**3GPP TSG-RAN WG4 Meeting #109 R4-2320315**

**Chicago, USA, 13th November – 17th November 2023**

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| *CR-Form-v12.2* |
| **DRAFT CHANGE REQUEST** |
|  |
|  | **38.101-1** | **CR** |  | **rev** |  | **Current version:** | **18.3.0** |  |
|  |
| *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 |  |

|  |
| --- |
|  |
| ***Title:***  | draft CR 38.101-1 correcting NR CA HPUE typos |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18 |  | ***Date:*** | 2023-11-03 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-18 |
|  | *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 canbe 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:*** | Correcting HPUE typos |
|  |  |
| ***Summary of change:*** | Change UL from n78 to n77 for CA\_n7-n77 configurationsChange UL from n77 to n79 for CA\_n8A-n79AChange UL from n77 to n78 for CA\_n66-n78 configurationsHide borders in the two leftmost columns for CA\_n7B-n78A so that also BCS 4 and 5 are includedHide borders in the two leftmost columns for CA\_n7B-n78(2A) so that also BCS 4 and 5 are includedHide borders in the two leftmost columns for CA\_n8A-n79A so that also BCS 4 and 5 are includedChange in MSD table so that CA\_n1-n77 refers to n1 instead of 1Hide borders in the leftmost column in MSD table for CA\_n1-n77Change colour from red to black in MSD table for CA\_n1-n77Change in MSD table so that CA\_n12-n77 refers to n12 instead of 12Change in MSD table so that CA\_n13-n77 refers to n12 instead of 13Change in MSD table so that CA\_n14-n77 refers to n12 instead of 14Change in MSD table so that CA\_n5-n77 refers to n5 instead of 5Hide borders in the leftmost column in MSD table for CA\_n28-n77Change colour from red to black in MSD table for CA\_n28-n77Change in MSD table so that CA\_n30-n77 refers to n30 instead of 30Change from red to black font for Note 14 and 15 in Table 7.3A.5-1a |
|  |  |
| ***Consequences if not approved:*** | Typos are not corrected |
|  |  |
| ***Clauses affected:*** | 5.5, 7,3 |
|  |  |
|  | **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---

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 | CA\_n7A-n8A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n7A-n12A | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n12 | 5, 10, 15 |  |
| 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-n26A | CA\_n7A-n26A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n26 | 5, 10, 15, 20 |  |
| CA\_n7A-n26(2A) | CA\_n7A-n26A | n7 | 5, 10, 15, 20, 25, 30, 35, 40, 50 | 0 |
|  |  | n26 | CA\_n26(2A)\_BCS0 |  |
| CA\_n7B-n26A | CA\_n7A-n26ACA\_n7B | n7 | CA\_n7B\_BCS0 | 0 |
|  |  | n26 | 5, 10, 15, 20 |  |
| CA\_n7B-n26(2A) | CA\_n7A-n26A | n7 | CA\_n7B\_BCS0 | 0 |
|  |  | n26 | CA\_n26(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-n28ACA\_n7B | n7 | CA\_n7B\_BCS0 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
| CA\_n7A-n40A | CA\_n7A-n40A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| 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-n46(2A) | CA\_n7A-n46A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n46 | CA\_n46(2A)\_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-n67A | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n67 | 5, 10, 15, 20 |  |
| CA\_n7A-n71A | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n7A-n75A | - | n7 | 10, 15, 20 | 0 |
|  |  | n75 | 5, 10, 15, 20 |  |
|  |  | n7 | n7 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n75 | n75 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n7A-n77A | n778,9CA\_n7A-n77A8 | 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 | n778,9CA\_n7A-n77A8 | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n7A-n77(2A) | n778,9CA\_n7A-n77A8 | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n7(2A)-n77(2A) | n778,9CA\_n7A-n77A8 | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n7A-n77(3A) | n778,9CA\_n77(2A)CA\_n7A-n77A8 | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS1 |  |
| CA\_n7(2A)-n77(3A) | n778,9CA\_n77(2A)CA\_n7A-n77A8 | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS1 |  |
| CA\_n7A-n78A | n788,9CA\_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 |  |
|  |  | n7 | n7 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n78 | n78 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n7A-n78C | CA\_n7A-n78A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n78 | CA\_n78C\_BCS1 |  |
| CA\_n7B-n78A | n788CA\_n7A-n78A8CA\_n7B | n7 | CA\_n7B\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n7 | CA\_n7B\_BCS4 and 5 | 4 and 5 |
|  |  | n78 | n78 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n7B-n78(2A) | CA\_n7A-n78ACA\_n7B | n7 | CA\_n7B\_BCS0 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n7 | CA\_n7B\_BCS4 and 5 | 4 and 5 |
|  |  | n78 | CA\_n78(2A)\_BCS4 and 5 |  |
| CA\_n7A-n78(2A) | n788,9CA\_n7A-n78A8 | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  | CA\_n78(2A) | n78 | CA\_n78(2A)\_BCS0 |  |
|  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
|  |  | n7 | See n7 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n78 | CA\_n78(2A)\_BCS4 and 5 |  |
| 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 |  |
|  |  | n7 | CA\_n7(2A)\_BCS4 and 5 | 4 and 5 |
|  |  | n78 | See n78 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n7(2A)-n78(2A) | CA\_n7A-n78ACA\_n78(2A) | n7 | CA\_n7(2A)\_BCS0 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n7 | CA\_n7(2A)\_BCS0 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
|  |  | n7 | CA\_n7(2A)\_BCS4 and 5 | 4 and 5 |
|  |  | n78 | CA\_n78(2A)\_BCS4 and 5 |  |
| CA\_n7A-n79A | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
|  |  | n7 | n7 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n79 | n79 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n7A-n79C | - | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
|  |  | n7 | n7 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n79 | CA\_n79C\_BCS4 and 5 |  |
| CA\_n7A-n102A | CA\_n7A-n102A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n102 | 20, 40, 60, 80, 100 |  |
| CA\_n7A-n102(2A) | CA\_n7A-n102A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n102 | CA\_n102(2A)\_BCS0 |  |
| CA\_n7A-n102B | CA\_n7A-n102A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n102 | CA\_n102B\_BCS0 |  |
| CA\_n7A-n102C | CA\_n7A-n102A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n102 | CA\_n102C\_BCS0 |  |
| CA\_n7A-n102D | CA\_n7A-n102A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n102 | CA\_n102D\_BCS0 |  |
| CA\_n7A-n102E | CA\_n7A-n102A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n102 | CA\_n102E\_BCS0 |  |
| CA\_n7A-n105A | CA\_n7A-n105A | n7 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n105 | 5, 10, 15, 20, 25, 30, 35 |  |
| 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-n38A | - | n8 | 5, 10, 15, 20 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| 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 |  |
|  |  | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n40 | See n40 channel bandwidths in Table 5.3.5-1 |  |
| 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 |  |
|  |  | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n41 | See n41 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n8A-n41C | CA\_n8A-n41A | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n41 | CA\_n41C\_BCS4 and 5 |  |
| CA\_n8A-n75A | - | n8 | 5, 10, 15, 20 | 0 |
|  |  | n75 | 5, 10, 15, 20 |  |
|  |  | n8 | 5, 10,15, 20 | 1 |
|  |  | n75 | 5, 10,15, 20, 25, 30, 40, 50 |  |
| 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 | n788CA\_n8A-n78A8 | 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 |  |
|  |  | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n78 | See n78 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n8A-n78C | CA\_n8A-n78A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n78 | CA\_n78C\_BCS4 and 5 |  |
| CA\_n8A-n78(2A) | CA\_n8A-n78A | n8 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  |  | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n78 | CA\_n78(2A)\_BCS4 and 5 |  |
| CA\_n8A-n79A | n798,9CA\_n8A-n79A8 | n8 | 5, 10, 15, 20 | 0 |
|  |  | n79 | 10, 20, 40, 50, 60, 80, 100 |  |
|  |  | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n79 | See n79 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n8A-n79C | CA\_n8A-n79ACA\_n79C | n8 | 5, 10, 15, 20 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
|  |  | n8 | See n8 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n79 | CA\_n79C\_BCS0 |  |

---Text omitted---

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 |  |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n71 | n71 channel bandwidths in Table 5.3.5-1 |  |
| 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 |  |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n71 | CA\_n71B\_BCS 4 and 5 |  |
| CA\_n66A-n71(2A) | CA\_n66A-n71A | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n71 | CA\_n71(2A)\_BCS 4 and 5 |  |
| 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 |  |
|  |  | n66 | CA\_n66(2A)\_BCS 4 and 5 | 4 and 5 |
|  |  | n71 | n71 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n66(2A)-n71B | CA\_n66A-n71A | n66 | CA\_n66(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71B\_BCS2 |  |
|  |  | n66 | CA\_n66(2A)\_BCS 4 and 5 | 4 and 5 |
|  |  | n71 | CA\_n71B\_BCS 4 and 5 |  |
| CA\_n66(2A)-n71(2A) | CA\_n66A-n71A | n66 | CA\_n66(2A)\_BCS1 | 0 |
|  |  | n71 | CA\_n71(2A)\_BCS0 |  |
|  |  | n66 | CA\_n66(2A)\_BCS 4 and 5 | 4 and 5 |
|  |  | n71 | CA\_n71(2A)\_BCS 4 and 5 |  |
| CA\_n66(3A)-n71A | CA\_n66A-n71A | n66 | CA\_n66(3A)\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n66B-n71A | CA\_n66A-n71A | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n71 | 5, 10, 15, 20 |  |
| CA\_n66A-n77A | n778,9CA\_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 |  |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n77 | n77 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n66A-n77B | - | n66 | n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n77 | CA\_n77B\_BCS 4 and 5 |  |
| CA\_n66(2A)-n77A | n778,9CA\_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 |  |
|  |  | n66 | CA\_n66(2A)\_BCS 4 and 5 | 4 and 5 |
|  |  | n77 | n77 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n66(2A)-n77B | - | n66 | CA\_n66(2A)\_BCS 4 and 5 | 4 and 5 |
|  |  | n77 | CA\_n77B\_BCS 4 and 5 |  |
| CA\_n66A-n77(2A) | n778,9CA\_n66A-n77A8CA\_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 |  |
|  |  | n66 | n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n77 | CA\_n77(2A)\_BCS 4 and 5 |  |
| CA\_n66(3A)-n77A | n778CA\_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) | n778,9CA\_n66A-n77A8CA\_n77(2A) | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
|  |  | n66 | CA\_n66(2A)\_BCS1 | 1 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
|  |  | n66 | CA\_n66(2A)\_BCS 4 and 5 | 4 and 5 |
|  |  | n77 | CA\_n77(2A)\_BCS 4 and 5 |  |
| CA\_n66(3A)-n77(2A) | n778CA\_n66A-n77A8 | n66 | CA\_n66(3A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS1 |  |
| CA\_n66A-n77C | n778,9CA\_n77CCA\_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\_n66A-n77(3A) | n778,9CA\_n77(2A)CA\_n66A-n77A8 | n66 | 5, 10, 15, 20, 40 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS0 |  |
|  |  | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n77 | CA\_n77(3A)\_BCS1 |  |
| CA\_n66(2A)-n77(3A) | CA\_n66(2A)CA\_n77(2A)CA\_n66A-n77A | n66 | CA\_n66(2A)\_BCS0 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS1 |  |
| CA\_n66(2A)-n77C | n778,9CA\_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 | n778,9CA\_n66A-n77A8 | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n77 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n66B-n77C | n778,9CA\_n66A-n77A8 | n66 | CA\_n66B\_BCS0 | 0 |
|  |  | n77 | CA\_n77C\_BCS0 |  |
|  |  | n66 | CA\_n66B\_BCS0 | 1 |
|  |  | n77 | CA\_n77C\_BCS1 |  |
| CA\_n66A-n78A | n788,9CA\_n66A-n78A8 | 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 |  |
|  |  | n66 | See n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n78 | See n78 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n66A-n78(2A) | n788,9CA\_n66A-n78A8 | n66 | 5, 10, 15, 20, 30, 40 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  | CA\_n66A-n78ACA\_n78(2A) | n66 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
|  | CA\_n66A-n78A | n66 | See n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n78 | CA\_n78(2A)\_BCS4 and 5 |  |
| 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 |  |
|  |  | n66 | CA\_n66(2A)\_BCS4 and 5 | 4 and 5 |
|  |  | n78 | See n78 channel bandwidths in Table 5.3.5-1 |  |
| 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 |  |
|  |  | n66 | CA\_n66(2A)\_BCS4 and 5 | 4 and 5 |
|  |  | n78 | CA\_n78(2A)\_BCS4 and 5 |  |
| CA\_n66A-n85A | CA\_n66A-n85A | n66 | See n66 channel bandwidths in Table 5.3.5-1 | 4 and 5 |
|  |  | n85 | See n85 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n66(2A)-n85A | CA\_n66A-n85A | n66 | CA\_n66(2A)\_BCS 4 and 5 | 4 and 5 |
|  |  | n85 | See n85 channel bandwidths in Table 5.3.5-1 |  |
| CA\_n67A-n78A | - | n67 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n67A-n78(2A) | CA\_n78(2A) | n67 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |

---Text omitted---

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

|  |  |
| --- | --- |
| Band / Channel bandwidth / NRB / Duplex mode | Source of IMD |
| NR CAConfiguration | NR band | UL Fc (MHz) | UL/DL BW (MHz) | UL LCRB | DL Fc (MHz) | MSD (dB) | Duplex mode |  |
| CA\_n1-n774 | n1 | 1950 | 5 | 25 | 2140 | 35.8 | FDD | IMD2 |
|  | n77 | 4090 | 10 | 50 | 4090 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 17.8 | FDD | IMD4 |
|  | n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n1 | N/A | 5 | N/A | 2130 | 31 | FDD | IMD515 |
|  | n7712 | 3310 | 10 | 1 RBSTART=25 | 3310 | N/A | TDD | N/A |
|  |  | 3900 | 10 | 1 RBSTART=25 | 3900 | N/A | TDD | N/A |
| 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-n774 | n3 | 1740 | 5 | 25 | 1835 | 31.9 | FDD | IMD2 |
|  | n77 | 3575 | 10 | 50 | 3575 | N/A | TDD | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 18.5 | FDD | IMD4 |
|  | 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 | 13.6 | FDD | IMD7 |
|  | n7712 | 3427.5 | 10 | 1 (RBstart=10) | 3427.5 | N/A | TDD | N/A |
|  |  | 3945 | 10 | 1 (RBstart=0) | 3945 | 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 |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n2 | 1900 | 5 | 25 | 1980 | 19.10 | FDD | IMD4 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | TDD | N/A |
| CA\_n5-n774,6 | n5 | 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\_n7-n77 | n7 | 2540 | 5 | 25 | 2660 | [15.8] | FDD | IMD4 |
|  | n77 | 3870 | 10 | 50 | 3870 | N/A | TDD | N/A |
| CA\_n8-n78 | n8 | 897.5 | 5 | 25 | 942.5 | 15.5 | FDD | IMD4 |
|  | n78 | 3635 | 10 | 50 | 3635 | N/A | TDD | N/A |
| CA\_n8-n79 | n8 | 897.5 | 5 | 25 | 942.5 | 21.5 | FDD | IMD5 |
|  | n79 | 4532.5 | 40 | 216 | 4532.5 | N/A | TDD | N/A |
| CA\_n12-n77 | n12 | 702 | 5 | 20 | 732 | 11.7 | FDD | IMD5 |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | TDD | N/A |
| CA\_n13-n77 | n13 | 782 | 5 | 20 | 751 | 20.5 | FDD | IMD5 |
|  | n77 | 3880 | 10 | 50 | 3880 | N/A | TDD | N/A |
| CA\_n14-n77 | n14 | 795.5 | 5 | 15 | 765.5 | 11.7 | FDD | IMD5 |
|  | n77 | 3947.5 | 10 | 50 | 3947.5 | N/A | TDD | N/A |
| CA\_n25-n41 | n25 | N/A | 5 | N/A | 1992.5 | 8.5 | FDD | IMD7 |
|  | n41 | 2545 | 90 | 1 (RBstart=0) | 2545 | N/A | TDD | N/A |
|  |  | 2640 | 100 | 1 (RBstart=221) | 2640 |  |  |  |
| 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\_n25-n78 | n25 | 1855 | 5 | 25 | 1935 | 32.10 | FDD | IMD24 |
|  | n78 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | 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 | 19.2 | FDD | IMD5 |
|  | n77 | 3582.5 | 10 | 50 | 3582.5 | N/A | TDD | N/A |
|  | n28 | 725 | 5 | 25 | 780 | 18.5 | FDD | IMD414 |
|  | n7712 | 3510 | 10 | 1 RBSTART=25 | 3510 | N/A | TDD | N/A |
|  |  | 3900 | 10 | 1 RBSTART=25 | 3900 | N/A | TDD | N/A |
| CA\_n30-n77 | n30 | 2310 | 5 | 25 | 2355 | 17.6 | FDD | IMD4 |
|  | n77 | 3487.5 | 10 | 50 | 3487.5 | N/A | TDD | N/A |
| 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 | 16.3 | 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\_n66-n77 | n66 | 1775  | 5 | 25 | 2175  | 34.33 | FDD | IMD2 |
|  | n77 | 3950  | 10 | 50 | 3950  | 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\_n66-n78 | n66 | 1760 | 5 | 25 | 2160 | 11.27 | FDD | IMD5 |
|  | n78 | 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.4NOTE 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: Void.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.NOTE 14: This band is subject to IMD6 also which MSD is not specified.NOTE 15: This band is subject to IMD7 also which MSD is not specified. |

---End of changes---