**3GPP TSG-RAN WG4 Meeting # 116 *R4-2509185***

**Bengaluru (Bangalore), India, 25th – 29th August, 2025**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.141-1** | **CR** | **0506** | **rev** | **1** | **Current version:** | **18.10.0** |  |
|  |
| *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)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  |  |
|  |  |
| ***Source to WG:*** | Nokia, Union Inter. Chemins de Fer |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_FR1\_lessthan\_5MHz\_BW-Perf |  | ***Date:*** | 2025-08-15 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | ECC Dec(20)2, approved 20 November 2020, has been amended 28 June 2024 to include in its Annex 2 the specific in-block requirements for 3 MHz channel bandwidth in band n100. |
|  |  |
| ***Summary of change:*** | Addition of the output power restrictions for 3MHz CBW in band n100. |
|  |  |
| ***Consequences if not approved:*** | Output power restrictions for 3MHz CBW in band n100 are not defined. |
|  |  |
| ***Clauses affected:*** | 6.2.1 |
|  |  |
|  | **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:*** | Corresponding CR to core requirements was agreed in R4-2508699. |
|  |  |
| ***This CR's revision history:*** | Revision of R4-2509185 to correct a reference number and other editorial errors. |

**<Start of change>**

6.2.1 Definition and applicability

The conducted BS output power requirements are specified at *single-band connector*, or at *multi-band connector*.

The *rated carrier output power* of the *BS type 1-C* shall be as specified in table 6.2.1-1.

**Table 6.2.1-1: *Rated carrier output power* limits for *BS type 1-C***

|  |  |
| --- | --- |
| **BS class** | **Prated,c,AC** |
| Wide Area BS | (Note) |
| Medium Range BS | ≤ 38 dBm |
| Local Area BS | ≤ 24 dBm |
| NOTE: There is no upper limit for the Prated,c,AC rated output power of the Wide Area Base Station. |

For operation in bands n100 and n101 in CEPT countries subject to the ECC Decision (20)02 [25], the WA BS requirement in table 6.2.1-1 apply in case of coordinated RMR BS deployments, while the requirements in clause 6.2.4 apply in case of uncoordinated RMR BS deployments.

The *rated carrier output power* of the *BS type 1-H* shall be as specified in table 6.2.1-2.

**Table 6.2.1-2: *Rated carrier output power* limits for *BS type 1-H***

| **BS class** | **Prated,c,sys** | **Prated,c,TABC** |
| --- | --- | --- |
| Wide Area BS | (Note) | (Note) |
| Medium Range BS | ≤ 38 dBm +10log(NTXU,counted) | ≤ 38 dBm |
| Local Area BS | ≤ 24 dBm +10log(NTXU,counted) | ≤ 24 dBm |
| NOTE: There is no upper limit for the Prated,c,sys or Prated,c,TABC of the Wide Area Base Station. |

In addition, for operation with shared spectrum channel access operation, the BS may have to comply with the applicable BS power limits established regionally, when deployed in regions where those limits apply and under the conditions declared by the manufacturer.

For Band n41 and n90 operation in Japan, the rated output power, Prated,c.sys for BS type 1-H or the sum of Prated,c,AC over all *antenna connectors* for BS type 1-C declared by the manufacturer shall be equal to or less than 20 W per 10 MHz bandwidth.

For band n100 in CEPT countries subject to the ECC Decision (20)02 [25], Prated,c,AC of the WA BS shall be as specified in table 6.2.1-3.

Table 6.2.1-3: WA BS Prated,c,AC in band n100

| Channel bandwidth | Prated,c,AC (NOTE 1) |
| --- | --- |
| 3MHz (NOTE 2) | ≤ 48 dBm/3MHz + (fDL-921.4) x 40/3 dB |
| 5MHz | ≤ 51.5 dBm/5MHz + (fDL-922.1) x 40/3 dB |
| NOTE 1: fDL = centre frequency in MHzNOTE 2 : fDL ≤ 922.5 MHz. No additional output power restriction for fDL > 922.5MHz |

This limit is derived from ECC Decision (20)02 [25] assuming a 17 dBi maximum antenna gain and 4 dB losses, and assuming one antenna connector. The above rated output power limit for band n100 applies to uncoordinated deployments and in case of coordinated deployments, higher output power values may be allowed.

NOTE 1: Void.

For CEPT countries subject to the ECC Decision (20)02 [25], administrations wishing to allow multiple carriers, i.e., more than one wideband carrier (LTE, NR, NB-IoT standalone, or NR/LTE with NB-IoT in-band) in band n100, should consider the implementation of a coordination procedure or other mitigation measures.

NOTE 2: Standalone NB-IoT operation is specified in TS 36.104 [22].

For band n101 in CEPT countries subject to the ECC Decision (20)02 [25], Prated,c,AC shall not exceed 51 dBm/10MHz or 48 dBm/5MHz. This limit is derived from ECC Decision (20)02 [25] assuming a 18 dBi maximum antenna gain and 4dB losses, and assuming one antenna connector. The above rated output power limit for band n101 applies to uncoordinated deployments and in case of coordinated deployments, higher output power values may be allowed.

For CEPT countries subject to the ECC Decision (20)02 [25], administrations wishing to allow multiple carriers, i.e., more than one wideband carrier (LTE, NR, NB-IoT standalone, or NR/LTE with NB-IoT in-band) in band n101, should consider the implementation of a coordination procedure or other mitigation measures.

NOTE 3: Standalone NB-IoT operation is specified in TS 36.104 [22].

The output power limit for the respective BS classes in tables 6.2.1-1 and 6.2.1-2 shall be compared to the rated output power and the declared BS class. It is not subject to testing.

**<End of change>**