | CA\_n260H | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A-66A | CA\_n260H | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-30A-66A | CA\_n260H | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-30A-66A | CA\_n260H | 14A | CA\_n260H | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A-66A | CA\_n260H | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_2A-14A-30A-66A | CA\_n260H | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_2A-14A-30A-66A | CA\_n260H | 30A | CA\_n260H | No |
|  | DC\_66A\_n260A | CA\_2A-14A-30A-66A | CA\_n260H | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-30A-66A | CA\_n260H | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-14A-30A-66A | CA\_n260H | 66A | CA\_n260H | No |
| DC\_2A-14A-30A-66A\_n260I | DC\_2A\_n260A | CA\_2A-14A-30A-66A | CA\_n260I | 2A | n260A | No |
|  | DC\_2A\_n260G | CA\_2A-14A-30A-66A | CA\_n260I | 2A | CA\_n260G | No |
|  | DC\_2A\_n260H | CA\_2A-14A-30A-66A | CA\_n260I | 2A | CA\_n260H | No |
|  | DC\_2A\_n260I | CA\_2A-14A-30A-66A | CA\_n260I | 2A | CA\_n260I | No |
|  | DC\_14A\_n260A | CA\_2A-14A-30A-66A | CA\_n260I | 14A | n260A | No |
|  | DC\_14A\_n260G | CA\_2A-14A-30A-66A | CA\_n260I | 14A | CA\_n260G | No |
|  | DC\_14A\_n260H | CA\_2A-14A-30A-66A | CA\_n260I | 14A | CA\_n260H | No |
|  | DC\_14A\_n260I | CA\_2A-14A-30A-66A | CA\_n260I | 14A | CA\_n260I | No |
|  | DC\_30A\_n260A | CA\_2A-14A-30A-66A | CA\_n260I | 30A | n260A | No |
|  | DC\_30A\_n260G | CA\_2A-14A-30A-66A | CA\_n260I | 30A | CA\_n260G | No |
|  | DC\_30A\_n260H | CA\_2A-14A-30A-66A | CA\_n260I | 30A | CA\_n260H | No |
|  | DC\_30A\_n260I | CA\_2A-14A-30A-66A | CA\_n260I | 30A | CA\_n260I | No |
|  | DC\_66A\_n260A | CA\_2A-14A-30A-66A | CA\_n260I | 66A | n260A | No |
|  | DC\_66A\_n260G | CA\_2A-14A-30A-66A | CA\_n260I | 66A | CA\_n260G | No |
|  | DC\_66A\_n260H | CA\_2A-14A-30A-66A | CA\_n260I | 66A | CA\_n260H | No |
|  | DC\_66A\_n260I | CA\_2A-14A-30A-66A | CA\_n260I | 66A | CA\_n260I | No |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

4.3.1.5.1.6 Inter-band EN-DC configurations including FR2 (six bands)

Table 4.3.1.5.1.6-1: Inter-band EN-DC configurations including FR2 (six bands)

| EN-DC  Configuration | Uplink EN-DC  configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| FFS | FFS | FFS | FFS | FFS | FFS | FFS |

#### 4.3.1.6 Test frequencies for EN-DC band combinations including FR1 and FR2

##### 4.3.1.6.1 Inter-band EN-DC configurations including FR1 and FR2

4.3.1.6.1.1 General

For inter-band EN-DC configurations as listed in this clause, the following apply:

For the E-UTRA band and E-UTRA CA configurations, test frequencies as specified in TS 36.508 [2], clause 4.3.1 are used.

For the NR band and NR CA configurations, test frequencies as specified in clause 4.3.1 for FR1 and 4.3.2 for FR2 are used.

4.3.1.6.1.2 Inter-band EN-DC configurations including FR1 and FR2 (three bands)

Table 4.3.1.6.1.2-1: Inter-band EN-DC including FR1 and FR2 (three bands)

| EN-DC  Configuration | Uplink EN-DC  configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| DC\_1A\_n78A-n257A | DC\_1A\_n78A | 1A | CA\_n78A-n257A | 1A | n78A | Yes (NR 2CC) |
|  | DC\_1A\_n257A | 1A | CA\_n78A-n257A | 1A | n257A | No |
|  | DC\_1A\_n78A-n257A | 1A | CA\_n78A-n257A | 1A | CA\_n78A-n257A | Yes (NR 2CC) |
| DC\_1A\_n79A-n257A | DC\_1A\_n79A | 1A | CA\_n79A-n257A | 1A | n79A | Yes (NR 2CC) |
|  | DC\_1A\_n257A | 1A | CA\_n79A-n257A | 1A | n257A | No |
|  | DC\_1A\_n79A-n257A | 1A | CA\_n79A-n257A | 1A | CA\_n79A-n257A | Yes (NR 2CC) |
| DC\_3A\_n78A-n257A | DC\_3A\_n78A | 3A | CA\_n78A-n257A | 3A | n78A | Yes (NR 2CC) |
|  | DC\_3A\_n257A | 3A | CA\_n78A-n257A | 3A | n257A | No |
|  | DC\_3A\_n78A-n257A | 3A | CA\_n78A-n257A | 3A | CA\_n78A-n257A | Yes (NR 2CC) |
| DC\_3A\_n79A-n257A | DC\_3A\_n79A | 3A | CA\_n79A-n257A | 3A | n79A | Yes (NR 2CC) |
|  | DC\_3A\_n257A | 3A | CA\_n79A-n257A | 3A | n257A | No |
|  | DC\_3A\_n79A-n257A | 3A | CA\_n79A-n257A | 3A | CA\_n79A-n257A | Yes (NR 2CC) |
| DC\_19A\_n78A-n257A | DC\_19A\_n78A | 19A | CA\_n78A-n257A | 19A | n78A | Yes (NR 2CC) |
|  | DC\_19A\_n257A | 19A | CA\_n78A-n257A | 19A | n257A | No |
|  | DC\_19A\_n78A-n257A | 19A | CA\_n78A-n257A | 19A | CA\_n78A-n257A | Yes (NR 2CC) |
| DC\_19A\_n79A-n257A | DC\_19A\_n79A | 19A | CA\_n79A-n257A | 19A | n79A | Yes (NR 2CC) |
|  | DC\_19A\_n257A | 19A | CA\_n79A-n257A | 19A | n257A | No |
|  | DC\_19A\_n79A-n257A | 19A | CA\_n79A-n257A | 19A | CA\_n79A-n257A | Yes (NR 2CC) |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

4.3.1.6.1.3 Inter-band EN-DC configurations including FR1 and FR2 (four bands)

Table 4.3.1.6.1.3-1: Inter-band EN-DC including FR1 and FR2 (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | | Applicable for protocol testing  (Note 1) | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DC\_1A-3A\_n78A-n257A | DC\_1A\_n78A | CA\_1A-3A | CA\_n78A-n257A | 1A | n78A | | No | |
|  | DC\_1A\_n257A | CA\_1A-3A | CA\_n78A-n257A | 1A | n257A | | No | |
|  | DC\_3A\_n78A | CA\_1A-3A | CA\_n78A-n257A | 3A | n78A | | No | |
|  | DC\_3A\_n257A | CA\_1A-3A | CA\_n78A-n257A | 3A | n257A | | No | |
| DC\_1A-3A\_n78A-n257G | DC\_1A\_n78A | CA\_1A-3A | CA\_n78A-n257G | 1A | n78A | No | |
|  | DC\_1A\_n257A | CA\_1A-3A | CA\_n78A-n257G | 1A | n257A | No | |
|  | DC\_1A\_n257D | CA\_1A-3A | CA\_n78A-n257G | 1A | CA\_n257D | No | |
|  | DC\_1A\_n257G | CA\_1A-3A | CA\_n78A-n257G | 1A | CA\_n257G | No | |
|  | DC\_3A\_n78A | CA\_1A-3A | CA\_n78A-n257G | 3A | n78A | No | |
|  | DC\_3A\_n257A | CA\_1A-3A | CA\_n78A-n257G | 3A | n257A | No | |
|  | DC\_3A\_n257D | CA\_1A-3A | CA\_n78A-n257G | 3A | CA\_n257D | No | |
|  | DC\_3A\_n257G | CA\_1A-3A | CA\_n78A-n257G | 3A | CA\_n257G | No | |
| DC\_1A-3A\_n78A-n257H | DC\_1A\_n78A | CA\_1A-3A | CA\_n78A-n257H | 1A | n78A | No | |
|  | DC\_1A\_n257A | CA\_1A-3A | CA\_n78A-n257H | 1A | n257A | No | |
|  | DC\_1A\_n257D | CA\_1A-3A | CA\_n78A-n257H | 1A | CA\_n257D | No | |
|  | DC\_1A\_n257G | CA\_1A-3A | CA\_n78A-n257H | 1A | CA\_n257G | No | |
|  | DC\_1A\_n257H | CA\_1A-3A | CA\_n78A-n257H | 1A | CA\_n257H | No | |
|  | DC\_3A\_n78A | CA\_1A-3A | CA\_n78A-n257H | 3A | n78A | No | |
|  | DC\_3A\_n257A | CA\_1A-3A | CA\_n78A-n257H | 3A | n257A | No | |
|  | DC\_3A\_n257D | CA\_1A-3A | CA\_n78A-n257H | 3A | CA\_n257D | No | |
|  | DC\_3A\_n257G | CA\_1A-3A | CA\_n78A-n257H | 3A | CA\_n257G | No | |
|  | DC\_3A\_n257H | CA\_1A-3A | CA\_n78A-n257H | 3A | CA\_n257H | No | |
| DC\_1A-3A\_n78A-n257I | DC\_1A\_n78A | CA\_1A-3A | CA\_n78A-n257I | 1A | n78A | No | |
|  | DC\_1A\_n257A | CA\_1A-3A | CA\_n78A-n257I | 1A | n257A | No | |
|  | DC\_1A\_n257D | CA\_1A-3A | CA\_n78A-n257I | 1A | CA\_n257D | No | |
|  | DC\_1A\_n257G | CA\_1A-3A | CA\_n78A-n257I | 1A | CA\_n257G | No | |
|  | DC\_1A\_n257H | CA\_1A-3A | CA\_n78A-n257I | 1A | CA\_n257H | No | |
|  | DC\_1A\_n257I | CA\_1A-3A | CA\_n78A-n257I | 1A | CA\_n257I | No | |
|  | DC\_3A\_n78A | CA\_1A-3A | CA\_n78A-n257I | 3A | n78A | No | |
|  | DC\_3A\_n257A | CA\_1A-3A | CA\_n78A-n257I | 3A | n257A | No | |
|  | DC\_3A\_n257D | CA\_1A-3A | CA\_n78A-n257I | 3A | CA\_n257D | No | |
|  | DC\_3A\_n257G | CA\_1A-3A | CA\_n78A-n257I | 3A | CA\_n257G | No | |
|  | DC\_3A\_n257H | CA\_1A-3A | CA\_n78A-n257I | 3A | CA\_n257H | No | |
|  | DC\_3A\_n257I | CA\_1A-3A | CA\_n78A-n257I | 3A | CA\_n257I | No | |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | | |

4.3.1.6.1.4 Inter-band EN-DC configurations including FR1 and FR2 (five bands)

Table 4.3.1.6.1.4-1: Inter-band EN-DC including FR1 and FR2 (five bands)

| EN-DC  Configuration | Uplink EN-DC  configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| FFS | FFS | FFS | FFS | FFS | FFS | FFS |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

4.3.1.6.1.5 Inter-band EN-DC configurations including FR1 and FR2 (six bands)

Table 4.3.1.6.1.5-1: Inter-band EN-DC including FR1 and FR2 (six bands)

| EN-DC  Configuration | Uplink EN-DC  configuration | E-UTRA downlink configuration | NR downlink configuration | E-UTRA uplink configuration | NR uplink configuration | Applicable for protocol testing  (Note 1) |
| --- | --- | --- | --- | --- | --- | --- |
| FFS | FFS | FFS | FFS | FFS | FFS | FFS |
| Note 1: Protocol testing is limited to EN-DC configurations with 1 CC E-UTRA and 1CC or 2CC NR configurations. | | | | | | |

#### 4.3.1.7 Test frequencies for Non-3GPP Access

##### 4.3.1.7.1 WLAN Test frequencies

The same WLAN test frequencies as in TS 36.508 [2] clause 4.3.1.6 applies.

##### 4.3.1.7.2 Bluetooth Test frequencies

The same Bluetooth test frequencies as in TS 36.508 [2] clause 4.3.1.7 applies.

#### 4.3.1.8 Test frequencies for NR Sidelink operating bands

##### 4.3.1.8.1 Test frequencies for NR Sidelink operating bands in FR1

4.3.1.8.1.1 Reference test frequencies for NR Sidelink operating band n38

FFS

4.3.1.8.1.2 Reference test frequencies for NR Sidelink operating band n47

Table 4.3.1.8.1.2-1: Test frequencies for NR operating band n47 and SCS 15 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***sl-absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | ***frequencyInfoSL***  **[ARFCN]** | ***sl-absoluteFrequencySSB***  **[ARFCN] (NOTE)** | | |
| **S-SSB Low** | **S-SSB Mid** | **S-SSB High** |
| 10 | 52 | Low | 5860.005 | 790667 | 5855.325 | 790355 | 0 | 790355 | 790421 | 790673 | 790913 |
|  |  | Mid | 5889.99 | 792666 | 5794.59 | 786306 | 504 | 792354 | 792420 | 792672 | 792912 |
|  |  | High | 5919.99 | 794666 | 5914.23 | 794282 | 6 | 794354 | 794420 | 794672 | 794912 |
| 20 | 106 | Low | 5865 | 791000 | 5855.46 | 790364 | 0 | 790364 | 790430 | 791006 | 791570 |
|  |  | Mid | 5889.99 | 792666 | 5789.73 | 785982 | 504 | 792030 | 792096 | 792672 | 793236 |
|  |  | High | 5914.995 | 794333 | 5904.375 | 793625 | 6 | 793697 | 793763 | 794339 | 794903 |
| 30 | 160 | Low | 5870.01 | 791334 | 5855.61 | 790374 | 0 | 790374 | 790440 | 791340 | 792228 |
|  |  | Mid | 5889.99 | 792666 | 5784.87 | 785658 | 504 | 791706 | 791772 | 792672 | 793560 |
|  |  | High | 5910 | 794000 | 5894.52 | 792968 | 6 | 793040 | 793106 | 794006 | 794894 |
| 40 | 216 | Low | 5875.005 | 791667 | 5855.565 | 790371 | 0 | 790371 | 790437 | 791673 | 792897 |
|  |  | Mid | 5889.99 | 792666 | 5779.83 | 785322 | 504 | 791370 | 791436 | 792672 | 793896 |
|  |  | High | 5904.99 | 793666 | 5884.47 | 792298 | 6 | 792370 | 792436 | 793672 | 794896 |
| NOTE: S-SSB Mid is the default S-SSB frequency unless explicitly indicated. | | | | | | | | | | | |

Table 4.3.1.8.1.2-2: Test frequencies for NR operating band n47 and SCS 30 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***sl-absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | ***frequencyInfoSL***  **[ARFCN]** | ***sl-absoluteFrequencySSB***  **[ARFCN] (NOTE)** | | |
| **S-SSB Low** | **S-SSB Mid** | **S-SSB High** |
| 10 | 24 | Low | 5860.005 | 790667 | 5855.685 | 790379 | 0 | 790379 | 790511 | 790679 | 790823 |
|  |  | Mid | 5889.99 | 792666 | 5704.23 | 780282 | 504 | 792378 | 792510 | 792678 | 792822 |
|  |  | High | 5919.99 | 794666 | 5913.51 | 794234 | 6 | 794378 | 794510 | 794678 | 794822 |
| 20 | 51 | Low | 5865 | 791000 | 5855.82 | 790388 | 0 | 790388 | 790520 | 791000 | 791480 |
|  |  | Mid | 5889.99 | 792666 | 5699.37 | 779958 | 504 | 792054 | 792186 | 792666 | 793146 |
|  |  | High | 5914.995 | 794333 | 5903.655 | 793577 | 6 | 793721 | 793853 | 794333 | 794813 |
| 30 | 78 | Low | 5870.01 | 791334 | 5855.97 | 790398 | 0 | 790398 | 790530 | 791346 | 792138 |
|  |  | Mid | 5889.9 | 792666 | 5694.51 | 779634 | 504 | 791730 | 791862 | 792678 | 793470 |
|  |  | High | 5910 | 794000 | 5893.8 | 792920 | 6 | 793064 | 793196 | 794012 | 794804 |
| 40 | 106 | Low | 5875.005 | 791667 | 5855.925 | 790395 | 0 | 790395 | 790527 | 791679 | 792807 |
|  |  | Mid | 5889.99 | 792666 | 5689.47 | 779298 | 504 | 791394 | 791526 | 792678 | 793806 |
|  |  | High | 5904.99 | 793666 | 5883.75 | 792250 | 6 | 792394 | 792526 | 793678 | 794806 |
| NOTE: S-SSB Mid is the default S-SSB frequency unless explicitly indicated. | | | | | | | | | | | |

Table 4.3.1.8.1.2-3: Test frequencies for NR operating band n47 and SCS 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | ***carrierBandwidth***  **[PRBs]** | **Range** | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | ***sl-absoluteFrequencyPointA* [ARFCN]** | ***offsetToCarrier* [Carrier PRBs]** | ***frequencyInfoSL***  **[ARFCN]** | ***sl-absoluteFrequencySSB***  **[ARFCN] (NOTE)** | | |
| **S-SSB Low** | **S-SSB Mid** | **S-SSB High** |
| 10 | 11 | Low | 5860.005 | 790667 | 5856.045 | 790403 | 0 | 790403 | 790667 | 790667 | 790667 |
|  |  | Mid | 5889.99 | 792666 | 5523.15 | 768210 | 504 | 792402 | 792666 | 792666 | 792666 |
|  |  | High | 5919.99 | 794666 | 5911.71 | 794114 | 6 | 794402 | 794666 | 794666 | 794666 |
| 20 | 24 | Low | 5865 | 791000 | 5856.36 | 790424 | 0 | 790424 | 790688 | 791024 | 791312 |
|  |  | Mid | 5889.99 | 792666 | 5518.47 | 767898 | 504 | 792090 | 792354 | 792690 | 792978 |
|  |  | High | 5914.995 | 794333 | 5902.035 | 793469 | 6 | 793757 | 794021 | 794357 | 794645 |
| 30 | 38 | Low | 5870.01 | 791334 | 5856.33 | 790422 | 0 | 790422 | 790686 | 791358 | 791982 |
|  |  | Mid | 5889.99 | 792666 | 5513.43 | 767562 | 504 | 791754 | 792018 | 792690 | 793314 |
|  |  | High | 5910 | 794000 | 5892 | 792800 | 6 | 793088 | 793352 | 794024 | 794648 |
| 40 | 51 | Low | 5875.005 | 791667 | 5856.645 | 790443 | 0 | 790443 | 790707 | 791667 | 792627 |
|  |  | Mid | 5889.99 | 792666 | 5508.75 | 767250 | 504 | 791442 | 791706 | 792666 | 793626 |
|  |  | High | 5904.99 | 793666 | 5882.31 | 792154 | 6 | 792442 | 792706 | 793666 | 794626 |
| NOTE: S-SSB Mid is the default S-SSB frequency unless explicitly indicated. | | | | | | | | | | | |

##### 4.3.1.8.2 Test frequencies for concurrent NR sidelink operation

4.3.1.8.2.1 Reference test frequencies for Inter-band concurrent NR sidelink configurations

For inter-band concurrent NR sidelink configurations as listed in this clause, the following apply:

For the NR Uu band, test frequencies as specified in clause 4.3.1.1 for FR1 are used.

For the NR PC5 band, test frequencies as specified in clause 4.3.1.8.1 for FR1 are used.

Table 4.3.1.8.2.1-1: Test frequencies for Inter-band concurrent NR sidelink operating bands

| Inter-band concurrent NR sidelink  configuration | Operating band for NR uplink | Operating band for NR downlink | Operating band for NR sidelink | Applicable for protocol testing |
| --- | --- | --- | --- | --- |
| V2X\_n71-n47 | n71 | n71 | n47 | Yes |

#### 4.3.1.9 Test frequencies for NR NTN operating bands

##### 4.3.1.9.1 NR NTN operating bands

4.3.1.9.1.1 Reference test frequencies for NR NTN operating band n256

Table 4.3.1.9.1.1-1: Test frequencies for NR operating band n256 and SCS 15 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | **absoluteFrequencySSB**  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 5 | 25 | Downlink | Low | 2172.5 | 434500 | 2170.25 | 434050 | 0 | 15 | 5429 | 434410 | 0 | 0 | 0(0) | 0 |
|  |  |  | Mid | 2185 | 437000 | 2164.39 | 432878 | 102 |  | 5464 | 437090 | 0 | 1 | 2(4) | 107 |
|  |  |  | High | 2197.5 | 439500 | 2104.53 | 420906 | 504 |  | 5493 | 439470 | 8 | 1 | 0(0) | 505 |
|  |  | Uplink | Low | 1982.5 | 396500 | 1980.25 | 396050 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1902.03 | 380406 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 2007.5 | 401500 | 2004.17 | 400834 | 6 |  | - | - | - | - | - | - |
| 10 | 52 | Downlink | Low | 2175 | 435000 | 2170.32 | 434064 | 0 | 15 | 5430 | 434430 | 2 | 0 | 0(0) | 0 |
|  |  |  | Mid | 2185 | 437000 | 2161.96 | 432392 | 102 |  | 5458 | 436610 | 2 | 1 | 2(4) | 107 |
|  |  |  | High | 2195 | 439000 | 2099.6 | 419920 | 504 |  | 5480 | 438490 | 10 | 1 | 0(0) | 505 |
|  |  | Uplink | Low | 1985 | 397000 | 1980.32 | 396064 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1899.6 | 379920 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 2005 | 401000 | 1999.24 | 399848 | 6 |  | - | - | - | - | - | - |
| 15 | 79 | Downlink | Low | 2177.5 | 435500 | 2170.39 | 434078 | 0 | 15 | 5431 | 434450 | 4 | 0 | 0(0) | 0 |
|  |  |  | Mid | 2185.0 | 437000 | 2159.53 | 431906 | 102 |  | 5452 | 436130 | 4 | 1 | 2(4) | 107 |
|  |  |  | High | 2192.5 | 438500 | 2094.67 | 418934 | 504 |  | 5470 | 437570 | 8 | 1 | 1(2) | 507 |
|  |  | Uplink | Low | 1987.5 | 397500 | 1980.39 | 396078 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1897.17 | 379434 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 2002.5 | 400500 | 1994.31 | 398862 | 6 |  | - | - | - | - | - | - |
| 20 | 106 | Downlink | Low | 2180 | 436000 | 2170.46 | 434092 | 0 | 15 | 5432 | 434650 | 6 | 1 | 2(4) | 5 |
|  |  |  | Mid | 2185 | 437000 | 2157.1 | 431420 | 102 |  | 5446 | 435650 | 6 | 1 | 2(4) | 107 |
|  |  |  | High | 2190 | 438000 | 2089.74 | 417948 | 504 |  | 5457 | 436590 | 10 | 1 | 1(2) | 507 |
|  |  | Uplink | Low | 1990 | 398000 | 1980.46 | 396092 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1894.74 | 378948 | 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 (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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.9.1.1-2: Test frequencies for NR operating band n256 and SCS 30 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | **absoluteFrequencySSB**  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 10 | 52 | Downlink | Low | 2175 | 435000 | 2165.64 | 433128 | 0 | 15 | 5424 | 433950 | 10 | 0 | 1(6) | 12 |
|  |  |  | Mid | 2185 | 437000 | 2138.92 | 427784 | 102 |  | 5449 | 435890 | 14 | 0 | 0(5) | 214 |
|  |  |  | High | 2195 | 439000 | 2004.2 | 400840 | 504 |  | 5474 | 438010 | 6 | 0 | 2(7) | 1022 |
|  |  | Uplink | Low | 1985 | 397000 | 1975.64 | 395128 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1804.2 | 360840 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 2005 | 401000 | 1993.48 | 398696 | 6 |  | - | - | - | - | - | - |
| 15 | 79 | Downlink | Low | 2177.5 | 435500 | 2163.28 | 432656 | 0 | 15 | 5419 | 433490 | 14 | 0 | 1(6) | 12 |
|  |  |  | Mid | 2185 | 437000 | 2134.06 | 426812 | 102 |  | 5437 | 434930 | 18 | 0 | 0(5) | 2146 |
|  |  |  | High | 2192.5 | 438500 | 1996.84 | 399368 | 504 |  | 5458 | 436610 | 6 | 0 | 3(8) | 1024 |
|  |  | Uplink | Low | 1987.5 | 397500 | 1973.28 | 394656 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1799.34 | 359868 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 2002.5 | 400500 | 1986.12 | 397224 | 6 |  | - | - | - | - | - | - |
| 20 | 106 | Downlink | Low | 2180 | 436000 | 2160.92 | 432184 | 0 | 15 | 5411 | 432970 | 22 | 0 | 0(5) | 10 |
|  |  |  | Mid | 2185 | 437000 | 2129.2 | 425840 | 102 |  | 5425 | 433970 | 22 | 0 | 0(5) | 214 |
|  |  |  | High | 2190 | 438000 | 1989.48 | 397896 | 504 |  | 5436 | 434910 | 2 | 0 | 0(5) | 1018 |
|  |  | Uplink | Low | 1990 | 398000 | 1970.92 | 394184 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1794.48 | 358896 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 2000 | 400000 | 1978.76 | 395752 | 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.9.1.1-3: Test frequencies for NR operating band n256 and SCS 60 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | **absoluteFrequencySSB**  **[ARFCN]** |
| 10 | 11 | Downlink | Low | 2175 | 435000 | 2171.04 | 434208 | 0 | 15 | - | 434568 |
|  |  |  | Mid | 2185 | 437000 | 2107.6 | 421520 | 102 |  | - | 436568 |
|  |  |  | High | 2195 | 439000 | 1828.16 | 365632 | 504 |  | - | 438568 |
|  |  | Uplink | Low | 1985 | 397000 | 1981.04 | 396208 | 0 | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1628.16 | 325632 | 504 |  | - | - |
|  |  |  | High | 2005 | 401000 | 1996.72 | 399344 | 6 |  | - | - |
| 15 | 18 | Downlink | Low | 2177.5 | 435500 | 2171.02 | 434204 | 0 | 15 | - | 434564 |
|  |  |  | Mid | 2185 | 437000 | 2105.08 | 421016 | 102 |  | - | 436064 |
|  |  |  | High | 2192.5 | 438500 | 1823.14 | 364628 | 504 |  | - | 437564 |
|  |  | Uplink | Low | 1987.5 | 397500 | 1981.02 | 396204 | 0 | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1625.64 | 325128 | 504 |  | - | - |
|  |  |  | High | 2002.5 | 400500 | 1991.7 | 398340 | 6 |  | - | - |
| 20 | 24 | Downlink | Low | 2180 | 436000 | 2171.36 | 434272 | 0 | 15 | - | 434632 |
|  |  |  | Mid | 2185 | 437000 | 2102.92 | 420584 | 102 |  | - | 435632 |
|  |  |  | High | 2190 | 438000 | 1818.48 | 363696 | 504 |  | - | 436632 |
|  |  | Uplink | Low | 1990 | 398000 | 1981.36 | 396272 | 0 | - | - | - |
|  |  |  | Mid | 1995 | 399000 | 1623.48 | 324696 | 504 |  | - | - |
|  |  |  | High | 2000 | 400000 | 1987.04 | 397408 | 6 |  | - | - |
| Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting =31, *controlResourceSetZero*=0 and *searchSpaceZero = 0* (TS 38.213 [22], clause 13). | | | | | | | | | | | |

4.3.1.9.1.2 Reference test frequencies for NR NTN operating band n255

Table 4.3.1.9.1.2-1: Test frequencies for NR operating band n255 with SCS 15 kHz and SSB SCS 15 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | **absoluteFrequencySSB**  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 5 | 25 | Downlink | Low | 1527.5 | 305500 | 1525.25 | 305050 | 0 | 15 | 3818 | 305530 | 4 | 1 | 1(2) | 3 |
|  |  |  | Mid | 1542 | 308400 | 1521.39 | 304278 | 102 |  | 3855 | 308430 | 4 | 1 | 1(2) | 105 |
|  |  |  | High | 1556.5 | 311300 | 1463.53 | 292706 | 504 |  | 3892 | 311330 | 4 | 1 | 1(2) | 507 |
|  |  | Uplink | Low | 1629 | 325800 | 1626.75 | 325350 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1550.53 | 310106 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 1658 | 331600 | 1654.67 | 330934 | 6 |  | - | - | - | - | - | - |
| 10 | 52 | Downlink | Low | 1530 | 306000 | 1525.32 | 305064 | 0 | 15 | 3819 | 305550 | 6 | 1 | 1(2) | 3 |
|  |  |  | Mid | 1542 | 308400 | 1518.96 | 303792 | 102 |  | 3849 | 307950 | 6 | 1 | 1(2) | 105 |
|  |  |  | High | 1554 | 310800 | 1458.6 | 291720 | 504 |  | 3879 | 310350 | 6 | 1 | 1(2) | 507 |
|  |  | Uplink | Low | 1631.5 | 326300 | 1626.82 | 325364 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1548.1 | 309620 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 1655.5 | 331100 | 1649.74 | 329948 | 6 |  | - | - | - | - | - | - |
| 15 | 79 | Downlink | Low | 1532.5 | 306500 | 1525.39 | 305078 | 0 | 15 | 3820 | 305570 | 8 | 1 | 1(2) | 3 |
|  |  |  | Mid | 1542 | 308400 | 1516.53 | 303306 | 102 |  | 3843 | 307470 | 8 | 1 | 1(2) | 105 |
|  |  |  | High | 1551.5 | 310300 | 1453.67 | 290734 | 504 |  | 3866 | 309370 | 8 | 1 | 1(2) | 507 |
|  |  | Uplink | Low | 1634 | 326800 | 1626.89 | 325378 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1545.67 | 309134 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 1653 | 330600 | 1644.81 | 328962 | 6 |  | - | - | - | - | - | - |
| 20 | 106 | Downlink | Low | 1535 | 307000 | 1525.46 | 305092 | 0 | 15 | 3818 | 305530 | 2 | 0 | 1(2) | 2 |
|  |  |  | Mid | 1542 | 308400 | 1514.1 | 302820 | 102 |  | 3837 | 306990 | 10 | 1 | 1(2) | 105 |
|  |  |  | High | 1549 | 309800 | 1448.74 | 289748 | 504 |  | 3856 | 308450 | 6 | 1 | 2(4) | 509 |
|  |  | Uplink | Low | 1636.5 | 327300 | 1626.96 | 325392 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1543.24 | 308648 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 1650.5 | 330100 | 1639.88 | 327976 | 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.9.1.2-2: Test frequencies for NR operating band n255 with SCS 30 kHz and SSB SCS 15 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [Carrier PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | **absoluteFrequencySSB**  **[ARFCN]** |  | **Offset Carrier CORESET#0**  **[RBs]**  **Note 2** | **CORESET#0 Index (Offset**  **[RBs])**  **Note 1** | **offsetToPointA (SIB1)**  **[PRBs]**  **Note 1** |
| 10 | 52 | Downlink | Low | 1530 | 306000 | 1520.64 | 304128 | 0 | 15 | 3813 | 305070 | 2 | 0 | 3(8) | 16 |
|  |  |  | Mid | 1542 | 308400 | 1495.92 | 299184 | 102 |  | 3843 | 307470 | 2 | 0 | 3(8) | 220 |
|  |  |  | High | 1554 | 310800 | 1363.2 | 272640 | 504 |  | 3873 | 309870 | 2 | 0 | 3(8) | 1024 |
|  |  | Uplink | Low | 1631.5 | 326300 | 1622.14 | 324428 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1452.7 | 290540 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 1655.5 | 331100 | 1643.98 | 328796 | 6 |  | - | - | - | - | - | - |
| 15 | 79 | Downlink | Low | 1532.5 | 306500 | 1518.28 | 303656 | 0 | 15 | 3808 | 304610 | 6 | 0 | 3(8) | 16 |
|  |  |  | Mid | 1542 | 308400 | 1491.06 | 298212 | 102 |  | 3831 | 306510 | 6 | 0 | 3(8) | 220 |
|  |  |  | High | 1551.5 | 310300 | 1355.84 | 271168 | 504 |  | 3854 | 308410 | 6 | 0 | 3(8) | 1024 |
|  |  | Uplink | Low | 1634 | 326800 | 1619.78 | 323956 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1447.84 | 289568 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 1653 | 330600 | 1636.62 | 327324 | 6 |  | - | - | - | - | - | - |
| 20 | 106 | Downlink | Low | 1535 | 307000 | 1515.92 | 303184 | 0 | 15 | 3800 | 304090 | 14 | 0 | 2(7) | 14 |
|  |  |  | Mid | 1542 | 308400 | 1486.2 | 297240 | 102 |  | 3816 | 305310 | 2 | 0 | 0(5) | 214 |
|  |  |  | High | 1549 | 309800 | 1348.48 | 269696 | 504 |  | 3835 | 306770 | 22 | 0 | 0(5) | 1018 |
|  |  | Uplink | Low | 1636.5 | 327300 | 1617.42 | 323484 | 0 | - | - | - | - | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1442.98 | 288596 | 504 |  | - | - | - | - | - | - |
|  |  |  | High | 1650.5 | 330100 | 1629.26 | 325852 | 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 ΔFOffsetCORESET-0-Carrier in Annex C expressed in number of common RBs. | | | | | | | | | | | | | | | |

Table 4.3.1.9.1.2-3: Test frequencies for NR operating band n255 with SCS 60 kHz and SSB SCS 15 kHz

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CBW**  **[MHz]** | **carrierBandwidth**  **[PRBs]** | **Range** | | **Carrier centre**  **[MHz]** | **Carrier centre**  **[ARFCN]** | **point A [MHz]** | **absoluteFrequencyPointA [ARFCN]** | **offsetToCarrier [PRBs]** | **SS block SCS**  **[kHz]** | **GSCN** | **absoluteFrequencySSB**  **[ARFCN]** |
| 10 | 11 | Downlink | Low | 1530 | 306000 | 1526.04 | 305208 | 0 | 15 | - | 305568 |
|  |  |  | Mid | 1542 | 308400 | 1464.6 | 292920 | 102 |  | - | 307968 |
|  |  |  | High | 1554 | 310800 | 1187.16 | 237432 | 504 |  | - | 310368 |
|  |  | Uplink | Low | 1631.5 | 326300 | 1627.54 | 325508 | 0 | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1276.66 | 255332 | 504 |  | - | - |
|  |  |  | High | 1655.5 | 331100 | 1647.22 | 329444 | 6 |  | - | - |
| 15 | 18 | Downlink | Low | 1532.5 | 306500 | 1526.02 | 305204 | 0 | 15 | - | 305564 |
|  |  |  | Mid | 1542 | 308400 | 1462.08 | 292416 | 102 |  | - | 307464 |
|  |  |  | High | 1551.5 | 310300 | 1182.14 | 236428 | 504 |  | - | 309364 |
|  |  | Uplink | Low | 1634 | 326800 | 1627.52 | 325504 | 0 | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1274.14 | 254828 | 504 |  | - | - |
|  |  |  | High | 1653 | 330600 | 1642.2 | 328440 | 6 |  | - | - |
| 20 | 24 | Downlink | Low | 1535 | 307000 | 1526.36 | 305272 | 0 | 15 | - | 305632 |
|  |  |  | Mid | 1542 | 308400 | 1459.92 | 291984 | 102 |  | - | 307032 |
|  |  |  | High | 1549 | 309800 | 1177.48 | 235496 | 504 |  | - | 308432 |
|  |  | Uplink | Low | 1636.5 | 327300 | 1627.86 | 325572 | 0 | - | - | - |
|  |  |  | Mid | 1643.5 | 328700 | 1271.98 | 254396 | 504 |  | - | - |
|  |  |  | High | 1650.5 | 330100 | 1637.54 | 327508 | 6 |  | - | - |
| Note: FR1 carrier without CORESET#0 is indicated in the MIB by setting =31, *controlResourceSetZero*=0 and *searchSpaceZero = 0* (TS 38.213 [22], clause 13). | | | | | | | | | | | |

### 4.3.2 Radio conditions

#### 4.3.2.1 FR1, normal propagation condition for connected

The downlink connection between the System Simulator and the UE is without Additive White Gaussian Noise, and has no fading or multipath effects.

The uplink connection between the UE and System Simulator is without Additive White Gaussian Noise, and has no fading or multipath effects.

#### 4.3.2.2 FR2, condition for OTA

FFS

### 4.3.3 Physical channel allocations

#### 4.3.3.1 E-UTRA

The same physical channel allocations as in TS 36.508 [2] clause 4.3.3 applies.

#### 4.3.3.2 NR

##### 4.3.3.2.1 Antennas

For FR1 testing, if the UE has two or four Rx antennas, the same downlink signal is applied to each antenna. All UE Rx antennas shall be connected unless otherwise stated in the test case.

##### 4.3.3.2.2 Downlink physical channels and physical signals

Table 4.3.3.2.2-1: Power allocation for OFDM symbols and reference signals

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Unit** | **Value** |
| SSS transmit power | W | Test specific (Note 1) |
| EPRE ratio of PSS to SSS | dB | 0 |
| EPRE ratio of PBCH DMRS to SSS | dB | 0 |
| EPRE ratio of PBCH to PBCH DMRS | dB | 0 |
| EPRE ratio of PDCCH DMRS to SSS | dB | 0 |
| EPRE ratio of PDCCH to PDCCH DMRS | dB | 0 |
| EPRE ratio of PDSCH DMRS to SSS | dB | 0 |
| EPRE ratio of PDSCH to PDSCH DMRS | dB | 0 |
| EPRE ratio of PTRS to PDSCH | dB | 0 |
| EPRE ratio of CSI-RS to SSS | dB | 0 |
| EPRE ratio of PRS to SSS | dB | 0 |
| Note 1: For signalling test cases the power allocation according to clause 6.2.1.2 applies. | | |

##### 4.3.3.2.3 Mapping of downlink physical channels and signals to physical resources

Parameters for mapping of downlink physical channels and signals are specified as follows.

Normal Cyclic Prefix

, Physical layer cell identity = 0 is used as the default physical layer cell identity

For Signalling testing, the same subcarrier spacing (SCS) is used for carrier and SS blocks; the tables in clause 6.2.3.1 specify which SCS to use for a particular NR band. In general, SCS=15kHz is used for FR1 FDD, SCS=15kHz or SCS=30kHz is used for FR1 TDD and SCS=120kHz is used for FR2.

For Signalling testing, the default channel bandwidth is specified in clause 6.2.3.1 for each NR band.

For Signalling testing, single SS Tx antenna is used, in FR1, unless specified otherwise in the test case.

For RF testing, the mapping of DL physical channels to resource element is defined in Annex C of TS 38.101-1 [7] and TS 38.101-2 [8] and TS 38.101-3 [9].

### 4.3.4 Signal levels

#### 4.3.4.1 Signal levels for conducted testing

##### 4.3.4.1.1 Downlink signal levels

For E-UTRA cell in EN-DC with FR1 NR, the downlink power setting specified in Table 4.3.4.1-1 of TS 36.508[2] are used unless otherwise specified in a test case.

#### 4.3.4.2 Signal levels for OTA testing

As defined in clause 5.2.1.2 for RF tests.

As defined in clause 6.2.1.2 for Signalling tests.

As defined in clause 7.2.1.2 for RRM tests.

### 4.3.5 Standard test signals

### 4.3.6 Physical layer parameters

#### 4.3.6.1 Downlink physical layer parameters

##### 4.3.6.1.1 Physical layer parameters for scheduling of PUSCH

###### 4.3.6.1.1.1 Physical layer parameters for DCI format 0\_0

DCI format 0\_0 is used for the scheduling of PUSCH in one cell.

Default physical layer parameters for DCI format 0\_0 are specified in table 4.3.6.1.1.1-1.

Table 4.3.6.1.1.1-1: Physical layer parameters for DCI format 0\_0

|  |  |  |
| --- | --- | --- |
| Parameter | Value | Value in binary |
| Identifier for DCI formats | Indicating an UL DCI format | "0" |
| Frequency domain resource assignment | Dependent on test parameters | - |
| Time domain resource assignment | Indicating the first entry of PUSCH-TimeDomainResourceAllocationList to be used | "0000" |
| Frequency hopping flag | w/o hopping | "0" |
| Modulation and coding scheme | Dependent on test parameters |  |
| New data indicator | Set for every data transmission/retransmission according to the rules specified in TS 38.321 | - |
| Redundancy version | Dependent on test parameters | - |
| HARQ process number | Dependent on test parameters | - |
| TPC command for scheduled PUSCH | 0 dB (accumulated TPC) as per Table 7.1.1-1 in TS 38.213 | "01" |
| UL/SUL indicator | Not present (0 bit for UEs not configured with SUL in the cell) | - |

###### 4.3.6.1.1.2 Physical layer parameters for DCI format 0\_1

DCI format 0\_1 is used for the scheduling of PUSCH in one cell.

Default physical layer parameters for DCI format 0\_1 are specified in table 4.3.6.1.1.2-1.

Table 4.3.6.1.1.2-1: Physical layer parameters for DCI format 0\_1

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| Carrier indicator | Not present | - |  |
| UL/SUL indicator | Not present (0 bit for UEs not configured with SUL in the cell) | - |  |
|  | 1 | 1 | SUL |
| Identifier for DCI formats | Indicating an UL DCI format | “0” |  |
| Bandwidth part indicator | Not present (indicating active BWP, not present in case of only one *BWP-Id* as per Table 4.6.3-8) | - |  |
| Frequency domain resource assignment | Dependent on test parameters | - |  |
| Time domain resource assignment | Indicating the first entry of PUSCH-TimeDomainResourceAllocationList to be used | “0000” |  |
| Frequency hopping flag | Not present | - |  |
| Modulation and coding scheme | Dependent on test parameters | - |  |
| New data indicator | Set for every data transmission / retransmission according to the rules specified in TS 38.321 [20] | - |  |
| Redundancy version | Dependent on test parameters | - |  |
| HARQ process number | Dependent on test parameters | - |  |
| 1st downlink assignment index | Dependent on test parameters |  |  |
| 2nd downlink assignment index | Not present (0 bit if one HARQ-ACK sub-codebook) | - |  |
| TPC command for scheduled PUSCH | 0 dB (accumulated TPC) as per Table 7.1.1-1 in TS 38.213 [22] | “01” |  |
| SRS resource indicator | Not present | - |  |
| Precoding information and number of layers | Not present (0 bits for 1 antenna port and if the higher layer parameter txConfig = Codebook as per clause 7.3.1.1.2 TS 38.212 [27]) | - |  |
|  | 2 | “10” | 2TX\_UL\_MIMO or ULFPTx\_Mode1 |
|  | Dependent on UE reported full power PMI | 1 bit as per Table 7.3.1.1.2-5 in TS 38.212 | ULFPTx\_Mode2 |
|  | 0 or 1 | 1 bit | ULFPTx\_ModeFull |
| Antenna ports | Port 0 (NOTE 2) | “000” |  |
|  |  | “00” | TRANSFORM \_PRECODER \_ENABLED |
| SRS request | No aperiodic SRS resource set triggered as per Table 7.3.1.1.2-24 in TS 38.212 (no SUL configured) | “00” |  |
| CSI request | Not present | - |  |
| CBG transmission information | Not present | - |  |
| PTRS-DMRS association | DMRS port 0 | “00” | PTRS\_UL\_CONFIG |
|  | Not present | - |  |
| beta\_offset indicator | Not present (0 bit if the higher layer parameter dynamic in uci-on-PUSCH is not configured) | - |  |
| DMRS sequence initialization | = 0 (ScramblingID0 is not present as per Table 4.6.3-50) | “0” |  |
| Not present | - | TRANSFORM \_PRECODER \_ENABLED |
| UL-SCH indicator | Dependent on test parameters  1 bit. A value of "1" indicates UL-SCH shall be transmitted on the PUSCH and a value of "0" indicates UL-SCH shall not be transmitted on the PUSCH. | - |  |
| ChannelAccess-CPext-CAPC | Not present | - |  |
| Open-loop power control parameter set indication | Not present | - |  |
| Priority indicator | Not present | - |  |
| Invalid symbol pattern indicator | Not present | - |  |
| Minimum applicable scheduling offset indicator | Not present | - |  |
| SCell dormancy indication | Not present | - |  |
| Sidelink assignment index | Dependent on test parameters  2 bits |  | SL\_Mode1 |
| NOTE 1: codebookSubset = nonCoherent, 2 layers,TPMI = 0 as specified in TS 38.212 [27] Table 7.3.1.1.2-4  NOTE 2: Bitsize depends on transform precoder being enabled/disabled (PUSCH\_Config, Table 4.6.3-118) and on dmrs-Type and maxLength (DMRS-UplinkConfig, Table 4.6.3-51); 3 bits (transform precoder disabled) or 2 bits (transform precoder enabled) for DMRS type 1 and len1 | | | |

|  |  |
| --- | --- |
| **Condition** | **Explanation** |
| 2TX\_UL\_MIMO | UL-MIMO test cases with 2 Tx antenna ports |
| PTRS\_UL\_CONFIG | When PTRS Uplink is configured |
| TRANSFORM\_PRECODER\_ENABLED | Transform precoding is enabled (PUSCH\_Config, Table 4.6.3-118) |
| SUL | On the SUL carrier when supplementary carrier is configured |
| ULFPTx\_Mode1 | UL-MIMO test cases with UEs supporting UL full power transmission Mode-1 |
| ULFPTx\_Mode2 | UL-MIMO test cases with UEs supporting UL full power transmission Mode-2 |
| ULFPTx\_ModeFull | UL-MIMO test cases with UEs supporting UL full power transmission Mode-full power |
| SL\_Mode1 | For SL mode 1 transmission test cases. |

###### 4.3.6.1.1.3 Physical layer parameters for DCI format 0\_2

DCI format 0\_2 is used for the scheduling of PUSCH in one cell.

Default physical layer parameters for DCI format 0\_2 are specified in table 4.3.6.1.1.3-1.

Table 4.3.6.1.1.3-1: Physical layer parameters for DCI format 0\_2

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| Identifier for DCI formats | Indicating an UL DCI format | “0” |  |
| Carrier indicator | Not present | - |  |
| UL/SUL indicator | Not present (0 bit for UEs not configured with SUL in the cell) | - |  |
| Bandwidth part indicator | Not present (indicating active BWP, not present in case of only one *BWP-Id* as per Table 4.6.3-8) | - |  |
| Frequency domain resource assignment | Dependent on test parameters | - |  |
| Time domain resource assignment | Indicating the first entry of PUSCH-TimeDomainResourceAllocationList to be used | “0000” |  |
| Frequency hopping flag | Not present (0 bit if the higher layer parameter frequencyHoppingDCI-0-2 is not configured) | - |  |
| Modulation and coding scheme | Dependent on test parameters | - |  |
| New data indicator | Set for every data transmission / retransmission according to the rules specified in TS 38.321 [20] | - |  |
| Redundancy version | Dependent on test parameters | - |  |
| HARQ process number | Dependent on test parameters | - |  |
| Downlink assignment index | Not present (0 bit if the higher layer parameter downlinkAssignmentIndexDCI-0-2 is not configured) |  |  |
| TPC command for scheduled PUSCH | 0 dB (accumulated TPC) as per Table 7.1.1-1 in TS 38.213 [22] | “01” |  |
| SRS resource indicator | Not present | - |  |
| Precoding information and number of layers | Not present (0 bits for 1 antenna port and if the higher layer parameter txConfig = Codebook as per clause 7.3.1.1.2 TS 38.212 [27]) | - |  |
| Antenna ports | Not present (0 bit if higher layer parameter antennaPortsFieldPresenceDCI-0-2 is not configured) | - |  |
| SRS request | Not present (0 bit if the higher layer parameter *srs-RequestDCI-0-2* is not configured) | - |  |
| CSI request | Not present | - |  |
| PTRS-DMRS association | DMRS port 0 | “00” | PTRS\_UL\_CONFIG |
|  | Not present | - |  |
| beta\_offset indicator | Not present (0 bit if the higher layer parameter betaOffsets = semiStatic) | - |  |
| DMRS sequence initialization | Not present (0 bit if the higher layer parameter dmrs-SequenceInitializationDCI-0-2 is not configured or if transform precoder is enabled) | - |  |
| UL-SCH indicator | Dependent on test parameters  1 bit. A value of "1" indicates UL-SCH shall be transmitted on the PUSCH and a value of "0" indicates UL-SCH shall not be transmitted on the PUSCH. | - |  |
| Open-loop power control parameter set indication | Not present (0 bit if the higher layer parameter p0-PUSCH-SetList is not configured) | - |  |
| Priority indicator | Not present (0 bit if higher layer parameter priorityIndicatorDCI-0-2 is not configured) | - |  |
| Invalid symbol pattern indicator | Not present (0 bit if higher layer parameter invalidSymbolPatternIndicatorDCI-0-2 is not configured) | - |  |
| NOTE 1: codebookSubset = nonCoherent, 2 layers,TPMI = 0 as specified in TS 38.212 [27] Table 7.3.1.1.2-4  NOTE 2: Bitsize depends on transform precoder being enabled/disabled (PUSCH\_Config, Table 4.6.3-118) and on dmrs-Type and maxLength (DMRS-UplinkConfig, Table 4.6.3-51); 3 bits (transform precoder disabled) or 2 bits (transform precoder enabled) for DMRS type 1 and len1 | | | |

|  |  |
| --- | --- |
| **Condition** | **Explanation** |
| PTRS\_UL\_CONFIG | When PTRS Uplink is configured |
| TRANSFORM\_PRECODER\_ENABLED | Transform precoding is enabled (PUSCH\_Config, Table 4.6.3-118) |

##### 4.3.6.1.2 Physical layer parameters for scheduling of PDSCH

###### 4.3.6.1.2.1 Physical layer parameters for DCI format 1\_0

DCI format 1\_0 is used for the scheduling of PDSCH in one cell.

Default physical layer parameters for DCI format 1\_0 are specified in table 4.3.6.1.2.1-1 to 4.3.6.1.2.1-4.

Table 4.3.6.1.2.1-1: Physical layer parameters for DCI format 1\_0

|  |  |  |
| --- | --- | --- |
| Parameter | Value | Value in binary |
| Identifier for DCI formats | Indicating a DL DCI format | “1” |
| Frequency domain resource assignment | Dependent on test parameters | - |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |
| VRB-to-PRB mapping | Non-interleaved | “0” |
| Modulation and coding scheme | Dependent on test parameters | - |
| New data indicator | Set for every data transmission/retransmission according to the rules specified in TS 38.321 | - |
| Redundancy version | Dependent on test parameters | - |
| HARQ process number | Dependent on test parameters | - |
| Downlink assignment index | Dependent on test parameters | - |
| TPC command for scheduled PUCCH | 0 dB (accumulated TPC) as per Table 7.2.1-1 in TS 38.213 | “01” |
| PUCCH resource indicator | *PUCCH-ResourceId[7]* = 6 in pucch-ResourceSetID[1] or *PUCCH-ResourceId[7]* = 14 in pucch-ResourceSetID[2] as defined in Table 4.6.3-112 (Mapping as per Table 9.2.3-2 in TS 38.213) | “110” |
| PDSCH-to-HARQ\_feedback timing indicator | K1 slots as specified in 9.2.3 in TS 38.213 |  |
|  | µ=0 (SCS=15kHz): K1=7 | '110'B |
|  | µ=1 (SCS=30kHz): K1=5 | '100'B |
|  | µ=3 (SCS=120kHz): K1=8 | '111'B |

Table 4.3.6.1.2.1-2: Physical layer parameters for DCI format 1\_0 for paging

|  |  |  |
| --- | --- | --- |
| Parameter | Value | Value in binary |
| Short Messages Indicator | Only scheduling information for Paging is present in the DCI | “01” |
| Short Messages | Reserved | - |
| Frequency domain resource assignment | Dependent on test parameters | - |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |
| VRB-to-PRB mapping | Non-interleaved | “0” |
| Modulation and coding scheme | Dependent on test parameters | - |
| TB scaling | Scaling factor S=1 as defined in Table 5.1.3.2-2 in TS 38.214) | “00” |
| Reserved bits | Reserved 6 bits | - |

Table 4.3.6.1.2.1-3: Physical layer parameters for DCI format 1\_0 for SI

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| Frequency domain resource assignment | Dependent on test parameters | - | - |
| Time domain resource assignment | Indicating the first entry of Table 5.1.2.1.1-2 in TS 38.214 [21] to be used | “0000” | SIB1 |
|  | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” | SI |
| VRB-to-PRB mapping | Non-interleaved | “0” | - |
| Modulation and coding scheme | Dependent on test parameters | - | - |
| Redundancy version | Dependent on test parameters | - | - |
| System information indicator | SIB1 | “0” | SIB1 |
|  | SI message | “1” | SI |
| Reserved bits | Reserved 15 bits | - | - |

|  |  |
| --- | --- |
| Condition | Explanation |
| SIB1 | Used for DCI format 1\_0 for SIB1 |
| SI | Used for DCI format 1\_0 for SI |

Table 4.3.6.1.2.1-4: Physical layer parameters for DCI format 1\_0 for random access

|  |  |  |
| --- | --- | --- |
| Parameter | Value | Value in binary |
| Frequency domain resource assignment | Dependent on test parameters | - |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |
| VRB-to-PRB mapping | Non-interleaved | “0” |
| Modulation and coding scheme | Dependent on test parameters | - |
| Redundancy version | Dependent on test parameters | - |
| TB scaling | Scaling factor S=[1] as defined in Table 5.1.3.2-2 in TS 38.214) | “00” |
| Reserved bits | Reserved 16 bits | - |

###### 4.3.6.1.2.2 Physical layer parameters for DCI format 1\_1

DCI format 1\_1 is used for the scheduling of PDSCH in one cell.

Default physical layer parameters for DCI format 1\_1 are specified in table 4.3.6.1.2.2-1.

Table 4.3.6.1.2.2-1: Physical layer parameters for DCI format 1\_1

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| Carrier indicator | Not present | - |  |
| Identifier for DCI formats | Indicating a DL DCI format | “1” |  |
| Bandwidth part indicator | Not present | - |  |
| Frequency domain resource assignment | Dependent on test parameters | - |  |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |  |
| VRB-to-PRB mapping | Not present (0 bits, *vrb-ToPRB-Interleaver* = Not present as per Table 4.6.3-100) | - |  |
| PRB bundling size indicator | Not present (semi-static PRB\_bundling) | - |  |
| Rate matching indicator | Not present | - |  |
| ZP CSI-RS trigger | Not present | - |  |
| Modulation and coding scheme (TB1) | Dependent on test parameters | - |  |
| New data indicator (TB1) | Set for every data transmission/retransmission according to the rules specified in TS 38.321 [20] | - |  |
| Redundancy version (TB1) | Dependent on test parameters | - |  |
| Modulation and coding scheme (TB2) | Dependent on test parameters | - |  |
| New data indicator (TB2) | Set for every data transmission/retransmission according to the rules specified in TS 38.321 [20] | - |  |
| Redundancy version (TB2) | Dependent on test parameters | - |  |
| HARQ process number | Dependent on test parameters | - |  |
| Downlink assignment index | Dependent on test parameters | - |  |
| TPC command for scheduled PUCCH | 0 dB (accumulated TPC) as per Table 7.2.1-1 in TS 38.213 [22] | “01” |  |
| PUCCH resource indicator | *PUCCH-ResourceId[7]* = 6 in pucch-ResourceSetID[1] or *PUCCH-ResourceId[7]* = 14 in pucch-ResourceSetID[2] as defined in Table 4.6.3-112 (Mapping as per Table 9.2.3-2 in TS 38.213 [22]) | “110” |  |
| PDSCH-to-HARQ\_feedback timing indicator | corresponding to K1 slots as per Table 9.2.3-1 in TS 38.213 [22] and dl-DataToUL-ACK in Table 4.6.3-112 |  |  |
|  | µ=0 (SCS=15kHz): K1=7 | “101” |  |
|  | µ=1 (SCS=30kHz): K1=5 | “011” |  |
|  | µ=3 (SCS=120kHz): K1=8 | “110” |  |
|  | corresponding to K1 slots as per Table 9.2.3-1 in TS 38.213 [22] and dl-DataToUL-ACK in Table 4.6.3-112  For 60KHz SCS  K1 = 4 if mod(i,5) = 0 K1 = 3 if mod(i,5) = 1 K1 = 7 if mod(i,5) = 2 where i is slot index per frame; i = {0,…,39}  For 120KHz SCS  K1 = 4 if mod(i,5) = 0 K1 =3 if mod(i,5) = 1 K1 =7 if mod(i,5) = 2 where i is slot index per frame; i = {0,…,79} |  | RF\_FR2\_DL |
|  | corresponding to K1 slots as per Table 9.2.3-1 in TS 38.213 [22] and dl-DataToUL-ACK in Table 4.6.3-112  For TDD  K1 = 4 if mod(i,5) = 0 K1 = 3 if mod(i,5) = 1 K1 = 2 if mod(i,5) = 2 where i is slot index per frame; i = {0,…,9}  For FDD  K1 = 2 |  | RF\_FR1\_15kHz |
|  | For TDD  corresponding to K1 slots as per Table 9.2.3-1 in TS 38.213 [22] and dl-DataToUL-ACK in Table 4.6.3-112  K1 = 8 if mod(i,10) = 0 K1 = 7 if mod(i,10) = 1 K1 = 6 if mod(i,10) = 2 K1 = 5 if mod(i,10) = 3 K1 = 4 if mod(i,10) = 4 K1 = 3 if mod(i,10) = 5 K1 = 2 if mod(i,10) = 6 where i is slot index per frame; i = {0,…,19}  For FDD  K1 = 2 |  | RF\_FR1\_30kHz |
|  | corresponding to K1 slots as per Table 9.2.3-1 in TS 38.213 [22] and dl-DataToUL-ACK in Table 4.6.3-112  For TDD  K1 = 13 if mod(i,20) = 2  K1 = 12 if mod(i,20) = 3  K1 = 11 if mod(i,20) = 4  K1 = 10 if mod(i,20) = 5  K1 = 9 if mod(i,20) = 6  K1 = 8 if mod(i,20) = 7  K1 = 7 if mod(i,20) = 8  K1 = 6 if mod(i,20) = 9 K1 = 6 if mod(i,20) = 10  K1 = 6 if mod(i,20) = 11  K1 = 6 if mod(i,20) = 12 K1 = 6 if mod(i,20) = 13 where i is slot index per frame; i = {0,…,39}  For FDD  K1 = 2 |  | RF\_FR1\_60kHz |
| Antenna port(s) | DMRS port 0 as per Table 7.3.1.2.2-1 in TS 38.212 [27] (*dmrs-Type* = DMRS type 1 and *maxLength* = len1 as per Table 4.6.3-50) | “0000” |  |
|  |  | “0011” | RF |
| Transmission configuration indication | Not present (0 bits, *tci-PresentInDCI* = Not present as per Table 4.6.3-28) | - |  |
| SRS request | No aperiodic SRS resource set triggered as per Table 7.3.1.1.2-24 in TS 38.212 [27] (no SUL configured) | “00” |  |
| CBG transmission information | Not present | - |  |
| CBG flushing out information | Not present | - |  |
| DMRS sequence initialization | fix length of 1 bit; '0'B for DMRS-DownlinkConfig.scramblingID0 (or physCellId if scramblingID0 is not present); see Table 4.6.3-50 | “0” |  |

|  |  |
| --- | --- |
| Condition | Explanation |
| RF\_FR1\_15kHz | RF testing in TS 38.521-x for FR1. SCS is set to 15kHz. |
| RF\_FR1\_30kHz | RF testing in TS 38.521-x for FR1. SCS is set to 30kHz. |
| RF\_FR1\_60kHz | RF testing in TS 38.521-x for FR1. SCS is set to 60kHz. |
| RF\_FR2\_DL | RF testing in TS 38.521-x for FR2. SCS is set to 60kHz or 120kHz |
| RF | RF testing in TS 38.521-x for FR1 and FR2. |

###### 4.3.6.1.2.3 Physical layer parameters for DCI format 1\_2

DCI format 1\_2 is used for the scheduling of PDSCH in one cell.

Default physical layer parameters for DCI format 1\_2 are specified in table 4.3.6.1.2.3-1.

Table 4.3.6.1.2.3-1: Physical layer parameters for DCI format 1\_2

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| Identifier for DCI formats | Indicating a DL DCI format | “1” |  |
| Carrier indicator | Not present |  |  |
| Bandwidth part indicator | Not present | - |  |
| Frequency domain resource assignment | Dependent on test parameters | - |  |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |  |
| VRB-to-PRB mapping | Not present (0 bits, *vrb-ToPRB-InterleaverDCI-1-2*= Not present as per Table 4.6.3-100) | - |  |
| PRB bundling size indicator | Not present (semi-static PRB\_bundling) | - |  |
| Rate matching indicator | Not present | - |  |
| ZP CSI-RS trigger | Not present | - |  |
| Modulation and coding scheme | Dependent on test parameters | - |  |
| New data indicator | Set for every data transmission/retransmission according to the rules specified in TS 38.321 [20] | - |  |
| Redundancy version | Dependent on test parameters | - |  |
| HARQ process number | Dependent on test parameters | - |  |
| Downlink assignment index | Dependent on test parameters | - |  |
| TPC command for scheduled PUCCH | 0 dB (accumulated TPC) as per Table 7.2.1-1 in TS 38.213 [22] | “01” |  |
| PUCCH resource indicator | *PUCCH-ResourceId[7]* = 6 in pucch-ResourceSetID[1] or *PUCCH-ResourceId[7]* = 14 in pucch-ResourceSetID[2] as defined in Table 4.6.3-112 (Mapping as per Table 9.2.3-2 in TS 38.213 [22]) | “110” |  |
| PDSCH-to-HARQ\_feedback timing indicator | corresponding to K1 slots as per Table 9.2.3-1 in TS 38.213 [22] and dl-DataToUL-ACK in Table 4.6.3-112 |  |  |
|  | µ=0 (SCS=15kHz): K1=7 | “101” |  |
|  | µ=1 (SCS=30kHz): K1=5 | “011” |  |
|  | µ=3 (SCS=120kHz): K1=8 | “110” |  |
| Antenna port(s) | Not present (0 bit if higher layer parameter antennaPortsFieldPresenceDCI-1-2 is not configured) | - |  |
| Transmission configuration indication | Not present (0 bits, *tci-PresentInDCI* = Not present as per Table 4.6.3-28) | - |  |
| SRS request | Not present (0 bit if higher layer parameter *srs-RequestDCI-1-2* is not configured) | - |  |
| DMRS sequence initialization | Not present (0 bit if higher layer parameter *dmrs-SequenceInitializationDCI-1-2* is not configured) | - |  |
| Priority indicator | Not present (0 bit if higher layer parameter *priorityIndicatorDCI-1-2* is not configured) | - |  |

##### 4.3.6.1.3 Void

##### 4.3.6.1.4 Physical layer parameters for scheduling of PSCCH/PSSCH

###### 4.3.6.1.4.1 Physical layer parameters for DCI format 3\_0

DCI format 3\_0 is used to schedule PSCCH/PSSCH transmission on NR sidelink.

Default physical layer parameters for DCI format 3\_0 are specified in Table 4.3.6.1.4.1-1.

Table 4.3.6.1.4.1-1: Physical layer parameters for DCI format 3\_0

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| Resource pool index | Not present | - |  |
| Time gap | Indicating the first entry of sl-DCI-ToSL-Trans to be used | “000”B |  |
| HARQ process number | Dependent on test parameters | - |  |
| New data indicator | Set for every data transmission/retransmission according to the rules specified in TS 38.321[20] | - |  |
| Lowest index of the subchannel allocation to the initial transmission | Dependent on test parameters | - |  |
| Frequency resource assignment | Dependent on test parameters | - |  |
| Time resource assignment | only one PSCCH/PSSCH occasion is scheduled per grant | "00000"B |  |
| PSFCH-to-HARQ feedback timing indicator | Indicating the first entry of sl-PSFCH-ToPUCCH to be used | "000"B |  |
| PUCCH resource indicator | Indicating the first entry of sl-PUCCH-Config to be used | "000"B |  |
| Configuration index | Not present | - | SL-RNTI |
|  | Indicating the first entry of sl-ConfiguredGrantConfigList to be used | "000" | SL-CS-RNTI |
| Counter sidelink assignment index | PDCCH monitoring occasions in which DCI format 3\_0 scheduling PSSCH transmissions with corresponding PSFCH reception occasions is present, denoted as Y, satisfies (Y-1) mod 4 =0, as specified in 38.213 Table 16.5.2.1-1 | "00" |  |

|  |  |
| --- | --- |
| Condition | Explanation |
| SL-RNTI | UE is configured to monitor DCI format 3\_0 with CRC scrambled by SL-RNTI, i.e. dymanic sidelink grant |
| SL-CS-RNTI | UE is configured to monitor DCI format 3\_0 with CRC scrambled by SL-CS-RNTI, i.e. configured sidelink grant |

###### 4.3.6.1.4.2 Physical layer parameters for DCI format 3\_1

DCI format 3\_1 is used to schedule PSCCH/PSSCH transmission on E-UTRA V2X sidelink.

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##### 4.3.6.1.5 Physical layer parameters for scheduling of MBS

###### 4.3.6.1.5.1 Physical layer parameters for DCI format 4\_0

DCI format 4\_0 is used for the scheduling of PDSCH for broadcast in DL cell.

Default physical layer parameters for DCI format 4\_0 are specified in Table 4.3.6.1.5.1-1.

Table 4.3.6.1.5.1-1: Physical layer parameters for DCI format 4\_0

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Value** | **Value in binary** | **Condition** |
| Frequency domain resource assignment | Dependent on test parameters | - |  |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |  |
| VRB-to-PRB mapping | Non-interleaved | “0” |  |
| Modulation and coding scheme | Dependent on test parameters | - |  |
| Redundancy version | Dependent on test parameters | - |  |
| MCCH change notification | MSB indicates no new MBS service(s) start. LSB indicates no modification of MCCH information other than the change caused by start of new MBS service(s). | “00” | MCCH-RNTI |
| Reserved 2 bits | - | G-RNTI |
| Reserved bits | Reserved 14 bits |  |  |

|  |  |
| --- | --- |
| Condition | Explanation |
| MCCH-RNTI | UE is configured to monitor DCI format 4\_0 with CRC scrambled by MCCH-RNTI |
| G-RNTI | UE is configured to monitor DCI format 4\_0 with CRC scrambled by G-RNTI for MTCH |

###### 4.3.6.1.5.2 Physical layer parameters for DCI format 4\_1

DCI format 4\_1 is used for the scheduling of PDSCH for multicast in DL cell.

Default physical layer parameters for DCI format 4\_1 are specified in Table 4.3.6.1.5.2-1.

Table 4.3.6.1.5.2-1: Physical layer parameters for DCI format 4\_1

|  |  |  |
| --- | --- | --- |
| Parameter | Value | Value in binary |
| Frequency domain resource assignment | Dependent on test parameters | - |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |
| VRB-to-PRB mapping | Non-interleaved | “0” |
| Modulation and coding scheme | Dependent on test parameters | - |
| New data indicator | Set for every data transmission/retransmission according to the rules specified in TS 38.321 | - |
| Redundancy version | Dependent on test parameters | - |
| HARQ process number | Dependent on test parameters | - |
| Downlink assignment index | Dependent on test parameters | - |
| PUCCH resource indicator | *PUCCH-ResourceId[7]* = 6 in pucch-ResourceSetID[1] or *PUCCH-ResourceId[7]* = 14 in pucch-ResourceSetID[2] as defined in Table 4.6.3-112 (Mapping as per Table 9.2.3-2 in TS 38.213) | “110” |
| PDSCH-to-HARQ\_feedback timing indicator | K1 slots, *dl-DataToUL-ACK-MulticastDciFormat4-1* is not provided, as specified in 9.2.3 in TS 38.213 |  |
| µ=0 (SCS=15kHz): K1=7 | '110'B |
| µ=1 (SCS=30kHz): K1=5 | '100'B |
| µ=3 (SCS=120kHz): K1=8 | '111'B |
| Reserved bits | Reserved 3 bits | - |

###### 4.3.6.1.5.3 Physical layer parameters for DCI format 4\_2

DCI format 4\_2 is used for the scheduling of PDSCH in DL cell.

Default physical layer parameters for DCI format 4\_2 are specified in Table 4.3.6.1.5.3-1.

Table 4.3.6.1.5.3-1: Physical layer parameters for DCI format 4\_2

|  |  |  |
| --- | --- | --- |
| Parameter | Value | Value in binary |
| Frequency domain resource assignment | Dependent on test parameters | - |
| Time domain resource assignment | Indicating the first entry of PDSCH-TimeDomainResourceAllocationList to be used | “0000” |
| VRB-to-PRB mapping | Not present(0bit, vrb-ToPRB-Interleaver in pdsch-ConfigMulticast is not configured) | - |
| PRB bundling size indicator | Not present (static PRB bundling) | - |
| Rate matching indicator | Not present | - |
| ZP CSI-RS trigger | Not present | - |
| Modulation and coding scheme (TB1) | Dependent on test parameters | - |
| New data indicator (TB1) | Set for every data transmission/retransmission according to the rules specified in TS 38.321 [20] | - |
| Redundancy version (TB1) | Dependent on test parameters | - |
| Modulation and coding scheme (TB2) | Dependent on test parameters | - |
| New data indicator (TB2) | Set for every data transmission/retransmission according to the rules specified in TS 38.321 [20] | - |
| Redundancy version (TB2) | Dependent on test parameters | - |
| HARQ process number | Dependent on test parameters | - |
| Downlink assignment index | Dependent on test parameters | - |
| PUCCH resource indicator | *PUCCH-ResourceId[7]* = 6 in pucch-ResourceSetID[1] or *PUCCH-ResourceId[7]* = 14 in pucch-ResourceSetID[2] as defined in Table 4.6.3-112 (Mapping as per Table 9.2.3-2 in TS 38.213 [22]) | “110” |
| PDSCH-to-HARQ\_feedback timing indicator | corresponding to K1 slots as per Table 9.2.3-1 in TS 38.213 [22] and *dl-DataToUL-ACK* in Table 4.6.3-112 |  |
|  | µ=0 (SCS=15kHz): K1=7 | “101” |
|  | µ=1 (SCS=30kHz): K1=5 | “011” |
|  | µ=3 (SCS=120kHz): K1=8 | “110” |
| Antenna port(s) | DMRS port 0 as per Table 7.3.1.2.2-1 in TS 38.212 [27] (*dmrs-Type* = DMRS type 1 and *maxLength* = len1 as per Table 4.6.3-50) | “0000” |
| Transmission configuration indication | Not present (0 bit, *tci-PresentInDCI* in *PDCCH-ConfigMulticast* is not enabled as per Table 4.6.3-28) | - |
| DMRS sequence initialization | Fix length of 1 bit (nSCID=0 and is configured to physCellId as scramblingID0 is not present in Table 4.6.3-50) | ”0” |
| Priority indicator | Not present (0 bit, *priorityIndicatorDCI-4-2-r17* is not configured in *PDSCH-ConfigMulticast* as per Table 4.6.3-100) | - |
| Enabling/disabling HARQ-ACK feedback indication | Not present (0 bit,  *harq-FeedbackEnablerMulticast* does notindicates *dci-enable* as per Table 4.6.3-68) | - |
| NOTE: The size of DCI format 4\_2 is configurable by higher layer parameter *sizeDCI-4-2* from 20 bits and up to 140 bits. | | |

#### 4.3.6.2 Sidelink physical layer parameters

##### 4.3.6.2.1 Physical layer parameters for scheduling of PSSCH on PSCCH

###### 4.3.6.2.1.1 Physical layer parameters for SCI format 1-A

SCI format 1-A is used to schedule PSSCH transmission.

Default physical layer parameters for SCI format 1-A are specified in Table 4.3.6.2.1.1-1.

Table 4.3.6.2.1.1-1: Physical layer parameters for SCI format 1-A

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| Priority | Dependent on test parameters | - |  |
| Frequency resource assignment | Dependent on test parameters | - |  |
| Time domain resource assignment | only one PSCCH/PSSCH occasion is scheduled per grant | "00000"B |  |
| Resource reservation period | Not present | - |  |
| DMRS pattern | Indicating the first entry of sl-PSSCH-DMRS-TimePatternList-r16 to be used | "0"B |  |
| 2nd-stage SCI format | SCI format 2-A | “00”B |  |
|  | SCI format 2-B | “01”B | DISTANCE-BASED HARQ |
| Beta\_offset indicator | Indicating the first entry of sl-BetaOffsets2ndSCI to be used | "00"B |  |
| Number of DMRS port | Single port p = 1000 is used | "0"B |  |
|  | Two ports p = 1000 and 1001 are used | "1"B | SL MIMO |
| Modulation and coding scheme | Dependent on test parameters | - |  |
| Additional MCS table indicator | Not present | - |  |
| PSFCH overhead indication | "1"B if mod (i, nPSFCH) = 0  "0"B if mod (i, nPSFCH ) ≠ 0  where i is the logical slot index belong to resource pool per 1024 frame as specified in 38.214 [21] clause 8. | - | nPSFCH = 2 OR nPSFCH = 4 (Note 1) |
|  | Not present |  |  |
| Reserved | Number of reserved bits is given by sl-NumReservedBits-r16 | "00" |  |
| Note 1: nPSFCH is the PSFCH period (in slots) provided by sl-PSFCH-Period-r16. nPSFCH = 0 if sl-PSFCH-Period-r16 is not configured. | | | |

|  |  |
| --- | --- |
| Condition | Explanation |
| DISTANCE-BASED HARQ | For distance-based HARQ test |
| SL MIMO | For SL MIMO test |

##### 4.3.6.2.2 Physical layer parameters for scheduling on PSSCH

###### 4.3.6.2.2.1 Physical layer parameters for SCI format 2-A

SCI format 2-A is used to provide HARQ information, to provide Souce/Destination L1 ID or to trigger CSI reporting.

Default physical layer parameters for SCI format 2-A are specified in Table 4.3.6.2.2.1-1.

Table 4.3.6.2.2.1-1: Physical layer parameters for SCI format 2-A

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Value | Value in binary | Condition |
| HARQ process number | Dependent on test parameters |  |  |
| New data indicator | Set for every data transmission/retransmission according to the rules specified in TS 38.321 | - |  |
| Redundancy version | Dependent on test parameters | - |  |
| Source ID | Dependent on test parameters | - |  |
| Destination ID | Dependent on test parameters | - |  |
| HARQ feedback enabled/disabled indicator | HARQ feedback is enabled | “1”B |  |
| Cast type indicator | broadcast | "00"B | BROADCAST |
|  | groupcast with ACK/NACK HARQ | "01"B | GROUPCAST\_ACK\_NACK |
|  | unicast | "10"B | UNICAST |
|  | groupcast with NACK-only HARQ | "11"B | GROUPCAST\_NACK\_ONLY |
| CSI request | Not ask for SL CSI report | "0"B |  |
|  | Ask for SL CSI report | "1"B | SL\_CSI |

|  |  |
| --- | --- |
| Condition | Explanation |
| BROADCAST | For broadcast SL communication test |
| GROUPCAST\_ACK\_NACK | For groupcast SL communication with ACK/NACK HARQ feedback test |
| GROUPCAST\_NACK\_ONLY | For groupcast SL communication with NACK-only HARQ feedback test |
| UNICAST | For unicast SL communication test |
| SL\_CSI | For SL CSI reporting test |

###### 4.3.6.2.2.2 Physical layer parameters for SCI format 2-B

SCI format 2-B is used to provide HARQ information, Souce/Destination L1 ID or distance-based HARQ related parameters.

Default physical layer parameters for SCI format 2-B are specified in Table 4.3.6.2.2.2-1.

Table 4.3.6.2.2.2-1: Physical layer parameters for SCI format 2-B

|  |  |  |
| --- | --- | --- |
| Parameter | Value | Value in binary |
| HARQ process number | Dependent on test parameters | - |
| New data indicator | Set for every data transmission/retransmission according to the rules specified in TS 38.321 | - |
| Redundancy version | Dependent on test parameters | - |
| Source ID | Dependent on test parameters | - |
| Destination ID | Dependent on test parameters | - |
| HARQ feedback enabled/disabled indicator | HARQ feedback enabled | “1”B |
| Zone ID | Dependent on test parameters | - |
| Communication range requirement | Indicating the first entry of sl-ZoneConfigMCR-List to be used | "0000"B |

## 4.4 Reference system configurations

The reference system configurations specified in this sub clause apply to all test cases unless otherwise specified.

### 4.4.1 Simulated network scenarios

The simulated network scenarios will simulate UE operation in either standalone NR, standalone E-UTRA or in non-standalone NR and E-UTRA networks. For non-standalone case either the NR or the E-UTRA radio access acts as the master anchor node. For both standalone and non-standalone cases, the simulated networks may be single mode networks (FDD or TDD) or dual mode networks (FDD+TDD). For the standalone NR case the simulated networks may also be inter-RAT networks ((FDD or TDD) + (E-UTRA FDD or E-UTRA TDD or UTRA FDD).

Simulated network scenarios to be tested are listed in this sub clause.

NOTE 1: The number of cells specified does not necessarily correspond to the maximum number of resources to be configured simultaneously in test equipment. Please refer to clause 6.1 for such information.

NOTE 2: For NAS test cases see sub clause 6.3.2.

#### 4.4.1.1 Standalone cell network scenarios

##### 4.4.1.1.1 Standalone E-UTRA single cell and multi cell network scenarios

For standalone E-UTRA FDD or TDD single cell environment see TS 36.508 [2], clause 4.4.1.1.

For standalone E-UTRA FDD or TDD multi cell network scenarios see TS 36.508 [2], clause 4.4.1.2.

##### 4.4.1.1.2 Standalone NR single cell network scenarios

For standalone NR FDD or TDD single cell environment, NR Cell 1 is used.

##### 4.4.1.1.3 Standalone NR single mode multi cell network scenarios

For standalone NR FDD or TDD intra-frequency multi cell environment, NR Cell 1, NR Cell 2 and NR Cell 4 are used.

For standalone NR FDD or TDD inter-frequency multi cell environment, NR Cell 1, NR Cell 3 and NR Cell 6 are used.

For standalone NR FDD or TDD inter-band cell environment, NR Cell 1 and NR Cell 10 are used.

For standalone NR FDD or TDD multi tracking area intra-frequency multi cell environment, NR Cell 1 and NR Cell 11 are used.

For standalone NR FDD or TDD multi tracking area inter-frequency multi cell environment, NR Cell 1 and NR Cell 23 are used.

For standalone NR FDD or TDD multi PLMN inter-frequency multi cell environment, NR Cell 1, NR Cell 12, NR Cell 13 and NR Cell 14 are used.

##### 4.4.1.1.4 Standalone NR dual mode multi cell network scenarios

For standalone NR FDD and TDD multi cell environment, NR Cell 1, NR Cell 10 and NR Cell 31 are used.

For standalone NR FDD and TDD multi PLMN multi cell environment, NR Cell 1, NR Cell 28, NR Cell 29 and NR Cell 30 are used.

In addition, standalone NR single mode multi cell network scenarios defined in clause 4.4.1.1.3 are combined with the dual mode scenarios defined in this clause when additional intra or inter-frequency cells are used.

##### 4.4.1.1.5 Standalone NR 3GPP Inter-RAT network scenarios

For standalone NR FDD or TDD single cell with E-UTRA FDD, E-UTRA TDD or UTRA FDD single cell inter-RAT environment:

- NR Cell 1 is used for the NR cell; and

- Cell 1, as specified in TS 36.508 [2] clause 4.4.1.1, is used for the E-UTRA cell; or

- Cell 5, as specified in TS 36.508 [2] clause 4.4.2, is used for the UTRA cell.

For standalone NR FDD or TDD single cell with E-UTRA FDD or E-UTRA TDD multi cell inter-RAT environment:

- NR Cell 1 is used for the NR cell; and

- Cell 1, Cell 2 and Cell 4, as specified in TS 36.508 [2] clause 4.4.1.2, is used for the E-UTRA cell; and

#### 4.4.1.2 Non-standalone cell network scenarios

##### 4.4.1.2.1 Non-standalone E-UTRA single cell and NR single cell network scenarios

For non-standalone NR FDD or TDD single cell and E-UTRA FDD or TDD single cell environment:

- Cell 1, as specified in TS 36.508 [2] clause 4.4.1.1, is used for the E-UTRA cell; and

- NR Cell 1 is used for the NR cell.

##### 4.4.1.2.2 Non-standalone E-UTRA single cell and NR single mode multi cell network scenarios

For non-standalone E-UTRA single cell and FDD or TDD NR intra-frequency single mode multi cell environment:

- Cell 1, as specified in TS 36.508 [2] clause 4.4.1.1, is used for the E-UTRA cell; and

- NR Cell 1, NR Cell 2 and NR Cell 4 are used for NR cells.

For non-standalone E-UTRA single cell and FDD or TDD NR inter-frequency single mode multi cell environment:

- Cell 1, as specified in TS 36.508 [2] clause 4.4.1.1, is used for the E-UTRA cell; and

- NR Cell 1, NR Cell 3 and NR Cell 6 are used for the NR cells.

For non-standalone E-UTRA single cell and FDD or TDD NR inter-band single mode multi cell environment:

- Cell 1, as specified in TS 36.508 [2] clause 4.4.1.1, is used for the E-UTRA cell; and

- NR Cell 1 and NR Cell 10 are used for the NR cells.

##### 4.4.1.2.3 Non-standalone E-UTRA single mode multi cell and NR single mode multi cell network scenarios

For non-standalone E-UTRA intra-frequency single mode multi cell and FDD or TDD NR intra-frequency single mode multi cell environment:

- E-UTRA Cell 1, Cell 2 and Cell 4, as specified in TS 36.508 [2] clause 4.4.1.2, is used for the E-UTRA cell; and

- NR Cell 1, NR Cell 2 and NR Cell 4 are used for NR cells.

For non-standalone FDD or TDD E-UTRA intra-frequency single mode multi cell and FDD or TDD NR inter-frequency single mode multi cell environment:

- E-UTRA Cell 1, Cell 2 and Cell 4, as specified in TS 36.508 [2] clause 4.4.1.2, is used for the E-UTRA cell; and

- NR Cell 1, NR Cell 3 and NR Cell 6 are used for the NR cells.

For non-standalone FDD or TDD E-UTRA inter-frequency single mode multi cell and FDD or TDD NR inter-frequency single mode multi cell environment:

- E-UTRA Cell 1, Cell 3 and Cell 6, as specified in TS 36.508 [2] clause 4.4.1.2, is used for the E-UTRA cell; and

- NR Cell 1, NR Cell 3 and NR Cell 6 are used for the NR cells.

For non-standalone single E-UTRA cell and FDD or TDD NR inter-band single mode multi cell environment:

- E-UTRA Cell 1, Cell 2 and Cell 4, as specified in TS 36.508 [2] clause 4.4.1.2, is used for the E-UTRA cell; and

- NR Cell 1 and NR Cell 10 are used for the NR cells.

##### 4.4.1.2.4 Non-standalone E-UTRA single cell and NR dual mode multi cell network scenarios

Editor’s note: It is FFS if the NR dual mode multi cell environment needs to include multiple E-UTRA cells in addition to the multiple NR cells.

For non-standalone single E-UTRA cell and FDD and TDD NR dual mode multi cell environment:

- Cell 1, as specified in TS 36.508 [2] clause 4.4.1.1, is used for the E-UTRA cell; and

- NR Cell 1, NR Cell 10 and NR Cell 31 are used for the NR cells.

In addition, standalone NR single mode multi cell network scenarios defined in clause 4.4.1.2.2 are combined with the dual mode scenarios defined in this clause when additional intra or inter-frequency NR cells are used.

#### 4.4.1.3 Non-3GPP Accesss network scenarios

##### 4.4.1.3.1 WLAN network scenario

For non-3GPP access over WLAN single cell environment Cell 27, Cell 27a and Cell 27b as specified in TS 36.508 [2] clauses 4.4.2 and 4.4.8 with condition 'IMSoWLAN' is used.

##### 4.4.1.3.2 Bluetooth network scenario

For non-3GPP access over Bluetooth single cell environment Cell 40 and Cell 41, as specified in TS 36.508 [2] clauses 4.4.2.

### 4.4.2 Simulated cells

NOTE 1: For NAS test cases see clause 6.3.2.

NOTE 2: Test frequency and range defined in table 4.4.2-1 do not apply to TS 38.521-1, TS 38.521-2 and TS 38.521-3 test cases.

Test frequencies and simulated NR cells are defined in table 4.4.2-1. Test frequencies and simulated E-UTRA and UTRA cells are defined in TS 36.508 [2] table 4.4.2-1.

For NR cells, NRf1 is the default test frequency. For UTRA cells, f8 as specified in TS 36.508 [2] table 4.2.2-1 is the default test frequency. For E-UTRA cells, f1 as specified in TS 36.508 [2] table 4.2.2-1 is the default test frequency.

Default parameters for simulated NR cells are specified in table 4.4.2-2 and table 4.4.2-3.

Default parameters for simulated E-UTRA cells are specified in TS 36.508 [2] table 4.4.2-1A and table 4.4.2-2.

Default parameters for simulated UTRA cells are specified in TS 36.508 [2] clause 4.4.4.

Common parameters for NR simulated cells are specified in clauses 4.4.3.

Other cell specific parameters are specified in TS 36.508 [2] clause 4.4.3 to 4.4.7.

Table 4.4.2-1: Definition of test frequencies and simulated NR cells

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test frequency | RAT | Operating band | Range | Simulated NR cells |
| NRf1 | NR | Operating band under test | Mid  (Note 1, Note 3 | NR Cell 1, NR Cell 2, NR Cell 4, NR Cell 11, NR Cell 489 |
| NRf2 | NR | Operating band under test | High  (Note 1, Note 3) | NR Cell 3, NR Cell 12, NR Cell 23 |
| NRf3 | NR | Operating band under test | Low  (Note 1, Note 3) | NR Cell 6, NR Cell 13 |
| NRf4 | NR | Operating band under test | (Note 1) | NR Cell 14 |
| NRf5 | NR | Operating band for inter-band cells | Mid  (Note 1) | NR Cell 10, NR Cell 30, NR Cell 31 |
| NRf6 | NR | Operating band for inter-band cells | High  (Note 1) | NR Cell 28, NR Cell 29 |
| NRf7 | NR | Operating band for inter-band cells | Low  (Note 1) |  |
| NRf8 | NR | Operating band for SDL cell | Mid  (Note 1) | NR Cell 32 |
| NRf9 | NR | Operating band for SUL cell | Mid  (Note 1) | NR Cell 33 |
| NRf10 | NR | Operating band for inter-band cells | Mid  (Note bb) | NR Cell 500 |
| Note 1: For signalling test, see clause 6.2.3.  Note 2: Void.  Note 3: For RRM test with NR intra-band non-contiguous CA, the test frequencies for the set of non-contiguous component carriers are specified in clauses 4.3.1.1.5 for FR1 and in clause 4.3.1.2.4 for FR2 without regard to range. Thus “Low”, “Mid” and “High” information in this table does not apply. Unless otherwise stated, test point with maximum Wgap is chosen.  Note 4: For signalling test with NR inter-band CA three bands only, the test band is different from the Operating band for NRf1 and the Operating band for NRf5.  Note 5: For RRM test with NR intra-band contiguous CA, the test frequencies for the secondary component carrier should follow the primary carrier, as specified in clauses 4.3.1.1.3 for FR1 and in clause 4.3.1.2.3 for FR2 without regard to range. Thus “Low”, “Mid” and “High” information in this table does not apply for the secondary component carrier. | | | | |

Table 4.4.2-2: Default NR parameters for simulated NR cells

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| cell ID | NR Cell Identifier | | Physical layer cell identity | Physical layer cell identity for SIG | PRACH-rootSequenceIndex FDD | PRACH-rootSequenceIndex TDD | SSB-Index2,3 |
|  | gNB Identifier | Cell Identity |  |  | *L*RA=139  Note 1 | *L*RA=139  Note 1 |  |
| NR Cell 1 | '00 0000 0000 0000 0000 0000 0001'B | '00 0000 0000'B | 0 | 42 | 0 | 0 | 1 |
| NR Cell 2 | '00 0000 0000 0000 0000 0000 0001'B | '00 0000 0010'B | 2 | 50 | 32 | 32 | 0 |
| NR Cell 3 | '00 0000 0000 0000 0000 0000 0010'B | '00 0000 0011'B | 3 | 58 | 0 | 0 | 1 |
| NR Cell 4 | '00 0000 0000 0000 0000 0000 0011'B | '00 0000 0100'B | 4 | 46 | 64 | 64 | 1 |
| NR Cell 6 | '00 0000 0000 0000 0000 0000 0100'B | '00 0000 0110'B | 6 | 18 | 0 | 0 | 1 |
| NR Cell 10 | '00 0000 0000 0000 0000 0000 0101'B | '00 0000 1010'B | 10 | 10 | 0 | 0 | 1 |
| NR Cell 11 | '00 0000 0000 0000 0000 0000 0110'B | '00 0000 1011'B | 11 | 54 | 96 | 96 | 0 |
| NR Cell 12 | '00 0000 0000 0000 0000 0000 0010'B | '00 0000 1100'B | 12 | 62 | 32 | 32 | 0 |
| NR Cell 13 | '00 0000 0000 0000 0000 0000 0100'B | '00 0000 1101'B | 13 | 22 | 32 | 32 | 0 |
| NR Cell 14 | '00 0000 0000 0000 0000 0000 0111'B | '00 0000 1110'B | 14 | 14 | 0 | 0 | 1 |
| NR Cell 23 | '00 0000 0000 0000 0000 0000 0110'B | '00 0001 0111'B | 23 | 66 | 64 | 64 | 1 |
| NR Cell 28 | '00 0000 0000 0000 0000 0000 0010'B | '00 0001 1100'B | 28 | 46 | 0 | 0 | 1 |
| NR Cell 29 | '00 0000 0000 0000 0000 0000 0100'B | '00 0001 1101'B | 29 | 34 | 32 | 32 | 0 |
| NR Cell 30 | '00 0000 0000 0000 0000 0000 0111'B | '00 0001 1110'B | 30 | 26 | 32 | 32 | 0 |
| NR Cell 31 | '00 0000 0000 0000 0000 0000 0110'B | '00 0001 1111'B | 31 | 38 | 64 | 64 | 1 |
| NR Cell 32 | '00 0000 0000 0000 0000 0001'B | '00 0010 0000'B | 32 | N/A | - | - | 1 |
| NR Cell 33 | '00 0000 0000 0000 0000 0001'B | '00 0010 0001'B | 33 | N/A | - | - | - |
| NR Cell 489 | '00 0000 0000 0000 0000 0000 0001'B | '01 1110 1001'B | 489 | N/A | 128 | 128 | 0 |
| NR Cell 500 | '00 0000 0000 0000 0000 0000 1000'B | '00 0000 0111'B | 500 | N/A | 0 | 0 | 1 |
| Note 1: To avoid collision of the preambles between intra-frequency cells, with the default *zeroCorrelationZoneConfig* value set to 15, the *PRACH-rootSequenceIndex* values have been separated by 32 root sequences per intra-frequency cell.  Note 2: This SSB-Index does not apply for RRM test cases in TS 38.533 [18]. RRM test cases shall use the SSB index defined in A.3 of TS 38.533 [18].  Note 3: For signalling test, simultaneous co-existence of active NR cells defined on the same frequency and same SSB-Index is not recommended due to the same timing used for intra-frequency NR cells in TS 38.523-3 [23]. | | | | | | | |

Table 4.4.2-3: Default NAS parameters for simulated NR cells

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| cell ID | Tracking Area | | | | TA# list  (Note 1) | 5G-GUTI (Note 2) | | | |
| TA# | PLMN | | TAC | AMF Identifier | | | 5G-TMSI |
| MCC | MNC | AMF region ID | AMF Set ID | AMF Pointer |
| NR Cell 1 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 | Arbitrarily selected according to TS 23.003 [26] clause 2.10 |
| NR Cell 2 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 |
| NR Cell 3 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 |
| NR Cell 4 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 |
| NR Cell 6 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 |
| NR Cell 10 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 |
| NR Cell 11 | TAI-2 | (Note 3) | | 2 | TAI-2 | 254 | 1 | 1 |
| NR Cell 23 | TAI-2 | (Note 3) | | 2 | TAI-2 | 254 | 1 | 1 |
| NR Cell 12, NR Cell 28 | TAI-3 | 002 | 11 | 1 | TAI-3 | 253 | 1 | 1 |
| NR Cell 13, NR Cell 29 | TAI-4 | 003 | 21 | 1 | TAI-4 | 252 | 1 | 1 |
| NR Cell 14, NR Cell 30 | TAI-5 | 004 | 31 | 1 | TAI-5 | 251 | 1 | 1 |
| NR Cell 31 | TAI-2 | (Note 3) | | 2 | TAI-2 | 254 | 1 | 1 |
| NR Cell 489 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 |
| NR Cell 500 | TAI-1 | (Note 3) | | 1 | TAI-1 | 254 | 1 | 1 |  |
| Note 1: The value(s) in the column TA# list indicates TAI(s) included in the response messages of the registration procedure (REGISTRATION ACCEPT) when the UE performs the registration procedure on a corresponding cell.  Note 2: The value in the column 5G-GUTI indicates 5G-GUTI included in the response messages of the registration procedure (REGISTRATION ACCEPT) when the UE performs the registration procedure on a corresponding cell.  Note 3: Set to the same Mobile Country Code and Mobile Network Code stored in EFIMSI on the test USIM card (subclause 4.9.3). | | | | | | | | | |

Table 4.4.2-4: Default parameters for simulated SNPN cells

|  |  |  |
| --- | --- | --- |
| cell ID | Network Identifier (NID) | |
| Assignment mode (Note 1) | NID value |
| NR Cell 1 | 1 | 1 |
| NR Cell 2 | 1 | 2 |
| NR Cell 3 | 1 | 3 |
| NR Cell 4 | 1 | 4 |
| NR Cell 6 | 1 | 6 |
| NR Cell 10 | 1 | 10 |
| NR Cell 11 | 1 | 11 |
| NR Cell 12 | 1 | 12 |
| NR Cell 13 | 1 | 13 |
| NR Cell 14 | 1 | 14 |
| NR Cell 23 | 1 | 23 |
| NR Cell 28 | 1 | 28 |
| NR Cell 29 | 1 | 29 |
| NR Cell 30 | 1 | 30 |
| NR Cell 31 | 1 | 31 |
| NR Cell 32 | 1 | 32 |
| NR Cell 33 | 1 | 33 |
| NR Cell 489 | 1 | 489 |
| NR Cell 500 | 1 | 500 |
| Note 1: As per TS 23.003 [26] clause 12.7.1, Network Identifier comprises of Assignment mode (one hexadecimal digit) and NID value (10 hexadecimal digits). Self-assignment NIDs are chosen by setting the assignment mode to value 1. | | |

### 4.4.3 Common parameters for simulated NR cells

The parameters specified in this sub clause apply to the simulated NR cells in standalone NR and non-standalone network scenarios unless otherwise specified.

The common parameters for the simulated E-UTRA cells for standalone E-UTRA and non-standalone network scenarios are specified in TS 36.508 [2] clause 4.4.3 unless otherwise specified.

#### 4.4.3.1 Common configurations of system information blocks

##### 4.4.3.1.1 Combinations of system information blocks for E-UTRA standalone, EN-DC and NGEN-DC

The combination of system information blocks for standalone E-UTRA, EN-DC and NGEN-DC network scenarios are specified in TS 36.508 [2] clause 4.4.3.1.

For EN-DC and NGEN-DC network scenarios the SS shall in addition to broadcasting the E-UTRA system information blocks also broadcast the NR MIB on the NR cell(s).

##### 4.4.3.1.2 Combinations of system information blocks for NR standalone and NE-DC

The combination of system information blocks required by a test case depends on the test case scenario. In this clause, several combinations of system information blocks are defined.

Regardless of the combination of system information blocks indicated as being used by a test case, the SS shall broadcast only the NR MIB on the NR Cell(s) configured on an SDL band and on NR SCell(s) configured on a band having no uplink frequency specified.

For NE-DC network scenario the SS shall in addition to broadcasting the NR system information blocks also broadcast the E-UTRA system information combination 1 on the E-UTRA cell(s) as specified in TS 36.508 [2].

Combination NR-1 is the default combination which applies to the following test case scenarios:

- NR FDD single cell scenario except RRM test case scenarios

- NR TDD single cell scenario except RRM test case scenarios

- NR FDD inter-band DC component carriers cell scenario

- NR TDD inter-band DC component carriers cell scenario

- NR FDD and NR TDD inter-band DC component carriers cell scenario

Combination NR-2 applies to the following test case scenarios:

- NR FDD intra-frequency multi cell scenario

- NR TDD intra-frequency multi cell scenario

- NR FDD and NR TDD dual mode multi cell roaming scenario

- NR FDD single cell RRM test case scenario

- NR TDD single cell RRM test case scenario

Combination NR-3 applies to the following test case scenarios:

- NR FDD intra-frequency multi cell scenario with neighbouring cell related information

- NR TDD intra-frequency multi cell scenario with neighbouring cell related information

Combination NR-4 applies to the following test case scenarios:

- NR FDD inter-frequency multi cell scenario

- NR TDD inter-frequency multi cell scenario

- NR FDD inter-band multi cell scenario

- NR TDD inter-band multi cell scenario

- NR FDD and NR TDD dual mode multi cell non-roaming scenario

- NR FDD intra-band carrier aggregation component carriers cell scenario

- NR FDD inter-band carrier aggregation component carriers cell scenario

- NR TDD intra-band carrier aggregation component carriers cell scenario

- NR FDD and NR TDD inter-band carrier aggregation component carriers cell scenario

Combination NR-5 applies to the following test case scenarios:

- NR FDD intra-band carrier aggregation component carriers cell scenario + NR FDD intra-frequency neighbour.

- NR FDD inter-band carrier aggregation component carriers cell scenario+ NR FDD intra-frequency neighbour.

- NR TDD intra-band carrier aggregation component carriers cell scenario+ NR FDD intra-frequency neighbour.

- NR FDD and NR TDD inter-band carrier aggregation component carriers cell scenario+ NR FDD intra-frequency neighbour.

Combination NR-6 applies to the following test case scenarios:

- 3GPP inter-RAT NR FDD + E-UTRA FDD multi cell scenario

- 3GPP inter-RAT NR TDD + E-UTRA TDD multi cell scenario

- 3GPP inter-RAT NR TDD + E-UTRA FDD multi cell scenario

Combination NR-7 applies to the following test case scenarios:

- NR FDD inter-frequency + 3GPP inter-RAT E-UTRA multi-cell scenario

- NR TDD inter-frequency + 3GPP inter-RAT E-UTRA multi-cell scenario

Combination NR-8 applies to the following test case scenarios:

- NR FDD ETWS single cell scenario

- NR TDD ETWS single cell scenario

Combination NR-9 applies to the following test case scenarios:

- 3GPP NR FDD + CMAS single cell scenario

- 3GPP NR TDD + CMAS single cell scenario

Combination NR-10 applies to the following test case scenarios:

- 3GPP NR FDD + ETWS primary notification single cell scenario

- 3GPP NR TDD + ETWS primary notification single cell scenario

Combination NR-11 applies to the following test case scenarios:

- 3GPP NR FDD + ETWS secondary notification single cell scenario

- 3GPP NR TDD + ETWS secondary notification single cell scenario

Combination NR-12 applies to the following test case scenarios:

- 3GPP NR FDD + SNPN only single cell scenario

- 3GPP NR TDD + SNPN only single cell scenario

Combination NR-13 applies to the following test case scenarios:

- 3GPP NR FDD + CAG cell multi cell scenario

- 3GPP NR TDD + CAG cell multi cell scenario

Combination NR-14 applies to the following test case scenarios:

- 3GPP NR FDD single cell scenario + NR sidelink communication with or without network scheduling.

- 3GPP NR TDD single cell scenario + NR sidelink communication with or without network scheduling.

- 3GPP NR FDD intra-frequency multi cell scenario + NR sidelink communication with or without network scheduling.

- 3GPP NR TDD intra-frequency multi cell scenario + NR sidelink communication with or without network scheduling.

- 3GPP NR FDD inter-frequency multi cell scenario + NR sidelink communication with or without network scheduling.

- 3GPP NR TDD inter-frequency multi cell scenario + NR sidelink communication with or without network scheduling.

- 3GPP NR FDD inter-band multi cell scenario + NR sidelink communication with or without network scheduling.

- 3GPP NR TDD inter-band multi cell scenario + NR sidelink communication with or without network scheduling.

Combination NR-15 applies to the following test case scenarios:

- 3GPP NR FDD single cell scenario + positioning test case which require posSIBs.

- 3GPP NR TDD single cell scenario + positioning test case which require posSIBs.

Combination NR-16 applies to the following test case scenarios:

- 3GPP NR FDD intra-frequency multi cell scenario + positioning test case which require posSIBs.

- 3GPP NR TDD intra-frequency multi cell scenario + positioning test case which require posSIBs.

Combination NR-17 applies to the following test case scenarios:

- 3GPP NR FDD inter-frequency multi cell scenario + positioning test case which require posSIBs.

- 3GPP NR TDD inter-frequency multi cell scenario + positioning test case which require posSIBs.

Combination NR-18 applies to the following test case scenarios:

- 3GPP NR FDD inter-frequency multi cell scenario + idle/inactive measurements.

- 3GPP NR TDD inter-frequency multi cell scenario + idle/inactive measurements.

Combination NR-19 applies to the following test case scenarios:

- 3GPP NR FDD + Extended field in SI scenario

- 3GPP NR TDD + Extended field in SI scenario

Combination NR-20 applies to the following test case scenarios:

- 3GPP NR FDD single cell scenario + MBS data.

- 3GPP NR TDD single cell scenario + MBS data.

- 3GPP NR FDD intra-frequency multi cell scenario + MBS data.

- 3GPP NR TDD intra-frequency multi cell scenario + MBS data.

Combination NR-21 applies to the following test case scenarios:

- 3GPP NR FDD intra-frequency multi cell scenario + MBS Service Continuity.

- 3GPP NR TDD intra-frequency multi cell scenario + MBS Service Continuity.

Combination NR-22 applies to the following test case scenarios:

- 3GPP NR FDD intra-frequency multi cell scenario + MBS data + MBS Service Continuity.

- 3GPP NR TDD intra-frequency multi cell scenario + MBS data + MBS Service Continuity.

Combination NR-23 applies to the following test case scenarios:

- 3GPP NR FDD inter-frequency multi cell scenario + MBS data

- 3GPP NR TDD inter-frequency multi cell scenario + MBS data.

Combination NR-24 applies to the following test case scenarios:

- 3GPP NR FDD inter-frequency multi cell scenario + MBS Service Continuity.

- 3GPP NR TDD inter-frequency multi cell scenario + MBS Service Continuity.

Combination NR-25 applies to the following test case scenarios:

- 3GPP NR FDD inter-frequency multi cell scenario + MBS data + MBS Service Continuity.

- 3GPP NR TDD inter-frequency multi cell scenario + MBS data + MBS Service Continuity.

Combination NR-26 applies to the following test case scenarios:

- 3GPP NR FDD + eNPN single cell scenario

- 3GPP NR TDD + eNPN single cell scenario

Combination NR-27 applies to the following test case scenarios:

- 3GPP NR FDD + eNPN multi cell scenario

- 3GPP NR TDD + eNPN multi cell scenario

Combination NR-28 applies to the following test case scenarios:

- 3GPP NR FDD single NTN cell scenario

Combination NR-29 applies to the following test case scenarios:

- 3GPP NR FDD intra-frequency multi NTN cell scenario

Combination NR-30 applies to the following test case scenarios:

- 3GPP NR FDD inter-frequency multi cell scenario + slice-based cell reselection in idle/inactive state

- 3GPP NR TDD inter-frequency multi cell scenario + slice-based cell reselection in idle/inactive state

Table 4.4.3.1.2-1: Combinations of system information blocks

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **System information block type** | | | | | | | | | | | | | | | | | | | | |
| **Combination No.** | **SIB1** | **SIB2** | **SIB3** | **SIB4** | **SIB5** | **SIB6** | **SIB7** | **SIB8** | **SIB9** | **SIB10** | **SIB11** | **SIB12** | **SIB13** | **SIB14** | **SIB16** | **posSIBs** | **SIB18** | **SIB19** | **SIB20** | **SIB**  **21** |
| NR-1 | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-2 | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-3 | X | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-4 | X | X |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-5 | X | X | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-6 | X | X |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-7 | X | X |  | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-8 | X |  |  |  |  | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-9 | X |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-10 | X |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-11 | X |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NR-12 | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| NR-13 | X | X |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| NR-14 | X | X |  | X |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| NR-15 | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| NR-16 | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| NR-17 | X | X |  | X |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| NR-18 | X |  |  | X |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| NR-19 | X | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| NR-20 | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |
| NR-21 | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |
| NR-22 | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X |
| NR-23 | X | X |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |
| NR-24 | X | X |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |
| NR-25 | X | X |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X |
| NR-26 | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  | X |  |  |  |
| NR-27 | X | X |  |  |  |  |  |  |  | X |  |  |  |  |  |  | X |  |  |  |
| NR-28 | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| NR-29 | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| NR-30 | X | X |  | X |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |

##### 4.4.3.1.3 Scheduling of system information blocks

The scheduling configurations for combinations of system information blocks are defined in the following tables. There is no scheduling information for combination NR-1.

Table 4.4.3.1.3-1: Scheduling for combination NR-2

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |

Table 4.4.3.1.3-2: Scheduling for combination NR-3

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB3 |

Table 4.4.3.1.3-3: Scheduling for combination NR-4

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4 |

Table 4.4.3.1.3-4: Scheduling for combination NR-5

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB3 |
| 3 | 64 | SIB4 |

Table 4.4.3.1.3-5: Scheduling for combination NR-6

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB5 |

Table 4.4.3.1.3-6: Scheduling for combination NR-7

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4, SIB5 |

Table 4.4.3.1.3-7: Scheduling for combination NR-8

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB6 |
| 2 | 32 | SIB7 |

Table 4.4.3.1.3-8: Scheduling for combination NR-9

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB8 |

Table 4.4.3.1.3-9: Scheduling for combination NR-10

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
|  | 32 | SIB6 |

Table 4.4.3.1.3-10: Scheduling for combination NR-11

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB7 |

Table 4.4.3.1.3-11: Scheduling for combination NR-12

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 64 | SIB10 |

Table 4.4.3.1.3-12: Scheduling for combination NR-13

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB10 |

Table 4.4.3.1.3-13: Scheduling for combination NR-14

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4 |
| 3 | 64 | SIB12 |

Table 4.4.3.1.3-14: Scheduling for combination NR-15

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | posSibType1-1, posSibType1-2, posSibType1-3 (Note 1) |
| 32 | posSibType4-1 (Note 2) |
| 32 | posSibType5-1 (Note 3) |
| 32 | posSibType1-5, posSibType1-6, posSibType1-7 (Note 5) |
| 32 | posSibType1-8 (Note 6) |
| 2..N+1 | 32 | posSibType2-1, posSibType2-3, posSibType2-6, posSibType2-7, posSibType2-8, posSibType2-9 (Note 4) |
| 32 | posSibType2-12, posSibType2-13 (Note 7) |
| 32 | posSibType2-17, posSibType2-18, posSibType2-19, posSibType2-20, posSibType2-21, posSibType2-22, posSibType2-23 (Note 8) |
| Note 1: Content of SI message 1 when UE supports GNSS as defined in TS 37.571-2 [20] Table 8.1-1: Sub-test 25.  Note 2: Content of SI message 1 when UE supports Sensor as defined in TS 37.571-2 [20] Table 8.1-1: Sub-test 24.  Note 3: Content of SI message 1 when UE supports MBS as defined in TS 37.571-2 [20] Table 8.1-1: Sub-test 23.  Note 4: Content of SI messages 2..N, only present when UE supports GNSS as defined in TS 37.571-2 [20] Table 8.1-1: Sub-test 25. If UE supports N GNSS systems, N SIs are broadcasted, one SI per each GNSS system.  Note 5: Content of SI message 1 when UE supports RTK corrections  Note 6: Content of SI message 1 when UE supports SSR corrections  Note 7: Content of SI messages 2..N, only present when UE supports RTK corrections. . If UE supports N GNSS systems, N SIs are broadcasted, one SI per each GNSS system. The posSibType2-13 must only be present when GLONASS is supported.  Note 8: Content of SI messages 2..N, only present when UE supports SSR corrections. If UE supports N GNSS systems, N SIs are broadcasted, one SI per each GNSS system. | | |

Table 4.4.3.1.3-15: Scheduling for combination NR-16

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2 |
| 2 | 32 | posSibType6-1 |

Table 4.4.3.1.3-16: Scheduling for combination NR-17

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4 |
| 3 | 32 | posSibType6-1 |

Table 4.4.3.1.3-17: Scheduling for combination NR-18

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 64 | SIB4 |
| 2 | 64 | SIB11 |

Table 4.4.3.1.3-18: Scheduling for combination NR-19

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2, SIB11 |

Table 4.4.3.1.3-19: Void

Table 4.4.3.1.3-20: Scheduling for combination NR-20

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB20 |

Table 4.4.3.1.3-21: Scheduling for combination NR-21

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB21 |

Table 4.4.3.1.3-22: Scheduling for combination NR-22

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB20 |
| 2 | 64 | SIB21 |

Table 4.4.3.1.3-23: Scheduling for combination NR-23

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4 |
| 3 | 64 | SIB20 |

Table 4.4.3.1.3-24: Scheduling for combination NR-24

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4 |
| 3 | 64 | SIB21 |

Table 4.4.3.1.3-25: Scheduling for combination NR-25

|  |  |  |
| --- | --- | --- |
| Scheduling Information No. | Periodicity  [radio frames] | Mapping of system information blocks |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4 |
| 3 | 64 | SIB20 |
| 4 | 64 | SIB21 |

Table 4.4.3.1.3-26: Scheduling for combination NR-26

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 64 | SIB10, SIB18 |

Table 4.4.3.1.3-27: Scheduling for combination NR-27

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB10, SIB18 |

Table 4.4.3.1.3-28: Scheduling for combination NR-28

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 64 | SIB19 |

Table 4.4.3.1.3-29: Scheduling for combination NR-29

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB19 |

Table 4.4.3.1.3-30: Scheduling for combination NR-30

|  |  |  |
| --- | --- | --- |
| **Scheduling Information No.** | **Periodicity**  **[radio frames]** | **Mapping of system information blocks** |
| 1 | 32 | SIB2 |
| 2 | 64 | SIB4 |
| 3 | 64 | SIB16 |

## 4.4A Test states

### 4.4A.1 General

The purpose of the test states is to get the UE into specific 5GC and RRC protocol states in the initial condition of test cases. Each test state is identified by a test state ID. The syntax used for test state IDs is described in sub-clause 4.4A.4. The list of defined test states and the associated UE 5GC and RRC/ N3AN protocol states are specified in sub-clause 4.4A.2.

A test case may request that one or more test functions and/or configurations are activated/configured by the SS as part of the procedure used for the requested test state. The test case requests the additional test functions and/or configurations by specifying one or more test state parameters. The list of defined test state parameters is specified in sub-clause 4.4A.3.

### 4.4A.2 Test states and associated 5GC and RRC protocol states

Table 4.4A.2-0: 5GC and RRC/N3AN protocol states for UE Switched Off

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 5GS state ID | Connectivity | RRC/N3AN state | 5GMM modes | 5GMM sublayer | 5GSM sublayer | Comments |
| 0-A | - | - | - | - | - | UE switched off. No change to PLMN stored in the USIM |
| 0N-B | NR | - | - | - | - | UE switched off with the PLMN under test stored in the USIM |
| 0E-B | E-UTRA | - | - | - | - |  |
| 0W-B | WLAN | - | - | - | - |  |

Table 4.4A.2-1: 5GC and RRC/N3AN protocol states for IDLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 5GS state ID | Connectivity | RRC/N3AN state | 5GMM modes | 5GMM sublayer | 5GSM sublayer |
| 1N-A | NR | NR RRC\_IDLE | 5GMM-IDLE | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |
| 1E-A | E-UTRA | EUTRA RRC\_IDLE | 5GMM-IDLE | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |
| 1W-A | WLAN | Ipsec\_SA\_Released | 5GMM-IDLE | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |
| 1N-B | NR | NR RRC\_IDLE | 5GMM-IDLE | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |

Table 4.4A.2-2: 5GC and RRC protocol states for INACTIVE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 5GS state ID | Connectivity | RRC state | 5GMM modes | 5GMM sublayer | 5GSM sublayer |
| 2N-A | NR | NR RRC\_INACTIVE | 5GMM-CONNECTED | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |
| 2E-A | E-UTRA | EUTRA RRC\_ INACTIVE | 5GMM-CONNECTED | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |

Table 4.4A.2-3: 5GC and RRC/N3AN protocol states for CONNECTED

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 5GS state ID | Connectivity | RRC/N3AN state | 5GMM modes | 5GMM sublayer | 5GSM sublayer |
| 3N-A | NR | NR RRC\_ CONNECTED | 5GMM-CONNECTED | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |
| 3E-A | E-UTRA | EUTRA RRC\_ CONNECTED | 5GMM-CONNECTED | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |
| 3W-A | WLAN | Ipsec\_SA\_Established | 5GMM-CONNECTED | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |
| 3N-B | NR | NR RRC\_ CONNECTED | 5GMM-CONNECTED | 5GMM-REGISTERED | PDU SESSION INACTIVE |
|  |  |  |  |  | PDU SESSION ACTIVE |

Table 4.4A.2-4: 5GC and RRC/N3AN protocol states for Out of Coverage

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5GS state ID | | Connectivity | | RRC/N3AN state | | 5GMM modes | | 5GMM sublayer | | 5GSM sublayer | |
| 4-A | | - | | - | | - | | - | | - | |
| 4N-A | | NR | | NR RRC\_ CONNECTED | | 5GMM-CONNECTED | | 5GMM-REGISTERED | | PDU SESSION INACTIVE | |
|  | |  | |  | |  | |  | | PDU SESSION ACTIVE | |

### 4.4A.3 Test state parameters

Table 4.4A.3-1 lists the test functions and configurations that a test case can request to be activated/configured. A test case requests a test function or configuration to be used in the preamble by including the test state parameter text in the preamble statement of the test case in *italics*.

Editor’s Note: The test state parameters are currently limited to test functions required by standalone NR. Additional test state parameters will be added in future as needed. E.g. for EN-DC, NE-DC and NGEN-DC there will be a need for parameters for bearer type (MCG and SCG, MCG and split or MCG only).

Table 4.4A.3-1: Test state parameters

|  |  |
| --- | --- |
| Test state parameter | Description |
| *UE test loop mode <X> prepared* | If included the UE test mode is activated in the preamble indicating that UE test loop mode <X> will be activated in the test case test procedure, where <X> is A, B or E. (Note 1, Note 2, Note 3, Note 4) |
| *UE test loop mode <X> active* | If included the UE Test Mode and UE test loop mode <X> will be activated in the preamble, where <X> is A, B or E. (Note 1, Note 2, Note 3, Note 4) |
| Note 1: See TS 38.509 [11], clause 5.2.2 for details of UE test mode.  Note 2: See TS 38.509 [11], clause 5.3.4.1 for details of UE test loop mode A.  Note 3: See TS 38.509 [11], clause 5.3.4.2.2 for details of UE test loop mode B.  Note 4: See TS 38.509 [11], clause 5.3.4.3 for details of UE test loop mode E. | |

### 4.4A.4 Test state ID syntax

A test state ID is defined as:

<RRC state><Connectivity>-<Variant>

, where <RRC state>, <Connectivity> and <Variant> are defined in Table 4.4A.2-1.

Table 4.4A.4-1: Test state fields

|  |  |  |
| --- | --- | --- |
| Test state field | Value | Description |
| <RRC state> | 0 | Indicates that the requested test state will end up in SWITCHED\_OFF state. |
|  | 1 | Indicates that the requested test state will end up in RRC\_IDLE/Ipsec\_SA\_Released state. |
|  | 2 | Indicates that the requested test state will end up in RRC\_INACTIVE state. |
|  | 3 | Indicates that the requested test state will end up in RRC\_CONNECTED/Ipsec\_SA\_Released state. |
|  | 4 | Indicates that the requested test state will end up in Out\_of\_Coverage state. |
| <Connectivity> | E | E-UTRA is used as the initial access. |
|  | N | NR is used as the initial access. |
|  | W | Un trusted non 3GPP Access over WLAN is used as the initial access |
| <Variant> | A | A, B, C etc. used to represent different variants within a <RRC state><Connectivity> group of test states. |

### 4.4A.5 Mapping of test state IDs and test parameters to generic procedures, generic procedure parameters and specific message conditions

Depending on the test case preamble requested test state ID and test parameters the SS shall:

1> use the applicable generic procedure as specified in Table 4.4A.5-1 using the:

2> applicable generic procedure parameters as specified in Table 4.4A.5-1 and Table 4.4A.5-2; and

2> applicable message conditions as specified in Table 4.4A.5-2.

Table 4.4A.5-1: Test state ID mapping to generic procedures and Connectivity generic procedure parameter

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Test state ID | | | | | | | | Generic Procedure | | | | | |
| RRC state field | | Connectivity field | | | Variant field | | | Name | | Generic procedure parameter  (Note 1) | | | Clause |
| 0 | | | - | | | A | | | SWITCHED\_OFF | |  | | 4.5.5 |
| 0 | | | N | | | B | | | SWITCHED\_OFF | | Connectivity=*NR* | | 4.5.5 |
| 0 | | | E | | | B | | | SWITCHED\_OFF | | Connectivity=*E-UTRA* | | 4.5.5 |
| 0 | W | | | B | | | SWITCHED\_OFF | | | | | Connectivity=*WLAN* | 4.5.5 |
| 1 | | N | | | A | | | RRC\_IDLE | | Connectivity=*NR* | | | 4.5.2 |
| 1 | | E | | | A | | | RRC\_IDLE | | Connectivity=*E-UTRA* | | | 4.5.2 |
| 1 | W | | | A | | | Ipsec\_SA\_Released | | | | | Connectivity=*WLAN* | 4.5.2 |
| 1 | N | | | B | | | RRC\_IDLE\_with\_SL | | | | | Connectivity=*NR,* Sidelink = *On* | 4.5.2 |
| 2 | | N | | | A | | | RRC\_INACTIVE | | Connectivity=*NR* | | | 4.5.3 |
| 2 | | E | | | A | | | RRC\_INACTIVE | | Connectivity=*E-UTRA* | | | 4.5.3 |
| 3 | | N | | | A | | | RRC\_CONNECTED | | Connectivity=*NR* | | | 4.5.4 |
| 3 | | E | | | A | | | RRC\_CONNECTED | | Connectivity=*E-UTRA* | | | 4.5.4 |
| 3 | W | | | A | | | Ipsec\_SA\_Established | | | | | Connectivity=*WLAN* | 4.5.4 |
| 3 | N | | | B | | | RRC\_CONNECTED\_with\_SL | | | | | Connectivity=*NR,* Sidelink = *On* | 4.5.4 |
| 4 | - | | | A | | | Out\_of\_Coverage | | | | | Sidelink = *On* | 4.5.7 |
| Note 1: In addition to the Connectivity parameter specified in this table the applicable additional generic procedure parameters and conditions as stated in Table 4.4A.5-2 shall be used | | | | | | | | | | | | | |

Table 4.4A.5-2: Additional generic procedure parameters and message conditions

|  |  |  |  |
| --- | --- | --- | --- |
| Test state | Additional generic | Specific message conditions | |
| parameter | procedure parameter(s) | Message | Condition |
| *UE test loop mode A prepared* | Test Mode=*On* | Note 1 | Note 1 |
| *UE test loop mode B prepared* | Test Mode=*On* | ACTIVATE UE TEST MODE (see subclause 4.7A.1) | UE test loop mode B |
| *UE test loop mode E prepared* | Test Mode=*On* | ACTIVATE UE TEST MODE (ee subclause 4.7A.1) | UE test loop mode E |
| *UE test loop mode A active* | Test Loop Function=*On* | Note 1 | Note 1 |
| *UE test loop mode B active* | Test Loop Function=*On* | ACTIVATE UE TEST MODE (see subclause 4.7A.1) | UE test loop mode B |
|  |  | CLOSE UE TEST LOOP  (see subclause 4.7A.2) | UE test loop mode B |
| *UE test loop mode E active* | Test Loop Function=*On* | ACTIVATE UE TEST MODE (see subclause 4.7A.1) | UE test loop mode E |
| CLOSE UE TEST LOOP  (see subclause 4.7A.2) | UE test loop mode E |
| Note 1: For test state parameters *UE test loop mode A prepared* and *UE test loop mode A active* there is no specific message conditions needed as the default UE test loop mode in the messages ACTIVATE UE TEST MODE and CLOSE UE TEST LOOP is UE test loop mode A. | | | |

## 4.5 Generic procedures

### 4.5.1 General

The generic procedures are used by test cases to get UE under test into SWITCHED\_OFF, RRC\_IDLE/Ipsec SA not established, RRC\_INACTIVE, RRC\_CONNECTED/Ipsec SA or Out of Coverage established state.

A test case controls the SS by specifying the required RRC state and a set of generic procedure parameters applicable for the intended testing.

The connectivity values *EN-DC* and *E-UTRA/EPC* are both a UE connected to the EPC. The connectivity values *E-UTRA/5GC, NR, NGEN-DC, NE-DC* and *NR-DC* are all a UE connected to the 5GC.

Table 4.5.1-1: Generic procedure parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Values | Description | Parameter condition |
| Connectivity | *E-UTRA/5GC* | E-UTRA connected to 5GC | Mandatory.  For value *NR* see note 1. |
| *NR* | NR connected to 5GC |
| *EN-DC* | E-UTRA-NR Dual Connectivity with E-UTRA connected to EPC |
| *NGEN-DC* | E-UTRA-NR Dual Connectivity with E-UTRA connected to 5GC |
| *NE-DC* | NR E-UTRA Dual Connectivity |
| *NR-DC* | NR-NR Dual Connectivity |
|  | *WLAN* | Un trusted non 3GPP access over WLAN |  |
|  | *E-UTRA/EPC* | E-UTRA connected to EPC |  |
| Bearers | *MCG(s) and SCG* | MCG and SCG | Mandatory when Connectivity is set to *EN-DC*, *NGEN-DC,* *NE-DC* and *NR-DC* and when the generic procedures are used by test cases to get UE under test into RRC\_CONNECTED state.  s=1 if MULTI\_PDN= FALSE and s=2 if MULTI\_PDN=TRUE.  N/A otherwise. |
| *MCG(s) and split* | MCG and split |
| Test Mode | *On* | UE test mode active as specified in TS 38.509 [11], clause 5.2.2. | Optional |
| Test Loop Function | *On* | UE test mode active with one of the UE test loop modes activated as specified in TS 38.509 [11], clauses 5.2.2 and 5.3.2. | Optional |
| Connected without release | *On* | Enter RRC\_Connected with Ipsec\_SA\_Established and without any release. | Optional  N/A for *NR-DC.* |
| Interworking without N26 interface supported | *On* | The NWK sets the REGISTRATION ACCEPT message, IE 5GS network feature support, IWK N26 (octet 3, bit 7) = 1 | Optional,  Depends on test case scenario. Default message content for REGISTRATION ACCEPT is set to Interworking without N26 interface NOT supported |
| Unrestricted nr PDN | *On* | Allow unrestricted numbers of PDNs. | Optional for Connectivity *E-UTRA/EPC*.  N/A otherwise. |
| Sidelink | *On* | NR sidelink | Optional |
| Cast type | *Unicast* | To establish unicast sidelink and PC5-RRC connection. | Optional |
| GNSS Sync | *On* | To use GNSS as the synchronization reference source. | Optional |
| SL MIMO | *On* | To transmit PSSCH with 2 spatial layers, i.e. SL MIMO | Optional |
| Note 1: The TS 38.331 [6] abbreviation for NR connected to 5GC is NR/5GC. | | | |

Editor’s Note: The following values are not available to use in the current version of this specification because details are still FFS: Connectivity (E-UTRA/5GC and NGEN-DC).

### 4.5.2 RRC\_IDLE

#### 4.5.2.1 Initiation

The SS shall:

1> if connectivity is *EN-DC*:

2> use 1 E-UTRA cell and 1 NR cell, default parameters;

2> if connected without release is not present:

3> perform according to the table 4.5.2.2-1: E-UTRA RRC\_IDLE;

1> if connectivity is *E-UTRA/EPC*:

2> use 1 E-UTRA cell, default parameters;

2> if unrestricted nr PDN is not present:

3> perform according to the table 4.5.2.2-1: E-UTRA RRC\_IDLE;

2> else:

3> perform according to the table 4.5.2.2-5: E-UTRA RRC\_IDLE Unrestricted nr PDN:

1> if connectivity is *NR*:

2> use 1 NR cell, default parameters;

2> if sidelink is *On*

3> use 1 NR-SS-UE;

3> if GNSS Sync is *On*

4> use 1 GNSS simulator.

2> perform according to the table 4.5.2.2-2: NR RRC\_IDLE;

1> if connectivity is *WLAN*:

2> use 1 WLAN cell, default parameters;

2> if connected without release is not present:

3> perform according to the table 4.5.2.2-3: WLAN Ipsec\_SA\_Released;

2> else:

3> Not defined:

1> if connectivity is *NR-DC*:

2> use 2 NR cells, default parameters;

2> perform according to the table 4.5.2.2-2: NR RRC\_IDLE.

1> if connectivity is *NE-DC*:

2> use 1 E-UTRA cell and 1 NR cell, default parameters;

2> perform according to the table 4.5.2.2-2: NR RRC\_IDLE.

#### 4.5.2.2 Procedures

Table 4.5.2.2-1: E-UTRA RRC\_IDLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| 1-9a2 | Same as TS 36.508 [2] table 4.5.2.3-1, steps 1-9a2. | - | - | - | - |
| - | EXCEPTION: Steps 10a1 to 10b8 describe behaviour which depends on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 10a1-10a10 | IF Test Mode = On OR Test Loop Function = On THEN steps 10-19 as defined in TS 36.508 [2] table 4.5.2A.3-1, are performed.  The ACTIVATE TEST MODE is using the associated condition for the test loop. | - | - | - | - |
| 10b1-10b8 | ELSE steps 10-17 as defined in TS 36.508 [2], table 4.5.2.3-1 are performed. | - | - | - | - |

Table 4.5.2.2-2: NR RRC\_IDLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| 1 | - | <-- | NR RRC: SYSTEM INFORMATION (BCCH) | - | - |
| 2 | The UE transmits an *RRCSetupRequest* message. | --> | NR RRC: *RRCSetupRequest* | - | - |
| 3 | The SS transmits an *RRCSetup* message. | <-- | NR RRC: *RRCSetup* | - | - |
| 4 | The UE transmits an *RRCSetupComplete* message and a REGISTRATION REQUEST message. | --> | NR RRC: *RRCSetupComplete*  5GMM: REGISTRATION REQUEST | - | - |
| 5 | The SS transmits a *DLInformationTransfer* message and an AUTHENTICATION REQUEST message. | <-- | NR RRC: *DLInformationTransfer*  5GMM: AUTHENTICATION REQUEST | - | - |
| 6 | The UE transmits an *ULInformationTransfer* message and an AUTHENTICATION RESPONSE message. | --> | NR RRC: *ULInformationTransfer*  5GMM: AUTHENTICATION RESPONSE | - | - |
| 7 | Void | - | - | - | - |
| 8 | The SS transmits a *DLInformationTransfer* message and a SECURITY MODE COMMAND message. | <-- | NR RRC: *DLInformationTransfer*  5GMM: SECURITY MODE COMMAND | - | - |
| 9 | The UE transmits an *ULInformationTransfer* message and a SECURITY MODE COMPLETE message. | --> | NR RRC: *ULInformationTransfer*  5GMM: SECURITY MODE COMPLETE | - | - |
| - | EXCEPTION: Step 9Aa1 to 9Aa2 describes behaviour that depends on the UE capability; the "lower case letter" identifies a step sequence that takes place if a capability is supported and the procedure parameter Interworking without N26 interface supported is not present. | - | - | - | - |
| 9Aa1 | IF UE\_S1\_SUPPORTED the SS transmits a DLInformationTransfer message and a SECURITY MODE COMMAND message. | <-- | NR RRC: *DLInformationTransfer*  5GMM: SECURITY MODE COMMAND | - | - |
| 9Aa2 | The UE transmits an ULInformationTransfer message and a SECURITY MODE COMPLETE message. | --> | NR RRC: *ULInformationTransfer*  5GMM: SECURITY MODE COMPLETE | - | - |
| - | EXCEPTION: Steps 9a1 to 9a2 describe the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value | - | - | - | - |
| 9a1 | IF Test Mode = *On* OR Test Loop Function = *On*, the SS transmits an ACTIVATE TEST MODE message to activate UE radio bearer test mode procedure. The ACTIVATE TEST MODE message is using the associated condition for the test loop. | <-- | RRC: *DLInformationTransfer*  TC: ACTIVATE TEST MODE | - | - |
| 9a2 | The UE transmits an ACTIVATE TEST MODE COMPLETE message. | --> | RRC: *ULInformationTransfer*  TC: ACTIVATE TEST MODE COMPLETE | - | - |
| 10 | The SS transmits a *SecurityModeCommand* message. | <-- | NR RRC: *SecurityModeCommand* | - | - |
| 11 | The UE transmits a *SecurityModeComplete* message. | --> | NR RRC: *SecurityModeComplete* | - | - |
| 12 | The SS transmits a *UECapabilityEnquiry* message. | <-- | NR RRC: *UECapabilityEnquiry* | - | - |
| 13 | The UE transmits a *UECapabilityInformation* message. | --> | NR RRC: *UECapabilityInformation* | - | - |
| 14 | The SS transmits a *DLInformationTransfer* message and a REGISTRATION ACCEPT message. | <-- | NR RRC: *DLInformationTransfer*  5GMM: REGISTRATION ACCEPT | - | - |
| 15 | The UE transmits an *ULInformationTransfer* message and a REGISTRATION COMPLETE message. | --> | NR RRC: *ULInformationTransfer*  5GMM: REGISTRATION COMPLETE | - | - |
| 16 | Void | - | - | - | - |
| 17 | Void | - | - | - | - |
| 18 | Void | - | - | - | - |
| - | EXCEPTION: Step 19a1 describes behaviour depending on UE implementation; the "lower case letter" identifies a step sequence that takes place if the UE performs a specific action. | - | - | - | - |
| 19a1 | IF pc\_noOf\_PDUsSameConnection > 0 THEN the generic procedure for UE-requested PDU session establishment, specified in subclause 4.5A.2, takes place performing establishment of UE-requested PDU session(s) with ExpectedNumberOfNewPDUSessions = pc\_noOf\_PDUsSameConnection. | - | - | - | - |
| 19Aa1 – 19Aa2 | Void | - | - | - | - |
| - | EXCEPTION: Steps 19Ba1 to 19Ba2 describe behaviour depending on UE implementation; the "lower case letter" identifies a step sequence that takes place if the UE performs a specific action. | - | - | - | - |
| 19Ba1 | IF pc\_noOf\_PDUsSameConnection = 0 OR pc\_noOf\_PDUsNewConnection > 0 THEN the SS transmits an *RRCRelease* message. | <-- | NR RRC: *RRCRelease* | - | - |
| 19Ba2 | Table 4.5.2.2-4 is performed to establish PDU session(s) on the new connection with ExpectedNumberOfNewPDUSessions = pc\_noOf\_PDUsNewConnection. | - | - | - | - |
| - | EXCEPTION: Steps 19Ca1 to 19Ca2 describe behaviour which depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value. | - | - | - | - |
| 19Ca1 | IF *connected without release* is *On* AND Test Loop Function=*On* THEN the SS transmits a CLOSE UE TEST LOOP message to enter the UE test loop mode. The CLOSE UE TEST LOOP is using the associated condition for the test loop. | <-- | NR RRC: *DLInformationTransfer*  TC: CLOSE UE TEST LOOP | - | - |
| 19Ca2 | The UE transmits a CLOSE UE TEST LOOP COMPLETE message to confirm that loopback entities for the radio bearer(s) have been created and loop back is activated. | --> | NR RRC: *ULInformationTransfer*  TC: CLOSE UE TEST LOOP COMPLETE | - | - |
| - | EXCEPTION: Step 20a1 depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value. | - | - | - | - |
| 20a1 | IF *connected without release* is not present THEN, the SS transmits an *RRCRelease* message. | <-- | NR RRC: *RRCRelease* | - | - |
| - | EXCEPTION: Step 20Aa1 depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value. | - | - | - | - |
| 20Aa1 | IF GNSS Sync = *On* THEN trigger UE to reset or clear the current UTC time that has been calculated from GNSS.  NOTE: The UTC time can be reset or clear on the UE using AT command (+CUTCR). | - | - | - | - |
| - | EXCEPTION: Step 21a1 and 21b1 depend on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value. | - | - | - | - |
| 21a1 | IF Sidelink = *On* AND Cast type = *Unicast* AND UE initiated unicast mode NR sidelink comunication THEN generic procedure specified in subclause 4.9.22 is performed to establish unicast mode sidelink communication between the UE and the NR-SS-UE. |  |  |  |  |
| 21b1 | ELSE IF Sidelink = *On* AND Cast type = *Unicast* AND NR-SS-UE initiated unicast mode NR sidelink comunication THEN generic procedure specified in subclause 4.9.23 is performed to establish unicast mode sidelink communication between the UE and the NR-SS-UE. |  |  |  |  |
| 22a1 | Void | - | - |  |  |

Table 4.5.2.2-3: WLAN Ipsec\_SA\_Released

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| 1 | The UE associates with the WLAN AP and obtains the local IP address. | - | - | - | - |
| 2 | The UE performs a dynamic selection of N3IWF using DNS query | - | - | - | - |
| - | Exception: The UE establishes an IPsec tunnel in parallel to 5GC registration steps 3 to 7 as per the IKEv2 protocol as defined in TS 23.502 [33] clause 4.12.2.2 figure 4.12.2.2-1. | - | - | - | - |
| 3 | The UE transmits a REGISTRATION REQUEST message. | --> | 5GMM: REGISTRATION REQUEST | - | - |
| 4 | The SS transmits an AUTHENTICATION REQUEST message including EAP-Request/AKA'-Challenge or 5G AKA Challenge. | <-- | 5GMM: AUTHENTICATION REQUEST | - | - |
| 5 | The UE transmits an AUTHENTICATION RESPONSE message including EAP-Response/AKA'-Challenge or 5G AKA Response. | --> | 5GMM: AUTHENTICATION RESPONSE | - | - |
| 6 | The SS transmits a SECURITY MODE COMMAND message including EAP-Success if EAP-AKA' used. | <-- | 5GMM: SECURITY MODE COMMAND | - | - |
| 7 | The UE transmits a SECURITY MODE COMPLETE message. | --> | 5GMM: SECURITY MODE COMPLETE | - | - |
| 8 | The SS transmits a REGISTRATION ACCEPT message. | <-- | 5GMM: REGISTRATION ACCEPT | - | - |
| 9 | The UE transmits a REGISTRATION COMPLETE message. | --> | 5GMM: REGISTRATION COMPLETE | - | - |
| 10 | The generic procedure for UE-requested PDU session establishment, specified in subclause 4.5A.2A, takes place performing establishment of UE-requested PDU session. | - | - | - | - |
| - | EXCEPTION: Step 11a1 depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 11a1 | IF *connected without release* is not present THEN generic procedure for SS-requested IPsec Secure tunnel disconnection, specified in subclause 4.5A.5, takes place performing disconnection of security association. | - | - | - | - |
| Note: The current procedure assumes UE establishes a single PDU session over Non 3GPP Access. | | | | | |

Table 4.5.2.2-4: NR RRC\_IDLE Extension

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| - | EXCEPTION: Step 0Aa1 describes behaviour depending on UE implementation; the "lower case letter" identifies a step sequence that takes place if the UE performs a specific action. | - | - | - | - |
| 0Aa1 | IF pc\_noOf\_PDUsNewConnection = 0 AND pc\_noOf\_PDUsSameConnection = 0 THEN trigger the UE to perform a PDU session establishment via AT or MMI command, and set ExpectedNumberOfNewPDUSessions = 1.  NOTE: For the DNN name in the AT command, check the default PDU type from the value of the ICS parameter pc\_APN\_Default\_Configuration and take the value of the corresponding ICS parameter. If it is set to ‘none’ then use pc\_APN\_ID\_Internet. |  |  |  |  |
| 0B | Wait for 10 sec to allow the UE to start PDU session establishment.  IF it does THEN stop the 10 sec timer and continue from step 2 onwards.  IF it does not and the 10 sec timer expires THEN go to step 0Ca1. | - | - | - | - |
| - | EXCEPTION: Step 0Ca1 depends on the UE behaviour; the "lower case letter" identifies a step sequence that takes place if the UE does not respond. | - | - | - | - |
| 0Ca1 | 10 second timer expires | - | - | - | F |
| 1a1-1b1 | Void | - | - | - | - |
| 2-6 | Steps 2-6 from Table 4.5.4.2-3 are performed. | - | - | - | - |
| - | EXCEPTION: Steps 7a1 to 7b2 describe behaviour depending on UE implementation; the "lower case letter" identifies a step sequence that takes place if the UE performs a specific action. | - | - | - | - |
| 7a1 | IF pc\_noOf\_PDUsSameConnection = 0 THEN the SS transmits a SERVICE ACCEPT message. | <-- | NR RRC: *DLInformationTransfer*  5GMM: SERVICE ACCEPT | - | - |
| 7b1 | ELSE the SS transmits an RRCReconfiguration message and a SERVICE ACCEPT message to establish SRB2 and DRB(s).  The RRCReconfiguration message is configured using RRCReconfiguration-SRB2-DRB(n, m) where n and m are the number of DRB(s) configured with RLC-AM and RLC-UM respectively. | <-- | NR RRC: RRCReconfiguration  5GMM: SERVICE ACCEPT | - | - |
| 7b2 | The UE transmits an RRCReconfigurationComplete message. | --> | NR RRC: RRCReconfigurationComplete | - | - |
| 8 | The generic procedure for UE-requested PDU session establishment, specified in subclause 4.5A.2, takes place performing establishment of ExpectedNumberOfNewPDUSessions of PDU session(s) | - | - | - | - |

Table 4.5.2.2-5: E-UTRA RRC\_IDLE Unrestricted nr PDN

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| 1-9a2 | Steps 1 to 9a2 of the generic procedure for UE Registration (State 2) as specified in TS 36.508 [2], table 4.5.2.3-1 take place. | - | - | - | - |
| - | EXCEPTION: Steps 10a1 to 10b8 describe behaviour which depends on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value. | - | - | - | - |
| 10a1-10a8 | IF Test Mode = On OR Test Loop Function = On THEN steps 10-17 of the generic procedure for UE Registration, UE Test Mode Activated (State 2A) as specified in TS 36.508 [2] table 4.5.2A.3-1, take place.  The ACTIVATE TEST MODE is using the associated condition for the test loop. | - | - | - | - |
| 10b1-10b6 | ELSE steps 10-15 as defined in TS 36.508 [2], table 4.5.2.3-1 take place. | - | - | - | - |
| - | EXCEPTION: IF the 'IP address allocation' for the APN for which the PDN connection is established is set to "Yes" in Table 4.8.4-1 THEN, in parallel to the event described in step 10A below the generic procedure for IP address allocation in the U-plane specified in TS 36.508 [2], subclause 4.5A.1 takes place performing IP address allocation in the U-plane if requested by the UE. | - | - | - | - |
| - | EXCEPTION: IF the 'IMS registration' for the APN for which the PDN connection is established is set to "Yes" in Table 4.8.4-1, THEN in parallel to the event described in step 10A below the relevant generic procedure for IMS signalling in the U-plane specified in Table 4.8.4-1 takes place. | - | - | - | - |
| 10A | This message includes the ATTACH COMPLETE message. The ACTIVATE DEFAULT EPS BEARER CONTEXT ACCEPT message is piggybacked in ATTACH COMPLETE. | --> | RRC: *ULInformationTransfer*  NAS: ATTACH COMPLETE  NAS: ACTIVATE DEFAULT EPS BEARER CONTEXT ACCEPT | - | - |
| 11 | The Generic Procedure to establish multiple additional PDN connections as specified in subclause 4.5A.2B takes place, ExpectedNumberOfNewPDNConnections=pc\_noOf\_PDNsSameConnection. | - | - | - | - |
| - | EXCEPTION: Steps 11Aa1 to 11Aa2 describe behaviour which depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 11Aa1 | IF pc\_noOf\_PDNsNewConnection > 0 THEN, the SS transmits an *RRCConnectionRelease* message to release RRC connection | <-- | RRC: *RRCConnectionRelease* | - | - |
| 11Aa2 | Table 4.5.2.2-6 is performed to establish multiple additional PDN connection(s) on the new connection with ExpectedNumberOfNewPDNConnections=pc\_noOf\_PDNsNewConnection. | - | - | - | - |
| - | EXCEPTION: Steps 11Ba1 to 11Ba2 describe behaviour which depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value. | - | - | - | - |
| 11Ba1 | IF connected without release is On AND Test Loop Function=On AND pc\_noOf\_PDUsNewConnection =0 THEN the SS transmits a CLOSE UE TEST LOOP message to enter the UE test loop mode. The CLOSE UE TEST LOOP is using the associated condition for the test loop. | <-- | RRC: DLInformationTransfer  TC: CLOSE UE TEST LOOP | - | - |
| 11Ba2 | The UE transmits a CLOSE UE TEST LOOP COMPLETE message to confirm that loopback entities for the radio bearer(s) have been created and loop back is activated. | --> | RRC: ULInformationTransfer  TC: CLOSE UE TEST LOOP COMPLETE | - | - |
| - | EXCEPTION: Step 12a1 depends on procedure parameters; the "lower case letter" identifies a step sequence that takes place if a procedure parameter has a particular value. | - | - | - | - |
| 12a1 | IF *connected without release* is not present THEN, the SS transmits an *RRCConnectionRelease* message to release RRC connection and move to E-UTRA RRC\_IDLE (State 2). | <-- | RRC: *RRCConnectionRelease* | - | - |

Table 4.5.2.2-6: E-UTRA RRC\_IDLE Unrestricted nr PDN Extension

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| 0 | Wait for 10 sec to allow the UE to start PDN connection establishment automatically.  IF it does THEN stop the 10 sec timer and continue with the steps from step 2 onwards.  IF it does not and the 10 sec timer expires THEN go to step 1. | - | - | - | - |
| - | EXCEPTION: Step 1a1 depends on the UE behaviour; the "lower case letter" identifies a step sequence that takes place if the UE does not respond | - | - | - | - |
| 1a1 | 10 second timer expires | - | - | - | F |
| 1b1 | Void | - | - | - | - |
| 2-6 | Steps 3 to 7 of the generic procedure specified in TS 36.508 [2], table 4.5.3.3-1 take place. | - | - | - | - |
| 7 | The Generic Procedure to establish multiple additional PDN connections as specified in subclause 4.5A.2B takes place, ExpectedNumberOfNewPDNConnections=pc\_noOf\_PDNsNewConnection. | - | - | - | - |

#### 4.5.2.3 Specific message contents

All specific message contents shall be according clause 4.6 and 4.7 and TS 36.508 [2] clause 4.6 and 4.7 with the following exception(s).

Table 4.5.2.3-1: SECURITY MODE COMMAND (Step 9Aa1, Table 4.5.2.2-2)

|  |
| --- |
| Derivation path: Table 4.7.1-25 with condition UE\_S1\_SUPPORTED |

Table 4.5.2.3-2: SERVICE REQUEST (Step 4, Table 4.5.2.2-4)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.7.1-16. | | | |
| Information Element | Value/remark | Comment | Condition |
| Service type | ‘0000’B | signalling |  |

Table 4.5.2.3-3: Message PDN CONNECTIVITY REQUEST (step 4, Table 4.5.2.2-5)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation path: TS 36.508 [2], Table 4.7.3-20. | | | |
| Information Element | Value/Remark | Comment | Condition |
| Access point name | Not present or One of the provided APN(s) in the Table 4.8.4-1 | If present, the SS shall initialise the APN\_Default=False  If not present NOTE 2 |  |
| NOTE 1: Unless explicitly specified otherwise, the SS uses the Access point name value to address the entry of Table 4.8.4-1 to be used for the subsequent signalling of the PDN connectivity establishment and verifying specific UE behaviour e.g. depending on the type of the APN the UE may perform some actions.  NOTE 2: The SS uses pc\_APN\_Default\_Configuration to address the entry of Table 4.8.4-1 to be used for the subsequent signalling of the PDN connectivity establishment. | | | |

Table 4.5.2.3-4: Message ESM INFORMATION RESPONSE (step 9a2, Table 4.5.2.2-5)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation path: TS 36.508 [2], Table 4.7.3-14. | | | |
| Information Element | Value/Remark | Comment | Condition |
| Access point name | Not present or One of the provided APN(s) in the Table 4.8.4-1 | If present, the SS shall initialise the APN\_Default=False  If not present NOTE 2 |  |
| NOTE 1: Unless explicitly specified otherwise, the SS uses the Access point name value to address the entry of Table 4.8.4-1 to be used for the subsequent signalling of the PDN connectivity establishment and verifying specific UE behaviour e.g. depending on the type of the APN the UE may perform some actions.  NOTE 2: The SS uses pc\_APN\_Default\_Configuration to address the entry of Table 4.8.4-1 to be used for the subsequent signalling of the PDN connectivity establishment. | | | |

Table 4.5.2.3-5: Message ACTIVATE DEFAULT EPS BEARER CONTEXT REQUEST (Steps 10a5, 10b7, Table 4.5.2.2-5)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation path: TS 36.508 [2], Table 4.7.3-6 with CONDITION Interworking\_with\_5GS. | | | |
| Information Element | Value/Remark | Comment | Condition |
| EPS QoS | The EPC default bearer context of the entry in Table 4.8.4-1 which has been determined at step 1 |  |  |
| Access point name | IF the UE provided an Access point name in step 1 THEN the SS returns this name;  OTHERWISE the SS includes the DNN/APN ID value of the entry in Table 4.8.4-1 which has been determined at step 1. |  |  |
| Container ID n+3 | '001C'H |  |  |
| Length of container ID n+3 contents |  |  |  |
| Container ID n+3 contents | 5GC QoS rule of the entry in Table 4.8.4-1 which has been determined at step 1 |  |  |
| Container ID n+4 | '001F'H |  |  |
| Length of container ID n+4 contents |  |  |  |
| Container ID n+4 contents | As per the relevant QoS rule (Container ID n+3) |  |  |

### 4.5.3 RRC\_INACTIVE

#### 4.5.3.1 Initiation

The SS shall:

1> if connectivity is *NR*

2> use 1 NR cell, default parameters;

2> perform according to the table 4.5.3.2-1: NR RRC\_INACTIVE;

#### 4.5.3.2 Procedures

Table 4.5.3.2-1: NR RRC\_INACTIVE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| 1-19 Ab9 | Void | - | - | - | - |
| 19B-19TCa2 | Steps 1 to 19Ca2 of the NR RRC Idle procedure specified in table 4.5.2.2-2 take place | - | - | - | - |
| 20 | The SS transmits an RRCRelease message with suspend. | <-- | NR RRC: *RRCRelease* | - | - |

### 4.5.4 RRC\_CONNECTED

#### 4.5.4.1 Initiation

The SS shall:

1> perform according to clause 4.5.2 RRC\_IDLE;

1> if connectivity is *EN-DC*:

2> use 1 E-UTRA cell and 1 NR cell, default parameters;

2> if connected without release is *On*:

3> perform according to the table 4.5.4.2-2: RF E-UTRA RRC\_CONNECTED;

2> else:

3> perform according to the table 4.5.4.2-1: E-UTRA RRC\_CONNECTED;

1> if connectivity is *E-UTRA/EPC*:

2> use 1 E-UTRA cell, default parameters;

2> perform according to the table 4.5.4.2-1: E-UTRA RRC\_CONNECTED;

1> if connectivity is *NR*:

2> use 1 NR cell, default parameters;

2> if sidelink is *On*

3> use 1 NR-SS-UE;

3> if GNSS Sync is *On*

4> use 1 GNSS simulator.

2> if connected without release is not present:

3> perform according to the table 4.5.4.2-3: NR RRC\_CONNECTED;

1> if connectivity is *WLAN*:

2> use 1 WLAN cell, default parameters;

2> if connected without release is not present:

3> perform according to the table 4.5.4.2-4: WLAN IPsec\_SA\_Established;

2> else:

3> Not defined;

1> if connectivity is *NR-DC*:

2> use 2 NR cells, default parameters;

2> perform according to the table 4.5.4.2-5: NR-DC RRC\_CONNECTED;

1> if connectivity is *NE-DC*:

2> use 1 E-UTRA cell and 1 NR cell, default parameters;

2> perform according to the table 4.5.4.2-6: NE-DC RRC\_CONNECTED;

#### 4.5.4.2 Procedures

Table 4.5.4.2-1: E-UTRA RRC\_CONNECTED

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **St** | **Procedure** | **Message Sequence** | | **TP** | **Verdict** |
|  |  | **U - S** | **Message** |  |  |
| 1-6 | Same as TS 36.508 [2] table 4.5.3.3-1, steps 2-7. | - | - | - | - |
| 7 | Same as TS 36.508 [2] table 4.5.3.3-1, step 8.  The *RRCConnectionReconfiguration* is using condition EN-DC\_SRB2-DRB for connectivity *EN-DC* and bearers *MCG(s) and SCG* or connectivity *E-UTRA/EPC*. The *RRCConnectionReconfiguration* is using an associated condition MCG\_and\_SCG for bearers *MCG(s) and SCG or* condition MCG\_and\_split for bearers *MCG(s) and split.* For connectivity *E-UTRA/EPC* there’s no associated condition. | <-- | *RRC: RRCConnectionReconfiguration*  NAS:  ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST | - | - |
| - | EXCEPTION: IF *MCG(s) and SCG* or *MCG(s) and split*. In parallel to steps 8-9 the UE performs a C-RNTI based Contention Based Random Access (CBRA) procedure on the NR cell. | - | - | - | - |
| 8-9 | Same as TS 36.508 [2] table 4.5.3.3-1, steps 9-10a1 | - | - | - | - |
| 10a1-10a2 | IF Test Loop Function=*On,* same as TS 36.508 [2] table 4.5.4.3-1, steps 1-2.  The CLOSE UE TEST LOOP is using the associated condition for the test loop. | - | - | - | - |

Table 4.5.4.2-2: RF E-UTRA RRC\_CONNECTED

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **St** | **Procedure** | **Message Sequence** | | **TP** | **Verdict** |
|  |  | **U - S** | **Message** |  |  |
| 1-9 | Same as table 4.5.2.2-1, steps 1-9. | - | - | - | - |
| 10a1-10a2 | IF Test Mode = *On* OR Test Loop Function = *On* THENsame as TS 36.508 [2] table 4.5.2A.3-1, steps 10-11.  The ACTIVATE TEST MODE is using the associated condition for the test loop. | - | - | - | - |
| - | EXCEPTION: Steps 11a1 to 11b8 describe the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 11a1-11a8 | IF Test Mode = *On* OR Test Loop Function = *On* THEN same as TS 36.508 [2] table 4.5.2A.3-1, steps 12-18. | - | - | - | - |
| 11b1-11b8 | ELSE, same as TS 36.508 [2] table 4.5.2.3-1, steps 10-16. | - | - | - | - |
| 12 | The SS transmits an *RRCConnectionReconfiguration* for connectivity *EN-DC* and bearers *MCG(s) and SCG*. The *RRCConnectionReconfiguration* is using an associated condition MCG\_and\_SCG for bearers *MCG(s) and SCG or* condition MCG\_and\_split for bearers *MCG(s) and split.* | <-- | RRC: RRCConnectionReconfiguration  NAS:  ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST | - | - |
| - | EXCEPTION: In parallel to steps 13-14 the UE performs a C-RNTI based Contention Based Random Access (CBRA) procedure on the NR cell. | - | - | - | - |
| - | EXCEPTION: the steps 13 and 14 happen in any order. | - | - | - | - |
| 13 | The UE transmits an *RRCConnectionReconfigurationComplete* | --> | RRC: RRCConnectionReconfigurationComplete |  |  |
| 14 | The UE transmits an ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT message | --> | RRC: ULInformationTransfer  NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT |  |  |
| 15a1-15a2 | IF Test Loop Function=*On,* same as TS 36.508 [2] table 4.5.4.3-1, steps 1-2.  The CLOSE UE TEST LOOP is using the associated condition for the test loop. | - | - | - | - |

Table 4.5.4.2-3: NR RRC\_CONNECTED

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **St** | **Procedure** | **Message Sequence** | | **TP** | **Verdict** |
|  |  | **U - S** | **Message** |  |  |
| 1 | The SS transmits a *Paging* message. | <-- | NR RRC: *Paging* | - | - |
| 2 | The UE transmits an *RRCSetupRequest* message. | --> | NR RRC: *RRCSetupRequest* | - | - |
| 3 | The SS transmits an *RRCSetup* message. | <-- | NR RRC: *RRCSetup* | - | - |
| 4 | The UE transmits an *RRCSetupComplete* message and a SERVICE REQUEST message. | --> | NR RRC: *RRCSetupComplete*  5GMM: SERVICE REQUEST | - | - |
| 5 | The SS transmits a *SecurityModeCommand* message. | <-- | NR RRC: *SecurityModeCommand* | - | - |
| 6 | The UE transmits a *SecurityModeComplete* message. | --> | NR RRC: *SecurityModeComplete* | - | - |
| 7 | The SS transmits an *RRCReconfiguration* message and a SERVICE ACCEPT message to establish SRB2 and DRB(s).  The RRCReconfiguration message is configured using RRCReconfiguration-SRB2-DRB(n, m) where n and m are the number of DRB(s) configured with RLC-AM and RLC-UM respectively. | <-- | NR RRC: *RRCReconfiguration*  5GMM: SERVICE ACCEPT | - | - |
| 8 | The UE transmits an *RRCReconfigurationComplete* message. | --> | NR RRC: *RRCReconfigurationComplete* | - | - |
| - | EXCEPTION: Steps 9a1 to 9a2 describe behaviour which depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 9a1 | IF Test Loop Function=*On,* the SS transmits a CLOSE UE TEST LOOP message to enter the UE test loop mode. The CLOSE UE TEST LOOP is using the associated condition for the test loop. | <-- | NR RRC: *DLInformationTransfer*  TC: CLOSE UE TEST LOOP | - | - |
| 9a2 | The UE transmits a CLOSE UE TEST LOOP COMPLETE message to confirm that loopback entities for the radio bearer(s) have been created and loop back is activated. | --> | NR RRC: *ULInformationTransfer*  TC: CLOSE UE TEST LOOP COMPLETE | - | - |

Table 4.5.4.2-4: WLAN IPsec\_SA\_Established

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **St** | **Procedure** | **Message Sequence** | | **TP** | **Verdict** |
|  |  | **U - S** | **Message** |  |  |
| 1 | Trigger UE to initiate IPSec SA. | - | - | - | - |
| 2 | The generic procedure for UE-requested IPsec Secure tunnel establishment, specified in subclause 4.5A.64, takes place performing establishment of security association and one child security association. | - | - | - | - |

Table 4.5.4.2-5: NR-DC RRC\_CONNECTED

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **St** | **Procedure** | **Message Sequence** | | **TP** | **Verdict** |
|  |  | **U - S** | **Message** |  |  |
| 1-8 | Same as table 4.5.4.2-3, steps 1-8. | - | - | - | - |
| 8A | The SS transmits an *RRCReconfiguration* message and a PDU SESSION MODIFICATION COMMAND to add a new SCG DRB or a new split DRB | <-- | NR RRC: *RRCReconfiguration* 5GMM: DL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMMAND | - | - |
| - | EXCEPTION: In parallel to steps 8B and 8C the UE performs a C-RNTI based Contention Based Random Access (CBRA) procedure on the PSCell. | - | - | - | - |
| - | EXCEPTION: Depending upon UE implementation, step 8B and 8C can occur in any order | - | - | - | - |
| 8B | The UE transmits an *RRCReconfigurationComplete* message including nr-SCG-Response. | --> | NR RRC: *RRCReconfigurationComplete* | - | - |
| 8C | The UE transmits a *ULInformationTransfer* message and an PDU SESSION MODIFICATION COMPLETE message. | --> | NR RRC: ULInformationTransfer  5GMM: UL NAS TRANSPORT  5GSM: PDU SESSION MODIFICATION COMPLETE | **-** | - |
| - | EXCEPTION: Steps 9a1 to 9a2 describe behaviour which depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 9a1 | IF Test Loop Function=*On,* the SS transmits a CLOSE UE TEST LOOP message to enter the UE test loop mode. The CLOSE UE TEST LOOP is using the associated condition for the test loop. | <-- | NR RRC: *DLInformationTransfer*  TC: CLOSE UE TEST LOOP | - | - |
| 9a2 | The UE transmits a CLOSE UE TEST LOOP COMPLETE message to confirm that loopback entities for the radio bearer(s) have been created and loop back is activated. | --> | NR RRC: *ULInformationTransfer*  TC: CLOSE UE TEST LOOP COMPLETE | - | - |

Table 4.5.4.2-6: NE-DC RRC\_CONNECTED

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **St** | **Procedure** | **Message Sequence** | | **TP** | **Verdict** |
|  |  | **U - S** | **Message** |  |  |
| 1-8 | Same as table 4.5.4.2-3, steps 1-8. | - | - | - | - |
| 8A | The SS transmits an *RRCReconfiguration* message and a PDU SESSION MODIFICATION COMMAND to add a new SCG DRB or a new split DRB | <-- | NR RRC: *RRCReconfiguration* 5GMM: DL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMMAND | - | - |
| - | EXCEPTION: In parallel to steps 8B and 8C the UE performs a C-RNTI based Contention Free Random Access (CFRA) procedure on the PSCell. | - | - | - | - |
| 8B | The UE transmits an *RRCReconfigurationComplete* message including eutra-SCG-Response. | --> | NR RRC: *RRCReconfigurationComplete* | - | - |
| 8C | The UE transmits a *ULInformationTransfer* message and an PDU SESSION MODIFICATION COMPLETE message. | --> | NR RRC: ULInformationTransfer  5GMM: UL NAS TRANSPORT  5GSM: PDU SESSION MODIFICATION COMPLETE | **-** | - |
| - | EXCEPTION: Steps 9a1 to 9a2 describe behaviour which depends on the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 9a1 | IF Test Loop Function=*On,* the SS transmits a CLOSE UE TEST LOOP message to enter the UE test loop mode. The CLOSE UE TEST LOOP is using the associated condition for the test loop. | <-- | NR RRC: *DLInformationTransfer*  TC: CLOSE UE TEST LOOP | - | - |
| 9a2 | The UE transmits a CLOSE UE TEST LOOP COMPLETE message to confirm that loopback entities for the radio bearer(s) have been created and loop back is activated. | --> | NR RRC: *ULInformationTransfer*  TC: CLOSE UE TEST LOOP COMPLETE | - | - |

#### 4.5.4.3 Specific message contents

All specific message contents shall be according clause 4.6 and 4.7 and TS 36.508 [2] clause 4.6 and 4.7 with the exceptions below.

Table 4.5.4.3-0: *RRCConnectionReconfiguration* (step 7, Table 4.5.4.2-1)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: 36.508 table 4.6.1-8 | | | |
| Information Element | | Value/remark | Comment | Condition |
| RRCConnectionReconfiguration ::= SEQUENCE { | |  |  |  |
| criticalExtensions CHOICE { | |  |  |  |
| c1 CHOICE { | |  |  |  |
| rrcConnectionReconfiguration-r8 SEQUENCE { | |  |  |  |
| dedicatedInfoNASList | | Not present | no NAS message |  |
| dedicatedInfoNASList SEQUENCE (SIZE(1..maxDRB)) OF | | 1 entry |  | MCG\_and\_SCG OR MCG\_and\_split |
| dedicatedInfoNAS [1] | | OCTET STRING including ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST | according to table 4.5.4.3-1 |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |

Table 4.5.4.3-1: Message ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST (step 7, Table 4.5.4.2-1)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation path: TS 36.508 [2] Table 4.7.3-3 | | | |
| Information Element | Value/Remark | Comment | Condition |
| Linked EPS bearer identity | 12 |  |  |
| EPS QoS | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| TFT | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Negotiated QoS | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Negotiated LLC SAPI | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Radio priority | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Protocol configuration options | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Extended protocol configuration options | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |

Table 4.5.4.3-1A: *RRCConnectionReconfiguration* (step 12, Table 4.5.4.2-2)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: 36.508 table 4.6.1-8 | | | |
| Information Element | | Value/remark | Comment | Condition |
| RRCConnectionReconfiguration ::= SEQUENCE { | |  |  |  |
| criticalExtensions CHOICE { | |  |  |  |
| c1 CHOICE { | |  |  |  |
| rrcConnectionReconfiguration-r8 SEQUENCE { | |  |  |  |
| dedicatedInfoNASList SEQUENCE (SIZE(1..maxDRB)) OF | | 1 entry |  |  |
| dedicatedInfoNAS [1] | | OCTET STRING including ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST | according to table 4.5.4.3-1B |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |

Table 4.5.4.3-1B: Message ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST (step 12, Table 4.5.4.2-2)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation path: TS 36.508 [2] Table 4.7.3-3 | | | |
| Information Element | Value/Remark | Comment | Condition |
| Linked EPS bearer identity | 5 |  |  |
| EPS QoS | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| TFT | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Negotiated QoS | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Negotiated LLC SAPI | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Radio priority | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Protocol configuration options | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |
| Extended protocol configuration options | According to reference dedicated EPS bearer context #6 - in TS 36.508 [2] table 6.6.2-1A |  |  |

Table 4.5.4.3-2: *RRCReconfiguration* (step 7, Table 4.5.4.2-3)

|  |
| --- |
| Derivation Path: TS 38.508-1, table 4.8.1-1B |

Table 4.5.4.3-3: *Void*

Table 4.5.4.3-4:PDU SESSION MODIFICATION COMMAND (step 8A, Table 4.5.4.2-5 and Table 4.5.4.2-6)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.7.2-9. | | | |
| Information Element | | Value/remark | Comment | Condition |
| PDU session ID | | The same as the PDU session ID in PDU SESSION ESTABLISHMENT REQUEST associated with the Internet PDU session if available or with the first PDU session |  |  |
| Authorized QoS rules | | One entry |  |  |
| QoS rule [1] | | Reference QoS rule #5 as defined in Table 4.8.2.1-5. | QFI=5 |  |
| Authorized QoS flow descriptions | | One entry |  |  |
| QoS flow [1] | | Reference QoS flow #5 as defined in Table 4.8.2.3-5. | QFI=5 |  |

Table 4.5.4.3-5: *RRCReconfiguration* (step 8A, Table 4.5.4.2-5)

|  |
| --- |
| Derivation Path: TS 38.508-1, table 4.8.1-1CA |

Table 4.5.4.3-6: *RRCReconfigurationComplete* (step 8B, Table 4.5.4.2-5)

|  |
| --- |
| Derivation Path: TS 38.508-1, table 4.6.1-14 with condition NR-DC |

Table 4.5.4.3-7: *RRCReconfiguration* (step 8A, Table 4.5.4.2-6)

|  |
| --- |
| Derivation Path: TS 38.508-1, table 4.8.1-1CB |

Table 4.5.4.3-8: *RRCReconfigurationComplete* (step 8B, Table 4.5.4.2-6)

|  |
| --- |
| Derivation Path: TS 38.508-1, table 4.6.1-14 with condition NE-DC |

### 4.5.5 SWITCHED\_OFF

4.5.5.1 Initiation

The SS shall:

1> if Test State ID=0-A:

2> Do nothing;

1> else if Test State ID=0N-B:

2> use 1 NR cell, default parameters;

2> perform the procedure according to the table 4.5.5.2-1: NR SWITCHED\_OFF\_0\_B;

1> else if Test State ID=0E-B:

2> FFS

NOTE: The procedure for State 0N-B is used as default.

4.5.5.2 Procedures

Table 4.5.5.2-1: NR SWITCHED\_OFF\_0N\_B

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **St** | **Procedure** | **Message Sequence** | | **TP** | **Verdict** |
|  |  | **U - S** | **Message** |  |  |
| 1-20 | Same as table 4.5.2.2-2, steps 1-20. | - | - | - | - |
| 21-26 | Same as table 4.9.6.1-1, steps 1a1-1b1 | - | - | - | - |

4.5.5.3 Specific message contents

All specific message contents shall be according clause 4.6 and 4.7.

NOTE: The procedure refers to default messages content. If a test case requires specific parameters to be set during the procedure e.g. list with ePLMNs or/and TAIs is stored, new or not 5G-GUTI, etc. then, this needs to be specified in the test case, which uses the procedure.

### 4.5.6 Void

### 4.5.7 Out of Coverage

#### 4.5.7.1 Initiation

The SS shall:

1> If sidelink is *On*

2> use neither NR cell nor E-UTRA cell;

2> use 1 GNSS simulator;

2> use 1 NR-SS-UE;

2> perform the procedure according to the table 4.5.7.2-1: Out of Coverage (NR sidelink).

#### 4.5.7.2 Procedures

Table 4.5.7.2-1: Out of Coverage (NR sidelink)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | TP | Verdict |
|  |  | U - S | Message |  |  |
| - | EXCEPTION: Steps 1a1 describe the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 1a1 | IF Test Mode = *On* OR Test Loop Function = *On* THEN the SS triggers UE to activate UE test mode E.  NOTE: The activation of UE test mode may be performed by MMI or AT command (+CATM). | - | - | - | - |
| 1A | Trigger UE to reset or clear the current UTC time that has been calculated from GNSS.  NOTE: The UTC time can be reset or clear on the UE using AT command (+CUTCR). | - | - | - | - |
| - | EXCEPTION: Steps 2a1 and 2b1 describe the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 2a1 | IF Cast type = *Unicast* AND UE initiated unicast mode NR sidelink comunication THEN generic procedure specified in subclause 4.9.22 is performed to establish unicast mode sidelink communication between the UE and the NR-SS-UE. |  |  |  |  |
| 2b1 | ELSE IF Cast type = *Unicast* AND NR-SS-UE initiated unicast mode NR sidelink comunication THEN generic procedure specified in subclause 4.9.23 is performed to establish unicast mode sidelink communication between the UE and the NR-SS-UE. |  |  |  |  |
| - | EXCEPTION: Steps 3a1 and 3b1 describe the SS sequence depending on procedure parameters; the "lower case letter" identifies a step sequence that take place if a procedure parameter has a particular value. | - | - | - | - |
| 3a1 | IF Test Loop Function = *On* AND the NR-SS-UE is configured as transmitting UE THEN the SS triggers UE to close UE test loop mode E (Receive Mode).  NOTE: Closing of UE test loop mode E may be performed by MMI or AT command (+CCUTLE). |  |  |  |  |
| 3b1 | IF Test Loop Function = *On* AND NR-SS-UE is configured as receiving UE AND SL MIMO ≠ *On* THEN the SS triggers UE to close UE test loop mode E (Transmit Mode).  NOTE: Closing of UE test loop mode E may be performed by MMI or AT command (+CCUTLE). |  |  |  |  |
| 3c1 | IF Test Loop Function = *On* AND NR-SS-UE is configured as receiving UE AND SL MIMO = *On* THEN the SS triggers UE to close UE test loop mode E (Transmit Mode with SL-MIMO).  NOTE: Closing of UE test loop mode E may be performed by MMI or AT command (+CCUTLE). |  |  |  |  |
| 4 | Void | - | - |  |  |

#### 4.5.7.3 Specific message contents

All specific message contents shall be according subclause 4.7B with the exceptions below.

Table 4.5.7.3-1: +CATM (Table 4.5.7.2-1, Step 1a1)

|  |
| --- |
| Derivation Path: +CATM specified in subclause 4.7B with condition Activation |

Table 4.5.7.3-2: +CCUTLE (Table 4.5.7.2-1, Step 3a1)

|  |
| --- |
| Derivation Path: Table 4.7B-1 with condition Close and Receive |

Table 4.5.7.3-3: +CCUTLE (Table 4.5.7.2-1, Step 3b1)

|  |
| --- |
| Derivation Path: Table 4.7B-1 with condition Close and Transmit |

Table 4.5.7.3-4: +CCUTLE (Table 4.5.7.2-1, Step 3c1)

|  |
| --- |
| Derivation Path: Table 4.7B-1 with condition Close, Transmit and SL\_MIMO |

### 4.5.8 Void

## 4.5A Auxiliary procedures

### 4.5A.1 General

### 4.5A.2 UE-requested PDU session establishment procedure

4.5A.2.1 Scope

The purpose of this procedure is to establish UE-requested PDU session(s).

Table 4.5A.2.1-1: Conditions and other parameters

|  |  |
| --- | --- |
| Condition | Explanation |
| ExpectedNumberOfNewPDUSessions | **Usage**: Parameter determining procedure sequence.  A value for this parameter shall be provided when the procedure is called.  Unless the test requires specific number of PDU sessions to be established the value should be either pc\_noOf\_PDUsSameConnection or pc\_noOf\_PDUsNewConnection ([23]).  **Meaning**: The number of PDU sessions which are expected to happen. Depends on the UE configuration and/or the context in which the procedure is used. |
| K | **Usage:** Parameter determining procedure sequence.  **Meaning**: The number of PDU SESSION ESTABLISHMENT REQUEST messages already processed including the one that is currently being processed. |
| L | **Usage**: Parameter determining procedure sequence.  **Meaning**: The number of PDU SESSION ESTABLISHMENT REQUEST messages being received so far. |
| N | **Usage:** Parameter determining procedure sequence.  The parameter is initialised with the value of ExpectedNumberOfNewPDUSessions  **Meaning**: Loop (step sequence repetition) control. |
| IMS\_PDU | **Usage**: Condition determining specific message contents.  **Meaning**: PDU session establishment for IMS. Whether a PDU session is for IMS is determined by the DNN/APN type of the entry in Table 4.8.4-1 which itself has been determined by the DNN IE in the UL NAS TRANSPORT message which carried the corresponding PDU SESSION ESTABLISHMENT REQUEST or by pc\_APN\_Default\_Configuration if the DNN IE was not present |

4.5A.2.2 Procedure description

4.5A.2.2.1 Initial conditions

The UE is in RRC\_CONNECTED state.

4.5A.2.2.2 Procedure sequence

Table 4.5A.2.2.2-1: PDU session establishment procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | Verdict |
|  |  | U - S | Message |  |
| 0 | Set K = 0, L = 0,  N = ExpectedNumberOfNewPDUSessions | - | - | - |
| 1 | The procedure specified in Table 4.5A.2.2.2-2 takes place. | - | - | - |
| 2 | Set K = K +1 | - | - | - |
| - | EXCEPTION: In parallel to the events described in steps 3-6a1 below the events specified in Table 4.5A.2.2.2-2 may take place. | - | - | - |
| 3 | The SS transmits an *RRCReconfiguration* message and an PDU SESSION ESTABLISHMENT ACCEPT | <-- | NR RRC: *RRCReconfiguration*  5GMM: DL NAS TRANSPORT  5GSM: PDU SESSION ESTABLISHMENT ACCEPT | - |
| 4 | The UE transmits an *RRCReconfigurationComplete* message. | --> | NR RRC: *RRCReconfigurationComplete* | - |
| - | EXCEPTION: Step 5a1 describes behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 5a1 | IF the 'IP address allocation' for the DNN for which the PDU session is established is set to "Yes" in Table 4.8.4-1 THEN, the generic procedure for IP address allocation in the user plane, specified in subclause 4.5A.3, takes place performing IP address allocation in the user plane. | - | - | - |
| - | EXCEPTION: Step 6a1 describes behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 6a1 | IF the 'IMS registration' for the DNN for which the PDU session is established is set to "Yes" in Table 4.8.4-1, THEN the generic procedure for IMS signalling in the U-plane specified in subclause 4.5A.4 takes place. | - | - | - |
| - | EXCEPTION: Steps 7a1 to 7b2 describe behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 7a1 | IF L > K (NOTE 1) THEN repeat from step 2 | - | - | - |
| 7b1 | ELSE IF K < N (NOTE 2) THEN repeat from step 1. | - | - | - |
| NOTE 1: One (or more) further PDU SESSION ESTABLISHMENT REQUEST message has been received in parallel.  NOTE 2: Less PDU SESSION ESTABLISHMENT REQUEST messages than expected have been received and processed so far -> further request are expected from the UE. | | | | |

Table 4.5A.2.2.2-2: Reception of PDU SESSION ESTABLISHMENT REQUEST message

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | Verdict |
|  |  | U – S | Message |  |
| 1 | Start Wait\_Timer = 8 sec.  NOTE: 8s were chosen to cater for T3540 being set to 10s. | - | - | - |
| - | EXCEPTION: Steps 2a1 to 2b1 describe behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 2a1 | The UE transmits an *ULInformationTransfer* message and a PDU SESSION ESTABLISHMENT REQUEST | --> | NR RRC: *ULInformationTransfer*  5GMM: UL NAS TRANSPORT  5GSM: PDU SESSION ESTABLISHMENT REQUEST | - |
| 2a2 | Stop Wait\_Timer. | - | - | - |
| 2a3 | Set L = L +1. | - | - | - |
| 2a4 | Check: Does the L>N?  (NOTE 1) | - | - | F |
| 2b1 | Check: Does Wait\_Timer expire?  (NOTE 2) | - | - | F |
| NOTE 1: The SS shall raise a fail verdict when there are more PDU SESSION ESTABLISHMENT REQUEST messages than expected and terminate the test. The reason for such a behaviour can be e.g. wrongly set IXIT with which the ExpectedNumberOfNewPDNConnections was initiated,  NOTE 2: Unless this is specified explicitly otherwise e.g. in a test procedure which calls the procedure specified in the present table, the SS shall raise a fail verdict when there are less PDN CONNECTIVITY REQUEST messages than expected received at this point and terminate the test. The reason for such a behaviour can be e.g. wrongly set PICS with which the ExpectedNumberOfNewPDUSessions was initiated. | | | | |

4.5A.2.2.3 Specific message contents

All specific message contents shall be according clause 4.6 and 4.7 with the exceptions below.

Table 4.5A.2.2.3-1: *RRCReconfiguration* (step 3, Table 4.5A.2.2.2-1)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.6.1-13 and condition NR if SRB2 is not yet established | | | |
| Information Element | | Value/remark | Comment | Condition |
| RRCReconfiguration ::= SEQUENCE { | |  |  |  |
| criticalExtensions CHOICE { | |  |  |  |
| rrcReconfiguration ::= SEQUENCE { | |  |  |  |
| radioBearerConfig | | RadioBearerConfig with conditions SRB2 and DRB2 |  | NOT IMS\_PDU |
|  | |  |  |  |
| nonCriticalExtension SEQUENCE { | |  |  |  |
| masterCellGroup | | CellGroupConfig with condition SRB2\_DRB2 |  | NOT IMS\_PDU |
| dedicatedNAS-MessageList SEQUENCE (SIZE(1..maxDRB)) OF DedicatedNAS-Message {} | | DedicatedNAS-Message |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |

Table 4.5A.2.2.3-2: *RRCReconfiguration* (step 3, Table 4.5A.2.2.2-1)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.6.1-13 and condition NR if SRB2 is already established | | | |
| Information Element | | Value/remark | Comment | Condition |
| RRCReconfiguration ::= SEQUENCE { | |  |  |  |
| criticalExtensions CHOICE { | |  |  |  |
| rrcReconfiguration ::= SEQUENCE { | |  |  |  |
| radioBearerConfig | | RadioBearerConfig with condition DRBn | n is chosen as the next available number higher or equal to 2 |  |
|  | | RadioBearerConfig with condition DRB1 |  | IMS\_PDU |
| nonCriticalExtension SEQUENCE { | |  |  |  |
| masterCellGroup | | CellGroupConfig with condition DRBn | n is set to the same value as for the radioBearerConfig IE above |  |
|  | | CellGroupConfig with condition DRB1 |  | IMS\_PDU |
| dedicatedNAS-MessageList SEQUENCE (SIZE(1..maxDRB)) OF DedicatedNAS-Message {} | | DedicatedNAS-Message |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |

### 4.5A.2A UE-requested PDU session establishment procedure over Non 3GPP Access

4.5A.2A.1 Scope

The purpose of this procedure is to establish UE-requested PDU session.

4.5A.2A.2 Procedure description

4.5A.2A.2.1 Initial conditions

The UE has established an IPsec security association

4.5A.2A.2.2 Procedure sequence

Table 4.5A.2A.2.2-1: PDU session establishment procedure over Non 3GPP Access

|  |  |  |  |
| --- | --- | --- | --- |
| St | Procedure | Message Sequence | |
|  |  | U – S | Message |
| 1 | The UE transmits a PDU SESSION ESTABLISHMENT REQUEST | --> | 5GMM: UL NAS TRANSPORT  5GSM: PDU SESSION ESTABLISHMENT REQUEST |
| 2 | The SS establishes an IPSec child security association according to the IKEv2 specification in RFC 7296 [34] |  |  |
| 3 | The SS transmits an PDU SESSION ESTABLISHMENT ACCEPT | <-- | 5GMM: DL NAS TRANSPORT  5GSM: PDU SESSION ESTABLISHMENT ACCEPT |
| Note 1: The current procedure assumes UE establishes a single PDU session over Non 3GPP Access. | | | |

4.5A.2A.3 Specific message contents

None

### 4.5A.2B Procedure to establish multiple additional PDN connections in S1

4.5A.2B.1 Scope

The present procedure is intended for test scenarios where it is desirable, due to the tested requirements (e.g. intersystem change between S1 and N1 mode), to allow the UE to set up as many as it may want, and in any order, PDN connections after the first PDN connection is established during the ATTACH to EPS procedure (i.e. when the UE is operating in S1 mode).

Table 4.5A.2B.1-1: Conditions and other parameters

|  |  |
| --- | --- |
| Condition | Explanation |
| ExpectedNumberOfNewPDNConnections | **Usage**: Parameter determining procedure sequence.  A value for this parameter shall be provided when the procedure is called.  Unless the test requires specific number of PDN connections to be established the value should be either pc\_noOf\_PDNsSameConnection or pc\_noOf\_PDNsNewConnection ([19]).  **Meaning**: The number of PDN connections which are expected to happen. Depends on the UE configuration and/or the context in which the procedure is used. |
| K | **Usage:** Parameter determining procedure sequence.  **Meaning**: The number of PDN CONNECTIVITY REQUEST messages already processed including the one that is currently being processed. |
| L | **Usage**: Parameter determining procedure sequence.  **Meaning**: The number of PDN CONNECTIVITY REQUEST messages being received so far. |
| N | **Usage:** Parameter determining procedure sequence.  The parameter is initialised with the value of ExpectedNumberOfNewPDNConnections  **Meaning**: Loop (step sequence repetition) control. |

4.5A.2B.2 Procedure description

4.5A.2B.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

- The procedure shall be performed under ideal radio conditions as defined in clause 5.

User Equipment:

- The UE is in Registered, RRC\_CONNECTED state (State 2).

The default system information messages are used.

4.5A.2B.2.2 Procedure sequence

Table 4.5A.2B.2.2-1: Establishment of additional PDN connectivity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | Verdict |
|  |  | U - S | Message |  |
| 0 | Set K = 0, L = 0,  N = ExpectedNumberOfNewPDNConnections | - | - | - |
| 1 | The procedure specified in Table 4.5A.2B.2.2-2 takes place. | - | - | - |
| 2 | Set K = K +1. | - | - | - |
| - | EXCEPTION: In parallel to the events described in steps 3-6a1 below the events specified in Table 4.5A.2B.2.2-2 may take place. | - | - | - |
| 3-4 | Step 2-3 as defined in TS 36.508 [2], Table 4.5A.16.3-1, Generic Test Procedure to establish additional PDN connectivity take place. | - | - | - |
| - | EXCEPTION: IF the 'IP address allocation' for the APN for which the PDN connection is established is set to "Yes" in Table 4.8.4-1 THEN, in parallel to the event described in step 5 below the generic procedure for IP address allocation in the U-plane specified in TS 36.508 [2], subclause 4.5A.1 takes place performing IP address allocation in the U-plane if requested by the UE. | - | - | - |
| - | EXCEPTION: IF the 'IMS registration' for the APN for which the PDN connection is established is set to "Yes" in Table 4.8.4-1, THEN in parallel to the event described in step 5 below the relevant generic procedure for IMS signalling in the U-plane specified in Table 4.8.4-1 takes place. | - | - | - |
| 5 | Step 4 as defined in TS 36.508 [2], Table 4.5A.16.3-1, Generic Test Procedure to establish additional PDN connectivity takes place. | - | - | - |
| - | EXCEPTION: Steps 6a1 to 6b1 describe behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 6a1 | IF L > K (NOTE 1) THEN repeat from step 2. | - | - | - |
| 6b1 | ELSE IF K < N (NOTE 2) THEN repeat from step 1. | - | - | - |
| NOTE 1: One (or more) further PDN CONNECTIVITY REQUEST message has been received in parallel.  NOTE 2: Less PDN CONNECTIVITY REQUEST messages than expected have been received and processed so far and consequently further requests are expected from the UE. | | | | |

Table 4.5A.2B.2.2-2: Reception of PDN CONNECTIVITY REQUEST message

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | Verdict |
|  |  | U - S | Message |  |
| 1 | Start Wait\_Timer = 10 sec.  NOTE: 10 sec is an arbitrary value. | - | - | - |
| - | EXCEPTION: Steps 2a1 to 2b1 describe behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 2a1 | Step 1 as defined in Table 4.5A.16.3-1, specified in TS 36.508 [2], subclause 4.5A.16 Generic Test Procedure to establish additional PDN connectivity takes place.  The UE transmits a PDN CONNECTIVITY REQUEST message to request an additional PDN. | --> | PDN CONNECTIVITY REQUEST | - |
| 2a2 | Stop Wait\_Timer. | - | - | - |
| 2a3 | Set L = L +1. | - | - | - |
| 2a4 | Check: Does the L>N?  (NOTE 1) | - | - | F |
| 2b1 | Check: Does Wait\_Timer expire?  (NOTE 2) | - | - | F |
| NOTE 1: The SS shall raise a fail verdict when there are more PDN CONNECTIVITY REQUEST messages received than expected (L>N) and terminate the test. The reason for such a behaviour can be e.g. wrongly set PICS with which the ExpectedNumberOfNewPDNConnections was initiated,  NOTE 2: Unless this is specified explicitly otherwise, e.g. in a test procedure which calls the procedure specified in the present table, the SS shall raise a fail verdict when there are less PDN CONNECTIVITY REQUEST messages than expected received at this point (note that when this procedure is called from the main behaviour K < N). The reason for such a behaviour can be e.g. wrongly set PICS with which the ExpectedNumberOfNewPDNConnections was initiated. | | | | |

#### 4.5A.2B.3 Specific message contents

All specific message contents shall be referred to TS 36.508 [2] subclauses 4.6 and 4.7 with the exceptions specified below.

Table 4.5A.2B.3-1: Message PDN CONNECTIVITY REQUEST (step 2a1, Table 4.5A.2B.2.2-2)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation path: TS 36.508 [2], Table 4.7.3-20. | | | |
| Information Element | Value/Remark | Comment | Condition |
| Access point name | Not present or One of the provided APN(s) in the Table 4.8.4-1 | If present, the SS shall initialise the APN\_Default=False  If not present NOTE 2 |  |
| NOTE 1: Unless explicitly specified otherwise, the SS uses the Access point name value to address the entry of Table 4.8.4-1 to be used for the subsequent signalling of the PDN connectivity establishment and verifying specific UE behaviour e.g. depending on the type of the APN the UE may perform some actions.  NOTE 2: The SS uses pc\_APN\_Default\_Configuration to address the entry of Table 4.8.4-1 to be used for the subsequent signalling of the PDN connectivity establishment. | | | |

Table 4.5A.2B.3-2: Message ACTIVATE DEFAULT EPS BEARER CONTEXT REQUEST (step 3, Table 4.5A.2B.2.2-1; Step 2, Table 4.5A.16.3-1 TS 36.508 [2])

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation path: TS 36.508 [2], Table 4.7.3-6 with CONDITION Interworking\_with\_5GS. | | | |
| Information Element | Value/Remark | Comment | Condition |
| EPS QoS | The EPC default bearer context of the entry in Table 4.8.4-1 which has been determined at step 1 |  |  |
| Access point name | IF the UE provided an Access point name in step 1 THEN the SS returns this name;  OTHERWISE the SS includes the DNN/APN ID value of the entry in Table 4.8.4-1 which has been determined at step 1. |  |  |
| Container ID n+3 | '001C'H |  |  |
| Length of container ID n+3 contents |  |  |  |
| Container ID n+3 contents | 5GC QoS rule of the entry in Table 4.8.4-1 which has been determined at step 1 |  |  |
| Container ID n+4 | '001F'H |  |  |
| Length of container ID n+4 contents |  |  |  |
| Container ID n+4 contents | As per the relevant QoS rule (Container ID n+3) |  |  |

### 4.5A.2C Procedure for UE-requested PDU session modification after the first S1 to N1 mode change / Single-registration mode with N26

4.5A.2C.1 Scope

The purpose of this procedure is to handle UE-requested PDU session modification after the first S1 to N1 mode change in the scenario of Single-registration mode, 'Interworking without N26 interface not supported'.

Table 4.5A.2C.1-1: Conditions and other parameters

|  |  |
| --- | --- |
| Condition | Explanation |
| ExpectedNumberOfPDUSessionModifications | **Usage**: Parameter determining procedure sequence.  A value for this parameter shall be provided when the procedure is called.  Unless the test requires specific number of PDU modifications to take place the value should be set to pc\_noOf\_PDNsSameConnection + pc\_noOf\_PDNsNewConnection +1 ([19]).  **Meaning**: The number of PDU sessions which are expected to happen. Depends on the UE configuration and/or the context in which the procedure is used. |
| K | **Usage:** Parameter determining procedure sequence.  **Meaning**: The number of PDN SESSION MODIFICATION REQUEST messages already processed including the one that is currently being processed. |
| L | **Usage**: Parameter determining procedure sequence.  **Meaning**: The number of PDN SESSION MODIFICATION REQUEST being received so far. |
| N | **Usage:** Parameter determining procedure sequence.  The parameter is initialised with the value of ExpectedNumberOfPDUSessionModifications  **Meaning**: Loop (step sequence repetition) control. |

4.5A.2C.2 Procedure description

4.5A.2C.2.1 Initial conditions

The UE is in RRC\_CONNECTED state.

4.5A.2C.2.2 Procedure sequence

Table 4.5A.2C.2.2-1: Procedure for UE-requested PDU session modification after the first S1 to N1 mode change

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | Verdict |
|  |  | U - S | Message |  |
| 0 | Set K = 0, L = 0,  N = (ExpectedNumberOfPDUSessionModifications). | - | - | - |
| 1 | The procedure specified in Table 4.5A.2C.2.2-2 takes place. | - | - | - |
| 2 | Set K = K +1. | - | - | - |
| - | EXCEPTION: In parallel to the events described in steps 3-5a1 below the events specified in Table 4.5A.2C.2.2-2 may take place. | - | - | - |
| 3 | The SS transmits a *RRCReconfiguration* message and a PDU SESSION MODIFICATION COMMAND. | <-- | NR RRC:  *RRCReconfiguration*  5GMM: DL NAS TRANSPORT  5GSM: PDU SESSION MODIFICATION COMMAND | - |
| - | EXCEPTION: Depending upon UE implementation, step 4 and 4A can occur in any order | - | - | - |
| 4 | The UE transmits a *RRCReconfigurationComplete* message. | --> | NR RRC:  *RRCReconfigurationComplete* | - |
| 4A | The UE transmits a PDU SESSION MODIFICATION COMPLETE message. | --> | 5GMM: UL NAS TRANSPORT  5GSM: PDU SESSION MODIFICATION COMPLETE |  |
| - | EXCEPTION: Steps 5a1 to 5b1 describe behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 5a1 | IF L > K (NOTE 1) THEN repeat from step 2. | - | - | - |
| 5b1 | ELSE IF K < N (NOTE 2) THEN repeat from step 1. | - | - | - |
| NOTE 1: One (or more) further PDU SESSION MODIFICATION REQUEST message has been received in parallel.  NOTE 2: Less PDU SESSION MODIFICATION REQUEST messages than expected have been received and processed so far -> Further request are expected from the UE. | | | | |

Table 4.5A.2C.2.2-2: Reception of PDU SESSION MODIFICATION REQUEST message

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| St | Procedure | Message Sequence | | Verdict |
|  |  | U - S | Message |  |
| 1 | Start Wait\_Timer = 8 sec.  NOTE: 8s were chosen to cater for T3540 being set to 10s. | - | - | - |
| - | EXCEPTION: Steps 2a1 to 2b1 describe behaviour depending UE implementation; the "lower case letter" identifies a step sequence that take place if the UE performs a specific action. | - | - | - |
| 2a1 | The UE transmits an *ULInformationTransfer* message and a PDU SESSION MODIFICATION REQUEST with PDU session ID which has been associated with a default EPS bearer set up during the UE operation in S1. | --> | NR RRC: *ULInformationTransfer*  5GSM: PDU SESSION MODIFICATION REQUEST | - |
| 2a2 | Stop Wait\_Timer. | - | - | - |
| 2a3 | Set L = L +1. | - | - | - |
| 2a4 | Check: Does the L>N?  (NOTE 1) | - | - | F |
| 2b1 | Check: Does Wait\_Timer expire?  (NOTE 2) | - | - | F |
| NOTE 1: The SS shall raise a fail verdict when there are more PDU SESSION MODIFICATION REQUEST messages received than expected and terminate the test. The reason for such a behaviour can be e.g. wrongly set PICS with which the ExpectedNumberOfNewPDNConnections was initiated.  NOTE 2: Unless this is specified explicitly otherwise e.g. in a test procedure which calls the procedure specified in the present table, the SS shall raise a fail verdict when there are less PDU SESSION MODIFICATION REQUEST messages than expected received at this point and terminate the test. The reason for such a behaviour can be e.g. wrongly set PICS with which the ExpectedNumberOfNewPDUSessions was initiated, | | | | |

4.5A.2C.2.3 Specific message contents

All specific message contents shall be according clause 4.6 and 4.7 with the below exceptions:

Table 4.5A.2C.2.3-1: UL NAS TRANSPORT (Step 1, Table 4.5A.2C.2.2-2)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.7.1-10. | | | |
| Information Element | | Value/remark | Comment | Condition |
| Request type | | '101'B | "modification request" |  |

Table 4.5A.2C.2.3-2: PDU SESSION MODIFICATION REQUEST (Step 1, Table 4.5A.2C.2.2-2)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.7.2-7. | | | |
| Information Element | | Value/remark | Comment | Condition |
| PDU session ID | | The PDU session ID associated with the default EPS bearer of the PDN connection which is being transferred into PDU session and for which the UE needs to indicate its capabilities via the modification procedure.  (NOTE 1) |  |  |
| 5GSM capability | | Present. Contents not checked. |  |  |
| Integrity protection maximum data rate | | Present. Contents not checked. |  |  |
| NOTE 1: The PDU session ID was provided in the ACTIVATE DEFAULT EPS BEARER CONTEXT ACCEPT when the UE attached in S1. If the UE provides here an unknown PDU session ID then the SS shall set an Inconclusive verdict. | | | | |

Table 4.5A.2C.2.3-3: *RRCReconfiguration* (step 3, Table 4.5A.2C.2.2-1)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.6.1-13 and condition NR if SRB2 is not yet established | | | |
| Information Element | | Value/remark | Comment | Condition |
| RRCReconfiguration ::= SEQUENCE { | |  |  |  |
| criticalExtensions CHOICE { | |  |  |  |
| rrcReconfiguration ::= SEQUENCE { | |  |  |  |
| radioBearerConfig | | RadioBearerConfig with conditions SRB2 and DRB2 |  | NOT IMS\_PDU |
|  | |  |  |  |
| nonCriticalExtension SEQUENCE { | |  |  |  |
| masterCellGroup | | CellGroupConfig with condition SRB2\_DRB2 |  | NOT IMS\_PDU |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |

Table 4.5A.2C.2.3-4: *RRCReconfiguration* (step 3, 4.5A.2C.2.2-1)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: Table 4.6.1-13 and condition NR if SRB2 is already established | | | |
| Information Element | | Value/remark | Comment | Condition |
| RRCReconfiguration ::= SEQUENCE { | |  |  |  |
| criticalExtensions CHOICE { | |  |  |  |
| rrcReconfiguration ::= SEQUENCE { | |  |  |  |
| radioBearerConfig | | RadioBearerConfig with condition DRBn | n is chosen as the next available number higher or equal to 2 |  |
|  | | RadioBearerConfig with condition DRB1 |  | IMS\_PDU |
| nonCriticalExtension SEQUENCE { | |  |  |  |
| masterCellGroup | | CellGroupConfig with condition DRBn | n is set to the same value as for the radioBearerConfig IE above |  |
|  | | CellGroupConfig with condition DRB1 |  | IMS\_PDU |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |
| } | |  |  |  |

### 4.5A.3 Procedure for IP address allocation in the user plane

4.5A.3.1 Scope

The purpose of this procedure is to allow the successful completion of IP address allocation if it is initiated by the UE therefore the result from the execution of the Procedure for IP address allocation in the user plane shall not lead to assignment of a verdict.

Depending on the UE configuration there may be unpredictable delay in the start of the procedure. A guarding time of 1.2 sec is suggested within which the procedure is expected to start. If the timer expires then the test procedure, from which the Procedure for IP address allocation in the user plane is called, shall advance to the next specified step.

4.5A.3.2 Procedure description

4.5A.3.2.1 Initial conditions

N/A

4.5A.3.2.2 Procedure sequence

Table 4.5A.3.2.2-1: Procedure for IP address allocation in the user plane

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Procedure | Message Sequence | |
|  |  | U - S | Message |
| - | EXCEPTION: Step 1 below and Step 1 in Table 4.5A.3.2.2-2 describe behaviour that depends on the contents of the latest PDU SESSION ESTABLISHMENT REQUEST message sent by the UE prior to this procedure. | - | - |
| - | EXCEPTION: In parallel to the event described in step 1 below the step specified in Table 4.5A.3.2.2-2 may take place. | - | - |
| 1 | If the "PDU session type" in the latest PDU SESSION ESTABLISHMENT REQUEST message prior to this procedure was 'IPv4' or 'IPv4v6' then, IPv4 address allocation by DHCPv4 may occur on the user plane bearer established for the QoS flow of the default QoS rule. | - | - |

Table 4.5A.3.2.2-2: Procedure for IP address allocation in the user plane, parallel behaviour

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Procedure | Message Sequence | |
|  |  | U - S | Message |
| 1 | If the "PDU session type" in the latest PDU SESSION ESTABLISHMENT REQUEST message prior to this procedure was 'IPv6' or 'IPv4v6' then stateless address auto configuration occurs on the user plane bearer established for the QoS flow of the default QoS rule. | - | - |

4.5A.3.2.3 Specific message contents

None

### 4.5A.4 Procedure for IMS signalling

4.5A.4.1 Scope

The purpose of this procedure is to allow the successful completion of IMS signalling.

The procedure is applicable for UEs with IMS support (TS 38.508-2 A.4.4-1/2).

4.5A.4.2 Procedure description

4.5A.4.2.1 Initial conditions

N/A

4.5A.4.2.2 Procedure sequence

Table 4.5A.4.2.2-1: Procedure for IMS signalling

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Procedure | Message Sequence | |
|  |  | U - S | Message |
| - | EXCEPTION: Steps 1a1 to 1a2b1 describe a transaction that depends on the UE capability | - | - |
| 1a1 | IF pc\_IMS\_5GS then the SS starts timer Timer\_1 = 10 s (Note 1) | - | - |
| - | EXCEPTION: Steps 1a2a1 to 1a2b1 describe a transaction that depends on the UE implementation | - | - |
| 1a2a1-1a2a8 | Registration procedure according TS 34.229-5 [47] subclause A.2 (steps 1-8).  Note: SS cancels timer Timer\_1 at step 1a2a1 | - | - |
| 1a2b1 | Timer\_1 expires | - | - |
| Note 1: Depending on the UE configuration there may be unpredictable delay in the start of the procedure. A guarding time of [10] sec is suggested within which the procedure is expected to start. If the timer expires then the test procedure, from which the Procedure for IMS signalling U-plane is called, shall advance to the next specified step | | | |

4.5A.4.2.3 Specific message contents

None

### 4.5A.5 IPsec Tunnel Disconnection in 5GC / WLAN

4.5A.5.1 Scope

The purpose of this procedure is to disconnect an Ipsec tunnel.

4.5A.5.2 Procedure description

4.5A.5.2.1 Initial conditions

The UE has established an IPsec security association

4.5A.5.2.2 Procedure sequence

Table 4.5A.5.2.2-1: IPsec Tunnel Disconnection in 5GC / WLAN

|  |  |  |  |
| --- | --- | --- | --- |
| St | Procedure | Message Sequence | |
|  |  | U – S | Message |
| 1 | The SS initiated disconnection from the existing IPsec tunnel as defined in TS 24.502 [35] clause 7.4.2 | - | - |
| NOTE: It is assumed that the WLAN AP association remains throughout the procedure. | | | |

4.5A.5.3 Specific message contents

None

### 4.5A.6 IPsec Tunnel Establishment in 5GC / WLAN

4.5A.6.1 Scope

The purpose of this procedure is to establish an Ipsec tunnel and NAS signalling connection.

4.5A.6.2 Procedure description

4.5A.6.2.1 Initial conditions

The UE has Registered to 5GC with a PDU session established and IPsec security association is released

4.5A.6.2.2 Procedure sequence

Table 4.5A.6.2.2-1: IPsec Tunnel Establishment in 5GC / WLAN

|  |  |  |  |
| --- | --- | --- | --- |
| St | Procedure | Message Sequence | |
|  |  | U – S | Message |
| - | Exception: In parallel to steps 1 to 2, the UE initiates an IPsec security association and one child security association as defined in TS 24.502 [35] clause 7.3.2 | - | - |
| 1 | The UE transmits a SERVICE REQUEST message. | --> | 5GMM: SERVICE REQUEST |
| 2 | The SS transmits a SERVICE Accept message. | <-- | 5GMM: SERVICE ACCEPT |
| Note 1: The current procedure assumes UE establishes a single PDU session over Non 3GPP Access. | | | |

4.5A.6.3 Specific message contents

Table 4.5A.6.3-1: SERVICE REQUEST (step 1, Table 4.5A.6.2.2-1)

|  |  |  |  |
| --- | --- | --- | --- |
| Derivation Path: 38.508-1 [4], Table 4.7.1-16 | | | |
| Information Element | | Value/remark | Comment | Condition |
| Service type | |  |  |  |
| Service type value | | ‘0000’B | signalling |  |

## 4.5B Common test environment for Vertical UEs

### 4.5B.1 SNPN-only UEs

This clause defines the test environment which applies to all test cases listed in TS 38.523-2 [19], clause 4.3 and executed for SNPN-only UEs (TS 38.508-2 [10] A.4.1-5/3), unless otherwise specified.

- Each configured NR Cell is an SNPN cell, i.e., condition ‘SNPN’ (Standalone NPN cell) applies in the default message contents.

- The SIB1 of each NR Cell includes the NPN-Identity-r16 set to snpn-r16 with the PLMN of the cell and the nid-List-r16 IE configured with only one entry of NID with Assignment mode = 1 and NID value = 0.

- UE’s "list of subscriber data" is pre-configured with the list of all PLMNs and NID value = 0.

NOTE: PLMNs are specified in Table 4.4.2-3 or clause 6.3.2 unless specified otherwise in the test case.

### 4.5B.2 RedCap UEs

This clause defines the test environment which applies to all test cases executed against RedCap UEs, unless otherwise specified.

- The test channel bandwidth is reduced, to a maximum of 20MHz for FR1 and 100MHz for FR2.

- The following ASN.1 types are configured with condition pc\_supportOfRedCap\_r17 = TRUE:

- *SIB1* in Table 4.6.1-28,

- *SIB4* in Table 4.6.2-3,

- *RLC-Config* in Table 4.6.3-149, and

- *PDCP-Config* in Table 4.6.3-99.

- In case of HD-FDD mode, the following ASN.1 type is configured with condition pc\_halfDuplexFDD\_TypeA\_RedCap\_r17 = TRUE:

- *SIB1* in Table 4.6.1-28.

4.5C UE Position Requirements for NTN testing

4.5C.1 General

This clause defines the UE positioning requirements which apply for all NR NTN cases.

- UE's positioning engine (e.g., standalone GNSS receiver) shall be enabled to allow it to acquire the position. UE position during the test is stationary. Below position shall be used to pre-configure UE position:

- Latitude: 25.08439333

- Longitude: 121.56076999

- Altitude: 0