**3GPP TSG-RAN4 Meeting # 102-eR4-220XXXX**

**Electronic Meeting, 21st Feb.- 3rd Mar., 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-1** | **CR** | **<CR#>** | **rev** | **<Rev#>** | **Current version:** | **16.10.0** |  |
|  | | | | | | | | |
| *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 for TS 38.101-1, Correction on configured transmitted power for V2X (Rel-16) | | | | | | | | | |
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| ***Source to WG:*** | vivo | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_SL\_enh-Core | | | | |  | ***Date:*** | | | 2022-2-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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 IE for PEMAX,c is wrong. PEMAX,c is the value given by IE sl-MaxTransPower, which is appllicable to PSSCH/PSCCH/PSFCH. | | | | | | | | |
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| ***Summary of change:*** | | Change the IE ‘*sl-maxTxPower*’ to *‘sl-MaxTransPower’;*  Remove the sentence ‘when the UE is not associated with a serving cell on the NR V2X carrier’. | | | | | | | | |
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| ***Consequences if not approved:*** | | The Pcmax requirements for SL would be wrong. | | | | | | | | |
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| ***Clauses affected:*** | | 6.2E.4 | | | | | | | | |
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|  | | **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 Change>*

6.2E.4 Configured transmitted power for V2X

6.2E.4.1 General

The NR V2X UE is allowed to set its configured maximum output power PCMAX,f,*c* for carrier f of serving cell *c* in each slot. The configured maximum output power PCMAX,f,*c* is set within the following bounds:

PCMAX\_L,f,c ≤ PCMAX,f,*c* ≤ PCMAX\_H,f,*c* with

PCMAX\_L,f, *c* = MIN {PEMAX,*c*, PPowerClass, V2X – MAX(MAX(MPR*c* , A-MPR*c*) + TC,*c* , P-MPR*c*), PRegulatory,c }

PCMAX\_H,f, *c* = MIN {PEMAX,*c*, PPowerClass, PRegulatory }

where

- PCMAX,f,*c* is configured for PSSCH\PSCCH , S-SSB and PSFCH, respectively;

- For the total transmitted power PCMAX,PSSCH/PSCCH/PSFCH , PEMAX,c is the value given by IE *sl-MaxTransPower*, defined by TS 38.331.- PPowerClass,V2X is the maximum UE power specified in Table 6.2E.1.1-1 without taking into account the tolerance specified in the Table 6.2E.1.1-1;

- MPR*c* and A-MPR*c* for serving cell *c* are specified in clause 6.2E.2 and clause 6.2E.3 for PSSCH\PSCCH, S-SSB and PSFCH, respectively;

-- TIB,c and P-MPR*c* are specified in clause 6.2.4

- PRegulatory,c= 10 - Gpost connector dBm the V2X UE is within the protected zone [12] of CEN DSRC tolling system and operating in Band n47; PRegulatory,c= 33 - Gpost connector dBm otherwise.

The maximum output power P*CMAX,PSSCH* and P*CMAX,PSCCH* are derived from PCMAX,c based on 0dB PSD offset between PSSCH and PSCCH.

For the measured configured maximum output power PUMAX,*c* for NR V2X sidelink transmissions non-concurrent with NR uplink transmissions, the same requirement as in clause 6.2.4 shall be applied.

For NR V2X UE supporting SL MIMO, the transmitted power is configured per each UE.

For NR V2X UE with two transmit antenna connectors, the tolerance is specified in Table 6.2E.4.1-1. The requirements shall be met with SL MIMO configurations specified in Table 6.2D.1-2.

If the UE transmits on two antenna connectors at the same time, the tolerance is specified in Table 6.2E.4.1-1.

**Table 6.2E.4.1-1: PCMAX,*c* tolerance schemes for MIMO**

|  |  |  |
| --- | --- | --- |
| **PCMAX,*c*(dBm)** | **Tolerance TLOW(PCMAX\_L,*c*) (dB)** | **Tolerance THIGH(PCMAX\_H,*c*) (dB)** |
| PCMAX,*c* = 26 | 3.0 | 2.0 |
| 23 ≤ PCMAX,*c* < 26 | 3.0 | 2.0 |
| 22 ≤ PCMAX,*c* < 23 | 5.0 | 2.0 |
| 21 ≤ PCMAX,*c* < 22 | 5.0 | 3.0 |
| 20 ≤ PCMAX,*c* < 21 | 6.0 | 4.0 |
| 16 ≤ PCMAX,*c* < 20 | 5.0 | |
| 11 ≤ PCMAX,*c* < 16 | 6.0 | |
| -40 ≤ PCMAX,*c* < 11 | 7.0 | |

*<End of Change>*