**3GPP TSG- Meeting #**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  | | | | | | | | |
| *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:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *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:*** | | The big CR for this meeting is adding support for the following channel bandwidth in band:   * 30MHz channel BW in bands n8.   Correcting NR CA FR1 3 bands combinations | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The channel bandwidth per operating bands table, MPR, A-MPR and REFSENS..  Correcting channel BW definition for n99 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The channel bandwidth won’t be supported in Rel-18, resulting on a less efficient use of spectrum for those bands. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.104 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This version is consolidating all endorsed draft CRs in RAN4#108 meeting:  R4-2320321 and R4-2321685. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

*<Start of the change>*

### 5.3.5 UE channel bandwidth per operating band

The requirements in this specification apply to the combination of channel bandwidths, SCS and operating bands shown in Table 5.3.5-1. The transmission bandwidth configuration in Table 5.3.2-1 shall be supported for each of the specified channel bandwidths. The channel bandwidths are specified for both the TX and RX path.

Table 5.3.5-1 Channel bandwidths for each NR band

| NR Band | SCS (kHz) | UE Channel bandwidth (MHz) | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | **5** | **10** | **15** | **20** | **25** | **30** | **35** | **40** | **45** | **50** | **60** | **70** | **80** | **90** | **100** |
| n1 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 |  | 40 | 45 | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 | 45 | 50 |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 | 45 | 50 |  |  |  |  |  |
| n2 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
| n3 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |  |  |  |  |  |
| n5 | 15 |  | 5 | 10 | 15 | 20 | 253 |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 253 |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n7 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  | 50 |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  | 50 |  |  |  |  |  |
| n8 | 15 |  | 5 | 10 | 15 | 20 | 253 | 303 | 353 |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 253 | 303 | 353 |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n12 | 15 |  | 5 | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n13 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n1410 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n18 | 15 |  | 5 | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n20 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n24 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n25 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 453 |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 453 |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 453 |  |  |  |  |  |  |
| n26 | 15 | 34 | 5 | 10 | 15 | 20 | 253 | 303 |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 253 | 303 |  |  |  |  |  |  |  |  |  |
| n28 | 15 | 34 | 5 | 10 | 15 | 207 | 257 | 307 |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 207 | 257 | 307 |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n29 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n30 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n34 | 15 |  | 5 | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| n3810 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 |  | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  |  |  |  |  |  |  |
| n39 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
| n40 | 15 |  | 55 | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
| n41 | 15 |  | 54,11 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 |
| n46 | 15 |  |  | 105 |  | 20 |  |  |  | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 105 |  | 20 |  |  |  | 40 |  |  | 60 |  | 80 |  | 1004 |
|  | 60 |  |  | 105 |  | 20 |  |  |  | 40 |  |  | 60 |  | 80 |  | 1004 |
| n4710 | 15 |  |  | 10 |  | 20 |  | 30 |  | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  | 20 |  | 30 |  | 40 |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 |  | 20 |  | 30 |  | 40 |  |  |  |  |  |  |  |
| n48 | 15 |  | 55 | 10 | 15 | 20 |  | 30 |  | 40 |  | 506 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  | 30 |  | 40 |  | 506 | 606 | 706 | 806 | 906 | 1006 |
|  | 60 |  |  | 10 | 15 | 20 |  | 30 |  | 40 |  | 506 | 606 | 706 | 806 | 906 | 1006 |
| n50 | 15 |  | 55 | 10 | 15 | 20 |  | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  | 30 |  | 40 |  | 50 | 60 |  | 803 |  |  |
|  | 60 |  |  | 10 | 15 | 20 |  | 30 |  | 40 |  | 50 | 60 |  | 803 |  |  |
| n51 | 15 |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n53 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n54 | 15 |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n65 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  | 50 |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 |  |  |  |  |  | 50 |  |  |  |  |  |
| n66 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |  |  |  |  |  |  |
| n67 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n70 | 15 |  | 5 | 10 | 15 | 203 | 253 |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 203 | 253 |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 203 | 253 |  |  |  |  |  |  |  |  |  |  |
| n71 | 15 |  | 5 | 10 | 15 | 20 | 2512 | 3012 | 3512 |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 2512 | 3012 | 3512 |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n74 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
| n75 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
| n76 | 15 |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n77 | 15 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
| n78 | 15 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
| n7910 | 15 |  |  | 10 |  | 20 |  | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 |  | 20 |  | 30 |  | 40 |  | 50 | 60 | 704 | 80 | 90 | 100 |
|  | 60 |  |  | 10 |  | 20 |  | 30 |  | 40 |  | 50 | 60 | 704 | 80 | 90 | 100 |
| n80 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 |  | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  |  |  |  |  |  |  |
| n81 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n82 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n83 | 15 |  | 5 | 10 | 15 | 207 | 257 | 307 |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 207 | 257 | 307 |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n84 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
| n85 | 15 | 34 | 5 | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n86 | 15 |  | 5 | 10 | 15 | 20 |  |  |  | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  | 40 |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 |  |  |  | 40 |  |  |  |  |  |  |  |
| n89 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n90 | 15 |  | 54 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 |
| n91 | 15 |  | 5 | 108 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n92 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n93 | 15 |  | 5 | 108 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n94 | 15 |  | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n95 | 15 |  | 5 | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| n96 | 15 |  |  |  |  | 20 |  |  |  | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  | 20 |  |  |  | 40 |  |  | 60 |  | 80 |  | 1004 |
|  | 60 |  |  |  |  | 20 |  |  |  | 40 |  |  | 60 |  | 80 |  | 1004 |
| n97 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
| n98 | 15 |  | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 15 | 20 | 25 | 30 | 35 | 40 |  |  |  |  |  |  |  |
| n99 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n100 | 15 | 34 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n101 | 15 |  | 5 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n102 | 15 |  |  |  |  | 20 |  |  |  | 40 |  |  |  |  |  |  |  |
|  | 30 |  |  |  |  | 20 |  |  |  | 40 |  |  | 60 |  | 80 |  | 1004 |
|  | 60 |  |  |  |  | 20 |  |  |  | 40 |  |  | 60 |  | 80 |  | 1004 |
| n104 | 15 |  |  |  |  | 20 |  | 30 |  | 40 |  | 50 |  |  |  |  |  |
|  | 30 |  |  |  |  | 20 |  | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
|  | 60 |  |  |  |  | 20 |  | 30 |  | 40 |  | 50 | 60 | 70 | 80 | 90 | 100 |
| n105 | 15 |  | 5 | 10 | 15 | 20 | 253 | 303 | 353 |  |  |  |  |  |  |  |  |
|  | 30 |  |  | 10 | 15 | 20 | 253 | 303 | 353 |  |  |  |  |  |  |  |  |
|  | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NOTE 1: Void.  NOTE 2: Void.  NOTE 3: This UE channel bandwidth is applicable only to downlink.  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 a downlink SCell part of CA configuration.  NOTE 7: For the 20 MHz bandwidth, the minimum requirements are specified for NR UL carrier frequencies confined to either 713-723 MHz or 728-738 MHz. For the 25 MHz bandwidth, the minimum requirements are specified for NR UL carrier frequencies confined to either 715.5-720.5 MHz or 730.5-735.5 MHz. For the 30MHz bandwidth, the minimum requirements are specified for NR UL transmission bandwidth configuration confined to either 703-733 or 718-748 MHz.  NOTE 8: This UE channel bandwidth is applicable only to uplink.  NOTE 9: Void.  NOTE 10: For this band, UE channel bandwidths which are applicable to sidelink operation are specified in Table 5.3E.1-1.  NOTE 11: Not all frequency positions of 5 MHz carriers are possible due limitations of the SSB position relative to the 5 MHz channels. 5 MHz channels with Fc such that 2499+N\*1.2 ≤Fc<2499.3+N\*1.2MHz for 0≤N<157 are not compatible with SSB positions and cannot be used for 5 MHz n41.  NOTE 12: This UE channel Bandwidth is optional for uplink in this release of the specification. | | | | | | | | | | | | | | | | | |

*<End of the change>*

*<Start of the change>*

### 5.3.6 Asymmetric channel bandwidths

The UE channel bandwidth can be asymmetric in downlink and uplink. In asymmetric channel bandwidth operation, the narrower carrier shall be confined within the frequency range of the wider channel bandwidth.

In FDD, the confinement is defined as a maximum deviation to the Tx-Rx carrier center frequency separation (defined in table 5.4.4-1) as following:

ΔFTX-RX = | (BWDL – BWUL)/2 |

The operating bands and supported asymmetric channel bandwidth combinations are defined in table 5.3.6-1.

Table 5.3.6-1: FDD asymmetric UL and DL channel bandwidth combinations

|  |  |  |  |
| --- | --- | --- | --- |
| NR Band | Channel bandwidths for UL (MHz) | Channel bandwidths for DL (MHz) | Asymmetric channel bandwidth combination set |
| n5 | 20 | 25 | 0 |
| n8 | 20 | 35 | 0 |
|  | 10, 15, 20 | 25, 35 | 1 |
|  | 10, 15, 20 | 25, 30, 35 | 2 |
| n24 | 10 | 5 | 0 |
| n25 | 40 | 45 | 0 |
| n26 | 20 | 25, 30 | 0 |
| n66 | 5, 10 | 20, 40 | 0 |
|  | 20 | 40 |  |
|  | 5, 10 | 20, 25, 30, 40 | 1 |
|  | 20, 25, 30 | 40 |  |
|  | 5, 10, 15 | 20, 25, 30, 35, 40 | 2 |
|  | 20, 25, 30 | 40 |  |
| n70 | 5, 10 | 15 | 0 |
|  | 5, 10, 15 | 20, 25 |  |
| n71 | 5 | 10 | 0 |
|  | 10 | 15 |  |
|  | 15 | 20 |  |
|  | 5 | 10 | 1 |
|  | 10 | 15 |  |
|  | 15 | 20 |  |
|  | 20 | 35 |  |
|  | 20 | 25, 30, 35 | 2 |
| n911 | 10 | 5 | 0 |
| n921 | 5 | 10, 15, 20 | 0 |
|  | 10 | 15, 20 |  |
| n931 | 10 | 5 | 0 |
| n941 | 5 | 10, 15, 20 | 0 |
|  | 10 | 15, 20 |  |
| n105 | 20 | 25, 30, 35 | 0 |
| NOTE 1: The assignment of the paired UL and DL channels are subject to a TX-RX separation as specified in clause 5.4.4.  NOTE 2: As indicated in TS38.306 [15], it is mandatory for UEs to support asymmetric channel BCS0 if there is an asymmetric BCS0 defined for the band. | | | |

*<End of the change>*

*<Start of the change>*

### 7.3.2 Reference sensitivity power level

The throughput shall be ≥ 95 % of the maximum throughput of the reference measurement channels as specified in Annexes A.2.2.2, A3.2 and A.3.3 (with one sided dynamic OCNG Pattern OP.1 FDD/TDD for the DL-signal as described in Annex A.5.1.1/A.5.2.1) with parameters specified in Table 7.3.2-1a, Table 7.3.2-1b, Table 7.3.2-1c, Table 7.3.2-1d and Table 7.3.2-2.

Table 7.3.2-1a: Two antenna port reference sensitivity QPSK PREFSENS for FDD bands

| Operating band / SCS / Channel bandwidth | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Operating Band | SCS kHz | 3  MHz (dBm) | 5  MHz (dBm) | 10  MHz (dBm) | 15  MHz (dBm) | 20  MHz (dBm) | 25  MHz (dBm) | 30 MHz (dBm) | 35 MHz (dBm) | 40  MHz (dBm) | 45 MHz (dBm) | 50  MHz (dBm) |
| n1 | 15 |  | -100.0 | -96.8 | -95.0 | -93.8 | -92.7 | -91.9 |  | -90.6 | -90.1 | -89.6 |
| 30 |  |  | -97.1 | -95.1 | -94.0 | -92.8 | -92.0 |  | -90.7 | -90.2 | -89.7 |
| 60 |  |  | -97.5 | -95.4 | -94.2 | -93.0 | -92.1 |  | -90.9 | -90.3 | -89.7 |
| n2 | 15 |  | -98 | -94.8 | -93 | -91.8 | -90.7 | -84.1 | -83.6 | -81.5 |  |  |
| 30 |  |  | -95.1 | -93.1 | -92 | -90.8 | -84.2 | -83.7 | -81.6 |  |  |
| 60 |  |  | -95.5 | -93.4 | -92.2 | -90.9 | -84.3 | -83.8 | -81.7 |  |  |
| n3 | 15 |  | -97.0 | -93.8 | -92.0 | -90.8 | -89.7 | -88.9 | -86.2 | -82.3 | -81.3 | -79.7 |
| 30 |  |  | -94.1 | -92.1 | -91.0 | -89.8 | -89.0 | -86.3 | -82.4 | -81.4 | -79.8 |
| 60 |  |  | -94.5 | -92.4 | -91.2 | -90.0 | -89.1 | -86.4 | -82.6 | -81.5 | -79.9 |
| n5 | 15 |  | -98.0 | -94.8 | -93.0 | -86.8 | -84.8 |  |  |  |  |  |
| 30 |  |  | -95.1 | -93.1 | -88.6 | -84.9 |  |  |  |  |  |
| n71 | 15 |  | -98.0 | -94.8 | -93.0 | -91.8 | -90.7 | -89.9 | -89.2 | -88.6 |  | -81.5 |
| 30 |  |  | -95.1 | -93.1 | -92.0 | -90.8 | -90.0 | -89.3 | -88.7 |  | -81.5 |
| 60 |  |  | -95.5 | -93.4 | -92.2 | -91.0 | -90.1 | -89.4 | -88.9 |  | -81.5 |
| n8 | 15 |  | -97.0 | -93.8 | -91.4 | -85.8 | -83.6 | -81.3 | -78.4 |  |  |  |
| 30 |  |  | -94.1 | -91.7 | -87.2 | -84.7 | -81.4 | -78.5 |  |  |  |
| n12 | 15 |  | -97.0 | -93.8 | -84.0 |  |  |  |  |  |  |  |
| 30 |  |  | -94.1 | -84.1 |  |  |  |  |  |  |  |
| n13 | 15 |  | -97.0 | -93.8 |  |  |  |  |  |  |  |  |
| 30 |  |  | -94.1 |  |  |  |  |  |  |  |  |
| n14 | 15 |  | -97.0 | -93.8 |  |  |  |  |  |  |  |  |
| 30 |  |  | -94.1 |  |  |  |  |  |  |  |  |
| n18 | 15 |  | -100.0 | -96.8 | -95.0 |  |  |  |  |  |  |  |
| 30 |  |  | -97.1 | -95.1 |  |  |  |  |  |  |  |
| n20 | 15 |  | -97.0 | -93.8 | -91.0 | -89.8 |  |  |  |  |  |  |
| 30 |  |  | -94.1 | -91.1 | -90.0 |  |  |  |  |  |  |
| n24 | 15 |  | -100.0 | -96.8 |  |  |  |  |  |  |  |  |
| 30 |  |  | -97.1 |  |  |  |  |  |  |  |  |
| 60 |  |  | -97.5 |  |  |  |  |  |  |  |  |
| n25 | 15 |  | -96.5 | -93.3 | -91.5 | -90.3 | -89.3 | -82.2 | -81.7 | -79.5 | -77.6 |  |
| 30 |  |  | -93.6 | -91.6 | -90.5 | -89.4 | -82.3 | -81.8 | -79.6 | -77.7 |  |
| 60 |  |  | -94.0 | -91.9 | -90.7 | -89.6 | -82.4 | -81.9 | -79.7 | -77.8 |  |
| n26 | 15 | -99.7 | -97.56 | -94.56 | -92.76 | -87.6 | -84.5 | -81.7 |  |  |  |  |
| 30 |  |  | -94.86 | -92.76 | -87.7 | -84.6 | -81.8 |  |  |  |  |
| n28 | 15 | -100.2 | -98.5 | -95.5 | -93.5 | -90.8 | -84.2 | -78.5 |  |  |  |  |
| 30 |  |  | -95.6 | -93.6 | -91.0 | -84.2 | -78.6 |  |  |  |  |
| n30 | 15 |  | -99.0 | -95.8 |  |  |  |  |  |  |  |  |
| 30 |  |  | -96.1 |  |  |  |  |  |  |  |  |
| n65 | 15 |  | -99.5 | -96.3 | -94.5 | -93.3 |  |  |  |  |  | -89.2 |
| 30 |  |  | -96.6 | -94.6 | -93.5 |  |  |  |  |  | -89.3 |
| 60 |  |  | -97.0 | -94.9 | -93.7 |  |  |  |  |  | -89.4 |
| n66 | 15 |  | -99.5 | -96.3 | -94.5 | -93.3 | -92.2 | -91.4 | -90.7 | -90.1 | -89.6 |  |
| 30 |  |  | -96.6 | -94.6 | -93.5 | -92.3 | -91.5 | -90.8 | -90.2 | -89.7 |  |
| 60 |  |  | -97.0 | -94.9 | -93.7 | -92.5 | -91.6 | -90.9 | -90.4 | -89.8 |  |
|  | 15 |  | -100.0 | -96.8 | -95.0 | -93.8 | -92.7 |  |  |  |  |  |
| n70 | 30 |  |  | -97.1 | -95.1 | -94.0 | -92.8 |  |  |  |  |  |
|  | 60 |  |  | -97.5 | -95.4 | -94.2 | -93.0 |  |  |  |  |  |
| n71 | 15 |  | -97.2 | -94.0 | -91.6 | -86.0 | -84.19  -74.810 | -82.59  -67.110 | -80.79  -64.010 |  |  |  |
| 30 |  |  | -94.3 | -91.9 | -87.4 | -84.29  -74.910 | -82.69  -67.210 | -80.89  -64.110 |  |  |  |
| n74 | 15 |  | -99.53 | -96.33 | -94.53 | -89.33 |  |  |  |  |  |  |
| 30 |  |  | -96.63 | -94.63 | -89.53 |  |  |  |  |  |  |
| 60 |  |  | -97.03 | -94.93 | -89.63 |  |  |  |  |  |  |
| n85 | 15 | -99.2 | -97.0 | -93.8 | -84.0 |  |  |  |  |  |  |  |
|  | 30 |  |  | -94.1 | -84.1 |  |  |  |  |  |  |  |
| n100 | 15 | -102.2 | -100 |  |  |  |  |  |  |  |  |  |
| n105 | 15 |  | -97.28 | -94.0 | -91.6 | -86.9 | -85.1 | -83.8 | -82.5 |  |  |  |
|  | 30 |  |  | -94.3 | -91.9 | -87.9 | -85.5 | -84.3 | -82.6 |  |  |  |
| NOTE 1: Four Rx antenna ports shall be the baseline for this operating band except for two Rx vehicular UE. Four Rx antenna ports for RedCap UE is not supported for this operating band.  NOTE 2: The transmitter shall be set to PUMAX as defined in clause 6.2.4  NOTE 3: The requirement is modified by -0.5 dB when the assigned NR channel bandwidth is confined within 1475.9 - 1510.9 MHz.  NOTE 4: Void  NOTE 5: Void  NOTE 6: Values are modified by -0.5dB when carrier channel BW is between 865MHz and 894MHz.  NOTE 7: Void.  NOTE 8: DL channels overlapping the 612-617MHz range have 0.5dB added to the REFSENS  NOTE 9: Applies to UEs that support a maximum uplink BW of 20 MHz in this band.  NOTE 10: Applies to UEs that support optional symmetric UL/DL for this BW. | | | | | | | | | | | | |

*<End of the change>*

*<Start of the change>*

Table 7.3.2-3: Uplink configuration for reference sensitivity

| Operating band / SCS (kHz) / Channel bandwidth (MHz) / Duplex mode | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Operating Band | SCS | 3 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | Duplex Mode |
| n1 | 15 |  | 25 | 501 | 751 | 1001 | 1281 | 1281 |  | 1281 | 1281 | 1281 |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 | 361 | 501 | 641 | 641 |  | 641 | 641 | 641 |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 18 | 24 | 301 | 301 |  | 301 | 301 | 301 |  |  |  |  |  |  |
| n2 | 15 |  | 25 | 501 | 501 | 501 | 501 | 481 | 401 | 401 |  |  |  |  |  |  |  | FDD |
|  | 30 |  | 101 | 24 | 241 | 241 | 241 | 241 | 201 | 201 |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 101 | 101 | 101 | 101 | 101 | 101 |  |  |  |  |  |  |  |  |
| n3 | 15 |  | 25 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 |  |  |  |  |  |  |
| n5 | 15 |  | 25 | 251 | 201 | 201 | Note 5 |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 121 | 101 | 101 | Note 5 |  |  |  |  |  |  |  |  |  |  |  |
| n7 | 15 |  | 25 | 501 | 751 | 751 | 721 | 641 | 451 | 451 |  | 451 |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 | 361 | 361 | 361 | 321 | 201 | 201 |  | 201 |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 18 | 181 | 181 | 161 | 101 | 101 |  | 101 |  |  |  |  |  |  |
| n8 | 15 |  | 25 | 251 | 201 | 201 | Note 5 | Note 5 | Note 5 |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 121 | 101 | 101 | Note 5 | Note 5 | Note 5 |  |  |  |  |  |  |  |  |  |
| n12 | 15 |  | 201 | 201 | 201 |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 101 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n13 | 15 |  | 201 | 201 |  |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n14 | 15 |  | 201 | 201 |  |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n18 | 15 |  | 25 | 251 | 251 |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 101 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n20 | 15 |  | 25 | 201 | 202 | 202 |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 102 | 102 |  |  |  |  |  |  |  |  |  |  |  |  |
| n24 | 15 |  | 25 | 50 |  |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n25 | 15 |  | 25 | 501 | 501 | 501 | 501 | 481 | 401 | 401 | Note 5 |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 | 241 | 241 | 241 | 241 | 201 | 201 | Note 5 |  |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 101 | 101 | 101 | 101 | 101 | 101 | Note 5 |  |  |  |  |  |  |  |
| n26 | 15 | 15 | 25 | 251 | 251 | 251 | Note 5 | Note 5 |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 121 | 121 | 121 | Note 5 | Note 5 |  |  |  |  |  |  |  |  |  |  |
| n28 | 15 | 15 | 25 | 251 | 251 | 251 | 251 | 251 |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 101 | 101 | 101 | 101 |  |  |  |  |  |  |  |  |  |  |
| n30 | 15 |  | 201 | 201 |  |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n34 | 15 |  | 25 | 50 | 75 |  |  |  |  |  |  |  |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 18 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n38 | 15 |  | 25 | 50 | 75 | 100 | 128 | 160 |  | 216 |  |  |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 | 64 | 75 |  | 100 |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 18 | 24 | 30 | 36 |  | 50 |  |  |  |  |  |  |  |  |
| n39 | 15 |  | 25 | 50 | 75 | 100 | 128 | 160 | 180 | 216 |  |  |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 | 64 | 75 | 90 | 100 |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 18 | 24 | 30 | 36 | 40 | 50 |  |  |  |  |  |  |  |  |
| n40 | 15 |  | 25 | 50 | 75 | 100 | 128 | 160 |  | 216 |  | 270 |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 | 64 | 75 |  | 100 |  | 128 | 162 | 180 | 216 | 243 | 270 |  |
|  | 60 |  |  | 10 | 18 | 24 | 30 | 36 |  | 50 |  | 64 | 75 | 90 | 100 | 120 | 135 |  |
| n41, n90 | 15 |  | 25 | 50 | 75 | 100 | 128 | 160 | 180 | 216 | 240 | 270 |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 | 64 | 75 | 90 | 100 | 108 | 128 | 162 | 180 | 216 | 243 | 270 |  |
|  | 60 |  |  | 10 | 18 | 24 | 30 | 36 | 40 | 50 | 54 | 64 | 75 | 90 | 100 | 120 | 135 |  |
| n48 | 15 |  | 25 | 50 | 75 | 100 |  | 160 |  | 216 |  |  |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 |  | 75 |  | 100 |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 | 18 | 24 |  | 36 |  | 50 |  |  |  |  |  |  |  |  |
| n50 | 15 |  | 25 | 50 | 75 | 100 |  | 160 |  | 216 |  | 270 |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 |  | 75 |  | 100 |  | 128 | 162 |  | Note 3 |  |  |  |
|  | 60 |  |  | 10 | 18 | 24 |  | 36 |  | 50 |  | 64 | 75 |  | Note 3 |  |  |  |
| n51 | 15 |  | 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | TDD |
| n53 | 15 |  | 25 | 50 |  |  |  |  |  |  |  |  |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n54 | 15 |  | 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | TDD |
| n65 | 15 |  | 25 | 501 | 751 | 1001 |  |  |  |  |  | 1281 |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 | 361 | 501 |  |  |  |  |  | 641 |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 18 | 24 |  |  |  |  |  | 301 |  |  |  |  |  |  |
| n66 | 15 |  | 25 | 501 | 751 | 1001 | 1281 | 160 | 1801 | 216 | [2401] |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 | 361 | 501 | 641 | 751 | 901 | 1001 | [1081] |  |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 18 | 24 | 301 | 361 | 401 | 501 | [541] |  |  |  |  |  |  |  |
| n70 | 15 |  | 25 | 501 | 751 | Note 3 | Note 3 |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 24 | 361 | Note 3 | Note 3 |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 101 | 18 | Note 3 | Note 3 |  |  |  |  |  |  |  |  |  |  |  |
| n71 | 15 |  | 25 | 251 | 201 | 201 | 201,6 | 201,6 | 201,6 |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 121 | 101 | 101 | 101,6 | 101,6 | 101,6 |  |  |  |  |  |  |  |  |  |
| n74 | 15 |  | 25 | 251 | 251 | 251 |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 101 | 101 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 60 |  |  | 51 | 51 | 51 |  |  |  |  |  |  |  |  |  |  |  |  |
| n77 | 15 |  |  | 50 | 75 | 100 | 128 | 160 |  | 216 |  | 270 |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 | 64 | 75 |  | 100 |  | 128 | 162 | 180 | 216 | 243 | 270 |  |
|  | 60 |  |  | 10 | 18 | 24 | 30 | 36 |  | 50 |  | 64 | 75 | 90 | 100 | 120 | 135 |  |
| n78 | 15 |  |  | 50 | 75 | 100 | 128 | 160 |  | 216 |  | 270 |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 | 36 | 50 | 64 | 75 |  | 100 |  | 128 | 162 | 180 | 216 | 243 | 270 |  |
|  | 60 |  |  | 10 | 18 | 24 | 30 | 36 |  | 50 |  | 64 | 75 | 90 | 100 | 120 | 135 |  |
| n79 | 15 |  |  | 50 |  | 100 |  | 160 |  | 216 |  | 270 |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 |  | 50 |  | 75 |  | 100 |  | 128 | 162 | 180 | 216 | 243 | 270 |  |
|  | 60 |  |  | 10 |  | 24 |  | 36 |  | 50 |  | 64 | 75 | 90 | 100 | 120 | 135 |  |
| n85 | 15 | 15 | 201 | 201 | 201 |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 101 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n91 | 15 |  | 254 | 201,4 |  |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
| n92 | 15 |  | 25 | 201 | 201 | 201 |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 101 | 101 |  |  |  |  |  |  |  |  |  |  |  |  |
| n93 | 15 |  | 254 | 251,4 |  |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
| n94 | 15 |  | 25 | 251 | 201 | 201 |  |  |  |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 121 | 101 | 101 |  |  |  |  |  |  |  |  |  |  |  |  |
| n100 | 15 | 15 | 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | FDD |
| n101 | 15 |  | 25 | 50 |  |  |  |  |  |  |  |  |  |  |  |  |  | TDD |
|  | 30 |  |  | 24 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n104 | 15 |  |  |  |  | 100 |  |  |  | 216 |  | 270 |  |  |  |  |  | TDD |
|  | 30 |  |  |  |  | 50 |  |  |  | 100 |  | 128 | 162 | 180 | 216 | 243 | 270 |  |
|  | 60 |  |  |  |  | 24 |  |  |  | 50 |  | 64 | 75 | 90 | 100 | 120 | 135 |  |
| n105 | 15 |  | 25 | 251 | 201 | 201 | Note 5 | Note 5 | Note 5 |  |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 121 | 101 | 101 | Note 5 | Note 5 | Note 5 |  |  |  |  |  |  |  |  |  |
| Note 1: UL resource blocks shall be located as close as possible to the downlink operating band but confined within the transmission bandwidth configuration for the channel bandwidth (Table 5.3.2-1).  Note 2: For Band 20; for 15 kHz SCS, in the case of 15 MHz channel bandwidth, the UL resource blocks shall be located at RBstart 11 and in the case of 20 MHz channel bandwidth, the UL resource blocks shall be located at RBstart 16; for 30 kHz SCS, in the case of 15 MHz channel bandwidth, the UL resource blocks shall be located at RBstart 6 and in the case of 20 MHz channel bandwidth, the UL resource blocks shall be located at RBstart 8; for 60 kHz SCS, in the case of 15 MHz channel bandwidth, the UL resource blocks shall be located at RBstart 3 and in the case of 20 MHz channel bandwidth, the UL resource blocks shall be located at RBstart 4;  Note 3: For DL channel bandwidths that do not have symmetric UL channel bandwidth, highest valid UL configuration with lowest TX-RX separation (Table 5.4.4-1) shall be used unless otherwise specified.  Note 4: For band n91 and n93, largest supported UL bandwidth configuration shall be used.  Note 5: For this DL channel bandwidth, the UL configuration of the highest UL channel bandwidth specified in Table 5.3.6-1 and the default Tx-Rx frequency separation specified in Table 5.4.4-1 shall be used.  Note 6: UEs supporting the optional symmetrical UL/DL bandwidths shall use this UL configuration. UEs not supporting this uplink channel BW shall use the configuration for 20 MHz. | | | | | | | | | | | | | | | | | | |

Unless given by Table 7.3.2-4, the minimum requirements specified in Tables 7.3.2-1a, Tables 7.3.2-1b, Tables 7.3.2-1c, Tables 7.3.2-1d and 7.3.2-2 shall be verified with the network signalling value NS\_01 (Table 6.2.3-1) configured.

*<End of the change>*