**3GPP TSG-RAN Meeting # 109 *R4-2319180***

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-5** | **CR** | **draft-CR** | **rev** | **-** | **Current version:** | **18.3.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_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: sub-clause 9.2.1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_NTN\_enh-Core | | | | |  | ***Date:*** | | | 2023-10-24 |
|  |  | | | |  | |  | | |  |
| ***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 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:*** | | To introduce content in chapter 9.2.1 in TS 38.101-5. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | To introduce content in chapter 9.2.1 in TS 38.101-5. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The requirements in chapter 9.2.1 is missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 Change>**

## 9.2 Transmitter power

### 9.2.1 UE maximum output power

#### 9.2.1.0 General

NOTE: UE power classes are specified based on the assumption of certain UE types with specific device architectures. The UE types can be found in Table 9.2.1.0-1.

Table 9.2.1.0-1: Assumption of UE Types

|  |  |  |
| --- | --- | --- |
| **UE/Power class** | **UE type** | Type description |
| [1] / [Fixed VSAT] | 1 | Fixed VSAT communicating with GEO and LEO with mechanical steering antenna. |
| 2 | Fixed VSAT communicating with GEO and LEO with electronic steering antenna. |
| 3 | Fixed VSAT communicating with LEO only with electronic steering antenna. |
| [2] / [Mobile VSAT] | 4 | Mobile VSAT communicating with GEO with mechanical steering antenna. |
| 5 | Mobile VSAT communicating with GEO with electronic steering antenna. |
| Note1: Assuming that UE has single beam towards one single satellite at a given time in Rel-18.  Note2: The Mobile VSAT communicating with non-GSO is not considered in Rel-18. | | |

#### 9.2.1.1 Minimum requirements for Mobile VSAT

The following requirements define the maximum output power radiated by the UE for any transmission bandwidth within the channel bandwidth for non-CA configuration, unless otherwise stated. The period of measurement shall be at least one sub frame (1ms). The minimum output power values for EIRP are found in Table 9.2.1.1-1. The requirement is verified with the test metric of EIRP (Link=TX beam peak direction, Meas=Link angle).

Table 9.2.1.1-1: UE minimum peak EIRP for Mobile VSAT

|  |  |
| --- | --- |
| Operating band | Min peak EIRP (dBm) |
| n512 | TBD |
| n511 | TBD |
| NOTE 1: Minimum peak EIRP is defined as the lower limit without tolerance | |

The maximum output power values for EIRP are found in Table 9.2.1.1-2 below.

Table 9.2.1.1-2: UE maximum output power limits for Mobile VSAT

|  |  |
| --- | --- |
| Operating band | Max EIRP (dBm) |
| n512 | [76.2] |
| n511 | [76.2] |

#### 9.2.1.2 Minimum requirements for Fixed VSAT

The following requirements define the maximum output power radiated by the UE for any transmission bandwidth within the channel bandwidth for non-CA configuration, unless otherwise stated. The period of measurement shall be at least one sub frame (1ms). The minimum output power values for EIRP are found in Table 9.2.1.2-1. The requirement is verified with the test metric of EIRP (Link=TX beam peak direction, Meas=Link angle).

Table 9.2.1.2-1: UE minimum peak EIRP for Fixed VSAT

|  |  |
| --- | --- |
| Operating band | Min peak EIRP (dBm) |
| n512 | TBD |
| n511 | TBD |
| n510 | TBD |
| NOTE 1: Minimum peak EIRP is defined as the lower limit without tolerance | |

The maximum output power values for EIRP are found in Table 9.2.1.2-2 below.

Table 9.2.1.2-2: UE maximum output power limits for Fixed VSAT

|  |  |
| --- | --- |
| Operating band | Max EIRP (dBm) |
| n512 | [76.2] |
| n511 | [76.2] |
| n510 | [76.2] |

## **<End of Change>**