**3GPP TSG- Meeting #**

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| *CR-Form-v12.1* | | | | | | | | |
| **DRAFT CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
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| *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:*** | Clarifications on additional UE co-ex requirements for 2 Band UL CA/DC for Japan(R16) | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SoftBank Corp., NTT DOCOMO INC., Apple | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Due to the clean-up of general/additional UE co-ex requirements, the additional requirements for 2 band UL UE co-ex were deleted and left uncovered for some time. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The new section and table are added to make the requirements clear. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The relevant requirements remain missed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.2B.3.3/3A(New), | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS/TR38.521-3 ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | . | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**[Unaffected Portions Skipped]**

6.2B.3.3 Inter-band EN-DC within FR1

Unless specified in Table 6.2B.3.3-1, for inter-band carrier aggregation with uplink assigned to LTE and NR bands, the requirements in [2] clause 6.2.3 apply for NR uplink component carrier and the requirements in [4] clause 6.2.4 apply for LTE uplink component carrier.

For inter-band EN-DC with uplink assigned to LTE and NR bands and specified in Table 6.2B.3.3-1 these requirements apply on each component carrier if LTE and NR component carriers are active. The requirements in Table 6.2B.3.3-1 are specified in terms of an additional spectrum emission requirement. The emission requirements specified in Table 6.2B.3.3-1 also apply for the frequency ranges that are less than FOOB (MHz) from the edge of the channel bandwidth specified in TS 36.101 [4] and TS 38.101-1 [2], respectively.

Table 6.2B.3.3A-1: Additional Requirements for inter-band EN-DC (two-bands)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NR CA combination | Band | Applied  NS | Requirements  (clause)  (TS 36.101 [4]) | Requirements  (clause)  (TS 38.101-1 [2]) | A-MPR  (table/clause)  (TS 36.101 [4]) | A-MPR  (table/clause)  (TS 38.101-1 [2]) | Note |
| DC\_1\_n3 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1 |
| n3 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 |
| DC\_1\_n5 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1 |
| n5 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 |
| DC\_1\_n8 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1 |
| n8 | 43 | N/A | 6.5.3.3.5 | N/A | Clause 6.2.3.6 |
| 43U | N/A | 6.5.3.3.5, 6.5.2.4.2 | N/A | Clause 6.2.3.6 |
| DC\_1\_n28 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 2 |
| n28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A |
| DC\_1\_n40 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 |  |
| DC\_1\_n41 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 |  |
| n41 | 47 | N/A | 6.5.3.3.15 | N/A | Table 6.2.3.18-2 |
| DC\_1\_n77 DC\_1\_n84\_ULSUP-TDM\_n77 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1 |
| n84 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 |
| 05U | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 |
| DC\_1\_n78  DC\_1\_n84\_ULSUP-TDM\_n78 | 1 | 05 | N/A | 6.5.3.3.4, 6.5.2.4.2 | N/A | Clause 6.2.3.4 | 1 |
| n84 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 |
| 05U | N/A | 6.5.3.3.4, 6.5.2.4.2 | N/A | Clause 6.2.3.4 |
| DC\_1\_n79  DC\_1\_n84\_ULSUP-TDM\_n79 | 1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1 |
| n84 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 |
| 05U | N/A | 6.5.3.3.4, 6.5.2.4.2 | N/A | Clause 6.2.3.4 |
| DC\_3\_n1 | n1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1 |
| 05U | N/A | 6.5.3.3.4, 6.5.2.4.2 | N/A | Clause 6.2.3.4 |
| DC\_3\_n5 | n5 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 | 1 |
| DC\_3\_n8 | n8 | 43 | N/A | 6.5.3.3.5 | N/A | Clause 6.2.3.6 | 1 |
| 43U | N/A | 6.5.3.3.5 | N/A | Clause 6.2.3.6 |
| DC\_3\_n28 | n28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| DC\_3\_n41,  DC\_3\_n80\_ULSUP-TDM\_n41 | n41 | 47 | N/A | 6.5.3.3.15 | N/A | Table 6.2.3.18-2 | 1 |
| n80 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 |
| DC\_8\_n1 | n1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1, 3 |
| 05U | N/A | 6.5.3.3.4, 6.5.2.4.2 | N/A | Clause 6.2.3.4 |
| DC\_8\_n3 | n3 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 | 1, 3 |
| DC\_8\_n28 | n28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2, 3 |
| DC\_8\_n41,  DC\_8\_n81\_ULSUP-TDM\_n41 | n41 | 47 | N/A | 6.5.3.3.15 | N/A | Table 6.2.3.18-2 | 3 |
| n81 | 43 | N/A | 6.5.3.3.5 | N/A | Clause 6.2.3.6 |
| 43U | N/A | 6.5.3.3.5 | N/A | Clause 6.2.3.6 |
| DC\_11\_n3 | n3 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 | 1 |
| DC\_11\_n28 | n28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| DC\_18\_n3 | n3 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 | 1 |
| DC\_19\_n77 | 19 | 08 | 6.6.3.3.3 | N/A | Table 6.2.4-1 (NS\_08) | N/A |  |
| DC\_19\_n78 | 19 | 08 | 6.6.3.3.3 | N/A | Table 6.2.4-1 (NS\_08) | N/A |  |
| DC\_19\_n79 | 19 | 08 | 6.6.3.3.3 | N/A | Table 6.2.4-1 (NS\_08) | N/A |  |
| DC\_21\_n77 | 21 | 09 | 6.6.3.3.4 | N/A | Table 6.2.4-1 (NS\_09) | N/A |  |
| DC\_21\_n78 | 21 | 09 | 6.6.3.3.4 | N/A | Table 6.2.4-1 (NS\_09) | N/A |  |
| DC\_21\_n79 | 21 | 09 | 6.6.3.3.4 | N/A | Table 6.2.4-1 (NS\_09) | N/A |  |
| DC\_28\_n3 | n3 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 | 2 |
| 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A |
| DC\_28\_n5 | 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 1, 2 |
| n5 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 |
| DC\_28\_n8 | 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 1, 2 |
| n8 | 43 | N/A | 6.5.3.3.5 | N/A | Clause 6.2.3.6 |
| 43U | N/A | 6.5.3.3.5 | N/A | Clause 6.2.3.6 |
| DC\_28\_n40 | 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| DC\_28\_n41 | 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| n41 | 47 | N/A | 6.5.3.3.15 | N/A | Table 6.2.3.18-2 |
| DC\_28\_n77 | 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| DC\_28\_n78 | 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| DC\_28\_n79 | 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| DC\_40\_n1 | n1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1 |
| 05U | N/A | 6.5.3.3.4, 6.5.2.4.2 | N/A | Clause 6.2.3.4 |
| DC\_40\_n41 | n41 | 47 | N/A | 6.5.3.3.15 | N/A | Table 6.2.3.18-2 |  |
| DC\_41\_n3 | n3 | 100 | N/A | 6.5.2.4.2 | N/A | Table 6.2.3.1-2 | 1 |
| DC\_41\_n28 | n28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| DC\_42\_n28 | n28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A | 2 |
| NOTE 1: NS\_05U, NS\_43U and NS\_100 can be signalled for NR bands that have UTRA services deployed and protected range is specified in clause 6.5.2.4.2 of TS38.101-1[2].  NOTE 2: Applicable when the assigned NR carrier is confined within 718 MHz and 748 MHz and when the channel bandwidth used is 5 or 10 MHz.  NOTE 3: This requirement is applicable only for the following cases: A: for carriers of 5 MHz channel bandwidth when carrier centre frequency (Fc) is within the range 902.5 MHz ≤ Fc < 907.5 MHz with an uplink transmission bandwidth less than or equal to 20 RB; B: for carriers of 5 MHz channel bandwidth when carrier centre frequency (Fc) is within the range 907.5 MHz ≤ Fc ≤ 912.5 MHz without any restriction on uplink transmission bandwidth; C: for carriers of 10 MHz channel bandwidth when carrier centre frequency (Fc) is Fc = 910 MHz with an uplink transmission bandwidth less than or equal to 32 RB with RBstart > 3. | | | | | | | |

6.2B.3.3A Inter-band NE-DC within FR1

Unless specified in Table 6.2B.3.3A-1, for inter-band carrier aggregation with uplink assigned to LTE and NR bands, the requirements in [2] clause 6.2.3 apply for NR uplink component carrier and the requirements in [4] clause 6.2.4 apply for LTE uplink component carrier.

For inter-band EN-DC with uplink assigned to LTE and NR bands and specified in Table 6.2B.3.3A-1these requirements apply on each component carrier if LTE and NR component carriers are active. The requirements in Table 6.2B.3.3A-1 are specified in terms of an additional spectrum emission requirement. The emission requirements specified in Table 6.2B.3.3A-1 also apply for the frequency ranges that are less than FOOB (MHz) from the edge of the channel bandwidth specified in TS 36.101 [4] and TS 38.101-1 [2], respectively.

Table 6.2B.3.3A-1: Additional Requirements for inter-band NE-DC (two-bands)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NR CA combination | Band | Applied  NS | Requirements  (clause)  (TS 36.101 [4]) | Requirements  (clause)  (TS 38.101-1 [2]) | A-MPR  (table/clause)  (TS 36.101 [4]) | A-MPR  (table/clause)  (TS 38.101-1 [2]) | Note |
| DC\_n1\_28 | n1 | 05 | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 | 1, 2 |
| 05U | N/A | 6.5.3.3.4 | N/A | Clause 6.2.3.4 |
| 28 | 17 | N/A | 6.5.3.3.2 | N/A | N/A |
| NOTE 1: NS\_05U can be signalled for NR bands that have UTRA services deployed and protected range is specified in clause 6.5.2.4.2 of TS38.101-1[2].  NOTE 2: Applicable when the assigned NR carrier is confined within 718 MHz and 748 MHz and when the channel bandwidth used is 5 or 10 MHz. | | | | | | | |

**[Unaffected Portions Skipped]**