**3GPP TSG-RAN WG4 Meeting #103-eR4-2208335**

**Electronic Meeting, May 09 – May 20, 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-1** | **CR** | 1065 | **rev** | **-** | **Current version:** | **17.5.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Big CR to 38.101-1 Introduce RF requirements for HPUE CA with 2 bands downlink and x bands uplink (x =1,2) | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | China Telecom | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_PC2\_CA\_R17\_2BDL\_2BUL-Core | | | | |  | ***Date:*** | | | 2022-05-19 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | Introduce band combination specific requirements for PC2 and PC1.5 CA with 2UL and 1UL. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | RAN4#103-e:  Implement the draft CR **R4-2210764** for resolving power class ambiguity for NR Inter-band CA  Implement the following draft CRs for combinations introduction:  **R4-2210763:**  DL: CA\_n48A-n77A, CA\_n48A-n77C, CA\_n48(2A)-n77A, CA\_n48(2A)-n77C, CA\_n48B-n77A, CA\_n48B-n77C, CA\_n48(A-B)-n77A; UL: n77-PC2-PC1.5  DL: CA\_n66(2A)-n77A, CA\_n66A-n77C, CA\_n66(2A)-n77C, CA\_n66B-n77A, CA\_n66B-n77C, UL: n77-PC1.5  **R4-2210005:** DL: CA\_n41C-n71(2A), CA\_n41(3A)-n71A, CA\_n41(A-C)-n71A, CA\_n41C-n71B, UL: n41-PC2-PC1.5, CA\_n41A-n71A  **R4-2210006:** DL: CA\_n66(2A)-n77A; UL: n77-PC1.5 and error correction  **R4-2210007:** DL: CA\_n25A-n77(2A), CA\_n25(2A)-n77A; UL: n77-PC2-PC1.5, CA\_n25A-n77A-PC2  **R4-2210008:** DL: CA\_n41(3A), CA\_n41(A-C); UL: n41-PC2-PC1.5  **R4-2210009:** DL: CA\_n77(2A); UL: n77-PC2-PC1.5  **R4-2210010:** DL: CA\_n71A-n77(2A), CA\_n71B-n77A, CA\_n71(2A)-n77A; UL: n77-PC2-PC1.5, CA\_n71A-n77A-PC2  **R4-2210011:** DL: CA\_n41(3A)-n77A, CA\_n41(A-C)-n77A; UL: n41-PC2-PC1.5, n77-PC2-PC1.5, CA\_n41A-n77A-PC2  Implement the following TPs for combinations introduction:  **R4-2207722:** DL: CA\_n12A-n77A, CA\_n12A-n77(2A); UL: n77-PC1.5  **R4-2207723:** DL: CA\_n14A-n77A, CA\_n14A-n77(2A); UL: n77-PC1.5  **R4-2207724:** DL: CA\_n29A-n77A, CA\_n29A-n77(2A); UL: n77-PC1.5  **R4-2207725:** DL: CA\_n30A-n77A, CA\_n30A-n77(2A); UL: n77-PC2-PC1.5  **R4-2210762:** DL: CA\_n13A-n77A; UL: n77-PC2-PC1.5, CA\_n13A-n77A-PC2  **R4-2207936:** DL: CA\_n5A-n77A, CA\_n5A-n77C; UL: n77-PC2-PC1.5  **R4-2207937:** DL: CA\_n2A-n77A, CA\_n2A-n77(2A), CA\_n2A-n77C, CA\_n2(2A)-n77A, CA\_n2(2A)-n77C, UL: n77-PC2-PC1.5, CA\_n2A-n77A-PC2  Add UL n78A-PC2 support to the combos of CA\_n5A-n78A, CA\_n7A-n78A, CA\_n7B-n78A, CA\_n28A-n78A, which were missing when implementing in last big CR of R4-2204197. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The above band combinations are not supported by the spec. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2A.2.1, 5.5A.2, 5.5A.3, 6.2A.1.3, 6.2A.4.1, 7.3A.4, 7.3A.5, 7.3A.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.521-1 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

## <Start of Changes>

#### 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-n28 | 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 Section >

### 5.5A.2 Configurations for intra-band non-contiguous CA

Table 5.5A.2-1: NR CA configurations and bandwidth combination sets defined for intra-band non-contiguous CA

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NR CA Configuration | Uplink CA Configurations or single uplink carrier5 | Channel bandwidths for carrier  (MHz) | Channel bandwidths for carrier  (MHz) | Channel bandwidths for carrier  (MHz) | Channel bandwidths for carrier  (MHz) | Maximum  Aggregated bandwidth  (MHz) | Bandwidth combination set |
| CA\_n1(2A) | - | 5, 10, 15, 20 | 5, 10, 15, 20 |  |  | 40 | 0 |
| CA\_n2(2A) | - | 5, 10, 15, 20 | 5, 10, 15, 20 |  |  | 40 | 0 |
| CA\_n3(2A) | - | 5, 10, 15, 20 | 5, 10, 15, 20 |  |  | 40 | 0 |
|  | - | 5, 10, 15, 20, 25, 30 | 5, 10, 15, 20, 25, 30 |  |  | 60 | 1 |
| CA\_n5(2A) | - | 5, 10, 15, 20 | 5, 10, 15, 20 |  |  | 25 | 0 |
| CA\_n7(2A) | - | 5, 10, 15, 20 | 5, 10, 15, 20 |  |  | 40 | 0 |
| CA\_n12(2A) | - | 5 | 5 |  |  | 10 | 0 |
| CA\_n25(2A) | - | 5, 10, 15, 20 | 5, 10, 15, 20 |  |  | 40 | 0 |
|  |  | 5, 10, 15, 20, 25, 30, 40 | 5, 10, 15, 20, 25, 30, 40 |  |  | 60 | 1 |
| CA\_n25(3A) | - | 5, 10, 15, 20, 25, 30, 40 | 5, 10, 15, 20, 25, 30, 40 | 5, 10, 15, 20, 25, 30, 40 |  | 55 | 0 |
| CA\_n41(2A) | n413,4 CA\_n41(2A) | 40, 50, 60, 80, 100 | 40, 50, 60, 80, 100 |  |  | 180 | 0 |
|  | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |  | 190 | 1 |
| - | 10, 15, 20, 30, 40, 50, 60, 80, 90 | 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |  | 190 | 2 |
|  |  | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 |  |  | 190 | 3 |
|  |  | See n41 channel bandwidths in Table 5.3.5-1 for each carrier | |  |  | 190 | 4 and 5 |
| CA\_n41(3A) | n413,4 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 |  | 190 | 0 |
| CA\_n48(2A) |  | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |  | 1402 | 0 |
|  | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 |  |  | 1402 | 1 |
| CA\_n48(3A) | - | 10, 15, 20, 40,50, 60, 80, 90, 100 | 10, 15, 20, 40,50, 60, 80, 90, 100 | 10, 15, 20, 40,50, 60, 80, 90, 100 |  | 1402 | 0 |
|  | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 |  | 1402 | 1 |
| CA\_n48(4A) | - | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 10, 15, 20, 40, 50, 60, 80, 90, 100 | 1352 | 0 |
|  | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 1352 | 1 |
| CA\_n66(2A) | - | 5, 10, 15, 20 | 5, 10, 15, 20, 40 |  |  | 60 | 0 |
| 5, 10, 15, 20, 25, 30, 40 | 5, 10, 15, 20, 25, 30, 40 |  |  | 80 | 1 |
| 5, 10, 15, 20, 40 | 5, 10, 15, 20, 40 |  |  | 80 | 2 |
| CA\_n66(3A) | - | 5, 10, 15, 20, 40 | 5, 10, 15, 20, 40 | 5, 10, 15, 20, 40 |  | 80 | 0 |
| CA\_n71(2A) | - | 5,10, 15, 20 | 5,10,15, 20 |  |  | 30 | 0 |
| CA\_n77(2A) | n773,4  CA\_n77(2A) | 20, 40, 80, 100 | 20, 40, 80, 100 |  |  | 200 | 0 |
|  |  | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |  | 200 | 1 |
| CA\_n77(3A) | - | 20, 40, 80, 100 | 20, 40, 80, 100 | 20, 40, 80, 100 |  | 300 | 0 |
| 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  | 300 | 1 |
| CA\_n78(2A) | CA\_n78(2A) | 10, 20, 40, 50, 60, 80, 90, 100 | 10, 20, 40, 50, 60, 80, 90, 100 |  |  | 200 | 0 |
|  |  | 10, 20, 25, 30, 40, 50, 60, 80, 90, 100 | 10, 20, 25, 30, 40, 50, 60, 80, 90, 100 |  |  | 200 | 1 |
|  |  | 10, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | 10, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |  | 200 | 2 |
| CA\_n96(2A) | - | 20, 40, 60, 80 | 20, 40, 60, 80 |  |  | 160 | 0 |
| CA\_n96(3A) | - | 20, 40, 60, 80 | 20, 40, 60, 80 | 20, 40, 60, 80 |  | 240 | 0 |
| CA\_n96(4A) | - | 20, 40, 60, 80 | 20, 40, 60, 80 | 20, 40, 60, 80 | 20, 40, 60, 80 | 320 | 0 |
| NOTE 1: Void.  NOTE 2: Parameter value accounts for both, the maximum frequency range of band n48 (150 MHz), and the minimum frequency gaps in between NR non-contiguous component carriers.  NOTE 3: Power Class 2 is allowed for this uplink combination or single uplink carrier in this downlink/uplink combination  NOTE 4: Power Class 1.5 is allowed for this uplink combination or single uplink carrier in this downlink/uplink combination  NOTE 5: Only single uplink carriers with power class other than PC3 are listed. | | | | | | | |

Table 5.5A.2-2: NR CA configurations and bandwidth combination sets defined for mixed intra-band contiguous and non-contiguous CA

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier4 | NR Band | Channel bandwidth (MHz) | | | | | | | | | | | | | Bandwidth combination set |
|  |  |  | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |  |
| CA\_n41(A-C) | n412,3 | n41 |  | 10 | 15 | 20 |  | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 0 |
|  |  | n41 | See CA\_n41C Bandwidth Combination Set 2 in Table 5.5A.1-1 | | | | | | | | | | | | |  |
| CA\_n48(A-B) | CA\_n48B | n48 | 5 | 10 | 15 | 20 |  |  | 40 | 501 | 601 |  | 801 | 901 | 1001 | 0 |
|  | n48 | See CA\_n48B Bandwidth Combination Set 0 in Table 5.5A.1-1 | | | | | | | | | | | | |  |
| CA\_n48B | n48 | 5 | 10 | 15 | 20 |  | 30 | 40 | 501 | 601 | 701 | 801 | 901 | 1001 | 1 |
|  | n48 | See CA\_n48B Bandwidth Combination Set 2 in Table 5.5A.1-1 | | | | | | | | | | | | |  |
| CA\_n48(A-C) | - | n48 | 5 | 10 | 15 | 20 |  |  | 40 | 501 | 601 |  | 801 | 901 | 1001 | 0 |
|  | n48 | See CA\_n48C Bandwidth Combination Set 0 in Table 5.5A.1-1 | | | | | | | | | | | | |  |
| - | n48 | 5 | 10 | 15 | 20 |  | 30 | 40 | 501 | 601 | 701 | 801 | 901 | 1001 | 1 |
|  | n48 | See CA\_n48C Bandwidth Combination Set 1 in Table 5.5A.1-1 | | | | | | | | | | | | |  |
| NOTE 1: This UE channel bandwidth is applicable only to downlink  NOTE 2: Power Class 2 is allowed for this uplink combination or single uplink carrier in this downlink/uplink combination  NOTE 3: Power Class 1.5 is allowed for this uplink combination or single uplink carrier in this downlink/uplink combination  NOTE 4: Only single uplink carriers with power class other than PC3 are listed. | | | | | | | | | | | | | | | | |

### 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 | n778,9  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) | n778,9  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 | n778, 9  CA\_n2A-n77A8 | n2 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
| CA\_n2(2A)-n77A | n778, 9  CA\_n2A-n77A8 | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n2(2A)-n77(2A) | n778  CA\_n2A-n77A8  CA\_n77(2A)7 | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n2(2A)-n77C | n778, 9  CA\_n2A-n77A8 | n2 | CA\_n2(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n2A-n78A | n78  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 | - | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n67 | 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, 9  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 | n778  CA\_n5A-n77A8 | n5 | CA\_n5(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n5A-n77C | n778, 9  CA\_n5A-n77A8 | n5 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n5 | 5, 10, 15, 20 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n5(2A)-n77C | n778  CA\_n5A-n77A8 | n5 | CA\_n5(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n5 | CA\_n5(2A)\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n5B-n77A | n778  CA\_n5A-n77A8  CA\_n5B | n5 | CA\_n5B\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n5B-n77C | n778  CA\_n5A-n77A8  CA\_n5B | n5 | CA\_n5B\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n5 | CA\_n5B\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n5A-n78A | n778  CA\_n5A-n78A8 | 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 | n778  CA\_n7A-n78A8 | 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 | n778  CA\_n7A-n78A8  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, 9  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, 9  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 | n778, 9  CA\_n13A-n77A8 | 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, 9  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, 9  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 | n418, 9  CA\_n25A-n41A8 | 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 | n418, 9  CA\_n25A-n41A8 | n25 | CA\_n25(2A)\_BCS1 | 0 |
|  |  | n41 | CA\_n41C\_BCS2 |  |
| CA\_n25(2A)-n41(2A) | n418, 9  CA\_n25A-n41A 8 | 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) | n418, 9  CA\_n25A-n41A8 | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n41 | CA\_n41(3A)\_BCS0 |  |
| CA\_n25A-n41(A-C) | n418, 9  CA\_n25A-n41A8 | 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 | n778,9  CA\_n25A-n77A8 | 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) | n778,9  CA\_n25A-n77A8 | n25 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n25(2A)-n77A | n778,9  CA\_n25A-n77A8 | 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 | n778  CA\_n28A-n78A8 | 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 | n778, 9 | n29 | 5, 10 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n29A-n77(2A) | n778, 9 | 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, 9  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, 9  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) | n418, 9  CA\_n41A-n66A8 | 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) | n418, 9  CA\_n41A-n66A8 | n41 | CA\_n41C\_BCS2 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n41(2A)-n66(2A) | n418, 9  CA\_n41A-n66A8 | n41 | CA\_n41(2A)\_BCS3 | 0 |
|  |  | n66 | CA\_n66(2A)\_BCS1 |  |
| CA\_n41(3A)-n66A | n418, 9  CA\_n41A-n66A8 | n41 | CA\_n41(3A)\_BCS0 | 0 |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40, |  |
| CA\_n41(A-C)-n66A | n418, 9  CA\_n41A-n66A8 | 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 | n418,9  CA\_n41A-n71A8 | 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) | n418,9  CA\_n41A-n71A8 | 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) | n418,9  CA\_n41A-n71A8 | 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) | n418,9  CA\_n41A-n71A8 | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
| CA\_n41(2A)-n71B | n418,9  CA\_n41A-n71A8 | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71B\_BCS0 |  |
|  |  | n41 | CA\_n41(2A)\_BCS1 | 1 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
| CA\_n41(3A)-n71A | n418,9  CA\_n41A-n71A8 | n41 | CA\_n41(3A)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n41(A-C)-n71A | n418,9  CA\_n41A-n71A8 | n41 | CA\_n41(A-C)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n41C-n71B | n418,9  CA\_n41A-n71A8 | 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  n778,9  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 | n418,9  n778,9  CA\_n41A-n77A8 | n41 | CA\_n41(2A)\_BCS1 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41(3A)-n77A | n418,9  n778,9  CA\_n41A-n77A8 | n41 | CA\_n41(3A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41(A-C)-n77A | n418,9  n778,9  CA\_n41A-n77A8 | n41 | CA\_n41(A-C)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41C-n77A | n418,9  n778,9  CA\_n41A-n77A8  CA\_n41C | n41 | CA\_n41C\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n41A-n77(2A) | n418,9  n778,9  CA\_n41A-n77A8 | 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 | 20, 40, 60, 80 |  |
| CA\_n46B-n96A | - | n46 | CA\_n46B\_BCS0 | 0 |
|  |  | n96 | 20, 40, 60, 80 |  |
| CA\_n46C-n96A | - | n46 | CA\_n46C\_BCS0 | 0 |
|  |  | n96 | 20, 40, 60, 80 |  |
| CA\_n46D-n96A | - | n46 | CA\_n46D\_BCS0 | 0 |
|  |  | n96 | 20, 40, 60, 80 |  |
| CA\_n46N-n96A | - | n46 | CA\_n46N\_BCS0 | 0 |
|  |  | n96 | 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 | n778,9 | 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 | n778,9 | 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 | n778,9 | 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 | n778,9 | 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 | n778,9 | 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 | n778,9 | 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 | n778,9 | 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 | 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 | 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 | 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 | n778,9  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 | n778,9  CA\_n66A-n77A8 | 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) | n778,9  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 | n778  CA\_n66A-n77A8 | n66 | CA\_n66(3A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66(2A)-n77(2A) | n778  CA\_n66A-n77A8  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 | n778,9  CA\_n66A-n77A8 | 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 | n778,9  CA\_n66A-n77A8 | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n66B-n77A | n778,9  CA\_n66A-n77A8 | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66B-n77C | n778,9  CA\_n66A-n77A8 | 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, 9  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) | n778, 9  CA\_n71A-n77A8 | n71 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n71B-n77A | n778, 9  CA\_n71A-n77A8 | n71 | CA\_n71B\_BCS2 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n71(2A)-n77A | n778, 9  CA\_n71A-n77A8 | 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

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

For inter-band downlink carrier aggregation with one uplink carrier assigned to one NR band, the transmitter power requirements in Table 6.2.1-1 apply for power class 3 and other power classes if indicated in clause 5.5A.3.

For inter-band carrier aggregation with two uplink contiguous carrier assigned to one NR band, the transmitter power requirements specified in subclause 6.2A.1.1 apply.

For inter-band carrier aggregation with two uplink non-contiguous carrier assigned to one NR band, the transmitter power requirements specified in subclause 6.2A.1.2 apply. 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 |  |  | 266 | +2/-3 | 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 |  |  | 266 | +2/-3 | 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 |  |  | 266 | +2/-3 | 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 |  |  | 266 | +2/-3 | 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\_n48B-n96A |  |  |  |  | 23 | +2/-3 |  |  |
| CA\_n48A-n96B |  |  |  |  | 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. | | | | | | | | |

If a UE supports a different power class than the default UE power class for the band combination listed in Table 6.2A.1.3-1 and the supported power class enables the higher maximum output power than that of the default power class:

– if the field of UE capability maxUplinkDutyCycle-interBandCA-PC2 is not absent and the average percentage of uplink symbols transmitted in a certain evaluation period is larger than maxUplinkDutyCycle-interBandCA-PC2 as defined in TS 38.331 (The exact evaluation period is no less than one radio frame); or

– if the IE P-Max as defined in TS 38.331 [7] is provided and set to the maximum output power of the default power class or lower;

– shall apply all requirements for the default power class to the supported power class and set the configured transmitted power as specified in clause 6.2A.4;

– else;

– shall apply all requirements for the supported power class and set the configured transmitted power as specified in clause 6.2A.4 (regardless of the average percentage of uplink symbols if the field of UE capability *maxUplinkDutyCycle-interBandCA-PC2* is absent).

The average percentage of uplink symbols is defined as 50% × ( DutyNR, x /maxDutyNR,x + DutyNR, y /maxDutyNR,y, ). DutyNR, x, DutyNR, y represent the actual percentage of uplink symbols transmitted in the same evaluation period (The exact evaluation period is no less than one radio frame) for NR Band x, NR Band y respectively; maxDutyNR,x,maxDutyNR,y represent the field of UE capability *maxUplinkDutyCycle-PC2-FR1* per band as defined in TS 38.331. For NR Band x or NR Band y,

– if power class of one or both of the bands within the band combination is power class 2 and the corresponding UE capability maxUplinkDutyCycle-PC2-FR1 is absent;

– the corresponding maxDutyNR,x or maxDutyNR,y is equal to 50%;

– else if the band is configured with power class 3;

– the corresponding maxDutyNR,x or maxDutyNR,y is equal to 100%.

Table 6.2A.1.3-2 Void

## <Next Change Section >

#### 6.2A.4.1 Configured transmitted power level

##### 6.2A.4.1.1 Configured transmitted power for Intra-band contiguous CA

For uplink carrier aggregation the UE is allowed to set its configured maximum output power PCMAX,*c* for serving cell *c* and its total configured maximum output power PCMAX.

The configured maximum output power PCMAX,*c* on serving cell *c* shall be set as specified in clause 6.2.4, but with MPR*c* = MPR and A-MPR*c* = A-MPR with MPR and A-MPR as determined by subclause 6.2A.2 and 6.2A.3, respectively. For PH reporting the following exception applies: if the UE is configured with multiple uplink serving cells, the power PCMAX,*c* used for the purpose of PH reporting on first serving cell *c* = *c*1 does not consider for computation of the PH report transmissions on a second serving cell *c*2 as exempted in subclause 7.7.1 in [8]. There is one power management term for the UE, denoted P-MPR, and P-MPR*c* = P-MPR.

The total configured maximum output power PCMAX shall be set within the following bounds:

PCMAX\_L ≤ PCMAX ≤ PCMAX\_H

For uplink intra-band contiguous carrier aggregation when same slot pattern is used in all aggregated serving cells,

PCMAX\_L  = MIN{10 log10 ∑ pEMAX,c  - TC , PEMAX,CA,(PPowerClass,CA– ΔPPowerClass,CA) – MAX(MAX(MPR, A-MPR) + ΔTIB,c + TC + TRxSRS, P-MPRc ) }

PCMAX\_H  = MIN{10 log10 ∑ pEMAX,c , PEMAX,CA ,PPowerClass,CA– ΔPPowerClass,CA }

where

- pEMAX,c is the linear value of PEMAX,*c* which is given by IE *P-Max* for serving cell *c* in [7];

PPowerClass,CA is the maximum UE power specified in Table 6.2A.1.1-1 without taking into account the tolerance;

- MPR and A-MPR are specified in clause 6.2A.2 and 6.2A.3, respectively;

- ΔPPowerClass,CA = 3 dB for a power class 2 capable UE when 10 log10 ∑ pEMAX,c of 23 dBm or lower is indicated; or when PEMAX,CA of 23dBm or lower is indicated; or when the field of UE capability *maxUplinkDutyCycle-PC2-FR1* is absent and the percentage of total uplink symbols transmitted on all UL CCs in a certain evaluation period is larger than 50%; or when the field of UE capability *maxUplinkDutyCycle-PC2-FR1* is not absent and the percentage of total uplink symbols transmitted in a certain evaluation period is larger than *maxUplinkDutyCycle-PC2-FR1* as defined in TS 38.331 (The exact evaluation period is no less than one radio frame); otherwise ΔPPowerClass,CA = 0 dB;

- TIB,c is the additional tolerance for serving cell *c* as specified in clause 6.2A.4.2 for NR CA, clause 6.2C.2 for SUL, or TS 38.101-3 clause 6.2B.4.2 for EN-DC; In case the UE supports more than one of band combinations for CA, SUL or DC, and an operating band belongs to more than one band combinations then

a) When the operating band frequency range is ≤ 1 GHz, the applicable additional ∆TIB,c shall be the average value for all band combinations defined in clause 6.2A.4.2, 6.2C.2 in this specification and 6.2B.4.2 in TS 38.101-3 [3], truncated to one decimal place that apply for that operating band among the supported band combinations. In case there is a harmonic relation between low band UL and high band DL, then the maximum ∆TIB,c among the different supported band combinations involving such band shall be applied

b) When the operating band frequency range is > 1 GHz, the applicable additional ∆TIB,c shall be the maximum value for all band combinations defined in clause 6.2A.4.2, 6.2C.2 in this specification and 6.2B.4.2 in TS 38.101-3 [3] for the applicable operating bands.

- P-MPR is the power management term for the UE;

- TC is the highest value TC,c among all serving cells *c*;

- ∆TRxSRS is the highest value among all serving cells *c;*

- PEMAX,CA is the value indicated by *p-NR-FR1* or by *p-UE-FR1* whichever is the smallest if both are present*.*

For uplink intra-band contiguous carrier aggregation, when at least one different numerology/slot pattern is used in aggregated cells, the UE is allowed to set its configured maximum output power PCMAX,c(i),i for serving cell c(i) of slot numerology type *i*, and its total configured maximum output power PCMAX.

The configured maximum output power PCMAX,c(i),i (p) in slot p of serving cell c(i) on slot numerology type *i* shall be set within the following bounds:

PCMAX\_L,f,c(i),i (p) ≤ PCMAX,f,c(i), i (p) ≤ PCMAX\_H,f,c(i),i (p)

where PCMAX\_L,f,c (i),i (p) and PCMAX\_H,f,c(i),i (p) are the limits for a serving cell c(i) of slot numerology type i as specified in clause 6.2.4.

The total UE configured maximum output power PCMAX (p,q) in a slot p of slot numerology or symbol pattern *i*, and a slot q of slot numerology or symbol pattern *j* that overlap in time shall be set within the following bounds unless stated otherwise:

PCMAX\_L(p,q) ≤ PCMAX (p,q) ≤ PCMAX\_H (p,q)

When slots p and q have different transmissions lengths and belong to different cells on different or same bands:

PCMAX\_L (p,q) = MIN {10 log10 [pCMAX\_L,f,c(i),i (p) + pCMAX\_L,f,c(i),j (q)], PPowerClass,CA, PEMAX,CA}

PCMAX\_H (p,q) = MIN {10 log10 [pCMAX\_ H,f,c(i),i (p) + pCMAX\_ H,f,c(i),j (q)], PPowerClass,CA, PEMAX,CA}

where pCMAX\_L,f,c (i),i and pCMAX\_ H,f,c(i),i are the respective limits PCMAX\_L,f,c (i),i and PCMAX\_H,f,c(i),i expressed in linear scale.

TREF and Teval are specified in Table 6.2A.4.1.1-0 when same and different slot patterns are used in aggregated carriers. For each TREF, the PCMAX\_L is evaluated per Teval and given by the minimum value taken over the transmission(s) within the Teval; the minimum PCMAX\_L over the one or more Teval is then applied for the entire TREF. The lesser of PPowerClass,CA and PEMAX,CA shall not be exceeded by the UE during any period of time.

Table 6.2A.4.1.1-0: PCMAX evaluation window for different slot and channel durations

|  |  |  |
| --- | --- | --- |
| TREF | Teval | Teval with frequency hopping |
| TREF of largest slot duration over both UL CCs | Physical channel length | Min(Tno\_hopping, Physical Channel Length) |

If the UE is configured with multiple TAGs and transmissions of the UE on slot *i* for any serving cell in one TAG overlap some portion of the first symbol of the transmission on slot *i* +1 for a different serving cell in another TAG, the UE minimum of PCMAX\_L for slots *i* and *i* + 1 applies for any overlapping portion of slots *i* and *i* + 1. The lesser of PPowerClass,CA and PEMAX,CA shall not be exceeded by the UE during any period of time.

The measured maximum output power PUMAX over all serving cells with same slot pattern shall be within the following range:

PCMAX\_L – MAX{TL, TLOW(PCMAX\_L) } ≤ PUMAX  ≤ PCMAX\_H + THIGH(PCMAX\_H)

PUMAX = 10 log10 ∑ pUMAX,c

where pUMAX,c denotes the measured maximum output power for serving cell *c* expressed in linear scale. The tolerances TLOW(PCMAX) and THIGH(PCMAX) for applicable values of PCMAX are specified in Table 6.2A.4.1.1-1. The tolerance TL is the absolute value of the lower tolerance for applicable NR CA configuration as specified in Table 6.2A.1.1-1 for intra-band carrier aggregation.

The measured maximum output power PUMAX over all serving cells, when at least one slot has a different transmission numerology or slot pattern, shall be within the following range:

P'CMAX\_L– MAX{TL, TLOW (P'CMAX\_L)} ≤ P'UMAX  ≤ P'CMAX\_H + THIGH (P'CMAX\_H)

P'UMAX = 10 log10 ∑ p'UMAX,c

where p'UMAX,c denotes the average measured maximum output power for serving cell *c* expressed in linear scale over TREF. The tolerances TLOW(P'CMAX) and THIGH(P'CMAX) for applicable values of P'CMAX are specified in Table 6.2A.4.1.1-1 for intra-band carrier aggregation. The tolerance TL is the absolute value of the lower tolerance for applicable NR CA configuration as specified in Table 6.2A.1.1-1 for inter-band carrier aggregation.

where:

P'CMAX\_L  = MIN{ MIN {10log10∑( pCMAX\_L,f,c(i),i), PPowerClass,CA} over all overlapping slots in TREF}

P'CMAX\_H = MAX{ MIN{10 log10 ∑ pEMAX,c , PPowerClass,CA} over all overlapping slots in TREF}

Table 6.2A.4.1.1-1: PCMAX tolerance for uplink intra-band contiguous CA

|  |  |  |
| --- | --- | --- |
| PCMAX (dBm) | Tolerance TLOW(PCMAX) (dB) | Tolerance THIGH(PCMAX) (dB) |
| 23 < PCMAX ≤ 26 | 3 | 2 |
| 21 ≤ PCMAX ≤ 23 | 2.0 | |
| 20 ≤ PCMAX < 21 | 2.5 | |
| 19 ≤ PCMAX < 20 | 3.5 | |
| 18 ≤ PCMAX < 19 | 4.0 | |
| 13 ≤ PCMAX < 18 | 5.0 | |
| 8 ≤ PCMAX < 13 | 6.0 | |
| -40 ≤ PCMAX < 8 | 7.0 | |

##### 6.2A.4.1.2 Configured transmitted power for Intra-band non-contiguous CA

For uplink carrier aggregation the UE is allowed to set its configured maximum output power PCMAX,*c* for serving cell *c* and its total configured maximum output power PCMAX.

The configured maximum output power PCMAX,*c* on serving cell *c* shall be set as specified in subclause 6.2.4.

The configured maximum output power PCMAX,c on serving cell c shall be set as specified in subclause 6.2.4, but with MPRc = MPR and A-MPRc = A-MPR with MPR and A-MPR as determined by subclause 6.2A.2 and 6.2A.3, respectively. For PH reporting the following exception applies: if the UE is configured with multiple uplink serving cells, the power PCMAX,c used for the purpose of PH reporting on first serving cell c = c1 does not consider for computation of the PH report transmissions on a second serving cell c2 as exempted in subclause 7.7.1 in [8]. There is one power management term for the UE, denoted P-MPR, and P-MPR c = P-MPR.

The total configured maximum output power PCMAX shall be set within the following bounds:

PCMAX\_L ≤ PCMAX ≤ PCMAX\_H

For uplink intra-band non-contiguous carrier aggregation when same slot pattern is used in all aggregated serving cells,

PCMAX\_L  = MIN{10 log10 ∑ pEMAX,c  - TC , PEMAX,CA,PPowerClass,CA – MAX(MAX(MPRc, A-MPRc) + ΔTIB,c + TC + TRxSRS, P-MPR) }

PCMAX\_H  = MIN{10 log10 ∑ pEMAX,c , PEMAX,CA ,PPowerClass,CA}

where

- pEMAX,c is the linear value of PEMAX,*c* which is given by IE *P-Max* for serving cell *c* in [7];

- PPowerClass,CA is the maximum UE power specified in Table 6.2A.1.2-1 without taking into account the tolerance;

- MPR and A-MPR are specified in subclause 6.2A.2 and subclause 6.2A.3 respectively;

- TIB,c is the additional tolerance for serving cell *c* as specified in clause 6.2A.4.2 for NR CA, clause 6.2C.2 for SUL, or TS 38.101-3 clause 6.2B.4.2 for EN-DC; In case the UE supports more than one of band combinations for CA, SUL or DC, and an operating band belongs to more than one band combinations then

a) When the operating band frequency range is ≤ 1 GHz, the applicable additional ∆TIB,c shall be the average value for all band combinations defined in clause 6.2A.4.2, 6.2C.2 in this specification and 6.2B.4.2 in TS 38.101-3 [3], truncated to one decimal place that apply for that operating band among the supported band combinations. In case there is a harmonic relation between low band UL and high band DL, then the maximum ∆TIB,c among the different supported band combinations involving such band shall be applied

b) When the operating band frequency range is > 1 GHz, the applicable additional ∆TIB,c shall be the maximum value for all band combinations defined in clause 6.2A.4.2, 6.2C.2 in this specification and 6.2B.4.2 in TS 38.101-3 [3] for the applicable operating bands.

- P-MPR is the power management term for the UE;

- TC is the highest value TC,c among all serving cells *c*;

- ∆TRxSRS is the highest value among all serving cells *c;*

- PEMAX,CA is the value indicated by *p-NR-FR1* or by *p-UE-FR1* whichever is the smallest if both are present*.*

[For uplink intra-band non-contiguous carrier aggregation, when at least one different numerology/slot pattern is used in aggregated cells, the UE is allowed to set its configured maximum output power PCMAX,c(i),i for serving cell c(i) of slot numerology type *i*, and its total configured maximum output power PCMAX.

The configured maximum output power PCMAX,c(i),i (p) in slot p of serving cell c(i) on slot numerology type *i* shall be set within the following bounds:

PCMAX\_L,f,c(i),i (p) ≤ PCMAX,f,c(i), i (p) ≤ PCMAX\_H,f,c(i),i (p)

where PCMAX\_L,f,c (i),i (p) and PCMAX\_H,f,c(i),i (p) are the limits for a serving cell c(i) of slot numerology type i as specified in subclause 6.2.4.

The total UE configured maximum output power PCMAX (p,q) in a slot p of slot numerology or symbol pattern *i*, and a slot q of slot numerology or symbol pattern *j* that overlap in time shall be set within the following bounds unless stated otherwise:

PCMAX\_L(p,q) ≤ PCMAX (p,q) ≤ PCMAX\_H (p,q)

When slots p and q have different transmissions lengths and belong to different cells on different or same bands:

PCMAX\_L (p,q) = MIN {10 log10 [pCMAX\_L,f,c(i),i (p) + pCMAX\_L,f,c(i),j (q)], PPowerClass,CA, PEMAX,CA}

PCMAX\_H (p,q) = MIN {10 log10 [pCMAX\_ H,f,c(i),i (p) + pCMAX\_ H,f,c(i),j (q)], PPowerClass,CA, PEMAX,CA}

where pCMAX\_L,f,c (i),i and pCMAX\_ H,f,c(i),i are the respective limits PCMAX\_L,f,c (i),i and PCMAX\_H,f,c(i),i expressed in linear scale.]

TREF and Teval are specified in Table 6.2A.4.1.2-1 when same and different slot patterns are used in aggregated carriers. For each TREF, the PCMAX\_L is evaluated per Teval and given by the minimum value taken over the transmission(s) within the Teval; the minimum PCMAX\_L over the one or more Teval is then applied for the entire TREF. The lesser of PPowerClass,CA and PEMAX,CA shall not be exceeded by the UE during any period of time.

Table 6.2A.4.1.2-1: PCMAX evaluation window for different slot and channel durations

|  |  |  |
| --- | --- | --- |
| TREF | Teval | Teval with frequency hopping |
| TREF of largest slot duration over both UL CCs | Physical channel length | Min(Tno\_hopping, Physical Channel Length) |

If the UE is configured with multiple TAGs and transmissions of the UE on slot *i* for any serving cell in one TAG overlap some portion of the first symbol of the transmission on slot *i* +1 for a different serving cell in another TAG, the UE minimum of PCMAX\_L for slots *i* and *i* + 1 applies for any overlapping portion of slots *i* and *i* + 1. The lesser of PPowerClass,CA and PEMAX,CA shall not be exceeded by the UE during any period of time.

The measured maximum output power PUMAX over all serving cells with same slot pattern shall be within the following range:

PCMAX\_L – MAX{TL, TLOW(PCMAX\_L) } ≤ PUMAX  ≤ PCMAX\_H + THIGH(PCMAX\_H)

PUMAX = 10 log10 ∑ pUMAX,c

where pUMAX,c denotes the measured maximum output power for serving cell *c* expressed in linear scale. The tolerances TLOW(PCMAX) and THIGH(PCMAX) for applicable values of PCMAX are specified in Table 6.2A.4.1.2-2. The tolerance TL is the absolute value of the lower tolerance for applicable NR CA configuration as specified in Table 6.2A.1.2-1 for intra-band carrier aggregation.

The measured maximum output power PUMAX over all serving cells, when at least one slot has a different transmission numerology or slot pattern, shall be within the following range:

P'CMAX\_L– MAX{TL, TLOW (P'CMAX\_L)} ≤ P'UMAX  ≤ P'CMAX\_H + THIGH (P'CMAX\_H)

P'UMAX = 10 log10 ∑ p'UMAX,c

where p'UMAX,c denotes the average measured maximum output power for serving cell *c* expressed in linear scale over TREF. The tolerances TLOW(P'CMAX) and THIGH(P'CMAX) for applicable values of P'CMAX are specified in Table 6.2A.4.1.2-2 for intra-band carrier aggregation. The tolerance TL is the absolute value of the lower tolerance for applicable NR CA configuration as specified in Table 6.2A.1.2-2 for intra-band carrier aggregation.

where:

P'CMAX\_L  = MIN{ MIN {10log10∑( pCMAX\_L,f,c(i),i), PPowerClass,CA} over all overlapping slots in TREF}

P'CMAX\_H = MAX{ MIN{10 log10 ∑ pEMAX,c , PPowerClass,CA} over all overlapping slots in TREF}

Table 6.2A.4.1.2-2: PCMAX tolerance for uplink intra-band non-contiguous CA

|  |  |  |
| --- | --- | --- |
| PCMAX (dBm) | Tolerance TLOW(PCMAX) (dB) | Tolerance THIGH(PCMAX) (dB) |
| 21 ≤ PCMAX ≤ 23 | 3.0 | 2.0 |
| 20 ≤ PCMAX < 21 | 2.5 | |
| 19 ≤ PCMAX < 20 | 3.5 | |
| 18 ≤ PCMAX < 19 | 4.0 | |
| 13 ≤ PCMAX < 18 | 5.0 | |
| 8 ≤ PCMAX < 13 | 6.0 | |
| -40 ≤ PCMAX < 8 | 7.0 | |

##### 6.2A.4.1.3 Configured transmitted power for Inter-band CA

For uplink carrier aggregation the UE is allowed to set its configured maximum output power PCMAX,*c* for serving cell *c* and its total configured maximum output power PCMAX.

The configured maximum output power PCMAX,*c* on serving cell *c* shall be set as specified in clause 6.2.4, except that the UE power class for serving cell *c* on the specific operating band shall be determined by the [powerClassPerBand] IE [TS 38.331] as indicated for the band combination if signalled.

For uplink inter-band carrier aggregation, MPR*c* and A-MPR*c* apply per serving cell *c* and are specified in clause 6.2.2 and clause 6.2.3, respectively. P-MPR*c* accounts for power management for serving cell *c*. PCMAX,*c* is calculated under the assumption that the transmit power is increased independently on all component carriers.

The total configured maximum output power PCMAX shall be set within the following bounds:

PCMAX\_L ≤ PCMAX ≤ PCMAX\_H

For uplink inter-band carrier aggregation with one serving cell c per operating band when same slot symbol pattern is used in all aggregated serving cells,

PCMAX\_L = MIN {10log10∑ MIN [ pEMAX,c/(tC,c), pPowerClass.c/(MAX(mprc·∆mprc, a-mprc)·tC,c ·tIB,c·tRxSRS,c), pPowerClass,c/pmprc], PEMAX,CA, PPowerClass,CA-ΔPPowerClass, CA}

PCMAX\_H = MIN{10 log10 ∑ pEMAX,c , PEMAX,CA, PPowerClass,CA-ΔPPowerClass, CA}

where

- pEMAX,c is the linear value of PEMAX, *c* which is given by IE *P-Max* for serving cell *c* in [7];

- PPowerClass,CA is the maximum UE power specified in Table 6.2A.1.3-1 without taking into account the tolerance specified in the Table 6.2A.1.3-1;

- pPowerClass,c is the linear value of the maximum UE power for serving cell *c* specified in Table 6.2.1-1 without taking into account the tolerance;

- ΔPPowerClass,CA = 3 dB for a power class 2 capable UE when the requirements of default power class are applied as specified in sub-clause 6.2.A.1.3; otherwise ΔPPowerClass, CA = 0 dB; - mpr *c* and a-mpr *c* are the linear values of MPR *c* and A-MPR *c* as specified in clause 6.2.2 and clause 6.2.3, respectively;

- ∆mpr *c* is the linear value of ∆MPR *c* as specified in clause 6.2.2;

- pmprc is the linear value of P-MPR*c*;

- ∆tRxSRS,c is the linear value of ∆TRxSRS,c;

- tC,c is the linear value of TC,ctC,c = 1.41 when NOTE 2 in Table 6.2A.1.3-1 applies for a serving cell *c*, otherwise tC,c = 1;

- tIB,c is the linear value of the inter-band relaxation term TIB,c of the serving cell *c* as specified in clause 6.2A.4.2 for NR CA, clause 6.2C.2 for SUL, or TS 38.101-3 clause 6.2B.4.2 for EN-DC; otherwise tIB,c In case the UE supports more than one of band combinations for CA, SUL or DC, and an operating band belongs to more than one band combinations then

a) When the operating band frequency range is ≤ 1 GHz, the applicable additional TIB,c shall be the average value for all band combinations defined in clause 6.2A.4.2, 6.2C.2 in this specification and 6.2B.4.2 in TS 38.101-3 [3], truncated to one decimal place that apply for that operating band among the supported band combinations. In case there is a harmonic relation between low band UL and high band DL, then the maximum ∆TIB,c among the different supported band combinations involving such band shall be applied

b) When the operating band frequency range is > 1 GHz, the applicable additional ∆TIB,c shall be the maximum value for all band combinations defined in clause 6.2A.4.2, 6.2C.2 in this specification and 6.2B.4.2 in TS 38.101-3 [3] for the applicable operating bands.

- PEMAX,CA is the value indicated by *p-NR-FR1* or by *p-UE-FR1* whichever is the smallest if both are present.For uplink inter-band carrier aggregation with one serving cell *c* per operating band when at least one different numerology/slot pattern is used in aggregated cells, the UE is allowed to set its configured maximum output power PCMAX,c(i),i for serving cell c(i) of slot numerology type *i*, and its total configured maximum output power PCMAX.

The configured maximum output power PCMAX,c(i),i (p) in slot p of serving cell c(i) on slot numerology type *i* shall be set within the following bounds:

PCMAX\_L,f,c(i),i (p) ≤ PCMAX,f,c(i), i (p) ≤ PCMAX\_H,f,c(i),i (p)

where PCMAX\_L,f,c (i),i (p) and PCMAX\_H,f,c(i),i (p) are the limits for a serving cell c(i) of slot numerology type i as specified in clause 6.2.4, except that the UE power class for the serving cell c(i)on the specific operating band shall be determined by the [powerClassPerBand] IE [TS 38.331] as indicated for the band combination if signalled.

The total UE configured maximum output power PCMAX (p,q) in a slot p of slot numerology or symbol pattern *i*, and a slot q of slot numerology or symbol pattern *j* that overlap in time shall be set within the following bounds unless stated otherwise:

PCMAX\_L(p,q) ≤ PCMAX (p,q) ≤ PCMAX\_H (p,q)

When slots p and q have different transmissions lengths and belong to different cells on different bands:

PCMAX\_L (p,q) = MIN {10 log10 [pCMAX\_L,f,c(i),i (p) + pCMAX\_L,f,c(i),j (q)], PPowerClass,CA, PEMAX,CA}

PCMAX\_H (p,q) = MIN {10 log10 [pCMAX\_ H,f,c(i),i (p) + pCMAX\_ H,f,c(i),j (q)], PPowerClass,CA, PEMAX,CA}

where pCMAX\_L,f,c (i),i and pCMAX\_ H,f,c(i),i are the respective limits PCMAX\_L,f,c (i),i and PCMAX\_H,f,c(i),i expressed in linear scale.

For combinations of intra-band and inter-band carrier aggregation with UE configured for transmission on three serving cells (up to two contiguously aggregated carriers per operating band), the following apply:

The UE power class for the serving cell(s) on the operating band *Bi* including intra-band carrier aggregation shall be determined by the [powerClassPerBand] IE [TS 38.331] as indicated for the band combination if signalled.

For the case when p and q belong to the same band and k belongs to a different band, but p, q and k are of the same numerology and slot patterns.

PCMAX\_L = MIN {10log10∑( pCMAX\_L, Bi), PEMAX,CA, PPowerClass.CA }

PCMAX\_H = MIN{10 log10 ∑ pEMAX,c , PEMAX,CA, PPowerClass.CA }

Where

- pCMAX\_L, Bi is the linear values of PCMAX\_L specified for the specific operating band *Bi*.

- The linear value of PCMAX\_L specified for uplink intra-band contiguous carrier aggregation in subclause 6.2A.4.1.1 applies for operating band supporting two contiguous serving cells, designated by its band index *Bi*. The linear value of PCMAX\_L specified for single carrier in subclause 6.2.4 applies for operating band *Bj* supporting one serving cell.

For the case when p and q belong to the same band and are of the same numerology *i* and slot patterns (p,q),while k belong to a different band and is of different numerology *j* and/or slot pattern on the 3rd cell then:

PCMAX\_L (p,q,k) = MIN {10 log10 [pCMAX\_L,Bi,i(p,q) + pCMAX\_L,c(3),Bj,j(k)], PEMAX,CA, PPowerClass.CA }

PCMAX\_H (p,q,k) = MIN {10 log10 [pCMAX\_ H,Bi,i (p,q) + pCMAX\_ H,c(3), Bj,j(k)], PEMAX,CA, PPowerClass.CA }

Where

- pEMAX,c is the linear value of PEMAX, *c* which is given by IE *P-Max* for serving cell *c* in [7];

- PEMAX,CA is p-UE-FR1 value signalled by RRC and defined in [38.331];

- PPowerClass.CA is the maximum UE power specified in Table 6.2A.1.3-1 without taking into account the tolerance specified in the Table 6.2A.1.3-1 or Table 6.2F.1A.1-1 for shared spectrum bands;

- pCMAX\_L,c(3),Bj,j(k) and pCMAX\_ H,c(3), Bj,j(k)are the linear values of PCMAX\_L and PCMAX\_H respectively, specified for single carrier in subclause 6.2.4 and applies for operating band supporting one serving cell in the *Bj* band on numerology *j*, using slot pattern k;

- pCMAX\_L,Bi,i(p,q) and pCMAX\_ H,Bi,i (p,q) are the linear values of PCMAX\_L respectively PCMAX\_H for uplink intra-band contiguous carrier aggregation specified in subclause 6.2A.4.1.1 which applies for operating band *Bi* on numerology *i*, supporting two contiguous serving cells, using the same slot pattern (p,q).

TREF and Teval are specified in Table 6.2A.4.1.3-0 when same and different slot patterns are used in aggregated carriers. For each TREF, the PCMAX\_L is evaluated per Teval and given by the minimum value taken over the transmission(s) within the Teval; the minimum PCMAX\_L over the one or more Teval is then applied for the entire TREF. The lesser of PPowerClass,CA and PEMAX,CA shall not be exceeded by the UE during any period of time.

Table 6.2A.4.1.3-0: PCMAX evaluation window for different slot and channel durations

|  |  |  |
| --- | --- | --- |
| TREF | Teval | Teval with frequency hopping |
| TREF of largest slot duration over both UL CCs | Physical channel length | Min(Tno\_hopping, Physical Channel Length) |

If the UE is configured with multiple TAGs and transmissions of the UE on slot *i* for any serving cell in one TAG overlap some portion of the first symbol of the transmission on slot *i* +1 for a different serving cell in another TAG, the UE minimum of PCMAX\_L for slots *i* and *i* + 1 applies for any overlapping portion of slots *i* and *i* + 1. The lesser of PPowerClass,CA and PEMAX,CA shall not be exceeded by the UE during any period of time.

The measured maximum output power PUMAX over all serving cells with same slot pattern shall be within the following range:

PCMAX\_L – MAX{TL, TLOW(PCMAX\_L) } ≤ PUMAX  ≤ PCMAX\_H + THIGH(PCMAX\_H)

PUMAX = 10 log10 ∑ pUMAX,c

where pUMAX,c denotes the measured maximum output power for serving cell *c* expressed in linear scale. The tolerances TLOW(PCMAX) and THIGH(PCMAX) for applicable values of PCMAX are specified in Table 6.2A.4.1.3-1. The tolerance TL is the absolute value of the lower tolerance for applicable NR CA configuration as specified in Table 6.2A.1.3-1-2 for inter-band carrier aggregation.

The measured maximum output power PUMAX over all serving cells, when at least one slot has a different transmission numerology or symbol pattern, shall be within the following range:

P'CMAX\_L– MAX{TL, TLOW (P'CMAX\_L)} ≤ P'UMAX  ≤ P'CMAX\_H + THIGH (P'CMAX\_H)

P'UMAX = 10 log10 ∑ p'UMAX,c

where p'UMAX,c denotes the average measured maximum output power for serving cell *c* expressed in linear scale over TREF. The tolerances TLOW(P'CMAX) and THIGH(P'CMAX) for applicable values of P'CMAX are specified in Table 6.2A.4.1.3-1 for inter-band carrier aggregation. The tolerance TL is the absolute value of the lower tolerance for applicable NR CA configuration as specified in Table 6.2A.1.3-1 for inter-band carrier aggregation.

where:

P'CMAX\_L  = MIN{ MIN {10log10∑( pCMAX\_L,f,c(i),i), PPowerClass,CA} over all overlapping slots in TREF}

P'CMAX\_H = MAX{ MIN{10 log10 ∑ pEMAX,c , PPowerClass,CA} over all overlapping slots in TREF}

Table 6.2A.4.1.3-1: PCMAX tolerance for uplink inter-band CA (two bands)

|  |  |  |
| --- | --- | --- |
| PCMAX (dBm) | Tolerance TLOW(PCMAX) (dB) | Tolerance THIGH(PCMAX) (dB) |
| 23 ≤ PCMAX ≤ 26 | 3.0 | 2.0 |
| 22 ≤ PCMAX < 23 | 5.0 | 2.0 |
| 21 ≤ PCMAX < 22 | 5.0 | 3.0 |
| 20 ≤ PCMAX < 21 | 6.0 | 4.0 |
| 16 ≤ PCMAX < 20 | 5.0 | |
| 11 ≤ PCMAX < 16 | 6.0 | |
| -40 ≤ PCMAX < 11 | 7.0 | |

##### 6.2A.4.1.4 Void

## <Next Change Section >

### 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 which belongs to NR band in frequency range 1 of the same downlink CA configuration. Reference sensitivity exceptions due to UL harmonic from a PC3 aggressor NR UL band for either single band uplink or PC3 or PC2 CA 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 from a PC3 aggressor NR UL band for NR DL 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 | dB |
| n1 | n771,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.0 | 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 |  |  |  |  |  |  |  |  |  |
|  | 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 |  |  |  |  |  |  |  |  |  |
|  | n781,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.8 | 14.3 | 13.8 |
|  | 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 |
|  | 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 |
|  | 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 |  | [12.0] |  | [9.3] |  |  | 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 |  |  | 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 | 6.7 | 6 | 4.7 | 3.7 | 3 | 2.3 | 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 |  |  |  |  |  |  |  |  |  |
| n25 | n483 | 1.9 | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 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 |  |  |  |  |  |  |  |  |  |
|  | n781,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.8 | 14.3 | 13.8 |
|  | 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 | [23.0] | 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 |  | 19.1 | 17.9 | 16.912 | 16.112 | 15.512 | 14.812 | 14.312 | 13.812 |
|  | n483 | 1.9 | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
|  | 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 |  |  |  |  |  |  |  |  |  |
|  | n781,2 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.5 | 14.8 | 14.3 | 13.8 |
|  | 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 | 50 | 50 | 100 | 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 | 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 |  | 16 |  | 25 |  |  | 25 | 25 | 25 |  | 25 |  | 25 |
| n12 | n48 |  | 10 | 15 | 20 |  | 25 | 25 |  |  |  |  |  |  |
| n12 | n66 | 8 | 16 | 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 | 25 | 25 | 25 |
| n20 | n78 |  | 16 | 25 | 25 |  |  | 25 | 25 | 25 |  | 25 | 25 | 25 |
| n24 | n77 |  | 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 | 50 |
| n25 | n78 |  | 25 | 36 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| n28 | n1 | 8 | 16 | 25 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |
| n28 | n50 | 12 | 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 |  | 80 | 100 | 128 | 160 | 180 | 200 | 200 | 200 |
| n66 | n77 |  | 25 | 36 | 50 | 64 | 80 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n66 | n78 |  | 25 | 36 | 50 | 64 | 80 | 100 | 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 which belongs to PC3 NR band or PC2 NR band of the same CA configuration. Reference sensitivity exceptions due to harmonic mixing from a PC3 aggressor NR UL band for either PC3 or PC2 CA are specified in Table 7.3A.4-4 and from a PC2 aggressor NR UL band for PC2 CA are specified in Table 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 from a PC3 aggressor NR UL band for DL NR CA 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 |  | 9.3 | 8.2 | 7.6 | 7.3 | 6.9 | 6.6 | 6.4 | 6.3 |
| 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 from a PC2 aggressor NR UL band for NR DL CA 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 | n5 | 8.1 | 6.0 | 4.8 | 4.3 |  |  |  |  |  |  |  |  |  |
| n77 | n121 | 34 | 31 | 29.2 |  |  |  |  |  |  |  |  |  |  |
| n77 | n131 | 34 | 31 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n141 | 34 | 31 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n25 | 9.2 | 7.3 | 6.0 | 5.7 | 5.3 | 3.9 | 2.0 |  |  |  |  |  |  |
| n772 | n291 | 34 | 31 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n303 | 13.2 | 10.6 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n41 |  | 13.2 | 13.2 | 13.2 |  | 12.0 | 10.9 | 10.2 | 9.9 | 9.4 | 9.1 | 9.9 | 8.8 |
| n78 | n3 | 8.1 | 6.1 | 4.8 | 4.3 | 3.8 | 3.4 | 1 |  |  |  |  |  |  |
| n78 | n281 | 31 | 28 | 26.2 | 25 |  | 11.7 |  |  |  |  |  |  |  |
| 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.  NOTE 2: 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 from TS 38.101-1 applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.  NOTE 3: 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.4-4b: Reference sensitivity exceptions due to harmonic mixing from a PC1.5 NR UL band for NR DL CA 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 | 11.8 | 10.6 | 9.5 | 9.2 |  |  |  |  |  |  |  |  |  |
| n77 | n5 | 10.7 | 8.4 | 7.0 | 6.4 |  |  |  |  |  |  |  |  |  |
| n77 | n121 | 37 | 34 | 32.2 |  |  |  |  |  |  |  |  |  |  |
| n77 | n131 | 37 | 34 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n141 | 37 | 34 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n41 |  | 16.1 | 16.1 | 16.1 |  | 14.9 | 13.7 | 13.0 | 12.6 | 12.2 | 11.8 | 11.6 | 11.5 |
| n77 | n25 | 11.9 | 9.8 | 8.5 | 8.0 | 7.6 | 6.0 | 3.3 |  |  |  |  |  |  |
| n772 | n291 | 37 | 34 |  |  |  |  |  |  |  |  |  |  |  |
| n77 | n303 | 16.1 | 13.5 |  |  |  |  |  |  |  |  |  |  |  |
| 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.  NOTE 2: 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 from TS 38.101-1 applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.  NOTE 3: 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.4-5: Uplink configuration for reference sensitivity exceptions due to receiver harmonic mixing for DL 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 | 30 |  | 50 | 50 | 50 |  | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| n78 | n3 | 15 | 25 | 50 | 75 | 100 | 128 | 160 | 216 |  |  |  |  |  |  |
| n78 | n28 | 15 | 25 | 50 | 75 | 100 |  | 160 |  |  |  |  |  |  |  |
| 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, Table 7.3A.5-2 and Table 7.3A.5-2a 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, Table 7.3A.5-2 and Table 7.3A.5-2a. 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, Table 7.3A.5-2 and Table 7.3A.5-2a.

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 | 1900 | 5 | 25 | 1980 | 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. | | | | | | | | |

Table 7.3A.5-1a: 2DL/2UL interband Reference sensitivity QPSK PREFSENS and uplink/downlink configurations for PC2 CA

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Band / Channel bandwidth / NRB / Duplex mode | | | | | | | | Source of IMD |
| NR CA  Configuration | NR band | UL Fc  (MHz) | UL/DL BW  (MHz) | UL  CLRB | DL Fc (MHz) | MSD  (dB) | Duplex mode |  |
| CA\_n1-n78 | n1 | 1950 | 5 | 25 | 2140 | [17.8] | FDD | IMD4 |
|  | n78 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
| CA\_n3-n41 | n3 | 1740 | 5 | 25 | 1835 | 18.4 | FDD | IMD4 |
|  | n41 | 2657.5 | 10 | 50 | 2657.5 | N/A | TDD | N/A |
| CA\_n3-n78 | n3 | 1740 | 5 | 25 | 1835 | 31.9 | FDD | IMD2 |
|  | n78 | 3575 | 10 | 50 | 3575 | N/A | TDD | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 18.5 | FDD | IMD4 |
|  | n78 | 3435 | 10 | 50 | 3435 | N/A | TDD | N/A |
| CA\_n2-n774 | n2 | 1855 | 5 | 25 | 1935 | 32.10 | FDD | IMD2 |
|  |  |  |  |  |  | 34.755 |  |  |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n2 | 1900 | 5 | 25 | 1980 | 19.10 | FDD | IMD4 |
|  |  |  |  |  |  | 21.855 |  |  |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
| CA\_n5-n774,6 | 5 | 844 | 5 | 25 | 889 | 18.6 | FDD | IMD4 |
|  | n77 | 3421 | 10 | 50 | 3421 | N/A | TDD | N/A |
| CA\_n5-n78 | n5 | 844 | 5 | 25 | 889 | 18.6 | FDD | IMD4 |
|  | n78 | 3421 | 10 | 50 | 3421 | N/A | TDD | N/A |
| CA\_n12-n77 | 12 | 702 | 5 | 20 | 732 | 11.7 | FDD | IMD5 |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
| CA\_n13-n77 | 13 | 782 | 5 | 20 | 751 | 20.5 | FDD | IMD5 |
|  | n77 | 3880 | 10 | 50 | 3880 | N/A | TDD | N/A |
| CA\_n14-n77 | 14 | 795.5 | 5 | 15 | 765.5 | 11.7 | FDD | IMD5 |
|  | n77 | 3947.5 | 10 | 50 | 3947.5 | N/A | TDD | N/A |
| CA\_n25-n774 | n25 | 1855 | 5 | 25 | 1935 | 32.1 | FDD | IMD2 |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n25 | 1900 | 5 | 25 | 1980 | 19.1 | FDD | IMD4 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
| CA\_n30-n77 | 30 | 2310 | 5 | 25 | 2355 | 17.6 | FDD | IMD4 |
|  | n77 | 3487.5 | 10 | 50 | 3487.5 | N/A | TDD | N/A |
| CA\_n41-n71 | n41 | 2614 | 5 | 25 | 2614 | N/A | TDD | N/A |
|  | n71 | 665 | 5 | 25 | 619 | 16.3 | FDD | IMD4 |
| CA\_n66-n77 | n66 | 1730 | 5 | 25 | 2130 | 34.33 | FDD | IMD2 |
|  | n77 | 3860 | 10 | 50 | 3860 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 11.27 | FDD | IMD5 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
| CA\_n71-n776 | n71 | 681.5 | 5 | 25 | 635.5 | 11.4 | FDD | IMD5 |
|  | n77 | 3361.5 | 10 | 50 | 3361.5 | N/A | TDD | N/A |
| NOTE 1: Both of the transmitters shall be set min(+23 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: 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.5-2: 3DL/2UL interband Reference sensitivity QPSK PREFSENS and uplink/downlink configurations

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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-n28 | n1 | 1975 | 5 | 25 | 2165 | N/A | FDD | N/A |
|  | n28 | 710.5 | 5 | 25 | 765.5 | N/A | FDD | N/A |
|  | n3 | 1723.5 | 5 | 25 | 1818.5 | 4.0 | FDD | IMD5 |
|  | n3 | 1780 | 5 | 25 | 1875 | N/A | FDD | N/A |
|  | n28 | 710.5 | 5 | 25 | 765.5 | N/A | FDD | N/A |
|  | n1 | 1949 | 5 | 25 | 2139 | 11.0 | FDD | IMD4 |
| CA\_n1-n3-n41 | n1 | 1977.5 | 5 | 25 | 2167.5 | N/A | FDD | N/A |
|  | n3 | 1712.5 | 5 | 25 | 1807.5 | N/A | FDD | N/A |
|  | n41 | 2507.5 | 10 | 25 | 2507.5 | 5.0 | TDD | IMD5 |
| CA\_n1-n3-n77 | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n3 | 1750 | 5 | 25 | 1845 | N/A | FDD | N/A |
|  | n77 | 3700 | 10 | 50 | 3700 | 28.4 | TDD | IMD22 |
|  | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n3 | 1712.5 | 5 | 25 | 1807.5 | 31.5 | FDD | IMD21,2 |
|  | n77 | 3757.5 | 10 | 50 | 3757.5 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 31.0 | FDD | IMD21 |
|  | n3 | 1775 | 5 | 25 | 1870 | N/A | FDD | N/A |
|  | n77 | 3915 | 10 | 50 | 3915 | N/A | TDD | N/A |
| CA\_n1-n3-n78 | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n3 | 1750 | 5 | 25 | 1845 | N/A |  | N/A |
|  | n78 | 3700 | 10 | 52 | 3700 | 28.4 | TDD | IMD2 |
|  | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n3 | 1770 | 5 | 25 | 1865 | N/A |  | N/A |
|  | n78 | 3360 | 10 | 52 | 3360 | 11.2 | TDD | IMD4 |
|  | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n3 | 1735 | 5 | 25 | 1830 | 27.9 |  | IMD2 |
|  | n78 | 3780 | 10 | 52 | 3780 | N/A | TDD | N/A |
| CA\_n1-n3-n79 | n1 | 1930 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n3 | 1720 | 5 | 25 | 1815 | N/A | FDD | N/A |
|  | n79 | 4950 | 40 | 216 | 4950 | 4.7 | TDD | IMD5 |
|  | n3 | 1750 | 5 | 25 | 1845 | N/A | FDD | N/A |
|  | n79 | 4860 | 40 | 216 | 4860 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 3.6 | FDD | IMD5 |
| CA\_n1-n5-n7 | n1 | 1968 | 5 | 25 | 2158 | N/A | FDD | N/A |
|  | n7 | 2512 | 10 | 50 | 2632 | N/A | FDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | 1.0 | FDD | IMD5 |
| CA\_n1-n5-n78 | n1 | 1932 | 5 | 25 | 2122 | 18.1 | FDD | IMD3 |
|  | n5 | 829 | 5 | 25 | 874 | N/A | FDD | N/A |
|  | n78 | 3780 | 10 | 50 | 3780 | N/A | TDD | N/A |
|  | n1 | 1975 | 5 | 25 | 2165 | N/A | FDD | N/A |
|  | n5 | 840 | 5 | 25 | 885 | 3.1 | FDD | IMD5 |
|  | n78 | 3405 | 10 | 50 | 3405 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n78 | 3610 | 10 | 50 | 3610 | 15.7 | TDD | IMD3 |
| CA\_n1-n7-n28 | n1 | 1935 | 5 | 25 | 2125 | N/A | FDD | N/A |
|  | n7 | 2533 | 10 | 50 | 2653 | 30.0 | FDD | IMD2 |
|  | n28 | 718 | 5 | 25 | 773 | N/A | FDD | N/A |
|  | n1 | 1935 | 5 | 25 | 2125 | N/A | FDD | N/A |
|  | n7 | 2510 | 10 | 50 | 2630 | N/A | FDD | N/A |
|  | n28 | 730 | 10 | 50 | 785 | 4.5 | FDD | IMD5 |
| CA\_n1-n7-n78 | n1 | 1977.5 | 5 | 25 | 2167.5 | N/A | FDD | N/A |
|  | n7 | 2507.5 | 5 | 25 | 2627.5 | 9.1 | FDD | IMD4 |
|  | n78 | 3305 | 10 | 50 | 3305 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 8.7 | FDD | IMD4 |
|  | n7 | 2510 | 10 | 50 | 2630 | N/A | FDD | N/A |
|  | n78 | 3580 | 10 | 50 | 3580 | N/A | TDD | N/A |
|  | n1 | 1970 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n7 | 2520 | 5 | 25 | 2640 | N/A | FDD | N/A |
|  | n78 | 3390 | 10 | 50 | 3390 | 10.1 | TDD | IMD4 |
| CA\_n1-n18-n28 | n1 | 1965 | 5 | 25 | 2155 | N/A | FDD | N/A |
|  | n28 | 708 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n18 | 822 | 5 | 25 | 867 | 4.6 | FDD | IMD5 |
|  | n18 | 825 | 5 | 25 | 870 | N/A | FDD | N/A |
|  | n28 | 738 | 5 | 25 | 793 | N/A | FDD | N/A |
|  | n1 | 1937 | 5 | 25 | 2127 | 4 | FDD | IMD5 |
| CA\_n1-n18-n41 | n1 | 1960 | 5 | 25 | 2150 | N/A | FDD | N/A |
|  | n41 | 2505 | 10 | 50 | 2505 | N/A | TDD | N/A |
|  | n18 | 825 | 5 | 25 | 870 | 3.3 | FDD | IMD5 |
| CA\_n1-n18-n77 | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n18 | 825 | 5 | 25 | 870 | N/A | FDD | N/A |
|  | n77 | 3600 | 10 | 50 | 3600 | 15.7 | TDD | IMD31 |
|  | n1 | 1970 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n77 | 3390 | 10 | 50 | 3390 | N/A | TDD | N/A |
|  | n18 | 825 | 5 | 25 | 870 | 3.5 | FDD | IMD5 |
|  | n1 | 1930 | 5 | 25 | 2120 | 16.4 | FDD | IMD3 |
|  | n18 | 825 | 5 | 25 | 870 | N/A | FDD | N/A |
|  | n77 | 3770 | 10 | 50 | 3770 | N/A | TDD | N/A |
| CA\_n1-n28-n41 | n1 | 1935 | 5 | 25 | 2125 | N/A | FDD | N/A |
|  | n28 | 718 | 5 | 25 | 773 | N/A | FDD | N/A |
|  | n41 | 2653 | 10 | 50 | 2653 | 30.1 | TDD | IMD22 |
|  | n1 | 1923 | 5 | 25 | 2113 | N/A | FDD | N/A |
|  | n41 | 2685 | 10 | 50 | 2685 | N/A | TDD | N/A |
|  | n28 | 707 | 5 | 25 | 762 | 29.3 | FDD | IMD21 |
| CA\_n1-n28-n77 | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n28 | 733 | 5 | 25 | 788 | N/A | FDD | N/A |
|  | n77 | 3416 | 10 | 50 | 3416 | 15.7 | TDD | IMD32 |
|  | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n77 | 3320 | 10 | 50 | 3320 | N/A | TDD | N/A |
|  | n28 | 735 | 5 | 25 | 790 | 4.2 | FDD | IMD5 |
|  | n28 | 740 | 5 | 25 | 795 | N/A | FDD | N/A |
|  | n77 | 3630 | 10 | 50 | 3630 | N/A | TDD | N/A |
|  | n1 | 1960 | 5 | 25 | 2150 | 15.7 | FDD | IMD3 |
| CA\_n1-n28-n78 | n1 | 1960 | 5 | 25 | 2150 | 15.7 | FDD | IMD3 |
|  | n28 | 740 | 5 | 25 | 795 | N/A | FDD | N/A |
|  | n78 | 3630 | 10 | 50 | 3630 | N/A | TDD | N/A |
|  | n1 | 1970 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n28 | 739 | 5 | 25 | 794 | 4.2 | FDD | IMD5 |
|  | n78 | 3352 | 10 | 50 | 3352 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n28 | 733 | 5 | 25 | 788 | N/A | FDD | N/A |
|  | n78 | 3416 | 10 | 50 | 3416 | 15.7 | TDD | IMD3 |
| CA\_n1A-n28A-n79A | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n28 | 730 | 5 | 25 | 785 | N/A | FDD | N/A |
|  | n79 | 4630 | 40 | 216 | 4630 | 14.9 | TDD | IMD31 |
|  | n1 | 1930 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n79 | 4648 | 40 | 216 | 4648 | N/A | TDD | N/A |
|  | n28 | 733 | 5 | 25 | 788 | 15.2 | FDD | IMD32 |
|  | n28 | 745.5 | 5 | 25 | 800.5 | N/A | FDD | N/A |
|  | n79 | 4420 | 40 | 216 | 4420 | N/A | TDD | N/A |
|  | n1 | 1977.5 | 5 | 25 | 2167.5 | 1.2 | FDD | IMD41 |
| CA\_n1-n40-n78 | n1 | 1930 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n40 | 2310 | 5 | 25 | 2310 | N/A | TDD | N/A |
|  | n78 | 3480 | 10 | 50 | 3480 | 9.8 | TDD | IMD41 |
|  | n1 | 1930 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n40 | 2340 | 5 | 25 | 2340 | 10.6 | TDD | IMD4 |
|  | n78 | 3450 | 10 | 50 | 3450 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 9.1 | FDD | IMD4 |
|  | n40 | 2380 | 5 | 25 | 2380 | N/A | TDD | N/A |
|  | n78 | 3450 | 10 | 50 | 3450 | N/A | TDD | N/A |
| CA\_n1-n41-n77 | n1 | 1970 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n41 | 2650 | 10 | 50 | 2650 | N/A | TDD | N/A |
|  | n77 | 3330 | 10 | 50 | 3330 | 19.6 | TDD | IMD31, 2 |
|  | n1 | 1975 | 5 | 10 | 2165 | N/A | FDD | N/A |
|  | n77 | 3410 | 10 | 50 | 3410 | N/A | TDD | N/A |
|  | n41 | 2515 | 10 | 50 | 2515 | 11.5 | TDD | IMD41 |
|  | n41 | 2640 | 10 | 50 | 2640 | N/A | TDD | N/A |
|  | n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 9.3 | FDD | IMD4 |
| CA\_n1-n77-n79 | n1 | 1950 | 5 | 25 | 2140 | 6.0 | FDD | IMD31,2 |
|  | n77 | 3400 | 10 | 50 | 3400 | N/A | TDD | N/A |
|  | n79 | 4660 | 40 | 216 | 4660 | N/A | TDD | N/A |
| CA\_n1-n78-n79 | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n78 | 3410 | 10 | 50 | 3410 | N/A | TDD | N/A |
|  | n79 | 4870 | 40 | 216 | 4870 | 15.9 | TDD | IMD31,3 |
|  | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n78 | 3490 | 10 | 50 | 3490 | 4.6 | TDD | IMD53 |
|  | n79 | 4670 | 40 | 216 | 4670 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 15.6 | FDD | IMD31,2 |
|  | n78 | 3400 | 10 | 50 | 3400 | N/A | TDD | N/A |
|  | n79 | 4660 | 40 | 216 | 4660 | N/A | TDD | N/A |
| CA\_n2-n5-n30 | n2 | 1870 | 5 | 25 | 1959 | N/A | FDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | 9.7 | FDD | IMD4 |
|  | n30 | 2310 | 10 | 50 | 2355 | N/A | FDD | N/A |
| CA\_n2-n5-n48 | n2 | 1882 | 5 | 25 | 1962 | 15.6 | FDD | IMD3 |
|  | n5 | 839 | 5 | 25 | 884 | N/A | FDD | N/A |
|  | n48 | 3640 | 5 | 25 | 3640 | N/A | TDD | N/A |
|  | n2 | 1905 | 5 | 25 | 1985 | N/A | FDD | N/A |
|  | n5 | 844 | 5 | 25 | 889 | N/A | FDD | N/A |
|  | n48 | 3593 | 5 | 25 | 3593 | 16.6 | TDD | IMD3 |
| CA\_n2-n5-n66 | n2 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | 7.2 | FDD | IMD4 |
| CA\_n2-n5-n77 | n2 | 1907.5 | 5 | 25 | 1987.5 | N/A | FDD | N/A |
|  | n5 | 842.5 | 5 | 25 | 887.5 | 3.8 | FDD | IMD55 |
|  | n77 | 3305 | 5 | 25 | 3305 | N/A | TDD | N/A |
|  | n2 | 1907 | 5 | 25 | 1987 | 16.5 | FDD | IMD35 |
|  | n5 | 846.5 | 5 | 25 | 891.5 | N/A | FDD | N/A |
|  | n77 | 3680 | 5 | 25 | 3680 | N/A | TDD | N/A |
|  | n2 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n77 | 3540 | 10 | 50 | 3540 | 16.0 | TDD | IMD31 |
| CA\_n2-n12-n30 | n2 | 1885 | 5 | 25 | 1965 | N/A | FDD | N/A |
|  | n12 | 708.5 | 5 | 25 | 738.5 | N/A | FDD | N/A |
|  | n30 | 2308 | 5 | 25 | 2353 | 12.0 | FDD | IMD4 |
| CA\_n2-n12-n775 | n2 | 1880 | 5 | 25 | 1960 | 16.5 | FDD | IMD32 |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n77 | 3375 | 10 | 50 | 3375 | N/A | TDD | N/A |
|  | n2 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n77 | 3315 | 10 | 50 | 3315 | 16.0 | TDD | IMD31,2 |
| CA\_n2-n14-n66 | n2 | 1874 | 5 | 25 | 1954 | N/A | FDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n66 | 1762 | 5 | 25 | 2162 | 7.6 | FDD | IMD4 |
|  | n2 | 1874 | 5 | 25 | 1954 | 7.2 | FDD | IMD4 |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n66 | 1770 | 5 | 25 | 2170 | N/A | FDD | N/A |
| CA\_n2-n14-n77 | n2 | 1874 | 5 | 25 | 1954 | 16.5 | FDD | IMD3 |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
|  | n2 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n77 | 3466 | 10 | 50 | 3466 | 16.0 | TDD | IMD31 |
| CA\_n2-n30-n77 | n2 | 1906 | 5 | 25 | 1986 | 8.6 | FDD | IMD45 |
|  | n30 | 2312 | 5 | 25 | 2357 | N/A | FDD | N/A |
|  | n77 | 3305 | 10 | 50 | 3305 | N/A | TDD | N/A |
|  | n2 | 1905 | 5 | 25 | 1985 | N/A | FDD | N/A |
|  | n30 | 2309 | 5 | 25 | 2354 | 10.6 | FDD | IMD45 |
|  | n77 | 3361 | 10 | 50 | 3361 | N/A | TDD | N/A |
|  | n2 | 1860 | 5 | 25 | 1940 | N/A | FDD | N/A |
|  | n30 | 2309 | 5 | 25 | 2354 | 3.4 | FDD | IMD5 |
|  | n77 | 3967 | 10 | 50 | 3967 | N/A | TDD | N/A |
|  | n2 | 1870 | 5 | 25 | 1950 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 4180 | 10 | 50 | 4180 | 29.4 | TDD | IMD22,5 |
| CA\_n2-n48-n66 | n2 | 1855 | 5 | 25 | 1935 | N/A | FDD | N/A |
|  | n48 | 3625 | 5 | 25 | 3625 | 32.0 | TDD | IMD2 |
|  | n66 | 1770 | 5 | 25 | 2190 | N/A | FDD | N/A |
|  | n2 | 1905 | 5 | 25 | 1985 | N/A | FDD | N/A |
|  | n48 | 3560 | 5 | 25 | 3560 | N/A | TDD | N/A |
|  | n66 | 1755 | 5 | 25 | 2155 | 12.1 | FDD | IMD4 |
|  | n2 | 1880 | 5 | 25 | 1960 | 28.3 | FDD | IMD21 |
|  | n48 | 3695 | 5 | 25 | 3695 | N/A | TDD | N/A |
|  | n66 | 1735 | 5 | 25 | 2135 | N/A | FDD | N/A |
| CA\_n2-n66-n77 | n2 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n77 | 3620 | 10 | 50 | 3620 | 29.4 | TDD | IMD25 |
|  | n2 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n77 | 3900 | 10 | 50 | 3900 | 8.9 | TDD | IMD4 |
|  | n2 | 1855 | 5 | 25 | 1935 | N/A | FDD | N/A |
|  | n66 | 1715 | 5 | 25 | 2115 | 29.2 | FDD | IMD2 |
|  | n77 | 3970 | 10 | 50 | 3970 | N/A | TDD | N/A |
|  | n2 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | 10.4 | FDD | IMD4 |
|  | n77 | 3500 | 10 | 50 | 3500 | N/A | TDD | N/A |
|  | n2 | 1885 | 5 | 25 | 1965 | N/A | FDD | N/A |
|  | n66 | 1775 | 5 | 25 | 2175 | 4.0 | FDD | IMD5 |
|  | n77 | 3915 | 10 | 50 | 3915 | N/A | TDD | N/A |
|  | n2 | 1880 | 5 | 25 | 1960 | 32.1 | FDD | IMD2 |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
|  | n2 | 1880 | 5 | 25 | 1960 | 9.1 | FDD | IMD45 |
|  | n66 | 1770 | 5 | 25 | 2170 | N/A | FDD | N/A |
|  | n77 | 3350 | 10 | 50 | 3350 | N/A | TDD | N/A |
|  | n2 | 1880 | 5 | 25 | 1960 | 2.1 | FDD | IMD55 |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n77 | 3620 | 10 | 50 | 3620 | N/A | TDD | N/A |
| CA\_n3-n5-n7 | n3 | 1780 | 5 | 25 | 1875 | N/A | FDD | N/A |
|  | n5 | 845 | 5 | 25 | 890 | N/A | FDD | N/A |
|  | n7 | 2505 | 10 | 50 | 2625 | 30.0 | FDD | IMD24 |
|  | n3 | 1720 | 5 | 25 | 1815 | N/A | FDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | 19.0 | FDD | IMD3 |
|  | n7 | 2560 | 10 | 50 | 2680 | N/A | FDD | N/A |
| CA\_n3-n5-n78 | n3 | 1730 | 5 | 25 | 1825 | N/A | FDD | N/A |
|  | n5 | 839 | 5 | 25 | 884 | N/A | FDD | N/A |
|  | n78 | 3408 | 10 | 50 | 3408 | 16.1 | TDD | IMD3 |
|  | n3 | 1730 | 5 | 25 | 1825 | N/A | FDD | N/A |
|  | n5 | 839 | 5 | 25 | 884 | N/A | FDD | N/A |
|  | n78 | 3512 | 10 | 50 | 3512 | 4.5 | TDD | IMD5 |
|  | n3 | 1767 | 5 | 25 | 1862 | 15.7 | FDD | IMD3 |
|  | n5 | 839 | 5 | 25 | 884 | N/A | FDD | N/A |
|  | n78 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
| CA\_n3-n7-n28 | n3 | 1747 | 5 | 25 | 1842 | N/A | FDD | N/A |
|  | n7 | 2543 | 5 | 25 | 2663 | N/A | FDD | N/A |
|  | n28 | 741 | 5 | 25 | 796 | 20.0 | FDD | IMD2 |
|  | n3 | 1712.5 | 5 | 25 | 1807.5 | N/A | FDD | N/A |
|  | n7 | 2562 | 5 | 25 | 2682 | 17.0 | FDD | IMD3 |
|  | n28 | 743 | 5 | 25 | 798 | N/A | FDD | N/A |
|  | n3 | 1737.5 | 5 | 25 | 1832.5 | 16.5 | FDD | IMD2 |
|  | n7 | 2543 | 5 | 25 | 2663 | N/A | FDD | N/A |
|  | n28 | 710.5 | 5 | 25 | 765.5 | N/A | FDD | N/A |
| CA\_n3-n7-n78 | n3 | 1725 | 5 | 25 | 1820 | 17.6 | FDD | IMD3 |
|  | n7 | 2565 | 5 | 25 | 2685 | N/A | FDD | N/A |
|  | n78 | 3310 | 10 | 50 | 3310 | N/A | TDD | N/A |
|  | n3 | 1725 | 5 | 25 | 1820 | 8.6 | FDD | IMD4 |
|  | n7 | 2565 | 5 | 25 | 2685 | N/A | FDD | N/A |
|  | n78 | 3475 | 10 | 50 | 3475 | N/A | TDD | N/A |
|  | n3 | 1730 | 5 | 25 | 1825 | N/A | FDD | N/A |
|  | n7 | 2560 | 5 | 25 | 2680 | N/A | FDD | N/A |
|  | n78 | 3390 | 10 | 50 | 3390 | 16.1 | TDD | IMD3 |
| CA\_n3-n8-n78 | n3 | 1730 | 5 | 25 | 1825 | N/A | FDD | N/A |
|  | n8 | 910 | 5 | 25 | 955 | N/A | FDD | N/A |
|  | n78 | 3550 | 10 | 50 | 3550 | 16.1 | TDD | IMD3 |
|  | n3 | 1730 | 5 | 25 | 1825 | N/A | FDD | N/A |
|  | n8 | 910 | 5 | 25 | 955 | N/A | FDD | N/A |
|  | n78 | 3370 | 10 | 50 | 3370 | 4.5 | TDD | IMD5 |
|  | n3 | 1725 | 5 | 25 | 1820 | 15.7 | FDD | IMD3 |
|  | n8 | 910 | 5 | 25 | 955 | N/A | FDD | N/A |
|  | n78 | 3640 | 10 | 50 | 3640 | N/A | TDD | N/A |
| CA\_n3-n18-n28 | n3 | 1712.5 | 5 | 25 | 1807.5 | N/A | FDD | N/A |
|  | n28 | 715 | 5 | 25 | 770 | 9.4 | FDD | IMD4 |
|  | n18 | 827.5 | 5 | 25 | 872.5 | N/A | FDD | N/A |
| CA\_n3-n18-n41 | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n3 | 1720 | 5 | 25 | 1815 | N/A | FDD | N/A |
|  | n41 | 2540 | 10 | 50 | 2540 | [N/A]1 | TDD | IMD2 |
|  | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n3 | 1725 | 5 | 25 | 1820 | N/A | FDD | N/A |
|  | n41 | 2630 | 10 | 50 | 2630 | 16.0 | TDD | IMD3 |
|  | n18 | 820 | 5 | 25 | 865 | 28.9 | FDD | IMD2 |
|  | n3 | 1765 | 5 | 25 | 1860 | N/A | FDD | N/A |
|  | n41 | 2630 | 10 | 50 | 2630 | N/A | TDD | N/A |
|  | n18 | 830 | 5 | 25 | 875 | [19.0] | FDD | IMD3 |
|  | n3 | 1725 | 5 | 25 | 1820 | N/A | FDD | N/A |
|  | n41 | 2670 | 5 | 25 | 2670 | N/A | TDD | N/A |
|  | n3 | 1755 | 5 | 25 | 1850 | 28.8 | FDD | IMD2 |
|  | n41 | 2670 | 10 | 50 | 2670 | N/A | TDD | N/A |
|  | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
| CA\_n3-n18-n77 | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n3 | 1770 | 5 | 25 | 1865 | N/A | FDD | N/A |
|  | n77 | 3410 | 10 | 50 | 3410 | 16.3 | TDD | IMD31,2 |
|  | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n3 | 1770 | 5 | 25 | 1865 | 15.7 | FDD | IMD3 |
|  | n77 | 3505 | 10 | 50 | 3505 | N/A | TDD | N/A |
| CA\_n3-n20-n67 | n3 | 1775 | 5 | 25 | 1870 | N/A | FDD | N/A |
|  | n20 | 840 | 5 | 25 | 799 | N/A | FDD | N/A |
|  | n67 | N/A | 5 | 25 | 745 | 9.4 | FDD | IMD4 |
| CA\_n3-n28-n41 | n3 | 1715 | 5 | 25 | 1810 | N/A | FDD | N/A |
|  | n28 | 743 | 5 | 25 | 798 | N/A | FDD | N/A |
|  | n41 | 2518 | 5 | 25 | 2518 | 27.4 | TDD | IMD2 |
|  | n3 | 1715 | 5 | 25 | 1810 | N/A | FDD | N/A |
|  | n28 | 743 | 5 | 25 | 798 | N/A | FDD | N/A |
|  | n41 | 2687 | 5 | 25 | 2687 | 15.9 | TDD | IMD3 |
| CA\_n3-n28-n77 | n3 | 1720 | 5 | 25 | 1815 | N/A | FDD | N/A |
|  | n28 | 733 | 5 | 25 | 788 | N/A | FDD | N/A |
|  | n77 | 4173 | 10 | 50 | 4173 | 15.9 | TDD | IMD3 |
|  | n28 | 735 | 5 | 25 | 790 | N/A | FDD | N/A |
|  | n77 | 3320 | 10 | 50 | 3320 | N/A | TDD | N/A |
|  | n3 | 1755 | 5 | 25 | 1850 | 17.0 | FDD | IMD3 |
|  | n3 | 1712.5 | 5 | 25 | 1807.5 | N/A | FDD | N/A |
|  | n77 | 4195 | 10 | 50 | 4195 | N/A | TDD | N/A |
|  | n28 | 715 | 5 | 25 | 770 | 15.3 | FDD | IMD3 |
| CA\_n3-n28-n78 | n28 | 735 | 5 | 25 | 790 | N/A | FDD | N/A |
|  | n78 | 3320 | 10 | 50 | 3320 | N/A | TDD | IMD3 |
|  | n3 | 1755 | 5 | 25 | 1850 | 17.3 | FDD | N/A |
|  | n3 | 1750 | 5 | 25 | 1845 | N/A | FDD | N/A |
|  | n28 | 743 | 5 | 25 | 798 | N/A | FDD | N/A |
|  | n78 | 3764 | 10 | 50 | 3764 | 4.5 | TDD | IMD5 |
| CA\_n3-n28-n79 | n3 | 1770 | 5 | 25 | 1865 | N/A | N/A | n3 |
|  | n28 | 725 | 5 | 25 | 780 | N/A | N/A | n28 |
|  | n79 | 4585 | 40 | 216 | 4585 | 9.4 | IMD41| | n79 |
|  | n3 | 1770 | 5 | 25 | 1865 | N/A | N/A | n3 |
|  | n79 | 4530 | 40 | 216 | 4530 | N/A | N/A | n79 |
|  | n28 | 725 | 5 | 25 | 780 | 10.3 | IMD4 | n28 |
|  | n28 | 725 | 5 | 25 | 780 | N/A | N/A | n28 |
|  | n79 | 4770 | 40 | 216 | 4770 | N/A | N/A | n79 |
|  | n3 | 1775 | 5 | 25 | 1870 | 5.7 | IMD5 | n3 |
| CA\_n3-40-n41 | n3 | 1747.5 | 5 | 25 | 1842.5 | 1.0 | FDD | IMD5 |
|  | n40 | 2347.5 | 5 | 25 | 2347.5 | N/A | TDD | N/A |
|  | n41 | 2600 | 10 | 50 | 2600 | N/A | TDD | N/A |
| CA\_n3-n41-n77 | n3 | 1720 | 5 | 25 | 1815 | N/A | FDD | N/A |
|  | n77 | 3900 | 10 | 50 | 3900 | N/A | TDD | N/A |
|  | n41 | 2640 | 5 | 25 | 2640 | 5.3 | TDD | IMD5 |
|  | n41 | 2620 | 5 | 25 | 2620 | N/A | TDD | N/A |
|  | n77 | 3400 | 10 | 50 | 3400 | N/A | TDD | N/A |
|  | n3 | 1745 | 5 | 25 | 1840 | 16.4 | FDD | IMD3 |
|  | n41 | 2580 | 5 | 25 | 2580 | N/A | TDD | N/A |
|  | n3 | 1720 | 5 | 25 | 1815 | N/A | FDD | N/A |
|  | n77 | 3440 | 10 | 50 | 3440 | 16.8 | TDD | IMD31 |
| CA\_n3-n41-n78 | n3 | 1730 | 5 | 25 | 1825 | N/A | FDD | N/A |
|  | n41 | 2560 | 10 | 50 | 2560 | N/A | TDD | N/A |
|  | n78 | 3390 | 10 | 50 | 3390 | 16.4 | TDD | IMD3 |
|  | n3 | 1745 | 5 | 25 | 1840 | 16.4 | TDD | IMD3 |
|  | n41 | 2620 | 5 | 25 | 2620 | N/A | FDD | N/A |
|  | n78 | 3400 | 10 | 50 | 3400 | N/A | TDD | N/A |
| CA\_n3-n77-n79 | n77 | 3350 | 10 | 50 | 3350 | N/A | FDD | N/A |
|  | n79 | 4840 | 40 | 216 | 4840 | N/A | TDD | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 15.7 | TDD | IMD31, 2  |2\*fBn77-fBn79| |
| CA\_n5-n7-n78 | n5 | 834 | 5 | 25 | 879 | 30.2 | FDD | IMD2 |
|  | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n78 | 3429 | 10 | 50 | 3429 | N/A | TDD | N/A |
|  | n5 | 830 | 5 | 25 | 875 | 3.3 | FDD | IMD5 |
|  | n7 | 2525 | 5 | 25 | 2645 | N/A | FDD | N/A |
|  | n78 | 3350 | 10 | 50 | 3350 | N/A | TDD | N/A |
|  | n5 | 844 | 5 | 25 | 889 | N/A | FDD | N/A |
|  | n7 | 2525 | 5 | 25 | 2645 | 30.1 | FDD | IMD2 |
|  | n78 | 3489 | 10 | 50 | 3489 | N/A | TDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n7 | 2540 | 5 | 25 | 2660 | N/A | FDD | N/A |
|  | n78 | 3375 | 10 | 50 | 3375 | 29.7 | TDD | IMD2 |
|  | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n78 | 3430 | 10 | 50 | 3430 | 9.7 | TDD | IMD4 |
| CA\_n5-n12-n77 | n5 | 835 | 5 | 25 | 880 | 3.9 | FDD | IMD5 |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n12 | 710 | 5 | 25 | 740 | 4.4 | FDD | IMD55 |
|  | n77 | 4080 | 10 | 50 | 4080 | N/A | TDD | N/A |
|  | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n77 | 3905 | 10 | 50 | 3905 | 4.4 | TDD | IMD5 |
| CA\_n5-n14-n775 | n5 | 835 | 5 | 25 | 880 | 3.9 | FDD | IMD5 |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n77 | 4052 | 10 | 50 | 4052 | N/A | TDD | N/A |
|  | n5 | 846.5 | 5 | 25 | 891.5 | N/A | FDD | N/A |
|  | n14 | 795.5 | 5 | 25 | 765.5 | 11.6 | FDD | IMD41 |
|  | n77 | 3305 | 10 | 50 | 3305 | N/A | TDD | N/A |
|  | n5 | 840 | 5 | 25 | 885 | N/A | FDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n77 | 3313 | 10 | 50 | 3313 | 10.3 | TDD | IMD41 |
| CA\_n5-n25-n66 | n5 | 834 | 5 | 25 | 879 | N/A | FDD | N/A |
|  | n25 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n66 | 1712 | 5 | 25 | 2132 | 7.2 | FDD | IMD4 |
| CA\_n5-n25-n77 | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n25 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n77 | 3540 | 10 | 50 | 3540 | 16.0 | TDD | IMD3 |
|  | n5 | 844 | 5 | 25 | 889 | 3.8 | FDD | IMD55 |
|  | n25 | 1907 | 5 | 25 | 1987 | N/A | FDD | N/A |
|  | n77 | 3305 | 10 | 50 | 3305 | N/A | TDD | N/A |
|  | n5 | 846.5 | 5 | 25 | 891.5 | N/A | FDD | N/A |
|  | n25 | 1907 | 5 | 25 | 1987 | 16.5 | FDD | IMD3 |
|  | n77 | 3680 | 10 | 25 | 3680 | N/A | TDD | N/A |
| CA\_n5-n25-n78 | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n25 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n78 | 3560 | 10 | 50 | 3560 | 16.1 | TDD | IMD3 |
| CA\_n5-n29-n77 | n5 | 845 | 5 | 25 | 890 | N/A | FDD | N/A |
|  | n29 | N/A | 5 | N/A | 720 | 4.4 | SDL | IMD57 |
|  | n77 | 4100 | 10 | 50 | 4100 | N/A | TDD | N/A |
| CA\_n5-n30-n66 | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n30 | 2307.5 | 5 | 25 | 2352.5 | N/A | FDD | N/A |
|  | n66 | 1725 | 5 | 25 | 2125 | 4 | FDD | IMD5 |
| CA\_n5-n30-n77 | n5 | 835 | 5 | 25 | 880 | 15.2 | FDD | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3740 | 10 | 50 | 3740 | N/A | TDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 13.2 | FDD | IMD35 |
|  | n77 | 4025 | 10 | 50 | 4025 | N/A | TDD | N/A |
|  | n5 | 840 | 5 | 25 | 885 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3780 | 10 | 50 | 3780 | 16.1 | TDD | IMD3 |
| CA\_n5-n48-n66 | n5 | 829 | 5 | 25 | 874 | N/A | FDD | N/A |
|  | n48 | 3622 | 10 | 50 | 3622 | 3.6 | TDD | IMD5 |
|  | n66 | 1760 | 5 | 216 | 2160 | N/A | FDD | N/A |
| CA\_n5-n66-n77 | n5 | 845 | 5 | 25 | 890 | N/A | FDD | N/A |
|  | n66 | 1775 | 5 | 25 | 2175 | N/A | FDD | N/A |
|  | n77 | 3465 | 10 | 50 | 3465 | 16.1 | TDD | IMD3 |
|  | n5 | 826.5 | 5 | 25 | 871.5 | N/A | FDD | N/A |
|  | n66 | 1712.5 | 5 | 25 | 2112.5 | N/A | FDD | N/A |
|  | n77 | 4192 | 10 | 50 | 4192 | 8.2 | TDD | IMD45 |
|  | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n66 | 1735 | 5 | 25 | 2135 | N/A | FDD | N/A |
|  | n77 | 3535 | 10 | 50 | 3535 | 3.3 | TDD | IMD5 |
|  | n5 | 826.5 | 5 | 25 | 871.5 | N/A | FDD | N/A |
|  | n66 | 1742 | 5 | 25 | 2142 | 13.2 | FDD | IMD3 |
|  | n77 | 3795 | 10 | 50 | 3795 | N/A | TDD | N/A |
| CA\_n5-n66-n78 | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n66 | 1720 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n78 | 3380 | 10 | 50 | 3380 | 16.1 | TDD | IMD3 |
| CA\_n5-n66-n78 | n5 | 830 | 5 | 25 | 875 | N/A | FDD | N/A |
|  | n66 | 1720 | 5 | 25 | 2120 | 13.2 | FDD | IMD3 |
|  | n78 | 3780 | 10 | 50 | 3780 | N/A | TDD | N/A |
| CA\_n7-n25-n77 | n7 | 2520 | 5 | 25 | 2640 | 5.3 | FDD | IMD5 |
|  | n25 | 1870 | 5 | 25 | 1950 | N/A | FDD | N/A |
|  | n77 | 4125 | 10 | 50 | 4125 | N/A | TDD | N/A |
|  | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n25 | 1870 | 5 | 25 | 1950 | 8.6 | FDD | IMD4 |
|  | n77 | 3525 | 10 | 50 | 3525 | N/A | TDD | N/A |
|  | n7 | 2520 | 5 | 25 | 2640 | N/A | FDD | N/A |
|  | n25 | 1905 | 5 | 25 | 1985 | N/A | FDD | N/A |
|  | n77 | 3750 | 10 | 50 | 3750 | 4.5 | TDD | IMD5 |
| CA\_n7-n25-n78 | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n25 | 1870 | 5 | 25 | 1950 | 8.6 | FDD | IMD4 |
|  | n78 | 3525 | 10 | 50 | 3525 | N/A | TDD | N/A |
|  | n7 | 2520 | 5 | 25 | 2640 | N/A | FDD | N/A |
|  | n25 | 1905 | 5 | 25 | 1985 | N/A | FDD | N/A |
|  | n78 | 3750 | 10 | 50 | 3750 | 4.5 | TDD | IMD5 |
| CA\_n7-n28-n78 | n7 | 2567.5 | 5 | 25 | 2687.5 | N/A | FDD | N/A |
|  | n28 | 727.5 | 5 | 25 | 782.5 | 28.8 | FDD | IMD2 |
|  | n78 | 3350 | 10 | 50 | 3350 | N/A | TDD | N/A |
|  | n7 | 2567.5 | 5 | 25 | 2687.5 | N/A | FDD | N/A |
|  | n28 | 727.5 | 5 | 25 | 782.5 | 3.0 | FDD | IMD5 |
|  | n78 | 3460 | 10 | 50 | 3460 | N/A | TDD | N/A |
|  | n7 | 2530 | 5 | 25 | 2650 | 30.5 | FDD | IMD2 |
|  | n28 | 740 | 5 | 25 | 795 | N/A | FDD | N/A |
|  | n78 | 3390 | 10 | 50 | 3390 | N/A | TDD | N/A |
|  | n7 | 2565 | 5 | 25 | 2685 | N/A | FDD | N/A |
|  | n28 | 745 | 5 | 25 | 800 | N/A | FDD | N/A |
|  | n78 | 3310 | 10 | 50 | 3310 | 29.7 | TDD | IMD2 |
|  | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n28 | 720 | 5 | 25 | 775 | N/A | FDD | N/A |
|  | n78 | 3714 | 10 | 50 | 3714 | 9.7 | TDD | IMD4 |
| CA\_n7-n46-n78 | n7 | 2530 | 5 | 25 | 2650 | N/A | FDD | N/A |
|  | n46 | 5840 | 20 | 100 | 5840 | N/A | TDD | N/A |
|  | n78 | 3310 | 10 | 50 | 3310 | 29,7 | TDD | IMD21 |
|  | n7 | 2530 | 5 | 25 | 2650 | N/A | FDD | N/A |
|  | n46 | 5840 | 20 | 100 | 5840 | 25.2 | TDD | IMD21 |
|  | n78 | 3310 | 10 | 50 | 3310 | N/A | TDD | N/A |
| CA\_n7-n66-n77 | n7 | 2560 | 5 | 25 | 2680 | N/A | FDD | N/A |
|  | n66 | 1730 | 5 | 25 | 2130 | N/A | FDD | N/A |
|  | n77 | 3390 | 10 | 50 | 3390 | 16.1 | TDD | IMD3 |
|  | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n66 | 1750 | 5 | 25 | 2150 | 8.7 | FDD | IMD4 |
|  | n77 | 3625 | 10 | 50 | 3625 | N/A | TDD | N/A |
|  | n7 | 2520 | 5 | 25 | 2640 | 3.4 | FDD | IMD5 |
|  | n66 | 1720 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n77 | 3900 | 10 | 50 | 3900 | N/A | TDD | N/A |
|  | n7 | 2520 | 5 | 25 | 2640 | N/A | FDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n77 | 4040 | 10 | 50 | 4040 | 4.2 | TDD | IMD5 |
| CA\_n7-n66-n78 | n7 | 2560 | 5 | 25 | 2680 | N/A | FDD | N/A |
|  | n66 | 1730 | 5 | 25 | 2130 | N/A | FDD | N/A |
|  | n78 | 3390 | 10 | 50 | 3390 | 16.1 | TDD | IMD3 |
|  | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n66 | 1750 | 5 | 25 | 2150 | 8.7 | FDD | IMD4 |
|  | n78 | 3625 | 10 | 50 | 3625 | N/A | TDD | N/A |
| CA\_n12-n30-n77 | n12 | 710 | 5 | 25 | 740 | 15.2 | FDD | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3880 | 10 | 50 | 3880 | N/A | TDD | N/A |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 13.2 | FDD | IMD3 |
|  | n77 | 3770 | 10 | 50 | 3770 | N/A | TDD | N/A |
|  | n12 | 707 | 5 | 25 | 737 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3913 | 10 | 50 | 3913 | 16.0 | TDD | IMD3 |
| CA\_n12-n66-n77 | n12 | 710 | 5 | 25 | 740 | 15.2 | FDD | IMD35 |
|  | n66 | 1720 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n77 | 4180 | 10 | 50 | 4180 | N/A | TDD | N/A |
|  | n12 | 707 | 5 | 25 | 737 | N/A | FDD | N/A |
|  | n66 | 1726 | 5 | 25 | 2126 | 13.2 | FDD | IMD3 |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
|  | n12 | 704 | 5 | 25 | 734 | N/A | FDD | N/A |
|  | n66 | 1723 | 5 | 25 | 2123 | N/A | FDD | N/A |
|  | n77 | 4150 | 10 | 50 | 4150 | 16.0 | TDD | IMD31,2,5 |
| CA\_n13-n25-n66 | n13 | 782 | 5 | 25 | 751 | N/A | FDD | N/A |
|  | n66 | 1736 | 5 | 25 | 2156 | 7..2 | FDD | IMD4 |
|  | n25 | 1860 | 5 | 25 | 1940 | N/A | FDD | N/A |
|  | n13 | 780 | 10 | 50 | 749 | N/A | FDD | N/A |
|  | n25 | 1860 | 5 | 25 | 1940 | 6.2 | FDD | IMD4 |
|  | n66 | 1750 | 5 | 25 | 2150 | N/A | FDD | N/A |
| CA\_n13-n25-n77 | n13 | 782 | 5 | 25 | 751 | N/A | FDD | N/A |
|  | n25 | 1896 | 5 | 25 | 1976 | N/A | FDD | N/A |
|  | n77 | 3460 | 10 | 50 | 3460 | 17.3 | TDD | IMD31,2 |
|  | n13 | 782 | 5 | 25 | 751 | N/A | FDD | N/A |
|  | n25 | 1880 | 5 | 25 | 1960 | 16.0 | FDD | IMD3 |
|  | n77 | 3524 | 10 | 50 | 3524 | N/A | TDD | N/A |
| CA\_n13-n66-n77 | n13 | 782 | 5 | 25 | 751 | N/A | FDD | N/A |
|  | n66 | 1746 | 5 | 25 | 2146 | 17.1 | FDD | IMD3 |
|  | n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n13 | 781 | 5 | 25 | 750 | 15.2 | FDD | IMD35 |
|  | n66 | 1710 | 5 | 25 | 2110 | N/A | FDD | N/A |
|  | n77 | 4170 | 10 | 50 | 4170 | N/A | TDD | N/A |
|  | n13 | 782 | 5 | 25 | 751 | N/A | FDD | N/A |
|  | n66 | 1770 | 5 | 25 | 2170 | N/A | FDD | N/A |
|  | n77 | 3334 | 10 | 50 | 3334 | 16.3 | TDD | IMD31,2,5 |
| CA\_n14-n30-n77 | n14 | 793 | 5 | 25 | 763 | 15.2 | FDD | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3857 | 10 | 50 | 3857 | N/A | TDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 13.2 | FDD | IMD3 |
|  | n77 | 3941 | 10 | 50 | 3941 | N/A | TDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3896 | 10 | 50 | 3896 | 16.0 | TDD | IMD3 |
| CA\_n14-n66-n77 | n14 | 793 | 5 | 25 | 763 | 15.2 | FDD | IMD35 |
|  | n66 | 1712.5 | 5 | 25 | 2112.5 | N/A | FDD | N/A |
|  | n77 | 4188 | 10 | 50 | 4188 | N/A | TDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n66 | 1755 | 5 | 25 | 2155 | 13.2 | FDD | IMD3 |
|  | n77 | 3741 | 10 | 50 | 3741 | N/A | TDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n66 | 1755 | 5 | 25 | 2155 | N/A | FDD | N/A |
|  | n77 | 3341 | 10 | 50 | 3341 | 16.0 | TDD | IMD31,2,5 |
| CA\_n18-n28-n41 | n18 | 825 | 5 | 25 | 870 | N/A | FDD | N/A |
|  | n28 | 738 | 5 | 25 | 793 | N/A | FDD | N/A |
|  | n41 | 2562 | 10 | 50 | 2562 | 4.4 | TDD | IMD5 |
|  | n18 | 825 | 5 | 25 | 870 | N/A | FDD | N/A |
|  | n41 | 2505 | 10 | 50 | 2505 | N/A | TDD | N/A |
|  | n28 | 740 | 5 | 25 | 795 | 3.9 | FDD | IMD5 |
| CA\_n18-n28-n77 | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n28 | 710 | 5 | 25 | 765 | N/A | FDD | N/A |
|  | n77 | 3770 | 10 | 50 | 3770 | 4.0 | TDD | IMD5 |
|  | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n28 | 723 | 5 | 25 | 778 | 4.4 | FDD | IMD5 |
|  | n77 | 4058 | 10 | 50 | 4058 | N/A | TDD | N/A |
|  | n18 | 820 | 5 | 25 | 865 | 3.9 | FDD | IMD5 |
|  | n28 | 723 | 5 | 25 | 778 | N/A | FDD | N/A |
|  | n77 | 3757 | 10 | 50 | 3757 | N/A | TDD | N/A |
| CA\_n18-n41-n77 | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n41 | 2570 | 5 | 25 | 2570 | N/A | TDD | N/A |
|  | n77 | 3390 | 10 | 50 | 3390 | 30.1 | TDD | IMD22,4 |
|  | n18 | 820 | 5 | 25 | 865 | N/A | FDD | N/A |
|  | n77 | 3450 | 10 | 50 | 3450 | N/A | TDD | N/A |
|  | n41 | 2630 | 5 | 25 | 2630 | 28.5 | TDD | IMD24 |
|  | n41 | 2590 | 10 | 50 | 2590 | N/A | TDD | N/A |
|  | n77 | 3460 | 10 | 50 | 3460 | N/A | TDD | N/A |
|  | n18 | 825 | 5 | 25 | 870 | 29.3 | FDD | IMD21,4 |
| CA\_n24-n41-n48 | n24 | 1649 | 5 | 25 | 1528.5 | N/A | FDD | N/A |
|  | n41 | 2610 | 5 | 25 | 2610 | N/A | TDD | N/A |
|  | n48 | 3571 | 10 | 50 | 3571 | 16.8 | TDD | IMD3 |
|  | n24 | 1630 | 5 | 25 | 1528.5 | N/A | FDD | N/A |
|  | n41 | 2500 | 5 | 25 | 2500 | 5.3 | TDD | IMD5 |
|  | n48 | 3695 | 10 | 50 | 3695 | N/A | TDD | N/A |
|  | n24 | 1631.5 | 5 | 25 | 1530 | 16.4 | FDD | IMD3 |
|  | n41 | 2592.5 | 5 | 25 | 2592.5 | N/A | TDD | N/A |
|  | n48 | 3655 | 10 | 50 | 3655 | N/A | TDD | N/A |
| CA\_n24-n41-n77 | n24 | 1630 | 5 | 25 | 1528.5 | N/A | FDD | N/A |
|  | n41 | 2685 | 5 | 25 | 2685 | N/A | TDD | N/A |
|  | n77 | 3735 | 10 | 50 | 3735 | 16.8 | TDD | IMD31,6 |
|  | n24 | 1630 | 5 | 25 | 1528.5 | N/A | FDD | N/A |
|  | n41 | 2610 | 5 | 25 | 2610 | 5.3 | TDD | IMD56 |
|  | n77 | 3755 | 10 | 50 | 3755 | N/A | TDD | N/A |
|  | n24 | 1630 | 5 | 25 | 1528.5 | 16.4 | FDD | IMD32,6 |
|  | n41 | 2500 | 5 | 25 | 2500 | N/A | TDD | N/A |
|  | n77 | 3465 | 10 | 50 | 3465 | N/A | TDD | N/A |
| CA\_n25-n38-n78 | n25 | 1852.5 | 5 | 25 | 1932.5 | 16.4 | FDD | IMD3 |
|  | n38 | 2617.5 | 5 | 25 | 2617.5 | N/A | TDD | N/A |
|  | n78 | 3305 | 10 | 50 | 3305 | N/A | TDD | N/A |
|  | n25 | 1870 | 5 | 25 | 1950 | N/A | FDD | N/A |
|  | n38 | 2610 | 5 | 25 | 2610 | N/A | TDD | N/A |
|  | n78 | 3350 | 10 | 50 | 3350 | 14.8 | TDD | IMD3 |
|  | n25 | 1880 | 5 | 25 | 1960 | 8.6 | TDD | IMD4 |
|  | n38 | 2570 | 5 | 25 | 2570 | N/A | FDD | N/A |
|  | n78 | 3550 | 10 | 50 | 3550 | N/A | TDD | N/A |
| CA\_n25-n41-n66 | n25 | 1860 | 5 | 25 | 1940 | 11.0 | FDD | IMD4 |
|  | n41 | 2685 | 10 | 50 | 2685 | N/A | TDD | N/A |
|  | n66 | 1715 | 5 | 25 | 2115 | N/A | FDD | N/A |
| CA\_n25-n41-n77 | n25 | 1870 | 5 | 25 | 1950 | N/A | FDD | N/A |
|  | n41 | 2670 | 5 | 25 | 2670 | N/A | TDD | N/A |
|  | n77 | 3470 | 10 | 50 | 3470 | 14.8 | TDD | IMD3 |
|  | n25 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n41 | 2525 | 5 | 25 | 2645 | N/A | TDD | N/A |
|  | n77 | 3775 | 10 | 50 | 3775 | 4.2 | TDD | IMD5 |
|  | n25 | 1870 | 5 | 25 | 1950 | N/A | FDD | N/A |
|  | n41 | 2640 | 5 | 25 | 2640 | 5.3 | TDD | IMD5ZZ |
|  | n77 | 4125 | 10 | 50 | 4125 | N/A | TDD | N/A |
|  | n25 | 1870 | 5 | 25 | 1950 | 17.6 | FDD | IMD3ZZ |
|  | n41 | 2675 | 5 | 25 | 2675 | N/A | TDD | N/A |
|  | n77 | 3400 | 10 | 50 | 3400 | N/A | TDD | N/A |
|  | n25 | 1870 | 5 | 25 | 1950 | 8.6 | FDD | IMD4 |
|  | n41 | 2550 | 5 | 25 | 2685 | N/A | TDD | N/A |
|  | n77 | 3525 | 10 | 50 | 3525 | N/A | TDD | N/A |
| CA\_n25-n41-n78 | n25 | 1870 | 5 | 25 | 1950 | N/A | FDD | N/A |
|  | n41 | 2610 | 5 | 25 | 2610 | N/A | TDD | N/A |
|  | n78 | 3350 | 10 | 50 | 3350 | 14.8 | TDD | IMD3 |
|  | n25 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n41 | 2525 | 5 | 25 | 2645 | N/A | TDD | N/A |
|  | n78 | 3775 | 10 | 50 | 3775 | 4.2 | TDD | IMD5 |
|  | n25 | 1870 | 5 | 25 | 1950 | 17.6 | FDD | IMD3 |
|  | n41 | 2565 | 5 | 25 | 2565 | N/A | TDD | N/A |
|  | n78 | 3180 | 10 | 50 | 3310 | N/A | TDD | N/A |
|  | n25 | 1870 | 5 | 25 | 1950 | 8.6 | FDD | IMD4 |
|  | n41 | 2550 | 5 | 25 | 2685 | N/A | TDD | N/A |
|  | n78 | 3525 | 10 | 50 | 3475 | N/A | TDD | N/A |
| CA\_n25-n48-n66 | n25 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n48 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 10.4 | FDD | IMD4 |
|  | n25 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n48 | 3620 | 10 | 50 | 3620 | 29.4 | TDD | IMD2 |
|  | n66 | 1740 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n25 | 1880 | 5 | 25 | 1960 | 32.1 | FDD | IMD21 |
|  | n48 | 3700 | 10 | 50 | 3700 | N/A | TDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | N/A | FDD | N/A |
| CA\_n25-n66-n77 | n25 | 1855 | 5 | 25 | 1935 | N/A | FDD | N/A |
|  | n66 | 1715 | 5 | 25 | 2115 | 29.2 | FDD | IMD2 |
|  | n77 | 3970 | 10 | 50 | 3970 | N/A | TDD | N/A |
|  | n25 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 10.4 | FDD | IMD4 |
|  | n77 | 3540 | 10 | 50 | 3540 | 10 | TDD | N/A |
|  | n25 | 1900 | 5 | 25 | 1980 | N/A | FDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 4.0 | FDD | IMD5 |
|  | n77 | 3930 | 10 | 50 | 3930 | N/A | TDD | N/A |
|  | n25 | 1880 | 5 | 25 | 1960 | 32.1 | FDD | IMD2 |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
|  | n25 | 1880 | 5 | 25 | 1960 | 9.1 | FDD | IMD4ZZ |
|  | n66 | 1770 | 5 | 25 | 2170 | N/A | FDD | N/A |
|  | n77 | 3350 | 10 | 50 | 3350 | N/A | TDD | N/A |
|  | n25 | 1880 | 5 | 25 | 1960 | 2.1 | FDD | IMD5ZZ |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n77 | 3620 | 10 | 50 | 3620 | N/A | TDD | N/A |
|  | n25 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n77 | 3620 | 10 | 50 | 3620 | 29.4 | TDD | IMD2ZZ |
|  | n25 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n77 | 3900 | 10 | 50 | 3900 | 8.9 | TDD | IMD4 |
| CA\_n25-n66-n78 | n25 | 1880 | 5 | 25 | 1960 | N/A | FDD | N/A |
|  | n66 | 1740 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n78 | 3620 | 10 | 50 | 3620 | 29.4 | TDD | IMD2 |
| CA\_n25-n71-n77 | n25 | 1907.5 | 5 | 25 | 1987.5 | N/A | FDD | N/A |
|  | n71 | 695.5 | 5 | 25 | 649.5 | N/A | FDD | N/A |
|  | n77 | 3305 | 10 | 50 | 3305 | 8.0 | TDD | IMD31,2,5 |
|  | n25 | 1874 | 5 | 25 | 1954 | 16.5 | FDD | IMD32,5 |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3340 | 10 | 50 | 3340 | N/A | TDD | N/A |
| CA\_n25-n71-n78 | n25 | 1907.5 | 5 | 25 | 1987.5 | N/A | FDD | N/A |
| n71 | 695.5 | 5 | 25 | 649.5 | N/A | FDD | N/A |
| n78 | 3305 | 10 | 50 | 3305 | 8.0 | TDD | IMD3 |
| n25 | 1874 | 5 | 25 | 1954 | 16.5 | FDD | IMD3 |
| n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
| n78 | 3340 | 10 | 50 | 3340 | N/A | TDD | N/A |
| CA\_n28-n40-n41 | n28 | 710 | 5 | 25 | 765 | FFS | FDD | IMD4 |
|  | n40 | 2302.5 | 5 | 25 | 2302.5 | N/A | TDD | N/A |
|  | n41 | 2685 | 10 | 50 | 2685 | N/A | TDD | N/A |
| CA\_n28-n40-n78 | n28 | N/A | 5 | 25 | 800.5 | 11 | IMD3 | IMD3 |
|  | n40 | 2302.5 | 5 | 25 | 2302.5 | N/A | N/A | N/A |
|  | n78 | 3795 | 10 | 50 | 3795 | N/A | N/A | N/A |
|  | n28 | 708 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n40 | 2310 | 5 | 25 | 2310 | N/A | TDD | N/A |
|  | n78 | 3736 | 10 | 50 | 3736 | 16.0 | TDD | IMD32 |
|  | n28 | 708 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n40 | 2134 | 5 | 25 | 2134 | 15.7 | TDD | IMD3 |
|  | n78 | 3550 | 10 | 50 | 3550 | N/A | TDD | N/A |
| CA\_n28-n40-n79 | n28 | 730 | 5 | 25 | 785 | N/A | FDD | N/A |
|  | n40 | 2350 | 5 | 50 | 2350 | N/A | TDD | N/A |
|  | n79 | 4540 | 40 | 216 | 4540 | 10.7 | TDD | IMD4 |
|  | n28 | 720 | 5 | 25 | 775 | N/A | FDD | N/A |
|  | n40 | 2340 | 5 | 50 | 2340 | 9.2 | TDD | IMD4 |
|  | n79 | 4500 | 40 | 216 | 4500 | N/A | TDD | N/A |
| CA\_n28-n41-n77 | n41 | 2642 | 5 | 25 | 2642 | N/A | TDD | N/A |
|  | n77 | 3440 | 10 | 50 | 3440 | N/A | TDD | N/A |
|  | n28 | 743 | 5 | 25 | 798 | 30.8 | FDD | IMD24 |
|  | n41 | 2567.5 | 10 | 50 | 2567.5 | N/A | TDD | N/A |
|  | n77 | 3460 | 10 | 50 | 3460 | N/A | TDD | N/A |
|  | n28 | 727.5 | 5 | 25 | 782.5 | 3.0 | FDD | IMD5 |
|  | n28 | 738 | 5 | 25 | 793 | N/A | FDD | N/A |
|  | n77 | 3380 | 10 | 50 | 3380 | N/A | TDD | N/A |
|  | n41 | 2642 | 5 | 25 | 2642 | 29.5 | TDD | IMD2 |
|  | n41 | 2580 | 5 | 25 | 2580 | N/A | TDD | N/A |
|  | n28 | 743 | 5 | 25 | 798 | N/A | FDD | N/A |
|  | n77 | 3323 | 10 | 50 | 3323 | 28.2 | TDD | IMD24 |
| CA\_n28-n41-n78 | n28 | 738 | 5 | 25 | 793 | N/A | FDD | N/A |
|  | n78 | 3380 | 10 | 50 | 3380 | N/A | TDD | N/A |
|  | n41 | 2642 | 5 | 25 | 2642 | 29.5 | TDD | IMD2 |
|  | n41 | 2642 | 5 | 25 | 2642 | N/A | TDD | N/A |
|  | n78 | 3440 | 10 | 50 | 3440 | N/A | TDD | N/A |
|  | n28 | 743 | 5 | 25 | 798 | 30.8 | FDD | IMD21 |
|  | n41 | 2565 | 5 | 25 | 2565 | N/A | TDD | N/A |
|  | n28 | 745 | 5 | 25 | 800 | N/A | FDD | N/A |
|  | n78 | 3310 | 10 | 50 | 3310 | 29.7 | TDD | IMD22 |
| CA\_n28-n41-n79 | n28 | 725 | 5 | 25 | 780 | 13.0 | FDD | IMD31 |
|  | n41 | 2600 | 10 | 50 | 2600 | N/A | TDD | N/A |
|  | n79 | 4600 | 40 | 216 | 4600 | N/A | TDD | N/A |
|  | n28 | 720 | 5 | 25 | 780 | N/A | FDD | N/A |
|  | n41 | 2600 | 10 | 50 | 2600 | N/A | TDD | N/A |
|  | n79 | 4480 | 40 | 216 | 4600 | 10.1 | TDD | IMD32 |
|  | n28 | 735 | 5 | 25 | 790 | N/A | FDD | N/A |
|  | n41 | 2645 | 10 | 50 | 2645 | 10.4 | TDD | IMD4 |
|  | n79 | 4850 | 40 | 216 | 4850 | N/A | TDD | N/A |
| CA\_n28-n46-n78 | n28 | 710 | 5 | 25 | 765 | N/A | FDD | N/A |
|  | n46 | 5170 | 20 | 100 | 5170 | N/A | FDD | N/A |
|  | n78 | 3750 | 10 | 50 | 3750 | 17 | TDD | IMD31 |
|  | n28 | 725 | 5 | 25 | 780 | 16 | FDD | IMD3 |
|  | n46 | 5900 | 20 | 100 | 5900 | N/A | FDD | N/A |
|  | n78 | 3340 | 10 | 50 | 3340 | N/A | TDD | N/A |
|  | n28 | 740 | 5 | 25 | 795 | N/A | FDD | N/A |
|  | n46 | 5900 | 20 | 100 | 5900 | 22 | TDD | IMD31,2 |
|  | n78 | 3320 | 10 | 50 | 3320 | N/A | TDD | N/A |
| CA\_n28-n77-n79 | n77 | 3620 | 10 | 52 | 3620 | N/A | N/A | n77 |
|  | n79 | 4420 | 40 | 216 | 4420 | N/A | N/A | n79 |
|  | n28 | 745 | 5 | 25 | 800 | 16.2 | IMD21,2 | n28 |
| CA\_n28-n78-n79 | n28 | 740 | 5 | 25 | 795 | N/A | FDD | N/A |
|  | n78 | 3700 | 10 | 50 | 3700 | N/A | TDD | N/A |
|  | n79 | 4440 | 40 | 216 | 4440 | 26.2 | TDD | IMD21,3,4 |
|  | n28 | 740 | 5 | 25 | 795 | N/A | FDD | N/A |
|  | n78 | 3700 | 10 | 50 | 3700 | 26.9 | TDD | IMD23,4 |
|  | n79 | 4440 | 40 | 216 | 4440 | N/A | TDD | N/A |
|  | n28 | 745 | 5 | 25 | 800 | 16.2 | FDD | IMD21 |
|  | n78 | 3620 | 10 | 50 | 3620 | N/A | TDD | N/A |
|  | n79 | 4420 | 40 | 216 | 4420 | N/A | TDD | N/A |
| CA\_n29-n30-n66 | n29 | N/A | 5 | N/A | 719.5 | 4.5 | SDL | IMD5 |
|  | n30 | 2307.5 | 5 | 25 | 2352.5 | N/A | FDD | N/A |
|  | n66 | 1777.5 | 5 | 25 | 2177.5 | N/A | FDD | N/A |
| CA\_n29-n30-n77 | n29 | N/A | 5 | N/A | 722 | 15.2 | SDL | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3898 | 10 | 50 | 3898 | N/A | TDD | N/A |
| CA\_n29-n66-n77 | n29 | N/A | 5 | N/A | 722 | 15.2 | SDL | IMD37 |
|  | n66 | 1734 | 5 | 25 | 2134 | N/A | FDD | N/A |
|  | n77 | 4190 | 10 | 50 | 4190 | N/A | TDD | N/A |
| CA\_n30-n66-n77 | n30 | 2310 | 5 | 25 | 2355 | 29.2 | FDD | IMD25 |
|  | n66 | 1745 | 5 | 25 | 2145 | N/A | FDD | N/A |
|  | n77 | 4100 | 10 | 50 | 4100 | N/A | TDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 3.4 | FDD | IMD5 |
|  | n66 | 1735 | 5 | 25 | 2135 | N/A | FDD | N/A |
|  | n77 | 3780 | 10 | 50 | 3780 | N/A | TDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 8.7 | FDD | IMD45 |
|  | n77 | 3390 | 10 | 50 | 3390 | N/A | TDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n66 | 1745 | 5 | 25 | 2145 | N/A | FDD | N/A |
|  | n77 | 4055 | 10 | 50 | 4055 | 28.4 | TDD | IMD21,5 |
| CA\_n38-n66-n78 | n38 | 2550 | 5 | 25 | 2550 | N/A | TDD | N/A |
|  | n66 | 1750 | 5 | 25 | 2150 | 8.7 | FDD | IMD4 |
|  | n78 | 3625 | 10 | 50 | 3625 | N/A | TDD | N/A |
|  | n38 | 2610 | 5 | 25 | 2610 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n78 | 3460 | 10 | 50 | 3460 | 15.0 | TDD | IMD3 |
| CA\_n39-n40-n79 | n39 | 1917.5 | 5 | 25 | 1917.5 | N/A | TDD | N/A |
|  | n40 | 2302.5 | 5 | 25 | 2302.5 | N/A | TDD | N/A |
|  | n79 | 4980 | 40 | 216 | 4980 | 5.8 | TDD | IMD4 |
| CA\_n40-n41-n79 | n40 | 2340 | 5 | 25 | 2340 | N/A | TDD | N/A |
|  | n41 | 2600 | 10 | 50 | 2600 | N/A | TDD | N/A |
|  | n79 | 4940 | 40 | 216 | 4940 | 30.5 | TDD | IMD2 |
| CA\_n41-n66-n77 | n41 | 2600 | 5 | 25 | 2600 | N/A | TDD | N/A |
|  | n66 | 1730 | 5 | 25 | 2130 | N/A | FDD | N/A |
|  | n77 | 3470 | 10 | 50 | 3470 | 16.1 | TDD | IMD31,2 |
|  | n41 | 2670 | 5 | 25 | 2670 | 5.2 | TDD | IMD55 |
|  | n66 | 1715 | 5 | 25 | 2115 | N/A | FDD | N/A |
|  | n77 | 4190 | 10 | 50 | 4190 | N/A | TDD | N/A |
|  | n41 | 2640 | 5 | 25 | 2640 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 9.0 | FDD | IMD4 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
| CA\_n41-n66-n78 | n41 | 2560 | 5 | 25 | 2560 | N/A | TDD | N/A |
|  | n66 | 1730 | 5 | 25 | 2130 | N/A | FDD | N/A |
|  | n77 | 3390 | 10 | 50 | 3390 | 16.1 | TDD | IMD31 |
|  | n41 | 2530 | 5 | 25 | 2530 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 9.0 | FDD | IMD4 |
|  | n77 | 3610 | 10 | 50 | 3610 | N/A | TDD | N/A |
| CA\_n41-n70-n78 | n41 | 2655 | 10 | 50 | 2655 | N/A | TDD | N/A |
|  | n70 | 1700 | 5 | 25 | 2000 | 17.6 | FDD | IMD3 |
|  | n78 | 3310 | 10 | 50 | 3310 | N/A | TDD | N/A |
|  | n41 | 2565 | 10 | 50 | 2565 | N/A | TDD | N/A |
|  | n70 | 1700 | 5 | 25 | 2000 | 8.6 | FDD | IMD4 |
|  | n78 | 3565 | 10 | 50 | 3565 | N/A | TDD | N/A |
|  | n41 | 2480 | 10 | 50 | 2480 | 5.3 | TDD | IMD5 |
|  | n70 | 1700 | 5 | 25 | 2000 | N/A | FDD | N/A |
|  | n78 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n41 | 2545 | 10 | 50 | 2545 | N/A | FDD | N/A |
|  | n70 | 1700 | 5 | 25 | 2000 | N/A | FDD | N/A |
|  | n78 | 3390 | 10 | 50 | 3390 | 16.1 | TDD | IMD3 |
| CA\_n41-n71-n77 | n41 | 2615 | 5 | 25 | 2615 | N/A | TDD | N/A |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3308 | 10 | 50 | 3308 | 29.1 | TDD | IMD21,5 |
|  | n41 | 2564 | 5 | 25 | 2564 | N/A | TDD | N/A |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3950 | 10 | 50 | 3950 | 16.3 | TDD | IMD31 |
|  | n41 | 2580 | 5 | 25 | 2580 | N/A | TDD | N/A |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3774 | 10 | 50 | 3774 | 10.3 | TDD | IMD41 |
|  | n41 | 2615 | 5 | 25 | 2615 | 28.7 | TDD | IMD25 |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3308 | 10 | 50 | 3308 | N/A | TDD | N/A |
|  | n41 | 2564 | 5 | 25 | 2564 | 15.5 | TDD | IMD3 |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3950 | 10 | 50 | 3950 | N/A | TDD | N/A |
|  | 41 | 2680 | 5 | 25 | 2680 | N/A | TDD | N/A |
|  | n71 | 686 | 5 | 25 | 640 | 30.8 | FDD | IMD25 |
|  | n77 | 3320 | 10 | 50 | 3320 | N/A | TDD | N/A |
| CA\_n41-n71-n78 | n41 | 2615 | 5 | 25 | 2615 | N/A | TDD | N/A |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n78 | 3308 | 10 | 50 | 3308 | 29.1 | TDD | IMD21 |
|  | n41 | 2580 | 5 | 25 | 2580 | N/A | TDD | N/A |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3774 | 10 | 50 | 3774 | 10.3 | TDD | IMD41 |
|  | n41 | 2615 | 5 | 25 | 2615 | 28.7 | TDD | IMD2 |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n77 | 3308 | 10 | 50 | 3308 | N/A | TDD | N/A |
|  | 41 | 2642 | 5 | 25 | 2642 | N/A | TDD | N/A |
|  | n71 | 743 | 5 | 25 | 798 | 30.8 | FDD | IMD2 |
|  | n77 | 3440 | 10 | 50 | 3440 | N/A | TDD | N/A |
| CA\_n48-n66-n70 | n48 | 3625 | 10 | 50 | 3625 | N/À | TDD | N/A |
|  | n66 | 1742.5 | 5 | 25 | 2142.5 | 2.8 | FDD | IMD5 |
|  | n70 | 1702.5 | 5 | 25 | 2002.5 | N/A | FDD | N/A |
| CA\_n48-n66-n71 | n48 | 3552.5 | 10 | 50 | 3552.5 | N/A | TDD | N/A |
|  | n66 | 1761.5 | 5 | 25 | 2161.5 | 14.4 | FDD | IMD3 |
|  | n71 | 695.5 | 5 | 25 | 649.5 | N/A | FDD | N/A |
|  | n48 | 3695 | 10 | 50 | 3695 | 5.2 | TDD | IMD4 |
|  | n66 | 1712.5 | 5 | 25 | 2112.5 | N/A | FDD | N/A |
|  | n71 | 665.5 | 5 | 25 | 619.5 | N/A | FDD | N/A |
| CA\_n48-n70-n71 | n48 | 3694 | 10 | 50 | 3694 | 9 | TDD | IMD41 |
|  | n70 | 1697.5 | 5 | 25 | 1997.5 | N/A | FDD | N/A |
|  | n71 | 665.5 | 5 | 25 | 619.5 | N/A | FDD | N/A |
| CA\_n66-n70-n78 | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n70 | 1700 | 5 | 25 | 2000 | 32.1 | FDD | IMD2 |
|  | n78 | 3760 | 10 | 50 | 3760 | N/A | TDD | N/A |
|  | n66 | 1770 | 5 | 25 | 2170 | N/A | FDD | N/A |
|  | n70 | 1700 | 5 | 25 | 2000 | 9.1 | FDD | IMD4 |
|  | n78 | 3310 | 10 | 50 | 3310 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n70 | 1700 | 5 | 25 | 2000 | 2.1 | FDD | IMD5 |
|  | n78 | 3640 | 10 | 50 | 3640 | N/A | TDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 5.0 | FDD | IMD5 |
|  | n70 | 1700 | 5 | 25 | 2000 | N/A | FDD | N/A |
|  | n78 | 3630 | 10 | 50 | 3630 | N/A | TDD | N/A |
| CA\_n66-n71-n77 | n66 | 1720 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n71 | 668 | 5 | 25 | 622 | N/A | FDD | N/A |
|  | n77 | 4108 | 10 | 50 | 4108 | 15.9 | TDD | IMD31,2,5 |
|  | n66 | 1750 | 5 | 25 | 2150 | 15.5 | FDD | IMD32 |
|  | n71 | 690 | 5 | 25 | 644 | N/A | FDD | N/A |
|  | n77 | 3530 | 10 | 50 | 3530 | N/A | TDD | N/A |
|  | n66 | 1720 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n71 | 686 | 5 | 25 | 640 | 15.3 | FDD | IMD35 |
|  | n77 | 4080 | 10 | 50 | 4080 | N/A | TDD | N/A |
| CA\_n66-n71-n78 | n66 | 1720 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n71 | 668 | 5 | 25 | 622 | N/A | FDD | N/A |
|  | n78 | 3724 | 10 | 50 | 3724 | 9 | TDD | IMD41 |
|  | n66 | 1760 | 5 | 25 | 2160 | 15.5 | FDD | IMD3 |
|  | n71 | 693 | 5 | 25 | 647 | N/A | FDD | N/A |
|  | n78 | 3546 | 10 | 50 | 3546 | N/A | TDD | N/A |
| NOTE 1: This band is subject to IMD5 also which MSD is not specified.  NOTE 2: This band is subject to IMD4 also which MSD is not specified.  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: This band is subject to IMD3 also which MSD is not specified.  NOTE 5: 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.  NOTE 6: This band is subjected to 2nd order IMD but is not expected for the operating frequency range of n77 within USA (3450 – 3550 MHz, 3700 – 3980 MHz).  NOTE 7: The MSD test points cannot be verified for the band combination in US due to the Band n77 frequency range restriction.  NOTE 8: Both of the transmitters shall be set min(+20 dBm, PCMAX\_L,f,c) as defined in clause 6.2A.4 | | | | | | | | |

Table 7.3A.5-2a: 3DL/2UL interband Reference sensitivity QPSK PREFSENS and uplink/downlink configurations for PC2 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-n78 | n1 | 1950 | 5 | 25 | 2140 | N/A | FDD | N/A |
|  | n3 | 1735 | 5 | 25 | 1830 | 33.9 |  | IMD2 |
|  | n78 | 3780 | 10 | 52 | 3780 | N/A | TDD | N/A |
| CA\_n2A-n5A-n77A | n2 | 1907.5 | 5 | 25 | 1987.5 | N/A | FDD | N/A |
|  | n5 | 842.5 | 5 | 25 | 887.5 | 13.6 | FDD | IMD55 |
|  | n77 | 3305 | 5 | 25 | 3305 | N/A | TDD | N/A |
|  | n2 | 1907 | 5 | 25 | 1987 | 24.8 | FDD | IMD35 |
|  | n5 | 846.5 | 5 | 25 | 891.5 | N/A | FDD | N/A |
|  | n77 | 3680 | 5 | 25 | 3680 | N/A | TDD | N/A |
| CA\_n2A-n12A-n77A | n2 | 1880 | 5 | 25 | 1960 | 24,8 | FDD | IMD32,5 |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n77 | 3375 | 10 | 50 | 3375 | N/A | TDD | N/A |
| CA\_n2A-n14A-n77A | n2 | 1874 | 5 | 25 | 1954 | 24.8 | FDD | IMD3 |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
| CA\_n2A-n30A-n77A | n2 | 1906 | 5 | 25 | 1986 | 19.3 | FDD | IMD45 |
|  | n30 | 2312 | 5 | 25 | 2357 | N/A | FDD | N/A |
|  | n77 | 3305 | 10 | 50 | 3305 | N/A | TDD | N/A |
|  | n2 | 1905 | 5 | 25 | 1985 | N/A | FDD | N/A |
|  | n30 | 2309 | 5 | 25 | 2354 | 22.2 | FDD | IMD45 |
|  | n77 | 3361 | 10 | 50 | 3361 | N/A | TDD | N/A |
|  | n2 | 1860 | 5 | 25 | 1940 | N/A | FDD | N/A |
|  | n30 | 2309 | 5 | 25 | 2354 | 12.9 | FDD | IMD5 |
|  | n77 | 3967 | 10 | 50 | 3967 | N/A | TDD | N/A |
| CA\_n2-n66-n77 | n2 | 1855 | 5 | 25 | 1935 | N/A | FDD | N/A |
|  | n66 | 1715 | 5 | 25 | 2115 | 34.7 | FDD | IMD21,2 |
|  | n77 | 3970 | 10 | 50 | 3970 | N/A | TDD | N/A |
|  | n2 | 1880 | 5 | 25 | 1960 | 37.6 | FDD | IMD21,2 |
|  | n66 | 1760 | 5 | 25 | 2160 | N/A | FDD | N/A |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
| CA\_n5-n7-n78 | n5 | 834 | 5 | 25 | 879 | 35.2 | FDD | IMD2 1 |
|  | n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
|  | n78 | 3429 | 10 | 50 | 3429 | N/A | TDD | N/A |
|  | n5 | 844 | 5 | 25 | 889 | N/A | FDD | N/A |
|  | n7 | 2525 | 5 | 25 | 2645 | 35.1 | FDD | IMD2 |
|  | n78 | 3489 | 10 | 50 | 3489 | N/A | TDD | N/A |
| CA\_n5A-n12A-n77A | n5 | 835 | 5 | 25 | 880 | 14.0 | FDD | IMD5 |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n12 | 710 | 5 | 25 | 740 | 14.9 | FDD | IMD55 |
|  | n77 | 4080 | 10 | 50 | 4080 | N/A | TDD | N/A |
| CA\_n5A-n14A-n77A5 | n5 | 835 | 5 | 25 | 880 | 14.0 | FDD | IMD5 |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n77 | 4052 | 10 | 50 | 4052 | N/A | TDD | N/A |
|  | n5 | 846.5 | 5 | 25 | 891.5 | N/A | FDD | N/A |
|  | n14 | 795.5 | 5 | 25 | 765.5 | 20.3 | FDD | IMD41 |
|  | n77 | 3305 | 10 | 50 | 3305 | N/A | TDD | N/A |
| CA\_n5-n29-n77 | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n29 | N/A | 5 | N/A | 722 | 14.9 | FDD | IMD55 |
|  | n77 | 4062 | 10 | 50 | 4062 | N/A | TDD | N/A |
| CA\_n5A-n30A-n77A | n5 | 835 | 5 | 25 | 880 | 23.5 | FDD | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3740 | 10 | 50 | 3740 | N/A | TDD | N/A |
|  | n5 | 835 | 5 | 25 | 880 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 21.4 | FDD | IMD35 |
|  | n77 | 4025 | 10 | 50 | 4025 | N/A | TDD | N/A |
| CA\_n5-n66-n77 | n5 | 826.5 | 5 | 25 | 871.5 | N/A | FDD | N/A |
|  | n66 | 1742 | 5 | 25 | 2142 | 22.2 | FDD | IMD3 |
|  | n77 | 3795 | 10 | 50 | 3795 | N/A | TDD | N/A |
| CA\_n7-n28-n78 | n7 | 2567.5 | 5 | 25 | 2687.5 | N/A | FDD | N/A |
|  | n28 | 727.5 | 5 | 25 | 782.5 | 33.8 | FDD | IMD21 |
|  | n78 | 3350 | 10 | 50 | 3350 | N/A | TDD | N/A |
|  | n7 | 2530 | 5 | 25 | 2650 | 35.5 | FDD | IMD2 |
|  | n28 | 740 | 5 | 25 | 795 | N/A | FDD | N/A |
|  | n78 | 3390 | 10 | 50 | 3390 | N/A | TDD | N/A |
| CA\_n12A-n30A-n77A | n12 | 710 | 5 | 25 | 740 | 23.5 | FDD | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3880 | 10 | 50 | 3880 | N/A | TDD | N/A |
|  | n12 | 707.5 | 5 | 25 | 737.5 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 21.4 | FDD | IMD3 |
|  | n77 | 3770 | 10 | 50 | 3770 | N/A | TDD | N/A |
| CA\_n12A-n66A-n77A | n12 | 710 | 5 | 25 | 740 | 23.5 | FDD | IMD35 |
|  | n66 | 1720 | 5 | 25 | 2120 | N/A | FDD | N/A |
|  | n77 | 4180 | 10 | 50 | 4180 | N/A | TDD | N/A |
|  | n12 | 707 | 5 | 25 | 737 | N/A | FDD | N/A |
|  | n66 | 1726 | 5 | 25 | 2126 | 21.4 | FDD | IMD3 |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
| CA\_n14A-n30A-n77A | n14 | 793 | 5 | 25 | 763 | 23.5 | FDD | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3857 | 10 | 50 | 3857 | N/A | TDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 21.4 | FDD | IMD3 |
|  | n77 | 3941 | 10 | 50 | 3941 | N/A | TDD | N/A |
| CA\_n14A-n66A-n77A | n14 | 793 | 5 | 25 | 763 | 23.5 | FDD | IMD35 |
|  | n66 | 1712.5 | 5 | 25 | 2112.5 | N/A | FDD | N/A |
|  | n77 | 4188 | 10 | 50 | 4188 | N/A | TDD | N/A |
|  | n14 | 793 | 5 | 25 | 763 | N/A | FDD | N/A |
|  | n66 | 1755 | 5 | 25 | 2155 | 21.4 | FDD | IMD3 |
|  | n77 | 3741 | 10 | 50 | 3741 | N/A | TDD | N/A |
| CA\_n29-n30-n77 | n29 | N/A | 5 | N/A | 722 | 23.5 | FDD | IMD31 |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n77 | 3898 | 10 | 50 | 3898 | N/A | TDD | N/A |
| CA\_n29-n66-n77 | n29 | N/A | 5 | N/A | 722 | 23.5 | FDD | IMD35 |
|  | n66 | 1734 | 5 | 25 | 2134 | N/A | FDD | N/A |
|  | n77 | 4190 | 10 | 50 | 4190 | N/A | TDD | N/A |
| CA\_n30A-n66A-n77A | n30 | 2310 | 5 | 25 | 2355 | 34.2 | FDD | IMD25 |
|  | n66 | 1745 | 5 | 25 | 2145 | N/A | FDD | N/A |
|  | n77 | 4100 | 10 | 50 | 4100 | N/A | TDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | 12.9 | FDD | IMD5 |
|  | n66 | 1735 | 5 | 25 | 2135 | N/A | FDD | N/A |
|  | n77 | 3780 | 10 | 50 | 3780 | N/A | TDD | N/A |
|  | n30 | 2310 | 5 | 25 | 2355 | N/A | FDD | N/A |
|  | n66 | 1760 | 5 | 25 | 2160 | 19.2 | FDD | IMD45 |
|  | n77 | 3390 | 10 | 50 | 3390 | N/A | TDD | N/A |
| NOTE 1: This band is subject to IMD5 also which MSD is not specified.  NOTE 2: This band is subject to IMD4 also which MSD is not specified.  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: This band is subject to IMD3 also which MSD is not specified.  NOTE 5: 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.  NOTE 6: Both of the transmitters shall be set min(+23 dBm, PCMAX\_L,f,c) as defined in clause 6.2A.4 | | | | | | | | |

### 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 which belongs to NR band of the same NR CA configuration due to cross band isolation issues. Reference sensitivity exceptions for the victim band due to cross band isolation from a PC3 aggressor NR UL band for either PC3 and PC2 NR CA are specified in Table 7.3A.6-1 and from a PC2 aggressor NR UL band for PC2 NR CA are specified in Table 7.3A.6-1a and from PC1.5 aggressor NR single band uplink are specified in Table 7.3A.6-1b with uplink configuration specified in Table 7.3A.6-2.

Table 7.3A.6-1: Reference sensitivity exceptions (MSD) due to cross band isolation from a PC3 aggressor NR UL band for NR CA 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) |
| 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 | 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 from a PC2 aggressor NR UL band for NR CA 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) |
| 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 | 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 |
| n41 | n79 |  |  |  |  |  |  | 3.1 | 3.1 | 3.1 |  | 3.1 |  | 3.1 |
| n77 | n2 | 1.0 | 1.0 | 1.0 | 1.0 |  |  |  |  |  |  |  |  |  |
| n77 | n25 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |  |  |  |  |  |  |
| n77 | n30 | 1.0 | 1.0 |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| n77 | n66 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |  |  |  |  |  |  |
| n78 | n7 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |  |  |  |  |  |
| n79 | n41 |  | 3.5 | 3.3 | 3.1 |  |  | 2.6 | 2.5 | 2.5 |  | 2.4 | 2.4 | 2.4 |
| 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 from a PC1.5 aggressor NR single UL band for DL NR CA 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) |
| 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 |
| n77 | n2 | 1.8 | 1.8 | 1.8 | 1.8 |  |  |  |  |  |  |  |  |  |
| n77 | n25 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |  |  |  |  |  |  |
| n77 | n411 |  | 9.0 | 9.0 | 9.0 |  | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| n77 | n412 |  | 16.1 | 16.1 | 16.1 |  | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 |
| n77 | n66 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |  |  |  |  |  |  |
| 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.6.2: 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 |
| n41 | n79 | 15 |  |  |  |  |  |  | 100 | 100 | 100 |  | 100 |  | 100 |
| n41 | n79 | 30 |  |  |  |  |  |  | 270 | 270 | 270 |  | 270 |  | 270 |
| 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 | n2 | 15 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |  |  |
| n77 | n25 | 30 | 270 | 270 | 270 | 270 |  | 270 | 270 |  |  |  |  |  |  |
| n77 | n30 | 30 | 270 | 270 |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| n77 | n66 | 30 | 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 | n41 | 30 |  | 270 | 270 | 270 |  |  | 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. | | | | | | | | | | | | | | | |

## <End of Changes>