**3GPP TSG-RAN WG4 Meeting #111 R4-2409377**

**Fukuoka, Japan, 20 - 24 May, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.101-1** | **CR** |  | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  |
| *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：*** | Draft CR 38.101-1 Rel-18 Correction of the MSD values for CA\_n18A-n77A PC3 |
|  |  |
| ***Source to WG:*** | KDDI, Samsung, LGE, Murata, Skyworks |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_CADC\_R18\_2BDL\_xBUL-Core |  | ***Date:*** | 2024-05-01 |
|  |  |  |  |  |
| ***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)**Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | Correction of two MSD values for CA\_n18A-n77A so that the TS will be more consistent to define MSD values for band n77 global frequency range, with the Note 8 addressing the frequency range limitation in Japan where the test points for MSD can be skipped. |
|  |  |
| ***Summary of change:*** | 1. Correction of the PC3 MSD values for CA\_n18A-n77A.

These corrections follow the approved TP (R4-2406674) in RAN4#110bis. |
|  |  |
| ***Consequences if not approved:*** | The requested band combination is not properly specified.  |
|  |  |
| ***Clauses affected:*** | 7.3A.5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **X** |  |  Test specifications | TS 38.521 CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

---Start of changes---

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

Table 7.3A.5-1: 2DL/2UL inter-band 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 LCRB | 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-n46 | n1 | 1950 | 5 | 25 | 2140 | 5 | FDD | IMD5 |
|  | n46 | 5660 | 20 | 100 | 5660 | N/A | TDD | N/A |
| CA\_n1-n77 | n1 | 1950 | 5 | 25 | 2140 | 29.8 | FDD | IMD24 |
|  | n77 | 4090 | 10 | 50 | 4090 | N/A | TDD | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 8.0 | FDD | IMD44 |
|  | n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n1 | N/A | 5 | N/A | 2130 | 17 | FDD | IMD516 |
|  | 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 | 8.0 | FDD | IMD4 |
|  | n78 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
|  | n1 | N/A | 5 | N/A | 2167.5 | 1.7 | FDD | IMD717 |
|  | n7812 | 3305 | 10 | 1 (RBSTART=0) | 3305 | N/A | TDD | N/A |
|  |   | 3675 | 10 | 1 (RBSTART=44) | 3675 |   |   |   |
| CA\_n1-n102 | n1 | 1922.5 | 5 | 25 | 2112.5 | 13 | FDD | IMD3 |
|  | n102 | 5957.5 | 20 | 100 | 5957.5 | N/A | TDD | N/A |
| CA\_n1-n105  | n1 | 1958 | 5 | 25 | 2148 | N/A | FDD | N/A |
|  | n105 | 673 | 5 | 25 | 622 | 15.1 | FDD | IMD3 |
| 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 |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n2 | 1900 | 5 | 25 | 1980 | 8.0 | FDD | IMD4 |
|  | 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 |
|  | 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-n26 | n3 | 1771 | 5 | 25 | 1866 | 4 | FDD | IMD4 |
|  | n26 | 838 | 5 | 25 | 883 | N/A | FDD | N/A |
|  | n3 | 1721 | 5 | 25 | 1816 | N/A | FDD | N/A |
|  | n26 | 838 | 5 | 25 | 883 | 26 | FDD | IMD24 |
| 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 |
|  | n3 | N/A | 5 | N/A | 1877.5 | N/A | FDD | IMD914 |
|  | n41 | 2545 | 60 | 1 (RBSTART= 0) | 2545 | N/A | TDD | N/A |
|  |  | 2625 | 100 | 1 (RBSTART= 272) | 2625 |  |  |  |
|  | n3 | 1747.5 | 5 | 25 (RBSTART= 0) | 1842.5 | 15.3 | FDD | IMD3 |
|  | n41 | 2560 | 60 | 1 (RBSTART= 30) | 2560 | N/A | TDD | N/A |
|  |  | 2620 | 60 | 1 (RBSTART= 127) | 2620 |  |  |  |
| CA\_n3-n77 | n3 | 1740 | 5 | 25 | 1835 | 26 | FDD | IMD24 |
|  | n77 | 3575 | 10 | 50 | 3575 | N/A | TDD | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 8.0 | FDD | IMD44 |
|  | n77 | 3435 | 10 | 50 | 3435 | N/A | TDD | N/A |
|  | n3 | N/A | N/A | N/A | N/A | N/A | FDD | IMD57 |
|  | n7712 | 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 |
|  | n7712 | 3427.5 | 10 | 1 (RBSTART=10) | 3427.5 | N/A | TDD | N/A |
|  |  | 3945 | 10 | 1 (RBSTART=0) | 3945 |  |  |  |
| CA\_n3-n78 | n3 | 1740 | 5 | 25 | 1835 | 26 | FDD | IMD24 |
|  | n78 | 3575 | 10 | 25 | 3575 | N/A | TDD | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 8.0 | FDD | IMD44 |
|  | n78 | 3435 | 10 | 25 | 3435 | N/A | TDD | N/A |
|  | n3 | N/A | 5 | N/A | 1877.5 | 2.2 | FDD | IMD7 |
|  | n7812 | 3305 | 10 | 1 (RBSTART=3) | 3305 | N/A | TDD | N/A |
|  |  | 3780 | 10 | 1 (RBSTART=0) | 3780 |  |  |  |
| CA\_n5-n7 | n5 | 834 | 5 | 25 | 879 | 12 | FDD | IMD34 |
|  | n7 | 2547 | 10 | 50 | 2667 | N/A | FDD | N/A |
| CA\_n5-n12 | n5 | 829 | 10 | 10 (RBSTART=0) | 874 | N/A18 | FDD | N/A |
|  |  | 838.9 | 10 | 10 (RBSTART=36) | 883.9 |  |  |  |
|  | n12 | N/A | 5 | N/A | 743.5 | 20.8 | FDD | IMD11 |
| 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 |
|  | n5 | 829 | 10 | 10 (RBSTART=0) | 874 | N/A18 | FDD | N/A |
|  |  | 838.9 | 10 | 10 (RBSTART=28) | 883.9 |  |  |  |
|  | n14 | N/A | 5 | N/A | 765.5 | 26.2 | FDD | IMD9 |
| CA\_n5-n29 | n5 | 829 | 10 | 10 (RBSTART=0) | 874 | N/A18 | FDD | N/A |
|  |  | 838.9 | 10 | 10 (RBSTART=36) | 883.9 |  |  |  |
|  | n29 | N/A | 5 | N/A | 725.5 | 16.0 | FDD | IMD13 |
| CA\_n5\_n41 | n5 | 839 | 5 | 25 | 884 | 15.6 | FDD | IMD33 |
|  | n41 | 2562 | 10 | 50 | 2562 | N/A | TDD | N/A |
| CA\_n5-n66 | n5 | 838 | 5 | 25 | 883 | 30 | FDD | IMD24 |
|  | n66 | 1721 | 5 | 25 | 2121 | N/A | FDD | N/A |
| CA\_n5-n77 | 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 | IMD413 |
|  | n77 | 3421 | 10 | 50 | 3421 | N/A | TDD | N/A |
|  | n5 | 829 | 5 | 25 | 874 | 5.5 | FDD | IMD513 |
|  | n77 | 4190 | 10 | 50 | 4190 | N/A | TDD | N/A |
|  | n5 | N/A | 5 | N/A | 880 | 8.6 | FDD | IMD4 |
|  | n7712 | 3410 | 10 | 1 (RBSTART=25) | 3410 | N/A | TDD | N/A |
|  |  | 3850 | 10 | 1 (RBSTART=25) | 3850 |  |  |  |
| CA\_n5-n78 | n5 | 844 | 5 | 25 | 889 | 8.3 | FDD | IMD4 |
|  | n78 | 3421 | 10 | 50 | 3421 | N/A | TDD | N/A |
|  | n5 | N/A | 5 | N/A | 880 | 8.6 | FDD | IMD417 |
|  | n7812 | 3340 | 10 | 1 (RBSTART=25) | 3340 | N/A | TDD | N/A |
|  |  | 3780 | 10 | 1 (RBSTART=25) | 3780 |  |  |  |
| CA\_n7-n26 | n7 | 2556 | 5 | 25 | 2676 | N/A | FDD | N/A |
|  | n26 | 837 | 5 | 25 | 882 | 16.0 | FDD | IMD34 |
|  | n7 | 2567.5 | 5 | 25 | 2687.5 | 2.5 | FDD | IMD5 |
|  | n26 | 816.5 | 5 | 25 | 861.5 | N/A | FDD | N/A |
| CA\_n7-n40 | n7 | 2510 | 5 | 25 | 2630 | 23 | FDD | IMD3 |
|  | n40 | 2390 | 5 | 25 | 2390 | N/A | TDD | N/A |
| CA\_n7-n46 | n7 | 2550 | 10 | 50 | 2670 | 26.8 | FDD | IMD24 |
|  | n46 | 5220 | 20 | 100 | 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\_n7-n77 | n7 | 2540 | 5 | 25 | 2660 | 7.1 | FDD | IMD4 |
|  | n77 | 3870 | 10 | 50 | 3870 | N/A | TDD | N/A |
|  | n7 | N/A | 5 | N/A | 2687.5 | 15 | FDD | IMD5 |
|  | n7712 | 3455 | 10 | 1 (RBSTART=0) | 3455 | N/A | TDD | N/A |
|  |  | 3835 | 10 | 1 (RBSTART=7) | 3835 |  |  |  |
| CA\_n7-n78 | n7 | N/A | 5 | N/A | 2650 | 15 | FDD | IMD5 |
|  | n7812 | 3350 | 10 | 1 (RBSTART=25) | 3350 | N/A | TDD | N/A |
|  |  | 3700 | 10 | 1 (RBSTART=25) | 3700 |  |  |  |
| CA\_n8-n20 | n8 | 892.5 | 5 | 25 | 937.5 | 25 | FDD | IMD3 |
|  | n20 | 849.5 | 5 | 25 | 808.5 | 25 | FDD | IMD3 |
| 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\_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\_n12-n78 | 12 | 710 | 5 | 25 | 740 | 5.5 | FDD | IMD5 |
|  | n78 | 3580 | 10 | 50 | 3580 | 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-n77 | n18 | 827.5 | 5 | 25 | 872.5 | 8.4 | FDD | IMD48 |
|  | n77 | 3355 | 10 | 50 | 3355 | N/A | TDD | N/A |
|  | n18 | 817.5 | 5 | 25 | 862.5 | 4.5 | FDD | IMD58 |
|  | n77 | 4130 | 10 | 50 | 4130 | N/A | TDD | N/A |
| CA\_n18-n78 | n18 | 827.5 | 5 | 25 | 872.5 | 8.3 | FDD | IMD49 |
|  | n78 | 3355 | 10 | 50 | 3355 | 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-n77 | n24 | N/A | N/A | N/A | N/A | N/A | FDD | IMD410 |
|  | n77 | N/A | N/A | N/A | N/A | 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-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 |
|  | n25 | 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\_n25-n78 | n25 | 1855 | 5 | 25 | 1935 | 26 | FDD | IMD24 |
|  | n78 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
|  | n25 | N/A | 5 | N/A | 1980 | 2.7 | FDD | IMD7 |
|  | n7812 | 3315 | 10 | 1 (RBSTART=7) | 3315 | N/A | TDD | N/A |
|  |  | 3760 | 10 | 1 (RBSTART=0) | 3760 |  |  |  |
| 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 | 831 | 5 | 25 | 876 | 30 | FDD | IMD24 |
|  | n70 | 1707.5 | 5 | 25 | 2007.5 | N/A | FDD | N/A |
| CA\_n26-n77 | n26 | N/A | N/A | N/A | N/A | N/A | FDD | IMD413 |
|  | n77 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
|  | n26 | N/A | N/A | N/A | N/A | N/A | FDD | IMD513 |
|  | n77 | N/A | N/A | N/A | N/A | N/A | TDD | N/A |
| CA\_n26-n78 | n26 | 836.5 | 5 | 25 | 881.5 | 11.1 | FDD | IMD4 |
|  | n78 | 3391 | 10 | 50 | 3391 | N/A | TDD | 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 | IMD44 |
|  | 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 |
|  | n28 | 705.5 | 5 | 25 | 760.5 | 5.5 | FDD | IMD5 |
|  | n77 | 3582.5 | 10 | 50 | 3582.5 | N/A | TDD | N/A |
|  | n28 | N/A | 5 | N/A | 780 | 8.5 | FDD | IMD415 |
|  | n7712 | 3510 | 10 | 1 (RBSTART=25) | 3510 | N/A | TDD | N/A |
|  |  | 3900 | 10 | 1 (RBSTART=25) | 3900 | N/A | TDD | N/A |
|  | n28 | N/A | 5 | N/A | 705.5 | [8.6] | FDD | IMD4 |
|  | n7712 | 3455 | 10 | 1 (RBSTART=17) | 3455 | N/A | TDD | N/A |
|  |   | 3805 | 10 | 1 (RBSTART=0) | 3805 |   |   |   |
| CA\_n28-n78 | n28 | 705.5 | 5 | 25 | 760.5 | 5.5 | FDD | IMD5 |
|  | 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 | n41 | 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 | n41 | 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 |
|  | n41 | N/A | 10 | N/A | 2565 | 17 | TDD | IMD516 |
|  | n7712 | 3485 | 10 | 1 (RBSTART=25) | 3485 | N/A | TDD | N/A |
|  |  | 3945 | 10 | 1 (RBSTART=25) | 3945 |  |  |  |
| CA\_n46-n77 | n46 | N/A | 20 | N/A | 5155 | N/A | TDD | IMD5 |
|  | n7712 | 3385 | 10 | 1 (RBSTART= 25) | 3385 | N/A | TDD | N/A |
|  |  | 3975 | 10 | 1 (RBSTART= 25) | 3975 |  |  |  |
|  | n46 | N/A | 20 | N/A | 5660 | N/A | TDD | IMD6 |
|  | n7712 | 3310 | 10 | 1 (RBSTART= 25) | 3310 | N/A | TDD | N/A |
|  |  | 3790 | 10 | 1 (RBSTART= 25) | 3790 |  |  |  |
|  | n46 | N/A | 20 | N/A | 5230 | N/A | TDD | IMD7 |
|  | n7712  | 3310 | 10 | 1 (RBSTART= 25) | 3310 | N/A | TDD | N/A |
|  |  | 3790 | 10 | 1 (RBSTART= 25) | 3790 |  |  |  |
| CA\_n46-n78 | n46 | N/A | 20 | N/A | 5660 | N/A | TDD | IMD6 |
|  | n7812 | 3310 | 10 | 1 (RBSTART= 25) | 3310 | N/A | TDD | N/A |
|  |  | 3790 | 10 | 1 (RBSTART= 25) | 3790 |  |  |  |
|  | n46 | N/A | 20 | N/A | 5230 | N/A | TDD | IMD7 |
|  | n7812 | 3310 | 10 | 1 (RBSTART= 25) | 3310 | N/A | TDD | N/A |
|  |  | 3790 | 10 | 1 (RBSTART= 25) | 3790 |  |  |  |
| 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 |
|  | 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 | N/A | 5 | N/A | 2197.5 | 15 | FDD | IMD513 |
|  | n7712 | 3305 | 10 | 1 (RBSTART=0) | 3305 | N/A | TDD | N/A |
|  |  | 3855 | 10 | 1 (RBSTART=8) | 3855 |  |  |  |
|  | 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 |
|  | n66 | N/A | 5 | 25 | 2150 | 1.7 | FDD | IMD7 |
|  | n7812 | 3350 | 10 | 1 (RBSTART=7) | 3350 | N/A | TDD | N/A |
|  |  | 3750 | 10 | 1 (RBSTART=0) | 3750 |  |  |  |
| CA\_n66-n85 | n66 | 1770 | 5 | 25 | 2138 | 5 | FDD | IMD4 |
|  | n85 | 701 | 5 | 25 | 731 | N/A | FDD | N/A |
| CA\_n67-n78 | n67 | N/A | 5 | N/A | 748 | 8.6 | SDL | IMD415 |
|  | n7812 | 3376 | 10 | 1 (RBSTART=25) | 3376 | N/A | TDD | N/A |
|  |  | 3750 | 10 | 1 (RBSTART=25) | 3750 |  |  |  |
| 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-n77 | n70 | 1702.5 | 5 | 25 | 2002.5 | 31 | FDD | IMD2 |
|  | n77 | 3705 | 10 | 50 | 3705 | N/A | TDD | N/A |
|  | n70 | 1697.5 | 5 | 25 | 1997.5 | 5.0 | FDD | IMD5 |
|  | n77 | 3545 | 10 | 50 | 3545 | N/A | TDD | 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-n77 | n71 | 671 | 5 | 25 | 625 | 5.5 | FDD | IMD513 |
|  | n77 | 3309 | 10 | 50 | 3309 | N/A | TDD | N/A |
|  | n71 | N/A | 5 | N/A | 640 | 8.6 | FDD | IMD4 |
|  | n7712 | 3480 | 10 | 1 (RBSTART=25) | 3480 | N/A | TDD | N/A |
|  |  | 3800 | 10 | 1 (RBSTART=25) | 3800 |  |  |  |
| 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 |
| CA\_n77-n85 | n77 | 3590 | 10 | 25 | 3590 | N/A | TDD | N/A |
|  | n85 | 712 | 5 | 25 | 742 | 5.5 | FDD | IMD5 |
| CA\_n78-n102 | n7812 | 3320 | 10 | 1 (RBSTART=25) | 3320 | N/A | TDD | N/A |
|  |  | 3680 | 10 | 1 (RBSTART=25) | 3680 |  |  |  |
|  | n102 | 6280 | 20 | 100 | 6280 | N/A | TDD | IMD44 |
| CA\_n78-n105 | n78 | 3361.5 | 10 | 50 | 3361.5 | N/A | TDD | N/A |
|  | n105 | 682.5 | 5 | 25 | 631.5 | 5.5 | FDD | IMD5 |
| NOTE 1: Both of the transmitters shall be set min(+20 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: Void.NOTE 7: In current release the maximum separation bandwidth class is 600MHz, therefore, no IMD MSD requirement apply for this CA configuration when two uplink sub blocks are assigned within CA\_77(2A).NOTE8: For a UE which supports this band combination only when the Band n77 frequency range restriction of 3400 - 4100 MHz in Japan applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.NOTE 9: For a UE which supports this band combination only when the Band n78 frequency range restriction of 3400 – 3800 MHz, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.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: Void.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: Applicable when n41 spectrum is restricted to 2515-2675MHzNOTE 15: This band is subject to IMD6 also which MSD is not specifiedNOTE 16: This band is subject to IMD7 also which MSD is not specified.NOTE 17: For a UE which supports this band combination only when the Band n78 frequency range restriction of 3400 – 3800 MHz or 3300 – 3600 MHz applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.NOTE 18: This component carrier is affected by IMD due to CA\_n5B for which the MSD is not specified. |

---End of changes---