**3GPP TSG- RAN WG4 Meeting # 102-eR4-2205488**

**Electronic meeting, Feb 21 - Mar 3, 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.141** | **CR** |  | **rev** | **1** | **Current version:** | **17.4.0** |  |
|  | | | | | | | | |
| *For* ***[HELP](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 |  | Radio Access Network | **x** | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Draft maintenance CR to TS36.141 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI | | | | |  | ***Date:*** | | | 2022-2-5 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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:*** | | Transmitter co-location requirement with other BS for NR Band n97 is not correct. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Correct co-location requirement with other BS for NR Band n97 for MR range BS scenario. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Transmitter co-location requirement with other BS for NR Band n97 is not correct in MR range BS scenario. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.6.4.5.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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>

##### 6.6.4.5.5 Co-location with other base stations

These requirements may be applied for the protection of other BS receivers when GSM900, DCS1800, PCS1900, GSM850, CDMA850, UTRA FDD, UTRA TDD E-UTRA and/or NR BS are co-located with an E-UTRA or NB-IoT BS.

The requirements assume a 30 dB coupling loss between transmitter and receiver and are based on co-location with base stations of the same class.

The power of any spurious emission shall not exceed the limits of Table 6.6.4.5.5-1 for a Wide Area BS where requirements for co-location with a BS type listed in the first column apply. For BS capable of multi-band operation, the exclusions and conditions in the Note column of Table 6.6.4.5.5-1 apply for each supported operating band. For BS capable of multi-band operation where multiple bands are mapped on separate antenna connectors, the exclusions and conditions in the Note column of Table 6.6.4.5.5-1 apply for the operating band supported at that antenna connector.

Table 6.6.4.5.5-1: BS Spurious emissions limits for Wide Area BS co-located with another BS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type of co-located BS | Frequency range for co-location requirement | Maximum Level | Measurement Bandwidth | Note |
| Macro GSM900 | 876-915 MHz | -98 dBm | 100 kHz |  |
| Macro DCS1800 | 1710 - 1785 MHz | -98 dBm | 100 kHz |  |
| Macro PCS1900 | 1850 - 1910 MHz | -98 dBm | 100 kHz |  |
| Macro GSM850 or CDMA850 | 824 - 849 MHz | -98 dBm | 100 kHz |  |
| WA UTRA FDD Band I or E-UTRA Band 1 or NR band n1 | 1920 - 1980 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band II or E-UTRA Band 2 or NR band n2 | 1850 - 1910 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band III or E-UTRA Band 3 or NR band n3 | 1710 - 1785 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band IV or E-UTRA Band 4 | 1710 - 1755 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band V or E-UTRA Band 5 or NR band n5 | 824 - 849 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band VI, XIX or  E-UTRA Band 6, 19 | 830 - 845 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band VII or E-UTRA Band 7 or Nrband n7 | 2500 - 2570 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band VIII or E-UTRA Band 8 or NR band n8 | 880 - 915 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band IX or E-UTRA Band 9 | 1749.9 - 1784.9 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band X or E-UTRA Band 10 | 1710 - 1770 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band XI or E-UTRA Band 11 | 1427.9 –1447.9 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 50 or 75 |
| WA UTRA FDD Band XII or  E-UTRA Band 12 or NR band n12 | 699 - 716 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band XIII or  E-UTRA Band 13 or NR Band n13 | 777 - 787 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band XIV or  E-UTRA Band 14 or NR Band n14 | 788 - 798 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 17 | 704 - 716 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 18 | 815 - 830 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band XX E-UTRA Band 20 or NR band n20 | 832 - 862 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band XXI or  E-UTRA Band 21 | 1447.9 – 1462.9 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 32, 50 or 75 |
| WA UTRA FDD Band XXII or E-UTRA Band 22 | 3410 – 3490 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42 |
| WA E-UTRA Band 24 or NR Band n24 | 1626.5 – 1660.5 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band XXV or  E-UTRA Band 25 or NR Band n25 | 1850 – 1915 MHz | -96 dBm | 100 kHz |  |
| WA UTRA FDD Band XXVI or  E-UTRA Band 26 or NR Band n26 | 814 – 849 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 27 | 807 - 824 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 28 or NR band n28 | 703 – 748 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 44 |
| WA E-UTRA Band 30 or NR Band n30 | 2305 – 2315 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 40 |
| WA E-UTRA Band 31 | 452.5 – 457.5 MHz | -96 dBm | 100 kHz |  |
| WA UTRA TDD Band a) or E-UTRA Band 33 | 1900 - 1920 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 33 |
| WA UTRA TDD Band a) or E-UTRA Band 34 or NR band n34 | 2010 - 2025 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 34 |
| WA UTRA TDD Band b) or E-UTRA Band 35 | 1850 – 1910 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 35 |
| WA UTRA TDD Band b) or E-UTRA Band 36 | 1930 - 1990 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 2 and 36 |
| WA UTRA TDD Band c) or E-UTRA Band 37 | 1910 - 1930 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 37. This unpaired band is defined in ITU-R M.1036, but is pending any future deployment. |
| WA UTRA TDD Band d) or E-UTRA Band 38 or NR band n38 | 2570 – 2620 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 38. |
| WA UTRA TDD Band f) or E-UTRA Band 39 or NR band n39 | 1880 – 1920MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 33 and 39 |
| WA UTRA TDD Band e) or E-UTRA Band 40 or NR band n40 | 2300 – 2400MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 30 or 40 |
| WA E-UTRA Band 41 or NR band n41 | 2496 – 2690 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 41 |
| WA E-UTRA Band 42 | 3400 – 3600 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48 or 52 |
| WA E-UTRA Band 43 | 3600 – 3800 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42, 43 or 48 |
| WA E-UTRA Band 44 | 703 – 803 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 28 or 44 |
| WA E-UTRA Band 45 | 1447 – 1467 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 45 |
| WA E-UTRA Band 48 or NR band n48 | 3550 – 3700 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42, 43 or 48 |
| WA E-UTRA Band 50 or NR band n50 | 1432 – 1517 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 11, 21, 32, 74 or 75 |
| WA E-UTRA Band 52 | 3300 – 3400 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42 or 52 |
| WA E-UTRA Band 65 or NR band n65 | 1920 - 2010 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 66 or NR band n66 | 1710 - 1780 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 68 | 698 - 728 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 70 or NR band n70 | 1695 - 1710 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 71 or NR band n71 | 663 - 698 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 72 | 451 - 456 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 73 | 450 - 455 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 74 or NR band n74 | 1427 – 1470 MHz | -96 dBm | 100 kHz | This is not applicabe to E-UTRA BS operating in Band 50 |
| WA NR band n77 | 3300 – 4200 MHz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48 or 52 |
| WA NR band n78 | 3300 – 3800 Mz | -96 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48 or 52 |
| WA NR Band n79 | 4.4 – 5.0 GHz | -96 dBm | 100 kHz |  |
| WA NR Band n80 | 1710 – 1785 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n81 | 880 – 915 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n82 | 832 – 862 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n83 | 703 – 748 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n84 | 1920 – 1980 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 85 or NR band n85 | 698 - 716 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n86 | 1710 – 1780 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 87 | 410 - 415 MHz | -96 dBm | 100 kHz |  |
| WA E-UTRA Band 88 | 412 - 417 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n89 | 824 – 849 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n92 | 832 – 862 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n94 | 880 – 915 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n95 | 2010 - 2025 MHz | -96 dBm | 100 kHz |  |
| WA NR Band n97 | 2300 – 2400MHz | -96 dBm | 100 kHz |  |
| WA NR Band n98 | 1880 – 1920MHz | -96 dBm | 100 kHz |  |
| WA NR Band n99 | 1626.5 – 1660.5 MHz | -96 dBm | 100 kHz |  |

The power of any spurious emission shall not exceed the limits of Table 6.6.4.5.5-2 for a Local Area BS where requirements for co-location with a BS type listed in the first column apply. For BS capable of multi-band operation, the exclusions and conditions in the Note column of Table 6.6.4.5.5-2 apply for each supported operating band. For BS capable of multi-band operation where multiple bands are mapped on separate antenna connectors, the exclusions and conditions in the Note column of Table 6.6.4.5.5-2 apply for the operating band supported at that antenna connector.

Table 6.6.4.5.5-2: BS Spurious emissions limits for Local Area BS co-located with another BS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type of co-located BS | Frequency range for co-location requirement | Maximum Level | Measurement Bandwidth | Note |
| Pico GSM900 | 876-915 MHz | -70 dBm | 100 kHz |  |
| Pico DCS1800 | 1710 - 1785 MHz | -80 dBm | 100 kHz |  |
| Pico PCS1900 | 1850 - 1910 MHz | -80 dBm | 100 kHz |  |
| Pico GSM850 | 824 - 849 MHz | -70 dBm | 100 kHz |  |
| LA UTRA FDD Band I or E-UTRA Band 1 or NR band n1 | 1920 - 1980 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band II or E-UTRA Band 2 or NR band n2 | 1850 - 1910 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band III or E-UTRA Band 3 or NR band n3 | 1710 - 1785 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band IV or E-UTRA Band 4 | 1710 - 1755 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band V or E-UTRA Band 5 or NR band n5 | 824 - 849 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band VI, XIX or E-UTRA Band 6, 19 | 830 - 845 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band VII or E-UTRA Band 7 or NR band n7 | 2500 - 2570 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band VIII or E-UTRA Band 8 or NR band n8 | 880 - 915 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band IX or E-UTRA Band 9 | 1749.9 - 1784.9 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band X or E-UTRA Band 10 | 1710 - 1770 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band XI or E-UTRA Band 11 | 1427.9 - 1447.9 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 50, 51, 75 or 76 |
| LA UTRA FDD Band XII or E-UTRA Band 12 or NR band n12 | 699 - 716 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band XIII or E-UTRA Band 13 or NR Band n13 | 777 - 787 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band XIV or E-UTRA Band 14 or NR Band n14 | 788 - 798 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 17 | 704 - 716 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 18 | 815 - 830 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band XX or E-UTRA Band 20 or NR band n20 | 832 - 862 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band XXI or E-UTRA Band 21 | 1447.9 – 1462.9 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 32, 50 or 75 |
| LA UTRA FDD Band XXII or E-UTRA Band 22 | 3410 – 3490 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42 |
| LA E-UTRA Band 24 or NR Band n24 | 1626.5 – 1660.5 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band XXV or E-UTRA Band 25 or NR band n25 | 1850 – 1915 MHz | -88 dBm | 100 kHz |  |
| LA UTRA FDD Band XXVI or  E-UTRA Band 26 or NR Band n26 | 814 – 849 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 27 | 807 - 824 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 28 or NR band n28 | 703 – 748 MHz | -88 dBm | 100 KHz | This is not applicable to E-UTRA BS operating in Band 44 |
| LA E-UTRA Band 30 or NR Band n30 | 2305 – 2315 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 40 |
| LA E-UTRA Band 31 | 452.5 – 457.5 MHz | -88 dBm | 100 kHz |  |
| LA UTRA TDD Band a) or E-UTRA Band 33 | 1900 - 1920 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 33 |
| LA UTRA TDD Band a) or E-UTRA Band 34 or NR band n34 | 2010 - 2025 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 34 |
| LA UTRA TDD Band b) or E-UTRA Band 35 | 1850 – 1910 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 35 |
| LA UTRA TDD Band b) or E-UTRA Band 36 | 1930 - 1990 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 2 and 36 |
| LA UTRA TDD Band c) or E-UTRA Band 37 | 1910 - 1930 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 37. This unpaired band is defined in ITU-R M.1036, but is pending any future deployment. |
| LA UTRA TDD Band d) or E-UTRA Band 38 or NR band n38 | 2570 – 2620 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 38. |
| LA UTRA TDD Band f) or E-UTRA Band 39 or NR band n39 | 1880 – 1920MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 33 and 39 |
| LA UTRA TDD Band e) or E-UTRA Band 40 or NR band n40 | 2300 – 2400MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 30 or 40 |
| LA E-UTRA Band 41 or NR band n41 | 2496 – 2690 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 41 or 53 |
| LA E-UTRA Band 42 | 3400 – 3600 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48, 49 or 52 |
| LA E-UTRA Band 43 | 3600 – 3800 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42, 43, 48 or 49 |
| LA E-UTRA Band 44 | 703 – 803 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 28 or 44 |
| LA E-UTRA Band 45 | 1447 – 1467 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 45 |
| LA E-UTRA Band 46 or NR Band n46 | 5150 – 5925 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 46 |
| LA E-UTRA Band 48 or NR band n48 | 3550 – 3700 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42, 43, 48 or 49 |
| LA E-UTRA Band 49 | 3550 – 3700 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42, 43, 48 or 49 |
| LA E-UTRA Band 50 or NR band n50 | 1432 – 1517 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 11, 21, 32, 51, 74, 75 or 76 |
| LA E-UTRA Band 51 or NR band n51 | 1427 – 1432 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 50, 75 or 76 |
| LA E-UTRA Band 52 | 3300 – 3400 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42 or 52 |
| LA E-UTRA Band 53 or NR Band n53 | 2483.5 – 2495 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 41 or 53 |
| LA E-UTRA Band 65 or NR band n65 | 1920 - 2010 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 66 or NR band n66 | 1710 - 1780 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 68 | 698 - 728 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 70 or NR band n70 | 1695 - 1710 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 71 or NR band n71 | 663 - 698 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 72 | 451 - 456 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 73 | 450 - 455 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 74 or NR band n74 | 1427 – 1470 MHz | -88 dBm | 100 kHz | This is not applicabe to E-UTRA BS operating in Band 50 or 51 |
| LA NR band n77 | 3300 – 4200 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48, 49 or 52 |
| LA NR band n78 | 3300 – 3800 MHz | -88 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48, 49 or 52 |
| LA NR Band n79 | 4.4 – 5.0 GHz | -88 dBm | 100 kHz |  |
| LA NR Band n80 | 1710 – 1785 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n81 | 880 – 915 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n82 | 832 – 862 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n83 | 703 – 748 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n84 | 1920 – 1980 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 85 or NR band n85 | 698 - 716 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n86 | 1920 – 1980 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 87 | 410 - 415 MHz | -88 dBm | 100 kHz |  |
| LA E-UTRA Band 88 | 412 - 417 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n89 | 824 – 849 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n91 | 832 – 862 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n92 | 832 – 862 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n93 | 880 – 915 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n94 | 880 – 915 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n95 | 2010 - 2025 MHz | -88 dBm | 100 kHz |  |
| LA NR Band n96 | 5925 - 7125 MHz | -87 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 46 |
| LA NR Band n97 | 2300 – 2400MHz | -88 dBm | 100 kHz |  |
| LA NR Band n98 | 1880 – 1920MHz | -88 dBm | 100 kHz |  |
| LA NR Band n99 | 1626.5 – 1660.5 MHz | -88 dBm | 100 kHz |  |

The power of any spurious emission shall not exceed the limits of Table 6.6.4.5.5-3 for a Medium Range BS where requirements for co-location with a BS type listed in the first column apply. For BS capable of multi-band operation, the exclusions and conditions in the Note column of Table 6.6.4.5.5-3 apply for each supported operating band. For BS capable of multi-band operation where multiple bands are mapped on separate antenna connectors, the exclusions and conditions in the Note column of Table 6.6.4.5.5-3 apply for the operating band supported at that antenna connector.

Table 6.6.4.5.5-3: BS Spurious emissions limits for Medium range BS co-located with another BS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type of co-located BS | Frequency range for co-location requirement | Maximum Level | Measurement Bandwidth | Note |
| Micro/MR GSM900 | 876-915 MHz | -91 dBm | 100 kHz |  |
| Micro/MR DCS1800 | 1710 - 1785 MHz | -91 dBm | 100 kHz |  |
| Micro/MR PCS1900 | 1850 - 1910 MHz | -91 dBm | 100 kHz |  |
| Micro/MR GSM850 | 824 - 849 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band I or E-UTRA Band 1 or NR band n1 | 1920 - 1980 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band II or E-UTRA Band 2 or NR band n2 | 1850 - 1910 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band III or E-UTRA Band 3 or NR band n3 | 1710 - 1785 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band IV or E-UTRA Band 4 | 1710 - 1755 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band V or E-UTRA Band 5 or NR band n5 | 824 - 849 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band VI, XIX or E-UTRA Band 6, 19 | 830 - 850 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band VII or E-UTRA Band 7 or NR band n7 | 2500 - 2570 MHz | -91 dBm | 100 KHz |  |
| MR UTRA FDD Band VIII or E-UTRA Band 8 or NR band n8 | 880 - 915 MHz | -91 dBm | 100 KHz |  |
| MR UTRA FDD Band IX or E-UTRA Band 9 | 1749.9 - 1784.9 MHz | -91 dBm | 100 KHz |  |
| MR UTRA FDD Band X or E-UTRA Band 10 | 1710 - 1770 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band XI or E-UTRA Band 11 | 1427.9 - 1447.9 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 50 or 75 |
| MR UTRA FDD Band XII or E-UTRA Band 12 or NR band n12 | 699 - 716 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band XIII or E-UTRA Band 13 or NR Band n13 | 777 - 787 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band XIV or E-UTRA Band 14 or NR Band n14 | 788 - 798 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 17 | 704 - 716 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 18 | 815 - 830 MHz | -91 dBm | 100 KHz |  |
| MR UTRA FDD Band XX or E-UTRA Band 20 or NR band n20 | 832 - 862 MHz | -91 dBm | 100 KHz |  |
| MR UTRA FDD Band XXI or E-UTRA Band 21 | 1447.9 - 1462.9 MHz | -91 dBm | 100 KHz | This is not applicable to E-UTRA BS operating in Band 32, 50 or 75 |
| MR UTRA FDD Band XXII or E-UTRA Band 22 | 3410 – 3490 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42 |
| MR E-UTRA Band 24 or NR Band n24 | 1626.5 – 1660.5 MHz | -91 dBm | 100 KHz |  |
| MR UTRA FDD Band XXV or E-UTRA Band 25 or NR band n25 or NR Band n26 | 1850 – 1915 MHz | -91 dBm | 100 kHz |  |
| MR UTRA FDD Band XXVI or  E-UTRA Band 26 | 814 – 849 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 27 | 807 - 824 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 28 or NR band n28 | 703 – 748 MHz | -91 dBm | 100 KHz | This is not applicable to E-UTRA BS operating in Band 44 |
| MR E-UTRA Band 30 or NR Band n30 | 2305 – 2315 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 40 |
| MR E-UTRA Band 31 | 452.5 – 457.5 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 33 | 1900 - 1920 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 33 |
| MR E-UTRA Band 34 or NR band n34 | 2010 - 2025 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 34 |
| MR E-UTRA Band 35 | 1850 – 1910 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 35 |
| MR E-UTRA Band 36 | 1930 - 1990 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 2 and 36 |
| MR E-UTRA Band 37 | 1910 - 1930 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 37. This unpaired band is defined in ITU-R M.1036, but is pending any future deployment. |
| MR E-UTRA Band 38 or NR band n38 | 2570 – 2620 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 38. |
| MR E-UTRA Band 39 or NR band n39 | 1880 – 1920MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 33 and 39 |
| MR E-UTRA Band 40 or NR band n40 | 2300 – 2400MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 30 or 40 |
| MR E-UTRA Band 41 or NR band n41 | 2496 – 2690 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 41 or 53 |
| MR E-UTRA Band 42 | 3400 – 3600 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48 or 52 |
| MR E-UTRA Band 43 | 3600 – 3800 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42, 43 or 48 |
| MR E-UTRA Band 44 | 703 – 803 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 28 or 44 |
| MR E-UTRA Band 45 | 1447 – 1467 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 45 |
| MR E-UTRA Band 46 or NR Band n46 | 5150 – 5925 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 46 |
| MR E-UTRA Band 48 or NR band n48 | 3550 – 3700 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42, 43 or 48 |
| MR E-UTRA Band 50 or NR band n50 | 1432 – 1517 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 11, 21, 32, 51, 74, 75 or 76 |
| MR E-UTRA Band 52 | 3300 – 3400 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 42 or 52 |
| MR E-UTRA Band 53 or NR Band n53 | 2483.5 – 2495 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 41 or 53 |
| MR E-UTRA Band 65 or NR band n65 | 1920 - 2010 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 66 or NR band n66 | 1710 - 1780 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 68 | 698 - 728 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 70 or NR band n70 | 1695 - 1710 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 71 | 663 - 698 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 72 | 451 - 456 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 73 | 450 - 455 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 74 or NR band n74 | 1427 – 1470 MHz | -91 dBm | 100 kHz | This is not applicabe to E-UTRA BS operating in Band 50 |
| MR NR band n77 | 3300 – 4200 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48 or 52 |
| MR NR band n78 | 3300 – 3800 MHz | -91 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 22, 42, 43, 48 or 52 |
| MR NR Band n79 | 4.4 – 5.0 GHz | -91 dBm | 100 kHz |  |
| MR NR Band n80 | 1710 – 1785 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n81 | 880 – 915 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n82 | 832 – 862 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n83 | 703 – 748 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n84 | 1920 – 1980 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 85 or NR band n85 | 698 - 716 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n86 | 1710 – 1780 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 87 | 410 - 415 MHz | -91 dBm | 100 kHz |  |
| MR E-UTRA Band 88 | 412 - 417 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n89 | 824 – 849 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n92 | 832 – 862 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n94 | 880 – 915 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n95 | 2010 - 2025 MHz | -91 dBm | 100 kHz |  |
| MR NR Band n96 | 5925 - 7125 MHz | -90 dBm | 100 kHz | This is not applicable to E-UTRA BS operating in Band 46 |
| MR NR Band n97 | 2300 – 2400MHz | -91 dBm | 100 kHz |  |
| MR NR Band n98 | 1880 – 1920MHz | -91 dBm | 100 kHz |  |
| MR NR Band n99 | 1626.5 – 1660.5 MHz | -91 dBm | 100 kHz |  |

NOTE 1: As defined in the scope for spurious emissions in this clause, the co-location requirements in Table 6.6.4.5.5-1 to Table 6.6.4.5.5-3 do not apply for the 10 MHz frequency range immediately outside the BS transmit frequency range of a downlink operating band (see Table 5.5-1). The current state-of-the-art technology does not allow a single generic solution for co-location with other system on adjacent frequencies for 30dB BS-BS minimum coupling loss. However, there are certain site-engineering solutions that can be used. These techniques are addressed in TR 25.942 [11].

NOTE 2: Tables 6.6.4.5.5-1 to 6.6.4.5.5-3 assume that two operating bands, where the corresponding eNode B transmit and receive frequency ranges in Table 5.3-1 would be overlapping, are not deployed in the same geographical area. For such a case of operation with overlapping frequency arrangements in the same geographical area, special co-location requirements may apply that are not covered by the 3GPP specifications.

NOTE 3: Co-located TDD base stations that are synchronized and using the same or adjacent operating band can transmit without special co-locations requirements. For unsynchronized base stations, special co-location requirements may apply that are not covered by the 3GPP specifications.

#### < End OF CHANGE>