**3GPP TSG-RAN WG4 Meeting # 102-e R4-2204770**

**Electronic Meeting, 21 Feb – 3 Mar, 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-1** | **CR** | **1009** | **rev** | **-** | **Current version:** | **17.4.0** |  |
|  | | | | | | | | |
| *For* ***[HELP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <http://www.3gpp.org/Change-Requests>.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Big CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into TS 38.101-1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE Corporation | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_CADC\_R17\_2BDL\_xBUL-Core | | | | |  | ***Date:*** | | | 2022-02-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)*  *Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In terms of the agreements captured in TR38.862 (R4-2119074):  In RAN4 #102-e meeting, each rapporteur should use the new formats in their rapporteur big CR to reflect the approved TPs and endorsed CRs.  Therefore, this big CR use the new formats to reflect the completed inter-band CA combinations are introduced into TS 38.101-1 from RAN4 #101bis-e and #102 meetings.  In addition, as requested by MCC, the CA configuration table is spitted. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The inter-band CA band combinations for 2 bands DL with up to 2 bands UL within FR1 completed in the following contributions are added from RAN4 #101bis-e and #102 meetings.  The endorsed draft CRs and approved TPs in #101bis-e meeting are listed:   1. R4-2200193 Draft CR for 38.101-1: support of DC\_n1A-n28A and DC\_n1A-n41A 2. R4-2201022 Draft CR for 38.101-1 to introduce CA\_n1A-n77(3A) and CA\_n18A-n77(3A) 3. R4-2201062 Draft CR for 38.101-1 to introduce new configurations of CA\_n25-n77 4. R4-2201088 draftCR to add DC\_n1A-n7A to 38.101-1 5. R4-2201090 draftCR to add DC\_n7A-n46 to 38.101-1 6. R4-2201094 TP to TR 38.717-02-01 Addition of BCS1 for CA\_n25-n77 7. R4-2201105 draftCR 38.101-1 Addition of CA\_n12A-n66(2A)(3A) 8. R4-2201106 draftCR 38.101-1 Addition of CA\_n2(2A)-n12 9. R4-2201107 draftCR 38.101-1 Addition of CA\_n29A-n66(3A) 10. R4-2201546 draft CR 38.101-1 to add new configurations for CA\_n25-n77 and CA\_n41-n48 11. R4-2201556 draft CR 38.101-1 to add new configurations for CA\_n3-n79 12. R4-2201559 TP for TR 38.717-02-01 to include dual UL for CA\_n3-n20 13. R4-2201561 TP for TR 38.717-02-01 to include CA\_n1-n67 14. R4-2201562 TP for TR 38.717-02-01 to include CA\_n3-n67 15. R4-2201681 Draft CR on CA\_n1A-n8A 16. R4-2202175 TP to TR 38.717.02-01 for CA\_n48-n96 17. R4-2202176 TP to TR 38.717.02-01 for CA\_n46-n48 18. R4-2202178 TP to TR 38.717-02-01 Addition of CA\_n40-n77 19. R4-2202179 draftCR to add DC\_n40B-n78 to 38.101-1 20. R4-2202180 TP for TR 38.717-02-01 to include CA\_n41-n70 21. R4-2202181 TP for TR 38.717-02-01 to include CA\_n70-n78 22. R4-2202182 TP for TR 38.717-02-01 to include dual UL for CA\_n1-n20 23. R4-2202276 draftCR to R17 38-101-1 on MSD for CA\_n29-n71 24. R4-2202277 draftCR to R17 38-101-1 on MSD for CA\_n5-n28 25. R4-2201565 TP for TR 38.717-02-01 to include CA\_n20-n67   The endorsed draft CRs and approved TPs in #102-e meeting are listed:   1. R4-2206385 draft CR to 38101-1-h40 missing MSD for CA\_n5-n77(2A) 2. R4-2204755 Draft CR to TS38.101-1[R17] CA\_n3A-n8A\_BCS1 3. R4-2204756 Draft CR to TS38.101-1[R17] CA\_n3A-n79A\_BCS1 4. R4-2205256 TP for TR 38.717-02-01 CA\_n28A-n38A 5. R4-2206245 TP for TR 38.717-02-01 CA\_n1A-n38A / CA\_n1(2A)-n38A 6. R4-2206246 Draft CR for 38.101-1 to add configuration CA\_n1A-n28A\_BCS1 7. R4-2205259 Draft CR for 38.101-1 to add configuration CA\_n3A-n28A\_BCS2 8. R4-2205260 Draft CR for 38.101-1 to add configuration CA\_n1A-n3B\_BCS0/CA\_n1A-n3(2A)\_BCS2/CA\_n1(2A)-n3(2A)/CA\_n1(2A)-n3B 9. R4-2205261 Draft CR for 38.101-1 to add configuration CA\_n1(2A)-n79A and CA\_n1(2A)-n79C 10. R4-2205262 Draft CR for 38.101-1 to add configuration CA\_n3B-n7A / CA\_n3(2A)-n7A\_BCS1 11. R4-2205263 Draft CR for 38.101-1 to add configuration CA\_n3B-n38A / CA\_n3(2A)-n38A 12. R4-2205264 Draft CR for 38.101-1 to add configuration CA\_n3B-n79A / CA\_n3(2A)-n79A 13. R4-2205265 Draft CR for 38.101-1 to add configuration CA\_n3B-n78A / CA\_n3(2A)-n78A 14. R4-2205268 Draft CR for 38.101-1 to add configuration CA\_n78A-n79C 15. R4-2206249 draftCR to add BCS for CA\_n40A-n78A to 38.101-1 16. R4-2206378 Draft Correction CR to R17 TS38.101-1 on MSD for CA\_n18-n28 17. R4-2205566 draftCR to add DC\_n1A-n28A to 38.101-1 18. R4-2205711 draft CR 38.101-1 to make editorial corrections in 2 bands NR CA configuration tables. 19. R4-2206380 TP to TR 38.717.02-01 for CA\_n46-n96 20. R4-2206381 TP to TR 38.717.02-01 for CA\_n48-n96 and DC\_n48-n96 21. R4-2206247 TP for TR 38.717-02-01 CA\_n38A-n79A / CA\_n38A-n79C 22. R4-2206248 TP for TR 38.717-02-01 CA\_n7A-n79A / CA\_n7A-n79C   In addition, some typos/order are corrected for some combinations | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The requirements for above band combinations are incomplete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2A.2, 5.5A.3, 5.5B, 6.2A.1, 6.2A.4.2.3, 6.2B, 6.5A.3.2.3, 7.3A.2.4, 7.3A.3.2.1, 7.3A.4, 7.3A.5, 7.3A.6, 7.6A.3.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS/TR ... CR ... 38.521-1 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

## << Start of change >>

### 5.2A.2 Inter-band CA

NR inter-band carrier aggregation is designed to operate in the operating bands defined in Table 5.2A.2.1-1, 5.2A.2.2-1 and Table 5.2A.2.3-1, where all operating bands are within FR1.

Table 5.2A.2-1: Void

Table 5.2A.2-2: Void

Table 5.2A.2-3: Void

#### 5.2A.2.1 Inter-band CA (two bands)

Table 5.2A.2.1-1: Inter-band CA operating bands involving FR1 (two bands)

|  |  |  |
| --- | --- | --- |
| NR CA Band | NR Band  (Table 5.2-1) | DL interruption allowed (Note 8) |
| CA\_n1-n3 | n1, n3 |  |
| CA\_n1-n5 | n1, n5 |  |
| CA\_n1-n7 | n1, n7 |  |
| CA\_n1-n8 | n1, n8 |  |
| CA\_n1-n18 | n1, n18 |  |
| CA\_n1-n20 | n1, n20 |  |
| CA\_n1-n28 | n1, n28 |  |
| CA\_n1-n38 | n1, n38 |  |
| CA\_n1-n40 | n1, n40 |  |
| CA\_n1-n411 | n1, n41 |  |
| CA\_n1-n67 | n1, n67 |  |
| CA\_n1-n74 | n1, n74 |  |
| CA\_n1-n771 | n1, n77 | No |
| CA\_n1-n781 | n1, n78 | No |
| CA\_n1-n791 | n1, n79 | No |
| CA\_n2-n5 | n2, n5 |  |
| CA\_n2-n7 | n2, n7 |  |
| CA\_n2-n12 | n2, n12 |  |
| CA\_n2-n14 | n2, n14 |  |
| CA\_n2-n29 | n2, n29 |  |
| CA\_n2-n30 | n2, n30 |  |
| CA\_n2-n48 | n2, n48 |  |
| CA\_n2-n66 | n2, n66 |  |
| CA\_n2-n77 | n2, n77 |  |
| CA\_n2-n78 | n2, n78 |  |
| CA\_n3-n5 | n3, n5 |  |
| CA\_n3-n7 | n3, n7 |  |
| CA\_n3-n8 | n3, n8 |  |
| CA\_n3-n18 | n3, n18 |  |
| CA\_n3-n20 | n3, n20 |  |
| CA\_n3-n28 | n3, n28 |  |
| CA\_n3-n341 | n3, n34 |  |
| CA\_n3-n38 | n3, n38 |  |
| CA\_n3-n401 | n3, n40 | No |
| CA\_n3-n411 | n3, n41 | No |
| CA\_n3-n67 | n3, n67 |  |
| CA\_n3-n74 | n3, n74 |  |
| CA\_n3-n771 | n3, n77 | No |
| CA\_n3-n781 | n3, n78 | No |
| CA\_n3-n791 | n3, n79 | No |
| CA\_n5-n7 | n5, n7 |  |
| CA\_n5-n12 | n5, n12 |  |
| CA\_n5-n14 | n5, n14 |  |
| CA\_n5-n25 | n5, n25 |  |
| CA\_n5-n282 | n5, n28 |  |
| CA\_n5-n29 | n5, n29 |  |
| CA\_n5-n30 | n5, n30 |  |
| CA\_n5-n48 | n5, n48 |  |
| CA\_n5-n66 | n5, n66 |  |
| CA\_n5-n771 | n5, n77 |  |
| CA\_n5-n781 | n5, n78 | No |
| CA\_n5-n791 | n5, n79 | No |
| CA\_n7-n8 | n7, n8 |  |
| CA\_n7-n25 | n7, n25 |  |
| CA\_n7-n28 | n7, n28 |  |
| CA\_n7-n46 | n7, n46 |  |
| CA\_n7-n66 | n7, n66 |  |
| CA\_n7-n77 | n7, n77 |  |
| CA\_n7-n781 | n7, n78 |  |
| CA\_n7-n79 | n7, n79 |  |
| CA\_n8-n20 | n8, n20 |  |
| CA\_n8-n28 | n8, n28 |  |
| CA\_n8-n341 | n8, n34 |  |
| CA\_n8-n391 | n8, n39 |  |
| CA\_n8-n401 | n8, n40 |  |
| CA\_n8-n411 | n8, n41 | No |
| CA\_n8-n751 | n8, n75 |  |
| CA\_n8-n77 | n8, n77 |  |
| CA n8-n781 | n8, n78 | No |
| CA\_n8-n791 | n8, n79 | No |
| CA\_n12-n25 | n12, n25 |  |
| CA\_n12-n30 | n12, n30 |  |
| CA\_n12-n48 | n12, n48 |  |
| CA\_n12-n66 | n12, n66 |  |
| CA\_n12-n71 | n12, n71 |  |
| CA\_n12-n77 | n12, n77 |  |
| CA\_n13-n25 | n13, n25 |  |
| CA\_n13-n66 | n13, n66 |  |
| CA\_n13-n77 | n13, n77 |  |
| CA\_n14-n30 | n14, n30 |  |
| CA\_n14-n66 | n14, n66 |  |
| CA\_n14-n77 | n14, n77 |  |
| CA\_n18-n28 | n18, n28 |  |
| CA\_n18-n41 | n18, n41 |  |
| CA\_n18-n74 | n18, n74 |  |
| CA\_n18-n7710 | n18, n77 |  |
| CA\_n18-n7811 | n18, n78 |  |
| CA\_n20-n282 | n20, n28 |  |
| CA\_n20-n67 | n20, n67 |  |
| CA\_n20-n75 | n20, n75 |  |
| CA\_n20-n78 | n20, n78 |  |
| CA\_n24-n41 | n24, n41 |  |
| CA\_n24-n48 | n24, n48 |  |
| CA\_n24-n77 | n24, n77 |  |
| CA\_n25-n29 | n25, n29 |  |
| CA\_n25-n38 | n25, n38 |  |
| CA\_n25-n41 | n25, n41 |  |
| CA\_n25-n466 | n25, n46 |  |
| CA\_n25-n48 | n25, n48 |  |
| CA\_n25-n66 | n25, n66 |  |
| CA\_n25-n71 | n25, n71 |  |
| CA\_n25-n77 | n25, n77 |  |
| CA\_n25-n78 | n25,n78 |  |
| CA\_n26-n66 | n26, n66 |  |
| CA\_n26-n70 | n26, n70 |  |
| CA\_n28-n38 | n28, n38 |  |
| CA\_n28-n40 | n28, n40 |  |
| CA\_n28-n411 | n28, n41 |  |
| CA\_n28-n46 | n28, n46 |  |
| CA\_n28-n50 | n28, n50 |  |
| CA\_n28-n7112 | n28, n71 |  |
| CA\_n28-n74 | n28, n74 |  |
| CA\_n28-n752 | n28, n75 |  |
| CA\_n28-n771 | n28, n77 | No |
| CA\_n28-n781 | n28, n78 | No |
| CA\_n28-n791 | n28, n79 |  |
| CA\_n29-n30 | n29, n30 |  |
| CA\_n29-n66 | n29, n66 |  |
| CA\_n29-n70 | n29, n70 |  |
| CA\_n29-n71 | n29, n71 |  |
| CA\_n29-n77 | n29, n77 |  |
| CA\_n30-n66 | n30, n66 |  |
| CA\_n30-n77 | n30, n77 |  |
| CA\_n34-n40 | n34, n40 |  |
| CA\_n34-n791 | n34, n79 |  |
| CA\_n38-n66 | n38, n66 |  |
| CA\_n38-n781 | n38, n78 |  |
| CA\_n38-n791 | n38, n79 |  |
| CA\_n39-n40 | n39, n40 |  |
| CA\_n39-n41 | n39, n41 | No |
| CA\_n39-n791 | n39, n79 | No |
| CA\_n40-n41 | n40, n41 |  |
| CA\_n40-n771 | n40, n77 |  |
| CA\_n40-n78 | n40, n78 |  |
| CA\_n40-n791,4 | n40, n79 | No |
| CA\_n41-n481 | n41, n48 |  |
| CA\_n41-n501 | n41, n50 |  |
| CA\_n41-n66 | n41, n66 |  |
| CA\_n41-n70 | n41, n70 |  |
| CA\_n41-n711 | n41, n71 |  |
| CA\_n41-n74 | n41, n74 |  |
| CA\_n41-n771 | n41, n77 |  |
| CA\_n41-n78 | n41, n78 |  |
| CA\_n41-n791,3 | n41, n79 | No |
| CA\_n46-n481,6 | n46, n48 |  |
| CA\_n46-n666 | n46, n66 |  |
| CA\_n46-n781,6 | n46, n78 |  |
| CA\_ n46-n9615,16,17,18 | n46, n96 |  |
| CA\_n48-n539 | n48, n53 |  |
| CA\_n48-n66 | n48, n66 |  |
| CA\_n48-n70 | n48, n70 |  |
| CA\_n48-n71 | n48, n71 |  |
| CA\_n48-n7713,14 | n48, n77 |  |
| CA\_n48-n961,9 | n48, n96 |  |
| CA\_n50-n78 | n50, n78 |  |
| CA\_n66-n70 | n66, n70 |  |
| CA\_n66-n71 | n66, n71 |  |
| CA\_n66-n77 | n66, n77 |  |
| CA\_n66-n78 | n66, n78 |  |
| CA\_n70-n71 | n70, n71 |  |
| CA\_n70-n78 | n70, n78 |  |
| CA\_n71-n77 | n71, n77 |  |
| CA\_n71-n78 | n71, n78 |  |
| CA\_n74-n771 | n74, n77 |  |
| CA\_n74-n781 | n74, n78 |  |
| CA\_n75-n781 | n75, n78 |  |
| CA\_n76-n781 | n76, n78 |  |
| CA\_n77-n795,7 | n77, n79 |  |
| CA\_n78-n795 | n78, n79 |  |
| CA\_n78-n92 | n78, n92 |  |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability.  NOTE 2: The frequency range in band n28 is restricted for this band combination to 703-733 MHz for the UL and 758-788 MHz for the DL.  NOTE 3: The frequency range below 2506 MHz for Band n41 is not used in this combination.  NOTE 4: Applicable for frequency range above 4800 MHz for Band n79 in this combination.  NOTE 5: For UEs supporting band n77, the minimum requirements apply only when there is non-simultaneous Rx/Tx operation between n78-n79 NR carriers. This restriction applies also for these carriers when applicable NR CA configuration is part of a higher order configuration.  NOTE 6: The PCell is allocated in the licensed band in this combination.  NOTE 7: The minimum requirements apply only when there is non-simultaneous Rx/Tx operation between n77-n79 NR carriers. This restriction applies also for these carriers when applicable NR CA configuration is part of a higher order configuration.  NOTE 8: Applicable when dynamic Tx switching is conducted. The DL interruption requirement is specified in clause 8.2.2.2.10 of 38.133 [13].  NOTE 9: Only applicable for UE supporting inter-band carrier aggregation without simultaneous Rx/Tx.  NOTE 10 The frequency range in band n77 is restricted for this band combination to 3520-3560 MHz, 3700-3800 MHz, 4000-4100 MHz.  NOTE 11: The frequency range in band n78 is restricted for this band combination to 3520 -3560 MHz and 3700– 3800 MHz.  NOTE 12: The implementation with 4 antennas is targeted for FWA form factor for this band combination.  NOTE 13: Simultaneous Rx/Tx capability for TDD combinations does not apply for UEs supporting band n48 with an n77 implementation.  NOTE 14: The band n48 and n77 will synchronize their uplink and downlink configurations and in commonly TDD network coordination  NOTE 15: Simultaneous Rx/Tx capability does not apply for UEs supporting CA\_n46-n96. Same restrictions are applied when applicable NR CA configuration is part of a higher order configurations  NOTE 16: The minimum requirements for intra-band non-contiguous CA/DC apply for CA\_n46-n96 and related higher order CA/DC configurations.  NOTE 17: The combination is not used alone as fall back mode of other band combinations in which UL in Band 48 is not used.  NOTE 18: The minimum requirements for inter-band CA apply when the maximum power spectral density imbalance between downlink carriers is within 6 dB. The power spectral density imbalance condition also applies for these carriers when applicable CA configuration is a subset of a higher order CA configuration. | | |

## << Next change >>

## 5.5A.3 Configurations for inter-band CA

Table 5.5A.3-1: Void

Table 5.5A.3-2: Void

Table 5.5A.3-3: Void

#### 5.5A.3.1 Configurations for inter-band CA (two bands)

Table 5.5A.3.1-1a: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n1A-n3A | CA\_n1A-n3A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n3 | 5, 10, 15, 20, 25, 30 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1A-n3B | - | n1 | 5, 10, 15, 20 | 0 |
|  |  | n3 | CA\_n3B\_BCS0 |  |
| CA\_n1B-n3A | CA\_n1A-n3A | n1 | CA\_n1B\_BCS0 | 0 |
|  |  | n3 | 5, 10, 15, 20, 25, 30 |  |
|  |  | n1 | CA\_n1B\_BCS0 | 1 |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1A-n3(2A) | CA\_n1A-n3A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n3 | CA\_n3(2A)\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n3 | CA\_n3(2A)\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20 | 2 |
|  |  | n3 | CA\_n3(2A)\_BCS1 |  |
| CA\_n1(2A)-n3A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1(2A)-n3(2A) | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n3 | CA\_n3(2A)\_BCS1 |  |
| CA\_n1(2A)-n3B | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n3 | CA\_n3B\_BCS0 |  |
| CA\_n1A-n5A | CA\_n1A-n5A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n1(2A)-n5A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n1A-n7A | CA\_n1A-n7A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n1A-n7B | CA\_n1A-n7A  CA\_n7B | n1 | 5, 10, 15, 20 | 0 |
|  |  | n7 | CA\_n7B\_BCS0 |  |
| CA\_n1(2A)-n7A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n1A-n8A | CA\_n1A-n8A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n1(2A)-n8A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n1A-n18A | CA\_n1A-n18A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n18 | 5, 10, 15 |  |
| CA\_n1A-n20A | CA\_n1A-n20A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n20 | 5, 10, 15, 20 |  |
| CA\_n1A-n28A | CA\_n1A-n28A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n28 | 5, 10, 15, 20, 30 |  |
| CA\_n1(2A)-n28A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
| CA\_n1A-n38A | - | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1(2A)-n38A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1A-n40A | CA\_n1A-n40A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n1A-n40B | - | n1 | 5, 10, 15, 20 | 0 |
|  |  | n40 | CA\_n40B\_BCS0 |  |
| CA\_n1A-n41A | CA\_n1A-n41A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n1A-n67A | - | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n67 | 5, 10, 15, 20 |  |
| CA\_n1A-n74A | CA\_n1A-n74A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n74 | 5, 10, 15, 20 |  |
| CA\_n1A-n77A | CA\_n1A-n77A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n1A-n77(2A) | CA\_n1A-n77A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
| CA\_n1A-n77(3A) | CA\_n1A-n77A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS1 |  |
| CA\_n1A-n78A | n788  CA\_n1A-n78A8 | n1 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40 | 2 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20 | 3 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n1A-n78(2A) | CA\_n1A-n78A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  |  | n1 | 5, 10, 15, 20 | 2 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n1A-n78C | CA\_n1A-n78A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40 | 2 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
| CA\_n1(2A)-n78A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n1A-n79A | CA\_n1A-n79A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n1A-n79C | CA\_n1A-n79A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n1(2A)-n79A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n79 | 40, 60, 80, 100 |  |
| CA\_n1(2A)-n79C | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |

Table 5.5A.3.1-1b: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n2A-n5A | CA\_n2A-n5A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n2A-n5B | CA\_n2A-n5A  CA\_n5B | n2 | 5, 10, 15, 20 | 0 |
|  |  | n5 | CA\_n5B\_BCS0 |  |
| CA\_n2(2A)-n5A | CA\_n2A-n5A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n2A-n7A | CA\_n2A-n7A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n2A-n7(2A) | CA\_n2A-n7A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n7 | CA\_n7(2A)\_BCS0 |  |
| CA\_n2A-n12A | CA\_n2A-n12A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n12 | 5, 10, 15 |  |
| CA\_n2(2A)-n12A | CA\_n2A-n12A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n12 | 5, 10, 15 |  |
| CA\_n2A-n14A | CA\_n2A-n14A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n14 | 5, 10 |  |
| CA\_n2(2A)-n14A | CA\_n2A-n14A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n14 | 5, 10 |  |
| CA\_n2A-n29A | - | n2 | 5, 10, 15, 20 | 0 |
|  |  | n29 | 5, 10 |  |
| CA\_n2(2A)-n29A | - | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n29 | 5, 10 |  |
| CA\_n2A-n30A | CA\_n2A-n30A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n30 | 5, 10 |  |
| CA\_n2(2A)-n30A | CA\_n2A-n30A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n30 | 5, 10 |  |
| CA\_n2A-n48A | CA\_n2A-n48A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 |  |
| CA\_n2A-n48B | CA\_n2A-n48A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48B\_BCS0 |  |
| CA\_n2A-n48C | CA\_n2A-n48A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n2A-n48(2A) | CA\_n2A-n48A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n2A-n48(A-B) | CA\_n2A-n48A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48(A-B)\_BCS0 |  |
|  |  | n2 | 5, 10, 15, 20 | 1 |
|  |  | n48 | CA\_n48(A-B)\_BCS1 |  |
| CA\_n2A-n48(A-C) | CA\_n2A-n48A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48(A-C)\_BCS0 |  |
| CA\_n2A-n66A | - | n2 | 5, 10, 15, 20 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  | CA\_n2A-n66A | n2 | 5, 10, 15, 20 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n2(2A)-n66A | CA\_n2A-n66A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n2A-n66(2A) | CA\_n2A-n66A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n2(2A)-n66(2A) | CA\_n2A-n66A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n2(2A)-n66(3A) | CA\_n2A-n66A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n66 | CA\_n66(3A)\_BCS0 |  |
| CA\_n2A-n66(3A) | CA\_n2A-n66A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n66 | CA\_n66(3A)\_BCS0 |  |
| CA\_n2A-n66B | CA\_n2A-n66A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n66 | CA\_n66B\_BCS0 |  |
| CA\_n2A-n77A | n778  CA\_n2A-n77A8 | n2 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n2A-n77(2A) | n778  CA\_n2A-n77A8  CA\_n77(2A)7 | n2 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
|  |  | n2 | 5, 10, 15, 20 | 1 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n2A-n77C | CA\_n2A-n77A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
| CA\_n2(2A)-n77A | CA\_n2A-n77A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n2(2A)-n77(2A) | CA\_n2A-n77A  CA\_n77(2A)7 | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n2(2A)-n77C | CA\_n2A-n77A | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n2A-n78A | n788  CA\_n2A-n78A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 |  |
|  |  | n2 | 5, 10, 15, 20 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n2A-n78(2A) | CA\_n2A-n78A | n2 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  |  | n2 | 5, 10, 15, 20 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |

Table 5.5A.3.1-1c: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n3A-n5A | CA\_n3A-n5A | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n3(2A)-n5A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n3A-n7A | CA\_n3A-n7A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n3A-n7B | CA\_n3A-n7A  CA\_n7B | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n7 | CA\_n7B\_BCS0 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n7 | CA\_n7B\_BCS0 |  |
| CA\_n3(2A)-n7A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
|  |  | n3 | CA\_n3(2A)\_BCS1 | 1 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n3B-n7A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n3A-n8A | CA\_n3A-n8A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n3(2A)-n8A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n3A-n18A | CA\_n3A-n18A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n18 | 5, 10, 15 |  |
| CA\_n3A-n20A | CA\_n3A-n20A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n20 | 5, 10, 15, 20 |  |
| CA\_n3A-n28A | CA\_n3A-n28A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n28 | 5, 10, 15, 20 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 2 |
|  |  | n28 | 5, 10, 15, 20, 30 |  |
| CA\_n3(2A)-n28A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
| CA\_n3A-n34A | CA\_n3A-n34A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n34 | 5, 10, 15 |  |
| CA\_n3A-n38A | CA\_n3A-n38A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n38 | 5, 10, 15, 20, 40 |  |
| CA\_n3B-n38A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n3(2A)-n38A | - | n3 | CA\_n3(2A)\_BCS1 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n3A-n40A | CA\_n3A-n40A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n3A-n41A | n418  CA\_n3A-n41A8 | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30 | 1 |
|  |  | n41 | 10, 15, 20, 40, 50, 60 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 2 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n3A-n41C | CA\_n3A-n41A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n41 | CA\_n41C\_BCS0 |  |
| CA\_n3A-n41(2A) | CA\_n3A-n41A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n41 | CA\_n41(2A)\_BCS0 |  |
| CA\_n3A-n67A | - |  | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  |  | 5, 10, 15, 20 |  |
| CA\_n3A-n74A | CA\_n3A-n74A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n74 | 5, 10, 15, 20 |  |
| CA\_n3A-n77A | CA\_n3A-n77A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n3A-n77(2A) | CA\_n77(2A)  CA\_n3A-n77A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
| CA\_n3A-n77(3A) | CA\_n3A-n77A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS0 |  |
| CA\_n3A-n78A | n788  CA\_n3A-n78A8 | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n3A-n78C | CA\_n3A-n78A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
| CA\_n3A-n78(2A) | CA\_n3A-n78A  CA\_n78(2A) | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  | CA\_n3A-n78A | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n3(2A)-n78A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n3 | CA\_n3(2A)\_BCS1 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n3B-n78A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n3A-n79A | CA\_n3A-n79A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n3(2A)-n79A | CA\_n3A-n79A | n3 | CA\_n3(2A)\_BCS1 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n3A-n79C | CA\_n3A-n79A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n3(2A)-n79C | CA\_n3A-n79A | n3 | CA\_n3(2A)\_BCS1 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n3B-n79A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |

Table 5.5A.3.1-1d: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n5A-n7A | CA\_n5A-n7A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n5A-n7B | CA\_n5A-n7A  CA\_n7B | n5 | 5, 10, 15, 20 | 0 |
|  |  | n7 | CA\_n7B\_BCS0 |  |
| CA\_n5A-n12A | CA\_n5A-n12A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n12 | 5, 10, 15 |  |
| CA\_n5A-n14A | CA\_n5A-n14A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n14 | 5, 10 |  |
| CA\_n5A-n25A | CA\_n5A-n25A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n5A-n25(2A) | CA\_n5A-n25A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n25 | CA\_n25(2A)\_BCS0 |  |
| CA\_n5A-n28A | - | n5 | 5, 10, 15, 20 | 0 |
|  |  | n28 | 5, 10, 15, 20, 30 |  |
| CA\_n5A-n29A | - | n5 | 5, 10, 15, 20 | 0 |
|  |  | n29 | 5, 10 |  |
| CA\_n5A-n30A | CA\_n5A-n30A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n30 | 5, 10 |  |
| CA\_n5A-n48A | CA\_n5A-n48A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n5A-n48(2A) | CA\_n5A-n48A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n5A-n48B | CA\_n5A-n48A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48B\_BCS0 |  |
| CA\_n5A-n48C | CA\_n5A-n48A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n5A-n48(A-B) | CA\_n5A-n48A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48(A-B)\_BCS0 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n48 | CA\_n48(A-B)\_BCS1 |  |
| CA\_n5A-n66A | CA\_n5A-n66A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n5B-n66A | CA\_n5A-n66A  CA\_n5B | n5 | CA\_n5B\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n5A-n66(2A) | CA\_n5A-n66A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS0 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n5A-n66(3A) | CA\_n5A-n66A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n66 | CA\_n66(3A)\_BCS0 |  |
| CA\_n5B-n66(2A) | CA\_n5A-n66A  CA\_n5B | n5 | CA\_n5B\_BCS0 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n5A-n77A | n778  CA\_n5A-n77A8 | n5 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n5A-n77(2A) | n778  CA\_n5A-n77A8  CA\_n77(2A) | n5 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n5(2A)-n77A | CA\_n5A-n77A | n5 | CA\_n5(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n5A-n77C | CA\_n5A-n77A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n5(2A)-n77C | CA\_n5A-n77A | n5 | CA\_n5(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n5 | CA\_n5(2A)\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n5B-n77A | CA\_n5A-n77A  CA\_n5B | n5 | CA\_n5B\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n5B-n77C | CA\_n5A-n77A  CA\_n5B | n5 | CA\_n5B\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n5 | CA\_n5B\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n5A-n78A | CA\_n5A-n78A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n5A-n78(2A) | CA\_n5A-n78A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n5A-n78C | CA\_n5A-n78A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n78 | CA\_n78C\_BCS1 |  |
| CA\_n5A-n79A | CA\_n5A-n79A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n5A-n79C | CA\_n5A-n79A | n5 | 5, 10, 15, 20 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |

Table 5.5A.3.1-1e: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n7A-n8A | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n7A-n25A | CA\_n7A-n25A | n7 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n7A-n25(2A) | CA\_n7A-n25A | n7 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n25 | CA\_n25(2A)\_BCS0 |  |
| CA\_n7(2A)-n25A | CA\_n7A-n25A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n7(2A)-n25(2A) | CA\_n7A-n25A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n25 | CA\_n25(2A)\_BCS0 |  |
| CA\_n7A-n28A | CA\_n7A-n28A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
| CA\_n7B-n28A | CA\_n7A-n28A  CA\_n7B | n7 | CA\_n7B\_BCS0 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
| CA\_n7A-n46A | CA\_n7A-n46A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n46 | 20, 40, 60, 80 |  |
| CA\_n7A-n46C | CA\_n7A-n46A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n46 | CA\_n46C\_BCS0 |  |
| CA\_n7A-n46D | CA\_n7A-n46A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n46 | CA\_n46D\_BCS0 |  |
| CA\_n7A-n66A | CA\_n7A-n66A | n7 | 5, 10, 15, 20 | 0 |
|  |  | n66 | 10, 15, 20, 40 |  |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n7A-n66(2A) | CA\_n7A-n66A | n7 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n7(2A)-n66A | CA\_n7A-n66A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n7(2A)-n66(2A) | CA\_n7A-n66A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n7A-n77A | CA\_n7A-n77A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n7(2A)-n77A | CA\_n7A-n77A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n7A-n77(2A) | CA\_n7A-n77A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n7(2A)-n77(2A) | CA\_n7A-n77A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n7A-n78A | CA\_n7A-n78A | n7 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n7B-n78A | CA\_n7A-n78A  CA\_n7B | n7 | CA\_n7B\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n7A-n78(2A) | CA\_n7A-n78A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n7(2A)-n78A | CA\_n7A-n78A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n7 | CA\_n7(2A)\_BCS0 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n7(2A)-n78(2A) | CA\_n7A-n78A | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n7 | CA\_n7(2A)\_BCS0 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n7A-n79A | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n7A-n79C | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n8A-n20A | - | n8 | 5, 10, 15, 20 | 0 |
|  |  | n20 | 5, 10, 15, 20 |  |
| CA\_n8A-n28A | - | n8 | 5, 10, 15, 20 | 0 |
|  |  | n28 | 5, 10, 15, 20, 30 |  |
| CA\_n8A-n34A | CA\_n8A-n34A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n34 | 5, 10, 15 |  |
| CA\_n8A-n39A | CA\_n8A-n39A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n39 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n8A-n40A | CA\_n8A-n40A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n8A-n41A | CA\_n8A-n41A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n8 | 5, 10, 15, 20 | 1 |
|  |  | n41 | 10, 15, 20, 40, 50, 60 |  |
| CA\_n8A-n75A | - | n8 | 5, 10, 15, 20 | 0 |
|  |  | n75 | 5, 10, 15, 20 |  |
| CA\_n8A-n77A | - | n8 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n8A-n77(2A) | - | n8 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n8A-n78A | CA\_n8A-n78A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n8 | 5, 10, 15, 20 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n8A-n78(2A) | CA\_n8A-n78A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
| CA\_n8A-n79A | CA\_n8A-n79A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n79 | 10, 20, 40, 50, 60, 80, 100 |  |

Table 5.5A.3.1-1f: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n12A-n25A | - | n12 | 5, 10, 15 | 0 |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n12A-n30A | CA\_n12A-n30A | n12 | 5, 10, 15 | 0 |
|  |  | n30 | 5, 10 |  |
| CA\_n12A-n48A | - | n12 | 5, 10, 15 | 0 |
|  |  | n48 | 10, 15, 20, 30, 40 |  |
| CA\_n12A-n66A | CA\_n12A-n66A | n12 | 5, 10, 15 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
| CA\_n12A-n66(2A) | CA\_n12A-n66A | n12 | 5, 10, 15 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n12A-n66(3A) | CA\_n12A-n66A | n12 | 5, 10, 15 | 0 |
|  |  | n66 | CA\_n66(3A)\_BCS0 |  |
| CA\_n12A-n71A | - | n12 | 5, 10, 15 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n12A-n77A | n778  CA\_n12A-n77A8 | n12 | 5, 10, 15 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n12A-n77(2A) | n778  CA\_n12A-n77A8 | n12 | 5, 10, 15 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n13A-n25A | CA\_n13A-n25A | n13 | 5, 10 | 0 |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n13A-n66A | CA\_n13A-n66A | n13 | 5, 10 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n13 | 5, 10, | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n13A-n77A | CA\_n13A-n77A | n13 | 5, 10 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n14A-n30A | CA\_n14A-n30A | n14 | 5, 10 | 0 |
|  |  | n30 | 5, 10 |  |
| CA\_n14A-n66A | CA\_n14A-n66A | n14 | 5, 10 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n14A-n66(2A) | CA\_n14A-n66A | n14 | 5, 10 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n14A-n66(3A) | CA\_n14A-n66A | n14 | 5, 10 | 0 |
|  |  | n66 | CA\_n66(3A)\_BCS0 |  |
| CA\_n14A-n77A | n778  CA\_n14A-n77A8 | n14 | 5, 10 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n14A-n77(2A) | n778  CA\_n14A-n77A8 | n14 | 5, 10 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n18A-n28A | CA\_n18A-n28A | n18 | 5, 10, 15 | 0 |
|  |  | n28 | 5, 10 |  |
| CA\_n18A-n41A | CA\_n18A-n41A | n18 | 5, 10, 15 | 0 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n18A-n74A | CA\_n18A-n74A | n18 | 5, 10, 15 | 0 |
|  |  | n74 | 5, 10, 15, 20 |  |
| CA\_n18A-n77A | CA\_n18A-n77A | n18 | 5, 10, 15 | 0 |
|  |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n18A-n77(2A) | CA\_n18A-n77A | n18 | 5, 10, 15 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
| CA\_n18A-n77(3A) | CA\_n18A-n77A | n18 | 5, 10, 15 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS1 |  |
| CA\_n18A-n78A | CA\_n18A-n78A | n18 | 5, 10, 15 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n18A-n78(2A) | CA\_n18A-n78A | n18 | 5, 10, 15 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |

Table 5.5A.3.1-1g: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n20A-n28A | CA\_n20A-n28A | n20 | 5, 10, 15, 20 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
|  |  | n20 | 5, 10, 15, 20 | 1 |
|  |  | n28 | 5, 10, 15, 20, 30 |  |
| CA\_n20A-n67A | - | n20 | 5, 10, 15, 20 | 0 |
|  |  | n67 | 5, 10, 15, 20 |  |
| CA\_n20A-n75A | - | n20 | 5, 10, 15, 20 | 0 |
|  |  | n75 | 5, 10, 15, 20 |  |
| CA\_n20A-n78A | CA\_n20A-n78A | n20 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n24A-n41A | CA\_n24A-n41A | n24 | 5, 10 | 0 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n24A-n41(2A) | CA\_n24A-n41A | n24 | 5, 10 | 0 |
|  |  | n41 | CA\_n41(2A)\_BCS1 |  |
| CA\_n24A-n48A | CA\_n24A-n48A | n24 | 5, 10 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n24A-n48B | CA\_n24A-n48A | n24 | 5, 10 | 0 |
|  |  | n48 | CA\_n48B\_BCS1 |  |
| CA\_n24A-n48(2A) | CA\_n24A-n48A | n24 | 5, 10 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n24A-n48(3A) | CA\_n24A-n48A | n24 | 5, 10 | 0 |
|  |  | n48 | CA\_n48(3A)\_BCS0 |  |
| CA\_n24A-n77A | CA\_n24A-n77A | n24 | 5, 10 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n24A-n77C | CA\_n24A-n77A | n24 | 5, 10 | 0 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n24A-n77(2A) | CA\_n24A-n77A | n24 | 5, 10 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
| CA\_n25A-n29A | - | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n29 | 5, 10 |  |
| CA\_n25A-n38A | CA\_n25A-n38A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n25(2A)-n38A | CA\_n25A-n38A | n25 | CA\_n25(2A)\_BCS0 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n25A-n41A | n418, 9  CA\_n25A-n41A8 | n25 | 5, 10, 15, 20 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n25(2A)-n41A | CA\_n25A-n41A | n25 | CA\_n25(2A)\_BCS0 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n25 | CA\_n25(2A)\_BCS1 | 1 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n25(2A)-n41C | CA\_n25A-n41A | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n41 | CA\_n41C\_BCS2 |  |
| CA\_n25(2A)-n41(2A) | CA\_n25A-n41A | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n41 | CA\_n41(2A)\_BCS3 |  |
| CA\_n25A-n41C | n418, 9  CA\_n25A-n41A8  CA\_n41C | n25 | 5, 10, 15, 20 | 0 |
|  |  | n41 | CA\_n41C\_BCS0 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n41 | CA\_n41C\_BCS1 |  |
| CA\_n25A-n41(2A) | n418, 9  CA\_n25A-n41A8 | n25 | 5, 10, 15, 20 | 0 |
|  |  | n41 | CA\_n41(2A)\_BCS1 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n41 | CA\_n41(2A)\_BCS3 |  |
| CA\_n25A-n41(3A) | CA\_n25A-n41A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n41 | CA\_n41(3A)\_BCS0 |  |
| CA\_n25A-n41(A-C) | CA\_n25A-n41A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n41 | CA\_n41(A-C)\_BCS0 |  |
| CA\_n25A-n46A | - | n25 | 5, 10, 15, 20 | 0 |
|  |  | n46 | 20, 40, 60, 80 |  |
| CA\_n25A-n48A | CA\_n25A-n48A | n25 | 5, 10, 15, 20 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n25A-n48(2A) | CA\_n25A-n48A | n25 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n25A-n48C | CA\_n25A-n48A | n25 | 5, 10, 15, 20 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n25A-n66A | CA\_n25A-n66A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n66 | 5, 10, 15, 20, 30, 40 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n25A-n66(2A) | CA\_n25A-n66A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS0 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n25(2A)-n66A | CA\_n25A-n66A | n25 | CA\_n25(2A)\_BCS0 | 0 |
|  |  | n66 | 10, 15, 20, 30, 40 |  |
|  |  | n25 | CA\_n25(2A)\_BCS0 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n25 | CA\_n25(2A)\_BCS1 | 2 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n25(2A)-n66(2A) | CA\_n25A-n66A | n25 | CA\_n25(2A)\_BCS0 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS0 |  |
|  |  | n25 | CA\_n25(2A)\_BCS0 | 1 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
|  |  | n25 | CA\_n25(2A)\_BCS1 | 2 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n25A-n71A | CA\_n25A-n71A | n25 | 5, 10, 15, 20 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n25A-n71B | CA\_n25A-n71A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n71 | CA\_n71B\_BCS0 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n25A-n71(2A) | - | n25 | 5, 10, 15, 20 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
|  | CA\_n25A-n71A | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n25(2A)-n71A | CA\_n25A-n71A | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n25(2A)-n71(2A) | CA\_n25A-n71A | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n25(2A)-n71B | CA\_n25A-n71A | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n25A-n77A | n778  CA\_n25A-n77A | n25 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n25A-n77(2A) | CA\_n25A-n77A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n25(2A)-n77A | CA\_n25A-n77A | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n25 | CA\_n25(2A)\_BCS0 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n25(2A)-n77(2A) | CA\_n25A-n77A | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
|  |  | n25 | CA\_n25(2A)\_BCS0 | 1 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n25A-n78A | CA\_n25A-n78A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n25A-n78(2A) | CA\_n25A-n78A | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n25 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n25(2A)-n78A | CA\_n25A-n78A | n25 | CA\_n25(2A)\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 |  |
|  |  | n25 | CA\_n25(2A)\_BCS0 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n25(2A)-n78(2A) | CA\_n25A-n78A | n25 | CA\_n25(2A)\_BCS0 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  |  | n25 | CA\_n25(2A)\_BCS0 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |

Table 5.5A.3.1-1h: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n26A-n66A | CA\_n26A-n66A | n26 | 5, 10, 15, 20 | 0 |
| n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n26A-n66(2A) | CA\_n26A-n66A | n26 | 5, 10, 15, 20 | 0 |
| n66 | CA\_n66(2A)\_BCS0 |  |
| CA\_n26A-n70A | CA\_n26A-n70A | n26 | 5, 10, 15, 20 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n28A-n38A | - | n28 | 5, 10, 15, 20, 30 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n28A-n40A | CA\_n28A-n40A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n28A-n40B | - | n28 | 5, 10, 15, 20 | 0 |
|  |  | n40 | CA\_n40B\_BCS0 |  |
| CA\_n28A-n41A | n418  CA\_n28A-n41A8 | n28 | 5, 10, 15, 20 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n28 | 5, 10, 15, 20, 30 | 1 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n28A-n41C | CA\_n28A-n41A  CA\_n41C | n28 | 5, 10, 15, 20, 30 | 0 |
|  |  | n41 | CA\_n41C\_BCS1 |  |
| CA\_n28A-n46A | CA\_n28A-n46A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n46 | 20, 40, 60, 80 |  |
| CA\_n28A-n46C | CA\_n28A-n46A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n46 | CA\_n46C\_BCS0 |  |
| CA\_n28A-n46D | CA\_n28A-n46A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n46 | CA\_n46D\_BCS0 |  |
| CA\_n28A-n50A | CA\_n28A-n50A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n50 | 5, 10, 15, 20, 40, 50, 60, 801 |  |
| CA\_n28A-n71A | - | n28 | 5, 10, 15, 20, 30 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n28A-n74A | CA\_n28A-n74A | n28 | 5, 10, 15, 20, 30 | 0 |
|  |  | n74 | 5, 10, 15, 20 |  |
| CA\_n28A-n75A | - | n28 | 5, 10, 15, 20 | 0 |
|  |  | n75 | 5, 10, 15, 20 |  |
|  | - | n28 | 5, 10, 15, 20 | 1 |
|  |  | n75 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n28A-n77A | CA\_n28A-n77A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n28A-n77(2A) | CA\_n77(2A)  CA\_n28A-n77A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
| CA\_n28A-n77(3A) | CA\_n28A-n77A | n28 | 5, 10 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS0 |  |
| CA\_n28A-n78A | CA\_n28A-n78A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n28 | 5, 10, 15, 20, 30 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n28A-n78(2A) | CA\_n78(2A)  CA\_n28A-n78A | n28 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n28 | 5, 10, 15, 20 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n28A-n79A | n798  CA\_n28A-n79A8 | n28 | 5, 10, 15, 20, 30 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n29A-n30A | - | n29 | 5, 10 | 0 |
|  |  | n30 | 5, 10 |  |
| CA\_n29A-n66A | - | n29 | 5, 10 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n29 | 5, 10 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n29A-n66B | - | n29 | 5, 10 | 0 |
|  |  | n66 | CA\_n66B\_BCS0 |  |
| CA\_n29A-n66(2A) | - | n29 | 5, 10 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS0 |  |
|  |  | n29 | 5, 10 | 1 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n29A-n66(3A) | - | n29 | 5, 10 | 0 |
|  |  | n66 | CA\_n66(3A)\_BCS0 |  |
| CA\_n29A-n70A | - | n29 | 5, 10 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n29A-n71A | - | n29 | 5, 10 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n29A-n77A | - | n29 | 5, 10 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n29A-n77(2A) | - | n29 | 5, 10 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |

Table 5.5A.3.1-1i: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n30A-n66A | CA\_n30A-n66A | n30 | 5, 10 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n30A-n66(2A) | CA\_n30A-n66A | n30 | 5, 10 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n30A-n66(3A) | CA\_n30A-n66A | n30 | 5, 10 | 0 |
|  |  | n66 | CA\_n66(3A)\_BCS0 |  |
| CA\_n30A-n77A | n778  CA\_n30A-n77A8 | n30 | 5, 10 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n30A-n77(2A) | n778  CA\_n77(2A)  CA\_n30A-n77A8 | n30 | 5, 10 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n34A-n40A | CA\_n34A-n40A | n34 | 5, 10, 15 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n34A-n79A | CA\_n34A-n79A | n34 | 5, 10, 15 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n38A-n66A | CA\_n38A-n66A | n38 | 5, 10, 15, 20 | 0 |
|  |  | n66 | 5, 10, 15, 20, 30, 40 |  |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n38A-n66(2A) | CA\_n38A-n66A | n38 | 5, 10, 15, 20 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n38A-n78A | CA\_n38A-n78A | n38 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 |  |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n38A-n78(2A) | CA\_n38A-n78A | n38 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n38 | 5, 10, 15, 20 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n38A-n79A | - | n38 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n38A-n79C | - | n38 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n39A-n40A | CA\_n39A-n40A | n39 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n39A-n41A | CA\_n39A-n41A | n39 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n39A-n41C | CA\_n39A-n41A | n39 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n41 | CA\_n41C\_BCS0 |  |
| CA\_n39A-n41(2A) | CA\_n39A-n41A | n39 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n41 | CA\_n41(2A)\_BCS0 |  |
| CA\_n39A-n79A | CA\_n39A-n79A | n39 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n40A-n41A | n418  CA\_n40A-n41A8 | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n41 | 10, 15, 20, 40, 50, 60 |  |
| CA\_n40A-n41C | CA\_n41C  CA\_n40A-n41A | n40 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n41 | CA\_n41C\_BCS0 |  |
| CA\_n40A-n77A | CA\_n40A-n77A | n40 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 704,80, 904, 100 |  |
| CA\_n40A-n77(2A) | CA\_n40A-n77A | n40 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n40B-n77A | CA\_n40A-n77A | n40 | CA\_n40B\_BCS1 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 704,80, 904, 100 |  |
| CA\_n40B-n77(2A) | CA\_n40A-n77A | n40 | CA\_n40B\_BCS1 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n40B-n77C | CA\_n40A-n77A | n40 | CA\_n40B\_BCS1 | 0 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n40A-n78A | CA\_n40A-n78A | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n40A-n78(2A) | CA\_n40A-n78A | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
| CA\_n40B-n78A | - | n40 | CA\_n40B\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  | CA\_n40A-n78A | n40 | CA\_n40B\_BCS1 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n40B-n78(2A) | CA\_n40A-n78A | n40 | CA\_n40B\_BCS1 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n40B-n78C | CA\_n40A-n78A | n40 | CA\_n40B\_BCS1 | 0 |
|  |  | n78 | CA\_n78C\_BCS1 |  |
| CA\_n40A-n79A | CA\_n40A-n79A | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |

Table 5.5A.3.1-1j: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n41A-n48A | CA\_n41A-n48A | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n41A-n48B | CA\_n41A-n48A | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n48 | CA\_n48B\_BCS2 |  |
| CA\_n41A-n48C | CA\_n41A-n48A | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n48 | CA\_n48C\_BCS1 |  |
| CA\_n41A-n48(2A) | CA\_n41A-n48A | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n41C-n48A | CA\_n41A-n48A | n41 | CA\_n41C\_BCS2 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n41C-n48B | CA\_n41A-n48A | n41 | CA\_n41C\_BCS2 | 0 |
|  |  | n48 | CA\_n48B\_BCS2 |  |
| CA\_n41C-n48C | CA\_n41A-n48A | n41 | CA\_n41C\_BCS2 | 0 |
|  |  | n48 | CA\_n48C\_BCS1 |  |
| CA\_n41(2A)-n48A | CA\_n41A-n48A | n41 | CA\_n41(2A)\_BCS3 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n41(2A)-n48B | CA\_n41A-n48A | n41 | CA\_n41(2A)\_BCS3 | 0 |
|  |  | n48 | CA\_n48B\_BCS2 |  |
| CA\_n41(2A)-n48C | CA\_n41A-n48A | n41 | CA\_n41(2A)\_BCS3 | 0 |
|  |  | n48 | CA\_n48C\_BCS1 |  |
| CA\_n41(2A)-n48(2A) | CA\_n41A-n48A | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n41A-n50A | CA\_n41A-n50A | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n50 | 5, 10, 15, 20, 40, 50, 60, 801 |  |
| CA\_n41A-n66A | n418,9  CA\_n41A-n66A8 | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n41 | n41 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n41(2A)-n66A | n418, 9 | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  | n418, 9  CA\_n41A-n66A8 | n41 | CA\_n41(2A)\_BCS1 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n41 | CA\_n41(2A) BCS 4 and 5 | 4 and 5 |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n41A-n66(2A) | CA\_n41A-n66A | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 1 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n41C-n66A | n418, 9 | n41 | CA\_n41C\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  | n418, 9  CA\_n41C  CA\_n41A-n66A8 | n41 | CA\_n41C\_BCS1 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n41 | CA\_n41C BCS 4 and 5 | 4 and 5 |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n41C-n66(2A) | CA\_n41A-n66A | n41 | CA\_n41C\_BCS2 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n41(2A)-n66(2A) | CA\_n41A-n66A | n41 | CA\_n41(2A)\_BCS3 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n41(3A)-n66A | CA\_n41A-n66A | n41 | CA\_n41(3A)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40, |  |
| CA\_n41(A-C)-n66A | CA\_n41A-n66A | n41 | CA\_n41(A-C)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n41A-n70A | CA\_n41A-n70A | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n41A-n71A | n418,9  CA\_n41A-n71A8 | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 1 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n41A-n71B | CA\_n41A-n71A | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n71 | CA\_n71B\_BCS0 |  |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 1 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n41A-n71(2A) | CA\_n41A-n71A | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 1 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n41C-n71A | n418, 9  CA\_n41C  CA\_n41A-n71A8 | n41 | CA\_n41C\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
|  |  | n41 | CA\_n41C\_BCS1 | 1 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n41C-n71(2A) | CA\_n41A-n71A | n41 | CA\_n41C\_BCS1 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n41(2A)-n71A | n418, 9  CA\_n41A-n71A8 | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
|  |  | n41 | CA\_n41(2A)\_BCS3 | 1 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n41(2A)-n71(2A) | CA\_n41A-n71A | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n41(2A)-n71B | CA\_n41A-n71A | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71B\_BCS0 |  |
|  |  | n41 | CA\_n41(2A)\_BCS1 | 1 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n41(3A)-n71A | CA\_n41A-n71A | n41 | CA\_n41(3A)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n41(A-C)-n71A | CA\_n41A-n71A | n41 | CA\_n41(A-C)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n41C-n71B | CA\_n41A-n71A | n41 | CA\_n41C\_BCS0 | 0 |
|  |  | n71 | CA\_n71B\_BCS0 |  |
|  |  | n41 | CA\_n41C\_BCS1 | 1 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n41A-n74A | CA\_n41A-n74A | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n74 | 5, 10, 15, 20 |  |
| CA\_n41A-n77A | n418,9  n778  CA\_n41A-n77A8 | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41(2A)-n77A | CA\_n41A-n77A | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41(3A)-n77A | CA\_n41A-n77A | n41 | CA\_n41(3A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41(A-C)-n77A | CA\_n41A-n77A | n41 | CA\_n41(A-C)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41C-n77A | CA\_n41A-n77A  CA\_n41C | n41 | CA\_n41C\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41A-n77(2A) | CA\_n41A-n77A | n41 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n41A-n77(3A) | CA\_n41A-n77A | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS0 |  |
| CA\_n41A-n78A | CA\_n41A-n78A | n41 | 10, 15, 20, 40, 50, 60, 80, 100 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41A-n78(2A) | CA\_n41A-n78A | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n41A-n79A | n418  n798  CA\_n41A-n79A8 | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
|  |  | n41 | 10, 15, 20, 40, 50, 60 | 1 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n41C-n79A | CA\_n41A-n79A  CA\_n41C | n41 | CA\_n41C\_BCS0 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |

Table 5.5A.3.1-1k: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n46A-n48A | CA\_n46A-n48A | n46 | 20, 40, 60, 80 | 0 |
|  |  | n48 | 20 |  |
|  |  | n46 | 20, 40, 60, 80 | 1 |
|  |  | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 |  |
| CA\_n46A-n48(2A) | CA\_n46A-n48A | n46 | 10, 20, 40, 60, 80 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n46A-n48(3A) | CA\_n46A-n48A | n46 | 10, 20, 40, 60, 80 | 0 |
|  |  | n48 | CA\_n48(3A)\_BCS0 |  |
| CA\_n46A-n48(4A) | CA\_n46A-n48A | n46 | 10, 20, 40, 60, 80 | 0 |
|  |  | n48 | CA\_n48(4A)\_BCS0 |  |
| CA\_n46A-n48B | CA\_n46A-n48A  CA\_n46A-n48B | n46 | 20, 40, 60, 80 | 0 |
|  |  | n48 | CA\_n48B\_BCS0 |  |
| CA\_n46A-n48C | CA\_n46A-n48A  CA\_n46A-n48B | n46 | 20, 40, 60, 80 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n46B-n48A | CA\_n46A-n48A | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n48 | 20 |  |
|  |  | n46 | CA\_n46B\_BCS0 | 1 |
|  |  | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 |  |
| CA\_n46B-n48(2A) | CA\_n46B-n48A | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n46B-n48(3A) | CA\_n46A-n48A | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n48 | CA\_n48(3A)\_BCS0 |  |
| CA\_n46B-n48(4A) | CA\_n46A-n48A | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n48 | CA\_n48(4A)\_BCS0 |  |
| CA\_n46B-n48B | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n48 | CA\_n48B\_BCS0 |  |
| CA\_n46B-n48C | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n46C-n48A | CA\_n46A-n48A | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n48 | 20 |  |
|  |  | n46 | CA\_n46C\_BCS0 | 1 |
|  |  | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 |  |
| CA\_n46C-n48(2A) | CA\_n46A-n48A | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n46C-n48(3A) | CA\_n46A-n48A | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n48 | CA\_n48(3A)\_BCS0 |  |
| CA\_n46C-n48(4A) | CA\_n46A-n48A | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n48 | CA\_n48(4A)\_BCS0 |  |
| CA\_n46C-n48B | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n48 | CA\_n48B\_BCS0 |  |
| CA\_n46C-n48C | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n46D-n48A | CA\_n46A-n48A | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n48 | 20 |  |
|  |  | n46 | CA\_n46D\_BCS0 | 1 |
|  |  | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 |  |
| CA\_n46D-n48(2A) | CA\_n46A-n48A | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n46D-n48(3A) | CA\_n46A-n48A | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n48 | CA\_n48(3A)\_BCS0 |  |
| CA\_n46D-n48(4A) | CA\_n46A-n48A | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n48 | CA\_n48(4A)\_BCS0 |  |
| CA\_n46D-n48B | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n48 | CA\_n48B\_BCS0 |  |
| CA\_n46D-n48C | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n46N-n48A | CA\_n46A-n48A | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 |  |
| CA\_n46N-n48(2A) | CA\_n46A-n48A | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n48 | CA\_n48(2A)\_BCS0 |  |
| CA\_n46N-n48(3A) | CA\_n46A-n48A | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n48 | CA\_n48(3A)\_BCS0 |  |
| CA\_n46N-n48(4A) | CA\_n46A-n48A | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n48 | CA\_n48(4A)\_BCS0 |  |
| CA\_n46N-n48B | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n48 | CA\_n48B\_BCS0 |  |
| CA\_n46N-n48C | CA\_n46A-n48A  CA\_n46A-n48B | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n48 | CA\_n48C\_BCS0 |  |
| CA\_n46A-n66A | - | n46 | 20, 40, 60, 80 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n46A-n78A | CA\_n46A-n78A | n46 | 20, 40, 60, 80 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n46C-n78A | CA\_n46A-n78A | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n46D-n78A | CA\_n46A-n78A | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n46A-n96A | - | n46 | 10, 20, 40, 60, 80 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n46B-n96A | - | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n46C-n96A | - | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n46D-n96A | - | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n46N-n96A | - | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n46A-n96B | - | n46 | 10, 20, 40, 60, 80 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |
| CA\_n46B-n96B | - | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |
| CA\_n46C-n96B | - | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |
| CA\_n46D-n96B | - | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |
| CA\_n46N-n96B | - | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |

Table 5.5A.3.1-1l: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n48A-n53A | - | n48 | 5, 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n53 | 5, 10 |  |
| CA\_n48(2A)-n53A | - | n48 | CA\_n48(2A)\_BCS0 | 0 |
|  |  | n53 | 5, 10 |  |
| CA\_n48A-n66A | CA\_n48A-n66A | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n48 | 5, 10, 15, 20, 40, 501, 601, 801, 901, 1001 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n48 | 5, 10, 15, 20, 30, 40, 501, 601, 701 , 801, 901, 1001 | 2 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40, |  |
| CA\_n48A-n66(2A) | CA\_n48A-n66A | n48 | 5, 10, 15, 20, 30, 40, 501, 601, 701 , 801, 901, 1001 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS0 |  |
| CA\_n48B-n66A | CA\_n48A-n66A | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n48 | CA\_n48B\_BCS1 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n48 | CA\_n48B\_BCS2 | 2 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n48B-n66(2A) | CA\_n48A-n66A | n48 | CA\_n48B\_BCS2 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS0 |  |
| CA\_n48C-n66A | CA\_n48A-n66A | n48 | CA\_n48C\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n48 | CA\_n48C\_BCS0 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n48(2A)-n66A | CA\_n48A-n66A | n48 | CA\_n48(2A)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n48 | CA\_n48(2A)\_BCS0 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n48 | CA\_n48(2A)\_BCS1 | 2 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n48(2A)-n66(2A) | CA\_n48A-n66A | n48 | CA\_n48(2A)\_BCS1 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS0 |  |
| CA\_n48(A-B)-n66A | CA\_n48A-n66A | n48 | CA\_n48(A-B)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
|  |  | n48 | CA\_n48(A-B)\_BCS1 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n48(A-C)-n66A | CA\_n48A-n66A | n48 | CA\_n48(A-C)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 40 |  |
|  |  | n48 | CA\_n48(A-C)\_BCS0 | 1 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n48A-n70A | CA\_n48A-n70A | n48 | 5, 10, 15, 20, 30, 40, 501, 601, 701 , 801, 901, 1001 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n48(2A)-n70A | CA\_n48A-n70A | n48 | CA\_n48(2A)\_BCS1 | 0 |
|  |  | n70 | 5, 10, 15, 20, 25 |  |
| CA\_n48B-n70A | CA\_n48A-n70A | n48 | CA\_n48B\_BCS2 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n48A-n71A | CA\_n48A-n71A | n48 | 5, 10, 15, 20, 30, 40, 501, 601, 701, 801, 901, 1001 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n48A-n71(2A) | CA\_n48A-n71A | n48 | 5, 10, 15, 20, 30, 40, 501, 601, 701 , 801, 901, 1001 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n48(2A)-n71A | CA\_n48A-n71A | n48 | CA\_n48(2A)\_BCS1 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n48(2A)-n71(2A) | CA\_n48A-n71A | n48 | CA\_n48(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n48(3A)-n71A | CA\_n48A-n71A | n48 | CA\_n48(3A)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n48(4A)-n71A | CA\_n48A-n71A | n48 | CA\_n48(4A)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n48B-n71A | CA\_n48A-n71A | n48 | CA\_n48B\_BCS2 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n48B-n71(2A) | CA\_n48A-n71A | n48 | CA\_n48B\_BCS2 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n48C-n71A | CA\_n48A-n71A | n48 | CA\_n48C\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n48A-n77A | - | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n48A-n77C | - | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n48(2A)-n77A | - | n48 | CA\_n48(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n48 | CA\_n48(2A)\_BCS1 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n48(2A)-n77C | - | n48 | CA\_n48(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n48 | CA\_n48(2A)\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
|  |  | n48 | CA\_n48(2A)\_BCS1 | 2 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n48 | CA\_n48(2A)\_BCS1 | 3 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n48B-n77A | - | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n48 | CA\_n48B\_BCS1 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n48 | CA\_n48B\_BCS2 | 2 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n48B-n77C | - | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n48 | CA\_n48B\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
|  |  | n48 | CA\_n48B\_BCS2 | 2 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n48 | CA\_n48B\_BCS2 | 3 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n48(A-B)-n77A | - | n48 | CA\_n48(A-B)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n48 | CA\_n48(A-B)\_BCS1 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n48A-n96A | CA\_n48A-n96A | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n96 | 20, 40, 60, 80 |  |
| CA\_n48(2A)-n96A | CA\_n48A-n96A | n48 | CA\_n48(2A) \_BCS0 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n48(2A)-n96B | CA\_n48A-n96B | n48 | CA\_n48(2A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96B \_BCS0 |  |
| CA\_n48(2A)-n96C | CA\_n48A-n96A | n48 | CA\_n48(2A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96C \_BCS0 |  |
| CA\_n48(2A)-n96D | CA\_n48A-n96A | n48 | CA\_n48(2A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96D \_BCS0 |  |
| CA\_n48(2A)-n96E | CA\_n48A-n96A | n48 | CA\_n48(2A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96E \_BCS0 |  |
| CA\_n48(3A)-n96A | CA\_n48A-n96A | n48 | CA\_n48(3A) \_BCS0 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n48(3A)-n96B | CA\_n48A-n96B | n48 | CA\_n48(3A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96B \_BCS0 |  |
| CA\_n48(3A)-n96C | CA\_n48A-n96A | n48 | CA\_n48(3A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96C \_BCS0 |  |
| CA\_n48(3A)-n96D | CA\_n48A-n96A | n48 | CA\_n48(3A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96D \_BCS0 |  |
| CA\_n48(3A)-n96E | CA\_n48A-n96A | n48 | CA\_n48(3A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96E \_BCS0 |  |
| CA\_n48(4A)-n96A | CA\_n48A-n96A | n48 | CA\_n48(4A) \_BCS0 | 0 |
|  |  | n96 | 10, 20, 40, 60, 80 |  |
| CA\_n48(4A)-n96B | CA\_n48A-n96A | n48 | CA\_n48(4A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96B \_BCS0 |  |
| CA\_n48(4A)-n96C | CA\_n48A-n96A | n48 | CA\_n48(4A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96C \_BCS0 |  |
| CA\_n48(4A)-n96D | CA\_n48A-n96A | n48 | CA\_n48(4A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96D \_BCS0 |  |
| CA\_n48(4A)-n96E | CA\_n48A-n96A | n48 | CA\_n48(4A) \_BCS0 | 0 |
|  |  | n96 | CA\_n96E \_BCS0 |  |
| CA\_n48A-n96B | CA\_n48A-n96A | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |
| CA\_n48A-n96C | CA\_n48A-n96A | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n96 | CA\_n96C\_BCS0 |  |
| CA\_n48A-n96D | CA\_n48A-n96A | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n96 | CA\_n96D\_BCS0 |  |
| CA\_n48A-n96E | CA\_n48A-n96A | n48 | 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n96 | CA\_n96E\_BCS0 |  |
| CA\_n48B-n96A | CA\_n48A-n96A CA\_n48B-n96A | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n96 | 20, 40, 60, 80 |  |
| CA\_n48B-n96B | CA\_n48A-n96A CA\_n48B-n96A | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |
| CA\_n48B-n96C | CA\_n48A-n96A CA\_n48B-n96A | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n96 | CA\_n96C\_BCS0 |  |
| CA\_n48B-n96D | CA\_n48A-n96A CA\_n48B-n96A | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n96 | CA\_n96D\_BCS0 |  |
| CA\_n48B-n96E | CA\_n48A-n96A CA\_n48B-n96A | n48 | CA\_n48B\_BCS0 | 0 |
|  |  | n96 | CA\_n96E\_BCS0 |  |
| CA\_n48C-n96A | CA\_n48A-n96A | n48 | CA\_n48C\_BCS0 | 0 |
|  |  | n96 | 20, 40, 60, 80 |  |
| CA\_n48C-n96B | CA\_n48A-n96A | n48 | CA\_n48C\_BCS0 | 0 |
|  |  | n96 | CA\_n96B\_BCS0 |  |
| CA\_n48C-n96C | CA\_n48A-n96A | n48 | CA\_n48C\_BCS0 | 0 |
|  |  | n96 | CA\_n96C\_BCS0 |  |
| CA\_n48C-n96D | CA\_n48A-n96A | n48 | CA\_n48C\_BCS0 | 0 |
|  |  | n96 | CA\_n96D\_BCS0 |  |
| CA\_n48C-n96E | CA\_n48A-n96A | n48 | CA\_n48C\_BCS0 | 0 |
|  |  | n96 | CA\_n96E\_BCS0 |  |
| CA\_n50A-n78A | CA\_n50A-n78A | n50 | 5, 10, 15, 20, 30, 40, 50, 60, 801 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |

Table 5.5A.3.1-1m: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n66A-n70A | - | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n66B-n70A | - | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n66(2A)-n70A | - | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n70 | 5, 10, 15, 201, 251 |  |
| CA\_n66A-n71A | CA\_n66A-n71A | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n66A-n71B | CA\_n66A-n71A | n66 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n71 | CA\_n71B\_BCS0 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n66A-n71(2A) | - | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
|  | CA\_n66A-n71A | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n66(2A)-n71A | CA\_n66A-n71A | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n66(2A)-n71B | CA\_n66A-n71A | n66 | CA\_n66(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n66(2A)-n71(2A) | CA\_n66A-n71A | n66 | CA\_n66(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n66B-n71A | CA\_n66A-n71A | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n66A-n77A | n778  CA\_n66A-n77A8 | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66(2A)-n77A | CA\_n66A-n77A | n66 | CA\_n66(2A)\_BCS1 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66A-n77(2A) | n778  CA\_n66A-n77A8  CA\_n77(2A)) | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n66(3A)-n77A | CA\_n66A-n77A | n66 | CA\_n66(3A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66(2A)-n77(2A) | CA\_n66A-n77A  CA\_n77(2A) | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n66A-n77C | CA\_n66A-n77A | n66 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n66(2A)-n77C | CA\_n66A-n77A | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n66B-n77A | CA\_n66A-n77A | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66B-n77C | CA\_n66A-n77A | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n66 | CA\_n66B\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n66A-n78A | CA\_n66A-n78A | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66A-n78(2A) | CA\_n66A-n78A | n66 | 5, 10, 15, 20, 30, 40 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n66(2A)-n78A | CA\_n66A-n78A | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66(2A)-n78(2A) | CA\_n66A-n78A | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |

Table 5.5A.3.1-1n: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n70A-n71A | CA\_n70A-n71A | n70 | 5, 10, 15, 201, 251 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n70A-n71(2A) | CA\_n70A-n71A | n70 | 5, 10, 15, 201, 251 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n70A-n78A | CA\_n70A-n78A | n70 | 5, 10, 15, 201, 251 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n71A-n77A | n778  CA\_n71A-n77A8 | n71 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n71A-n77(2A) | CA\_n71A-n77A | n71 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n71B-n77A | CA\_n71A-n77A | n71 | CA\_n71B\_BCS2 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n71(2A)-n77A | CA\_n71A-n77A | n71 | CA\_n71(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n71A-n78A | CA\_n71A-n78A | n71 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n71A-n78(2A) | CA\_n71A-n78A | n71 | 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n74A-n77A | CA\_n74A-n77A | n74 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n74A-n78A | CA\_n74A-n78A | n74 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n75A-n78A | - | n75 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n75A-n78(2A) | - | n75 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
| CA\_n76A-n78A | - | n76 | 5 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n77A-n78A2 |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n77A-n79A | CA\_n77A-n79A | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n77(2A)-n79A | CA\_n77A-n79A | n77 | CA\_n77(2A)\_BCS1 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n78A-n79A | CA\_n78A-n79A | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100 | 1 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n78A-n79C | - | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n78(2A)-n79A | CA\_n78A-n79A | n78 | CA\_n78(2A)\_BCS1 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n78A-n92A | CA\_n78A-n92A | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 0 |
|  |  | n92 | 5, 10, 15, 20 |  |
| CA\_n78(2A)-n92A | CA\_n78A-n92A | n78 | CA\_n78(2A)\_BCS0 | 0 |
|  |  | n92 | 5, 10, 15, 20 |  |

The following notes are applied to the above tables:

NOTE 1: This UE channel bandwidth is applicable only to downlink.

NOTE 2: The minimum requirements for intra-band contiguous or non-contiguous CA apply.

NOTE 3: The SCS of each channel bandwidth for NR band refers to Table 5.3.5-1.

NOTE 4: This UE channel bandwidth is optional in this release of the specification.

NOTE 5: For this bandwidth, the minimum requirements are restricted to operation when carrier is configured as an SCell part of DC or CA configuration.

NOTE 6: For this bandwidth, the minimum requirements are restricted to operation when carrier is configured as an downlink SCell part of CA configuration

NOTE 7: Limited to operation at 3450-3550 MHz and 3700–3980 MHz.

NOTE 8: Power Class 2 is allowed for this uplink combination or single uplink carrier in this downlink/uplink combination

NOTE 9: Power Class 1.5 is allowed for this uplink combination or single uplink carrier in this downlink/uplink combination

NOTE 10: Only single uplink carriers with power class other than PC3 are listed.

NOTE 11: The CA configurations are given in Table 5.5A.1-1 or Table 5.5A.2-1 in this specification

## << Next change >>

## 5.5B Configurations for DC

For an NR DC configuration specified in 5.5B.1-1, the bandwidth combination sets for the corresponding NR CA configuration in 5.5A.3,i.e.,dual uplink inter-band carrier aggregation with uplink assigned to two NR bands, are applicable to Dual Connectivity.

Table 5.5B.1-1: Inter-band NR DC configurations (two bands)

| NR DC  configuration | Uplink NR DC  configuration |
| --- | --- |
| DC\_n1A-n3A | DC\_n1A-n3A |
| DC\_n1A-n7A | DC\_n1A-n7A |
| DC\_n1A-n28A | DC\_n1A-n28A |
| DC\_n1A-n41A | DC\_n1A-n41A |
| DC\_n1A-n77A2 | DC\_n1A-n77A |
| DC\_n1A-n78A | DC\_n1A-n78A |
| DC\_n1A-n79A2 | DC\_n1A-n79A |
| DC\_n2A-n5A  DC\_n2A-n5B | DC\_n2A-n5A |
| DC\_n2A-n48A  DC\_n2A-n48B  DC\_n2A-n48C | DC\_n2A-n48A |
| DC\_n2A-n48(2A)  DC\_n2A-n48(A-C) | DC\_n2A-n48A |
| DC\_n2A-n66A  DC\_n2A-n66B | DC\_n2A-n66A |
| DC\_n2A-n77A  DC\_n2A-n77C | DC\_n2A-n77A |
| DC\_n2A-n77(2A)  DC\_n2(2A)-n77A  DC\_n2(2A)-n77C | DC\_n2A-n77A |
| DC\_n3A-n28A | DC\_n3A-n28A |
| DC\_n3A-n41A | DC\_n3A-n41A |
| DC\_n3A-n77A2 | DC\_n3A-n77A |
| DC\_n3A-n77(2A) 2 | DC\_n3A-n77A |
| DC\_n3A-n78A2 | DC\_n3A-n78A |
| DC\_n3A-n79A | DC\_n3A-n79A |
| DC\_n5A-n48A  DC\_n5A-n48B  DC\_n5A-n48C | DC\_n5A-n48A |
| DC\_n5A-n48(2A) | DC\_n5A-n48A |
| DC\_n5A-n66A  DC\_n5B-n66A | DC\_n5A-n66A |
| DC\_n5A-n66(2A)  DC\_n5B-n66(2A) | DC\_n5A-n66A |
| DC\_n5A-n77A  DC\_n5A-n77C | DC\_n5A-n77A |
| DC\_n5A-n77(2A)  DC\_n5(2A)-n77A  DC\_n5(2A)-n77C | DC\_n5A-n77A |
| DC\_n7A-n46A  DC\_n7A-n46C  DC\_n7A-n46D | DC\_n7A-n46A |
| DC\_n7A-n78A | DC\_n7A-n78A |
| DC\_n12A-n77A | DC\_n12A-n77A |
| DC\_n12A-n77(2A) | DC\_n12A-n77A |
| DC\_n28A-n41A | DC\_n28A-n41A |
| DC\_n28A-n46A  DC\_n28A-n46C  DC\_n28A-n46D | DC\_n28A-n46A |
| DC\_n28A-n77A2 | DC\_n28A-n77A |
| DC\_n28A-n77(2A) | DC\_n28A-n77A |
| DC\_n28A-n78A2 | DC\_n28A-n78A |
| DC\_n28A-n79A | DC\_n28A-n79A |
| DC\_n41A-n77A | DC\_n41A-n77A |
| DC\_n41A-n78A | DC\_n41A-n78A |
| DC\_n46A-n48A  DC\_n46A-n48B  DC\_n46A-n48C  DC\_n46B-n48A  DC\_n46B-n48B  DC\_n46B-n48C  DC\_n46C-n48A  DC\_n46C-n48B  DC\_n46C-n48C  DC\_n46D-n48A  DC\_n46D-n48B  DC\_n46D-n48C  DC\_n46N-n48A  DC\_n46N-n48B  DC\_n46N-n48C | DC\_n46A-n48A  DC\_n46A-n48B |
| DC\_n46A-n78A  DC\_n46C-n78A  DC\_n46D-n78A | DC\_n46A-n78A |
| DC\_n48A-n66A  DC\_n48B-n66A  DC\_n48C-n66A | DC\_n48A-n66A |
| DC\_n48A-n66(2A)  DC\_n48B-n66(2A)  DC\_n48(2A)-n66A  DC\_n48(2A)-n66(2A)  DC\_n48(A-C)-n66A | DC\_n48A-n66A |
| DC\_n48A-n70A  DC\_n48B-n70A | DC\_n48A-n70A |
| DC\_n48(2A)-n70A | DC\_n48A-n70A |
| DC\_n48A-n71A  DC\_n48B-n71A  DC\_n48C-n71A | DC\_n48A-n71A |
| DC\_n48A-n71(2A)  DC\_n48(2A)-n71A  DC\_n48(2A)-n71(2A)  DC\_n48(3A)-n71A  DC\_n48(4A)-n71A  DC\_n48B-n71(2A) | DC\_n48A-n71A |
| DC\_n48A-n96A  DC\_n48B-n96A  DC\_n48C-n96A  DC\_n48A-n96B  DC\_n48B-n96B  DC\_n48C-n96B  DC\_n48A-n96C  DC\_n48B-n96C  DC\_n48C-n96C  DC\_n48A-n96D  DC\_n48B-n96D  DC\_n48C-n96D  DC\_n48A-n96E  DC\_n48B-n96E  DC\_n48C-n96E | DC\_n48A-n96A DC\_n48B-n96A |
| DC\_n66A-n77A  DC\_n66A-n77C  DC\_n66B-n77A  DC\_n66B-n77C | DC\_n66A-n77A |
| DC\_n66A-n77(2A) | DC\_n66A-n77A |
| DC\_n66(2A)-n77(2A)  DC\_n66(2A)-n77C | DC\_n66A-n77A |
| DC\_n71A-n77A | DC\_n71A-n77A |
| DC\_n71A-n77(2A) | DC\_n71A-n77A |
| DC\_n77A-n79A1 | DC\_n77A-n79A |
| DC\_n77(2A)-n79A1 | DC\_n77A-n79A |
| NOTE 1: The minimum requirements apply only when there is non-simultaneous Rx/Tx operation between n77-n79 NR carriers. This restriction applies also for these carriers when applicable NR DC configuration is part of a higher order configuration.  NOTE 2: Applicable for UE supporting inter-band NR DC with mandatory simultaneous Rx/Tx capability. | |

## << Next change >>

## 6.2A Transmitter power for CA

### 6.2A.1 UE maximum output power for CA

#### 6.2A.1.1 Void

#### 6.2A.1.2 Void

#### 6.2A.1.3 UE maximum output power for Inter-band CA

For power class 3 inter-band downlink carrier aggregation with one uplink carrier assigned to one NR band, the transmitter power requirements power class 3 in clause 6.2 apply.

For other power class except class 3 inter-band downlink carrier aggregation with one uplink carrier assigned to one NR band, the maximum output power is specified in Table 6.2A.1.3-2. The period of measurement shall be at least one sub frame (1 ms).

For inter-band uplink carrier aggregation with uplink assigned to two NR bands, UE maximum output power shall be measured over all component carriers from different bands. If each band has separate antenna connectors, maximum output power is defined as the sum of maximum output power from each UE antenna connector. The period of measurement shall be at least one sub frame (1 ms). The maximum output power is specified in Table 6.2A.1.3-1.

Table 6.2A.1.3-1 UE Power Class for uplink inter-band CA (two bands)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Uplink CA Configuration | Class 1 (dBm) | Tolerance (dB) | Class 2 (dBm) | Tolerance  (dB) | Class 3 (dBm) | Tolerance (dB) | Class 4 (dBm) | Tolerance (dB) |
| CA\_n1A-n3A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n5A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n7A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n8A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n18A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n20A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n28A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n40A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n74A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n1A-n78A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n1A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n5A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n7A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n12A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n14A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n30A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n2A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n2A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n5A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n7A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n8A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n18A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n20A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n28A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n34A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3-n38A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n40A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n41A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n3A-n74A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n3A-n78A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n3A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n7A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n12A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n14A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n25A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n30A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n5A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n5A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n7A-n25A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n7A-n28A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n7A-n46A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n7A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n7A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n7A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n8A-n34A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n8A-n39A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n8A-n40A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n8A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n8A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n8A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n8A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n12A-n30A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n12A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n12A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n13A-n25A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n13A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n13A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n14A-n30A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n14A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n14A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n18A-n28A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n18A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n18A-n74A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n18A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n18A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n20A-n28A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n20A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n24A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n24A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n24A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n25A-n38A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n25A-n41A |  |  | 266 | +2/-32 | 23 | +2/-3 |  |  |
| CA\_25A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n25A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n25A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n25A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n26A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n26A-n70A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n28A-n40A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n28A-n41A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n28A-n46A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n28A-n50A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n28A-n74A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n28A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n28A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n28A-n79A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n34A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n30A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n30A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n34A-n40A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n38A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n38A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n39A-n40A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n39A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n39A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n40A-n41A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n40A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n40A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n40A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n41A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n41A-n50A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n41A-n66A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n41A-n70A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n41A-n71A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n41A-n74A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n41A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n41A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n41A-n79A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n46A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n46A-n48B |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n46A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n48A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n48A-n70A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n48A-n71A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n48A-n96A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n48A-n96B |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n48B-n96A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n50A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n66A-n71A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n66A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n66A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n70A-n71A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n70A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n71A-n77A |  |  | 266 | +2/-3 | 23 | +2/-3 |  |  |
| CA\_n71A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n74A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n74A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n77A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n78A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n78A-n92A |  |  |  |  | 23 | +2/-3 |  |  |
| NOTE 1: Void  NOTE 2: An uplink CA configuration in which at least one of the bands has NOTE 3 in Table 6.2.1-1 is allowed to reduce the lower tolerance limit by 1.5 dB when the transmission bandwidths of at least one of the bands is confined within FUL\_low and FUL\_low + 4 MHz or FUL\_high - 4 MHz and FUL\_high.  NOTE 3: PPowerClass is the maximum UE power specified without taking into account the tolerance  NOTE 4: For inter-band carrier aggregation the maximum power requirement should apply to the total transmitted power over all component carriers (per UE).  NOTE 5: Power class 3 is the default power class unless otherwise stated.  NOTE 6: The UE supports PC3 within NR FDD band, and supports either PC3 or PC2 within NR TDD band. | | | | | | | | |

## << Next change >>

#### 6.2A.4.2 ΔTIB,c for CA

For the UE which supports inter-band NR CA configuration, ΔTIB,c in tables below applies. Unless otherwise stated, ΔTIB,c is set to zero.

##### 6.2A.4.2.1 Void

##### 6.2A.4.2.2 Void

##### 6.2A.4.2.3 ΔTIB,c for Inter-band CA (two bands)

Table 6.2A.4.2.3-1: ΔTIB,c due to NR CA (two bands)

|  |  |  |
| --- | --- | --- |
| Inter-band CA combination | NR Band | ΔTIB,c (dB) |
| CA\_n1-n3 | n1 | 0.3 |
|  | n3 | 0.3 |
| CA\_n1-n5 | n1 | 0.3 |
|  | n5 | 0.3 |
| CA\_n1-n7 | n1 | 0.5 |
|  | n7 | 0.6 |
| CA\_n1-n8 | n1 | 0.3 |
|  | n8 | 0.3 |
| CA\_n1-n18 | n1 | 0.3 |
|  | n18 | 0.3 |
| CA\_n1-n20 | n1 | 0.3 |
|  | n20 | 0.3 |
| CA\_n1-n28 | n1 | 0.3 |
|  | n28 | 0.6 |
| CA\_n1-n38 | n1 | 0.5 |
|  | n38 | 0.5 |
| CA\_n1-n40 | n1 | 0.5 |
|  | n40 | 0.5 |
| CA\_n1-n41 | n1 | 0.5 |
|  | n41 | 0.5 |
| CA\_n1-n67 | n1 | 0.3 |
| CA\_n1-n74 | n1 | 0.3 |
|  | n74 | 0.3 |
| CA\_n1-n77 | n1 | 0.6 |
|  | n77 | 0.8 |
| CA\_n1-n78 | n1 | 0.3 |
|  | n78 | 0.8 |
| CA\_n2-n5 | n2 | 0.3 |
|  | n5 | 0.3 |
| CA\_n2-n7 | n2 | 0.5 |
|  | n7 | 0.5 |
| CA\_n2-n12 | n2 | 0.3 |
|  | n12 | 0.3 |
| CA\_n2-n14 | n2 | 0.3 |
|  | n14 | 0.3 |
| CA\_n2-n29 | n2 | 0.3 |
| CA\_n2-n30 | n2 | 0.5 |
|  | n30 | 0.3 |
| CA\_n2-n48 | n2 | 0.6 |
|  | n48 | 0.8 |
| CA\_n2-n66 | n2 | 0.5 |
|  | n66 | 0.5 |
| CA\_n2-n77 | n2 | 0.6 |
|  | n77 | 0.8 |
| CA\_n2-n78 | n2 | 0.6 |
|  | n78 | 0.8 |
| CA\_n3-n5 | n3 | 0.3 |
|  | n5 | 0.3 |
| CA\_n3-n7 | n3 | 0.5 |
|  | n7 | 0.5 |
| CA\_n3-n8 | n3 | 0.3 |
|  | n8 | 0.3 |
| CA\_n3-n18 | n3 | 0.3 |
|  | n18 | 0.3 |
| CA\_n3-n20 | n3 | 0.3 |
|  | n20 | 0.3 |
| CA\_n3-n28 | n3 | 0.3 |
|  | n28 | 0.3 |
| CA\_n3-n34 | n3 | 0.5 |
|  | n34 | 0.5 |
| CA\_n3-n38 | n3 | 0.5 |
|  | n38 | 0.5 |
| CA\_n3-n40 | n3 | 0.5 |
|  | n40 | 0.5 |
| CA\_n3-n41 | n3 | 0.5 |
|  | n41 | 0.34 |
|  |  | 0.85 |
| CA\_n3-n74 | n3 | 0.8 |
|  | n74 | 0.9 |
| CA\_n3-n77 | n3 | 0.6 |
|  | n77 | 0.8 |
| CA\_n3-n78 | n3 | 0.6 |
|  | n78 | 0.8 |
| CA\_n3-n79 | n3 | 0.3 |
|  | n79 | 0.8 |
| CA\_n5-n7 | n5 | 0.3 |
|  | n7 | 0.3 |
| CA\_n5-n12 | n5 | 0.8 |
|  | n12 | 0.4 |
| CA\_n5-n14 | n5 | 0.5 |
|  | n14 | 0.5 |
| CA\_n5-n25 | n5 | 0.3 |
|  | n25 | 0.3 |
| CA\_n5-n28 | n5 | 0.5 |
|  | n28 | 0.5 |
| CA\_n5-n29 | n5 | 0.5 |
| CA\_n5-n30 | n5 | 0.3 |
|  | n30 | 0.3 |
| CA\_n5-n48 | n5 | 0.3 |
|  | n48 | 0.3 |
| CA\_n5-n66 | n5 | 0.3 |
|  | n66 | 0.3 |
| CA\_n5-n77 | n5 | 0.6 |
|  | n77 | 0.8 |
| CA\_n5-n78 | n5 | 0.6 |
|  | n78 | 0.8 |
| CA\_n7-n8 | n7 | 0.3 |
|  | n8 | 0.6 |
| CA\_n7-n25 | n7 | 0.5 |
|  | n25 | 0.5 |
| CA\_n7-n28 | n7 | 0.3 |
|  | n28 | 0.3 |
| CA\_n7-n46 | n7 | 0.3 |
| CA\_n7-n66 | n7 | 0.5 |
|  | n66 | 0.5 |
| CA\_n7-n77 | n7 | 0.5 |
|  | n77 | 0.8 |
| CA\_n7-n78 | n7 | 0.5 |
|  | n78 | 0.8 |
| CA\_n7-n79 | n7 | 0.5 |
|  | n79 | 0.8 |
| CA\_n8-n20 | n8 | 0.4 |
|  | n20 | 0.4 |
| CA\_n8-n28 | n8 | 0.6 |
|  | n28 | 0.5 |
| CA\_n8-n34 | n8 | 0.3 |
|  | n34 | 0.3 |
| CA\_n8-n39 | n8 | 0.3 |
|  | n39 | 0.3 |
| CA\_n8-n40 | n8 | 0.3 |
|  | n40 | 0.3 |
| CA\_n8-n41 | n8 | 0.6 |
|  | n41 | 0.3 |
| CA\_n8-n75 | n8 | 0.3 |
| CA\_n8-n77 | n8 | 0.6 |
|  | n77 | 0.8 |
| CA\_n8-n78 | n8 | 0.6 |
|  | n78 | 0.8 |
| CA\_n8-n79 | n8 | 0.3 |
|  | n79 | 0.8 |
| CA\_n12-n25 | n12 | 0.3 |
|  | n25 | 0.3 |
| CA\_n12-n30 | n12 | 0.3 |
|  | n30 | 0.3 |
| CA\_n12-n48 | n12 | 0.3 |
|  | n48 | 0.3 |
| CA\_n12-n66 | n12 | 0.8 |
|  | n66 | 0.3 |
| CA\_n12-n71 | n12 | 1 |
|  | n71 | 1 |
| CA\_n12-n77 | n12 | 0.5 |
|  | n77 | 0.8 |
| CA\_n13-n25 | n13 | 0.3 |
|  | n25 | 0.3 |
| CA\_n13-n66 | n13 | 0.3 |
|  | n66 | 0.3 |
| CA\_n13-n77 | n13 | 0.5 |
|  | n78 | 0.8 |
| CA\_n14-n30 | n14 | 0.3 |
|  | n30 | 0.3 |
| CA\_n14-n66 | n14 | 0.3 |
|  | n66 | 0.3 |
| CA\_n14-n77 | n14 | 0.5 |
|  | n77 | 0.8 |
| CA\_n18-n28 | n18 | 0.5 |
|  | n28 | 0.5 |
| CA\_n18-n41 | n18 | 0.3 |
|  | n41 | 0.3 |
| CA\_n18-n74 | n18 | 0.3 |
|  | n74 | 0.3 |
| CA\_n18-n77 | n18 | 0.3 |
|  | n77 | 0.8 |
| CA\_n18-n78 | n18 | 0.3 |
|  | n78 | 0.8 |
| CA\_n20-n28 | n20 | 0.5 |
|  | n28 | 0.5 |
| CA\_n20-n75 | n20 | 0.3 |
| CA\_n20-n78 | n20 | 0.6 |
|  | n78 | 0.8 |
| CA\_n20-n67 | n20 | 0.5 |
| CA\_n24-n41 | n24 | 0.3 |
|  | n41 | 0.46 |
|  |  | 0.97 |
| CA\_n24-n48 | n24 | 0.6 |
|  | n48 | 0.8 |
| CA\_n24-n77 | n24 | 0.6 |
|  | n77 | 0.8 |
| CA\_n25-n29 | n25 | 0.3 |
| CA\_n25-n38 | n25 | 0.5 |
|  | n38 | 0.5 |
| CA\_n25-n41 | n25 | 0.5 |
|  | n41 | 0.46 |
|  |  | 0.97 |
| CA\_n25-n48 | n25 | 0.6 |
|  | n48 | 0.8 |
| CA\_n25-n66 | n25 | 0.5 |
|  | n66 | 0.5 |
| CA\_n25-n71 | n25 | 0.3 |
|  | n71 | 0.6 |
| CA\_n25-n77 | n25 | 0.6 |
|  | n77 | 0.8 |
| CA\_n26-n66 | n26 | 0.3 |
|  | n66 | 0.3 |
| CA\_n26-n70 | n26 | 0.3 |
|  | n70 | 0.3 |
| CA\_n28-n38 | n28 | 0.3 |
|  | n38 | 0.3 |
| CA\_n28-n40 | n28 | 0.3 |
|  | n40 | 0.3 |
| CA\_n28-n41 | n28 | 0.3 |
|  | n41 | 0.3 |
| CA\_n28-n50 | n28 | 0.3 |
|  | n50 | 0.4 |
| CA\_n28-n71 | n28 | 1.1 |
|  | n71 | 1.1 |
| CA\_n28-n74 | n28 | 0.6 |
|  | n74 | 0.4 |
| CA\_n28-n75 | n28 | 0.3 |
| CA\_n28-n77 | n28 | 0.5 |
|  | n77 | 0.8 |
| CA\_n28-n78 | n28 | 0.5 |
|  | n78 | 0.8 |
| CA\_n28-n79 | n28 | 0.5 |
|  | n79 | 0.8 |
| CA\_n29-n30 | n30 | 0.3 |
| CA\_n29-n66 | n66 | 0.3 |
| CA\_n29-n70 | n70 | 0.3 |
| CA\_n29-n71 | n71 | 0.5 |
| CA\_n29-n77 | n77 | 0.8 |
| CA\_n34-n79 | n34 | 0.3 |
|  | n79 | 0.8 |
| CA\_n30-n66 | n30 | 0.5 |
|  | n66 | 0.8 |
| CA\_n30-n77 | n30 | 0.3 |
|  | n77 | 0.8 |
| CA\_n38-n66 | n38 | 0.5 |
|  | n66 | 0.5 |
| CA\_n38-n78 | n38 | 0.3 |
|  | n78 | 0.8 |
| CA\_n38-n79 | n38 | 0.3 |
|  | n79 | 0.8 |
| CA\_n39-n41 | n39 | 02 |
|  | n41 | 02 |
|  | n39 | 0.53 |
|  | n41 | 0.53 |
| CA\_n39-n79 | n39 | 0.3 |
|  | n79 | 0.8 |
| CA\_n40-n41 | n40 | 0.53 |
|  | n41 | 0.53 |
| CA\_n40-n77 | n77 | 0.5 |
| CA\_n40-n78 | n78 | 0.5 |
|  |  |  |
|  |  |  |
| CA\_n40-n79 | n40 | 0.3 |
|  | n79 | 0.8 |
| CA\_n41-n48 | n41 | 0.3 |
|  | n48 | 0.8 |
| CA\_n41-n50 | n41 | 0.3 |
|  | n50 | 0.4 |
| CA\_n41-n66 | n41 | 0.86 |
|  |  | 1.37 |
|  | n66 | 0.5 |
| CA\_n41-n70 | n41 | 0.5 |
|  | n70 | 0.5 |
| CA\_n41-n71 | n41 | 0.3 |
|  | n71 | 0.6 |
| CA\_n41-n74 | n41 | 0.3 |
|  | n74 | 0.3 |
| CA\_n41-n771 | n41 | 0.3 |
|  | n77 | 0.8 |
| CA\_n41-n781 | n41 | 0.3 |
|  | n78 | 0.8 |
| CA\_n41-n79 | n41 | 0.3 |
|  | n79 | 0.8 |
| CA\_n46-n48 | n48 | 0.5 |
| CA\_n46-n78 | n78 | 0.8 |
| CA\_n46-n96 | n96 | 0.5 |
| CA\_n48-n53 | n48 | 0.53 |
|  | n53 | 0.33 |
| CA\_n48-n66 | n48 | 0.8 |
|  | n66 | 0.6 |
| CA\_n48-n70 | n48 | 0.8 |
|  | n70 | 0.6 |
| CA\_n48-n71 | n48 | 0.3 |
|  | n71 | 0.3 |
| CA\_n48-n96 | n48 | 0.5 |
|  | n96 | 0.5 |
| CA\_n50-n78 | n50 | 02 |
|  | n78 | 02 |
|  | n50 | 0.53 |
|  | n78 | 0.53 |
| CA\_n66-n70 | n66 | 0.5 |
|  | n70 | 0.5 |
| CA\_n66-n71 | n66 | 0.3 |
|  | n71 | 0.3 |
| CA\_n66-n77 | n66 | 0.6 |
|  | n77 | 0.8 |
| CA\_n66-n78 | n66 | 0.6 |
|  | n78 | 0.8 |
| CA\_n70-n71 | n70 | 0.3 |
|  | n71 | 0.6 |
| CA\_n70-n78 | n70 | 0.6 |
|  | n78 | 0.8 |
| CA\_n71-n77 | n71 | 0.5 |
|  | n77 | 0.8 |
| CA\_n71-n78 | n71 | 0.5 |
|  | n78 | 0.8 |
| CA\_n74-n77 | n74 | 0.4 |
|  | n77 | 0.8 |
| CA\_n74-n78 | n74 | 0.4 |
|  | n78 | 0.8 |
| CA\_n75-n78 | n78 | 0.8 |
| CA\_n76-n78 | n78 | 0.8 |
| CA\_n77-n79 | n77 | 0.5 |
|  | n79 | 0.5 |
| CA\_n78-n79 | n78 | 0.5 |
|  |  | 1.58 |
|  | n79 | 0.5 |
|  |  | 1.58 |
| CA\_n78-n92 | n78 | 0.8 |
|  | n92 | 0.6 |
| NOTE 1: The requirements only apply when the sub-frame and Tx-Rx timings are synchronized between the component carriers. In the absence of synchronization, the requirements are not within scope of these specifications.  NOTE 2: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx.  NOTE 3: Applicable for UE supporting inter-band carrier aggregation without simultaneous Rx/Tx.  NOTE 4: The requirement is applied for UE transmitting on the frequency range of 2515-2690 MHz.  NOTE 5: The requirement is applied for UE transmitting on the frequency range of 2496-2515 MHz.  NOTE 6: The requirement is applied for UE transmitting on the frequency range of 2545-2690 MHz.  NOTE 7: The requirement is applied for UE transmitting on the frequency range of 2496-2545 MHz.  NOTE 8: The requirements only apply for UE supporting inter-band carrier aggregation with simultaneous Rx/Tx capability, and NR UL carrier frequencies are confined to 3700 MHz-3800MHz for n78 and 4400 MHz-4500MHz for n79. Simultaneous Rx/Tx capability does not apply for UEs supporting band n78 with a n77 implementation. | | |

## << Next change >>

## 6.2.B Transmitter power for NR-DC

### 6.2B.0 General

The requirements apply for inter-band NR-DC with one uplink serving cell configured per CG.

### 6.2B.1 UE maximum output power for NR-DC

For inter-band NR-DC with one uplink carrier assigned per NR band, the transmitter power requirements in clause 6.2 apply per band.

For inter-band NR-DC with one uplink assigned per band, the UE maximum output power shall be measured over all component carriers from different bands. If each band has separate antenna connectors, the maximum output power is measured as the sum of maximum output power at each UE antenna connector. The period of measurement shall be at least one sub frame (1 ms). The maximum output power is specified in Table 6.2B.1.3-1.

**Table 6.2B.1.3-1 UE Power Class for inter-band NR-DC**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Uplink CA Configuration | Class 1 (dBm) | Tolerance (dB) | Class 2 (dBm) | Tolerance  (dB) | Class 3 (dBm) | Tolerance (dB) | Class 4 (dBm) | Tolerance (dB) |
| DC\_n1A-n3A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n1A-n7A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n1A-n28A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n1A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n1A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n1A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n1A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n2A-n5A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n2A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n2A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n2A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n3A-n28A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n3A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n3A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n3A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n3A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n5A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n5A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n5A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n7A-n46A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n7A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n28A-n41A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n28A-n46A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n28A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n28A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n28A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n41A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n41A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n46A-n48A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n46A-n48B |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n46A-n78A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n48A-n66A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n48A-n70A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n48A-n71A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n48A-n96A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n48B-n96A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n66A-n77A |  |  |  |  | 23 | +2/-3 |  |  |
| DC\_n77A-n79A |  |  |  |  | 23 | +2/-3 |  |  |
| NOTE 1: An uplink DC configuration in which at least one of the bands has NOTE 3 in Table 6.2.1-1 is allowed to reduce the lower tolerance limit by 1.5 dB when the transmission bandwidths of at least one of the bands is confined within FUL\_low and FUL\_low + 4 MHz or FUL\_high - 4 MHz and FUL\_high.  NOTE 2: PPowerClass is the maximum UE power specified without account of the tolerance  NOTE 3: The maximum power requirement applies to the total transmitted power over both the MCG and SCG.  NOTE 4: Power class 3 is the default power class unless otherwise stated. | | | | | | | | |

## << Next change >>

#### 6.5A.3.2 Spurious emissions for UE co-existence

##### 6.5A.3.2.1 Void

##### 6.5A.3.2.2 Void

##### 6.5A.3.2.3 Spurious emissions for UE co-existence for Inter-band CA

For inter-band carrier aggregation with the uplink assigned to two NR bands, the requirements in Table 6.5A.3.2.3-1 apply on each component carrier with all component carriers are active.

NOTE: For inter-band carrier aggregation with uplink assigned to two NR bands the requirements in Table 6.5A.3.2.3-1 could be verified by measuring spurious emissions at the specific frequencies where second and third order intermodulation products generated by the two transmitted carriers can occur; in that case, the requirements for remaining applicable frequencies in Table 6.5A.3.2.3-1 would be considered to be verified by the measurements verifying the one uplink inter-band CA UE to UE co-existence requirements.

Table 6.5A.3.2.3-1: Requirements for uplink inter-band carrier aggregation (two bands)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NR CA combination | Spurious emission | | | | | | |
|  | Protected Band | Frequency range (MHz) | | | Maximum Level (dBm) | MBW (MHz) | NOTE |
| CA\_n1-n3 | E-UTRA Band 1, 5, 7, 8, 11, 18, 19, 20, 21, 26, 27, 28, 31, 32, 38, 40, 41, 43, 44, 50, 51, 65, 67, 68, 69, 72, 73, 74, 75, 76  NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA band 22, 42, 52  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4,6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
| CA\_n1-n5 | E-UTRA Band 1, 5, 7, 8, 11, 18, 19, 21, 22, 26, 28, 31, 38, 40, 42, 43, 50, 51, 65, 73, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 3,34 | FDL\_low | - | FDL\_high | -50 | 1 | 5 |
|  | E-UTRA band 41, 52  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n1-n7 | E-UTRA Band 1, 5, 7, 8, 20, 22, 26, 27, 28, 31,32, 40, 42, 43, 50, 51, 52, 65, 67, 68, 72, 74, 75, 76  NR Band n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | Frequency range | 1880 |  | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 |  | 1915 | -15.5 | 5 | 4. 7, 6 |
|  | Frequency range | 1915 |  | 1920 | +1.6 | 5 | 4. 7, 6 |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n1-n8 | E-UTRA Band 20, 28, 31, 32, 38, 40, 45, 50, 51, 65, 67, 68, 69, 72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3, 7, 22, 41, 42, 43  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 1, 8, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 5 |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
| CA\_n1-n18 | E-UTRA Band 1, 11, 21, 42, 65  NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 758 | - | 799 | -50 | 1 |  |
|  | Frequency range | 799 | - | 803 | -40 | 1 | 4 |
|  | Frequency range | 860 | - | 890 | -40 | 1 |  |
|  | Frequency range | 945 | - | 960 | -50 | 1 |  |
|  | Frequency range | 2545 | - | 2575 | -50 | 1 |  |
|  | Frequency range | 2595 | - | 2645 | -50 | 1 |  |
| CA\_n1-n20 | E-UTRA Band 3, 7, 8, 22, 31, 32, 40, 43, 50, 51, 65, 67, 68, 72, 74, 75, 76  NR band n1 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 38, 42, 69  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 34  NR band n20 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | Frequency range | 758 | - | 788 | -50 | 1 |  |
| CA\_n1-n28 | E-UTRA Band 5, 7, 8, 18, 19, 20, 26, 27, 31, 38, 40, 41, 72, 73  NR band n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 1, 22, 32, 42, 43, 50, 51, 52, 65, 74, 75, 76  NR band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 12 |
|  | E-UTRA Band 1, 65 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 15 |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 4, 14 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 15 |
|  | Frequency range | 758 | - | 773 | -30 | 1 | 4 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 4 |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
| CA\_n1-n40 | E-UTRA Band 1, 5, 7, 8, 11, 18, 19, 20, 21, 22, 26, 27, 28, 31, 32, 38, 41, 42, 43, 44, 45, 50, 51, 52, 65, 67, 68, 69, 72, 73, 74, 75, 76  NR band n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | NR band n77, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1880 |  | 1895 | -40 | 1 | 4, 14 |
|  | Frequency range | 1895 |  | 1915 | -15.5 | 5 | 4, 7, 14 |
|  | Frequency range | 1915 |  | 1920 | +1.6 | 5 | 4, 7, 14 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n1-n41 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 26, 27, 28, 42, 44, 45, 50, 51, 52, 65, 73, 74  NR Band n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | NR Band n77, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4,6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
| CA\_n1-n74 | E-UTRA Band 1, 5, 7, 8, 18, 19, 20, 26, 28, 31, 38, 40, 41, 42, 43, 52, 65, 67, 68  NR Band n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n77, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 1400 | - | 1427 | -32 | 27 | 4, 20 |
|  | Frequency range | 1475 | - | 1488 | -50 | 1 | 21 |
|  | Frequency range | 1488 | - | 1518 | -50 | 1 | 4 |
| CA\_n1-n77 | E-UTRA Band 1, 5, 7, 8, 11, 18, 19, 20, 21, 26, 27, 28, 40, 41, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
| CA\_n1-n78 | E-UTRA Band 1, 3, 5, 7, 8, 11, 18, 19, 20, 21, 26, 28, 34, 40, 41, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
| CA\_n1-n79 | E-UTRA Band 1, 3, 5, 7, 8, 11, 18, 19, 21, 26, 28, 34, 40, 41, 42, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
| CA\_n2-n5 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 25, 26, 28, 29, 30, 42, 48, 50, 51 66, 70, 71, 74, 85, | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, 43, 53  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n2-n7 | E-UTRA Band 2, 5, 7, 10, 12, 13, 14, 17, 26, 27, 28, 29, 30, 42, 50, 51, 66, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 43 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 2570 | - | 2575 | 1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n2-n12 | E-UTRA Band 5, 13, 14, 17, 24, 26, 27, 30, 41, 50, 53, 71, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 12, 25, 85 | FDL\_low | - | FDL\_high | -50 | 1 | 3 |
|  | E-UTRA Band 2 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 4, 10, 51, 66, 70 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n2-n14 | E-UTRA Band 4, 5, 10, 12, 13, 14, 17, 24, 26, 27, 29, 30, 41, 48, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 769 | - | 775 | -35 | 0.00625 | 4 |
|  | Frequency range | 799 | - | 805 | -35 | 0.00625 | 4 |
| CA\_n2-n30 | E-UTRA Band 4, 5, 12, 13, 14, 17, 24, 26, 27, 28, 29, 41, 42, 48, 50, 51, 53, 66, 70, 71, 74, 85  NR band n30 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | NR Band n2 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 43,  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n2-n48 | E-UTRA Band 4, 5, 12, 13, 14, 17, 24, 25, 26, 29, 30, 41, 50, 51, 53, 66, 70, 71, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| CA\_n2-n66 | E-UTRA Band 4, 5, 10, 12, 13, 14, 17, 24, 26, 27, 28, 29, 30, 41, 50, 51, 66, 70, 71, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 42, 48,  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n2-n77 | E-UTRA Band 4, 5, 12, 13, 14, 17, 26, 29, 30, 41, 65, 66, 70, 71 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n2-n78 | E-UTRA Band 5, 7, 12, 13，26, 28, 41, 66 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n3-n5 | E-UTRA Band 1, 5, 7, 8, 11, 18, 19, 21, 26, 28, 31, 38, 40, 43, 50, 51, 65, 73, 74  NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 3,34 | FDL\_low | - | FDL\_high | -50 | 1 | 5 |
|  | E-UTRA Band 22, 42, 52  Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n3-n7 | E-UTRA Band 1, 5, 7, 8, 20, 26, 27, 28, 31, 32, 33, 34, 40, 43, 44, 50, 51, 65, 67, 72, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 3 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA band 22, 42, 52  NR-band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n3-n8 | E-UTRA Band 1, 11, 20, 21, 28, 31, 32, 33, 34, 38, 39, 40, 44, 50, 51, 65, 67, 72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 3, 8 | FDL\_low | - | FDL\_high | -50 | 1 | 2, 4 |
|  | E-UTRA band 7, 22, 41, 42, 43, 52  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n3-n18 | E-UTRA Band 1, 3, 11, 21, 28, 34, 40, 65  NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 945 | - | 960 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 2545 | - | 2575 | -50 | 1 |  |
|  | Frequency range | 2595 | - | 2645 | -50 | 1 |  |
| CA\_n3-n20 | E-UTRA Band 1, 7, 8, 31, 32, 33, 34, 40, 43, 50, 51, 65, 67, 72, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| NR band n3, n20 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| E-UTRA Band 22, 38, 42, 52 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| Frequency range | 758 | - | 788 | -50 | 1 |  |
| CA\_n3-n34 | E-UTRA Band 1, 7, 8, 11, 18, 19, 20, 21, 26, 28, 31, 32, 33, 38, 39, 40, 41, 43, 44, 45, 50, 51, 65, 67, 69,72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 22, 42, 52  NR Band n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 3 | FDL\_low | - | FDL\_high | -50 | 1 | 15 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n3-n38 | E-UTRA Band 1, 5, 8, 20, 27, 28, 31, 32, 33, 34, 40, 43, 50, 51, 65, 67, 68, 72, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 3 | FDL\_low | - | FDL\_high | -50 | 1 | 15 |
|  | E-UTRA band 22, 42, 52 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 2620 | - | 2645 | -15.5 | 5 | 15, 22, 26 |
|  | Frequency range | 2645 | - | 2690 | -40 | 1 | 15, 22 |
| CA\_n3-n28 | E-UTRA Band 5, 7, 8, 18, 19, 20, 26, 27, 31 38, 40, 41, 72 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 32, 42, 43, 50, 51, 74, 75, 76  NR band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 3, 34 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 12 |
|  | E-UTRA Band 1, 65 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 15 |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 4, 14 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 15 |
|  | Frequency range | 758 | - | 773 | -30 | 1 | 4 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 4 |
|  | Frequency range | 1880 | - | 1895 | -40 | 1 | 4, 6 |
|  | Frequency range | 1895 | - | 1915 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 1915 | - | 1920 | +1.6 | 5 | 4, 6, 7 |
|  | Frequency range | 1839.9 | - | 1879.9 | -50 | 1 | 4 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3, 11 |
| CA\_n3-n40 | E-UTRA Band 1, 5, 7, 8, 11, 18, 19, 20, 21, 26, 27, 28, 31, 32, 33, 34, 38, 39, 41, 43, 44. 45, 50, 51, 65, 67, 68, 69, 72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | UTRA Band 22, 42, 52  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n3-n41 | E-UTRA Band 1, 5, 8, 11, 18, 19, 20, 21, 26, 27, 28, 34, 39, 44, 45, 50, 51, 65, 73, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | E-UTRA Band 3 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 42,  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n3-n74 | E-UTRA Band 1, 5, 7, 8, 18, 19, 20, 26, 28, 31, 34, 38, 39, 40, 41, 43, 65, 67, 68 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 42, 52  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 1400 | - | 1427 | -32 | 27 | 4, 20 |
|  | Frequency range | 1475 | - | 1488 | -50 | 1 | 21 |
|  | Frequency range | 1488 | - | 1518 | -50 | 1 | 4 |
| CA\_n3-n77 | E-UTRA Band 1, 3, 5, 7, 8, 11, 18, 19, 20, 21, 26, 28, 34, 39, 40, 41, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n3-n78 | E-UTRA Band 1, 3, 5, 7, 8, 11, 18, 19, 20, 21, 26, 28, 34, 39, 40, 41, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n3-n79 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 28, 34, 39, 40, 41, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 42 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n5-n7 | E-UTRA Band 1, 2, 3, 4, 5, 8, 12, 13, 14, 17, 28, 29, 30, 31, 34, 40, 42, 43, 65, 66, 71, 85  NR Band n7 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 52  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA band 26 | 859 | - | 869 | -27 | 1 |  |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 13 |
| CA\_n5-n12 | E-UTRA Band 2, 5, 13, 14, 17, 24, 25, 26, 30, 42, 43 50, 71, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 4, 10, 41, 42, 48, 51, 66, 70  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 12, 85 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n5-n14 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 29, 30, 48, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 41, 53 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n5-n25 | E-UTRA Band 4, 5, 10, 12, 13, 14, 17, 24, 26, 28, 29, 30, 42, 48, 50, 51, 53, 66, 70, 71,74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, 43, n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n5-n30 | E-UTRA Band 2, 4, 7, 12, 13, 14, 17, 24, 25, 26, 29, 38, 48, 66, 70, 71, 85  NR band n5, 30 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, 53  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n5An48 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 24, 25, 26, 29, 30, 65, 66, 70, 71, 73 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 8 |
| CA\_n5-n66 | E-UTRA Band 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 14, 17, 24, 25, 28, 29, 30, 34, 38, 40, 43, 45, 50, 51, 65, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 26 | 859 | - | 869 | -27 | 1 |  |
|  | E-UTRA Band 41, 42, 48, 52 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n5-n77 | E-UTRA Band 1, 2, 3, 4, 8, 11, 12, 13, 14, 17, 18, 19, 21, 25, 26, 28, 29, 30, 34, 40, 65, 66, 70, 71, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n5-n78 | E-UTRA Band 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 14, 17, 18, 19, 21, 24, 25, 26, 28, 29, 30, 31, 34, 38, 40, 45, 65, 66, 70, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 945 | - | 960 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 2545 | - | 2575 | -50 | 1 | 2 |
|  | Frequency range | 2595 | - | 2645 | -50 | 1 |  |
|  | E-UTRA Band 41 | FDL\_low | - | FDL\_high | -50 | 1 | 7, 2 |
| CA\_n5-n79 | E-UTRA Band 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 14, 17, 18, 19, 21, 24, 25, 26, 28, 29, 30, 31, 34, 38, 40, 42, 43, 45, 48, 50, 51, 65, 66, 70, 71, 73, 74, 85 | FDL\_low | - | FDL\_high |  |  |  |
|  | E-UTRA Band 41, 52 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n7-n25 | E-UTRA Band 4, 5, 7, 12, 13, 14 17, 26, 27, 28, 29, 30, 42, 66, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 43 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | Frequency range | 2570 | - | 2575 | 1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n7-n28 | E-UTRA Band 2, 3, 5, 7, 8, 20, 26, 27, 31, 34, 40 72 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 1, 4, 42, 43, 50, 51, 65, 66, 74, 75, 76  NR band n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band n1 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 12 |
|  | Frequency range | 758 | - | 773 | -32 | 1 | 4 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n7-n46 | E-UTRA Band 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 20, 22, 26, 27, 28, 29, 30, 31, 32, 33, 34, 40, 42, 43, 50, 51, 52, 65, 66, 67, 68, 72, 74, 75, 76, 85,  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n7-n66 | E-UTRA Band 2, 4, 5, 7, 12, 13, 14, 17, 26, 27, 28, 29, 30, 43, 66, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 42 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n7-n77 | E-UTRA Band 1, 2, 3, 4, 5, 7, 8, 11, 18, 19, 20, 21, 26, 27, 28, 31, 32, 33, 34, 40, 50, 51, 65, 66, 67, 68, 72, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 6, 7 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 6, 7 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 6 |
| CA\_n7-n78 | E-UTRA Band 1, 2, 3, 4, 5, 7, 8, 11, 18, 19, 20, 21, 26, 27, 28, 31, 32, 33, 34, 40, 50, 51, 65, 66, 67, 68, 72, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 2570 | - | 2575 | +1.6 | 5 | 4, 7, 18 |
|  | Frequency range | 2575 | - | 2595 | -15.5 | 5 | 4, 7, 18 |
|  | Frequency range | 2595 | - | 2620 | -40 | 1 | 4, 18 |
| CA\_n8-n34 | E-UTRA Band 1, 20, 28, 31, 32, 33, 38, 39, 40, 45, 50, 51, 65, 67, 69,72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3, 7, 22, 41, 42, 43, 52  NR Band n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 8 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n8-n39 | E-UTRA Band 1, 34, 40, 50, 51, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 22, 41, 42  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 8 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n8-n40 | E-UTRA Bands 1, 5, 11, 18, 19, 20, 21, 26, 28, 31, 32, 33, 34, 38, 39, 45, 50, 51, 65, 67, 68, 69, 72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Bands 3, 7, 22, 41, 42, 43, 52  NR Bands n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 8 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n8-n41 | E-UTRA Band 1, 11, 12, 28, 34, 39, 45, 50, 51, 65, 73,74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | E-UTRA band 3, 42, 52  NR band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n8-n78 | E-UTRA Band 1, 8, 11, 20, 21, 28, 34, 39, 40, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3, 7, 41 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n8-n79 | E-UTRA Band 1, 8, 11, 21, 28, 34, 39, 40, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3, 41, 42 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n12-n30 | E-UTRA Band 2, 5, 13, 14, 17, 24, 25, 26, 27, 30, 41, 53, 71 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 4, 48, 66, 70,  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 12, 85 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n12-n66 | E-UTRA Band 2, 5, 13, 14, 17, 25, 26, 27, 30, 41, 53, 71, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 4, 48, 50, 51, 66, 70  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 12, 85 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n12-n77 | E-UTRA Band 2, 5, 13, 14, 17, 24, 25, 26, 27, 30, 41, 53, 71, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 4, 50, 51, 66, 70, | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 12, 85 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n13-n25 | E-UTRA Band 4, 5,12,13,17, 26, 29, 41, 48, 66, 70, 71 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2,14, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 30 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 769 | - | 775 | -35 | 0.00625 | 4 |
|  | Frequency range | 799 | - | 805 | -35 | 0.00625 | 4 |
| CA\_n13-n66 | Bands 2, 4, 5, 7, 12, 13, 17, 25, 26, 27, 29, 41, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 14 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 24, 30, 46, 48, | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | NR Band n77 | 769 | - | 775 | -35 | 0.00625 | 4 |
|  | Frequency range | 799 | - | 805 | -35 | 0.00625 | 4 |
| CA\_n13-n77 | E-UTRA Band 2, 5, 7, 12, 13, 25, 26, 41, 66 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 769 | - | 775 | -35 | 0.00625 | 4 |
|  | Frequency range | 799 | - | 805 | -35 | 0.00625 | 4 |
| CA\_n14-n30 | E-UTRA Band 2, 4, 5,12, 13, 14, 17, 24, 25, 26, 27, 29, 30, 41, 48, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 769 | - | 775 | -35 | 0.00625 | 4 |
|  | Frequency range | 799 | - | 805 | -35 | 0.00625 | 4 |
| CA\_n14-n66 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 27, 29, 30, 41, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA band 48 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 769 | - | 775 | -35 | 0.00625 | 4 |
|  | Frequency range | 799 | - | 805 | -35 | 0.00625 | 4 |
| CA\_n14-n77 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 23, 24, 25, 26, 27, 29, 30, 41, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 769 | - | 775 | -35 | 0.00625 | 4, 20 |
|  | Frequency range | 799 | - | 805 | -35 | 0.00625 | 4, 20 |
| CA\_n18-n28 | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 12 |
|  | E-UTRA Band 1 | FDL\_low | - | FDL\_high | -50 | 1 | 2,11, 15 |
|  | E-UTRA Band 42, 65  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 3, 34  NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 4, 14 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 13 |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 4 |
|  | Frequency range | 758 | - | 799 | -50 | 1 |  |
|  | Frequency range | 799 | - | 803 | -40 | 1 | 4 |
|  | Frequency range | 860 | - | 890 | -40 | 1 |  |
|  | Frequency range | 945 | - | 960 | -50 | 1 | 4 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 2545 | - | 2575 | -50 | 1 |  |
|  | Frequency range | 2595 | - | 2645 | -50 | 1 |  |
| CA\_n18-n41 | E-UTRA Band 1, 3, 34, 42, 65 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 758 | - | 799 | -50 | 1 |  |
|  | Frequency range | 799 | - | 803 | -40 | 1 |  |
|  | Frequency range | 860 | - | 890 | -40 | 1 |  |
|  | Frequency range | 945 | - | 960 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n18-n74 | E-UTRA Band 1, 3, 34, 42, 65 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 758 | - | 799 | -50 | 1 |  |
|  | Frequency range | 799 | - | 803 | -40 | 1 |  |
|  | Frequency range | 860 | - | 890 | -40 | 1 |  |
|  | Frequency range | 945 | - | 960 | -50 | 1 |  |
|  | Frequency range | 1400 | - | 1427 | -32 | 27 | 4, 20 |
|  | Frequency range | 1475 | - | 1488 | -50 | 1 | 21 |
|  | Frequency range | 1488 | - | 1518 | -50 | 1 | 4 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 2545 | - | 2575 | -50 | 1 |  |
|  | Frequency range | 2595 | - | 2645 | -50 | 1 |  |
| CA\_n18-n77 | E-UTRA Band 1, 3, 11, 21, 34, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 758 | - | 799 | -50 | 1 |  |
|  | Frequency range | 799 | - | 803 | -40 | 1 |  |
|  | Frequency range | 860 | - | 890 | -40 | 1 |  |
|  | Frequency range | 945 | - | 960 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 2545 | - | 2575 | -50 | 1 |  |
|  | Frequency range | 2595 | - | 2645 | -50 | 1 |  |
| CA\_n18-n78 | E-UTRA Band 1, 3, 11, 21, 34, 65, | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 758 | - | 799 | -50 | 1 |  |
|  | Frequency range | 799 | - | 803 | -40 | 1 |  |
|  | Frequency range | 860 | - | 890 | -40 | 1 |  |
|  | Frequency range | 945 | - | 960 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 2545 | - | 2575 | -50 | 1 |  |
|  | Frequency range | 2595 | - | 2645 | -50 | 1 |  |
| CA\_n20-n28 | E-UTRA Band 3, 7, 28, 31, 34 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 1, 22, 32, 38, 42, 43, 65, 75, 76  NR Band n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n20-n78 | E-UTRA Band 1, 3, 7, 8, 34, 40, 65 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 20 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 38, 69 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n24-n41 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 25, 26, 29, 30, 48, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n24-n48 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 25, 26, 29, 30, 41, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| CA\_n24-n77 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 25, 26, 29, 30, 41, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| CA\_n25-n41 | E-UTRA Band 4, 5, 12, 13 , 14, 17, 24, 26, 27, 28, 29, 30, 42, 48, 66, 70, 71,85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n25-n48 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 29, 30, , 50, 51, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, NR band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n25-n66 | E-UTRA Band 4, 5, 7, 12, 13, 14, 17, 24, 26, 27, 28, 29, 30, 38, 41, 50, 51, 53, 66, 70, 71, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 42, 43, 48,  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n25-n71 | E-UTRA Band 4, 5, 12, 13, 14, 17, 24, 26, 30, 48, 53, 66, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, 70 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | NR Band n71 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 29 | FDL\_low | - | FDL\_high | -38 | 1 | 4 |
| CA\_n25-n77 | E-UTRA Band 4, 5, 12, 13, 14, 17, 26, 29, 30, 41, 65, 66, 70, 71 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n25-n78 | E-UTRA Band 5, 7, 12, 13, 25, 26, 28, 41，66 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n26-n66 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 29, 30, 43, 47, 50, 51, 66, 70, 71, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, 42, 48, 53  NR band 77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n26-n70 | E-UTRA Band 2, 5, 10, 12, 13, 14, 17, 24, 25, 29, 30, 48, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, 53 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n28-n40 | E-UTRA Band 1, 3, 5, 7, 8, 18, 19, 20, 26, 27, 28, 31, 34, 38, 41, 72 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 11, 21, 22, 32, 42, 43, 50, 51, 52, 65, 73, 74, 75, 76  NR band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n28-n41 | E-UTRA Band 2, 3, 5, 8, 25, 26, 27, 34 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 4, 42, 50, 51, 52, 65, 66, 73, 74  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 18, 19 | FDL\_low | - | FDL\_high | -50 | 1 | 11 |
|  | E-UTRA Band 1 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 15 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 12 |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 4, 14 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 13 |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 4 |
|  | Frequency range | 758 | - | 773 | -32 | 1 | 4 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3, 11 |
| CA\_n28-n46 | E-UTRA Band 4, 22, 32, 42, 43, 50, 51, 65, 66, 73, 74, 75, 76  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 1 | FDL\_low | - | FDL\_high | -50 | 1 | 19, 25 |
|  | E-UTRA Band 2, 3, 5, 7, 8, 18, 19, 20, 25, 26, 27, 31, 34, 38, 40, 41, 52, 72, 87, 88  NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 19, 24 |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 15, 35 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 34 |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 15 |
|  | Frequency range | 758 | - | 773 | -32 | 1 | 15 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 8, 19 |
| CA\_n28-n50 | E-UTRA Band 2, 3, 5, 7, 8, 18, 19, 25, 26, 27, 31, 34, 38, 39, 40, 41, 72 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 4, 22, 42, 43, 48, 52, 65, 66, 73  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 1 | FDL\_low | - | FDL\_high | -50 | 1 | 2, 10, 11 |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 4, 14 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 13 |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 4 |
|  | Frequency range | 758 | - | 773 | -32 | 1 | 4 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3, 11 |
| CA\_n28-n77 | E-UTRA Band 3, 5, 7, 8, 18, 19, 20, 26, 34, 39, 40, 41 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 1 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 15 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 12 |
|  | Frequency range | 758 | - | 773 | -32 | 1 |  |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3, 11 |
| CA\_n28-n74 | E-UTRA Band 2, 3, 5, 7, 8, 18, 19, 20, 26, 31, 34, 38, 39, 40, 41 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 1 | FDL\_low | - | FDL\_high | -50 | 1 | 2, 11, 15 |
|  | E-UTRA Band 4, 42, 43, 52, 65, 66  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 4, 14 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 13 |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 4 |
|  | Frequency range | 758 | - | 773 | -32 | 1 | 4 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3, 11 |
|  | Frequency range | 1400 | - | 1427 | -32 | 27 | 4, 20, 2 |
|  | Frequency range | 1475 | - | 1488 | -50 | 1 | 21, 2 |
|  | Frequency range | 1488 | - | 1518 | -50 | 1 | 4, 2 |
| CA\_n28-n78 | E-UTRA Band 3, 5, 7, 8, 18, 19, 20, 26, 34, 39, 40, 41 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 65 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 1 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 15 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 11, 12 |
|  | Frequency range | 758 | - | 773 | -32 | 1 |  |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3, 11 |
| CA\_n28-n79 | E-UTRA Band 3, 5, 8, 18, 19, 34, 39, 40, 41, | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 1, 42, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 11, 21 | FDL\_low | - | FDL\_high | -50 | 1 | 10 |
|  | Frequency range | 470 | - | 694 | -42 | 8 | 4, 14 |
|  | Frequency range | 470 | - | 710 | -26.2 | 6 | 13 |
|  | Frequency range | 662 | - | 694 | -26.2 | 6 | 4 |
|  | Frequency range | 758 | - | 773 | -32 | 1 | 4 |
|  | Frequency range | 773 | - | 803 | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3, 10, 11 |
| CA\_n30-n66 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 24, 25, 26, 27, 29, 38, 41, 70, 71  NR band n30, n66 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 48,  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n30-n77 | E-UTRA Band 2, 4, 5, 7, 12, 13, 14, 17, 24, 25, 26, 27, 29, 30, 38, 41, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| CA\_n34-n40 | E-UTRA Band 1, 3, 7, 8, 20, 22, 26, 28, 31, 32, 33, 38, 39, 41, 42, 43, 44, 45, 50, 51, 65, 67, 69, 72, 73, 74, 75, 76  NR band n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 8 |
| CA\_n34-n79 | E-UTRA Band 1, 3, 8, 11, 18, 19, 21, 28, 39, 40, 41, 42, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 8 |
| CA\_n38-n66 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 25, 27, 28, 29, 30, 43, 50, 51, 66, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 42 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 2620 | - | 2645 | -15.5 | 5 | 5, 7, 19 |
|  | Frequency range | 2645 | - | 2690 | -40 | 1 | 5, 19, |
| CA\_n38-n78 | E-UTRA Band 1, 3, 5, 8, 20, 28, 34, 40, 65, | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 2620 | - | 2645 | -15.5 | 5 | 15, 22, 26 |
|  | Frequency range | 2645 | - | 2690 | -40 | 1 | 15, 22 |
| CA\_n39-n40 | E-UTRA Band 1, 8, 22, 26, 28, 34, 41, 42, 44, 45, 50, 51, 52, 73, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1805 |  | 1855 | -40 | 1 | 8 |
|  | Frequency range | 1855 |  | 1880 | -15.5 | 5 | 4, 7, 8 |
| CA\_n39-n41 | E-UTRA Band 1, 8, 26, 28, 34, 42, 44, 45, 50, 51, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1805 | - | 1855 | -40 | 1 | 4 |
|  | Frequency range | 1855 | - | 1880 | -15.5 | 5 | 4, 7, 8 |
| CA\_n39-n79 | E-UTRA Band 1, 8, 28, 34, 40, 41, 44, 45 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n78 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1805 | - | 1855 | -40 | 1 | 4, 8 |
|  | Frequency range | 1855 | - | 1880 | -15.5 | 5 | 4, 7, 8 |
| CA\_n40-n41 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 26, 27, 28, 34, 39, 42, 44, 45, 50, 51, 65, 73, 74,  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n40-n77 | UTRA Band 1, 3, 5, 7, 8, 11, 18, 19, 20, 21, 26, 27, 28, 31, 32, 33, 34, 38, 39, 41, 44, 45, 50, 51, 65, 67, 68, 69, 72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 | 22 |
|  | NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n40-n78 | UTRA Band 1, 3, 5, 7, 8, 11, 18, 19, 20, 21, 26, 27, 28, 31, 32, 33, 34, 38, 39, 41, 44, 45, 50, 51, 65, 67, 68, 69, 72, 73, 74, 75, 76 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n40-n79 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 26, 28, 34, 39, 41, 42, 65, 74,  NR band n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n41-n48 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 29, 30, 50, 51, 53, 66, 70, 71, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n41-n50 | E-UTRA Band 1, 2, 3, 4, 5, 8, 12, 13 , 14, 17, 20, 25, 26, 27, 28, 29, 30, 31, 34, 39, 42, 43, 44, 48, 52, 65, 66, 67, 68, 70, 71, 73, 85  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n41-n66 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 24, 25, 26, 27, 28, 29, 30, 50, 51, 66, 70, 71, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 42, 48 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n41-n70 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 29, 30, 48, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 3, 22, 32, 42, 43, 50, 51, 52, 65, 73, 74, 75, 76  NR Band n77, n78, n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n41-n71 | E-UTRA Band 4, 5, 12, 13, 14, 17, 24, 26, 30, 48, 66, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25, 70 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | NR Band n71 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 29 | FDL\_low | - | FDL\_high | -38 | 1 | 4 |
| CA\_n41-n74 | E-UTRA Band 1, 2, 3, 4, 5, 8, 12, 13, 17, 18, 19, 26, 28, 29, 34, 39, 42, 48, 52, 65, 66, 85  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | Frequency range | 1884.5 |  | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 1400 | - | 1427 | -32 | 27 | 4, 20 |
|  | Frequency range | 1475 | - | 1488 | -50 | 1 | 21 |
|  | Frequency range | 1488 | - | 1518 | -50 | 1 | 4 |
| CA\_n41-n77 | E-UTRA Band 1, 2, 3, 4, 5, 8, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29, 30, 34, 39, 44, 45, 50, 51, 53, 65, 66, 70, 71, 73, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | Frequency range | 1884.5 |  | 1915.7 | -41 | 0.3 | 3 |
| CA\_n41-n78 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 26, 28, 34, 39, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | Frequency range | 1884.5 |  | 1915.7 | -41 | 0.3 | 3 |
| CA\_n41-n79 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 28, 34, 42, 44, 45, 65 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 40 | FDL\_low | - | FDL\_high | -40 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n46-n48 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 29, 30, 50, 51, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, NR band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n46-n78 | E-UTRA Band 1, 3, 5, 7, 8, 11, 18, 19, 20, 21, 26, 28, 34, 39, 40, 41, 65 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 8 |
| CA\_n48-n66 | E-UTRA Band 2, 4, 5, 7, 12, 13, 14, 17, 24, 25, 26, 27, 29, 30, 41, 50, 51, 66, 70, 71, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| CA\_n48-n70 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 24, 25, 26, 29, 30, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n48\_n71 | E-UTRA Band 4, 5, 12, 13, 14, 17, 24, 26, 30, 50, 51, 53, 66, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25, 41, 70 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 29 | FDL\_low | - | FDL\_high | -38 | 1 | 15 |
|  | E-UTRA Band 71 | FDL\_low | - | FDL\_high | -50 | 1 | 15 |
| CA\_n48-n96 | E-UTRA Band 2, 4, 5, 10, 12, 13, 14, 17, 24, 25, 26, 29, 30, 50, 51, 53, 66, 70, 71, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41, NR band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n50-n78 | E-UTRA Band 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 20, 25, 26, 27, 28, 29, 31, 33, 34, 38, 39, 40, 41, 44, 65, 66, 67, 68, 69, 72, 73, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n66-n71 | E-UTRA Band 4, 5, 12, 13, 14, 17, 26, 27, 30, 43, 50, 51, 53, 66, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 25, 41, 42, 48, 70  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 29 | FDL\_low | - | FDL\_high | -38 | 1 | 4 |
|  | E-UTRA Band 71 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n66-n77 | E-UTRA Band 2, 4, 5, 12, 13, 14, 17, 26, 29, 30, 41, 65, 66, 70, 71 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| CA\_n66-n78 | E-UTRA Band 2, 4, 5, 7, 12, 13, 14, 17, 29, 26, 28, 41, 66, 71 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| CA\_n70-n71 | E-UTRA Band 4, 5, 12, 13, 14, 17, 26, 27, 30, 48, 66, 74, 85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 2, 7, 25, 41, 70,  NR Band n77 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 29 | FDL\_low | - | FDL\_high | -38 | 1 | 4 |
|  | E-UTRA Band 71 | FDL\_low | - | FDL\_high | -38 | 1 | 4 |
| CA\_n70-n78 | E-UTRA Band 5, 26 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n71-n77 | E-UTRA Band 1, 3, 4, 5, 7, 8, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 24, 26, 27, 28, 29, 30, 34, 39, 40, 44, 45, 50, 51, 53, 65, 66, 71, 73, 74, 85, | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 |  | 1915.7 | -41 | 0.3 | 3 |
|  | E-UTRA Band 2, 25, 41, 70 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
|  | E-UTRA Band 29 | FDL\_low | - | FDL\_high | -38 | 1 | 4 |
|  | E-UTRA Band 71 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
| CA\_n71-n78 | E-UTRA Band 5, 26 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 41 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| CA\_n74-n77 | E-UTRA Band 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 26, 28, 29, 34, 39, 40, 41, 65, 66,85 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 1400 | - | 1427 | -32 | 27 | 4, 20 |
|  | Frequency range | 1475 | - | 1488 | -50 | 1 | 21 |
|  | Frequency range | 1488 | - | 1518 | -50 | 1 | 4 |
| CA\_n74-n78 | E-UTRA Band 1, 3, 5, 7, 8, 18, 19, 20, 26, 28, 34, 39, 40, 41, 65, | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
|  | Frequency range | 1400 | - | 1427 | -32 | 27 | 4, 20 |
|  | Frequency range | 1475 | - | 1488 | -50 | 1 | 21 |
|  | Frequency range | 1488 | - | 1518 | -50 | 1 | 4 |
| CA\_n77-n79 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 28, 34, 40, 41, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n78-n79 | E-UTRA Band 1, 3, 5, 8, 11, 18, 19, 21, 28, 34, 40, 41, 65, 74 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | Frequency range | 1884.5 | - | 1915.7 | -41 | 0.3 | 3 |
| CA\_n78-n92 | E-UTRA Band 1, 3, 7, 8, 34, 40, 65 | FDL\_low | - | FDL\_high | -50 | 1 |  |
|  | E-UTRA Band 20 | FDL\_low | - | FDL\_high | -50 | 1 | 4 |
|  | E-UTRA Band 38, 69 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |
| NOTE 1: FDL\_low and FDL\_high refer to each frequency band specified in Table 5.2-1 in TS 38.101-1 or Table 5.5-1 in TS 36.101  NOTE 2: As exceptions, measurements with a level up to the applicable requirements defined in Table 6.5.3.1-2 are permitted for each assigned NR carrier used in the measurement due to 2nd, 3rd, 4th or 5th harmonic spurious emissions. Due to spreading of the harmonic emission the exception is also allowed for the first 1 MHz frequency range immediately outside the harmonic emission on both sides of the harmonic emission. This results in an overall exception interval centred at the harmonic emission of (2 MHz + N x LCRB x 180kHz), where N is 2, 3, 4, 5 for the 2nd, 3rd, 4th or 5th harmonic respectively. The exception is allowed if the measurement bandwidth (MBW) totally or partially overlaps the overall exception interval.  NOTE 3: Applicable when co-existence with PHS system operating in 1884.5 -1915.7 MHz  NOTE 4: These requirements also apply for the frequency ranges that are less than FOOB (MHz) in Table 6.5.3.1-1 from the edge of the channel bandwidth.  NOTE 5: Void.  NOTE 6: This requirement is applicable for any channel bandwidths within the range 1920 – 1980 MHz with the following restriction: for carriers of 15 MHz bandwidth when carrier centre frequency is within the range 1927.5 - 1929.5 MHz and for carriers of 20 MHz bandwidth when carrier centre frequency is within the range 1930 – 1938 MHz the requirement is applicable only for an uplink transmission bandwidth less than or equal to 54 RB.  NOTE 7: For these adjacent bands, the emission limit could imply risk of harmful interference to UE(s) operating in the protected operating band.  NOTE 8: This requirement is only applicable for carriers with bandwidth confined within 1885-1920 MHz (requirement for carriers with at least 1RB confined within 1880 - 1885 MHz is not specified). This requirement applies for an uplink transmission bandwidth less than or equal to 54 RB for carriers of 15 MHz bandwidth when carrier center frequency is within the range 1892.5 - 1894.5 MHz and for carriers of 20 MHz bandwidth when carrier center frequency is within the range 1895 - 1903 MHz.  NOTE 9: Void.  NOTE 10: Void.  NOTE 11:Applicable when the assigned NR carrier is confined within 718 MHz and 748 MHz and when the channel bandwidth used is 5 or 10 MHz.  NOTE 12: As exceptions, measurements with a level up to the applicable requirement of -38 dBm/MHz is permitted for each assigned NR carrier used in the measurement due to 2nd harmonic spurious emissions. An exception is allowed if there is at least one individual RB within the transmission bandwidth (see Figure 5.3.1-1) for which the 2nd harmonic totally or partially overlaps the measurement bandwidth (MBW).  NOTE 13: This requirement is applicable for 5 and 10 MHz NR channel bandwidth allocated within 718 - 728 MHz. For carriers of 10 MHz bandwidth, this requirement applies for an uplink transmission bandwidth less than or equal to 30 RB with RBstart > 1 and Rbstart < 48.  NOTE 14: This requirement is applicable in the case of a 10 MHz NR carrier confined within 703 MHz and 733 MHz, otherwise the requirement of -25 dBm with a measurement bandwidth of 8 MHz applies.  NOTE 15: As exceptions, measurements with a level up to the applicable requirement of -36 dBm/MHz is permitted for each assigned E-UTRA carrier used in the measurement due to 3rd harmonic spurious emissions. An exception is allowed if there is at least one individual RB within the transmission bandwidth (see Figure 5.6-1) for which the 3rd harmonic totally or partially overlaps the measurement bandwidth (MBW).  NOTE 17: Void.  NOTE 18: This requirement is applicable for any channel bandwidths within the range 2500 – 2570 MHz with the following restriction: for carriers of 15 MHz bandwidth when carrier centre frequency is within the range 2560.5 - 2562.5 MHz and for carriers of 20 MHz bandwidth when carrier centre frequency is within the range 2552 – 2560 MHz the requirement is applicable only for an uplink transmission bandwidth less than or equal to 54 RB.  NOTE 19: This requirement is applicable for power class 3 UE for any channel bandwidths within the range 2570 - 2615 MHz with the following restriction: for carriers of 15 MHz bandwidth when carrier centre frequency is within the range 2605.5 - 2607.5 MHz and for carriers of 20 MHz bandwidth when carrier centre frequency is within the range 2597 - 2605 MHz the requirement is applicable only for an uplink transmission bandwidth less than or equal to 54 RB. For power class 2 UE for any channel bandwidths within the range 2570 - 2615 MHz, NS\_44 shall apply. For power class 2 or 3 UE for carriers with channel bandwidth overlapping the frequency range 2615 - 2620 MHz the requirement applies with the maximum output power configured to +19 dBm in the IE P-Max.  NOTE 20: Applicable for cases and when the lower edge of the assigned NR UL channel bandwidth frequency is greater than or equal to 1427 MHz + the channel BW assigned for 5 and 10 MHz bandwidth, and when the lower edge of the assigned NR UL channel bandwidth frequency is greater than or equal to 1440 MHz for 15 and 20 MHz bandwidth.  NOTE 21: Applicable for 5 MHz bandwidth, and when the upper edge of the assigned NR UL channel bandwidth frequency is less than or equal to 1467 MHz assigned for 10 MHz bandwidth, and when the upper edge of the assigned NR UL channel bandwidth frequency is less than or equal to 1463.8 MHz for 15 MHz bandwidth, and when the upper edge of the assigned NR UL channel bandwidth.. | | | | | | | |

NOTE: To simplify Table 6.5A.3.2.3-1, E-UTRA band numbers are listed for bands which are specified only for E-UTRA operation or both E-UTRA and NR operation. NR band numbers are listed for bands which are specified only for NR operation.

## < Next change >>

##### 7.3A.3.2.1 ΔRIB,c for two bands

Table 7.3A.3.2.1-1: ΔRIB,c due to CA (two bands)

|  |  |  |
| --- | --- | --- |
| Inter-band CA combination | NR Band | ΔRIB,c (dB) |
| CA\_n1-n28 | n28 | 0.2 |
| CA\_n1-n67 | n67 | 0.2 |
| CA\_n1-n77 | n1 | 0.2 |
|  | n77 | 0.5 |
| CA\_n1-n78 | n78 | 0.5 |
| CA\_n2-n48 | n2 | 0.2 |
|  | n48 | 0.5 |
| CA\_n2-n66 | n2 | 0.3 |
|  | n66 | 0.3 |
| CA\_n2-n77 | n2 | 0.2 |
|  | n77 | 0.5 |
| CA\_n2-n78 | n2 | 0.2 |
|  | n78 | 0.5 |
| CA\_n3-n41 | n41 | 04 |
|  |  | 0.55 |
| CA\_n3-n67 | n3 | 0.3 |
| CA\_n3-n74 | n3 | 0.3 |
| n74 | 0.5 |
| CA\_n3-n77 | n3 | 0.2 |
|  | n77 | 0.5 |
| CA\_n3-n78 | n3 | 0.2 |
|  | n78 | 0.5 |
| CA\_n3-n79 | n79 | 0.5 |
| CA\_n5-n12 | n5 | 0.5 |
| n12 | 0.3 |
| CA\_n5-n77 | n5 | 0.2 |
|  | n77 | 0.5 |
| CA\_n5-n78 | n5 | 0.2 |
|  | n78 | 0.5 |
| CA\_n7-n8 | n8 | 0.2 |
| CA\_n7-n46 | n7 | 0.3 |
| CA\_n7-n66 | n7 | 0.5 |
|  | n66 | 0.5 |
| CA\_n7-n77 | n77 | 0.5 |
| CA\_n7-n78 | n7 | 0.5 |
|  | n78 | 0.5 |
| CA\_n7-n79 | n79 | 0.5 |
| CA\_n8-n28 | n8 | 0.2 |
|  | n28 | 0.2 |
| CA\_n8-n77 | n8 | 0.2 |
|  | n77 | 0.5 |
| CA\_n8-n78 | n8 | 0.2 |
|  | n78 | 0.5 |
| CA\_n8-n79 | n79 | 0.5 |
| CA\_n12-n66 | n12 | 0.5 |
| CA\_n12-n71 | n12 | 0.8 |
|  | n71 | 0.8 |
| CA\_n12-n77 | n12 | 0.2 |
| n77 | 0.5 |
| CA\_n13-n77 | n13 | 0.2 |
| n78 | 0.5 |
| CA\_n14-n77 | n14 | 0.2 |
| n77 | 0.5 |
| CA\_n18-n77 | n77 | 0.5 |
| CA\_n18-n78 | n78 | 0.5 |
| CA\_n20-n78 | n78 | 0.5 |
| CA\_n24-n48 | n24 | 0.2 |
| n48 | 0.5 |
| CA\_n24-n77 | n24 | 0.2 |
| n77 | 0.5 |
| CA\_n25-n48 | n25 | 0.2 |
|  | n48 | 0.5 |
| CA\_n25-n66 | n25 | 0.3 |
|  | n66 | 0.3 |
| CA\_n25-n71 | n71 | 0.3 |
| CA\_n25-n77 | n25 | 0.2 |
|  | n77 | 0.5 |
| CA\_n25-n78 | n25 | 0.2 |
|  | n78 | 0.5 |
| CA\_n28-n71 | n28 | 0.7 |
| n71 | 0.7 |
| CA\_n28-n74 | n28 | 0.2 |
| CA\_n28-n75 | n28 | 0.2 |
| CA\_n28-n77 | n28 | 0.2 |
|  | n77 | 0.5 |
| CA\_n28-n78 | n28 | 0.2 |
|  | n78 | 0.5 |
| CA\_n28-n79 | n28 | 0.2 |
|  | n79 | 0.5 |
| CA\_n29-n77 | n29 | 0.2 |
|  | n77 | 0.5 |
| CA\_n30-n66 | n30 | 0.5 |
| n66 | 0.4 |
| CA\_n30-n77 | n77 | 0.5 |
| CA\_n34-n40 | n34 | 0.3 |
| n40 | 0.3 |
| CA\_n34-n79 | n79 | 0.5 |
| CA\_n38-n66 | n38 | 0.5 |
|  | n66 | 0.5 |
| CA\_n38-n78 | n38 | 0.4 |
|  | n78 | 0.5 |
| CA\_n38-n79 | n38 | 0.5 |
|  | n79 | 0.5 |
| CA\_n39-n40 | n39 | 0.3 |
|  | n40 | 0.3 |
| CA\_n39-n41 | n39 | 0.22 |
|  | n41 | 0.22 |
|  | n39 | 0.23 |
|  | n41 | 0.23 |
| CA\_n39-n79 | n79 | 0.5 |
| CA\_n40-n77 | n40 | 0.4 |
|  | n77 | 0.5 |
| CA\_n40-n78 | n40 | 0.4 |
|  | n78 | 0.5 |
| CA\_n40-n79 | n79 | 0.5 |
| CA\_n41-n48 | n41 | 0.5 |
|  | n48 | 0.5 |
| CA\_n41-n66 | n41 | 0.56 |
|  |  | 17 |
|  | n66 | 0.5 |
| CA\_n41-n71 | n71 | 0.2 |
| CA\_n41-n771 | n77 | 0.5 |
| CA\_n41-n781 | n78 | 0.5 |
| CA\_n41-n79 | n41 | 0.5 |
|  | n79 | 0.5 |
| CA\_ n46-n48 | n48 | 0.5 |
| CA\_n46-n78 | n78 | 0.5 |
| CA\_n48-n53 | n48 | 0.53 |
| CA\_n48-n66 | n48 | 0.5 |
|  | n66 | 0.2 |
| CA\_n48-n70 | n48 | 0.5 |
|  | n70 | 0.2 |
| CA\_n48-n96 | n48 | 0.5 |
| CA\_n50-n78 | n50 | 0.22 |
|  | n78 | 0.22 |
|  | n50 | 0.23 |
|  | n78 | 0.23 |
| CA\_n66-n77 | n66 | 0.2 |
|  | n77 | 0.5 |
| CA\_n66-n78 | n66 | 0.2 |
|  | n78 | 0.5 |
| CA\_n70-n78 | n70 | 0.2 |
|  | n78 | 0.5 |
| CA\_n71-n77 | n71 | 0.2 |
|  | n77 | 0.5 |
| CA\_n71-n78 | n71 | 0.2 |
|  | n78 | 0.5 |
| CA\_n74-n77 | n77 | 0.5 |
| CA\_n74-n78 | n78 | 0.5 |
| CA\_n75-n78 | n78 | 0.5 |
| CA\_n76-n78 | n78 | 0.5 |
| CA\_n78-n92 | n78 | 0.5 |
| NOTE 1: The requirements only apply when the sub-frame and Tx-Rx timings are synchronized between the component carriers. In the absence of synchronization, the requirements are not within scope of these specifications.  NOTE 2: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx.  NOTE 3: Applicable for UE supporting inter-band carrier aggregation without simultaneous Rx/Tx.  NOTE 4: The requirement is applied for UE transmitting on the frequency range of 2515 – 2690 MHz.  NOTE 5: The requirement is applied for UE transmitting on the frequency range of 2496 – 2515 MHz.  NOTE 6: The requirement is applied for UE transmitting on the frequency range of 2545-2690 MHz.  NOTE 7: The requirement is applied for UE transmitting on the frequency range of 2496-2545 MHz | | |

## << Next change >>

### 7.3A.4 Reference sensitivity exceptions due to UL harmonic interference for CA

Sensitivity degradation is allowed for a band in frequency range 1 if it is impacted by UL harmonic interference from another band in frequency range 1 of the same CA configuration. Reference sensitivity exceptions are specified in Table 7.3A.4-1 with uplink configuration specified in Table 7.3A.4-2.

Table 7.3A.4-1: Reference sensitivity exceptions due to UL harmonic for NR CA FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MSD due to harmonic exception for the DL band | | | | | | | | | | | | | | |
| UL band | DL band | 5 MHz | 10 MHz | 15 MHz | 20 MHz | 25 MHz | 30 MHz | 40 MHz | 50 MHz | 60 MHz | **70**  MHz | 80 MHz | 90 MHz | 100 MHz |
|  |  | dB | dB | dB | dB | dB | dB | dB | dB | dB |  | dB | dB | dB |
| n1 | n771,2 |  | 23.9 | 22.1 | 20.9 |  |  | 17.9 | 16.8 | 16.0 |  | 14.8 | 14.3 | 13.8 |
|  | n773 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n2 | n481, 2 | 27.1 | 23.9 | 22.1 | 20.9 |  |  | 17.9 | 16.912 | 16.112 |  | 14.812 | 14.312 | 13.812 |
|  | n483 | 1.9 | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n2 | n771,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.8 | 14.3 | 13.8 |
|  | n773 |  | 1.1 | 0.8 | 0.3 | 0.1 |  |  |  |  |  |  |  |  |
| 2 | n781,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 |  | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n3 | n771,2 |  | 23.9 | 22.1 | 20.9 |  |  | 17.9 | 16.9 | 16.1 |  | 14.8 | 14.3 | 13.8 |
|  | n773 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
|  | n781,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.1 | 17.9 | 16.9 | 16.1 | 15.4 | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n5 | n774,5,13 |  | 10.5 | 8.9 | 7.8 | 7.2 | 6.5 | 5.1 | 4.2 | 3.5 | 2.8 | 2.3 | 2.1 | 1.4 |
| n5 | n776,7,13 |  | 10.4 | 8.9 | 7.8 | 6.7 | 6.0 | 4.7 | 3.7 | 3 | 2.3 | 1.7 | 1.2 | 0.7 |
| n5 | n784,5 |  | 10.5 | 8.9 | 7.8 | 7.1 | 6.5 | 5.4 | 4.2 | 3.5 | 2.9 | 2.3 | 2.1 | 1.4 |
| n8 | n311 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |  |  |  |  |  |
|  | n78,9 | 10 | 7.5 | 6.2 | 5.5 | 4.4 | 3.6 | 2.4 | 0.8 |  |  |  |  |  |
|  | n418,9 |  | 13.0 | 11.3 | 10.1 |  |  | 7.0 | 6.1 | 5.5 |  | 4.3 | 3.9 | 3.5 |
|  | n774,5 |  | 10.8 | 9.1 | 8.0 | 7.2 | 6.5 | 5.1 | 4.2 | 3.5 | 2.9 | 2.3 | 2.1 | 1.4 |
|  | n784,5 |  | 10.8 | 9.1 | 8.0 | 7.2 | 6.5 | 5.1 | 4.2 | 3.5 |  | 2.3 | 2.1 | 1.4 |
|  | n796,7 |  |  |  |  |  |  | 6.8 | 6.2 | 5.6 |  | 4.9 |  | 4.4 |
| n12 | n486,7 |  | 10.4 | 8.9 | 7.8 |  | 6.5 | 4.7 |  |  |  |  |  |  |
|  | n668,9 | 10 | 7.5 | 6.2 | 5.5 | 4.4 | 3.6 | 2.4 |  |  |  |  |  |  |
|  | n776,7 |  | 10.4 | 8.9 | 7.8 | 6.7 | 6 | 4.7 | 3.7 | 3 | 2.3 | 1.7 | 1.2 | 0.7 |
| n13 | n776,7 |  | 10.4 | 8.9 | 7.8 | 6.7 | 6 | 4.7 | 3.7 | 3 | 2.3 | 1.7 | 1.2 | 0.7 |
| n14 | n776,7 |  | 10.4 | 8.9 | 7.8 | 6.7 | 6 | 4.7 | 3.7 | 3 | 2.3 | 1.7 | 1.2 | 0.7 |
| n18 | n776,7 |  | 10.4 | 8.9 | 7.8 |  |  | 4.7 | 3.7 | 3 |  | 1.7 | 1.2 | 0.7 |
| n20 | n784,5 |  | 10.8 | 9.1 | 8 |  |  | 6 | 4.0 | 3.2 |  | 2.0 | 1.5 | 1.0 |
| n24 | n771,2,13 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.8 | 14.3 | 13.8 |
|  | n773,13 |  | 1.1 | 0.8 | 0.3 | 0.1 |  |  |  |  |  |  |  |  |
| n25 | n481,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.812 | 14.312 | 13.812 |
|  | n483 |  | 1.1 | 0.8 | 0.3 | 0.1 |  |  |  |  |  |  |  |  |
| n25 | n771,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.8 | 14.3 | 13.8 |
|  | n773 |  | 1.1 | 0.8 | 0.3 | 0.1 |  |  |  |  |  |  |  |  |
| n25 | n781,2 |  | 23.9 | 22.1 | 20.9 |  |  | 17.9 | 16.8 | 16.0 |  | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n28 | n18,9 | 10.2 | 7.6 | 6.2 | 5.3 | 4.2 | 3.4 | 2.1 | 1.1 |  |  |  |  |  |
|  | n501,2 |  | 19.8 | 18.0 | 16.8 |  |  | 13.8 | 12.8 | 12.0 |  | 10.8 |  |  |
|  | n741,2 | 23.1 | 19.8 | 18 | 16.8 |  |  |  |  |  |  |  |  |  |
|  | n751,2 | 28.1 | 25.3 | 24.0 | 22.8 | 21.8 | 21.0 | 19.7 | 18.7 |  |  |  |  |  |
|  | n776,7 |  | 10.4 | 8.9 | 7.8 |  |  | 4.7 | 3.7 | 3 |  | 1.7 | 1.2 | 0.7 |
|  | n786,7 |  | 10.4 | 8.9 | 7.8 | 6.7 | 6 | 4.7 | 3.7 | 3 | 2.3 | 1.7 | 1.2 | 0.7 |
| n66 | n481,2 | 27.1 | 23.9 | 22.1 | 20.9 |  |  | 17.9 | 16.912 | 16.112 |  | 14.812 | 14.312 | 13.812 |
|  | n483 | 1.9 | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n66 | n771,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.8 | 14.3 | 13.8 |
|  | n773 |  | 1.1 | 0.8 | 0.3 | 0.1 |  |  |  |  |  |  |  |  |
| n66 | n781,2 |  | 23.9 | 22.1 | 20.9 |  |  | 17.9 | 16.8 | 16.0 |  | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n70 | n782,3 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.1 | 17.9 | 16.9 | 16.1 | 15.4 | 14.8 | 14.3 | 13.8 |
|  | n781 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n71 | n2510 | 10 | 7.5 | 6 | 5.1 | 4.1 | 3.0 | 2.1 |  |  |  |  |  |  |
|  | n414,5 |  | 10.8 | 9.1 | 8.0 |  | 6.5 | 5.1 | 4.2 | 3.5 | 2.8 | 2.3 | 2.1 | 1.4 |
|  | n708,9 | 9.9 | 7.1 | 6.7 | 4.9 | 4.1 |  |  |  |  |  |  |  |  |
| n92 | n784,5 |  | 10.8 | 9.1 | 8 |  |  | 6 | 4.0 | 3.2 |  | 2.0 | 1.5 | 1.0 |
| NOTE 1: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the aggressor (lower) band for which the 2nd transmitter harmonic is within the downlink transmission bandwidth of a victim (higher) band and a range ∆FHD above and below the edge of this downlink transmission bandwidth. The value ∆FHD depends on the band combination: ∆FHD = 10 MHz for CA\_n1-n77, CA\_n2-n78, CA\_n3-n77, CA\_n3-n78, CA\_n2-n48, CA\_n24-n77, CA\_n25-n48, CA\_n28-n74, CA\_n25-n78, CA\_n48-n66, CA\_n66-n78.  NOTE 2: The requirements should be verified for UL NR-ARFCN of the aggressor (lower) band (superscript LB) such that in MHz and  with carrier frequency in the victim (higher) band in MHz and  the channel bandwidth configured in the lower band.  NOTE 3: The requirements are only applicable to channel bandwidths no larger than 20 MHz and with a carrier frequency at  MHz offset from  in the victim (higher band) with , whereandare the channel bandwidths configured in the aggressor (lower) and victim (higher) bands in MHz, respectively.  NOTE 4: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of a low band for which the 4th transmitter harmonic is within the downlink transmission bandwidth of a high band.  NOTE 5: The requirements should be verified for UL NR‑ARFCN of a low band (superscript LB) such that in MHz and  with the carrier frequency of a high band in MHz and  the channel bandwidth configured in the low band.  NOTE 6: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of a low band for which the 5th transmitter harmonic is within the downlink transmission bandwidth of a high band.  NOTE 7: The requirements should be verified for UL NR‑ARFCN of a low band (superscript LB) such that in MHz and  with the carrier frequency of a high band in MHz and  the channel bandwidth configured in the low band.  NOTE 8: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the aggressor (lower) band for which the 3rd transmitter harmonic is within the downlink transmission bandwidth of a victim (higher) band.  NOTE 9: The requirements should be verified for UL NR-ARFCN of the aggressor (lower) band (superscript LB) such that in MHz and  with carrier frequency in the victim (higher) band in MHz and  the channel bandwidth configured in the lower band.  NOTE 10: These requirements apply when the lower edge frequency of the 10 MHz, 15 MHz, or 20 MHz uplink channel in Band 71 is located at or below 668 MHz and the downlink channel in Band n25 is located with its upper edge at 1995 MHz.  NOTE 11: No requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the low band for which the 2nd transmitter harmonic is within the downlink transmission bandwidth of the high band. The reference sensitivity for all active downlink component carriers is only verified when this is not the case (the requirements specified in clause 7.3.2 apply unless otherwise specified).  NOTE 12: For these bandwidths, the minimum requirements are restricted to operation when carrier is configured as a downlink carrier part of CA configuration.  NOTE 13: For a UE which supports this band combination only when the Band n77 frequency range restriction defined in NOTE 12 of Table 5.2-1 applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped. | | | | | | | | | | | | | | |

Table 7.3A.4-1a: NR-U reference sensitivity measurement exclusion region in MHz.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Harmonic order / Channel BW in UL | | | | | | | | | |
| Band | Harmonic order | 5MHz | 10MHz | 15MHz | 20 MHz | 25 MHz | 30 MHz | 40MHz | 50 MHz |
| n7 | 2 | +/- 10 | +/- 20 | +/- 30 | +/- 40 | +/- 50 | +/- 60 | +/- 80 | +/- 100 |
| n25 | 3 | +/- 15 | +/- 23 | +/- 35 | +/- 45 |  |  | +/- 90 |  |
| n66 | 3 | +/- 15 | +/- 23 | +/- 35 | +/- 45 |  |  | +/- 90 |  |
| n48 | 2 | +/- 10 | +/- 20 | +/- 30 | +/- 40 |  |  | +/- 80 |  |
| NOTE 1: Even though UL harmonic does not fall directly into NR-U band the exclusion region still applies.  NOTE 2: The center of the exclusion region is obtained by multiplying the UL channel center frequency by the harmonic order. | | | | | | | | | |

Table 7.3A.4-2: Uplink configuration for reference sensitivity exceptions due to UL harmonic interference for NR CA, FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Channel bandwidth of the high band | | | | | | | | | | | | | | |
| UL band | DL band | 5 MHz | 10 MHz | 15 MHz | 20 MHz | 25 MHz | 30 MHz | 40 MHz | 50 MHz | 60 MHz | 70  MHz | 80 MHz | 90 MHz | 100 MHz |
| n1 | n77 |  | 25 | 36 | 50 |  |  | 100 | 100 | 100 |  | 100 | 100 | 100 |
| n2 | n48 | 25 | 50 | 50 | 50 |  |  | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n2 | n77 |  | 25 | 36 | 50 | 50 | 50 | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n2 | n78 |  | 25 | 36 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| n3 | n77 |  | 25 | 36 | 50 |  |  | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n3 | n78 |  | 25 | 36 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| n5 | n77 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n5 | n78 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n8 | n7 | 8 | 16 | 25 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |
| n8 | n41 |  | 16 | 25 | 25 |  |  | 25 | 25 | 25 |  | 25 | 25 | 25 |
| n8 | n77 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n8 | n78 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |  | 25 | 25 | 25 |
| n8 | n79 |  |  |  |  |  |  | 25 | 25 | 25 |  | 25 |  | 25 |
| n12 | n48 |  | 10 | 15 | 20 |  | 25 | 25 |  |  |  |  |  |  |
| n12 | n66 | 8 | 16 | 20 | 20 | 20 | 20 | 20 |  |  |  |  |  |  |
| n12 | n77 |  | 10 | 15 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| n13 | n77 |  | 10 | 15 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| n14 | n77 |  | 10 | 15 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| n18 | n77 |  | 16 | 25 | 25 |  |  | 25 | 25 | 25 |  | 25 | 25 | 25 |
| n20 | n78 |  | 16 | 25 | 25 |  |  | 25 | 25 | 25 |  | 25 | 25 | 25 |
| n24 | n77 | 12 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n25 | n48 | 25 | 50 | 50 | 50 |  |  | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n25 | n77 |  | 25 | 36 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | n2 |
| n25 | n78 |  | 25 | 36 | 50 |  |  | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n28 | n1 | 8 | 16 | 25 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |
| n28 | n50 |  | 25 | 25 | 25 |  |  | 25 | 25 | 25 |  | 25 |  |  |
| n28 | n74 | 12 | 25 | 25 | 25 |  |  |  |  |  |  |  |  |  |
| n28 | n75 | 12 | 25 | 36 | 50 | 50 | 50 | 50 | 50 |  |  |  |  |  |
| n28 | n77 |  | 10 | 15 | 20 |  |  | 25 | 25 | 25 |  | 25 | 25 | 25 |
| n28 | n78 |  | 10 | 15 | 20 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n66 | n48 | 12 | 25 | 36 | 50 |  |  | 100 | 128 | 160 |  | 200 | 200 | 200 |
| n66 | n77 |  | 25 | 36 | 50 | 64 | 80 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n66 | n78 |  | 25 | 36 | 50 |  |  | 100 | 100 | 100 |  | 100 | 100 | 100 |
| n70 | n78 |  | 25 | 36 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| n71 | n25 | 84 | 84 | 84 | 84 | 84 | 84 | 84 |  |  |  |  |  |  |
| n71 | n41 |  | 16 | 25 | 25 |  | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n71 | n70 | 8 | 16 | 20 | 20 | 20 |  |  |  |  |  |  |  |  |
| n92 | n78 |  | 16 | 25 | 25 |  |  | 25 | 25 | 25 |  | 25 | 25 | 25 |
| NOTE 1: 15 kHz SCS is assumed for UL band.  NOTE 2: The UL configuration applies regardless of the channel bandwidth of the low band unless the UL resource blocks exceed that specified in Table 7.3.2-3 for the uplink bandwidth in which case the allocation according to Table 7.3.2-3 applies.  NOTE 3: Unless stated otherwise, UL resource blocks shall be centred within the transmission bandwidth configuration for the channel bandwidth.  NOTE 4: These requirements apply when the lower edge frequency of the uplink channel in Band n71 is located at or below 668 MHz and the downlink channel in Band n25 is located with its upper edge at 1990 MHz. | | | | | | | | | | | | | | |

Table 7.3A.4-3: Void

Table 7.3A.4-3a: Void

Sensitivity degradation is allowed for a band if it is impacted by receiver harmonic mixing due to another band part of the same CA configuration. Reference sensitivity exceptions are specified in Table 7.3A.4-4 and 7.3A.4-4a with uplink configuration specified in Table 7.3A.4-5.

Table 7.3A.4-4: Reference sensitivity exceptions due to harmonic mixing for PC3 CA in NR FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Channel bandwidth of the affected DL band | | | | | | | | | | | | | | |
| UL band | DL band | 5 MHz  (dB) | 10 MHz  (dB) | 15 MHz  (dB) | 20 MHz  (dB) | 25 MHz  (dB) | 30  MHz(dB) | 40 MHz  (dB) | 50 MHz  (dB) | 60 MHz  (dB) | 70  MHz(dB) | 80 MHz  (dB) | 90 MHz  (dB) | 100 MHz  (dB) |
| n25 | n713,4 | 26.5 | 23.3 | 20.9 | 15.3 |  |  |  |  |  |  |  |  |  |
| n40 | n284 | 37.8 | 34.8 | 33 | 30.3 |  |  |  |  |  |  |  |  |  |
| n40 | n771 |  | 8.3 | 8.0 | 6.9 | 5.2 | 4.2 | 3.9 | 3 | 2.3 | 1.8 | 1.2 | 0.9 | 0.4 |
| n40 | n781 |  | 8.3 | 8.0 | 6.9 |  |  | 3.9 | 3 | 2.3 |  | 1.2 |  | 0.4 |
| n413,4 | n18 | [24.3] | [24.3] | [22.5] |  |  |  |  |  |  |  |  |  |  |
| n41 | n481 |  | 8.3 | 8.0 | 6.9 |  |  | 3.9 | 3 | 2.3 |  | 1.2 |  | 0.4 |
| n41 | n781 |  | 8.3 | 8.0 | 6.9 |  |  | 3.9 | 3 | 2.3 |  | 1.2 |  | 0.4 |
| n46 | n71 | 8.3 | 7.1 | 6.4 | 5.5 | 4.3 | 3.1 | 1.5 | 0.6 |  |  |  |  |  |
| n46 | n481 | 22.6 | 19.5 | 17.8 | 16.6 |  |  | 14 | 13.1 | 12.6 | 12 | 12 | 12 | 12 |
| n46 | n781 |  | 19.5 | 17.8 | 16.6 | 15.6 | 14.8 | 14 | 13.1 | 12.6 | 12 | 12 | 12 | 12 |
| n77 | n2 | 6.7 | 5.0 | 4.0 | 3.7 |  |  |  |  |  |  |  |  |  |
| n77 | n5 | 5.7 | 4.0 | 3.0 | 2.7 |  |  |  |  |  |  |  |  |  |
| n77 | n125 | 31 | 28 | 26.2 |  |  |  |  |  |  |  |  |  |  |
| n77 | n135 | 31 | 28 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n145 | 31 | 28 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n25 | 6.7 | 5.0 | 4.0 | 3.7 | 3.4 | 2.4 | 1.1 |  |  |  |  |  |  |
| n776 | n295 | 31 | 28 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n302 | 10.4 | 8.0 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n402 |  | 10.4 | 10.4 | 10.4 | 9.8 | 8.4 | 7.2 | 6.2 | 5.5 |  | 3.2 | 2.1 | 0.9 |
| n77 | 412 |  | 10.4 | 10.4 | 10.4 |  | 10.4 | 10.4 | 10.4 | 10.4 |  | 10.4 | 10.4 | 10.4 |
| n78 | n402 | 10.4 | 10.4 | 10.4 | 10.4 |  |  | 7.2 | 6.2 | 5.5 |  | 4.5 |  |  |
| n78 | n412 |  | 10.4 | 10.4 | 10.4 |  |  | 8.2 | 7.6 | 7.3 |  | 6.6 | 6.4 | 6.3 |
| n96 | n482 | 5.8 | 3.7 | 2.7 | 2.2 |  | 1.6 | 1.2 | 1.0 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 |
| NOTE 1: The requirements should be verified for UL NR-ARFCN of the aggressor (lower) band (superscript LB) such that in MHz and  with carrier frequency in the victim (higher) band in MHz and  the channel bandwidth configured in the lower band.  NOTE 2: The requirements should be verified for UL NR-ARFCN of the aggressor (high) band (superscript HB) such that in MHz and  with carrier frequency in the victim (lower) band in MHz and  the channel bandwidth configured in the higher band.  NOTE 3: These requirements apply when there is at least one individual RE within the downlink transmission bandwidth of the victim (lower) band for which the 3rd harmonic is within the uplink transmission bandwidth or the uplink adjacent channel's transmission bandwidth of an aggressor (higher) band.  NOTE 4: The requirements should be verified for UL NR-ARFCN of the aggressor (higher) band (superscript HB) such that  in MHz and  with  the carrier frequency in the victim (lower) band and  the channel bandwidth configured in the higher band.  NOTE 5: The requirements should be verified for DL EARFCN of the victim (lower) band (superscript LB) such that  with  the DL carrier frequency in the lower band and the UL carrier frequency in the higher band, both in MHz.  NOTE 6: For a UE which supports this band combination only when the Band n77 frequency range restriction defined in NOTE 12 of Table 5.2-1 applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped. | | | | | | | | | | | | | | |

Table 7.3A.4-4a: Reference sensitivity exceptions due to harmonic mixing for PC2 CA in NR FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Channel bandwidth of the affected DL band | | | | | | | | | | | | | | |
| UL band | DL band | 5 MHz  (dB) | 10 MHz  (dB) | 15 MHz  (dB) | 20 MHz  (dB) | 25 MHz  (dB) | 30  MHz(dB) | 40 MHz  (dB) | 50 MHz  (dB) | 60 MHz  (dB) | 70  MHz(dB) | 80 MHz  (dB) | 90 MHz  (dB) | 100 MHz  (dB) |
| n77 | n2 | 9.1 | 8.0 | 7.0 | 6.7 |  |  |  |  |  |  |  |  |  |
| n77 | n121 | 34 | 31 | 29.2 |  |  |  |  |  |  |  |  |  |  |
| n77 | n141 | 34 | 31 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n25 | 9.1 | 8.0 | 7.0 | 6.7 |  |  |  |  |  |  |  |  |  |
| n78 | n3 | 8.1 | 6.1 | 4.8 | 4.3 | 3.8 | 3.4 | 1 |  |  |  |  |  |  |
| NOTE 1: The requirements should be verified for DL EARFCN of the victim (lower) band (superscript LB) such that  with  the DL carrier frequency in the lower band and the UL carrier frequency in the higher band, both in MHz. | | | | | | | | | | | | | | |

Table 7.3A.4-5: Uplink configuration for reference sensitivity exceptions due to receiver harmonic mixing for CA in NR FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / SCS / Channel bandwidth of the affected DL band | | | | | | | | | | | | | | | |
| UL band | DL band | SCS  (kHz) | 5 MHz | 10 MHz | 15 MHz | 20 MHz | 25 MHz | 30  MHz | 40 MHz | 50 MHz | 60 MHz | 70  MHz | 80 MHz | 90 MHz | 100 MHz |
| n25 | n71 | 15 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |  |  |
| n40 | n28 | 15 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |  |  |
| n40 | n77 | 30 |  | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| n40 | n78 | 30 |  | 24 | 24 | 24 |  |  | 24 | 24 | 24 |  | 24 |  | 24 |
| n41 | n18 | 15 | 25 | 50 | 75 |  |  |  |  |  |  |  |  |  |  |
| n41 | n48 | 30 |  | 24 | 24 | 24 |  |  | 24 | 24 | 24 |  | 24 |  | 24 |
| n41 | n78 | 30 |  | 24 | 24 | 24 |  |  | 24 | 24 | 24 |  | 24 |  | 24 |
| n46 | n7 | 15 | 12 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |
| n46 | n48 | 15 | 12 | 25 | 36 | 50 |  |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n46 | n78 | 15 |  | 25 | 36 | 50 | 75 | 75 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n77 | n2 | 15 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |  |  |
| n77 | n5 | 25 | 25 | 20 | 20 |  |  |  |  |  |  |  |  |  |  |
| n77 | n12 | 15 | 25 | 50 | 75 |  |  |  |  |  |  |  |  |  |  |
| n77 | n13 | 15 | 25 | 50 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n14 | 15 | 25 | 50 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n25 | 15 | 25 | 50 | 75 | 100 | 100 | 100 | 100 |  |  |  |  |  |  |
| n77 | n29 | 15 | 25 | 50 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n30 | 15 | 12 | 25 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n40 | 30 |  | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n77 | 41 | 15 |  | 25 | 36 | 50 |  | 50 | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n78 | n3 | 15 | 25 | 50 | 75 | 100 | 128 | 160 | 216 |  |  |  |  |  |  |
| n78 | n40 | 30 | 50 | 50 | 50 | 50 |  |  | 50 | 50 | 50 |  | 50 |  |  |
| n78 | n41 | 30 |  | 50 | 50 | 50 |  | 50 | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n96 | n48 | 15 | 25 | 50 | 75 | 100 |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| NOTE 1: The UL configuration applies regardless of the channel bandwidth of the UL band unless the UL resource blocks exceed that specified in Table 7.3.2-3 for the uplink bandwidth in which case the allocation according to Table 7.3.2-3 applies. | | | | | | | | | | | | | | | |

### 7.3A.5 Reference sensitivity exceptions due to intermodulation interference due to 2UL CA

For inter-band carrier aggregation with uplink assigned to two NR bands given in Table 7.3A.5-1, Table 7.3A.5-1a and Table 7.3A.5-2 the reference sensitivity is defined only for the specific uplink and downlink test points specified in Table 7.3A.5-1, Table 7.3A.5-1a and Table 7.3A.5-2. For these test points the reference sensitivity requirement specified in Table 7.3.2-1 and Table 7.3.2-2 are relaxed by the amount of the corresponding parameter MSD given in Table 7.3A.5-1, Table 7.3A.5-1a and Table 7.3A.5-2.

Table 7.3A.5-1: 2DL/2UL interband Reference sensitivity QPSK PREFSENS and uplink/downlink configurations for PC3 CA

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band / Channel bandwidth / NRB / Duplex mode | | | | | | | | Source of IMD |
| NR CA band combination | NR band | UL Fc  (MHz) | UL/DL BW  (MHz) | UL  CLRB | DL Fc (MHz) | MSD  (dB) | Duplex mode |  |
| CA\_n1-n3 | n1 | 1950 | 5 | 25 | 2140 | 23 | FDD | IMD3 |
|  | n3 | 1760 | 5 | 25 | 1855 | N/A | TDD | N/A |
| CA\_n1-n8 | n1 | 1965 | 5 | 25 | 2155 | 6.0 | FDD | IMD4 |
|  | n8 | 887.5 | 5 | 25 | 932.5 | N/A | FDD | N/A |
| CA\_n1-n77 | 1 | 1950 | 5 | 25 | 2140 | 29.8 | FDD | IMD24 |
|  |  |  |  |  |  | 32.5 5 |  |  |
|  | n77 | 4090 | 10 | 50 | 4090 | N/A | TDD | N/A |
|  | 1 | 1950 | 5 | 25 | 2140 | 8.0 | FDD | IMD44 |
|  |  |  |  |  |  | 10.75 |  |  |
|  | n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
| CA\_n1-n78 | n1 | 1950 | 5 | 25 | 2140 | 8.0 | FDD | IMD4 |
|  |  |  |  |  |  | 10.75 |  |  |
|  | n78 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
| CA\_n2-n48 | n2 | 1852.5 | 5 | 25 | 1932.5 | 12 | FDD | IMD4 |
|  | n48 | 3625 | 20 | 100 | 3625 | N/A | TDD | N/A |
| CA\_n2-n66 | n2 | 1855 | 5 | 25 | 1935 | 20 | FDD | IMD3 |
|  | n66 | 1775 | 5 | 25 | 2175 | N/A | FDD | N/A |
|  | n2 | 1883.3 | 5 | 25 | 1963.3 | N/A | FDD | N/A |
|  | n66 | 1750 | 5 | 25 | 2150 | 4 | FDD | IMD5 |
| CA\_n2-n77 | n2 | 1855 | 5 | 25 | 1935 | 26 | FDD | IMD2 |
|  |  |  |  |  |  | 28.75 |  |  |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n2 | 1900 | 5 | 25 | 1980 | 8.0 | FDD | IMD4 |
|  |  |  |  |  |  | 10.75 |  |  |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
|  | n2 | 1885 | 5 | 25 | 1965 | 5 | FDD | IMD5 |
|  | n77 | 3810 | 10 | 50 | 3810 | N/A | TDD | N/A |
|  | n2 | N/A | 5 | N/A | 1987.5 | 2.7 | FDD | IMD7 |
|  | n7712 | 3455 | 10 | 1 RBSTART=10 | 3455 | N/A | TDD | N/A |
|  |  | 3945 | 10 | 1 RBSTART=0 | 3945 |  |  |  |
| CA\_n2-n78 | n2 | 1855 | 5 | 25 | 1935 | 26 | FDD | IMD24 |
|  |  |  |  |  |  | 28.75 |  |  |
|  | n78 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
| CA\_n3-n5 | n3 | 1771 | 10 | 50 | 1866 | 4 | FDD | IMD4 |
|  | n5 | 838 | 5 | 25 | 883 | N/A | FDD | N/A |
|  | n3 | 1721 | 10 | 50 | 1816 | N/A | FDD | N/A |
|  | n5 | 838 | 5 | 25 | 883 | 24 | FDD | IMD23 |
| CA\_n3-n7 | n3 | 1730 | 5 | 25 | 1825 | N/A | FDD | N/A |
|  | n7 | 2535 | 10 | 50 | 2655 | 10.2 | FDD | IMD4 |
| CA\_n3-n8 | n3 | 1755 | 10 | 50 | 1850 | N/A | FDD | N/A |
|  | n8 | 900 | 5 | 25 | 945 | 8 | FDD | IMD44 |
|  | n3 | 1747.5 | 10 | 50 | 1842.5 | 6.4 | FDD | IMD5 |
|  | n8 | 897.5 | 5 | 25 | 942.5 | N/A | FDD | N/A |
| CA\_n3-n18 | n18 | 818 | 5 | 25 | 863 | N/A | FDD | N/A |
|  | n3 | 1731 | 5 | 25 | 1826 | 4 | FDD | IMD4 |
| CA\_n3-n20 | 3 | 1775 | 5 | 25 | 1870 | 4 | FDD | IMD4 |
|  | 20 | 840 | 5 | 25 | 799 | N/A | FDD | N/A |
|  | 3 | 1735 | 5 | 25 | 1830 | N/A | FDD | N/A |
|  | 20 | 847 | 5 | 25 | 806 | 9 | FDD | IMD4 |
| CA\_n3-n38 | n3 | 1713 | 5 | 25 | 1808 | 8.2 | FDD | IMD4 |
| n38 | 2617 | 5 | 25 | 2617 | N/A | TDD | N/A |
| CA\_n3-n41 | n3 | 1740 | 5 | 25 | 1835 | 8.2 | FDD | IMD4 |
|  | n41 | 2657.5 | 10 | 50 | 2657.5 | N/A | TDD | N/A |
| CA\_n3-n77 | n3 | 1740 | 5 | 25 | 1835 | 26 | FDD | IMD24 |
|  |  |  |  |  |  | 28.74 |  |  |
|  | n77 | 3575 | 10 | 50 | 3575 | N/A | TDD | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 8.0 | FDD | IMD44 |
|  |  |  |  |  |  | 10.74 |  |  |
|  | n77 | 3435 | 10 | 50 | 3435 | N/A | TDD | N/A |
|  | n3 | N/A | N/A | N/A | N/A | N/A6 | FDD | IMD5 |
|  | n77 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
|  | n3 | N/A | 5 | N/A | 1877.5 | [2.2] | FDD | IMD7 |
|  | n77 | 3455 | 10 | 1 (RBstart=10) | 3455 | N/A | TDD | N/A |
|  |  | 3945 | 10 | 1 (RBstart=0) | 3945 |  |  |  |
| CA\_n3-n78 | n3 | 1740 | 5 | 25 | 1835 | 26 | FDD | IMD24 |
|  |  |  |  |  |  | 28.75 |  |  |
|  | n78 | 3575 | 10 | 25 | 3575 | N/A | TDD | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 8.0 | FDD | IMD44 |
|  |  |  |  |  |  | 10.75 |  |  |
|  | n78 | 3435 | 10 | 25 | 3435 | N/A | TDD | N/A |
| CA\_n5-n7 | n5 | 834 | 5 | 25 | 879 | 12 | FDD | IMD34 |
|  | n7 | 2547 | 10 | 50 | 2667 | N/A | FDD | N/A |
| CA\_n5-n14 | n5 | 836 | 5 | 25 | 881 | 25 | FDD | IMD34 |
|  | n14 | 791 | 5 | 25 | 761 | N/A | FDD | N/A |
|  | n5 | 826.5 | 5 | 25 | 871.5 | N/A | FDD | N/A |
|  | n14 | 795.5 | 5 | 25 | 765.5 | 25 | FDD | IMD3 |
| CA\_n5-n66 | n5 | 838 | 5 | 25 | 883 | 30 | FDD | IMD24 |
|  | n66 | 1721 | 5 | 25 | 2121 | N/A | FDD | N/A |
| CA\_n5-n7713 | n5 | N/A | N/A | N/A | N/A | N/A | FDD | IMD27 |
|  | n7712 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
|  | n5 | 844 | 5 | 25 | 889 | 8.3 | FDD | IMD4 |
|  | n77 | 3421 | 10 | 50 | 3421 | N/A | TDD | N/A |
|  | n5 | 829 | 5 | 25 | 874 | 5.5 | FDD | IMD5 |
|  | n77 | 4190 | 10 | 50 | 4190 | N/A | TDD | N/A |
| CA\_n5-n78 | n5 | 844 | 5 | 25 | 889 | 8.3 | FDD | IMD4 |
|  | n78 | 3421 | 10 | 50 | 3421 | N/A | TDD | N/A |
| CA\_n7-n46 | n7 | 2550 | 10 | 50 | 2670 | 26.8 | FDD | IMD24 |
|  | n46 | 5220 | 20 | 50 | 5220 | N/A | TDD | N/A |
| CA\_n7-n66 | n7 | 2535 | 10 | 50 | 2655 | 15 | FDD | IMD4 |
|  | n66 | 1730 | 5 | 25 | 2130 | N/A | FDD | N/A |
| CA\_n8-n41 | n8 | 882.5 | 5 | 25 | 927.5 | 12.1 | FDD | IMD34 |
|  | n41 | 2685 | 10 | 50 | 2685 | N/A | TDD | N/A |
| CA\_n7-n77 | n7 | 2540 | 5 | 25 | 2660 | 7.1 | FDD | IMD4 |
|  | n77 | 3870 | 10 | 50 | 3870 | N/A | TDD | N/A |
| CA\_n8-n78 | n8 | 897.5 | 5 | 25 | 942.5 | 8.3 | FDD | IMD4 |
|  | n78 | 3635 | 10 | 50 | 3635 | N/A | TDD | N/A |
| CA\_n8-n79 | n8 | 897.5 | 5 | 25 | 942.5 | 4.8 | FDD | IMD5 |
|  | n79 | 4532.5 | 40 | 216 | 4532.5 | N/A | TDD | N/A |
| CA\_n12-n66 | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n66 | 1765 | 5 | 25 | 2115 | 5.0 | FDD | IMD4 |
| CA\_n12-n77 | n12 | 702 | 5 | 20 | 732 | 5.5 | FDD | IMD5 |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
| CA\_n13-n77 | n13 | 782 | 5 | 20 | 751 | 5.5 | FDD | IMD5 |
|  | n77 | 3880 | 10 | 50 | 3880 | N/A | TDD | N/A |
| CA\_n14-n77 | n14 | 793 | 5 | 20 | 763 | 5.5 | FDD | IMD5 |
|  | n77 | 3935 | 10 | 50 | 3935 | N/A | TDD | N/A |
| CA\_n18-n778 | n18 | N/A | N/A | N/A | N/A | N/A | FDD | IMD4/5 |
|  | n77 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
| CA\_n18-n789 | n18 | N/A | N/A | N/A | N/A | N/A | FDD | IMD4 |
|  | n78 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
| CA\_n20-n78 | n20 | 850 | 5 | 25 | 809 | 11 | FDD | IMD4 |
|  | n78 | 3359 | 10 | 50 | 3359 | N/A | TDD | N/A |
| CA\_n24-n7710 | n24 | N/A | N/A | N/A | N/A | N/A | FDD | IMD4 |
|  | n77 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
| CA\_n25-n41 | n25 | N/A | 5 | N/A |  | [8.5] | FDD | IMD7 |
|  | n41 | 2545 | 90 | 1 (RBstart=0) | 2545 | N/A | TDD | N/A |
|  |  | [2460] | 100 | 1 (RBstart=[226-229]) | [2460] |  |  |  |
| CA\_n25-n48 | n25 | 1852.5 | 5 | 25 | 1932.5 | 12 | FDD | IMD4 |
|  | n48 | 3625 | 20 | 100 | 3625 | N/A | TDD | N/A |
| CA\_n25-n66 | n66 | 1775 | 5 | 25 | 2175 | N/A | FDD | N/A |
|  | n25 | 1855 | 5 | 25 | 1935 | 20 | FDD | IMD3 |
|  | n66 | 1712.5 | 5 | 25 | 2112.5 | 23 | FDD | IMD3 |
|  | n25 | 1912.5 | 5 | 25 | 1992.5 | N/A | FDD | N/A |
|  | n66 | 1750 | 5 | 25 | 2150 | 4 | FDD | IMD5 |
|  | n25 | 1883.3 | 5 | 25 | 1963.3 | N/A | FDD | N/A |
| CA\_n25-n77 | n25 | 1855 | 5 | 25 | 1935 | 26 | FDD | IMD2 |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n25 | 1885 | 5 | 25 | 1965 | 8.0 | FDD | IMD4 |
|  | n77 | 3690 | 10 | 50 | 3690 | N/A | TDD | N/A |
|  | n25 | 1885 | 5 | 25 | 1965 | 5 | FDD | IMD5 |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
| CA\_n25-n78 | n25 | 1855 | 5 | 25 | 1935 | 26 | FDD | IMD24 |
|  | n78 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
| CA\_n26-n66 | n26 | 838 | 5 | 25 | 883 | 30 | FDD | IMD24 |
|  | n66 | 1721 | 5 | 25 | 2121 | N/A | FDD | N/A |
| CA\_n26-n70 | n26 | 838 | 5 | 25 | 883 | 30 | FDD | IMD24 |
|  | n70 | 1710 | 5 | 25 | 2020 | N/A | FDD | N/A |
| CA\_n28-n50 | n28 | 730 | 10 | 50 | 775 | 15.3 | FDD | IMD2 |
|  | n50 | 1500 | 10 | 50 | 1500 | N/A | TDD | N/A |
|  | n28 | 740 | 10 | 50 | 785 | 6.0 | FDD | IMD44 |
|  | n50 | 1500 | 10 | 50 | 1500 | N/A | TDD | N/A |
| CA\_n28-n74 | n28 | 705.5 | 5 | 25 | 760.5 | 24.6 | FDD | IMD2 |
|  | n74 | 1466 | 5 | 25 | 1514 | N/A | FDD | N/A |
|  | n28 | 743 | 5 | 25 | 798 | 11.3 | FDD | IMD411 |
|  | n74 | 1431 | 5 | 25 | 1479 | N/A | FDD | N/A |
|  | n28 | 709 | 5 | 25 | 764 | N/A | FDD | N/A |
|  | n74 | 1466 | 5 | 25 | 1514 | 14.6 | FDD | IMD4 |
|  | n28 | 735.5 | 5 | 25 | 790.5 | N/A | FDD | N/A |
|  | n74 | 1450.4 | 5 | 25 | 1498.4 | 2.5 | FDD | IMD5 |
| CA\_n28-n77 | n28 | N/A | N/A | N/A | N/A | N/A | FDD | IMD27 |
|  | n7712 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
| CA\_n28-n77 | n28 | 705.5 | 5 | 25 | 760.5 | 5.5 | FDD | IMD5 |
|  | n77/n78 | 3582.5 | 10 | 50 | 3582.5 | N/A | TDD | N/A |
| CA\_n30-n77 | n30 | 2310 | 5 | 25 | 2355 | 8.0 | FDD | IMD4 |
|  | n77 | 3487.5 | 10 | 50 | 3487.5 | N/A | TDD | N/A |
|  | n30 | N/A | 5 | N/A | 2352.5 | [3.2] | FDD | IMD7 |
|  | n7712 | 3455 | 10 | 1 (RBstart=17) | 3455 | N/A | TDD | N/A |
|  |  | 3825 | 10 | 1 (RBstart=0) | 3825 |  |  |  |
| CA\_n41-n66 | n4112 | 2545 | 90 | 1 (RBstart=0) | 2545 | N/A | TDD | N/A |
|  |  | 2640 | 100 | 1 (RBstart=171) | 2640 |  |  |  |
|  | n66 | N/A | 5 | N/A | 2197.5 | [32.5] | FDD | IMD5 |
| CA\_n41-n71 | n41 | 2614 | 5 | 25 | 2614 | N/A | TDD | N/A |
|  | n71 | 665 | 5 | 25 | 619 | 11 | FDD | IMD4 |
| CA\_n41-n77 | n4112 | 2545 | 60 | 1 (RBstart=0) | 2545 | N/A | TDD | N/A |
|  |  | 2625 | 100 | 1 (RBstart=272) | 2625 |  |  |  |
|  | n77 | N/A | 10 | N/A | 3305 | [2.7] | FDD | IMD9 |
| CA\_n48-n66 | n48 | 3660 | 5 | 25 | 3660 | N/A | TDD | N/A |
|  | n66 | 1730 | 5 | 25 | 2130 | 5.0 | FDD | IMD5 |
| CA\_n48-n70 | n70 | 1697.5 | 25/15 | 25 | 1997.5 | 26 | FDD | IMD24 |
| 28.75 |
|  | n48 | 3695 | 10 | 50 | 3695 | N/A | TDD | N/A |
| CA\_n66-n71 | n66 | 1750 | 5 | 25 | 2150 | 5 | FDD | IMD4 |
|  | n71 | 675 | 5 | 25 | 629 | N/A | FDD | N/A |
| CA\_n66-n77 | n66 | 1775 | 5 | 25 | 2175 | 31 | FDD | IMD2 |
|  | n77 | 3950 | 10 | 50 | 3950 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 5.0 | FDD | IMD5 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
|  | n66 | 1730 | 5 | 25 | 2130 | [1.7] | FDD | IMD7 |
|  | n7712 | 3455 | 10 | 1 (RBstart=10) | 3455 | N/A | TDD | N/A |
|  |  | 3875 | 10 | 1 (RBstart=0) | 3875 |  |  |  |
| CA\_n66-n78 | n66 | 1730 | 5 | 25 | 2130 | 5.0 | FDD | IMD5 |
|  | n78 | 3660 | 10 | 50 | 3660 | N/A | TDD | N/A |
| CA\_n70-n71 | n70 | 1697.5 | 5 | 25 | 1997.5 | 5 | FDD | IMD4 |
|  | n71 | 695.5 | 5 | 25 | 649.5 | N/A | FDD | N/A |
| CA\_n70-n78 | n70 | 1705 | 5 | 25 | 2005 | 31 | FDD | IMD2 |
|  | n78 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n70 | 1705 | 5 | 25 | 2005 | 5.0 | FDD | IMD5 |
|  | n78 | 3560 | 10 | 50 | 3560 | N/A | TDD | N/A |
| CA\_n71-n7713 | n71 | 671 | 5 | 25 | 625 | 5.5 | FDD | IMD5 |
|  | n77 | 3309 | 10 | 50 | 3309 | N/A | TDD | N/A |
| CA\_n71-n78 | n71 | 681.5 | 5 | 25 | 635.5 | 5.5 | FDD | IMD5 |
|  | n78 | 3361.5 | 10 | 50 | 3361.5 | N/A | TDD | N/A |
| NOTE 1: Both of the transmitters shall be set min(+20 dBm, PCMAX\_L,f,c) as defined in clause 6.2A.4  NOTE 2: RBSTART = 0, 15 kHz SCS is assumed.  NOTE 3: No requirements apply when there is at least one individual RE within the intermodulation generated by the dual uplink is within the downlink transmission bandwidth of the FDD band. The reference sensitivity should only be verified when this is not the case (the requirements specified in clause 7.3 apply).  NOTE 4: This band is subject to IMD5 also which MSD is not specified.  NOTE 5: Applicable only if operation with 4 antenna ports is supported in the band with carrier aggregation configured.  NOTE 6: Considering the spectrum holdings of the operator for CA\_n77(2A) (when one uplink sub block is assigned within 3300-3400MHz, the other uplink sub block is not assigned within 4000-4200MHz or vice versa), no IMD5 result will fall in Rx frequency range of band n3. Therefore, no MSD requirement apply for this CA configuration when two uplink sub blocks are assigned within CA\_77(2A).  NOTE 7: In current release the maximum separation bandwidth class is 600MHz, therefore, no IMD2 MSD requirement apply for this CA configuration when two uplink sub blocks are assigned within CA\_77(2A).  NOTE8: There is no IMD4/5 products in band n18 downlink for n77 operating in 3520 – 3560 MHz, 3700 – 3800MHz and 4000 - 4100MHz frequency range.  NOTE 9: There is no IMD4 product in band n18 downlink for n78 operating in 3520 – 3560MHz and 3700-3800MHz frequency range.  NOTE 10: There is no IMD4 product in band n24 downlink for n77 operating in 3450 – 3980 MHz and n24 uplink restricted to between 1627.5 – 1637.5 MHz and between 1646.5 – 1656.5 MHz.  NOTE 11: This band is subject to IMD5 also which MSD is not specified..  NOTE 12: This band supports intra-band non-contiguous uplink configuration.  NOTE 13: For a UE which supports this band combination only when the Band n77 frequency range restriction defined in NOTE 12 of Table 5.2-1 applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped. | | | | | | | | |

*<Unchanged texts are omitted>*

### 7.3A.6 Reference sensitivity exceptions due to cross band isolation for CA

Sensitivity degradation is allowed for a band if it is impacted by UL of another band part of the same NR CA configuration due to cross band isolation issues. Reference sensitivity exceptions for the victim band are specified in Table 7.3A.6-1 and 7.3A.6-1a with uplink configuration of the agressor band specified in Table 7.3A.6-2.

Table 7.3A.6-1: Reference sensitivity exceptions (MSD) due to cross band isolation for NR CA FR1 for PC3 CA

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Channel bandwidth of the affected DL band | | | | | | | | | | | | | | |
| UL band | DL band | 5 MHz (dB) | 10 MHz (dB) | 15 MHz (dB) | 20 MHz (dB) | 25 MHz (dB) | 30 MHz (dB) | 40 MHz (dB) | 50 MHz (dB) | 60 MHz (dB) | 70  MHz  (dB) | 80 MHz (dB) | 90 MHz (dB) | 100 MHz (dB) |
| n1 | n3 | 3 | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 | 1.4 |  |  |  |  |  |  |
| n1 | n38 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |  |  |  |  |  |  |
| n1 | n40 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |  | 6.6 |  |  |
| n1 | n41 |  | 6.1 | 6.1 | 6.1 |  | 6.1 | 6.1 | 6.1 | 6.1 |  | 6.1 | 6.1 | 6.1 |
| n3 | n41 |  | 0.7 | 0.7 | 0.7 |  | 0.7 | 0.7 | 0.7 | 0.7 |  | 0.7 | 0.7 | 0.7 |
| n3 | n74 | 2.6 | 2.6 | 2.6 | 2.6 |  |  |  |  |  |  |  |  |  |
| n5 | n28 | [17.5] | [15.8] | [14.0] | [11.7] |  | [2.9] |  |  |  |  |  |  |  |
| n7 | n3 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |  |  |  |  |  |  |
| n18 | n285 | 31.3 | 28.7 |  |  |  |  |  |  |  |  |  |  |  |
| n34 | n3 | 3 | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 |  |  |  |  |  |  |  |
| n38 | n1 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |  |  |  |  |  |
| n38 | n25 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |  |  |  |  |  |  |
| n38 | n78 |  | 8.3 | 8.3 | 8.3 | 7.3 | 6.5 | 6.3 | 5.3 | 4.5 | 4.3 | 4.0 | 3.9 | 3.8 |
| n40 | n1 | 8.3 | 8.3 | 8.3 | 8.3 |  |  |  |  |  |  |  |  |  |
| n41 | n1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 |  |  |  |  |  |
| n41 | n3 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |  |  |  |  |  |  |  |
| n41 | n25 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |  |  |  |  |  |  |
| n41 | n48 |  | 8.3 | 8.3 | 8.3 | 7.3 | 6.5 | 6.3 | 5.3 | 4.5 | 4.3 | 4.0 | 3.9 | 3.8 |
| n411 | n66 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |  |  |  |  |  |
| n41 | n70 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |  |  |  |  |  |  |  |  |
| n41 | n77 |  | 8.3 | 8.3 | 8.3 | 7.3 | 6.5 | 6.3 | 5.3 | 4.5 | 4.3 | 4.0 | 3.9 | 3.8 |
| n41 | n78 |  | 8.3 | 8.3 | 8.3 | 7.3 | 6.5 | 6.3 | 5.3 | 4.5 | 4.3 | 4.0 | 3.9 | 3.8 |
| n46 | n48 | 13.3 | 13.3 | 11.8 | 10.7 |  | 9.4 | 8.5 | 7.9 | 7.3 |  | 7.0 | 6.4 | 6.2 |
| n46 | n78 |  | 10.4 | 8.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7 | 6.5 | 6.0 | 5.7 | 5.4 | 5.1 |
| n48 | n411 |  | 4.5 | 4.5 | 4.5 |  | 4.5 | 4.5 | 4.5 | 4.5 |  | 4.5 | 4.5 | 4.5 |
| n48 | n46 |  |  |  | 15.7 |  |  | 15.7 |  | 15.7 |  | 15.7 |  |  |
| n48 | n96 |  |  |  | 15.7 |  |  | 15.7 |  | 15.7 |  | 15.7 |  |  |
| n71 | n29 | 17.5 | 16.0 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n401 |  | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |  | 4.5 | 4.5 | 4.5 |
| n77 | n411 |  | 4.5 | 4.5 | 4.5 |  | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| n78 | n71 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |  |  |  |  |  |
| n78 | n38 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |  |  |  |  |  |  |
| n78 | n401 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |  | 4.5 |  |  |
| n78 | n411 |  | 4.5 | 4.5 | 4.5 |  | 4.5 | 4.5 | 4.5 | 4.5 |  | 4.5 | 4.5 | 4.5 |
| n78 | n46 |  |  |  | 13.5 |  |  | 10.9 |  | 9.4 |  | 8.7 |  |  |
| n783 | n79 |  |  |  |  |  |  | 2 | 2 | 2 |  | 2 |  | 2 |
| n79 | n783 |  | 2.6 | 2.6 | 2.6 |  |  | 2.6 | 2.6 | 2.6 |  | 2.6 | 2.6 | 2.6 |
| n96 | n48 | 13.3 | 13.3 | 11.8 | 10.7 |  | 9.4 | 8.5 | 7.9 | 7.3 |  | 7.0 | 6.4 | 6.2 |
| NOTE 1: Applicable only when harmonic mixing MSD for this combination is not applied.  NOTE 2: Void  NOTE 3: The requirements only apply for UEs supporting inter-band carrier aggregation with simultaneous Rx/Tx capability. Simultaneous Rx/Tx capability does not apply for UEs supporting band n78 with a n77 implementation.  NOTE 4: The requirements only apply for UEs supporting inter-band carrier aggregation with simultaneous Rx/Tx capability. Simultaneous Rx/Tx capability does not apply for UEs supporting band n78 with a n77 implementation.  NOTE 5: The MSD exceptions are applicable to the case that interference of UL band 3rd order IMD product falls into the affected DL channels. | | | | | | | | | | | | | | |

Table 7.3A.6-1a: Reference sensitivity exceptions (MSD) due to cross band isolation for NR CA FR1 for PC2 CA

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Channel bandwidth of the affected DL band | | | | | | | | | | | | | | |
| UL band | DL band | 5 MHz (dB) | 10 MHz (dB) | 15 MHz (dB) | 20 MHz (dB) | 25 MHz (dB) | 30 MHz (dB) | 40 MHz (dB) | 50 MHz (dB) | 60 MHz (dB) | 70  MHz  (dB) | 80 MHz (dB) | 90 MHz (dB) | 100 MHz (dB) |
| n41 | n3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |  |  |  |  |  |  |
| n41 | n25 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |  |  |  |  |  |  |
| n41 | n66 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |  |  |  |  |  |  |
| n41 | n79 |  |  |  |  |  |  | 3.1 | 3.1 | 3.1 |  | 3.1 |  | 3.1 |
| n79 | n41 |  | 3.5 | 3.3 | 3.1 |  |  | 2.6 | 2.5 | 2.5 |  | 2.4 | 2.4 | 2.4 |
| n77 | n411 |  | 6.5 | 6.5 | 6.5 |  | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| n77 | n412 |  | 13.2 | 13.2 | 13.2 |  | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |
| n41 | n77 |  | 10.5 | 10.5 | 10.5 | 9.5 | 8.6 | 8.3 | 7.2 | 6.3 | 6.0 | 5.7 | 5.6 | 5.6 |
| NOTE 1: Applicable only when harmonic mixing MSD for this combination is not applied.  NOTE 2: The requirements should be verified for UL NR-ARFCN of the aggressor (high) band (superscript HB) such that in MHz and  with carrier frequency in the victim (lower) band in MHz and  the channel bandwidth configured in the higher band. | | | | | | | | | | | | | | |

Table 7.3A.6-1b: Reference sensitivity exceptions (MSD) due to cross band isolation for NR CA FR1 for PC1.5 CA

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Channel bandwidth of the affected DL band | | | | | | | | | | | | | | |
| UL band | DL band | 5 MHz (dB) | 10 MHz (dB) | 15 MHz (dB) | 20 MHz (dB) | 25 MHz (dB) | 30 MHz (dB) | 40 MHz (dB) | 50 MHz (dB) | 60 MHz (dB) | 70  MHz  (dB) | 80 MHz (dB) | 90 MHz (dB) | 100 MHz (dB) |
| n41 | n25 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |  |  |  |  |  |  |
| n41 | n66 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 |  |  |  |  |  |  |
| n41 | n77 |  | 13.3 | 13.3 | 13.3 | 12.2 | 11.3 | 11.0 | 9.8 | 8.8 | 8.4 | 8.1 | 8.0 | 8.0 |

Table 7.3A.6.2: Uplink configuration for reference sensitivity exceptions due to cross band isolation for NR CA FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / SCS / Channel bandwidth of the affected DL band | | | | | | | | | | | | | | | |
| UL band | DL band | SCS of UL band (kHz) | 5 MHz | 10 MHz | 15 MHz | 20 MHz | 25 MHz | 30 MHz | 40 MHz | 50 MHz | 60 MHz | 70  MHz | 80 MHz | 90 MHz | 100 MHz |
| n1 | n3 | 15 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |  |
| n1 | n38 | 15 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |  |  |  |  |  |
| n1 | n40 | 15 | 25 | 50 | 75 | 100 | 100 | 100 | 100 | 100 | 100 |  | 100 |  |  |
| n1 | n41 | 15 |  | 100 | 100 | 100 |  | 100 | 100 | 100 | 100 |  | 100 | 100 | 100 |
| n3 | n41 | 15 |  | 50 | 50 | 50 |  | 50 | 50 | 50 | 50 |  | 50 | 50 | 50 |
| n3 | n74 | 15 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |  |  |
| n54 | n28 | 15 | 20 | 20 | 20 | 20 |  | 20 |  |  |  |  |  |  |  |
| n7 | n3 | 15 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |  |  |  |  |  |  |
| n184 | n285 | 15 | 25 | 25 |  |  |  |  |  |  |  |  |  |  |  |
| n34 | n3 | 15 | 25 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |  |  |
| n38 | n1 | 15 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |  |  |  |  |
| n38 | n25 | 15 | 160 | 160 | 160 | 160 | 160 | 160 | 160 |  |  |  |  |  |  |
| n38 | n78 | 15 |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n40 | n1 | 30 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |  |  |
| n41 | n1 | 30 | 128 | 128 | 128 | 128 | 128 | 128 | 128 | 128 |  |  |  |  |  |
| n41 | n3 | 30 | 160 | 160 | 160 | 160 | 160 | 160 |  |  |  |  |  |  |  |
| n41 | n25 | 15 | 160 | 160 | 160 | 160 | 160 | 160 | 160 |  |  |  |  |  |  |
| n41 | n48 | 15 |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n41 | n66 | 30 | 128 | 128 | 128 | 128 | 128 | 128 | 128 |  |  |  |  |  |  |
| n41 | n70 | 15 | 160 | 160 | 160 | 160 | 160 |  |  |  |  |  |  |  |  |
| n41 | n77 | 15 |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n41 | n78 | 15 |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n46 | n48 | 30 | 216 | 216 | 216 | 216 |  |  | 216 | 216 | 216 |  | 216 | 216 | 216 |
| n46 | n78 | 30 |  | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 |
| n48 | n41 | 30 |  | 270 | 270 | 270 |  | 270 | 270 | 270 | 270 |  | 270 | 270 | 270 |
| n48 | n46 | 15 |  |  |  | 216 |  |  | 216 |  | 216 |  | 216 |  |  |
| n48 | n96 | 15 |  |  |  | 216 |  |  | 216 |  | 216 |  | 216 |  |  |
| n71 | n29 | 15 | 20 | 20 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n40 | 30 |  | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |  | 270 | 270 | 270 |
| n77 | n41 | 30 |  | 270 | 270 | 270 |  | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |
| n78 | n7 | 30 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |  |  |  |  |  |
| n78 | n38 | 30 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |  |  |  |  |  |  |
| n78 | n40 | 30 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |  | 270 |  |  |
| n78 | n41 | 30 |  | 270 | 270 | 270 |  | 270 | 270 | 270 | 270 |  | 270 | 270 | 270 |
| n78 | n46 | 15 |  |  |  | 216 |  |  | 216 |  | 216 |  | 216 |  |  |
| n783 | n79 | 30 |  |  |  |  |  | 270 | 270 | 270 | 270 |  | 270 |  | 270 |
| n79 | n783 | 30 |  | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |  | 270 | 270 | 270 |
| n96 | n48 | 30 | 216 | 216 | 216 | 216 |  | 216 | 216 | 216 | 216 |  | 216 | 216 | 216 |
| NOTE 1: The UL configuration applies regardless of the channel bandwidth of the UL band unless the UL resource blocks exceed that specified in Table 7.3.2-3 for the uplink bandwidth in which case the allocation according to Table 7.3.2-3 applies.  NOTE 2: Refers to the UL resource blocks shall be located as close as possible to the affected downlink operating band but confined within the transmission bandwidth configuration for the channel bandwidth in Table 5.3.2-1.  NOTE 3: The requirements only apply for UEs supporting inter-band carrier aggregation with simultaneous Rx/Tx capability. Simultaneous Rx/Tx capability does not apply for UEs supporting band n78 with a n77 implementation.  NOTE 4: The carrier centre frequency in the UL operating band shall be configured as close as possible to the affected DL band.  NOTE 5: The UL configuration are applicable to the case that interference of UL band 3rd order IMD product falls into the affected DL channels. | | | | | | | | | | | | | | | |

## << Next change >>

#### 7.6A.3.3 Out-of-band blocking for Inter-band CA

For inter-band carrier aggregation with one component carrier per operating band and the uplink assigned to one NR band, the out-of-band blocking requirements are defined with the uplink active on the band(s) other than the band whose downlink is being tested. For NR CA configurations including an operating band without uplink band or an operating band with an unpaired DL part (as noted in Table 5.2-1), the requirements for all downlinks shall be met with the single uplink carrier active in each band capable of UL operation. The UE shall meet the requirements specified in clause 7.6.3 for each component carrier while all downlink carriers are active.

For inter-band carrier aggregation with component carriers in operating bands < 2.7GHz including n48, and for FDL\_Low(*j*) – 15 MHz ≤ f ≤ FDL\_High(*j*) + 15 MHz, the appropriate adjacent channel selectivity and in-band blocking requirements in the respective clauses 7.5 and 7.6.2 shall be applied for carrier *j*. For inter-band carrier aggregation with component carriers in operating bands > 2.7GHz excluding n48, and for FDL\_Low(*j*) – 3\* BWchannel ≤ f ≤ FDL\_High(*j*) + 3\* BWchannel, the appropriate adjacent channel selectivity and in-band blocking requirements in the respective clauses 7.5 and 7.6.2 shall be applied for carrier *j*. FDL\_Low(*j*) and FDL\_High(*j*) denote the respective lower and upper frequency limits of the operating band containing carrier *j*, *j* = 1,…,X, with carriers numbered in increasing order of carrier frequency and X the number of component carriers in the band combination. BWchannel denotes the channel bandwidth of the wanted signal component carrier j. If CW interferer falls in a gap between FDL\_High(*j*) and FDL\_Low(*j*+1) where the corresponding OOB ranges 1 and 2 overlap, then the lower level interferer limit of the overlapping OOB ranges applies.

For inter-band carrier aggregation with uplink assigned to two NR bands, the out-of-band blocking requirements specified in clause 7.6.3 shall be met with the transmitter power for the uplink set to 7 dB below PCMAX\_L,f,c for each serving cell c.

For the UE which supports inter-band CA configuration in Table 7.3A.3.2.1-1, Pinterferer power defined in Table 7.6.3-2 and 7.6.3-4 is increased by the amount given by ΔRIB,c in Table 7.3A.3.2.1-1.

For inter-band CA combination listed in Table 7.6A.3.3-1, exceptions to the requirement specified in Table 7.6A.3.3-2 are allowed when the second order intermodulation product of the lower frequency band UL carrier and the CW interfering signal fully or partially overlaps with the higher frequency band DL carrier. Unless otherwise stated, the exceptions apply to any power classes for the listed inter-band CA combinations.

Table 7.6A.3.3-1: CA band combination with exceptions allowed

|  |
| --- |
| CA band combination |
| CA\_n5-n77 |
| CA\_n5-n78 |
| CA\_n5-n79 |
| CA\_n7-n8 |
| CA\_n7-n46 |
| CA\_n8-n77 |
| CA\_n8-n78 |
| CA\_n8-n79 |
| CA\_n12-n48 |
| CA\_n12-n77 |
| CA\_n13-n77 |
| CA\_n14-n77 |
| CA\_n18-n77 |
| CA\_n18-n78 |
| CA\_n20-n78 |
| CA\_n28-n46 |
| CA\_n28-n77 |
| CA\_n28-n78 |
| CA\_n28-n79 |
| CA\_n48-n71 |
| CA\_n48-n77 |
| CA\_n71-n77 |
| CA\_n71-n78 |
| CA\_n78-n92 |

Table 7.6A.3.3-1a: Void

Table 7.6A.3.3-2: Requirement for out-of-band blocking exceptions

|  |  |  |
| --- | --- | --- |
| Parameter | Unit | Level |
| PInterferer (CW) | dBm | -441 |
| NOTE 1: The requirement applies when , where and are the carrier frequencies for lower frequency band UL and higher frequency band DL, respectively. and are the channel bandwidths configured for lower frequency band UL carrier and higher frequency band DL carrier in MHz, respectively. | | |

For all interferer frequency ranges specified in clause 7.6.3 a maximum of



exceptions are allowed for spurious response frequencies in each assigned frequency channel when measured using a step size of MHz with *NRB* the number of resource blocks in the downlink transmission bandwidth configuration, BWChannel the bandwidth of the frequency channel in MHz and n = 1, 2, 3 for SCS = 15, 30, 60 kHz, respectively. For these exceptions, the requirements in clause 7.7 apply.

The throughput of each carrier shall be ≥ 95% of the maximum throughput of the reference measurement channels as specified in Annexes A.2.2, A.2.3, A.3.2, and A.3.3 (with one sided dynamic OCNG Pattern OP.1 FDD/TDD for the DL-signal as described in Annex A.5.1.1/A.5.2.1).

## << End of change >>