**3GPP TSG- Meeting # *r1***

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **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 |  | Radio Access Network |  | Core Network |  |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
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| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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)* | |
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| ***Reason for change:*** | | To align with the notes for band edge relaxation for the cases of inter-band CA and MR-DC, it is proposed that for intra-band contiguous EN-DC and intra-band non-contiguous EN-DC, band edge relaxation should be applied to the uplink configurations if this band has band edge relaxation for MOP as single band usage. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Correct the band edge relaxation notes for intra-band contiguous EN-DC and intra-band non-contiguous EN-DC band combinations. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The band edge relaxation notes for intra-band contiguous EN-DC and intra-band non-contiguous EN-DC band combinations will be incomplete. | | | | | | | | |
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| ***Clauses affected:*** | | 6.2B.1.1, 6.2B.1.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS/TR ... CR ... 38.521-3 | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

### *<< start of changes >>*

### *<< Unchanged sections omitted >>*

#### 6.2B.1.1 Intra-band contiguous EN-DC

The following UE Power Classes define the total maximum output power for any transmission bandwidth(s) of the CG(s) configured.

The maximum output power is measured as the total maximum output power across the UE antenna connector(s). The period of measurement shall be at least one sub frame.

Table 6.2B.1.1-1: Maximum output power for EN-DC (continuous sub-blocks)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| EN-DC configuration | Power class 1.5  (dBm) | Tolerance  (dB) | Power class 2  (dBm) | Tolerance  (dB) | Power class 3  (dBm) | Tolerance  (dB) |
| DC\_(n)3AA3 |  |  |  |  | 23 | +2/-3 |
| DC\_(n)5AA3 |  |  |  |  | 23 | +2/-3 |
| DC\_(n)7AA3 |  |  |  |  | 23 | +2/-3 |
| DC\_(n)12AA3 |  |  |  |  | 23 | +2/-3 |
| DC\_(n)71AA |  |  |  |  | 23 | +2/-3 |
| DC\_(n)38AA3 |  |  |  |  | 23 | +2/-3 |
| DC\_(n)41AA | 29 | +2/-3 | 26 | +2/-3 | 23 | +2/-3 |
| DC\_(n)48AA3 |  |  |  |  | 23 | +2/-3 |
| DC\_(n)66AA3 |  |  |  |  | 23 | +2/-3 |
| NOTE 1: An uplink DC configuration in which the band has NOTE 3 in Table 6.2.1-1 in TS 38.101-1 or NOTE 2 in Table 6.2.2-1 in TS 36.101 is allowed to reduce the lower tolerance limit by 1.5 dB when the transmission bandwidths of at least one of the bands are confined within FUL\_low and FUL\_low + 4 MHz or FUL\_high - 4 MHz and FUL\_high.  NOTE 2: Power Class 3 is the default power class unless otherwise stated.  NOTE 3: Only single switched UL is supported. | | | | | | |

If UE supports a different power class than the default UE power class for EN-DC band combination, and the supported power class enables higher maximum output power than that of the default power class:

- if the E-UTRA UL/DL configuration is 0 or 6; or

- if the E-UTRA UL/DL configuration is 1 and special subframe configuration is 0 or 5; or

- if the IE *p-maxUE-FR1-r15* as defined in TS 36.331 [8] is provided and set to the maximum output power of the default power class or lower;

- apply all requirements for the default power class, and set the configured transmitted power as specified in clause 6.2B.4;

- else

- if the UE does not support a power class with higher maximum output power than power class 2; or

- if the E-UTRA UL/DL configuration is not 2 or 4 or 5; or

- if the field of UE IE *maxUplinkDutyCycle-PC2-FR1* as defined in TS 38.331 is absent and the percentage of uplink symbols transmitted in a certain evaluation period is larger than 25% (The exact evaluation period is no less than one radio frame); or

- if the field of UE IE *maxUplinkDutyCycle-PC2-FR1* is not absent and the percentage of uplink symbols transmitted in a certain evaluation period is larger than 0.5\**maxUplinkDutyCycle-PC2-FR1* (The exact evaluation period is no less than one radio frame); or

- if the IE P-Max as defined in TS 38.331 [9] is provided and set to the maximum output power of the power class 2 or lower;

- apply all requirements for the power class 2 and set the configured transmitted power as specified in clause 6.2B.4;

- else

- apply all requirements for the supported power class, and set the configured transmitted power class as specified in clause 6.2B.4;

#### 6.2B.1.2 Intra-band non-contiguous EN-DC

Table 6.2B.1.2-1: Maximum output power for EN-DC (non-continuous sub-blocks)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| EN-DC configuration | Power class 1.5  (dBm) | Tolerance  (dB) | Power class 2  (dBm) | Tolerance  (dB) | Power class 3  (dBm) | Tolerance  (dB) |
| DC\_2A\_n2A4 |  |  |  |  | 23 | +2/-3 |
| DC\_3A\_n3A |  |  |  |  | 23 | +2/-3 |
| DC\_5A\_n5A4 |  |  |  |  | 23 | +2/-3 |
| DC\_7A\_n7A4 |  |  |  |  | 23 | +2/-3 |
| DC\_48A\_n48A4 |  |  |  |  | 23 | +2/-3 |
| DC\_41A\_n41A | 29 | +2/-3 | 26 | +2/-3 | 23 | +2/-3 |
| DC\_66A\_n66A4 |  |  |  |  | 23 | +2/-3 |
| DC\_71A\_n71A4 |  |  |  |  | 23 | +2/-3 |
| NOTE 1: An uplink DC configuration in which the band has NOTE 3 in Table 6.2.1-1 in TS 38.101-1 or NOTE 2 in Table 6.2.2-1 in TS 36.101 is allowed to reduce the lower tolerance limit by 1.5 dB when the transmission bandwidths of at least one of the bands are confined within FUL\_low and FUL\_low + 4 MHz or FUL\_high - 4 MHz and FUL\_high.  NOTE 2: Void.  NOTE 3: Power Class 3 is the default power class unless otherwise stated.  NOTE 4: Only single switched UL is supported. | | | | | | |

If UE supports a different power class than the default UE power class for EN-DC band combination, and the supported power class enables higher maximum output power than that of the default power class:

- if the E-UTRA UL/DL configuration is 0 or 6; or

- if the E-UTRA UL/DL configuration is 1 and special subframe configuration is 0 or 5; or

- if the IE *p-maxUE-FR1-r15* as defined in TS 36.331 [8] is provided and set to the maximum output power of the default power class or lower;

- apply all requirements for the default power class, and set the configured transmitted power as specified in clause 6.2B.4;

- else

- if the UE does not support a power class with higher maximum output power than power class 2; or

- if the E-UTRA UL/DL configuration is not 2 or 4 or 5; or

- if the field of UE IE *maxUplinkDutyCycle-PC2-FR1* as defined in TS 38.331 is absent and the percentage of uplink symbols transmitted in a certain evaluation period is larger than 25% (The exact evaluation period is no less than one radio frame); or

- if the field of UE IE *maxUplinkDutyCycle-PC2-FR1* is not absent and the percentage of uplink symbols transmitted in a certain evaluation period is larger than 0.5\**maxUplinkDutyCycle-PC2-FR1* (The exact evaluation period is no less than one radio frame); or

- if the IE P-Max as defined in TS 38.331 [9] is provided and set to the maximum output power of the power class 2 or lower;

- apply all requirements for the power class 2 and set the configured transmitted power as specified in clause 6.2B.4;

- else

- apply all requirements for the supported power class, and set the configured transmitted power class as specified in clause 6.2B.4;

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### *<< End of changes >>*