**3GPP TSG-RAN WG4 Meeting # 109 R4-2319575**

**Chicago, USA, November 13 – November 17, 2023**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.101-5** | **CR** |  | **rev** |  | **Current version:** | **18.3.0** |  |
|  |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)*** *on using this form: comprehensive instructions can be found at <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 to TS 38.101-5: NTN Ka-band introduction – sub-clause 9.2.3 |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_NTN\_enh-Core |  | ***Date:*** | 2023-11-13 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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)* |
|  |  |
| ***Reason for change:*** | This CR introduces requirements for NTN Ka bands according to the agreed work split. Sub-clause 9.2.3. |
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| ***Summary of change:*** | The configured transmitted power clause has been specified assuming the following features are not supported at least in this release (partly discussed offline): * MPR
* A-MPR
* Multi-band support and peak EIRP relaxation ΔMBP (not specified in 9.2.1)
* Suport for *mpr-PowerBoost-FR2-r16 (*DPIBE)
* Power management MPR (P-MPRf,c)
* maxUplinkDutyCycle-FR2 usage (used for EMF)
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| ***Consequences if not approved:*** | The NTN ka-bands won’t be correctly supported |
|  |  |
| ***Clauses affected:*** | 9.2.3 (new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ... |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ... |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

*<Start of the change>*

### 9.2.3. Configured transmitted power

The NTN UE can configure its maximum output power. The configured NTN UE maximum output power PCMAX,f,c for carrier f of a serving cell c is defined as that available to the reference point of a given transmitter branch that corresponds to the reference point of the higher-layer filtered RSRP measurement as specified in TS 38.215 [11].

The configured NTN UE maximum output power PCMAX,f,c for carrier *f* of a serving cell *c* shall be set such that the corresponding measured peak EIRP PUMAX,f,c is within the following bounds

PPowerclass ≤ PUMAX,f,c ≤ EIRPmax

while the corresponding measured total radiated power PTMAX,f,c is bounded by

PTMAX,f,c ≤ TRPmax

with PPowerclass the NTN UE minimum peak EIRP as specified in sub-clause 9.2.1, EIRPmax the applicable maximum EIRP as specified in sub-clause 9.2.1, and TRPmax the maximum TRP for the NTN UE power class as specified in sub-clause 9.2.1. The requirement is verified in beam peak direction.

The tolerance T(∆P) for applicable values of ∆P (values in dB) is specified in Table 9.2.3-1.

Table 9.2.3-1: PUMAX,f,c tolerance for FR2-NTN

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| --- | --- | --- |
| Operating Band | ∆P (dB) | Tolerance T(∆P)(dB) |
| n510, n511, n512 | P = 0 | 0 |
|  | 0 < P ≤ 2 | 1.5 |
|  | 2 < P ≤ 3 | 2.0 |
|  | 3 < P ≤ 4 | 3.0 |
|  | 4 < P ≤ 5 | 4.0 |
|  | 5 < P ≤ 10 | 5.0 |
|  | 10 < P ≤ 15 | 7.0 |
|  | 15 < P ≤ X | 8.0 |
| NOTE: X is the value such that Pumax,f,c lower bound, PPowerclass - P – T(P) = minimum output power specified in clause 6.3.1 |

*<End of the change>*