# FCC SAR TEST REPORT

| | | |
|---|---|---|
| **FCC ID** | : | **O57FLEX5G14X05** |
| **Equipment** | : | **Notebook Computer** |
| **Brand Name** | : | **Lenovo** |
| **Model Name** | : | **Lenovo Flex 5G 14Q8CX05********, 82AK********, Yoga 5G 14Q8CX05********, 81XE******** (* = 0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product)** |
| **Applicant** | : | **Lenovo (Shanghai) Electronics Technology Co., Ltd. Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone, Shanghai** |
| **Manufacturer** | : | **Lenovo PC HK Limited 23/F, Lincoln House, Taikoo Place, 979 King's Road, Quarry Bay, Hong Kong** |
| **Standard** | : | **FCC 47 CFR Part 2 (2.1093) ANSI/IEEE C95.1-1992 IEEE 1528-2013** |

**The product was received on Dec. 12, 2019 and testing was started from Dec. 19, 2019 and completed on Jan. 28, 2020. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.**

**The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.**

**The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.**

Cona Huang

**Approved by: Cona Huang / Deputy Manager**

***SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory***
*No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan*

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# History of this test report

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| FA9N2705A | 01 | Initial issue of report | Feb. 20, 2020 |
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# 1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Lenovo (Shanghai) Electronics Technology Co., Ltd., Notebook Computer , Lenovo Flex 5G 14Q8CX05********, 82AK********, Yoga 5G 14Q8CX05********, 81XE******** (* = 0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product), are as follows.

| Equipment Class | Frequency Band | Highest SAR Summary Body (Separation 0mm) 1g SAR (W/kg) | Highest Simultaneous Transmission 1g SAR (W/kg) |
|---|---|---|---|
| Licensed | WCDMA II | 1.20 | 1.59 |
| | WCDMA IV | 1.13 | |
| | WCDMA V | 1.05 | |
| | LTE Band 7 | 1.11 | |
| | LTE Band 12/17 | 1.19 | |
| | LTE Band 13 | 1.17 | |
| | LTE Band 14 | 0.91 | |
| | LTE Band 2/25 | 1.19 | |
| | LTE Band 5/26 | 0.98 | |
| | LTE Band 30 | 1.19 | |
| | LTE Band 38/41 | 0.82 | |
| | LTE Band 48 | 0.99 | |
| | LTE Band 4/66 | 1.19 | |
| | LTE Band 71 | 1.16 | |
| DTS | 2.4GHz WLAN | 0.71 | 1.57 |
| NII | 5GHz WLAN | 1.18 | 1.59 |
| Date of Testing: | | 2019/12/19 ~ 2020/01/28 | |

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.( This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

**Reviewed by: Jason Wang**
**Report Producer: Wan Liu**

# 2. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02

# 3. Equipment Under Test (EUT) Information

## 3.1 General Information

| Product Feature & Specification | |
|---|---|
| **Equipment Name** | Notebook Computer |
| **Brand Name** | Lenovo |
| **Model Name** | Lenovo Flex 5G 14Q8CX05********, 82AK********, Yoga 5G 14Q8CX05********, 81XE******** (* = 0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product) |
| **FCC ID** | O57FLEX5G14X05 |
| **Wireless Technology and Frequency Range** | WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz<br>WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz<br>WCDMA Band V: 826.4 MHz ~ 846.6 MHz<br>LTE Band 2: 1850.7 MHz ~ 1909.3 MHz<br>LTE Band 4: 1710.7 MHz ~ 1754.3 MHz<br>LTE Band 5: 824.7 MHz ~ 848.3 MHz<br>LTE Band 7: 2502.5 MHz ~ 2567.5 MHz<br>LTE Band 12: 699.7 MHz ~ 715.3 MHz<br>LTE Band 13: 779.5 MHz ~ 784.5 MHz<br>LTE Band 14: 790.5 MHz ~ 795.5 MHz<br>LTE Band 17: 706.5 MHz ~ 713.5 MHz<br>LTE Band 25: 1850.7 MHz ~ 1914.3 MHz<br>LTE Band 26: 814.7 MHz ~ 848.3 MHz<br>LTE Band 30: 2307.5 MHz ~ 2312.5 MHz<br>LTE Band 38: 2572.5 MHz ~ 2617.5 MHz<br>LTE Band 41: 2498.5 MHz ~ 2687.5 MHz<br>LTE Band 48: 3552.5 MHz ~ 3697.5 MHz<br>LTE Band 66: 1710.7 MHz ~ 1779.3 MHz<br>LTE Band 71: 665.5 MHz ~ 695.5 MHz<br>5G NR n260: 37GHz~40GHz<br>5G NR n261: 27.5GHz~28.35GHz<br>WLAN 2.4GHz Band: 2412 MHz ~ 2472 MHz<br>WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz<br>WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz<br>WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz<br>WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz<br>Bluetooth: 2402 MHz ~ 2480 MHz |
| **Mode** | RMC 12.2Kbps<br>HSDPA<br>HSUPA<br>DC-HSDPA<br>HSPA+<br>LTE: QPSK, 16QAM, 64QAM<br>5GNR: DFT-s-OFDM/CP-OFDM, QPSK / 16QAM / 64QAM<br>WLAN: 802.11a/b/g/n/ac HT20 / HT40 / VHT20 / VHT40 / VHT80<br>Bluetooth BR/EDR/LE |
| **EUT Stage** | Production Unit |

**Remark:**

1. This device is convertible type notebook PC, and there have Laptop and Tablet two usage way, when end user is used different mode which the device will according current mode to limit different maximum power.

| Antenna Information | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 NB Mode | Ant. Type | PIFA | | | 2 TB Mode | Ant. Type | PIFA | | |
| | Model No. | Main:AML6Y-100089 (AM2RC000600)<br>Aux:AML6Y-100090 (AM2RC000700) | | | | Model No. | Main:AML6Y-100089 (AM2RC000600)<br>Aux:AML6Y-100090 (AM2RC000700) | | |
| | Peak Gain (dBi) | | | | | Peak Gain (dBi) | | | |
| | 2400~2483.5MHz | Main:-1.34<br>Aux:-1.89 | 5470~5725MHz | Main:0.23<br>Aux:-1.74 | | 2400~2483.5MHz | Main:-1.73<br>Aux:-0.52 | 5470~5725MHz | Main:1.93<br>Aux:1.88 |
| | 5150~5250MHz | Main:-1.93<br>Aux:-1.98 | 5725~5850MHz | Main:0.26<br>Aux:-1.74 | | 5150~5250MHz | Main:1.9<br>Aux:1.81 | 5725~5850MHz | Main:1.9<br>Aux:1.88 |
| | 5250~5350MHz | Main:-2.18<br>Aux:-1.98 | | | | 5250~5350MHz | Main:1.95<br>Aux:0.89 | | |

## 3.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>O57FLEX5G14X05</td></tr>
<tr><td>Equipment Name</td><td>Notebook Computer</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>LTE Band 2: 1850.7 MHz ~ 1909.3 MHz<br>LTE Band 4: 1710.7 MHz ~ 1754.3 MHz<br>LTE Band 5: 824.7 MHz ~ 848.3 MHz<br>LTE Band 7: 2502.5 MHz ~ 2567.5 MHz<br>LTE Band 12: 699.7 MHz ~ 715.3 MHz<br>LTE Band 13: 779.5 MHz ~ 784.5 MHz<br>LTE Band 14: 790.5 MHz ~ 795.5 MHz<br>LTE Band 17: 706.5 MHz ~ 713.5 MHz<br>LTE Band 25: 1850.7 MHz ~ 1914.3 MHz<br>LTE Band 26: 814.7 MHz ~ 848.3 MHz<br>LTE Band 30: 2307.5 MHz ~ 2312.5 MHz<br>LTE Band 38: 2572.5 MHz ~ 2617.5 MHz<br>LTE Band 41: 2498.5 MHz ~ 2687.5 MHz<br>LTE Band 48: 3552.5 MHz ~ 3697.5 MHz<br>LTE Band 66: 1710.7 MHz ~ 1779.3 MHz<br>LTE Band 71: 665.5 MHz ~ 695.5 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 02:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 04:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 05:1.4MHz, 3MHz, 5MHz, 10MHz<br>LTE Band 07: 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz<br>LTE Band 13: 5MHz, 10MHz<br>LTE Band 14: 5MHz, 10MHz<br>LTE Band 17: 5MHz, 10MHz<br>LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz<br>LTE Band 30: 5MHz, 10MHz<br>LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Data only</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth ($N_{RB}$)</th><th rowspan="2">MPR (dB)</th></tr>
<tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr>
<tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr>
<tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr>
</table></td></tr>
<tr><td>LTE A-MPR</td><td>In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>Yes, Proximity Sensor</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 12.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>1. This device supports LTE Carrier Aggregation (CA) in the uplink for LTE B66 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance.<br>2. This device supports maximum of 6 carriers in the downlink and 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.</td></tr>
</table>

| Transmission (H, M, L) channel numbers and frequencies in each LTE band | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LTE Band 2 | | | | | | | | | | | | |
| | Bandwidth 1.4 MHz | | Bandwidth 3 MHz | | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 18607 | 1850.7 | 18615 | 1851.5 | 18625 | 1852.5 | 18650 | 1855 | 18675 | 1857.5 | 18700 | 1860 |
| M | 18900 | 1880 | 18900 | 1880 | 18900 | 1880 | 18900 | 1880 | 18900 | 1880 | 18900 | 1880 |
| H | 19193 | 1909.3 | 19185 | 1908.5 | 19175 | 1907.5 | 19150 | 1905 | 19125 | 1902.5 | 19100 | 1900 |
| LTE Band 4 | | | | | | | | | | | | |
| | Bandwidth 1.4 MHz | | Bandwidth 3 MHz | | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 19957 | 1710.7 | 19965 | 1711.5 | 19975 | 1712.5 | 20000 | 1715 | 20025 | 1717.5 | 20050 | 1720 |
| M | 20175 | 1732.5 | 20175 | 1732.5 | 20175 | 1732.5 | 20175 | 1732.5 | 20175 | 1732.5 | 20175 | 1732.5 |
| H | 20393 | 1754.3 | 20385 | 1753.5 | 20375 | 1752.5 | 20350 | 1750 | 20325 | 1747.5 | 20300 | 1745 |
| LTE Band 5 | | | | | | | | |
| | Bandwidth 1.4 MHz | | Bandwidth 3 MHz | | Bandwidth 5 MHz | | Bandwidth 10 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 20407 | 824.7 | 20415 | 825.5 | 20425 | 826.5 | 20450 | 829 |
| M | 20525 | 836.5 | 20525 | 836.5 | 20525 | 836.5 | 20525 | 836.5 |
| H | 20643 | 848.3 | 20635 | 847.5 | 20625 | 846.5 | 20600 | 844 |
| LTE Band 7 | | | | | | | | |
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 20775 | 2502.5 | 20800 | 2505 | 20825 | 2507.5 | 20850 | 2510 |
| M | 21100 | 2535 | 21100 | 2535 | 21100 | 2535 | 21100 | 2535 |
| H | 21425 | 2567.5 | 21400 | 2565 | 21375 | 2562.5 | 21350 | 2560 |
| LTE Band 12 | | | | | | | | |
| | Bandwidth 1.4 MHz | | Bandwidth 3 MHz | | Bandwidth 5 MHz | | Bandwidth 10 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 23017 | 699.7 | 23025 | 700.5 | 23035 | 701.5 | 23060 | 704 |
| M | 23095 | 707.5 | 23095 | 707.5 | 23095 | 707.5 | 23095 | 707.5 |
| H | 23173 | 715.3 | 23165 | 714.5 | 23155 | 713.5 | 23130 | 711 |
| LTE Band 13 | | | | |
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | |
| | Channel # | Freq.(MHz) | Channel # | Freq.(MHz) |
| L | 23205 | 779.5 | 23230 | 782 |
| M | 23230 | 782 | | |
| H | 23255 | 784.5 | | |
| LTE Band 14 | | | | |
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | |
| | Channel # | Channel # | Channel # | Freq.(MHz) |
| L | 23305 | 790.5 | 23330 | 793 |
| M | 23330 | 793 | | |
| H | 23355 | 795.5 | | |
| LTE Band 17 | | | | |
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | |
| | Channel # | Freq.(MHz) | Channel # | Freq. (MHz) |
| L | 23755 | 706.5 | 23780 | 709 |
| M | 23790 | 710 | 23790 | 710 |
| H | 23825 | 713.5 | 23800 | 711 |

| LTE Band 25 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bandwidth 1.4 MHz | | Bandwidth 3 MHz | | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 26047 | 1850.7 | 26055 | 1851.5 | 26065 | 1852.5 | 26090 | 1855 | 26115 | 1857.5 | 26140 | 1860 |
| M | 26340 | 1880 | 26340 | 1880 | 26340 | 1880 | 26340 | 1880 | 26340 | 1880 | 26340 | 1880 |
| H | 26683 | 1914.3 | 26675 | 1913.5 | 26665 | 1912.5 | 26640 | 1910 | 26615 | 1907.5 | 26590 | 1905 |

| LTE Band 26 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Bandwidth 1.4 MHz | | Bandwidth 3 MHz | | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 26697 | 814.7 | 26705 | 815.5 | 26715 | 816.5 | 26740 | 819 | 26765 | 821.5 |
| M | 26865 | 831.5 | 26865 | 831.5 | 26865 | 831.5 | 26865 | 831.5 | 26865 | 831.5 |
| H | 27033 | 848.3 | 27025 | 847.5 | 27015 | 846.5 | 26990 | 844 | 26965 | 841.5 |

| LTE Band 30 | | | | |
|---|---|---|---|---|
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | |
| | Channel # | Freq.(MHz) | Channel # | Freq.(MHz) |
| L | 27685 | 2307.5 | 27710 | 2310 |
| M | 27710 | 2310 | | |
| H | 27735 | 2312.5 | | |

| LTE Band 38 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 37775 | 2572.5 | 37800 | 2575 | 37825 | 2577.5 | 37850 | 2580 |
| M | 38000 | 2595 | 38000 | 2595 | 38000 | 2595 | 38000 | 2595 |
| H | 38225 | 2617.5 | 38200 | 2615 | 38175 | 2612.5 | 38150 | 2610 |

| LTE Band 41 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 39675 | 2498.5 | 39700 | 2501 | 39725 | 2503.5 | 39750 | 2506 |
| L M | 40148 | 2545.8 | 40160 | 2547 | 40173 | 2548.3 | 40185 | 2549.5 |
| M | 40620 | 2593 | 40620 | 2593 | 40620 | 2593 | 40620 | 2593 |
| H M | 41093 | 2640.3 | 41080 | 2639 | 41068 | 2637.8 | 41055 | 2636.5 |
| H | 41565 | 2687.5 | 41540 | 2685 | 41515 | 2682.5 | 41490 | 2680 |

| LTE Band 66 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bandwidth 1.4 MHz | | Bandwidth 3 MHz | | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 131979 | 1710.7 | 131987 | 1711.5 | 131997 | 1712.5 | 132022 | 1715 | 132047 | 1717.5 | 132072 | 1720 |
| M | 132322 | 1745 | 132322 | 1745 | 132322 | 1745 | 132322 | 1745 | 132322 | 1745 | 132322 | 1745 |
| H | 132665 | 1779.3 | 132657 | 1778.5 | 132647 | 1777.5 | 132622 | 1775 | 132597 | 1772.5 | 132572 | 1770 |

| LTE Band 71 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 133147 | 665.5 | 133172 | 668 | 133197 | 670.5 | 133222 | 673 |
| M | 133297 | 680.5 | 133297 | 680.5 | 133297 | 680.5 | 133297 | 680.5 |
| H | 133447 | 695.5 | 133422 | 693 | 133397 | 690.5 | 133372 | 688 |

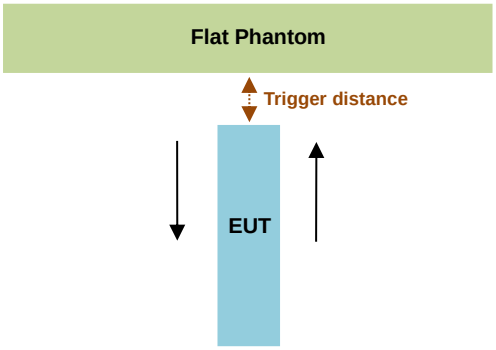
| LTE Band 48 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Bandwidth 5 MHz | | Bandwidth 10 MHz | | Bandwidth 15 MHz | | Bandwidth 20 MHz | |
| | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) | Ch. # | Freq. (MHz) |
| L | 55265 | 3552.5 | 55290 | 3555 | 55315 | 3557.5 | 55340 | 3560 |
| L M | 55810 | 3607 | 55815 | 3607.5 | 55820 | 3608 | 55830 | 3609 |
| M H | 56170 | 3643 | 56165 | 3642.5 | 56160 | 3642 | 56150 | 3641 |
| H | 56715 | 3697.5 | 56690 | 3695 | 56665 | 3692.5 | 56640 | 3690 |

# 4. Sensor Triggering Test

## 4.1 Proximity sensor triggering Considerations

**<Proximity Sensor Triggering Distance (KDB 616217 D04 section 6.2)>:**

Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed. The details are illustrated in the exhibit “P-Sensor operational description”, and the shortest triggering distances were reported and used for SAR assessment.
In the preliminary triggering distance testing, the tissue-equivalent medium for different frequency bands were used for verification; no other frequency bands tissue-equivalent medium was found to result in shortest triggering distance than that for 1900MHz, and the tissue-equivalent medium for 1900MHz was used for formal proximity sensor triggering testing.




| Proximity Sensor Trigger Distance (mm) for WWAN ANT 1 | | | | | | |
|---|---|---|---|---|---|---|
| Position | Bottom Face | | Bottom of Laptop | | Edge 2 | |
| Minimum (mm) | Move Toward | Move Away | Move Toward | Move Away | Move Toward | Move Away |
| | 27 | 31 | 25 | 29 | 25 | 29 |

| Proximity Sensor Trigger Distance (mm) for WWAN ANT 3 | | | | | | |
|---|---|---|---|---|---|---|
| Position | Bottom Face | | Bottom of Laptop | | Edge 1 | |
| Minimum (mm) | Move Toward | Move Away | Move Toward | Move Away | Move Toward | Move Away |
| | 21 | 25 | 23 | 27 | 15 | 17 |

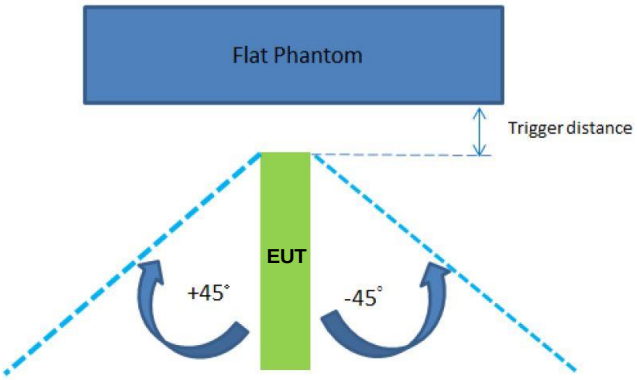
| Antennas Support Bands | |
|---|---|
| WWAN Antenna 1 | WCDMA II/IV/V, LTE B2/4/5/7/12/13/14/17/25/26/30/66/71/38/41 |
| WWAN Antenna 3 | LTE B48 |

**<Proximity Sensor Triggering Coverage (KDB 616217 D04 section 6.3)>:**

If a sensor is spatially offset from the antenna(s), it is necessary to verify sensor triggering for conditions where the antenna is next to the user but the sensor is laterally further away to ensure sensor coverage is sufficient for reducing the power to maintain compliance. For p-sensor coverage testing, the device is moved and “along the direction of maximum antenna and sensor offset”.
Illustrated in the internal photo exhibit, although the senor is spatially offset, there is no trigger condition where the antenna is next to the user but the sensor is laterally further away, therefore proximity sensor coverage testing is not required.
This procedure is not required because antenna and sensor are collocated and the peak SAR location is overlapping with the sensor.

**<Tablet Tilt angle influences to proximity sensor triggering (KDB 616217 D04 section 6.4)>:**

The influence of table tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom, at 13 mm separation.
Rotating the tablet around the edge next to the phantom in ≤ 10° increments until the tablet is ± 45° from the vertical position at 0°, and the maximum output power remains in the reduced mode.




| Proximity Sensor Trigger Distance (mm) for WWAN ANT 1 | | |
|---|---|---|
| Position | Edge 2 | |
| Minimum (mm) | Move Toward | Move Away |
| | 22 | 38 |

| Proximity Sensor Trigger Distance (mm) for WWAN ANT 3 | | |
|---|---|---|
| Position | Edge 2 | |
| Minimum (mm) | Move Toward | Move Away |
| | 13 | 26 |

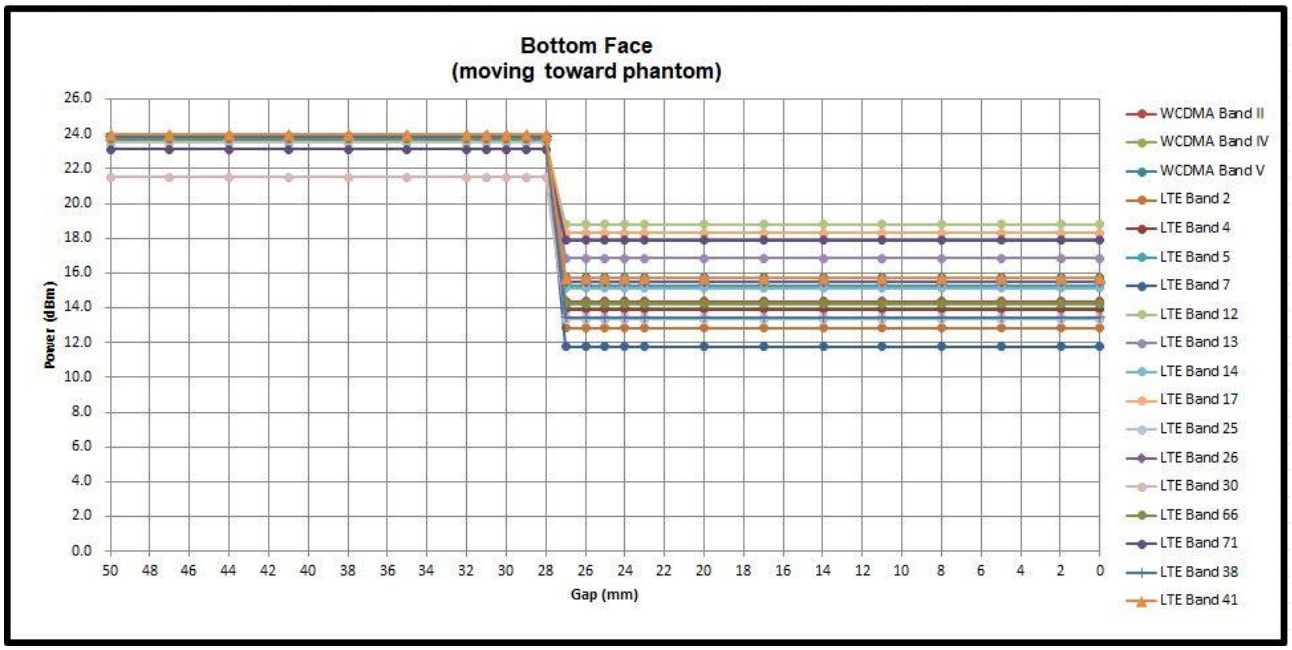
## Proximity sensor power reduction

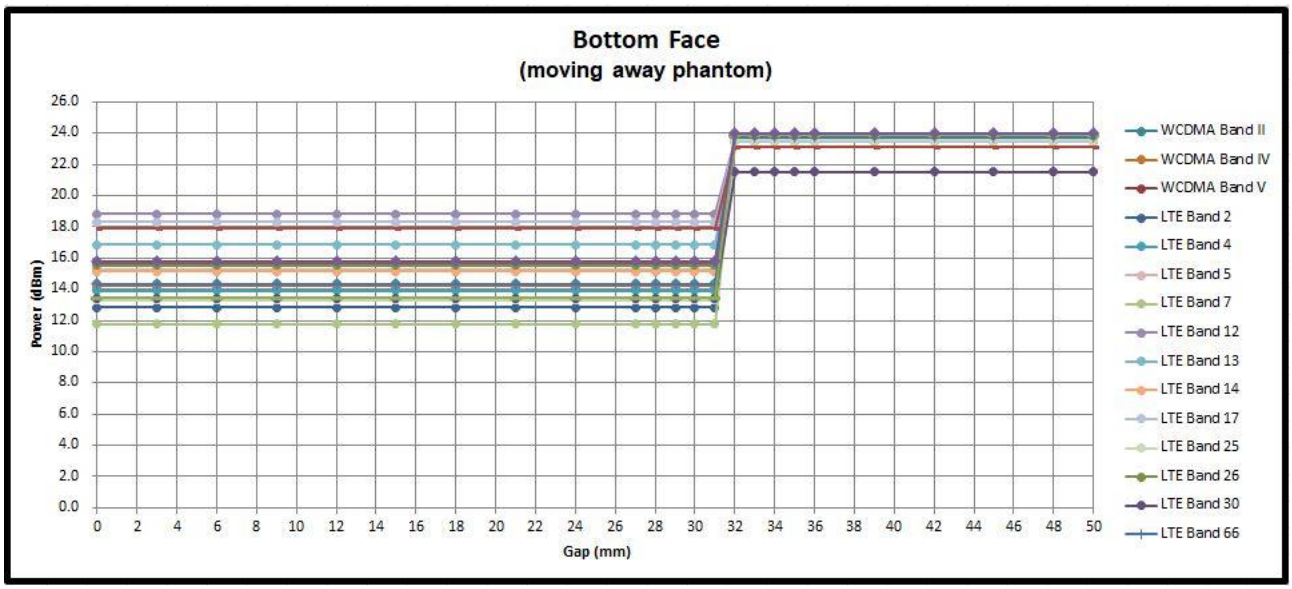
| Exposure Position / wireless mode | Bottom of laptop(1) | Bottom Face(1) | Edge 1(1) | Edge 2(1) | Edge 3 | Edge 4 |
|---|---|---|---|---|---|---|
| WCDMA Band II | 4.5dB | 9.5dB | 0 dB | 9.5dB | 0 dB | 0 dB |
| WCDMA Band IV | 4.2dB | 9.5dB | 0 dB | 9.5dB | 0 dB | 0 dB |
| WCDMA Band V | 3.4dB | 7.6dB | 0 dB | 7.6dB | 0 dB | 0 dB |
| LTE Band 2 | 4.2dB | 10.1dB | 0 dB | 10.1dB | 0 dB | 0 dB |
| LTE Band 4 | 4dB | 9.2dB | 0 dB | 9.2dB | 0 dB | 0 dB |
| LTE Band 5 | 3.2dB | 7.5dB | 0 dB | 7.5dB | 0 dB | 0 dB |
| LTE Band 7 | 5.4dB | 11.6dB | 0 dB | 11.6dB | 0 dB | 0 dB |
| LTE Band 12 | 1.3dB | 4.6dB | 0 dB | 4.6dB | 0 dB | 0 dB |
| LTE Band 13 | 1.4dB | 5.7dB | 0 dB | 5.7dB | 0 dB | 0 dB |
| LTE Band 14 | 1.6dB | 7.3dB | 0 dB | 7.3dB | 0 dB | 0 dB |
| LTE Band 17 | 1.3dB | 4.6dB | 0 dB | 4.6dB | 0 dB | 0 dB |
| LTE Band 25 | 4.2dB | 10.1dB | 0 dB | 10.1dB | 0 dB | 0 dB |
| LTE Band 26 | 3.2dB | 7.5dB | 0 dB | 7.5dB | 0 dB | 0 dB |
| LTE Band 30 | 3.4dB | 8.4dB | 0 dB | 8.4dB | 0 dB | 0 dB |
| LTE Band 66 | 4dB | 9.2dB | 0 dB | 9.2dB | 0 dB | 0 dB |
| LTE Band 71 | 2.5dB | 5.3dB | 0 dB | 5.3dB | 0 dB | 0 dB |
| LTE Band 38 | 3dB | 9.1dB | 0 dB | 9.1dB | 0 dB | 0 dB |
| LTE Band 41 | 3dB | 9.1dB | 0 dB | 9.1dB | 0 dB | 0 dB |
| LTE Band 41_HPUE | 3dB | 9.1dB | 0 dB | 9.1dB | 0 dB | 0 dB |
| LTE Band 48 | 3.9dB | 7.8dB | 7.8dB | 0 dB | 0 dB | 0 dB |

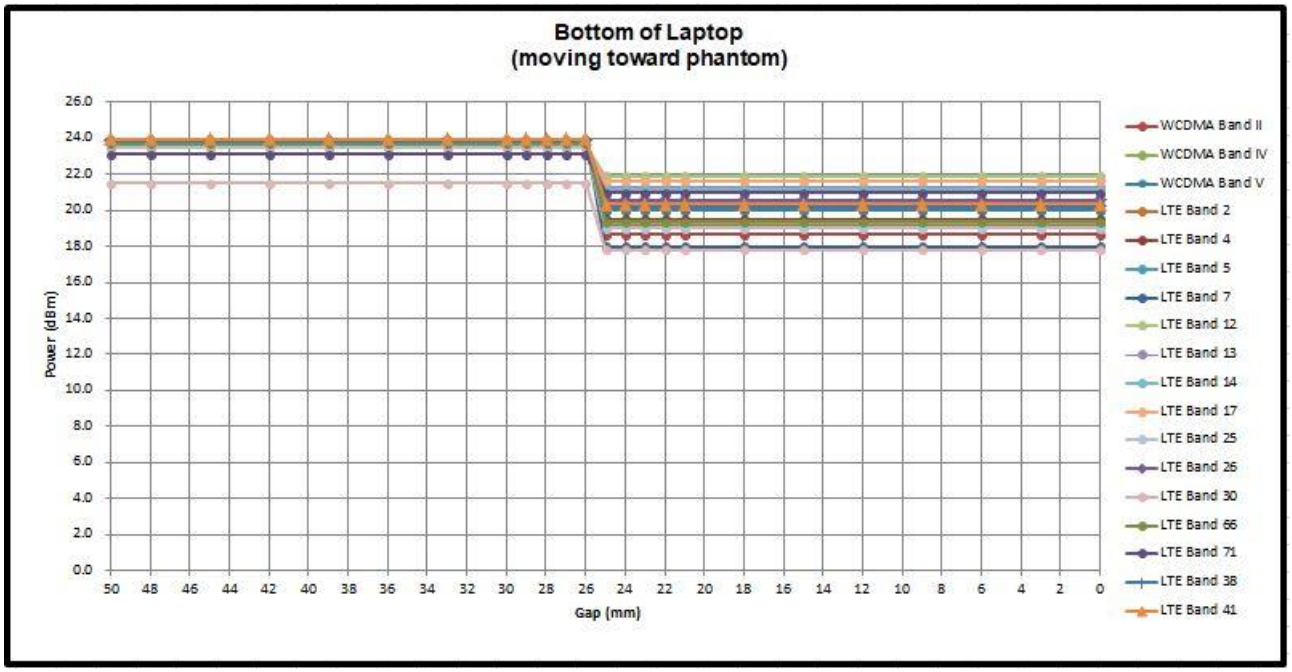
**Remark:**

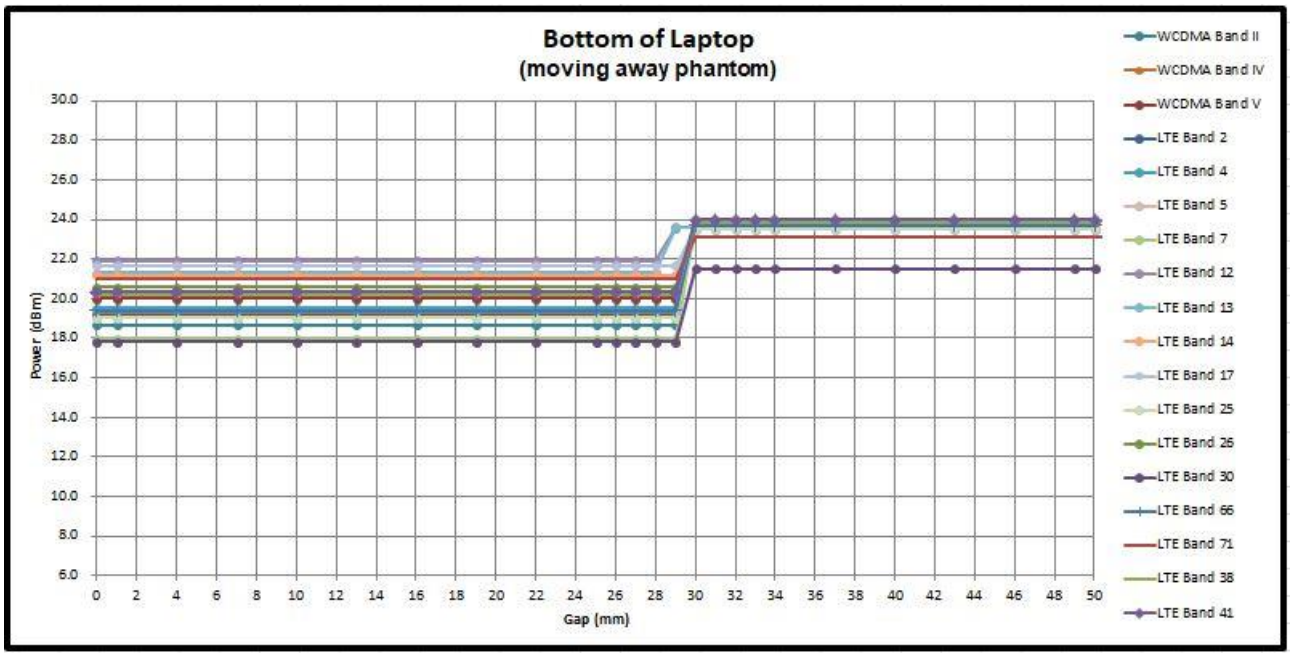
1. (1): Reduced maximum limit applied by activation of proximity sensor.
2. Power reduction is not applicable for WLAN and Bluetooth.
3. Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown and described in exhibit “P-Sensor operational description
4. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:
   - Bottom of Laptop: 20 mm
   - Bottom Face: 20 mm
   - Edge1: 10 mm
   - Edge2: 20 mm

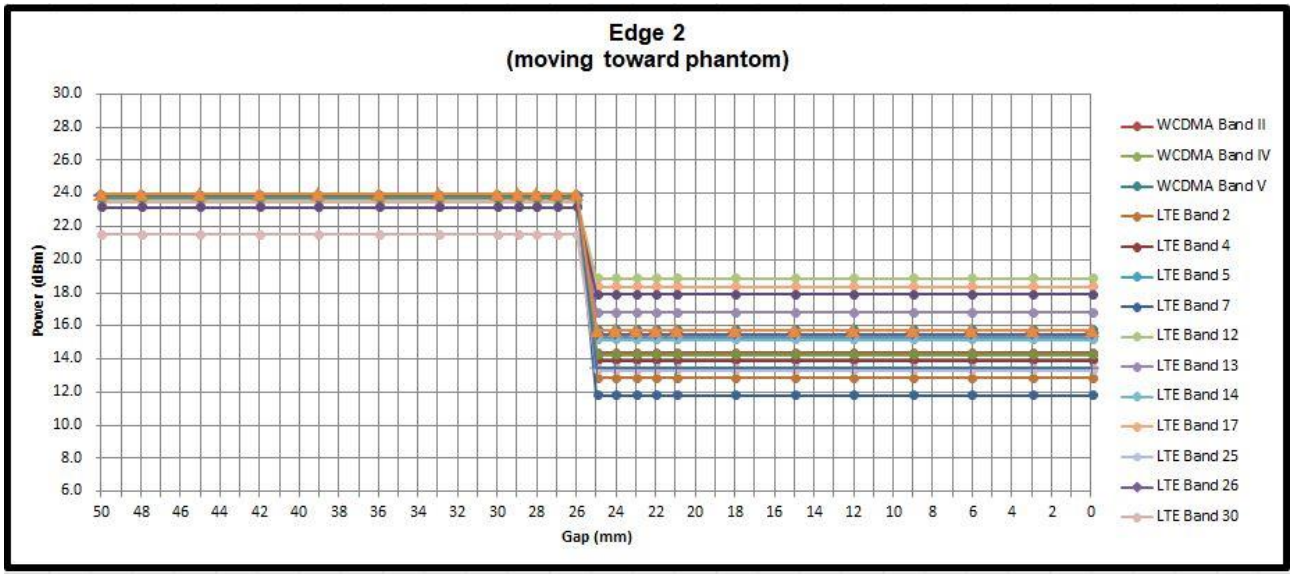
**Power Measurement during Sensor Trigger distance testing for WWAN Ant 1**

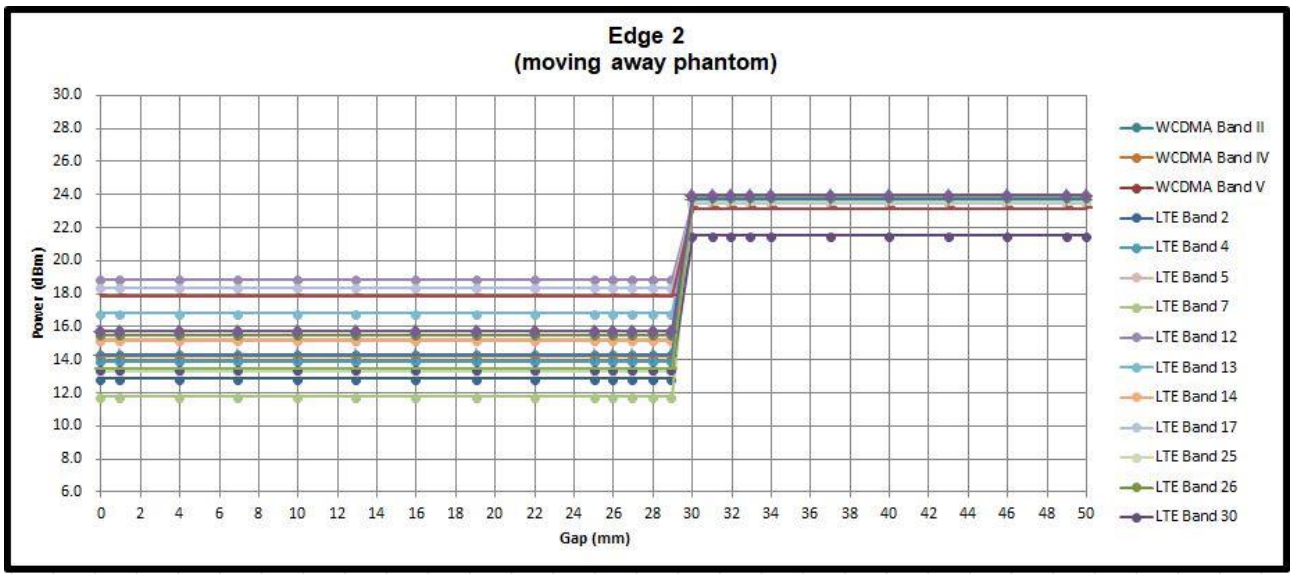


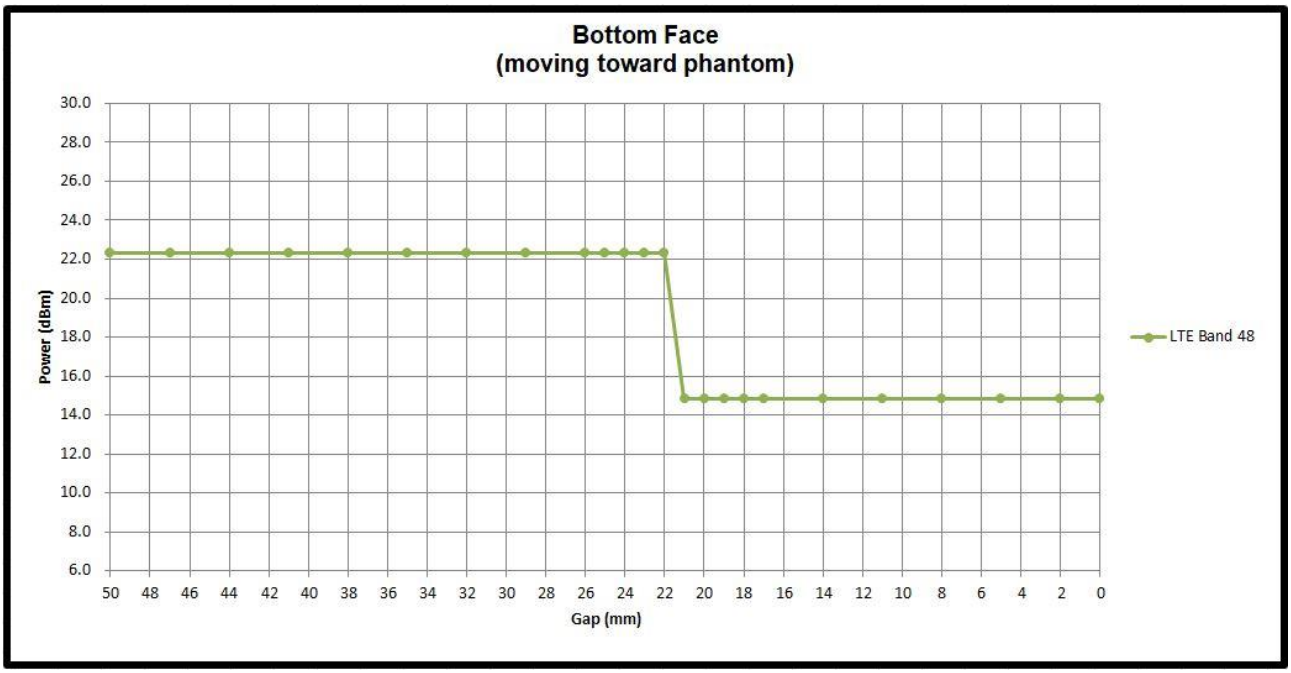

Bottom of Laptop
(moving toward phantom)
Power (dBm)
Gap (mm)
WCDMA Band II
WCDMA Band IV
WCDMA Band V
LTE Band 2
LTE Band 4
LTE Band 5
LTE Band 7
LTE Band 12
LTE Band 13
LTE Band 14
LTE Band 17
LTE Band 25
LTE Band 26
LTE Band 30
LTE Band 66
LTE Band 71
LTE Band 38
LTE Band 41

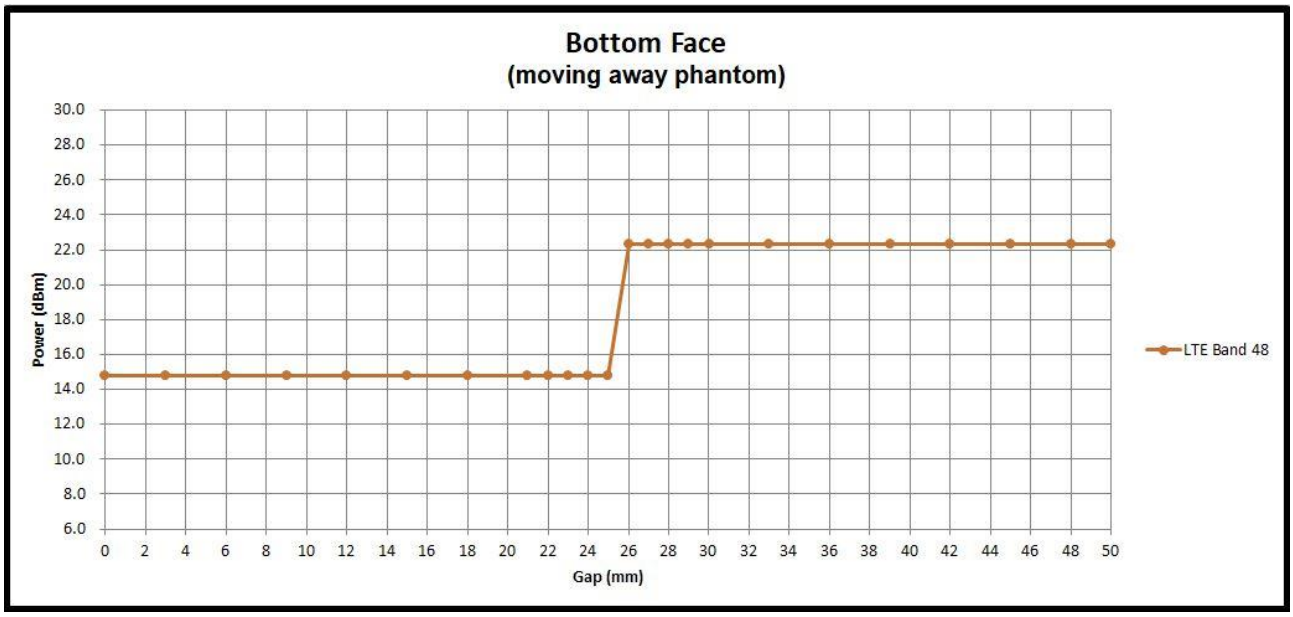

Bottom of Laptop
(moving away phantom)
Power (dBm)
Gap (mm)
WCDMA Band II
WCDMA Band IV
WCDMA Band V
LTE Band 2
LTE Band 4
LTE Band 5
LTE Band 7
LTE Band 12
LTE Band 13
LTE Band 14
LTE Band 17
LTE Band 25
LTE Band 26
LTE Band 30
LTE Band 66
LTE Band 71
LTE Band 38
LTE Band 41

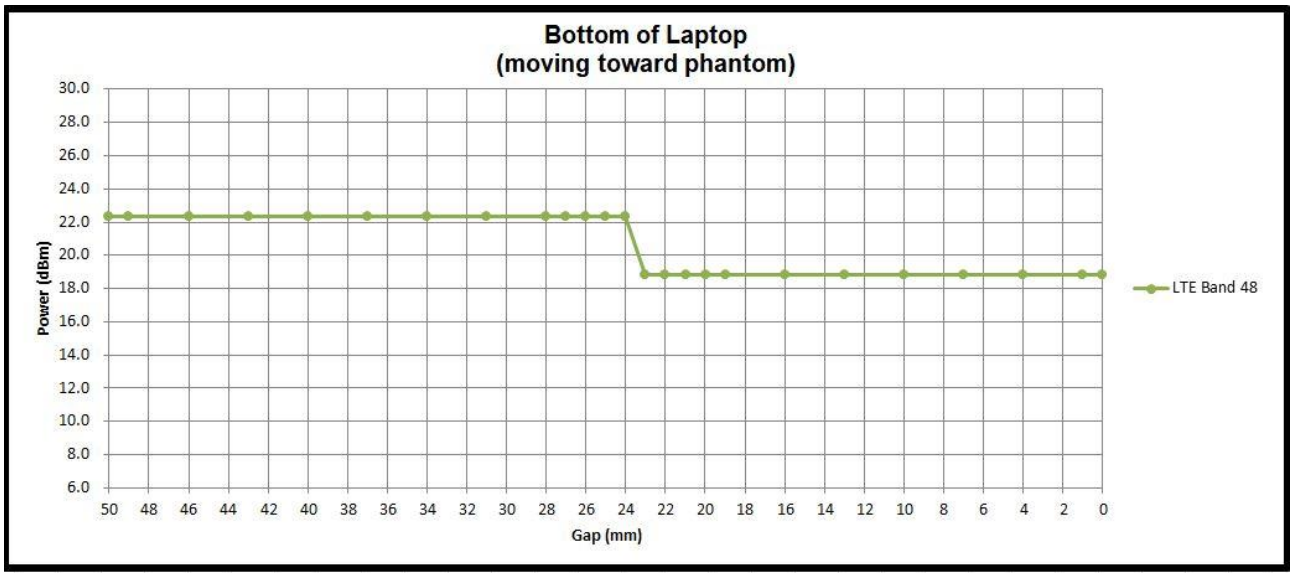

Edge 2
(moving toward phantom)
Power (dBm)
Gap (mm)
WCDMA Band II
WCDMA Band IV
WCDMA Band V
LTE Band 2
LTE Band 4
LTE Band 5
LTE Band 7
LTE Band 12
LTE Band 13
LTE Band 14
LTE Band 17
LTE Band 25
LTE Band 26
LTE Band 30

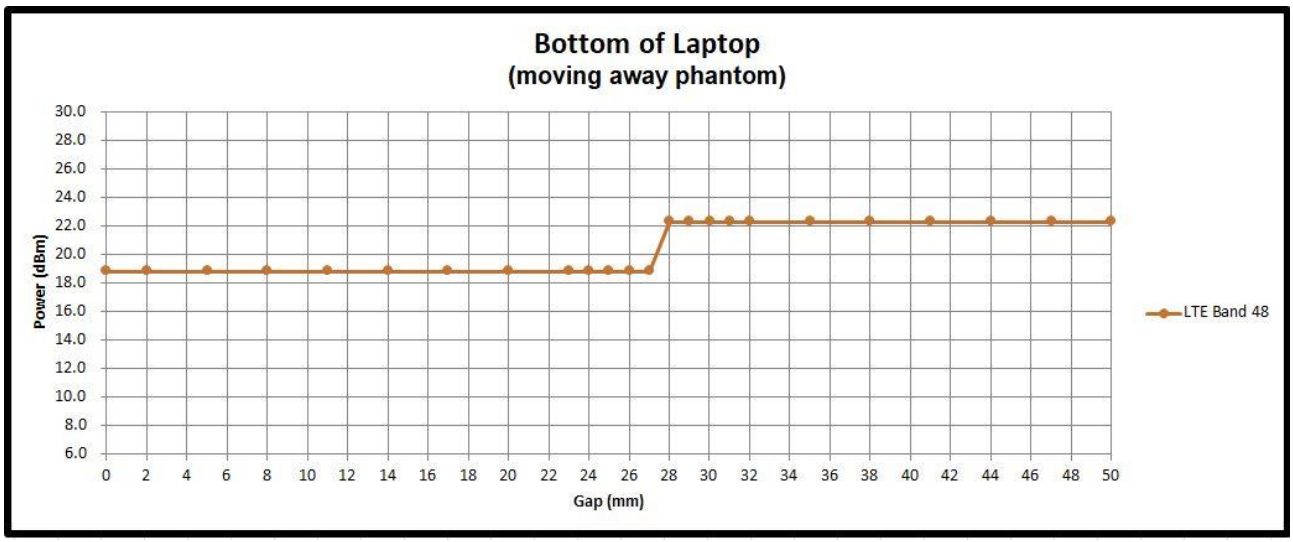

Edge 2
(moving away phantom)
Power (dBm)
Gap (mm)
WCDMA Band II
WCDMA Band IV
WCDMA Band V
LTE Band 2
LTE Band 4
LTE Band 5
LTE Band 7
LTE Band 12
LTE Band 13
LTE Band 14
LTE Band 17
LTE Band 25
LTE Band 26
LTE Band 30

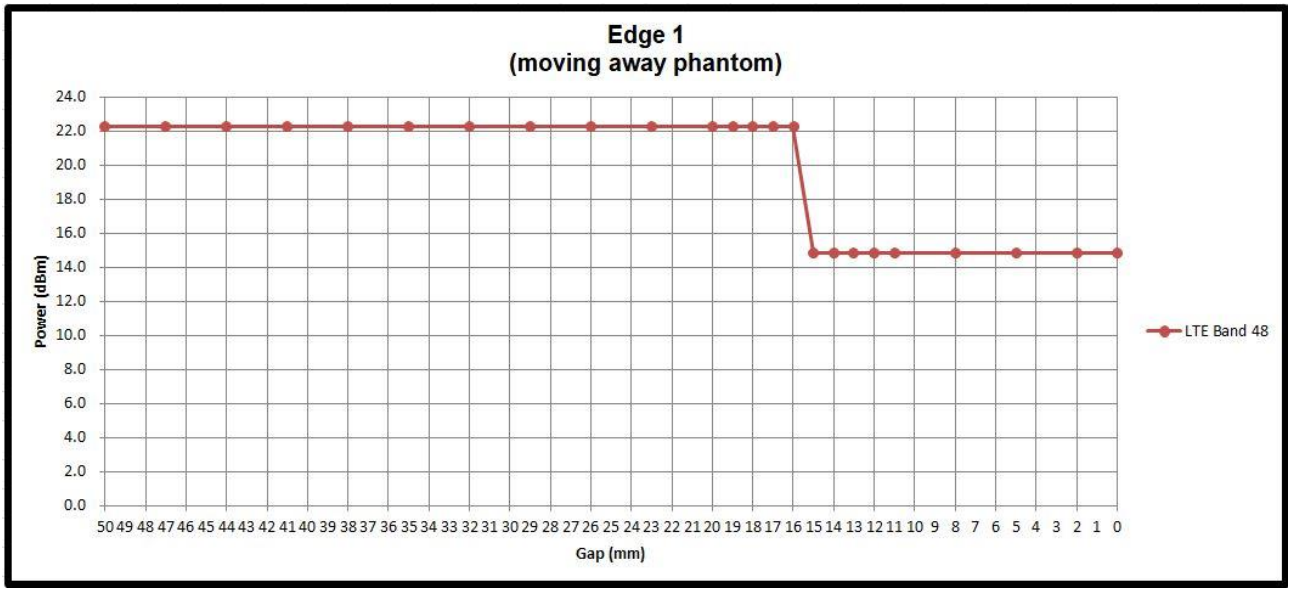
**Power Measurement during Sensor Trigger distance testing for WWAN Ant 3**

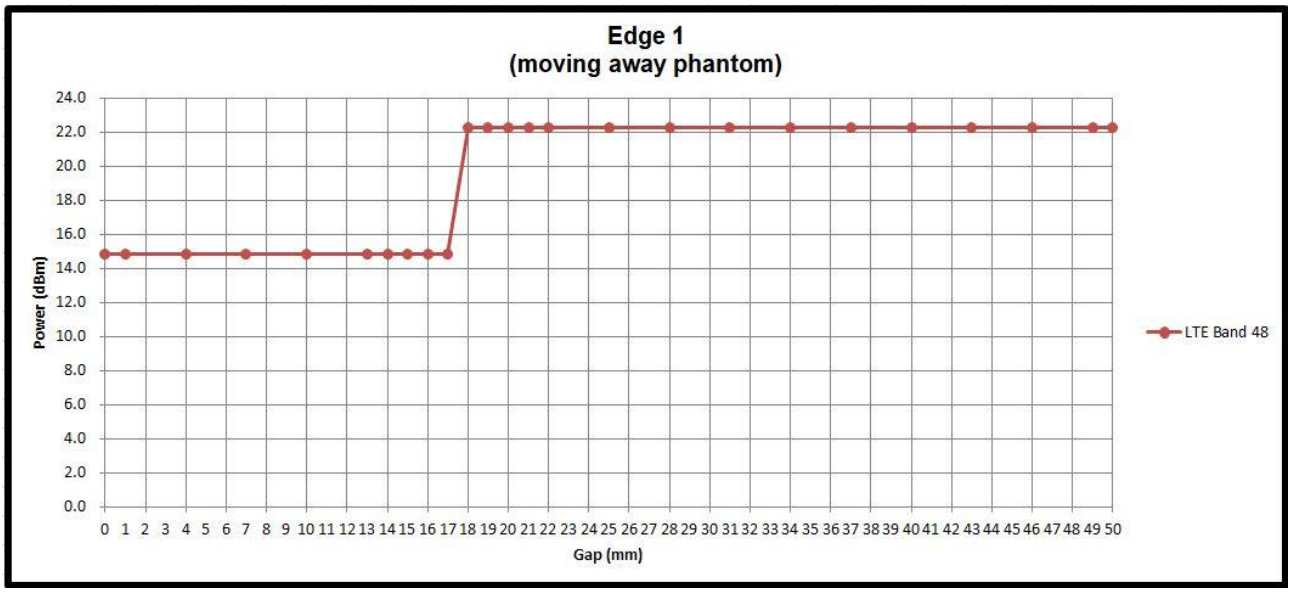



Bottom of Laptop
(moving toward phantom)
Power (dBm)
30.0
28.0
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
50 48 46 44 42 40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0
Gap (mm)
LTE Band 48


Bottom of Laptop
(moving away phantom)
Power (dBm)
30.0
28.0
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
Gap (mm)
LTE Band 48


Edge 1
(moving away phantom)
Power (dBm)
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Gap (mm)
LTE Band 48


Edge 1
(moving away phantom)
Power (dBm)
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
Gap (mm)
LTE Band 48

## 4.2 Lid angle power verification

**General Note:**

1. for lid angle power verification based on P-sensor is triggered, due to only when the P-sensor is trigger which the laptop and tablet mode have different output power level.
2. This device is convertible type notebook PC, and there have Laptop and Tablet two usage way, when end user is used different mode which the device will according current mode to limit different maximum power, according to 201911 TCBC workshop Hall effect and Gravity sensor guidance to detect lid angle for the power verification in different usage mode was following below step:

   Step 1: With the lid is in closed mode (0 degrees), open the screen in 10 degree steps until laptop mode is obtained
   Step 2: Lower the screen 5 degrees. Closed mode should be reobtained. If not keep lowering in 5 degree steps.
   Step 3: Open the screen in 1 degree steps until laptop mode is reobtained
   Step 4: Continue opening the screen in 1 degree steps until at least 5 degrees past where laptop mode was obtained
   Step 5: Then continue opening the screen in 10 degree steps until tablet mode is obtained
   Step 6: Power measurements should be taken at each step
   Step 7: Reverse this procedure going from tablet mode back down to closed mode

| when the screen angle is from 0 degree to 360 degree | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Screen angle (degree) | Wireless | | UMTS | | | LTE | | | | | | | | | | | |
| | Band | | B2 | B4 | B5 | B2/25 | B4/66 | B5/26 | B7 | B12/17 | B13 | B14 | B30 | B38/41 | B41 HPUE | B48 | B71 |
| | Notebook | 0 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 10 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 20 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 30 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 40 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 50 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 60 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 70 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 80 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 90 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 100 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 110 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 120 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 130 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 140 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 150 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 160 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 170 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 175 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 176 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 177 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 178 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 179 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | Tablet | 180 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 181 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 182 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 183 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 184 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 185 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 190 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 200 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 210 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 220 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 230 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 240 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 250 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 260 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 270 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 280 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 290 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 300 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 310 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 320 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 330 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 340 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 350 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 360 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |

| when the screen angle is from 360 degree to 0 degree | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Screen angle (degree) | Wireless | | UMTS | | | LTE | | | | | | | | | | | |
| | Band | | B2 | B4 | B5 | B2/25 | B4/66 | B5/26 | B7 | B12/17 | B13 | B14 | B30 | B38/41 | B41 HPUE | B48 | B71 |
| | Tablet | 360 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 350 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 340 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 330 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 320 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 310 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 300 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 290 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 280 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 270 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 260 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 250 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 240 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 230 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 220 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 210 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 200 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 190 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 185 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 184 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 183 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 182 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 181 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | | 180 | 14.5 | 14.5 | 16.4 | 13.9 | 14.8 | 16.5 | 12.4 | 19.4 | 18.3 | 16.7 | 14.6 | 14.9 | 16.9 | 15.2 | 18.7 |
| | Notebook | 179 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 178 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 177 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 176 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 175 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 170 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 160 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 150 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 140 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 130 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 120 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 110 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 100 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 90 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 80 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 70 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 60 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 50 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 40 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 30 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 20 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 10 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |
| | | 0 | 19.5 | 19.8 | 20.6 | 19.8 | 20 | 20.8 | 18.6 | 22.7 | 22.6 | 22.4 | 19.6 | 21 | 23 | 19.1 | 21.5 |

## 5. Smart Transmit feature for RF Exposure compliance

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target or PD_design_target, below the predefined time-averaged power limit (i.e., input.power.limit for 5G mmW NR), for each characterized technology and band (refer to RF exposure part0 report)

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

**<$P_{limit}$ for supported technologies and bands ($P_{limit}$ in EFS file)>**

| Tech/Band | Antenna | DSI 0 Tablet Sensor off | DSI 1 Tablet Sensor on | DSI 2 NB Sensor on | DSI 3 NB Sensor off | PMAX* |
|---|---|---|---|---|---|---|
| WCDMA B2 | Ant 1 | 26.6 | 13.5 | 18.5 | 26.6 | 23 |
| WCDMA B4 | Ant 1 | 24.7 | 13.5 | 18.8 | 24.7 | 23 |
| WCDMA B5 | Ant 1 | 24.4 | 15.4 | 19.6 | 24.4 | 23 |
| LTE B25/2 | Ant 1 | 25.8 | 12.9 | 18.8 | 25.8 | 23 |
| LTE B66/4 | Ant 1 | 24.9 | 13.8 | 19 | 24.9 | 23 |
| LTE B26/5 | Ant 1 | 25.4 | 15.5 | 20.5 | 25.4 | 23 |
| LTE B7 | Ant 1 | 23.1 | 11.4 | 17.6 | 23.1 | 23 |
| LTE B12/17 | Ant 1 | 26.8 | 18.4 | 21.7 | 26.8 | 23 |
| LTE B13 | Ant 1 | 27.7 | 17.3 | 21.6 | 27.7 | 23 |
| LTE B14 | Ant 1 | 26.3 | 15.7 | 21.4 | 26.3 | 23 |
| LTE B30 | Ant 1 | 23 | 13.6 | 18.6 | 23 | 22 |
| LTE B41/38(**) | Ant 1 | 23.4 | 10.9 | 17 | 23.4 | 21 |
| LTE B48(**) | Ant 1 | 22.1 | 11.2 | 15.1 | 22.1 | 20 |
| LTE B42(**) | Ant 1 | 21.6 | 14.7 | 15.6 | 21.6 | 21 |
| LTE B71 | Ant 1 | 26.7 | 17.7 | 20.5 | 26.7 | 23 |

*$P_{max}$ is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1dB uncertainty.

**All $P_{limit}$ power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).

The max allowed output power is the $P_{limit}$ + 1dB device uncertainty, and if $P_{limit}$ is higher than $P_{max}$, the device output power will be $P_{max}$ instead.

# 6. RF Exposure Limits

## 6.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

## 6.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

**Limits for Occupational/Controlled Exposure (W/kg)**

| Whole-Body | Partial-Body | Hands, Wrists, Feet and Ankles |
|---|---|---|
| 0.4 | 8.0 | 20.0 |

**Limits for General Population/Uncontrolled Exposure (W/kg)**

| Whole-Body | Partial-Body | Hands, Wrists, Feet and Ankles |
|---|---|---|
| 0.08 | 1.6 | 4.0 |

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

# 7. Specific Absorption Rate (SAR)

## 7.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

## 7.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\mathbf{dm}}\right) = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\boldsymbol{\rho}\mathbf{dv}}\right)$$

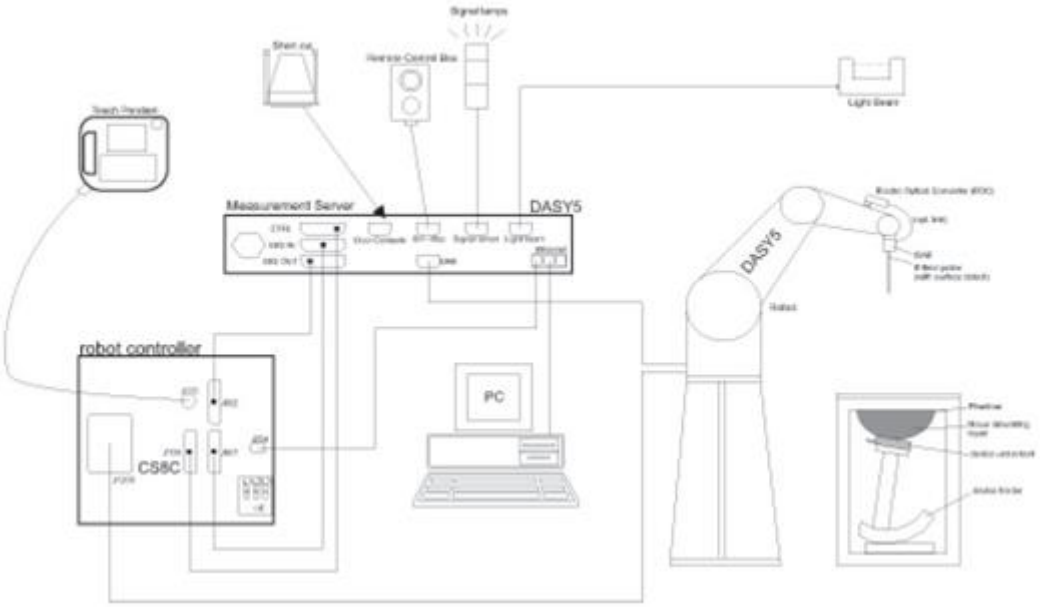
SAR is expressed in units of Watts per kilogram (W/kg)

$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}|\mathbf{E}|^{\mathbf{2}}}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

# 8. System Description and Setup

**The DASY system used for performing compliance tests consists of the following items:**




- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

## 8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG).The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

**<ES3DV3 Probe>**

| | | |
|---|---|---|
| **Construction** | Symmetric design with triangular core<br>Interleaved sensors<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE) | |
| **Frequency** | 10 MHz – 4 GHz;<br>Linearity: ±0.2 dB (30 MHz – 4 GHz) | |
| **Directivity** | ±0.2 dB in TSL (rotation around probe axis)<br>±0.3 dB in TSL (rotation normal to probe axis) | |
| **Dynamic Range** | 5 µW/g – >100 mW/g;<br>Linearity: ±0.2 dB | |
| **Dimensions** | Overall length: 337 mm (tip: 20 mm)<br>Tip diameter: 3.9 mm (body: 12 mm)<br>Distance from probe tip to dipole centers: 3.0 mm | |

**<EX3DV4 Probe>**

| | | |
|---|---|---|
| **Construction** | Symmetric design with triangular core<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE) | |
| **Frequency** | 10 MHz – >6 GHz<br>Linearity: ±0.2 dB (30 MHz – 6 GHz) | |
| **Directivity** | ±0.3 dB in TSL (rotation around probe axis)<br>±0.5 dB in TSL (rotation normal to probe axis) | |
| **Dynamic Range** | 10 µW/g – >100 mW/g<br>Linearity: ±0.2 dB (noise: typically <1 µW/g) | |
| **Dimensions** | Overall length: 337 mm (tip: 20 mm)<br>Tip diameter: 2.5 mm (body: 12 mm)<br>Typical distance from probe tip to dipole centers: 1 mm | |

## 8.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

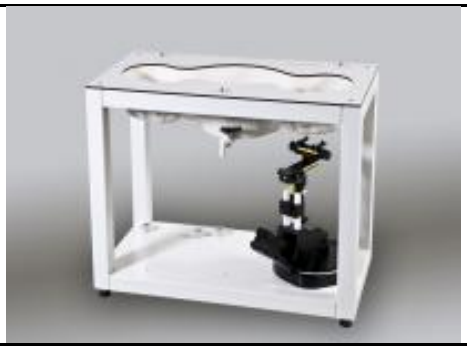
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

**Fig 5.1 Photo of DAE**

## 8.3 Phantom

**<SAM Twin Phantom>**

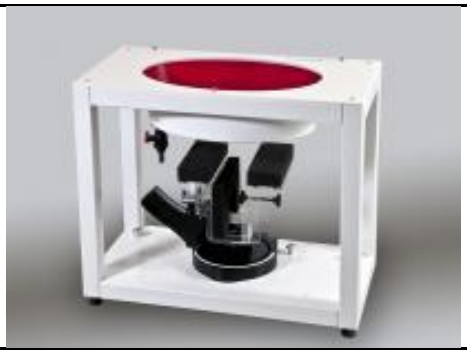
| | |
|---|---|
| **Shell Thickness** | 2 ± 0.2 mm;<br>Center ear point: 6 ± 0.2 mm |
| **Filling Volume** | Approx. 25 liters |
| **Dimensions** | Length: 1000 mm; Width: 500 mm; Height: adjustable feet |
| **Measurement Areas** | Left Hand, Right Hand, Flat Phantom |



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

**<ELI Phantom>**

| | |
|---|---|
| **Shell Thickness** | 2 ± 0.2 mm (sagging: <1%) |
| **Filling Volume** | Approx. 30 liters |
| **Dimensions** | Major ellipse axis: 600 mm<br>Minor axis: 400 mm |



The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

## 8.4 Device Holder

**<Mounting Device for Hand-Held Transmitter>**

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

**<Mounting Device for Laptops and other Body-Worn Transmitters>**

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

Mounting Device for Laptops

# 9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
(b) Read the WWAN RF power level from the base station simulator.
(c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
(b) Place the EUT in the positions as Appendix D demonstrates.
(c) Set scan area, grid size and other setting on the DASY software.
(d) Measure SAR results for the highest power channel on each testing position.
(e) Find out the largest SAR result on these testing positions of each band
(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

## 9.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

## 9.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

## 9.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

| | ≤ 3 GHz | > 3 GHz |
|---|---|---|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface | 5 ± 1 mm | ½·δ·ln(2) ± 0.5 mm |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location | 30° ± 1° | 20° ± 1° |
| Maximum area scan spatial resolution: $\Delta x_{Area}$, $\Delta y_{Area}$ | ≤ 2 GHz: ≤ 15 mm<br>2 – 3 GHz: ≤ 12 mm | 3 – 4 GHz: ≤ 12 mm<br>4 – 6 GHz: ≤ 10 mm |
| | When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device. | |

## 9.4 Zoom Scan

Zoom scans are used assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube shoes base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

| | | | ≤ 3 GHz | > 3 GHz |
|---|---|---|---|---|
| Maximum zoom scan spatial resolution: $\Delta x_{Zoom}$, $\Delta y_{Zoom}$ | | | ≤ 2 GHz: ≤ 8 mm<br>2 – 3 GHz: ≤ 5 mm* | 3 – 4 GHz: ≤ 5 mm*<br>4 – 6 GHz: ≤ 4 mm* |
| Maximum zoom scan spatial resolution, normal to phantom surface | uniform grid: $\Delta z_{Zoom}(n)$ | | ≤ 5 mm | 3 – 4 GHz: ≤ 4 mm<br>4 – 5 GHz: ≤ 3 mm<br>5 – 6 GHz: ≤ 2 mm |
| | graded grid | $\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface | ≤ 4 mm | 3 – 4 GHz: ≤ 3 mm<br>4 – 5 GHz: ≤ 2.5 mm<br>5 – 6 GHz: ≤ 2 mm |
| | | $\Delta z_{Zoom}(n>1)$: between subsequent points | ≤ 1.5·$\Delta z_{Zoom}(n-1)$ | |
| Minimum zoom scan volume | x, y, z | | ≥ 30 mm | 3 – 4 GHz: ≥ 28 mm<br>4 – 5 GHz: ≥ 25 mm<br>5 – 6 GHz: ≥ 22 mm |

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

## 9.5 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

## 9.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

## 10. Test Equipment List

| Manufacturer | Name of Equipment | Type/Model | Serial Number | Calibration | |
|---|---|---|---|---|---|
| | | | | Last Cal. | Due Date |
| SPEAG | 750MHz System Validation Kit | D750V3 | 1107 | Mar. 08, 2019 | Mar. 07, 2020 |
| SPEAG | 835MHz System Validation Kit | D835V2 | 4d167 | Nov. 25, 2019 | Nov. 24, 2020 |
| SPEAG | 1750MHz System Validation Kit | D1750V2 | 1112 | Mar. 07, 2019 | Mar. 06, 2020 |
| SPEAG | 1900MHz System Validation Kit | D1900V2 | 5d041 | Sep. 11, 2018 | Sep. 09, 2020 |
| SPEAG | 2300MHz System Validation Kit | D2300V2 | 1006 | Jan. 28, 2019 | Jan. 26, 2021 |
| SPEAG | 2450MHz System Validation Kit | D2450V2 | 736 | Aug. 31, 2018 | Aug. 29, 2020 |
| SPEAG | 2600MHz System Validation Kit | D2600V2 | 1008 | Aug. 31, 2018 | Aug. 29, 2020 |
| SPEAG | 3500MHz System Validation Kit | D3500V2 | 1014 | Jan. 29, 2019 | Jan. 28, 2020 |
| SPEAG | 3700MHz System Validation Kit | D3700V2 | 1006 | Mar. 05, 2019 | Mar. 04, 2020 |
| SPEAG | 5GHz System Validation Kit | D5GHzV2 | 1006 | Sep. 27, 2018 | Sep. 25, 2020 |
| SPEAG | Data Acquisition Electronics | DAE3 | 495 | May. 21, 2019 | May. 20, 2020 |
| SPEAG | Data Acquisition Electronics | DAE3 | 577 | Sep. 17, 2019 | Sep. 16, 2020 |
| SPEAG | Data Acquisition Electronics | DAE4 | 778 | May. 21, 2019 | May. 20, 2020 |
| SPEAG | Dosimetric E-Field Probe | ES3DV3 | 3169 | May. 24, 2019 | May. 23, 2020 |
| SPEAG | Dosimetric E-Field Probe | EX3DV4 | 3728 | Jan. 15, 2019 | Jan. 14, 2020 |
| SPEAG | Dosimetric E-Field Probe | EX3DV4 | 3931 | Sep. 26, 2019 | Sep. 25, 2020 |
| RCPTWN | Thermometer | HTC-1 | TM685-1 | Nov. 12, 2019 | Nov. 11, 2020 |
| RCPTWN | Thermometer | HTC-1 | TM560-2 | Nov. 12, 2019 | Nov. 11, 2020 |
| Anritsu | Radio Communication Analyzer | MT8821C | 6201341950 | Oct. 31, 2019 | Oct. 30, 2020 |
| Agilent | Wireless Communication Test Set | E5515C | MY50266977 | May. 27, 2019 | May. 26, 2020 |
| SPEAG | Device Holder | N/A | N/A | N/A | N/A |
| Anritsu | Signal Generator | MG3710A | 6201502524 | Nov. 20, 2019 | Nov. 19, 2020 |
| Agilent | ENA Network Analyzer | E5071C | MY46104758 | Sep. 06, 2019 | Sep. 05, 2020 |
| SPEAG | Dielectric Probe Kit | DAK-3.5 | 1126 | Sep. 18, 2019 | Sep. 17, 2020 |
| LINE SEIKI | Digital Thermometer | DTM3000-spezial | 3169 | Sep. 10, 2019 | Sep. 09, 2020 |
| Anritsu | Power Meter | ML2495A | 1036004 | Aug. 08, 2019 | Aug. 07, 2020 |
| Anritsu | Power Sensor | MA2411B | 1027253 | Aug. 08, 2019 | Aug. 07, 2020 |
| Anritsu | Power Meter | ML2495A | 1419002 | May. 29, 2019 | May. 28, 2020 |
| Anritsu | Power Sensor | MA2411B | 1339124 | May. 29, 2019 | May. 28, 2020 |
| Agilent | Spectrum Analyzer | E4408B | MY44211028 | Aug. 27, 2019 | Aug. 26, 2020 |
| Anritsu | Spectrum Analyzer | MS2830A | 6201396378 | Jun. 27, 2019 | Jun. 26, 2020 |
| Mini-Circuits | Power Amplifier | ZVE-8G+ | 6418 | Oct. 16, 2019 | Oct. 15, 2020 |
| Mini-Circuits | Power Amplifier | ZVE-8G+ | 6382 | Aug. 12, 2019 | Aug. 11, 2020 |
| ATM | Dual Directional Coupler | C122H-10 | P610410z-02 | Note 1 | |
| Woken | Attenuator 1 | WK0602-XX | N/A | Note 1 | |
| PE | Attenuator 2 | PE7005-10 | N/A | Note 1 | |
| PE | Attenuator 3 | PE7005- 3 | N/A | Note 1 | |

**General Note:**

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole D1900V2, SN: 5d041, D2450V2, SN: 736, D2600V2, SN: 1008, D5GHzV2, SN: 1006 can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

# 11. System Verification

## 11.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.2.

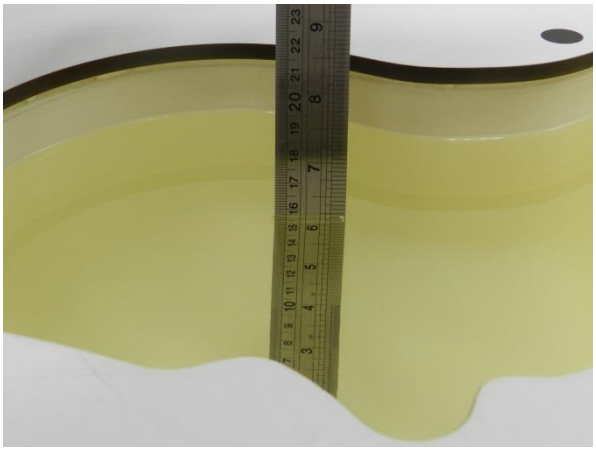


**Fig 10.1Photo of Liquid Height for Head SAR**

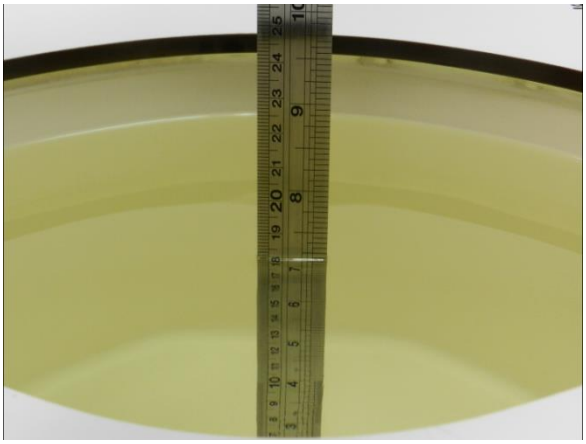


**Fig 10.2 Photo of Liquid Height for Body SAR**

## 11.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

| Frequency (MHz) | Water (%) | Sugar (%) | Cellulose (%) | Salt (%) | Preventol (%) | DGBE (%) | Conductivity (σ) | Permittivity (εr) |
|---|---|---|---|---|---|---|---|---|
| 750 | 41.1 | 57.0 | 0.2 | 1.4 | 0.2 | 0 | 0.89 | 41.9 |
| 835 | 40.3 | 57.9 | 0.2 | 1.4 | 0.2 | 0 | 0.90 | 41.5 |
| 900 | 40.3 | 57.9 | 0.2 | 1.4 | 0.2 | 0 | 0.97 | 41.5 |
| 1800, 1900, 2000 | 55.2 | 0 | 0 | 0.3 | 0 | 44.5 | 1.40 | 40.0 |
| 2450 | 55.0 | 0 | 0 | 0 | 0 | 45.0 | 1.80 | 39.2 |
| 2600 | 54.8 | 0 | 0 | 0.1 | 0 | 45.1 | 1.96 | 39.0 |

Simulating Liquid for 5GHz, Manufactured by SPEAG

| Ingredients | (% by weight) |
|---|---|
| Water | 64~78% |
| Mineral oil | 11~18% |
| Emulsifiers | 9~15% |
| Additives and Salt | 2~3% |

**<Tissue Dielectric Parameter Check Results>**

| Frequency (MHz) | Liquid Temp. (℃) | Conductivity (σ) | Permittivity ($\varepsilon_r$) | Conductivity Target (σ) | Permittivity Target ($\varepsilon_r$) | Delta (σ) (%) | Delta ($\varepsilon_r$) (%) | Limit (%) | Date |
|---|---|---|---|---|---|---|---|---|---|
| 750 | 22.2 | 0.899 | 43.706 | 0.89 | 41.90 | 1.01 | 4.31 | ±5 | 2020/1/20 |
| 750 | 22.3 | 0.891 | 43.276 | 0.89 | 41.90 | 0.11 | 3.28 | ±5 | 2020/1/21 |
| 750 | 22.6 | 0.903 | 43.070 | 0.89 | 41.90 | 1.46 | 2.79 | ±5 | 2020/1/26 |
| 835 | 22.2 | 0.934 | 43.410 | 0.90 | 41.50 | 3.78 | 4.60 | ±5 | 2020/1/20 |
| 835 | 22.3 | 0.921 | 42.680 | 0.90 | 41.50 | 2.33 | 2.84 | ±5 | 2020/1/21 |
| 835 | 22.6 | 0.882 | 42.016 | 0.90 | 41.50 | -2.00 | 1.24 | ±5 | 2020/1/26 |
| 835 | 22.4 | 0.918 | 41.502 | 0.90 | 41.50 | 2.00 | 0.00 | ±5 | 2020/2/14 |
| 1750 | 22.5 | 1.379 | 40.579 | 1.37 | 40.10 | 0.66 | 1.19 | ±5 | 2020/1/19 |
| 1750 | 22.6 | 1.379 | 40.539 | 1.37 | 40.10 | 0.66 | 1.09 | ±5 | 2020/1/26 |
| 1900 | 22.5 | 1.447 | 40.783 | 1.40 | 40.00 | 3.36 | 1.96 | ±5 | 2020/1/19 |
| 1900 | 22.6 | 1.449 | 39.742 | 1.40 | 40.00 | 3.50 | -0.65 | ±5 | 2020/1/28 |
| 2300 | 22.6 | 1.648 | 40.001 | 1.67 | 39.50 | -1.32 | 1.27 | ±5 | 2020/1/28 |
| 2450 | 22.6 | 1.782 | 39.011 | 1.80 | 39.20 | -1.00 | -0.48 | ±5 | 2019/12/30 |
| 2600 | 22.7 | 1.920 | 38.589 | 1.96 | 39.00 | -2.04 | -1.05 | ±5 | 2020/1/18 |
| 2600 | 22.4 | 1.982 | 38.418 | 1.96 | 39.00 | 1.12 | -1.49 | ±5 | 2020/1/27 |
| 2600 | 22.3 | 2.036 | 38.431 | 1.96 | 39.00 | 3.88 | -1.46 | ±5 | 2020/2/13 |
| 3500 | 22.5 | 2.984 | 39.194 | 2.91 | 37.90 | 2.54 | 3.41 | ±5 | 2020/1/24 |
| 3700 | 22.5 | 3.142 | 38.977 | 3.12 | 37.70 | 0.71 | 3.39 | ±5 | 2020/1/24 |
| 5250 | 22.5 | 4.525 | 35.475 | 4.71 | 35.95 | -3.93 | -1.32 | ±5 | 2019/12/19 |
| 5600 | 22.6 | 4.870 | 34.838 | 5.07 | 35.50 | -3.94 | -1.86 | ±5 | 2019/12/20 |
| 5750 | 22.6 | 5.215 | 36.578 | 5.22 | 35.35 | -0.10 | 3.47 | ±5 | 2020/1/14 |

## 11.3 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

| Date | Frequency (MHz) | Input Power (mW) | Dipole S/N | Probe S/N | DAE S/N | Measured 1g SAR (W/kg) | Targeted 1g SAR (W/kg) | Normalized 1g SAR (W/kg) | Deviation (%) |
|---|---|---|---|---|---|---|---|---|---|
| 2020/1/20 | 750 | 250 | D750V3-1107 | ES3DV3 - SN3169 | DAE3 Sn577 | 2.10 | 8.32 | 8.40 | 0.96 |
| 2020/1/21 | 750 | 250 | D750V3-1107 | ES3DV3 - SN3169 | DAE3 Sn577 | 2.02 | 8.32 | 8.08 | -2.88 |
| 2020/1/26 | 750 | 250 | D750V3-1107 | EX3DV4 - SN3931 | DAE3 Sn495 | 2.18 | 8.32 | 8.72 | 4.81 |
| 2020/1/20 | 835 | 250 | D835V2-4d167 | ES3DV3 - SN3169 | DAE3 Sn577 | 2.31 | 9.55 | 9.24 | -3.25 |
| 2020/1/21 | 835 | 250 | D835V2-4d167 | ES3DV3 - SN3169 | DAE3 Sn577 | 2.36 | 9.55 | 9.44 | -1.15 |
| 2020/1/26 | 835 | 250 | D835V2-4d167 | EX3DV4 - SN3931 | DAE3 Sn495 | 2.32 | 9.55 | 9.28 | -2.83 |
| 2020/2/14 | 835 | 250 | D835V2-4d167 | ES3DV3 - SN3169 | DAE3 Sn577 | 2.27 | 9.55 | 9.08 | -4.92 |
| 2020/1/19 | 1750 | 250 | D1750V2-1112 | ES3DV3 - SN3169 | DAE3 Sn577 | 9.28 | 36.70 | 37.12 | 1.14 |
| 2020/1/26 | 1750 | 250 | D1750V2-1112 | EX3DV4 - SN3931 | DAE3 Sn495 | 9.61 | 36.70 | 38.44 | 4.74 |
| 2020/1/19 | 1900 | 250 | D1900V2-5d041 | ES3DV3 - SN3169 | DAE3 Sn577 | 10.80 | 40.20 | 43.20 | 7.46 |
| 2020/1/28 | 1900 | 250 | D1900V2-5d041 | EX3DV4 - SN3931 | DAE3 Sn495 | 9.87 | 40.20 | 39.48 | -1.79 |
| 2020/1/28 | 2300 | 250 | D2300V2-1006 | EX3DV4 - SN3931 | DAE3 Sn495 | 11.30 | 48.70 | 45.20 | -7.19 |
| 2019/12/30 | 2450 | 250 | D2450V2-736 | EX3DV4 - SN3728 | DAE4 Sn778 | 12.40 | 52.70 | 49.60 | -5.88 |
| 2020/1/18 | 2600 | 250 | D2600V2-1008 | ES3DV3 - SN3169 | DAE3 Sn577 | 14.60 | 56.40 | 58.40 | 3.55 |
| 2020/1/27 | 2600 | 250 | D2600V2-1008 | EX3DV4 - SN3931 | DAE3 Sn495 | 14.50 | 56.40 | 58.00 | 2.84 |
| 2020/2/13 | 2600 | 250 | D2600V2-1008 | EX3DV4 - SN3931 | DAE3 Sn495 | 14.90 | 56.40 | 59.60 | 5.67 |
| 2020/1/24 | 3500 | 100 | D3500V2-1014 | EX3DV4 - SN3931 | DAE3 Sn495 | 7.13 | 67.90 | 71.30 | 5.01 |
| 2020/1/24 | 3700 | 100 | D3700V2-1006 | EX3DV4 - SN3931 | DAE3 Sn495 | 6.82 | 67.30 | 68.20 | 1.34 |
| 2019/12/19 | 5250 | 100 | D5GHzV2-1006-5250 | EX3DV4 - SN3931 | DAE3 Sn495 | 7.59 | 80.70 | 75.90 | -5.95 |
| 2019/12/20 | 5600 | 100 | D5GHzV2-1006-5600 | EX3DV4 - SN3931 | DAE3 Sn495 | 8.15 | 83.30 | 81.50 | -2.16 |
| 2020/1/14 | 5750 | 100 | D5GHzV2-1006-5750 | EX3DV4 - SN3931 | DAE4 Sn778 | 7.43 | 80.40 | 74.30 | -7.59 |

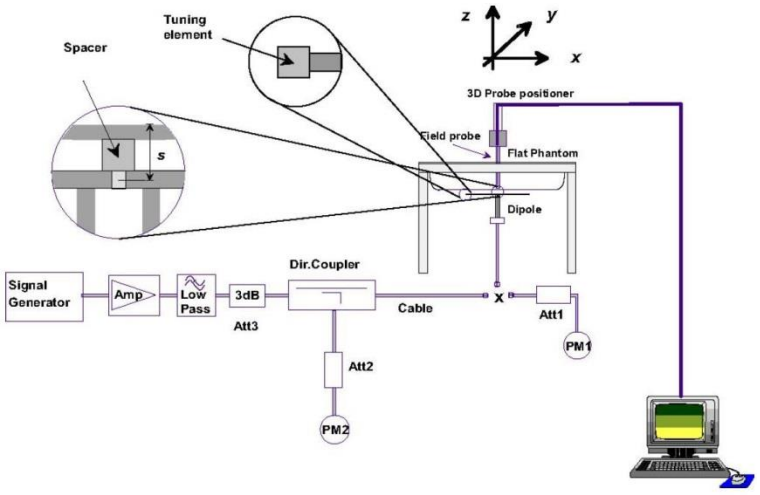



Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

# 12. UMTS/LTE Output Power (Unit: dBm)

**<WCDMA Conducted Power>**

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For HSPA+ devices supporting 16 QAM in the uplink, power measurements procedure is according to the configurations in Table C.11.1.4 of 3GPP TS 34.121-1.
4. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

**HSDPA Setup Configuration:**

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors ($\beta_c$ and $\beta_d$) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2Kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

**Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH**

| Sub-test | $\beta_c$ | $\beta_d$ | $\beta_d$ (SF) | $\beta_c/\beta_d$ | $\beta_{HS}$ (Note1, Note 2) | CM (dB) (Note 3) | MPR (dB) (Note 3) |
|---|---|---|---|---|---|---|---|
| 1 | 2/15 | 15/15 | 64 | 2/15 | 4/15 | 0.0 | 0.0 |
| 2 | 12/15 (Note 4) | 15/15 (Note 4) | 64 | 12/15 (Note 4) | 24/15 | 1.0 | 0.0 |
| 3 | 15/15 | 8/15 | 64 | 15/8 | 30/15 | 1.5 | 0.5 |
| 4 | 15/15 | 4/15 | 64 | 15/4 | 30/15 | 1.5 | 0.5 |

Note 1: $\Delta_{ACK}$, $\Delta_{NACK}$ and $\Delta_{CQI}$ = 30/15 with $\beta_{hs}$ = 30/15 * $\beta_c$.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, $\Delta_{ACK}$ and $\Delta_{NACK}$ = 30/15 with $\beta_{hs}$ = 30/15 * $\beta_c$, and $\Delta_{CQI}$ = 24/15 with $\beta_{hs}$ = 24/15 * $\beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d$ =12/15, $\beta_{hs}/\beta_c$=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the $\beta_c/\beta_d$ ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c$ = 11/15 and $\beta_d$ = 15/15.

**Setup Configuration**

**HSUPA Setup Configuration:**

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors ($\beta_c$ and $\beta_d$) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

**Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH**

| Sub-test | $\beta_c$ | $\beta_d$ | $\beta_d$ (SF) | $\beta_c/\beta_d$ | $\beta_{HS}$ (Note1) | $\beta_{ec}$ | $\beta_{ed}$ (Note 4) (Note 5) | $\beta_{ed}$ (SF) | $\beta_{ed}$ (Codes) | CM (dB) (Note 2) | MPR (dB) (Note 2) (Note 6) | AG Index (Note 5) | E-TFCI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11/15 (Note 3) | 15/15 (Note 3) | 64 | 11/15 (Note 3) | 22/15 | 209/225 | 1309/225 | 4 | 1 | 1.0 | 0.0 | 20 | 75 |
| 2 | 6/15 | 15/15 | 64 | 6/15 | 12/15 | 12/15 | 94/75 | 4 | 1 | 3.0 | 2.0 | 12 | 67 |
| 3 | 15/15 | 9/15 | 64 | 15/9 | 30/15 | 30/15 | $\beta_{ed}1$: 47/15<br>$\beta_{ed}2$: 47/15 | 4<br>4 | 2 | 2.0 | 1.0 | 15 | 92 |
| 4 | 2/15 | 15/15 | 64 | 2/15 | 4/15 | 2/15 | 56/75 | 4 | 1 | 3.0 | 2.0 | 17 | 71 |
| 5 | 15/15 | 0 | - | - | 5/15 | 5/15 | 47/15 | 4 | 1 | 1.0 | 0.0 | 12 | 67 |

Note 1: For sub-test 1 to 4, $\Delta_{ACK}$, $\Delta_{NACK}$ and $\Delta_{CQI}$ = 30/15 with $\beta_{hs}$ = 30/15 * $\beta_c$. For sub-test 5, $\Delta_{ACK}$, $\Delta_{NACK}$ and $\Delta_{CQI}$ = 5/15 with $\beta_{hs}$ = 5/15 * $\beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d$ =12/15, $\beta_{hs}/\beta_c$=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the $\beta_c/\beta_d$ ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c$ = 10/15 and $\beta_d$ = 15/15.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: $\beta_{ed}$ can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

**Setup Configuration**

**DC-HSDPA 3GPP release 8 Setup Configuration:**

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set RMC 12.2Kbps + HSDPA mode.
   ii. Set Cell Power = -25 dBm
   iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
   iv. Select HSDPA Uplink Parameters
   v. Set Gain Factors ($\beta_c$ and $\beta_d$) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
      a). Subtest 1: $\beta_c/\beta_d$=2/15
      b). Subtest 2: $\beta_c/\beta_d$=12/15
      c). Subtest 3: $\beta_c/\beta_d$=15/8
      d). Subtest 4: $\beta_c/\beta_d$=15/4
   vi. Set Delta ACK, Delta NACK and Delta CQI = 8
   vii. Set Ack-Nack Repetition Factor to 3
   viii. Set CQI Feedback Cycle (k) to 4 ms
   ix. Set CQI Repetition Factor to 2
   x. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12

**Table C.8.1.12: Fixed Reference Channel H-Set 12**

| Parameter | Unit | Value |
|---|---|---|
| Nominal Avg. Inf. Bit Rate | kbps | 60 |
| Inter-TTI Distance | TTI's | 1 |
| Number of HARQ Processes | Proces ses | 6 |
| Information Bit Payload ( $N_{INF}$ ) | Bits | 120 |
| Number Code Blocks | Blocks | 1 |
| Binary Channel Bits Per TTI | Bits | 960 |
| Total Available SML's in UE | SML's | 19200 |
| Number of SML's per HARQ Proc. | SML's | 3200 |
| Coding Rate | | 0.15 |
| Number of Physical Channel Codes | Codes | 1 |
| Modulation | | QPSK |
| Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table. | | |
| Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used. | | |

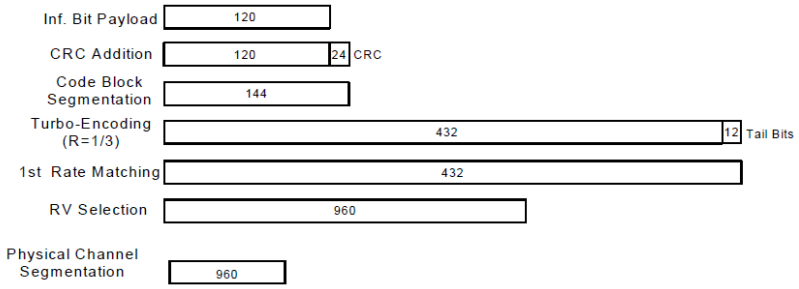



**Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)**

**Setup Configuration**

**HSPA+ 3GPP release 7 (uplink category 7) 16QAM, Setup Configuration:**

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2E:HSPA+:UL with 16QAM
   ii. Set the Gain Factors ($\beta_c$ and $\beta_d$) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.4, quoted from the TS 34.121-1 s5.2E
   iii. Set Channel Parms
   iv. Set Cell Power = -86 dBm
   v. Set Channel Type = HSPA
   vi. Set UE Target Power =21 dBm
   vii. Power Ctrl Mode= All Up Bits
   viii. Set Manual Uplink DPCH Bc/Bd = Manual
   ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
   x. Set HSPA Conn DL Channel Levels
   xi. Set HS-SCCH Configs
   xii. Set RB Test Mode Setup
   xiii. Set Common HSUPA Parameters
   xiv. Set Serving Grant
   xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

**Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM**

| Sub-test | $\beta_c$ (Note3) | $\beta_d$ | $\beta_{HS}$ (Note1) | $\beta_{ec}$ | $\beta_{ed}$ (2xSF2) (Note 4) | $\beta_{ed}$ (2xSF4) (Note 4) | CM (dB) (Note 2) | MPR (dB) (Note 2) | AG Index (Note 4) | E-TFCI (Note 5) | E-TFCI (boost) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 30/15 | 30/15 | $\beta_{ed}$1: 30/15<br>$\beta_{ed}$2: 30/15 | $\beta_{ed}$3: 24/15<br>$\beta_{ed}$4: 24/15 | 3.5 | 2.5 | 14 | 105 | 105 |

Note 1: $\Delta_{ACK}$, $\Delta_{NACK}$ and $\Delta_{CQI}$ = 30/15 with $\beta_{hs}$ = 30/15 * $\beta_c$.
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the $\beta_c$ is set to 1 and $\beta_d$ = 0 by default.
Note 4: $\beta_{ed}$ can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.

**Setup Configuration**

## <WCDMA Conducted Power>

**General Note:**

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA / HSPA+) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

**<Default Power Mode>**

| Band | | WCDMA II | | | Tune-up Limit (dBm) | WCDMA IV | | | Tune-up Limit (dBm) | WCDMA V | | | Tune-up Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX Channel | | 9262 | 9400 | 9538 | | 1312 | 1413 | 1513 | | 4132 | 4182 | 4233 | |
| Rx Channel | | 9662 | 9800 | 9938 | | 1537 | 1638 | 1738 | | 4357 | 4407 | 4458 | |
| Frequency (MHz) | | 1852.4 | 1880 | 1907.6 | | 1712.4 | 1732.6 | 1752.6 | | 826.4 | 836.4 | 846.6 | |
| 3GPP Rel 99 | RMC 12.2Kbps | 23.55 | 23.81 | 23.70 | 24.00 | 23.36 | 23.51 | 23.57 | 24.00 | 23.64 | 23.76 | 23.77 | 24.00 |
| 3GPP Rel 6 | HSDPA Subtest-1 | 23.36 | 23.39 | 23.40 | 24.00 | 22.56 | 22.57 | 22.50 | 24.00 | 22.98 | 23.04 | 23.06 | 24.00 |
| 3GPP Rel 6 | HSDPA Subtest-2 | 22.53 | 22.53 | 22.56 | 24.00 | 22.51 | 22.58 | 22.53 | 24.00 | 22.46 | 22.56 | 22.55 | 24.00 |
| 3GPP Rel 6 | HSDPA Subtest-3 | 22.02 | 22.08 | 22.20 | 23.50 | 22.20 | 22.32 | 22.45 | 23.50 | 22.46 | 22.53 | 22.54 | 23.50 |
| 3GPP Rel 6 | HSDPA Subtest-4 | 22.09 | 22.10 | 22.01 | 23.50 | 22.32 | 22.34 | 22.40 | 23.50 | 22.56 | 22.55 | 22.50 | 23.50 |
| 3GPP Rel 8 | DC-HSDPA Subtest-1 | 22.27 | 22.38 | 22.28 | 24.00 | 22.17 | 22.36 | 22.39 | 24.00 | 22.94 | 23.11 | 23.09 | 24.00 |
| 3GPP Rel 8 | DC-HSDPA Subtest-2 | 22.36 | 22.40 | 22.32 | 24.00 | 22.31 | 22.22 | 22.41 | 24.00 | 22.54 | 22.59 | 22.57 | 24.00 |
| 3GPP Rel 8 | DC-HSDPA Subtest-3 | 21.80 | 21.85 | 21.93 | 23.50 | 21.71 | 21.73 | 21.81 | 23.50 | 22.39 | 22.60 | 22.57 | 23.50 |
| 3GPP Rel 8 | DC-HSDPA Subtest-4 | 21.88 | 21.94 | 21.98 | 23.50 | 22.29 | 22.31 | 22.35 | 23.50 | 21.04 | 21.01 | 21.56 | 23.50 |
| 3GPP Rel 6 | HSUPA Subtest-1 | 21.39 | 21.37 | 21.40 | 22.00 | 20.82 | 20.86 | 20.94 | 22.00 | 20.55 | 20.53 | 20.58 | 22.00 |
| 3GPP Rel 6 | HSUPA Subtest-2 | 20.89 | 20.66 | 20.68 | 21.00 | 19.78 | 19.84 | 19.91 | 21.00 | 20.89 | 20.97 | 21.00 | 21.00 |
| 3GPP Rel 6 | HSUPA Subtest-3 | 20.88 | 20.92 | 20.91 | 22.00 | 20.31 | 20.36 | 20.45 | 22.00 | 21.01 | 21.03 | 21.12 | 22.00 |
| 3GPP Rel 6 | HSUPA Subtest-4 | 20.68 | 20.63 | 20.60 | 21.00 | 19.90 | 19.97 | 19.91 | 21.00 | 20.80 | 20.85 | 20.98 | 21.00 |
| 3GPP Rel 6 | HSUPA Subtest-5 | 21.88 | 21.89 | 21.76 | 23.00 | 21.02 | 21.09 | 21.11 | 23.00 | 21.73 | 21.76 | 21.76 | 23.00 |
| 3GPP Rel 7 | HSPA+ (16QAM) Subtest-1 | 19.78 | 19.66 | 19.58 | 20.50 | 19.50 | 19.57 | 19.43 | 20.50 | 19.50 | 19.57 | 19.43 | 20.50 |

**<Reduced Power Mode for NB Mode>**

| Band | | WCDMA II | | | Tune-up Limit (dBm) | WCDMA IV | | | Tune-up Limit (dBm) | WCDMA V | | | Tune-up Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX Channel | | 9262 | 9400 | 9538 | | 1312 | 1413 | 1513 | | 4132 | 4182 | 4233 | |
| Rx Channel | | 9662 | 9800 | 9938 | | 1537 | 1638 | 1738 | | 4357 | 4407 | 4458 | |
| Frequency (MHz) | | 1852.4 | 1880 | 1907.6 | | 1712.4 | 1732.6 | 1752.6 | | 826.4 | 836.4 | 846.6 | |
| 3GPP Rel 99 | RMC 12.2Kbps | 18.65 | 18.68 | 18.64 | 19.50 | 19.10 | 19.17 | 19.27 | 19.80 | 19.75 | 19.97 | 20.00 | 20.60 |
| 3GPP Rel 6 | HSDPA Subtest-1 | 18.41 | 18.64 | 18.37 | 19.50 | 19.04 | 19.09 | 19.02 | 19.80 | 19.65 | 19.91 | 19.95 | 20.60 |
| 3GPP Rel 6 | HSDPA Subtest-2 | 18.58 | 18.65 | 18.52 | 19.50 | 19.01 | 19.03 | 19.09 | 19.80 | 19.55 | 19.83 | 19.91 | 20.60 |
| 3GPP Rel 6 | HSDPA Subtest-3 | 18.45 | 18.63 | 18.53 | 19.50 | 19.00 | 19.00 | 19.04 | 19.80 | 19.52 | 19.76 | 19.90 | 20.60 |
| 3GPP Rel 6 | HSDPA Subtest-4 | 18.62 | 18.65 | 18.35 | 19.50 | 19.06 | 19.06 | 19.04 | 19.80 | 19.46 | 19.69 | 19.82 | 20.60 |
| 3GPP Rel 8 | DC-HSDPA Subtest-1 | 18.54 | 18.64 | 18.50 | 19.50 | 19.01 | 19.03 | 19.07 | 19.80 | 19.42 | 19.65 | 19.78 | 20.60 |
| 3GPP Rel 8 | DC-HSDPA Subtest-2 | 18.47 | 18.64 | 18.50 | 19.50 | 19.07 | 19.07 | 19.00 | 19.80 | 19.41 | 19.58 | 19.73 | 20.60 |
| 3GPP Rel 8 | DC-HSDPA Subtest-3 | 18.58 | 18.64 | 18.55 | 19.50 | 19.05 | 19.04 | 19.07 | 19.80 | 19.37 | 19.51 | 19.65 | 20.60 |
| 3GPP Rel 8 | DC-HSDPA Subtest-4 | 18.55 | 18.58 | 18.54 | 19.50 | 19.03 | 19.03 | 19.00 | 19.80 | 19.34 | 19.50 | 19.61 | 20.60 |
| 3GPP Rel 6 | HSUPA Subtest-1 | 18.44 | 18.56 | 18.63 | 19.50 | 19.01 | 19.06 | 19.02 | 19.80 | 19.29 | 19.46 | 19.54 | 20.60 |
| 3GPP Rel 6 | HSUPA Subtest-2 | 18.49 | 18.58 | 18.35 | 19.50 | 19.01 | 19.07 | 19.05 | 19.80 | 19.25 | 19.39 | 19.49 | 20.60 |
| 3GPP Rel 6 | HSUPA Subtest-3 | 18.52 | 18.56 | 18.44 | 19.50 | 19.01 | 19.07 | 19.04 | 19.80 | 19.25 | 19.29 | 19.46 | 20.60 |
| 3GPP Rel 6 | HSUPA Subtest-4 | 18.59 | 18.57 | 18.36 | 19.50 | 19.05 | 19.01 | 19.03 | 19.80 | 19.17 | 19.28 | 19.43 | 20.60 |
| 3GPP Rel 6 | HSUPA Subtest-5 | 18.60 | 18.49 | 18.59 | 19.50 | 19.08 | 19.08 | 19.07 | 19.80 | 19.10 | 19.18 | 19.36 | 20.60 |
| 3GPP Rel 7 | HSPA+ (16QAM) Subtest-1 | 18.65 | 18.50 | 18.55 | 19.50 | 19.10 | 19.05 | 19.08 | 19.80 | 19.02 | 19.08 | 19.35 | 20.60 |

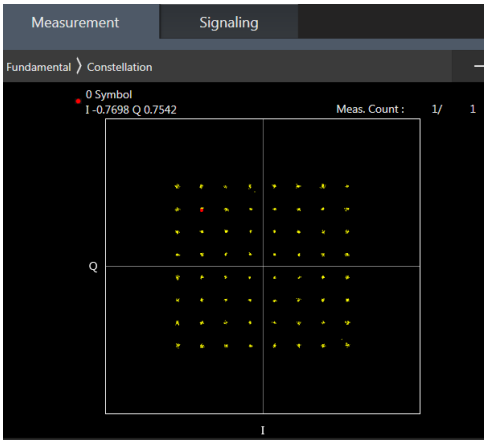
**<Reduced Power Mode for Tablet Mode>**

| Band | | WCDMA II | | | Tune-up Limit (dBm) | WCDMA IV | | | Tune-up Limit (dBm) | WCDMA V | | | Tune-up Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TX Channel | | 9262 | 9400 | 9538 | | 1312 | 1413 | 1513 | | 4132 | 4182 | 4233 | |
| Rx Channel | | 9662 | 9800 | 9938 | | 1537 | 1638 | 1738 | | 4357 | 4407 | 4458 | |
| Frequency (MHz) | | 1852.4 | 1880 | 1907.6 | | 1712.4 | 1732.6 | 1752.6 | | 826.4 | 836.4 | 846.6 | |
| 3GPP Rel 99 | RMC 12.2Kbps | 14.30 | 14.33 | 14.35 | 14.50 | 14.10 | 14.19 | 14.22 | 14.50 | 15.56 | 15.75 | 14.60 | 16.40 |
| 3GPP Rel 6 | HSDPA Subtest-1 | 13.97 | 14.00 | 13.95 | 14.50 | 14.08 | 14.15 | 14.18 | 14.50 | 15.52 | 15.72 | 14.59 | 16.40 |
| 3GPP Rel 6 | HSDPA Subtest-2 | 13.95 | 13.98 | 13.96 | 14.50 | 14.07 | 14.16 | 14.17 | 14.50 | 15.52 | 15.68 | 14.58 | 16.40 |
| 3GPP Rel 6 | HSDPA Subtest-3 | 13.93 | 13.97 | 14.02 | 14.50 | 14.05 | 14.18 | 14.20 | 14.50 | 15.50 | 15.68 | 14.55 | 15.90 |
| 3GPP Rel 6 | HSDPA Subtest-4 | 13.96 | 13.99 | 13.92 | 14.50 | 14.04 | 14.13 | 14.16 | 14.50 | 15.51 | 15.70 | 14.53 | 15.90 |
| 3GPP Rel 8 | DC-HSDPA Subtest-1 | 13.95 | 13.97 | 13.92 | 14.50 | 14.07 | 14.13 | 14.14 | 14.50 | 15.55 | 15.66 | 14.50 | 16.40 |
| 3GPP Rel 8 | DC-HSDPA Subtest-2 | 13.93 | 13.92 | 13.88 | 14.50 | 13.98 | 14.10 | 14.07 | 14.50 | 15.53 | 15.69 | 14.53 | 16.40 |
| 3GPP Rel 8 | DC-HSDPA Subtest-3 | 13.84 | 13.96 | 13.94 | 14.50 | 13.95 | 14.13 | 14.20 | 14.50 | 15.52 | 15.71 | 14.52 | 15.90 |
| 3GPP Rel 8 | DC-HSDPA Subtest-4 | 13.94 | 13.96 | 13.87 | 14.50 | 13.96 | 14.10 | 14.15 | 14.50 | 15.49 | 15.72 | 14.51 | 15.90 |
| 3GPP Rel 6 | HSUPA Subtest-1 | 13.93 | 13.90 | 13.94 | 14.50 | 14.04 | 14.11 | 14.12 | 14.50 | 15.48 | 15.70 | 14.55 | 15.40 |
| 3GPP Rel 6 | HSUPA Subtest-2 | 13.90 | 13.95 | 13.94 | 14.50 | 14.07 | 14.08 | 14.08 | 14.50 | 15.53 | 15.69 | 14.59 | 14.40 |
| 3GPP Rel 6 | HSUPA Subtest-3 | 13.92 | 13.93 | 14.01 | 14.50 | 13.98 | 14.14 | 14.20 | 14.50 | 15.52 | 15.67 | 14.56 | 15.40 |
| 3GPP Rel 6 | HSUPA Subtest-4 | 13.89 | 13.90 | 13.90 | 14.50 | 13.94 | 14.12 | 14.11 | 14.50 | 15.00 | 15.71 | 14.50 | 14.40 |
| 3GPP Rel 6 | HSUPA Subtest-5 | 13.85 | 13.89 | 13.83 | 14.50 | 13.98 | 14.12 | 14.08 | 14.50 | 15.51 | 15.70 | 14.58 | 16.40 |
| 3GPP Rel 7 | HSPA+ (16QAM) Subtest-1 | 13.90 | 13.93 | 13.97 | 14.50 | 14.04 | 14.08 | 14.06 | 14.50 | 15.54 | 15.72 | 14.57 | 13.90 |

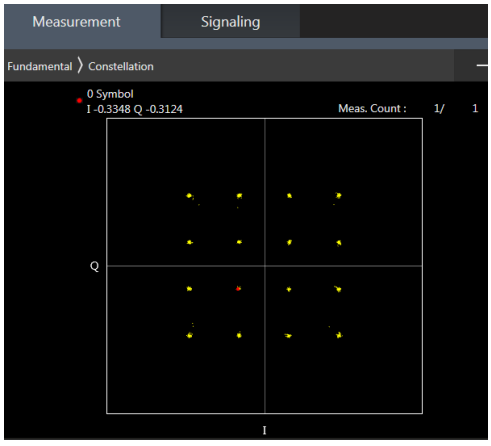
## <LTE Conducted Power>

**General Note:**

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B12 / B26 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41 according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.




**64QAM**




**16QAM**

## <Default Power Mode>

### <LTE Band 2>

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 18700 | 18900 | 19100 | | |
| Frequency (MHz) | | | | 1860 | 1880 | 1900 | | |
| 20 | QPSK | 1 | 0 | 23.53 | 23.55 | 23.49 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.41 | 23.36 | 23.05 | | |
| 20 | QPSK | 1 | 99 | 23.39 | 23.31 | 23.39 | | |
| 20 | QPSK | 50 | 0 | 22.55 | 22.47 | 22.46 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.59 | 22.51 | 22.35 | | |
| 20 | QPSK | 50 | 50 | 22.58 | 22.55 | 22.49 | | |
| 20 | QPSK | 100 | 0 | 22.62 | 22.47 | 22.29 | | |
| 20 | 16QAM | 1 | 0 | 22.88 | 22.80 | 22.87 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.80 | 22.76 | 22.40 | | |
| 20 | 16QAM | 1 | 99 | 22.69 | 22.70 | 22.68 | | |
| 20 | 16QAM | 50 | 0 | 21.57 | 21.48 | 21.54 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 21.63 | 21.49 | 21.50 | | |
| 20 | 16QAM | 50 | 50 | 21.59 | 21.56 | 21.58 | | |
| 20 | 16QAM | 100 | 0 | 21.60 | 21.46 | 21.48 | | |
| 20 | 64QAM | 1 | 0 | 21.74 | 21.44 | 21.55 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.66 | 21.61 | 20.48 | | |
| 20 | 64QAM | 1 | 99 | 21.35 | 21.57 | 21.23 | | |
| 20 | 64QAM | 50 | 0 | 20.57 | 20.50 | 19.93 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 20.65 | 20.52 | 19.68 | | |
| 20 | 64QAM | 50 | 50 | 20.33 | 20.58 | 19.93 | | |
| 20 | 64QAM | 100 | 0 | 20.60 | 20.49 | 19.81 | | |
| Channel | | | | 18675 | 18900 | 19125 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1857.5 | 1880 | 1902.5 | | |
| 15 | QPSK | 1 | 0 | 23.48 | 23.43 | 23.41 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.43 | 23.44 | 23.20 | | |
| 15 | QPSK | 1 | 74 | 23.43 | 23.42 | 23.44 | | |
| 15 | QPSK | 36 | 0 | 22.51 | 22.46 | 22.37 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.60 | 22.56 | 22.55 | | |
| 15 | QPSK | 36 | 39 | 22.57 | 22.54 | 22.59 | | |
| 15 | QPSK | 75 | 0 | 22.56 | 22.43 | 22.35 | | |
| 15 | 16QAM | 1 | 0 | 22.76 | 22.74 | 22.71 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.72 | 22.73 | 22.54 | | |
| 15 | 16QAM | 1 | 74 | 22.75 | 22.70 | 22.72 | | |
| 15 | 16QAM | 36 | 0 | 21.50 | 21.47 | 21.44 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.59 | 21.53 | 21.55 | | |
| 15 | 16QAM | 36 | 39 | 21.56 | 21.55 | 21.61 | | |
| 15 | 16QAM | 75 | 0 | 21.58 | 21.46 | 21.53 | | |
| 15 | 64QAM | 1 | 0 | 21.66 | 21.57 | 20.99 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.68 | 21.64 | 20.63 | | |
| 15 | 64QAM | 1 | 74 | 21.60 | 21.61 | 21.24 | | |
| 15 | 64QAM | 36 | 0 | 20.53 | 20.52 | 19.68 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.66 | 20.60 | 19.81 | | |
| 15 | 64QAM | 36 | 39 | 20.64 | 20.59 | 20.10 | | |
| 15 | 64QAM | 75 | 0 | 20.60 | 20.48 | 19.81 | | |
| Channel | | | | 18650 | 18900 | 19150 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1855 | 1880 | 1905 | | |
| 10 | QPSK | 1 | 0 | 23.25 | 23.17 | 23.25 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.18 | 23.15 | 23.23 | | |
| 10 | QPSK | 1 | 49 | 23.23 | 23.22 | 23.26 | | |
| 10 | QPSK | 25 | 0 | 22.34 | 22.24 | 22.32 | 23 | 1 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 12 | 22.38 | 22.27 | 22.32 | | |
| 10 | QPSK | 25 | 25 | 22.38 | 22.33 | 22.43 | | |
| 10 | QPSK | 50 | 0 | 22.38 | 22.26 | 22.32 | | |
| 10 | 16QAM | 1 | 0 | 22.64 | 22.59 | 22.56 | | |
| 10 | 16QAM | 1 | 25 | 22.57 | 22.55 | 22.66 | 23 | 1 |
| 10 | 16QAM | 1 | 49 | 22.62 | 22.58 | 22.61 | | |
| 10 | 16QAM | 25 | 0 | 21.35 | 21.24 | 21.29 | | |
| 10 | 16QAM | 25 | 12 | 21.38 | 21.28 | 21.38 | 22 | 2 |
| 10 | 16QAM | 25 | 25 | 21.38 | 21.31 | 21.35 | | |
| 10 | 16QAM | 50 | 22.53 | 21.33 | 21.35 | 21.35 | | |
| 10 | 64QAM | 1 | 22.02 | 21.98 | 21.90 | 20.63 | | |
| 10 | 64QAM | 1 | 22.09 | 21.90 | 21.91 | 21.05 | 22.2 | 22.32 |
| 10 | 64QAM | 1 | 49 | 21.51 | 21.47 | 21.27 | | |
| 10 | 64QAM | 25 | 0 | 20.40 | 20.27 | 19.76 | | |
| 10 | 64QAM | 25 | 12 | 20.43 | 20.27 | 20.03 | 21 | 3 |
| 10 | 64QAM | 25 | 25 | 20.42 | 20.36 | 20.18 | | |
| 10 | 64QAM | 50 | 0 | 20.38 | 20.31 | 19.89 | | |
| Channel | | | | 18625 | 18900 | 19175 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1852.5 | 1880 | 1907.5 | | |
| 5 | QPSK | 1 | 0 | 23.23 | 23.15 | 23.31 | | |
| 5 | QPSK | 1 | 12 | 23.29 | 23.29 | 23.35 | 24 | 0 |
| 5 | QPSK | 1 | 24 | 23.27 | 23.28 | 23.33 | | |
| 5 | QPSK | 12 | 0 | 22.32 | 22.23 | 22.35 | | |
| 5 | QPSK | 12 | 7 | 22.34 | 22.33 | 22.42 | 23 | 1 |
| 5 | QPSK | 12 | 13 | 22.38 | 22.32 | 22.40 | | |
| 5 | QPSK | 25 | 0 | 22.33 | 22.24 | 22.37 | | |
| 5 | 16QAM | 1 | 0 | 22.59 | 22.48 | 22.61 | | |
| 5 | 16QAM | 1 | 12 | 22.61 | 22.57 | 22.62 | 23 | 1 |
| 5 | 16QAM | 1 | 24 | 22.61 | 22.64 | 22.66 | | |
| 5 | 16QAM | 12 | 0 | 21.36 | 21.28 | 21.38 | | |
| 5 | 16QAM | 12 | 7 | 21.40 | 21.35 | 21.43 | 22 | 2 |
| 5 | 16QAM | 12 | 13 | 21.37 | 21.32 | 21.43 | | |
| 5 | 16QAM | 25 | 0 | 21.37 | 21.27 | 21.40 | | |
| 5 | 64QAM | 1 | 0 | 21.58 | 21.44 | 21.00 | | |
| 5 | 64QAM | 1 | 12 | 21.52 | 21.48 | 21.31 | 22 | 2 |
| 5 | 64QAM | 1 | 24 | 21.50 | 21.52 | 21.34 | | |
| 5 | 64QAM | 12 | 0 | 20.39 | 20.32 | 20.20 | | |
| 5 | 64QAM | 12 | 7 | 20.43 | 20.39 | 20.29 | 21 | 3 |
| 5 | 64QAM | 12 | 13 | 20.42 | 20.40 | 20.26 | | |
| 5 | 64QAM | 25 | 0 | 20.37 | 20.26 | 20.13 | | |
| Channel | | | | 18615 | 18900 | 19185 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1851.5 | 1880 | 1908.5 | | |
| 3 | QPSK | 1 | 0 | 23.36 | 23.30 | 23.40 | | |
| 3 | QPSK | 1 | 8 | 23.44 | 23.41 | 23.48 | 24 | 0 |
| 3 | QPSK | 1 | 14 | 23.39 | 23.36 | 23.43 | | |
| 3 | QPSK | 8 | 0 | 22.47 | 22.34 | 22.47 | | |
| 3 | QPSK | 8 | 4 | 22.51 | 22.46 | 22.53 | 23 | 1 |
| 3 | QPSK | 8 | 7 | 22.47 | 22.41 | 22.50 | | |
| 3 | QPSK | 15 | 0 | 22.47 | 22.45 | 22.49 | | |
| 3 | 16QAM | 1 | 0 | 22.69 | 22.61 | 22.69 | | |
| 3 | 16QAM | 1 | 8 | 22.80 | 22.76 | 22.80 | 23 | 1 |
| 3 | 16QAM | 1 | 14 | 22.73 | 22.70 | 22.75 | | |
| 3 | 16QAM | 8 | 0 | 21.55 | 21.42 | 21.54 | | |
| 3 | 16QAM | 8 | 4 | 21.57 | 21.52 | 21.59 | 22 | 2 |
| 3 | 16QAM | 8 | 7 | 21.51 | 21.51 | 21.56 | | |
| 3 | 16QAM | 15 | 0 | 21.52 | 21.48 | 21.53 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 0 | 21.65 | 21.52 | 21.31 | 22 | 2 |
| 3 | 64QAM | 1 | 8 | 21.72 | 21.69 | 21.51 | | |
| 3 | 64QAM | 1 | 14 | 21.64 | 21.62 | 21.50 | | |
| 3 | 64QAM | 8 | 0 | 20.54 | 20.42 | 20.37 | 21 | 3 |
| 3 | 64QAM | 8 | 4 | 20.55 | 20.55 | 20.40 | | |
| 3 | 64QAM | 8 | 7 | 20.53 | 20.50 | 20.37 | | |
| 3 | 64QAM | 15 | 0 | 20.52 | 20.46 | 20.33 | | |
| Channel | | | | 18607 | 18900 | 19193 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1850.7 | 1880 | 1909.3 | | |
| 1.4 | QPSK | 1 | 0 | 23.31 | 23.26 | 23.34 | 24 | 0 |
| 1.4 | QPSK | 1 | 3 | 23.37 | 23.33 | 23.37 | | |
| 1.4 | QPSK | 1 | 5 | 23.32 | 23.26 | 23.33 | | |
| 1.4 | QPSK | 3 | 0 | 23.35 | 23.29 | 23.35 | | |
| 1.4 | QPSK | 3 | 1 | 23.40 | 23.35 | 23.40 | | |
| 1.4 | QPSK | 3 | 3 | 23.35 | 23.29 | 23.35 | | |
| 1.4 | QPSK | 6 | 0 | 22.40 | 22.36 | 22.42 | 23 | 1 |
| 1.4 | 16QAM | 1 | 0 | 22.60 | 22.57 | 22.65 | 23 | 1 |
| 1.4 | 16QAM | 1 | 3 | 22.69 | 22.67 | 22.73 | | |
| 1.4 | 16QAM | 1 | 5 | 22.65 | 22.61 | 22.61 | | |
| 1.4 | 16QAM | 3 | 0 | 22.43 | 22.40 | 22.44 | | |
| 1.4 | 16QAM | 3 | 1 | 22.49 | 22.43 | 22.47 | | |
| 1.4 | 16QAM | 3 | 3 | 22.42 | 22.41 | 22.43 | | |
| 1.4 | 16QAM | 6 | 0 | 21.46 | 21.43 | 21.50 | 22 | 2 |
| 1.4 | 64QAM | 1 | 0 | 21.60 | 21.56 | 21.15 | 22 | 2 |
| 1.4 | 64QAM | 1 | 3 | 21.65 | 21.63 | 21.28 | | |
| 1.4 | 64QAM | 1 | 5 | 21.62 | 21.52 | 21.13 | | |
| 1.4 | 64QAM | 3 | 0 | 21.54 | 21.49 | 21.14 | | |
| 1.4 | 64QAM | 3 | 1 | 21.60 | 21.56 | 21.19 | | |
| 1.4 | 64QAM | 3 | 3 | 21.57 | 21.53 | 21.12 | | |
| 13 | 64QAM | 6 | 0 | 20.47 | 20.42 | 20.07 | 21 | 3 |

**<LTE Band 4>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20050 | 20175 | 20300 | | |
| Frequency (MHz) | | | | 1720 | 1732.5 | 1745 | | |
| 20 | QPSK | 1 | 0 | 23.54 | 23.60 | 23.59 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.39 | 23.39 | 23.49 | | |
| 20 | QPSK | 1 | 99 | 23.39 | 23.40 | 23.47 | | |
| 20 | QPSK | 50 | 0 | 22.59 | 22.60 | 22.64 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.62 | 22.60 | 22.60 | | |
| 20 | QPSK | 50 | 50 | 22.54 | 22.53 | 22.61 | | |
| 20 | QPSK | 100 | 0 | 22.59 | 22.64 | 22.57 | | |
| 20 | 16QAM | 1 | 0 | 22.87 | 22.92 | 22.94 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.79 | 22.76 | 22.83 | | |
| 20 | 16QAM | 1 | 99 | 22.78 | 22.72 | 22.77 | | |
| 20 | 16QAM | 50 | 0 | 21.59 | 21.62 | 21.68 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 21.60 | 21.63 | 21.61 | | |
| 20 | 16QAM | 50 | 50 | 21.53 | 21.55 | 21.60 | | |
| 20 | 16QAM | 100 | 0 | 21.59 | 21.64 | 21.56 | | |
| 20 | 64QAM | 1 | 0 | 21.53 | 21.74 | 20.92 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.58 | 21.38 | 21.68 | | |
| 20 | 64QAM | 1 | 99 | 21.65 | 21.03 | 21.74 | | |
| 20 | 64QAM | 50 | 0 | 20.62 | 20.63 | 20.30 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 20.64 | 20.45 | 20.64 | | |
| 20 | 64QAM | 50 | 50 | 20.56 | 20.12 | 20.63 | | |
| 20 | 64QAM | 100 | 0 | 20.62 | 20.64 | 20.60 | | |
| Channel | | | | 20025 | 20175 | 20325 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1717.5 | 1732.5 | 1747.5 | | |
| 15 | QPSK | 1 | 0 | 23.53 | 23.56 | 22.51 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.37 | 23.39 | 22.56 | | |
| 15 | QPSK | 1 | 74 | 23.41 | 23.39 | 22.51 | | |
| 15 | QPSK | 36 | 0 | 22.55 | 22.61 | 21.50 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.57 | 22.57 | 21.56 | | |
| 15 | QPSK | 36 | 39 | 22.53 | 22.52 | 21.52 | | |
| 15 | QPSK | 75 | 0 | 22.56 | 22.60 | 21.54 | | |
| 15 | 16QAM | 1 | 0 | 22.82 | 22.89 | 22.92 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.71 | 22.70 | 22.81 | | |
| 15 | 16QAM | 1 | 74 | 22.74 | 22.69 | 22.80 | | |
| 15 | 16QAM | 36 | 0 | 21.56 | 21.58 | 21.65 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.56 | 21.57 | 21.58 | | |
| 15 | 16QAM | 36 | 39 | 21.53 | 21.52 | 21.62 | | |
| 15 | 16QAM | 75 | 0 | 21.58 | 21.60 | 21.59 | | |
| 15 | 64QAM | 1 | 0 | 21.52 | 21.76 | 20.52 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.64 | 21.23 | 20.50 | | |
| 15 | 64QAM | 1 | 74 | 20.51 | 20.81 | 20.55 | | |
| 15 | 64QAM | 36 | 0 | 20.58 | 20.67 | 19.52 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.57 | 20.40 | 20.58 | | |
| 15 | 64QAM | 36 | 39 | 20.55 | 20.17 | 20.64 | | |
| 15 | 64QAM | 75 | 0 | 20.59 | 20.50 | 20.60 | | |
| Channel | | | | 20000 | 20175 | 20350 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1715 | 1732.5 | 1750 | | |
| 10 | QPSK | 1 | 0 | 23.26 | 23.27 | 23.34 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.20 | 23.23 | 23.32 | | |
| 10 | QPSK | 1 | 49 | 23.23 | 23.25 | 23.35 | | |
| 10 | QPSK | 25 | 0 | 22.35 | 22.33 | 22.38 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.37 | 22.42 | 22.41 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 22.39 | 22.41 | 22.48 | | |
| 10 | QPSK | 50 | 0 | 22.39 | 22.41 | 22.41 | | |
| 10 | 16QAM | 1 | 0 | 22.62 | 22.63 | 22.69 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.60 | 22.65 | 22.74 | | |
| 10 | 16QAM | 1 | 49 | 22.61 | 22.64 | 22.72 | | |
| 10 | 16QAM | 25 | 0 | 21.34 | 21.32 | 21.41 | 22 | 2 |
| 10 | 24.5 | 25 | 12 | 21.38 | 21.39 | 21.44 | | |
| 10 | 24.5 | 25 | 25 | 21.37 | 21.39 | 21.50 | | |
| 10 | 16QAM | 50 | 0 | 21.40 | 21.39 | 21.42 | | |
| 10 | 64QAM | 1 | 0 | 21.34 | 21.47 | 21.61 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.56 | 21.42 | 21.64 | | |
| 10 | 64QAM | 1 | 49 | 21.54 | 20.86 | 21.61 | | |
| 10 | 64QAM | 25 | 0 | 20.37 | 20.34 | 20.39 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 20.39 | 20.40 | 20.45 | | |
| 10 | 64QAM | 25 | 25 | 20.42 | 20.16 | 20.52 | | |
| 10 | 64QAM | 50 | 0 | 20.43 | 20.37 | 20.47 | | |
| Channel | | | | 19975 | 20175 | 20375 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1712.5 | 1732.5 | 1752.5 | | |
| 5 | QPSK | 1 | 0 | 23.28 | 23.26 | 23.33 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.30 | 23.35 | 23.39 | | |
| 5 | QPSK | 1 | 24 | 23.28 | 23.32 | 23.38 | | |
| 5 | QPSK | 12 | 0 | 22.33 | 22.28 | 22.45 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.37 | 22.39 | 22.48 | | |
| 5 | QPSK | 12 | 13 | 22.36 | 22.42 | 22.45 | | |
| 5 | QPSK | 25 | 0 | 22.34 | 22.40 | 22.45 | | |
| 5 | 16QAM | 1 | 0 | 22.57 | 22.60 | 22.69 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.59 | 22.60 | 22.70 | | |
| 5 | 16QAM | 1 | 24 | 22.58 | 22.62 | 22.73 | | |
| 5 | 16QAM | 12 | 0 | 21.38 | 21.33 | 21.48 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.41 | 21.41 | 21.51 | | |
| 5 | 16QAM | 12 | 13 | 21.40 | 21.40 | 21.48 | | |
| 5 | 16QAM | 25 | 0 | 21.38 | 21.37 | 21.47 | | |
| 5 | 64QAM | 1 | 0 | 21.45 | 21.49 | 21.65 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.56 | 21.41 | 21.63 | | |
| 5 | 64QAM | 1 | 24 | 21.58 | 21.09 | 21.64 | | |
| 5 | 64QAM | 12 | 0 | 20.40 | 20.37 | 20.54 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.46 | 20.42 | 20.54 | | |
| 5 | 64QAM | 12 | 13 | 20.44 | 20.25 | 20.55 | | |
| 5 | 64QAM | 25 | 0 | 20.39 | 20.33 | 20.48 | | |
| Channel | | | | 19965 | 20175 | 20385 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1711.5 | 1732.5 | 1753.5 | | |
| 3 | QPSK | 1 | 0 | 23.38 | 23.35 | 23.47 | 24 | 0 |
| 3 | QPSK | 1 | 8 | 23.46 | 23.50 | 23.53 | | |
| 3 | QPSK | 1 | 14 | 23.40 | 23.43 | 23.52 | | |
| 3 | QPSK | 8 | 0 | 22.48 | 22.40 | 22.57 | 23 | 1 |
| 3 | QPSK | 8 | 4 | 22.48 | 22.51 | 22.61 | | |
| 3 | QPSK | 8 | 7 | 22.46 | 22.49 | 22.61 | | |
| 3 | QPSK | 15 | 0 | 22.49 | 22.49 | 22.58 | | |
| 3 | 16QAM | 1 | 0 | 22.71 | 22.66 | 22.79 | 23 | 1 |
| 3 | 16QAM | 1 | 8 | 22.80 | 22.77 | 22.93 | | |
| 3 | 16QAM | 1 | 14 | 22.76 | 22.75 | 22.83 | | |
| 3 | 16QAM | 8 | 0 | 21.52 | 21.50 | 21.64 | 22 | 2 |
| 3 | 16QAM | 8 | 4 | 21.57 | 21.58 | 21.69 | | |
| 3 | 16QAM | 8 | 7 | 21.53 | 21.54 | 21.62 | | |
| 3 | 16QAM | 15 | 0 | 21.51 | 21.53 | 21.63 | | |
| 3 | 64QAM | 1 | 0 | 21.54 | 21.59 | 21.77 | 22 | 2 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 21.73 | 21.58 | 21.80 | | |
| 3 | 64QAM | 1 | 14 | 21.68 | 21.38 | 21.77 | | |
| 3 | 64QAM | 8 | 0 | 20.53 | 20.45 | 20.65 | 21 | 3 |
| 3 | 64QAM | 8 | 4 | 20.59 | 20.51 | 20.66 | | |
| 3 | 64QAM | 8 | 7 | 20.54 | 20.42 | 20.66 | | |
| 3 | 64QAM | 15 | 0 | 20.50 | 20.45 | 20.62 | | |
| Channel | | | | 19957 | 20175 | 20393 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1710.7 | 1732.5 | 1754.3 | | |
| 1.4 | QPSK | 1 | 0 | 23.26 | 23.32 | 23.41 | 24 | 0 |
| 1.4 | QPSK | 1 | 3 | 23.36 | 23.39 | 23.48 | | |
| 1.4 | QPSK | 1 | 5 | 23.30 | 23.28 | 23.44 | | |
| 1.4 | QPSK | 3 | 0 | 23.31 | 23.33 | 23.42 | | |
| 1.4 | QPSK | 3 | 1 | 23.35 | 23.35 | 23.47 | | |
| 1.4 | QPSK | 3 | 3 | 23.35 | 23.34 | 23.45 | | |
| 1.4 | QPSK | 6 | 0 | 22.40 | 22.41 | 22.53 | 23 | 1 |
| 1.4 | 16QAM | 1 | 0 | 22.63 | 22.66 | 22.74 | 23 | 1 |
| 1.4 | 16QAM | 1 | 3 | 22.72 | 22.68 | 22.78 | | |
| 1.4 | 16QAM | 1 | 5 | 22.66 | 22.64 | 22.75 | | |
| 1.4 | 16QAM | 3 | 0 | 22.41 | 22.39 | 22.56 | | |
| 1.4 | 16QAM | 3 | 1 | 22.44 | 22.48 | 22.58 | | |
| 1.4 | 16QAM | 3 | 3 | 22.38 | 22.40 | 22.50 | | |
| 1.4 | 16QAM | 6 | 0 | 21.45 | 21.49 | 21.59 | 22 | 2 |
| 1.4 | 64QAM | 1 | 0 | 21.40 | 21.47 | 21.67 | 22 | 2 |
| 1.4 | 64QAM | 1 | 3 | 21.55 | 21.47 | 21.76 | | |
| 1.4 | 64QAM | 1 | 5 | 21.52 | 21.35 | 21.70 | | |
| 1.4 | 64QAM | 3 | 0 | 21.48 | 21.48 | 21.64 | | |
| 1.4 | 64QAM | 3 | 1 | 21.60 | 21.55 | 21.71 | | |
| 1.4 | 64QAM | 3 | 3 | 21.54 | 21.42 | 21.65 | | |
| 1.4 | 64QAM | 6 | 0 | 20.43 | 20.39 | 20.53 | 21 | 3 |

**<LTE Band 5>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20450 | 20525 | 20600 | | |
| Frequency (MHz) | | | | 829 | 836.5 | 844 | | |
| 10 | QPSK | 1 | 0 | 23.80 | 23.85 | 23.80 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.68 | 23.74 | 23.71 | | |
| 10 | QPSK | 1 | 49 | 23.74 | 23.76 | 23.56 | | |
| 10 | QPSK | 25 | 0 | 22.79 | 22.86 | 22.84 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.88 | 22.87 | 22.85 | | |
| 10 | QPSK | 25 | 25 | 22.88 | 22.90 | 22.88 | | |
| 10 | QPSK | 50 | 0 | 22.89 | 22.87 | 22.84 | | |
| 10 | 16QAM | 1 | 0 | 22.90 | 22.99 | 22.95 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.93 | 22.93 | 22.90 | | |
| 10 | 16QAM | 1 | 49 | 22.91 | 22.92 | 22.74 | | |
| 10 | 16QAM | 25 | 0 | 21.75 | 21.85 | 21.83 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.87 | 21.86 | 21.83 | | |
| 10 | 16QAM | 25 | 25 | 21.86 | 21.90 | 21.84 | | |
| 10 | 16QAM | 50 | 0 | 21.87 | 21.87 | 21.86 | | |
| 10 | 64QAM | 1 | 0 | 21.96 | 21.95 | 21.91 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.92 | 21.97 | 21.49 | | |
| 10 | 64QAM | 1 | 49 | 21.90 | 21.94 | 20.82 | | |
| 10 | 64QAM | 25 | 0 | 20.78 | 20.89 | 20.88 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 20.89 | 20.93 | 20.65 | | |
| 10 | 64QAM | 25 | 25 | 20.88 | 20.93 | 20.41 | | |
| 10 | 64QAM | 50 | 0 | 20.91 | 20.90 | 20.68 | | |
| Channel | | | | 20425 | 20525 | 20625 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 826.5 | 836.5 | 846.5 | | |
| 5 | QPSK | 1 | 0 | 23.83 | 23.82 | 23.76 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.76 | 23.84 | 23.78 | | |
| 5 | QPSK | 1 | 24 | 23.75 | 23.79 | 23.69 | | |
| 5 | QPSK | 12 | 0 | 22.90 | 22.92 | 22.87 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.87 | 22.87 | 22.81 | | |
| 5 | QPSK | 12 | 13 | 22.81 | 22.90 | 22.79 | | |
| 5 | QPSK | 25 | 0 | 22.85 | 22.86 | 22.81 | | |
| 5 | 16QAM | 1 | 0 | 22.86 | 22.86 | 22.80 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.86 | 22.85 | 22.83 | | |
| 5 | 16QAM | 1 | 24 | 22.87 | 22.83 | 22.81 | | |
| 5 | 16QAM | 12 | 0 | 21.90 | 21.93 | 21.88 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.87 | 21.89 | 21.83 | | |
| 5 | 16QAM | 12 | 13 | 21.82 | 21.90 | 21.81 | | |
| 5 | 16QAM | 25 | 0 | 21.84 | 21.86 | 21.83 | | |
| 5 | 64QAM | 1 | 0 | 21.67 | 21.61 | 21.68 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.98 | 21.65 | 21.29 | | |
| 5 | 64QAM | 1 | 24 | 21.61 | 21.67 | 21.11 | | |
| 5 | 64QAM | 12 | 0 | 20.92 | 20.95 | 20.41 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.91 | 20.94 | 20.26 | | |
| 5 | 64QAM | 12 | 13 | 20.85 | 20.94 | 20.28 | | |
| 5 | 64QAM | 25 | 0 | 20.87 | 20.89 | 20.28 | | |
| Channel | | | | 20415 | 20525 | 20635 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 825.5 | 836.5 | 847.5 | | |
| 3 | QPSK | 1 | 0 | 23.60 | 23.59 | 23.65 | 24 | 0 |
| 3 | QPSK | 1 | 8 | 23.59 | 23.68 | 23.63 | | |
| 3 | QPSK | 1 | 14 | 23.53 | 23.59 | 23.49 | | |
| 3 | QPSK | 8 | 0 | 22.68 | 22.72 | 22.74 | 23 | 1 |
| 3 | QPSK | 8 | 4 | 22.68 | 22.70 | 22.72 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | QPSK | 8 | 7 | 22.60 | 22.71 | 22.62 | | |
| 3 | QPSK | 15 | 0 | 22.67 | 22.67 | 22.67 | | |
| 3 | 16QAM | 1 | 0 | 22.95 | 22.93 | 22.96 | 23 | 1 |
| 3 | 16QAM | 1 | 8 | 22.97 | 22.92 | 22.90 | | |
| 3 | 16QAM | 1 | 14 | 22.81 | 22.91 | 22.83 | | |
| 3 | 16QAM | 8 | 0 | 21.73 | 21.74 | 21.78 | 22 | 2 |
| 3 | 16QAM | 8 | 4 | 21.73 | 21.75 | 21.75 | | |
| 3 | 16QAM | 8 | 7 | 21.67 | 21.76 | 21.71 | | |
| 3 | 16QAM | 15 | 0 | 21.66 | 21.68 | 21.73 | | |
| 3 | 64QAM | 1 | 0 | 21.86 | 21.89 | 21.12 | 22 | 2 |
| 3 | 64QAM | 1 | 8 | 21.87 | 21.94 | 21.18 | | |
| 3 | 64QAM | 1 | 14 | 21.80 | 21.85 | 21.13 | | |
| 3 | 64QAM | 8 | 0 | 20.74 | 20.74 | 20.05 | 21 | 3 |
| 3 | 64QAM | 8 | 4 | 20.73 | 20.74 | 20.15 | | |
| 3 | 64QAM | 8 | 7 | 20.67 | 20.76 | 20.20 | | |
| 3 | 64QAM | 15 | 0 | 20.68 | 20.69 | 20.11 | | |
| Channel | | | | 20407 | 20525 | 20643 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 824.7 | 836.5 | 848.3 | | |
| 1.4 | QPSK | 1 | 0 | 23.51 | 23.50 | 23.46 | 24 | 0 |
| 1.4 | QPSK | 1 | 3 | 23.54 | 23.58 | 23.52 | | |
| 1.4 | QPSK | 1 | 5 | 23.46 | 23.51 | 23.41 | | |
| 1.4 | QPSK | 3 | 0 | 23.52 | 23.52 | 23.51 | | |
| 1.4 | QPSK | 3 | 1 | 23.59 | 23.57 | 23.55 | | |
| 1.4 | QPSK | 3 | 3 | 23.51 | 23.56 | 23.47 | | |
| 1.4 | QPSK | 6 | 0 | 22.59 | 22.59 | 22.57 | 23 | 1 |
| 1.4 | 16QAM | 1 | 0 | 22.85 | 22.86 | 22.78 | 23 | 1 |
| 1.4 | 16QAM | 1 | 3 | 22.88 | 22.94 | 22.85 | | |
| 1.4 | 16QAM | 1 | 5 | 22.76 | 22.84 | 22.77 | | |
| 1.4 | 16QAM | 3 | 0 | 22.61 | 22.61 | 22.58 | | |
| 1.4 | 16QAM | 3 | 1 | 22.63 | 22.66 | 22.62 | | |
| 1.4 | 16QAM | 3 | 3 | 22.56 | 22.65 | 22.53 | | |
| 1.4 | 16QAM | 6 | 0 | 21.63 | 21.65 | 21.66 | 22 | 2 |
| 1.4 | 64QAM | 1 | 0 | 21.83 | 21.80 | 21.17 | 22 | 2 |
| 1.4 | 64QAM | 1 | 3 | 21.83 | 21.87 | 21.31 | | |
| 1.4 | 64QAM | 1 | 5 | 21.72 | 21.77 | 21.25 | | |
| 1.4 | 64QAM | 3 | 0 | 21.74 | 21.75 | 21.14 | | |
| 1.4 | 64QAM | 3 | 1 | 21.78 | 21.80 | 21.28 | | |
| 1.4 | 64QAM | 3 | 3 | 21.71 | 21.79 | 21.24 | | |
| 1.4 | 64QAM | 6 | 0 | 20.63 | 20.63 | 20.12 | 21 | 3 |

**<LTE Band 7>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20850 | 21100 | 21350 | | |
| Frequency (MHz) | | | | 2510 | 2535 | 2560 | | |
| 20 | QPSK | 1 | 0 | 23.79 | 23.88 | 23.75 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.87 | 23.84 | 23.46 | | |
| 20 | QPSK | 1 | 99 | 23.78 | 23.76 | 23.62 | | |
| 20 | QPSK | 50 | 0 | 22.91 | 22.86 | 22.87 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.93 | 22.90 | 22.61 | | |
| 20 | QPSK | 50 | 50 | 22.92 | 22.90 | 22.50 | | |
| 20 | QPSK | 100 | 0 | 22.92 | 22.88 | 22.62 | | |
| 20 | 16QAM | 1 | 0 | 22.86 | 22.81 | 22.80 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.75 | 22.76 | 22.73 | | |
| 20 | 16QAM | 1 | 99 | 22.78 | 22.70 | 22.92 | | |
| 20 | 16QAM | 50 | 0 | 21.99 | 21.90 | 21.90 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 21.93 | 21.94 | 21.75 | | |
| 20 | 16QAM | 50 | 50 | 21.94 | 21.94 | 21.59 | | |
| 20 | 16QAM | 100 | 0 | 21.91 | 21.89 | 21.85 | | |
| 20 | 64QAM | 1 | 0 | 21.62 | 22.00 | 21.97 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.75 | 21.75 | 20.89 | | |
| 20 | 64QAM | 1 | 99 | 21.74 | 21.76 | 20.98 | | |
| 20 | 64QAM | 50 | 0 | 20.61 | 20.70 | 20.32 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 20.95 | 20.97 | 19.83 | | |
| 20 | 64QAM | 50 | 50 | 20.95 | 20.97 | 19.63 | | |
| 20 | 64QAM | 100 | 0 | 20.94 | 20.94 | 19.94 | | |
| Channel | | | | 20825 | 21100 | 21375 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2507.5 | 2535 | 2562.5 | | |
| 15 | QPSK | 1 | 0 | 23.81 | 23.78 | 23.73 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.83 | 23.82 | 23.12 | | |
| 15 | QPSK | 1 | 74 | 23.52 | 23.55 | 23.48 | | |
| 15 | QPSK | 36 | 0 | 22.97 | 22.87 | 22.58 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.81 | 22.89 | 22.39 | | |
| 15 | QPSK | 36 | 39 | 23.00 | 23.00 | 22.50 | | |
| 15 | QPSK | 75 | 0 | 22.96 | 22.89 | 22.41 | | |
| 15 | 16QAM | 1 | 0 | 22.71 | 22.71 | 22.77 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.79 | 22.76 | 22.42 | | |
| 15 | 16QAM | 1 | 74 | 22.73 | 22.71 | 22.78 | | |
| 15 | 16QAM | 36 | 0 | 21.96 | 21.89 | 21.72 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.91 | 21.91 | 21.52 | | |
| 15 | 16QAM | 36 | 39 | 21.91 | 21.99 | 21.60 | | |
| 15 | 16QAM | 75 | 0 | 21.99 | 21.90 | 21.63 | | |
| 15 | 64QAM | 1 | 0 | 21.73 | 21.97 | 21.41 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.92 | 21.86 | 20.62 | | |
| 15 | 64QAM | 1 | 74 | 21.82 | 21.85 | 20.79 | | |
| 15 | 64QAM | 36 | 0 | 20.97 | 20.77 | 19.86 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.93 | 20.96 | 19.62 | | |
| 15 | 64QAM | 36 | 39 | 20.85 | 20.82 | 19.68 | | |
| 15 | 64QAM | 75 | 0 | 20.99 | 20.92 | 19.72 | | |
| Channel | | | | 20800 | 21100 | 21400 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2505 | 2535 | 2565 | | |
| 10 | QPSK | 1 | 0 | 23.55 | 23.54 | 23.43 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.54 | 23.55 | 23.32 | | |
| 10 | QPSK | 1 | 49 | 23.63 | 23.58 | 23.47 | | |
| 10 | QPSK | 25 | 0 | 22.72 | 22.62 | 22.41 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.77 | 22.74 | 22.47 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 22.75 | 22.76 | 22.62 | | |
| 10 | QPSK | 50 | 0 | 22.76 | 22.68 | 22.43 | | |
| 10 | 16QAM | 1 | 0 | 22.94 | 22.90 | 22.83 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.96 | 22.93 | 22.70 | | |
| 10 | 16QAM | 1 | 49 | 22.99 | 22.99 | 22.88 | | |
| 10 | 16QAM | 25 | 0 | 21.70 | 21.66 | 21.49 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.75 | 21.74 | 21.56 | | |
| 10 | 16QAM | 25 | 25 | 21.76 | 21.75 | 21.65 | | |
| 10 | 16QAM | 50 | 0 | 21.76 | 21.68 | 21.53 | | |
| 10 | 64QAM | 1 | 0 | 21.79 | 21.73 | 20.88 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.88 | 21.87 | 20.64 | | |
| 10 | 64QAM | 1 | 49 | 21.89 | 21.86 | 20.91 | | |
| 10 | 64QAM | 25 | 0 | 20.76 | 20.69 | 19.60 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 20.78 | 20.79 | 19.56 | | |
| 10 | 64QAM | 25 | 25 | 20.77 | 20.77 | 19.68 | | |
| 10 | 64QAM | 50 | 0 | 20.78 | 20.71 | 19.54 | | |
| Channel | | | | 20775 | 21100 | 21425 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2502.5 | 2535 | 2567.5 | | |
| 5 | QPSK | 1 | 0 | 23.61 | 23.57 | 23.40 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.64 | 23.58 | 23.47 | | |
| 5 | QPSK | 1 | 24 | 23.63 | 23.61 | 23.46 | | |
| 5 | QPSK | 12 | 0 | 22.72 | 22.70 | 22.56 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.72 | 22.73 | 22.60 | | |
| 5 | QPSK | 12 | 13 | 22.73 | 22.72 | 22.61 | | |
| 5 | QPSK | 25 | 0 | 22.69 | 22.71 | 22.54 | | |
| 5 | 16QAM | 1 | 0 | 22.89 | 22.91 | 22.67 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.95 | 22.93 | 22.75 | | |
| 5 | 16QAM | 1 | 24 | 22.96 | 22.95 | 22.83 | | |
| 5 | 16QAM | 12 | 0 | 21.75 | 21.73 | 21.61 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.75 | 21.75 | 21.66 | | |
| 5 | 16QAM | 12 | 13 | 21.75 | 21.75 | 21.65 | | |
| 5 | 16QAM | 25 | 0 | 21.75 | 21.73 | 21.64 | | |
| 5 | 64QAM | 1 | 0 | 21.67 | 21.85 | 20.79 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.84 | 21.82 | 20.86 | | |
| 5 | 64QAM | 1 | 24 | 21.90 | 21.88 | 21.09 | | |
| 5 | 64QAM | 12 | 0 | 20.76 | 20.78 | 19.74 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.81 | 20.74 | 19.87 | | |
| 5 | 64QAM | 12 | 13 | 20.79 | 20.79 | 19.92 | | |
| 5 | 64QAM | 25 | 0 | 20.74 | 20.73 | 19.70 | | |

**<LTE Band 12>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 23060 | 23095 | 23130 | | |
| Frequency (MHz) | | | | 704 | 707.5 | 711 | | |
| 10 | QPSK | 1 | 0 | 23.51 | 23.58 | 23.41 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.50 | 23.40 | 23.39 | | |
| 10 | QPSK | 1 | 49 | 23.57 | 23.43 | 23.40 | | |
| 10 | QPSK | 25 | 0 | 22.64 | 22.49 | 22.50 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.71 | 22.51 | 22.59 | | |
| 10 | QPSK | 25 | 25 | 22.69 | 22.57 | 22.59 | | |
| 10 | QPSK | 50 | 0 | 22.71 | 22.52 | 22.60 | | |
| 10 | 16QAM | 1 | 0 | 22.86 | 22.72 | 22.80 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.89 | 22.75 | 22.78 | | |
| 10 | 16QAM | 1 | 49 | 22.89 | 22.80 | 22.79 | | |
| 10 | 16QAM | 25 | 0 | 21.52 | 21.52 | 21.50 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.60 | 21.51 | 21.58 | | |
| 10 | 16QAM | 25 | 25 | 21.56 | 21.57 | 21.60 | | |
| 10 | 16QAM | 50 | 0 | 21.62 | 21.52 | 21.57 | | |
| 10 | 64QAM | 1 | 0 | 21.62 | 21.54 | 21.64 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.23 | 21.68 | 21.74 | | |
| 10 | 64QAM | 1 | 49 | 21.54 | 21.69 | 21.65 | | |
| 10 | 64QAM | 25 | 0 | 20.35 | 20.52 | 20.51 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 20.60 | 20.57 | 20.64 | | |
| 10 | 64QAM | 25 | 25 | 20.60 | 20.61 | 20.61 | | |
| 10 | 64QAM | 50 | 0 | 20.63 | 20.57 | 20.61 | | |
| Channel | | | | 23035 | 23095 | 23155 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 701.5 | 707.5 | 713.5 | | |
| 5 | QPSK | 1 | 0 | 23.56 | 23.43 | 23.40 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.36 | 23.48 | 23.43 | | |
| 5 | QPSK | 1 | 24 | 23.31 | 23.44 | 23.45 | | |
| 5 | QPSK | 12 | 0 | 22.48 | 22.53 | 22.51 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.67 | 22.57 | 22.54 | | |
| 5 | QPSK | 12 | 13 | 22.64 | 22.52 | 22.51 | | |
| 5 | QPSK | 25 | 0 | 22.51 | 22.50 | 22.50 | | |
| 5 | 16QAM | 1 | 0 | 22.68 | 22.80 | 22.70 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.70 | 22.79 | 22.71 | | |
| 5 | 16QAM | 1 | 24 | 22.61 | 22.75 | 22.70 | | |
| 5 | 16QAM | 12 | 0 | 21.56 | 21.58 | 21.53 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.61 | 21.63 | 21.57 | | |
| 5 | 16QAM | 12 | 13 | 21.58 | 21.53 | 21.52 | | |
| 5 | 16QAM | 25 | 0 | 21.58 | 21.51 | 21.49 | | |
| 5 | 64QAM | 1 | 0 | 21.06 | 21.69 | 21.64 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.08 | 21.69 | 21.62 | | |
| 5 | 64QAM | 1 | 24 | 21.00 | 21.69 | 21.58 | | |
| 5 | 64QAM | 12 | 0 | 20.02 | 20.62 | 20.60 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.08 | 20.66 | 20.61 | | |
| 5 | 64QAM | 12 | 13 | 20.15 | 20.60 | 20.44 | | |
| 5 | 64QAM | 25 | 0 | 20.04 | 20.55 | 20.53 | | |
| Channel | | | | 23025 | 23095 | 23165 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 700.5 | 707.5 | 714.5 | | |
| 3 | QPSK | 1 | 0 | 23.17 | 23.23 | 23.26 | 24 | 0 |
| 3 | QPSK | 1 | 8 | 23.28 | 23.34 | 23.31 | | |
| 3 | QPSK | 1 | 14 | 23.11 | 23.27 | 23.23 | | |
| 3 | QPSK | 8 | 0 | 22.25 | 22.36 | 22.33 | 23 | 1 |
| 3 | QPSK | 8 | 4 | 22.39 | 22.42 | 22.36 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | QPSK | 8 | 7 | 22.27 | 22.37 | 22.31 | | |
| 3 | QPSK | 15 | 0 | 22.26 | 22.35 | 22.31 | | |
| 3 | 16QAM | 1 | 0 | 22.48 | 22.57 | 22.61 | 23 | 1 |
| 3 | 16QAM | 1 | 8 | 22.50 | 22.65 | 22.62 | | |
| 3 | 16QAM | 1 | 14 | 22.45 | 22.59 | 22.55 | | |
| 3 | 16QAM | 8 | 0 | 21.44 | 21.40 | 21.35 | 22 | 2 |
| 3 | 16QAM | 8 | 4 | 21.44 | 21.47 | 21.43 | | |
| 3 | 16QAM | 8 | 7 | 21.44 | 21.42 | 21.39 | | |
| 3 | 16QAM | 15 | 0 | 21.35 | 21.37 | 21.32 | | |
| 3 | 64QAM | 1 | 0 | 20.95 | 21.52 | 21.19 | 22 | 2 |
| 3 | 64QAM | 1 | 8 | 21.01 | 21.61 | 21.13 | | |
| 3 | 64QAM | 1 | 14 | 20.89 | 21.52 | 20.97 | | |
| 3 | 64QAM | 8 | 0 | 19.90 | 20.43 | 20.10 | 21 | 3 |
| 3 | 64QAM | 8 | 4 | 19.94 | 20.49 | 20.07 | | |
| 3 | 64QAM | 8 | 7 | 19.90 | 20.44 | 19.94 | | |
| 3 | 64QAM | 15 | 0 | 19.87 | 20.38 | 19.98 | | |
| Channel | | | | 23017 | 23095 | 23173 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 699.7 | 707.5 | 715.3 | | |
| 1.4 | QPSK | 1 | 0 | 22.95 | 23.17 | 23.17 | 24 | 0 |
| 1.4 | QPSK | 1 | 3 | 22.98 | 23.25 | 23.22 | | |
| 1.4 | QPSK | 1 | 5 | 22.93 | 23.16 | 23.07 | | |
| 1.4 | QPSK | 3 | 0 | 23.07 | 23.18 | 23.16 | | |
| 1.4 | QPSK | 3 | 1 | 23.11 | 23.17 | 23.19 | | |
| 1.4 | QPSK | 3 | 3 | 23.02 | 23.21 | 23.15 | | |
| 1.4 | QPSK | 6 | 0 | 22.12 | 22.24 | 22.25 | 23 | 1 |
| 1.4 | 16QAM | 1 | 0 | 22.31 | 22.44 | 22.48 | 23 | 1 |
| 1.4 | 16QAM | 1 | 3 | 22.40 | 22.57 | 22.57 | | |
| 1.4 | 16QAM | 1 | 5 | 22.36 | 22.50 | 22.41 | | |
| 1.4 | 16QAM | 3 | 0 | 21.99 | 22.27 | 22.24 | | |
| 1.4 | 16QAM | 3 | 1 | 22.19 | 22.31 | 22.28 | | |
| 1.4 | 16QAM | 3 | 3 | 22.18 | 22.28 | 22.20 | | |
| 1.4 | 16QAM | 6 | 0 | 21.23 | 21.34 | 21.33 | 22 | 2 |
| 1.4 | 64QAM | 1 | 0 | 20.82 | 21.45 | 20.92 | 22 | 2 |
| 1.4 | 64QAM | 1 | 3 | 20.86 | 21.49 | 20.91 | | |
| 1.4 | 64QAM | 1 | 5 | 20.81 | 21.41 | 20.80 | | |
| 1.4 | 64QAM | 3 | 0 | 20.79 | 21.37 | 21.00 | | |
| 1.4 | 64QAM | 3 | 1 | 20.82 | 21.42 | 20.97 | | |
| 1.4 | 64QAM | 3 | 3 | 20.81 | 21.42 | 20.96 | | |
| 1.4 | 64QAM | 6 | 0 | 19.72 | 20.23 | 19.87 | 21 | 3 |

**<LTE Band 13>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 23230 | | | |
| Frequency (MHz) | | | | | 782 | | | |
| 10 | QPSK | 1 | 0 | | 23.60 | | 24 | 0 |
| 10 | QPSK | 1 | 25 | | 23.49 | | | |
| 10 | QPSK | 1 | 49 | | 23.56 | | | |
| 10 | QPSK | 25 | 0 | | 22.14 | | 23 | 1 |
| 10 | QPSK | 25 | 12 | | 21.89 | | | |
| 10 | QPSK | 25 | 25 | | 21.66 | | | |
| 10 | QPSK | 50 | 0 | | 21.57 | | | |
| 10 | 16QAM | 1 | 0 | | 22.80 | | 23 | 1 |
| 10 | 16QAM | 1 | 25 | | 22.78 | | | |
| 10 | 16QAM | 1 | 49 | | 22.79 | | | |
| 10 | 16QAM | 25 | 0 | | 21.42 | | 22 | 2 |
| 10 | 16QAM | 25 | 12 | | 21.51 | | | |
| 10 | 16QAM | 25 | 25 | | 21.57 | | | |
| 10 | 16QAM | 50 | 0 | | 21.47 | | | |
| 10 | 64QAM | 1 | 0 | | 21.61 | | 22 | 2 |
| 10 | 64QAM | 1 | 25 | | 21.70 | | | |
| 10 | 64QAM | 1 | 49 | | 21.65 | | | |
| 10 | 64QAM | 25 | 0 | | 20.24 | | 21 | 3 |
| 10 | 64QAM | 25 | 12 | | 20.59 | | | |
| 10 | 64QAM | 25 | 25 | | 20.56 | | | |
| 10 | 64QAM | 50 | 0 | | 20.22 | | | |
| Channel | | | | 23205 | 23230 | 23255 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 779.5 | 782 | 784.5 | | |
| 5 | QPSK | 1 | 0 | 22.91 | 23.24 | 23.55 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.10 | 22.57 | 23.59 | | |
| 5 | QPSK | 1 | 24 | 22.65 | 23.21 | 23.55 | | |
| 5 | QPSK | 12 | 0 | 22.56 | 22.53 | 22.16 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.61 | 22.58 | 22.29 | | |
| 5 | QPSK | 12 | 13 | 22.47 | 22.51 | 22.16 | | |
| 5 | QPSK | 25 | 0 | 22.58 | 22.56 | 22.09 | | |
| 5 | 16QAM | 1 | 0 | 21.87 | 21.87 | 21.86 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 21.81 | 21.88 | 21.86 | | |
| 5 | 16QAM | 1 | 24 | 21.85 | 21.82 | 21.67 | | |
| 5 | 16QAM | 12 | 0 | 21.39 | 21.34 | 21.22 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.27 | 21.04 | 20.58 | | |
| 5 | 16QAM | 12 | 13 | 21.58 | 21.51 | 20.86 | | |
| 5 | 16QAM | 25 | 0 | 21.48 | 21.43 | 21.40 | | |
| 5 | 64QAM | 1 | 0 | 21.41 | 21.27 | 21.47 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.44 | 21.42 | 21.39 | | |
| 5 | 64QAM | 1 | 24 | 21.41 | 21.36 | 20.88 | | |
| 5 | 64QAM | 12 | 0 | 20.43 | 20.40 | 20.38 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.58 | 20.49 | 20.20 | | |
| 5 | 64QAM | 12 | 13 | 20.57 | 20.49 | 20.03 | | |
| 5 | 64QAM | 25 | 0 | 20.53 | 20.41 | 20.26 | | |

**<LTE Band 14>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 23330 | | | |
| Frequency (MHz) | | | | | 793 | | | |
| 10 | QPSK | 1 | 0 | | 23.52 | | 24 | 0 |
| 10 | QPSK | 1 | 25 | | 23.42 | | | |
| 10 | QPSK | 1 | 49 | | 23.36 | | | |
| 10 | QPSK | 25 | 0 | | 22.45 | | 23 | 1 |
| 10 | QPSK | 25 | 12 | | 22.49 | | | |
| 10 | QPSK | 25 | 25 | | 22.53 | | | |
| 10 | QPSK | 50 | 0 | | 22.49 | | | |
| 10 | 16QAM | 1 | 0 | | 22.82 | | 23 | 1 |
| 10 | 16QAM | 1 | 25 | | 22.84 | | | |
| 10 | 16QAM | 1 | 49 | | 22.77 | | | |
| 10 | 16QAM | 25 | 0 | | 21.45 | | 22 | 2 |
| 10 | 16QAM | 25 | 12 | | 21.47 | | | |
| 10 | 16QAM | 25 | 25 | | 21.53 | | | |
| 10 | 16QAM | 50 | 0 | | 21.47 | | | |
| 10 | 64QAM | 1 | 0 | | 21.64 | | 22 | 2 |
| 10 | 64QAM | 1 | 25 | | 21.75 | | | |
| 10 | 64QAM | 1 | 49 | | 21.67 | | | |
| 10 | 64QAM | 25 | 0 | | 20.50 | | 21 | 3 |
| 10 | 64QAM | 25 | 12 | | 20.51 | | | |
| 10 | 64QAM | 25 | 25 | | 20.56 | | | |
| 10 | 64QAM | 50 | 0 | | 20.51 | | | |
| Channel | | | | 23305 | 23330 | 23355 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 790.5 | 793 | 795.5 | | |
| 5 | QPSK | 1 | 0 | 23.38 | 23.36 | 23.37 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.48 | 23.49 | 23.51 | | |
| 5 | QPSK | 1 | 24 | 23.43 | 23.41 | 23.39 | | |
| 5 | QPSK | 12 | 0 | 22.41 | 22.45 | 22.44 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.51 | 22.50 | 22.51 | | |
| 5 | QPSK | 12 | 13 | 22.50 | 22.49 | 22.48 | | |
| 5 | QPSK | 25 | 0 | 22.47 | 22.44 | 22.41 | | |
| 5 | 16QAM | 1 | 0 | 22.71 | 22.72 | 22.72 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.78 | 22.82 | 22.80 | | |
| 5 | 16QAM | 1 | 24 | 22.81 | 22.76 | 22.72 | | |
| 5 | 16QAM | 12 | 0 | 21.46 | 21.51 | 21.49 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.56 | 21.53 | 21.57 | | |
| 5 | 16QAM | 12 | 13 | 21.52 | 21.52 | 21.47 | | |
| 5 | 16QAM | 25 | 0 | 21.50 | 21.48 | 21.43 | | |
| 5 | 64QAM | 1 | 0 | 21.64 | 21.63 | 21.68 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.72 | 21.75 | 21.68 | | |
| 5 | 64QAM | 1 | 24 | 21.74 | 21.69 | 21.65 | | |
| 5 | 64QAM | 12 | 0 | 20.53 | 20.55 | 20.51 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.62 | 20.58 | 20.62 | | |
| 5 | 64QAM | 12 | 13 | 20.54 | 20.56 | 20.53 | | |
| 5 | 64QAM | 25 | 0 | 20.51 | 20.49 | 20.44 | | |

**<LTE Band 17>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 23780 | 23790 | 23800 | | |
| Frequency (MHz) | | | | 709 | 710 | 711 | | |
| 10 | QPSK | 1 | 0 | 23.37 | 23.49 | 23.31 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.36 | 23.38 | 23.36 | | |
| 10 | QPSK | 1 | 49 | 23.38 | 23.39 | 23.38 | | |
| 10 | QPSK | 25 | 0 | 22.40 | 22.41 | 22.43 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.58 | 22.51 | 22.50 | | |
| 10 | QPSK | 25 | 25 | 22.59 | 22.59 | 22.56 | | |
| 10 | QPSK | 50 | 0 | 22.50 | 22.49 | 22.46 | | |
| 10 | 16QAM | 1 | 0 | 22.74 | 22.68 | 22.71 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.77 | 22.73 | 22.76 | | |
| 10 | 16QAM | 1 | 49 | 22.77 | 22.78 | 22.73 | | |
| 10 | 16QAM | 25 | 0 | 21.43 | 21.42 | 21.42 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.61 | 21.51 | 21.49 | | |
| 10 | 16QAM | 25 | 25 | 21.51 | 21.57 | 21.52 | | |
| 10 | 16QAM | 50 | 0 | 21.47 | 21.47 | 21.46 | | |
| 10 | 64QAM | 1 | 0 | 21.61 | 21.61 | 21.53 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.69 | 21.70 | 21.70 | | |
| 10 | 64QAM | 1 | 49 | 21.65 | 21.65 | 21.65 | | |
| 10 | 64QAM | 25 | 0 | 20.45 | 20.46 | 20.44 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 20.60 | 20.53 | 20.52 | | |
| 10 | 64QAM | 25 | 25 | 20.62 | 20.64 | 20.58 | | |
| 10 | 64QAM | 50 | 0 | 20.52 | 20.46 | 20.49 | | |
| Channel | | | | 23755 | 23790 | 23825 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 706.5 | 710 | 713.5 | | |
| 5 | QPSK | 1 | 0 | 23.34 | 23.35 | 23.36 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.44 | 23.48 | 23.42 | | |
| 5 | QPSK | 1 | 24 | 23.46 | 23.44 | 23.39 | | |
| 5 | QPSK | 12 | 0 | 22.49 | 22.48 | 22.42 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.53 | 22.50 | 22.52 | | |
| 5 | QPSK | 12 | 13 | 22.55 | 22.52 | 22.47 | | |
| 5 | QPSK | 25 | 0 | 22.51 | 22.50 | 22.52 | | |
| 5 | 16QAM | 1 | 0 | 22.69 | 22.70 | 22.71 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.76 | 22.76 | 22.70 | | |
| 5 | 16QAM | 1 | 24 | 22.83 | 22.77 | 22.73 | | |
| 5 | 16QAM | 12 | 0 | 21.50 | 21.49 | 21.47 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.61 | 21.51 | 21.52 | | |
| 5 | 16QAM | 12 | 13 | 21.57 | 21.55 | 21.51 | | |
| 5 | 16QAM | 25 | 0 | 21.56 | 21.47 | 21.50 | | |
| 5 | 64QAM | 1 | 0 | 21.46 | 21.60 | 21.61 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.67 | 21.68 | 21.59 | | |
| 5 | 64QAM | 1 | 24 | 21.76 | 21.66 | 21.33 | | |
| 5 | 64QAM | 12 | 0 | 20.57 | 20.56 | 20.51 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.62 | 20.56 | 20.35 | | |
| 5 | 64QAM | 12 | 13 | 20.62 | 20.59 | 20.25 | | |
| 5 | 64QAM | 25 | 0 | 20.56 | 20.53 | 20.40 | | |

**<LTE Band 25>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 26140 | 26340 | 26590 | | |
| Frequency (MHz) | | | | 1860 | 1880 | 1905 | | |
| 20 | QPSK | 1 | 0 | 23.53 | 23.46 | 22.77 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.43 | 23.44 | 22.87 | | |
| 20 | QPSK | 1 | 99 | 23.34 | 23.32 | 22.50 | | |
| 20 | QPSK | 50 | 0 | 22.56 | 22.52 | 21.98 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.62 | 22.60 | 22.16 | | |
| 20 | QPSK | 50 | 50 | 22.36 | 22.53 | 22.28 | | |
| 20 | QPSK | 100 | 0 | 22.61 | 22.55 | 21.92 | | |
| 20 | 16QAM | 1 | 0 | 22.87 | 22.80 | 22.25 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.77 | 22.76 | 22.31 | | |
| 20 | 16QAM | 1 | 99 | 22.70 | 22.68 | 21.81 | | |
| 20 | 16QAM | 50 | 0 | 21.59 | 21.56 | 21.10 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 21.63 | 21.59 | 21.20 | | |
| 20 | 16QAM | 50 | 50 | 21.56 | 21.55 | 21.20 | | |
| 20 | 16QAM | 100 | 0 | 21.62 | 21.55 | 20.86 | | |
| 20 | 64QAM | 1 | 0 | 21.28 | 21.09 | 20.56 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.29 | 21.48 | 20.51 | | |
| 20 | 64QAM | 1 | 99 | 20.88 | 21.58 | 20.54 | | |
| 20 | 64QAM | 50 | 0 | 20.60 | 20.24 | 19.66 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 20.29 | 20.59 | 19.62 | | |
| 20 | 64QAM | 50 | 50 | 19.83 | 20.56 | 19.56 | | |
| 20 | 64QAM | 100 | 0 | 20.02 | 20.22 | 19.09 | | |
| Channel | | | | 26115 | 26340 | 26615 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1857.5 | 1880 | 1907.5 | | |
| 15 | QPSK | 1 | 0 | 23.51 | 23.41 | 22.79 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.47 | 23.41 | 23.19 | | |
| 15 | QPSK | 1 | 74 | 23.32 | 23.40 | 22.56 | | |
| 15 | QPSK | 36 | 0 | 22.56 | 22.53 | 22.16 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.61 | 22.58 | 22.29 | | |
| 15 | QPSK | 36 | 39 | 22.47 | 22.51 | 22.16 | | |
| 15 | QPSK | 75 | 0 | 22.58 | 22.56 | 22.09 | | |
| 15 | 16QAM | 1 | 0 | 22.78 | 22.74 | 22.15 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.77 | 22.73 | 22.58 | | |
| 15 | 16QAM | 1 | 74 | 22.69 | 22.66 | 21.74 | | |
| 15 | 16QAM | 36 | 0 | 21.58 | 21.53 | 21.29 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.60 | 21.58 | 21.42 | | |
| 15 | 16QAM | 36 | 39 | 21.54 | 21.53 | 21.22 | | |
| 15 | 16QAM | 75 | 0 | 21.61 | 21.57 | 21.07 | | |
| 15 | 64QAM | 1 | 0 | 21.15 | 21.20 | 20.51 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.48 | 21.36 | 20.74 | | |
| 15 | 64QAM | 1 | 74 | 21.00 | 21.54 | 20.60 | | |
| 15 | 64QAM | 36 | 0 | 20.48 | 20.25 | 19.61 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.48 | 20.41 | 19.81 | | |
| 15 | 64QAM | 36 | 39 | 20.19 | 20.49 | 19.53 | | |
| 15 | 64QAM | 75 | 0 | 20.23 | 20.29 | 19.80 | | |
| Channel | | | | 26090 | 26340 | 26640 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1855 | 1880 | 1910 | | |
| 10 | QPSK | 1 | 0 | 23.33 | 23.28 | 23.29 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.22 | 23.17 | 23.31 | | |
| 10 | QPSK | 1 | 49 | 23.20 | 23.19 | 22.52 | | |
| 10 | QPSK | 25 | 0 | 22.37 | 22.24 | 22.31 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.39 | 22.35 | 22.33 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 22.37 | 22.31 | 21.91 | | |
| 10 | QPSK | 50 | 0 | 22.39 | 22.35 | 22.29 | | |
| 10 | 16QAM | 1 | 0 | 22.68 | 22.56 | 22.61 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.59 | 22.56 | 22.65 | | |
| 10 | 16QAM | 1 | 49 | 22.58 | 22.55 | 21.85 | | |
| 10 | 16QAM | 25 | 0 | 21.37 | 21.27 | 21.26 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.41 | 21.38 | 21.35 | | |
| 10 | 16QAM | 25 | 25 | 21.35 | 21.32 | 21.17 | | |
| 10 | 16QAM | 50 | 0 | 21.39 | 21.34 | 21.22 | | |
| 10 | 64QAM | 1 | 0 | 21.27 | 21.04 | 20.58 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.58 | 21.51 | 20.86 | | |
| 10 | 64QAM | 1 | 49 | 21.48 | 21.43 | 20.67 | | |
| 10 | 64QAM | 25 | 0 | 20.41 | 20.27 | 19.89 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 20.44 | 20.41 | 19.82 | | |
| 10 | 64QAM | 25 | 25 | 20.41 | 20.36 | 19.38 | | |
| 10 | 64QAM | 50 | 0 | 20.43 | 20.40 | 19.38 | | |
| Channel | | | | 26065 | 26340 | 26665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1852.5 | 1880 | 1912.5 | | |
| 5 | QPSK | 1 | 0 | 23.27 | 23.19 | 23.10 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.33 | 23.30 | 22.84 | | |
| 5 | QPSK | 1 | 24 | 23.27 | 23.23 | 22.70 | | |
| 5 | QPSK | 12 | 0 | 22.33 | 22.27 | 22.07 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.40 | 22.34 | 21.93 | | |
| 5 | QPSK | 12 | 13 | 22.40 | 22.36 | 21.59 | | |
| 5 | QPSK | 25 | 0 | 22.35 | 22.29 | 21.86 | | |
| 5 | 16QAM | 1 | 0 | 22.60 | 22.49 | 22.37 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.59 | 22.57 | 22.20 | | |
| 5 | 16QAM | 1 | 24 | 22.60 | 22.58 | 21.73 | | |
| 5 | 16QAM | 12 | 0 | 21.36 | 21.30 | 21.16 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.40 | 21.39 | 21.06 | | |
| 5 | 16QAM | 12 | 13 | 21.39 | 21.35 | 20.80 | | |
| 5 | 16QAM | 25 | 0 | 21.36 | 21.34 | 20.97 | | |
| 5 | 64QAM | 1 | 0 | 21.54 | 21.36 | 20.67 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.50 | 21.46 | 20.52 | | |
| 5 | 64QAM | 1 | 24 | 21.50 | 21.46 | 21.44 | | |
| 5 | 64QAM | 12 | 0 | 20.41 | 20.37 | 19.69 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.46 | 20.43 | 19.43 | | |
| 5 | 64QAM | 12 | 13 | 20.46 | 20.42 | 19.08 | | |
| 5 | 64QAM | 25 | 0 | 20.38 | 20.36 | 19.23 | | |
| Channel | | | | 26055 | 26340 | 26675 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1851.5 | 1880 | 1913.5 | | |
| 3 | QPSK | 1 | 0 | 23.34 | 23.22 | 22.76 | 24 | 0 |
| 3 | QPSK | 1 | 8 | 23.49 | 23.42 | 22.67 | | |
| 3 | QPSK | 1 | 14 | 23.44 | 23.43 | 22.54 | | |
| 3 | QPSK | 8 | 0 | 22.46 | 22.40 | 21.80 | 23 | 1 |
| 3 | QPSK | 8 | 4 | 22.50 | 22.46 | 21.75 | | |
| 3 | QPSK | 8 | 7 | 22.52 | 22.50 | 21.58 | | |
| 3 | QPSK | 15 | 0 | 22.49 | 22.45 | 21.67 | | |
| 3 | 16QAM | 1 | 0 | 22.70 | 22.54 | 22.00 | 23 | 1 |
| 3 | 16QAM | 1 | 8 | 22.79 | 22.78 | 21.95 | | |
| 3 | 16QAM | 1 | 14 | 22.79 | 22.76 | 21.66 | | |
| 3 | 16QAM | 8 | 0 | 21.52 | 21.44 | 20.90 | 22 | 2 |
| 3 | 16QAM | 8 | 4 | 21.56 | 21.55 | 20.85 | | |
| 3 | 16QAM | 8 | 7 | 21.62 | 21.50 | 20.77 | | |
| 3 | 16QAM | 15 | 0 | 21.54 | 21.46 | 20.80 | | |
| 3 | 64QAM | 1 | 0 | 21.58 | 21.27 | 20.56 | 22 | 2 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 21.71 | 21.53 | 20.51 | | |
| 3 | 64QAM | 1 | 14 | 21.66 | 21.58 | 21.32 | | |
| 3 | 64QAM | 8 | 0 | 20.51 | 20.47 | 19.60 | 21 | 3 |
| 3 | 64QAM | 8 | 4 | 20.58 | 20.49 | 19.20 | | |
| 3 | 64QAM | 8 | 7 | 20.57 | 20.49 | 19.03 | | |
| 3 | 64QAM | 15 | 0 | 20.53 | 20.41 | 19.16 | | |
| Channel | | | | 26047 | 26340 | 26683 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1850.7 | 1880 | 1914.3 | | |
| 1.4 | QPSK | 1 | 0 | 23.32 | 23.23 | 22.54 | 24 | 0 |
| 1.4 | QPSK | 1 | 3 | 23.40 | 23.33 | 22.56 | | |
| 1.4 | QPSK | 1 | 5 | 23.37 | 23.32 | 22.50 | | |
| 1.4 | QPSK | 3 | 0 | 23.35 | 23.30 | 22.60 | | |
| 1.4 | QPSK | 3 | 1 | 23.41 | 23.34 | 22.61 | | |
| 1.4 | QPSK | 3 | 3 | 23.37 | 23.33 | 22.53 | | |
| 1.4 | QPSK | 6 | 0 | 22.42 | 22.37 | 21.51 | 23 | 1 |
| 1.4 | 16QAM | 1 | 0 | 22.64 | 22.55 | 21.78 | 23 | 1 |
| 1.4 | 16QAM | 1 | 3 | 22.71 | 22.67 | 21.71 | | |
| 1.4 | 16QAM | 1 | 5 | 22.69 | 22.64 | 21.56 | | |
| 1.4 | 16QAM | 3 | 0 | 22.44 | 22.37 | 21.65 | | |
| 1.4 | 16QAM | 3 | 1 | 22.51 | 22.43 | 21.61 | | |
| 1.4 | 16QAM | 3 | 3 | 22.44 | 22.41 | 21.54 | | |
| 1.4 | 16QAM | 6 | 0 | 21.50 | 21.47 | 20.65 | 22 | 2 |
| 1.4 | 64QAM | 1 | 0 | 21.55 | 21.51 | 21.48 | 22 | 2 |
| 1.4 | 64QAM | 1 | 3 | 21.70 | 21.64 | 21.47 | | |
| 1.4 | 64QAM | 1 | 5 | 21.64 | 21.58 | 21.66 | | |
| 1.4 | 64QAM | 3 | 0 | 21.57 | 21.50 | 20.53 | | |
| 1.4 | 64QAM | 3 | 1 | 21.62 | 21.59 | 20.54 | | |
| 1.4 | 64QAM | 3 | 3 | 21.61 | 21.56 | 21.34 | | |
| 1.4 | 64QAM | 6 | 0 | 20.46 | 20.42 | 20.31 | 21 | 3 |

**<LTE Band 26>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 26765 | 26865 | 26965 | | |
| Frequency (MHz) | | | | 821.5 | 831.5 | 841.5 | | |
| 15 | QPSK | 1 | 0 | 23.86 | 23.88 | 23.85 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.79 | 23.83 | 23.79 | | |
| 15 | QPSK | 1 | 74 | 23.81 | 23.87 | 23.45 | | |
| 15 | QPSK | 36 | 0 | 22.80 | 22.96 | 22.94 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.96 | 22.93 | 22.91 | | |
| 15 | QPSK | 36 | 39 | 22.95 | 22.99 | 22.86 | | |
| 15 | QPSK | 75 | 0 | 22.96 | 22.91 | 22.92 | | |
| 15 | 16QAM | 1 | 0 | 22.84 | 22.86 | 22.84 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.86 | 22.82 | 22.83 | | |
| 15 | 16QAM | 1 | 74 | 22.81 | 22.73 | 22.74 | | |
| 15 | 16QAM | 36 | 0 | 21.89 | 21.94 | 21.96 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.96 | 21.93 | 21.92 | | |
| 15 | 16QAM | 36 | 39 | 21.96 | 21.97 | 21.94 | | |
| 15 | 16QAM | 75 | 0 | 21.97 | 21.94 | 21.96 | | |
| 15 | 64QAM | 1 | 0 | 21.27 | 21.98 | 21.97 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.70 | 21.97 | 21.78 | | |
| 15 | 64QAM | 1 | 74 | 22.00 | 21.75 | 20.66 | | |
| 15 | 64QAM | 36 | 0 | 19.97 | 20.98 | 21.00 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.58 | 20.96 | 20.92 | | |
| 15 | 64QAM | 36 | 39 | 20.99 | 20.81 | 20.32 | | |
| 15 | 64QAM | 75 | 0 | 20.60 | 20.94 | 20.63 | | |
| Channel | | | | 26740 | 26865 | 26990 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 819 | 831.5 | 844 | | |
| 10 | QPSK | 1 | 0 | 23.72 | 23.65 | 23.72 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.65 | 23.64 | 23.64 | | |
| 10 | QPSK | 1 | 49 | 23.67 | 23.71 | 23.48 | | |
| 10 | QPSK | 25 | 0 | 22.63 | 22.74 | 22.77 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.77 | 22.73 | 22.74 | | |
| 10 | QPSK | 25 | 25 | 22.70 | 22.77 | 22.73 | | |
| 10 | QPSK | 50 | 0 | 22.74 | 22.72 | 22.71 | | |
| 10 | 16QAM | 1 | 0 | 22.80 | 22.82 | 22.78 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.99 | 22.85 | 22.86 | | |
| 10 | 16QAM | 1 | 49 | 22.87 | 22.86 | 22.83 | | |
| 10 | 16QAM | 25 | 0 | 21.77 | 21.73 | 21.75 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.78 | 21.72 | 21.73 | | |
| 10 | 16QAM | 25 | 25 | 21.66 | 21.72 | 21.74 | | |
| 10 | 16QAM | 50 | 0 | 21.74 | 21.71 | 21.74 | | |
| 10 | 64QAM | 1 | 0 | 21.20 | 21.95 | 21.93 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.21 | 21.98 | 21.26 | | |
| 10 | 64QAM | 1 | 49 | 21.94 | 21.94 | 20.73 | | |
| 10 | 64QAM | 25 | 0 | 19.90 | 20.77 | 20.78 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 19.98 | 20.79 | 20.40 | | |
| 10 | 64QAM | 25 | 25 | 20.40 | 20.78 | 20.06 | | |
| 10 | 64QAM | 50 | 0 | 20.12 | 20.78 | 20.48 | | |
| Channel | | | | 26715 | 26865 | 27015 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 816.5 | 831.5 | 846.5 | | |
| 5 | QPSK | 1 | 0 | 23.80 | 23.68 | 23.58 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.58 | 23.72 | 23.35 | | |
| 5 | QPSK | 1 | 24 | 23.53 | 23.72 | 23.37 | | |
| 5 | QPSK | 12 | 0 | 22.81 | 22.78 | 22.54 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.70 | 22.81 | 22.45 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | QPSK | 12 | 13 | 22.63 | 22.75 | 22.45 | | |
| 5 | QPSK | 25 | 0 | 22.64 | 22.74 | 22.48 | | |
| 5 | 16QAM | 1 | 0 | 22.81 | 22.82 | 22.89 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.99 | 22.86 | 22.64 | | |
| 5 | 16QAM | 1 | 24 | 22.90 | 22.85 | 22.70 | | |
| 5 | 16QAM | 12 | 0 | 21.83 | 21.80 | 21.60 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.81 | 21.83 | 21.51 | | |
| 5 | 16QAM | 12 | 13 | 21.72 | 21.77 | 21.50 | | |
| 5 | 16QAM | 25 | 0 | 21.77 | 21.74 | 21.56 | | |
| 5 | 64QAM | 1 | 0 | 21.14 | 21.91 | 21.32 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.04 | 21.97 | 20.89 | | |
| 5 | 64QAM | 1 | 24 | 20.91 | 21.97 | 20.91 | | |
| 5 | 64QAM | 12 | 0 | 20.12 | 20.82 | 20.03 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 19.97 | 20.88 | 19.90 | | |
| 5 | 64QAM | 12 | 13 | 19.83 | 20.82 | 19.90 | | |
| 5 | 64QAM | 25 | 0 | 19.89 | 20.75 | 19.92 | | |
| Channel | | | | 26705 | 26865 | 27025 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 815.5 | 831.5 | 847.5 | | |
| 3 | QPSK | 1 | 0 | 23.65 | 23.50 | 23.35 | 24 | 0 |
| 3 | QPSK | 1 | 8 | 23.61 | 23.60 | 23.40 | | |
| 3 | QPSK | 1 | 14 | 23.31 | 23.55 | 23.41 | | |
| 3 | QPSK | 8 | 0 | 22.67 | 22.59 | 22.40 | 23 | 1 |
| 3 | QPSK | 8 | 4 | 22.65 | 22.64 | 22.55 | | |
| 3 | QPSK | 8 | 7 | 22.57 | 22.58 | 22.47 | | |
| 3 | QPSK | 15 | 0 | 22.61 | 22.54 | 22.42 | | |
| 3 | 16QAM | 1 | 0 | 22.89 | 22.83 | 22.74 | 23 | 1 |
| 3 | 16QAM | 1 | 8 | 22.91 | 22.94 | 22.72 | | |
| 3 | 16QAM | 1 | 14 | 22.65 | 22.88 | 22.63 | | |
| 3 | 16QAM | 8 | 0 | 21.69 | 21.64 | 21.53 | 22 | 2 |
| 3 | 16QAM | 8 | 4 | 21.67 | 21.69 | 21.55 | | |
| 3 | 16QAM | 8 | 7 | 21.63 | 21.65 | 21.56 | | |
| 3 | 16QAM | 15 | 0 | 21.63 | 21.58 | 21.50 | | |
| 3 | 64QAM | 1 | 0 | 21.01 | 21.75 | 20.76 | 22 | 2 |
| 3 | 64QAM | 1 | 8 | 21.01 | 21.87 | 20.81 | | |
| 3 | 64QAM | 1 | 14 | 20.81 | 21.83 | 20.80 | | |
| 3 | 64QAM | 8 | 0 | 19.94 | 20.63 | 19.65 | 21 | 3 |
| 3 | 64QAM | 8 | 4 | 19.90 | 20.73 | 19.71 | | |
| 3 | 64QAM | 8 | 7 | 19.83 | 20.66 | 19.81 | | |
| 3 | 64QAM | 15 | 0 | 19.82 | 20.60 | 19.71 | | |
| Channel | | | | 26697 | 26865 | 27033 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 814.7 | 831.5 | 848.3 | | |
| 1.4 | QPSK | 1 | 0 | 23.56 | 23.43 | 23.37 | 24 | 0 |
| 1.4 | QPSK | 1 | 3 | 23.58 | 23.50 | 23.39 | | |
| 1.4 | QPSK | 1 | 5 | 23.49 | 23.45 | 23.32 | | |
| 1.4 | QPSK | 3 | 0 | 23.54 | 23.45 | 23.41 | | |
| 1.4 | QPSK | 3 | 1 | 23.57 | 23.51 | 23.45 | | |
| 1.4 | QPSK | 3 | 3 | 23.53 | 23.46 | 23.39 | | |
| 1.4 | QPSK | 6 | 0 | 22.59 | 22.54 | 22.46 | 23 | 1 |
| 1.4 | 16QAM | 1 | 0 | 22.85 | 22.76 | 22.69 | 23 | 1 |
| 1.4 | 16QAM | 1 | 3 | 22.86 | 22.83 | 22.74 | | |
| 1.4 | 16QAM | 1 | 5 | 22.75 | 22.80 | 22.65 | | |
| 1.4 | 16QAM | 3 | 0 | 22.57 | 22.54 | 22.47 | | |
| 1.4 | 16QAM | 3 | 1 | 22.63 | 22.57 | 22.50 | | |
| 1.4 | 16QAM | 3 | 3 | 22.52 | 22.56 | 22.44 | | |
| 1.4 | 16QAM | 6 | 0 | 21.60 | 21.63 | 21.50 | 22 | 2 |
| 1.4 | 64QAM | 1 | 0 | 21.00 | 21.70 | 20.77 | 22 | 2 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1.4 | 64QAM | 1 | 3 | 21.06 | 21.81 | 20.87 | | |
| 1.4 | 64QAM | 1 | 5 | 20.92 | 21.70 | 20.86 | | |
| 1.4 | 64QAM | 3 | 0 | 21.09 | 21.71 | 20.75 | | |
| 1.4 | 64QAM | 3 | 1 | 21.16 | 21.72 | 20.87 | | |
| 1.4 | 64QAM | 3 | 3 | 21.00 | 21.67 | 20.86 | | |
| 1.4 | 64QAM | 6 | 0 | 19.99 | 20.56 | 19.73 | 21 | 3 |

**<LTE Band 30>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 27710 | | | |
| Frequency (MHz) | | | | | 2310 | | | |
| 10 | QPSK | 1 | 0 | | 21.52 | | 23 | 0 |
| 10 | QPSK | 1 | 25 | | 21.36 | | | |
| 10 | QPSK | 1 | 49 | | 21.45 | | | |
| 10 | QPSK | 25 | 0 | | 20.53 | | 22 | 1 |
| 10 | QPSK | 25 | 12 | | 20.48 | | | |
| 10 | QPSK | 25 | 25 | | 20.51 | | | |
| 10 | QPSK | 50 | 0 | | 20.49 | | | |
| 10 | 16QAM | 1 | 0 | | 20.76 | | 22 | 1 |
| 10 | 16QAM | 1 | 25 | | 20.77 | | | |
| 10 | 16QAM | 1 | 49 | | 20.79 | | | |
| 10 | 16QAM | 25 | 0 | | 19.46 | | 21 | 2 |
| 10 | 16QAM | 25 | 12 | | 19.52 | | | |
| 10 | 16QAM | 25 | 25 | | 19.56 | | | |
| 10 | 16QAM | 50 | 0 | | 19.52 | | | |
| 10 | 64QAM | 1 | 0 | | 19.63 | | 21 | 2 |
| 10 | 64QAM | 1 | 25 | | 19.75 | | | |
| 10 | 64QAM | 1 | 49 | | 19.70 | | | |
| 10 | 64QAM | 25 | 0 | | 18.48 | | 20 | 3 |
| 10 | 64QAM | 25 | 12 | | 18.54 | | | |
| 10 | 64QAM | 25 | 25 | | 18.60 | | | |
| 10 | 64QAM | 50 | 0 | | 18.53 | | | |
| Channel | | | | 27685 | 27710 | 27735 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2307.5 | 2310 | 2312.5 | | |
| 5 | QPSK | 1 | 0 | 21.30 | 21.32 | 21.39 | 23 | 0 |
| 5 | QPSK | 1 | 12 | 21.46 | 21.47 | 21.50 | | |
| 5 | QPSK | 1 | 24 | 21.46 | 21.49 | 21.51 | | |
| 5 | QPSK | 12 | 0 | 20.44 | 20.47 | 20.52 | 22 | 1 |
| 5 | QPSK | 12 | 7 | 20.55 | 20.51 | 20.57 | | |
| 5 | QPSK | 12 | 13 | 20.54 | 20.56 | 20.56 | | |
| 5 | QPSK | 25 | 0 | 20.49 | 20.46 | 20.50 | | |
| 5 | 16QAM | 1 | 0 | 20.62 | 20.70 | 20.70 | 22 | 1 |
| 5 | 16QAM | 1 | 12 | 20.75 | 20.81 | 20.81 | | |
| 5 | 16QAM | 1 | 24 | 20.80 | 20.81 | 20.75 | | |
| 5 | 16QAM | 12 | 0 | 19.43 | 19.50 | 19.68 | 21 | 2 |
| 5 | 16QAM | 12 | 7 | 19.56 | 19.52 | 19.59 | | |
| 5 | 16QAM | 12 | 13 | 19.56 | 19.57 | 19.55 | | |
| 5 | 16QAM | 25 | 0 | 19.53 | 19.50 | 19.54 | | |
| 5 | 64QAM | 1 | 0 | 19.56 | 19.57 | 19.66 | 21 | 2 |
| 5 | 64QAM | 1 | 12 | 19.67 | 19.71 | 19.70 | | |
| 5 | 64QAM | 1 | 24 | 19.75 | 19.73 | 19.74 | | |
| 5 | 64QAM | 12 | 0 | 18.47 | 18.53 | 18.57 | 20 | 3 |
| 5 | 64QAM | 12 | 7 | 18.61 | 18.59 | 18.66 | | |
| 5 | 64QAM | 12 | 13 | 18.61 | 18.61 | 18.63 | | |
| 5 | 64QAM | 25 | 0 | 18.56 | 18.51 | 18.54 | | |

**<LTE Band 66>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 132072 | 132322 | 132572 | | |
| Frequency (MHz) | | | | 1720 | 1745 | 1770 | | |
| 20 | QPSK | 1 | 0 | 23.63 | 23.36 | 23.70 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.53 | 23.59 | 23.57 | | |
| 20 | QPSK | 1 | 99 | 23.54 | 23.56 | 23.44 | | |
| 20 | QPSK | 50 | 0 | 22.62 | 22.68 | 22.68 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.69 | 22.66 | 22.73 | | |
| 20 | QPSK | 50 | 50 | 22.65 | 22.68 | 22.64 | | |
| 20 | QPSK | 100 | 0 | 22.68 | 22.62 | 22.73 | | |
| 20 | 16QAM | 1 | 0 | 22.95 | 22.75 | 22.89 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.90 | 22.98 | 22.92 | | |
| 20 | 16QAM | 1 | 99 | 22.91 | 22.84 | 22.80 | | |
| 20 | 16QAM | 50 | 0 | 21.64 | 21.71 | 21.72 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 21.69 | 21.68 | 21.75 | | |
| 20 | 16QAM | 50 | 50 | 21.65 | 21.70 | 21.66 | | |
| 20 | 16QAM | 100 | 0 | 21.66 | 21.63 | 21.74 | | |
| 20 | 64QAM | 1 | 0 | 21.15 | 20.69 | 21.87 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.81 | 21.74 | 21.54 | | |
| 20 | 64QAM | 1 | 99 | 21.77 | 21.82 | 21.70 | | |
| 20 | 64QAM | 50 | 0 | 20.66 | 20.22 | 20.72 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 20.74 | 20.62 | 20.54 | | |
| 20 | 64QAM | 50 | 50 | 20.68 | 20.71 | 20.56 | | |
| 20 | 64QAM | 100 | 0 | 20.72 | 20.55 | 20.72 | | |
| Channel | | | | 132047 | 132322 | 132597 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1717.5 | 1745 | 1772.5 | | |
| 15 | QPSK | 1 | 0 | 23.53 | 23.50 | 23.66 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.53 | 23.59 | 23.56 | | |
| 15 | QPSK | 1 | 74 | 23.53 | 23.55 | 23.48 | | |
| 15 | QPSK | 36 | 0 | 22.58 | 22.68 | 22.65 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.68 | 22.68 | 22.71 | | |
| 15 | QPSK | 36 | 39 | 22.61 | 22.69 | 22.64 | | |
| 15 | QPSK | 75 | 0 | 22.64 | 22.63 | 22.61 | | |
| 15 | 16QAM | 1 | 0 | 22.81 | 22.72 | 22.96 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.87 | 22.97 | 22.95 | | |
| 15 | 16QAM | 1 | 74 | 22.85 | 22.88 | 22.82 | | |
| 15 | 16QAM | 36 | 0 | 21.59 | 21.67 | 21.64 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.68 | 21.69 | 21.71 | | |
| 15 | 16QAM | 36 | 39 | 21.64 | 21.69 | 21.62 | | |
| 15 | 16QAM | 75 | 0 | 21.66 | 21.66 | 21.61 | | |
| 15 | 64QAM | 1 | 0 | 21.25 | 20.77 | 21.76 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.78 | 21.68 | 21.45 | | |
| 15 | 64QAM | 1 | 74 | 21.73 | 21.81 | 21.70 | | |
| 15 | 64QAM | 36 | 0 | 20.63 | 20.28 | 20.46 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.71 | 20.69 | 20.46 | | |
| 15 | 64QAM | 36 | 39 | 20.67 | 20.72 | 20.58 | | |
| 15 | 64QAM | 75 | 0 | 20.67 | 20.61 | 20.46 | | |
| Channel | | | | 132022 | 132322 | 132622 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1715 | 1745 | 1775 | | |
| 10 | QPSK | 1 | 0 | 23.30 | 23.39 | 23.33 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.24 | 23.32 | 23.27 | | |
| 10 | QPSK | 1 | 49 | 23.28 | 23.33 | 23.23 | | |
| 10 | QPSK | 25 | 0 | 22.41 | 22.44 | 22.39 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.42 | 22.42 | 22.35 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 22.38 | 22.44 | 22.39 | | |
| 10 | QPSK | 50 | 0 | 22.41 | 22.40 | 22.37 | | |
| 10 | 16QAM | 1 | 0 | 22.71 | 22.75 | 22.76 | | |
| 10 | 16QAM | 1 | 25 | 22.68 | 22.71 | 22.70 | 23 | 1 |
| 10 | 16QAM | 1 | 49 | 22.60 | 22.68 | 22.63 | | |
| 10 | 16QAM | 25 | 0 | 21.44 | 21.44 | 21.38 | | |
| 10 | 16QAM | 25 | 12 | 21.43 | 21.44 | 21.38 | 22 | 2 |
| 10 | 16QAM | 25 | 25 | 21.40 | 21.44 | 21.38 | | |
| 10 | 16QAM | 50 | 0 | 21.42 | 21.42 | 21.36 | | |
| 10 | 64QAM | 1 | 0 | 21.06 | 20.96 | 21.04 | | |
| 10 | 64QAM | 1 | 25 | 21.58 | 21.69 | 21.57 | 22 | 2 |
| 10 | 64QAM | 1 | 49 | 21.51 | 21.64 | 21.50 | | |
| 10 | 64QAM | 25 | 0 | 20.45 | 20.44 | 20.36 | | |
| 10 | 64QAM | 25 | 12 | 20.45 | 20.45 | 20.40 | 21 | 3 |
| 10 | 64QAM | 25 | 25 | 20.39 | 20.49 | 20.42 | | |
| 10 | 64QAM | 50 | 0 | 20.47 | 20.46 | 20.40 | | |
| Channel | | | | 131997 | 132322 | 132647 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1712.5 | 1745 | 1777.5 | | |
| 5 | QPSK | 1 | 0 | 23.33 | 23.33 | 23.33 | | |
| 5 | QPSK | 1 | 12 | 23.35 | 23.44 | 23.35 | 24 | 0 |
| 5 | QPSK | 1 | 24 | 23.30 | 23.40 | 23.30 | | |
| 5 | QPSK | 12 | 0 | 22.45 | 22.44 | 22.44 | | |
| 5 | QPSK | 12 | 7 | 22.44 | 22.45 | 22.41 | 23 | 1 |
| 5 | QPSK | 12 | 13 | 22.39 | 22.46 | 22.40 | | |
| 5 | QPSK | 25 | 0 | 22.38 | 22.41 | 22.37 | | |
| 5 | 16QAM | 1 | 0 | 22.66 | 22.65 | 22.66 | | |
| 5 | 16QAM | 1 | 12 | 22.66 | 22.74 | 22.64 | 23 | 1 |
| 5 | 16QAM | 1 | 24 | 22.66 | 22.71 | 22.62 | | |
| 5 | 16QAM | 12 | 0 | 21.45 | 21.49 | 21.47 | | |
| 5 | 16QAM | 12 | 7 | 21.46 | 21.48 | 21.48 | 22 | 2 |
| 5 | 16QAM | 12 | 13 | 21.42 | 21.49 | 21.42 | | |
| 5 | 16QAM | 25 | 0 | 21.42 | 21.43 | 21.43 | | |
| 5 | 64QAM | 1 | 0 | 21.35 | 21.38 | 21.42 | | |
| 5 | 64QAM | 1 | 12 | 21.62 | 21.67 | 21.58 | 22 | 2 |
| 5 | 64QAM | 1 | 24 | 21.54 | 21.60 | 21.52 | | |
| 5 | 64QAM | 12 | 0 | 20.43 | 20.53 | 20.52 | | |
| 5 | 64QAM | 12 | 7 | 20.54 | 20.55 | 20.51 | 21 | 3 |
| 5 | 64QAM | 12 | 13 | 20.49 | 20.56 | 20.48 | | |
| 5 | 64QAM | 25 | 0 | 20.45 | 20.46 | 20.42 | | |
| Channel | | | | 131987 | 132322 | 132657 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1711.5 | 1745 | 1778.5 | | |
| 3 | QPSK | 1 | 0 | 23.48 | 23.47 | 23.48 | | |
| 3 | QPSK | 1 | 8 | 23.54 | 23.56 | 23.48 | 24 | 0 |
| 3 | QPSK | 1 | 14 | 23.46 | 23.52 | 23.45 | | |
| 3 | QPSK | 8 | 0 | 22.52 | 22.58 | 22.54 | | |
| 3 | QPSK | 8 | 4 | 22.56 | 22.62 | 22.57 | 23 | 1 |
| 3 | QPSK | 8 | 7 | 22.52 | 22.58 | 22.51 | | |
| 3 | QPSK | 15 | 0 | 22.51 | 22.55 | 22.52 | | |
| 3 | 16QAM | 1 | 0 | 22.79 | 22.78 | 22.81 | | |
| 3 | 16QAM | 1 | 8 | 22.82 | 22.91 | 22.83 | 23 | 1 |
| 3 | 16QAM | 1 | 14 | 22.79 | 22.81 | 22.73 | | |
| 3 | 16QAM | 8 | 0 | 21.61 | 21.61 | 21.61 | | |
| 3 | 16QAM | 8 | 4 | 21.62 | 21.71 | 21.63 | 22 | 2 |
| 3 | 16QAM | 8 | 7 | 21.58 | 21.63 | 21.55 | | |
| 3 | 16QAM | 15 | 0 | 21.57 | 21.60 | 21.57 | | |
| 3 | 64QAM | 1 | 0 | 21.51 | 21.67 | 21.70 | 22 | 2 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 21.77 | 21.86 | 21.79 | | |
| 3 | 64QAM | 1 | 14 | 21.71 | 21.79 | 21.67 | | |
| 3 | 64QAM | 8 | 0 | 20.53 | 20.63 | 20.60 | 21 | 3 |
| 3 | 64QAM | 8 | 4 | 20.65 | 20.69 | 20.62 | | |
| 3 | 64QAM | 8 | 7 | 20.58 | 20.67 | 20.62 | | |
| 3 | 64QAM | 15 | 0 | 20.58 | 20.59 | 20.57 | | |
| Channel | | | | 131979 | 132322 | 132665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1710.7 | 1745 | 1779.3 | | |
| 1.4 | QPSK | 1 | 0 | 23.37 | 23.43 | 23.36 | 24 | 0 |
| 1.4 | QPSK | 1 | 3 | 23.44 | 23.49 | 23.41 | | |
| 1.4 | QPSK | 1 | 5 | 23.33 | 23.43 | 23.32 | | |
| 1.4 | QPSK | 3 | 0 | 23.41 | 23.47 | 23.42 | | |
| 1.4 | QPSK | 3 | 1 | 23.45 | 23.53 | 23.45 | | |
| 1.4 | QPSK | 3 | 3 | 23.40 | 23.48 | 23.40 | | |
| 1.4 | QPSK | 6 | 0 | 22.49 | 22.54 | 22.43 | 23 | 1 |
| 1.4 | 16QAM | 1 | 0 | 22.71 | 22.80 | 22.74 | 23 | 1 |
| 1.4 | 16QAM | 1 | 3 | 22.76 | 22.80 | 22.75 | | |
| 1.4 | 16QAM | 1 | 5 | 22.68 | 22.75 | 22.70 | | |
| 1.4 | 16QAM | 3 | 0 | 22.50 | 22.58 | 22.48 | | |
| 1.4 | 16QAM | 3 | 1 | 22.55 | 22.62 | 22.53 | | |
| 1.4 | 16QAM | 3 | 3 | 22.48 | 22.56 | 22.50 | | |
| 1.4 | 16QAM | 6 | 0 | 21.53 | 21.62 | 21.56 | 22 | 2 |
| 1.4 | 64QAM | 1 | 0 | 21.47 | 21.71 | 21.52 | 22 | 2 |
| 1.4 | 64QAM | 1 | 3 | 21.60 | 21.74 | 21.60 | | |
| 1.4 | 64QAM | 1 | 5 | 21.57 | 21.68 | 21.56 | | |
| 1.4 | 64QAM | 3 | 0 | 21.55 | 21.71 | 21.56 | | |
| 1.4 | 64QAM | 3 | 1 | 21.66 | 21.72 | 21.58 | | |
| 1.4 | 64QAM | 3 | 3 | 21.64 | 21.71 | 21.59 | | |
| 1.4 | 64QAM | 6 | 0 | 20.48 | 20.58 | 20.46 | 21 | 3 |

**<LTE Band 71>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 133222 | 133322 | 133372 | | |
| Frequency (MHz) | | | | 673 | 683 | 688 | | |
| 20 | QPSK | 1 | 0 | 23.00 | 23.11 | 23.02 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.04 | 23.06 | 23.03 | | |
| 20 | QPSK | 1 | 99 | 23.04 | 22.98 | 22.87 | | |
| 20 | QPSK | 50 | 0 | 22.10 | 22.27 | 22.07 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.15 | 22.08 | 22.24 | | |
| 20 | QPSK | 50 | 50 | 22.19 | 22.25 | 22.13 | | |
| 20 | QPSK | 100 | 0 | 22.25 | 22.07 | 22.29 | | |
| 20 | 16QAM | 1 | 0 | 22.52 | 22.23 | 22.32 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.43 | 22.46 | 22.50 | | |
| 20 | 16QAM | 1 | 99 | 22.43 | 22.26 | 22.36 | | |
| 20 | 16QAM | 50 | 0 | 21.22 | 21.17 | 21.16 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 21.14 | 21.27 | 21.26 | | |
| 20 | 16QAM | 50 | 50 | 21.09 | 21.18 | 21.14 | | |
| 20 | 16QAM | 100 | 0 | 21.14 | 21.05 | 21.26 | | |
| 20 | 64QAM | 1 | 0 | 20.73 | 20.70 | 21.27 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.25 | 21.26 | 21.06 | | |
| 20 | 64QAM | 1 | 99 | 21.28 | 21.25 | 21.15 | | |
| 20 | 64QAM | 50 | 0 | 20.11 | 19.80 | 20.15 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 20.21 | 20.24 | 20.00 | | |
| 20 | 64QAM | 50 | 50 | 20.21 | 20.33 | 20.09 | | |
| 20 | 64QAM | 100 | 0 | 20.31 | 20.16 | 20.24 | | |
| Channel | | | | 133197 | 133297 | 133397 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 670.5 | 680.5 | 690.5 | | |
| 15 | QPSK | 1 | 0 | 23.00 | 23.10 | 23.01 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 22.94 | 23.02 | 23.05 | | |
| 15 | QPSK | 1 | 74 | 23.05 | 23.04 | 22.92 | | |
| 15 | QPSK | 36 | 0 | 22.07 | 22.24 | 22.11 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.19 | 22.10 | 22.27 | | |
| 15 | QPSK | 36 | 39 | 22.13 | 22.11 | 22.05 | | |
| 15 | QPSK | 75 | 0 | 22.19 | 22.15 | 22.10 | | |
| 15 | 16QAM | 1 | 0 | 22.41 | 22.15 | 22.40 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.32 | 22.41 | 22.45 | | |
| 15 | 16QAM | 1 | 74 | 22.26 | 22.50 | 22.29 | | |
| 15 | 16QAM | 36 | 0 | 21.10 | 21.21 | 21.10 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.08 | 21.26 | 21.22 | | |
| 15 | 16QAM | 36 | 39 | 21.14 | 21.29 | 21.06 | | |
| 15 | 16QAM | 75 | 0 | 21.16 | 21.11 | 21.09 | | |
| 15 | 64QAM | 1 | 0 | 20.72 | 20.71 | 21.16 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.20 | 21.22 | 20.90 | | |
| 15 | 64QAM | 1 | 74 | 21.27 | 21.33 | 21.23 | | |
| 15 | 64QAM | 36 | 0 | 20.20 | 19.73 | 19.91 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.24 | 20.25 | 19.93 | | |
| 15 | 64QAM | 36 | 39 | 20.27 | 20.33 | 20.06 | | |
| 15 | 64QAM | 75 | 0 | 20.26 | 20.06 | 19.90 | | |
| Channel | | | | 133172 | 133272 | 133422 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 668 | 678 | 693 | | |
| 10 | QPSK | 1 | 0 | 22.83 | 22.88 | 22.78 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 22.81 | 22.83 | 22.85 | | |
| 10 | QPSK | 1 | 49 | 22.78 | 22.95 | 22.82 | | |
| 10 | QPSK | 25 | 0 | 22.01 | 22.00 | 21.81 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 21.83 | 21.97 | 21.82 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 21.88 | 21.95 | 21.78 | | |
| 10 | QPSK | 50 | 0 | 21.91 | 22.00 | 21.95 | | |
| 10 | 16QAM | 1 | 0 | 22.12 | 22.31 | 22.21 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.13 | 22.14 | 22.17 | | |
| 10 | 16QAM | 1 | 49 | 22.03 | 22.19 | 22.09 | | |
| 10 | 16QAM | 25 | 0 | 21.02 | 21.02 | 20.79 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 20.84 | 20.87 | 20.93 | | |
| 10 | 16QAM | 25 | 25 | 20.89 | 20.87 | 20.86 | | |
| 10 | 16QAM | 50 | 0 | 20.87 | 20.86 | 20.93 | | |
| 10 | 64QAM | 1 | 0 | 20.51 | 20.56 | 20.56 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.17 | 21.22 | 21.00 | | |
| 10 | 64QAM | 1 | 49 | 21.10 | 21.13 | 20.98 | | |
| 10 | 64QAM | 25 | 0 | 19.99 | 19.88 | 19.91 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 19.92 | 20.06 | 19.81 | | |
| 10 | 64QAM | 25 | 25 | 19.97 | 20.09 | 19.94 | | |
| 10 | 64QAM | 50 | 0 | 19.88 | 19.96 | 19.93 | | |
| Channel | | | | 133147 | 133247 | 133447 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 665.5 | 675.5 | 695.5 | | |
| 5 | QPSK | 1 | 0 | 22.79 | 22.93 | 22.73 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 22.91 | 22.92 | 22.82 | | |
| 5 | QPSK | 1 | 24 | 22.76 | 22.85 | 22.79 | | |
| 5 | QPSK | 12 | 0 | 21.88 | 21.98 | 22.00 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 21.94 | 21.89 | 21.97 | | |
| 5 | QPSK | 12 | 13 | 21.83 | 22.03 | 21.88 | | |
| 5 | QPSK | 25 | 0 | 21.84 | 22.02 | 21.83 | | |
| 5 | 16QAM | 1 | 0 | 22.11 | 22.07 | 22.19 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.12 | 22.16 | 22.17 | | |
| 5 | 16QAM | 1 | 24 | 22.25 | 22.13 | 22.08 | | |
| 5 | 16QAM | 12 | 0 | 21.03 | 21.01 | 21.01 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.00 | 20.90 | 20.93 | | |
| 5 | 16QAM | 12 | 13 | 20.87 | 21.02 | 20.94 | | |
| 5 | 16QAM | 25 | 0 | 20.99 | 20.87 | 21.01 | | |
| 5 | 64QAM | 1 | 0 | 20.80 | 20.90 | 20.95 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.13 | 21.19 | 21.08 | | |
| 5 | 64QAM | 1 | 24 | 21.10 | 21.18 | 21.04 | | |
| 5 | 64QAM | 12 | 0 | 20.00 | 19.98 | 19.92 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 19.96 | 19.98 | 20.01 | | |
| 5 | 64QAM | 12 | 13 | 20.03 | 20.17 | 20.06 | | |
| 5 | 64QAM | 25 | 0 | 19.96 | 19.90 | 19.81 | | |

## <Reduced Power Mode for NB Mode>

### <LTE Band 2>

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 18700 | 18900 | 19100 | | |
| Frequency (MHz) | | | | 1860 | 1880 | 1900 | | |
| 20 | QPSK | 1 | 0 | 19.12 | 19.02 | 18.96 | 19.8 | 0 |
| 20 | QPSK | 1 | 49 | 19.08 | 19.00 | 19.00 | | |
| 20 | QPSK | 1 | 99 | 19.02 | 19.01 | 19.04 | | |
| 20 | QPSK | 50 | 0 | 19.06 | 19.02 | 19.00 | 19.9 | 0 |
| 20 | QPSK | 50 | 24 | 19.00 | 19.05 | 19.02 | | |
| 20 | QPSK | 50 | 50 | 19.02 | 19.05 | 19.05 | | |
| 20 | QPSK | 100 | 0 | 19.08 | 19.00 | 19.01 | | |
| 20 | 16QAM | 1 | 0 | 19.08 | 19.08 | 19.02 | 19.8 | 0 |
| 20 | 16QAM | 1 | 49 | 19.05 | 19.04 | 19.00 | | |
| 20 | 16QAM | 1 | 99 | 19.08 | 19.09 | 19.07 | | |
| 20 | 16QAM | 50 | 0 | 19.04 | 19.07 | 19.01 | 19.8 | 0 |
| 20 | 16QAM | 50 | 24 | 19.01 | 19.06 | 19.04 | | |
| 20 | 16QAM | 50 | 50 | 19.10 | 19.07 | 19.02 | | |
| 20 | 16QAM | 100 | 0 | 19.01 | 19.07 | 19.10 | | |
| 20 | 64QAM | 1 | 0 | 19.07 | 19.00 | 19.07 | 19.8 | 0 |
| 20 | 64QAM | 1 | 49 | 19.03 | 19.04 | 19.05 | | |
| 20 | 64QAM | 1 | 99 | 19.00 | 19.00 | 19.00 | | |
| 20 | 64QAM | 50 | 0 | 19.08 | 19.08 | 19.09 | 19.8 | 0 |
| 20 | 64QAM | 50 | 24 | 19.09 | 19.04 | 19.08 | | |
| 20 | 64QAM | 50 | 50 | 19.09 | 19.07 | 19.05 | | |
| 20 | 64QAM | 100 | 0 | 19.07 | 19.07 | 19.10 | | |
| Channel | | | | 18675 | 18900 | 19125 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1857.5 | 1880 | 1902.5 | | |
| 15 | QPSK | 1 | 0 | 19.03 | 18.97 | 18.90 | 19.8 | 0 |
| 15 | QPSK | 1 | 37 | 19.05 | 18.93 | 18.99 | | |
| 15 | QPSK | 1 | 74 | 18.96 | 18.98 | 19.03 | | |
| 15 | QPSK | 36 | 0 | 19.02 | 18.95 | 18.98 | 19.8 | 0 |
| 15 | QPSK | 36 | 20 | 18.92 | 18.99 | 18.95 | | |
| 15 | QPSK | 36 | 39 | 18.98 | 19.00 | 19.03 | | |
| 15 | QPSK | 75 | 0 | 19.06 | 18.99 | 18.96 | | |
| 15 | 16QAM | 1 | 0 | 19.06 | 19.06 | 18.94 | 19.8 | 0 |
| 15 | 16QAM | 1 | 37 | 18.99 | 18.97 | 18.98 | | |
| 15 | 16QAM | 1 | 74 | 18.98 | 19.07 | 19.05 | | |
| 15 | 16QAM | 36 | 0 | 19.04 | 18.97 | 18.98 | 19.8 | 0 |
| 15 | 16QAM | 36 | 20 | 18.94 | 19.02 | 19.00 | | |
| 15 | 16QAM | 36 | 39 | 19.01 | 19.01 | 19.01 | | |
| 15 | 16QAM | 75 | 0 | 18.94 | 19.07 | 19.06 | | |
| 15 | 64QAM | 1 | 0 | 18.99 | 18.90 | 19.00 | 19.8 | 0 |
| 15 | 64QAM | 1 | 37 | 19.00 | 19.01 | 19.05 | | |
| 15 | 64QAM | 1 | 74 | 18.91 | 18.91 | 18.96 | | |
| 15 | 64QAM | 36 | 0 | 19.01 | 19.03 | 19.09 | 19.8 | 0 |
| 15 | 64QAM | 36 | 20 | 19.09 | 18.96 | 19.00 | | |
| 15 | 64QAM | 36 | 39 | 19.05 | 18.97 | 19.04 | | |
| 15 | 64QAM | 75 | 0 | 18.97 | 19.03 | 19.10 | | |
| Channel | | | | 18650 | 18900 | 19150 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1855 | 1880 | 1905 | | |
| 10 | QPSK | 1 | 0 | 18.93 | 18.88 | 18.84 | 19.8 | 0 |
| 10 | QPSK | 1 | 25 | 19.02 | 18.86 | 18.97 | | |
| 10 | QPSK | 1 | 49 | 18.88 | 18.94 | 18.96 | | |
| 10 | QPSK | 25 | 0 | 19.00 | 18.86 | 18.92 | 19.8 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 12 | 18.83 | 18.98 | 18.91 | | |
| 10 | QPSK | 25 | 25 | 18.88 | 18.94 | 18.96 | | |
| 10 | QPSK | 50 | 0 | 19.04 | 18.99 | 18.94 | | |
| 10 | 16QAM | 1 | 0 | 18.98 | 19.04 | 18.93 | 19.8 | 0 |
| 10 | 16QAM | 1 | 25 | 18.93 | 18.90 | 18.95 | | |
| 10 | 16QAM | 1 | 49 | 18.95 | 18.98 | 19.02 | | |
| 10 | 16QAM | 25 | 0 | 18.94 | 18.90 | 18.97 | 19.8 | 0 |
| 10 | 16QAM | 25 | 12 | 18.94 | 18.92 | 18.98 | | |
| 10 | 16QAM | 25 | 25 | 18.98 | 18.91 | 18.91 | | |
| 10 | 16QAM | 50 | 22.53 | 18.86 | 19.03 | 19.01 | | |
| 10 | 64QAM | 1 | 22.02 | 18.92 | 18.84 | 18.99 | 22.2 | 22.32 |
| 10 | 64QAM | 1 | 22.09 | 18.91 | 19.01 | 18.95 | | |
| 10 | 64QAM | 1 | 49 | 18.87 | 18.87 | 18.88 | | |
| 10 | 64QAM | 25 | 0 | 19.01 | 18.99 | 19.03 | 19.8 | 0 |
| 10 | 64QAM | 25 | 12 | 19.06 | 18.94 | 18.97 | | |
| 10 | 64QAM | 25 | 25 | 19.01 | 18.95 | 19.02 | | |
| 10 | 64QAM | 50 | 0 | 18.92 | 18.96 | 19.07 | | |
| Channel | | | | 18625 | 18900 | 19175 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1852.5 | 1880 | 1907.5 | | |
| 5 | QPSK | 1 | 0 | 18.87 | 18.79 | 18.74 | 19.8 | 0 |
| 5 | QPSK | 1 | 12 | 18.95 | 18.86 | 18.87 | | |
| 5 | QPSK | 1 | 24 | 18.82 | 18.95 | 19.06 | | |
| 5 | QPSK | 12 | 0 | 19.08 | 18.92 | 19.01 | 19.8 | 0 |
| 5 | QPSK | 12 | 7 | 18.85 | 19.01 | 18.94 | | |
| 5 | QPSK | 12 | 13 | 18.93 | 18.90 | 19.05 | | |
| 5 | QPSK | 25 | 0 | 19.08 | 19.07 | 19.01 | | |
| 5 | 16QAM | 1 | 0 | 19.04 | 19.09 | 18.92 | 19.8 | 0 |
| 5 | 16QAM | 1 | 12 | 18.96 | 18.92 | 19.02 | | |
| 5 | 16QAM | 1 | 24 | 18.87 | 18.99 | 18.95 | | |
| 5 | 16QAM | 12 | 0 | 18.86 | 18.93 | 18.97 | 19.8 | 0 |
| 5 | 16QAM | 12 | 7 | 19.02 | 18.97 | 19.00 | | |
| 5 | 16QAM | 12 | 13 | 18.97 | 18.84 | 18.85 | | |
| 5 | 16QAM | 25 | 0 | 18.88 | 19.08 | 19.09 | | |
| 5 | 64QAM | 1 | 0 | 18.95 | 18.92 | 19.03 | 19.8 | 0 |
| 5 | 64QAM | 1 | 12 | 18.98 | 18.97 | 19.01 | | |
| 5 | 64QAM | 1 | 24 | 18.83 | 18.88 | 18.94 | | |
| 5 | 64QAM | 12 | 0 | 18.93 | 18.95 | 19.09 | 19.8 | 0 |
| 5 | 64QAM | 12 | 7 | 19.10 | 19.02 | 19.01 | | |
| 5 | 64QAM | 12 | 13 | 18.92 | 19.04 | 19.05 | | |
| 5 | 64QAM | 25 | 0 | 18.86 | 19.06 | 19.02 | | |
| Channel | | | | 18615 | 18900 | 19185 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1851.5 | 1880 | 1908.5 | | |
| 3 | QPSK | 1 | 0 | 19.03 | 18.96 | 19.09 | 19.8 | 0 |
| 3 | QPSK | 1 | 8 | 19.04 | 19.03 | 18.97 | | |
| 3 | QPSK | 1 | 14 | 19.08 | 19.10 | 18.93 | | |
| 3 | QPSK | 8 | 0 | 19.08 | 19.02 | 19.00 | 19.8 | 0 |
| 3 | QPSK | 8 | 4 | 19.03 | 19.09 | 19.02 | | |
| 3 | QPSK | 8 | 7 | 19.02 | 19.08 | 18.94 | | |
| 3 | QPSK | 15 | 0 | 18.97 | 18.90 | 18.98 | | |
| 3 | 16QAM | 1 | 0 | 18.92 | 19.06 | 18.93 | 19.8 | 0 |
| 3 | 16QAM | 1 | 8 | 19.09 | 18.95 | 18.97 | | |
| 3 | 16QAM | 1 | 14 | 18.91 | 19.04 | 19.02 | | |
| 3 | 16QAM | 8 | 0 | 19.08 | 19.05 | 19.02 | 19.8 | 0 |
| 3 | 16QAM | 8 | 4 | 18.91 | 18.94 | 19.03 | | |
| 3 | 16QAM | 8 | 7 | 19.09 | 18.92 | 18.99 | | |
| 3 | 16QAM | 15 | 0 | 19.03 | 19.02 | 18.90 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 0 | 19.08 | 18.92 | 19.06 | 19.8 | 0 |
| 3 | 64QAM | 1 | 8 | 19.02 | 18.95 | 18.92 | | |
| 3 | 64QAM | 1 | 14 | 19.02 | 19.03 | 19.04 | | |
| 3 | 64QAM | 8 | 0 | 19.03 | 18.96 | 18.97 | 19.8 | 0 |
| 3 | 64QAM | 8 | 4 | 18.97 | 18.90 | 19.01 | | |
| 3 | 64QAM | 8 | 7 | 19.10 | 18.95 | 19.07 | | |
| 3 | 64QAM | 15 | 0 | 18.92 | 18.95 | 19.09 | | |
| Channel | | | | 18607 | 18900 | 19193 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1850.7 | 1880 | 1909.3 | | |
| 1.4 | QPSK | 1 | 0 | 19.04 | 18.94 | 19.07 | 19.8 | 0 |
| 1.4 | QPSK | 1 | 3 | 18.93 | 18.90 | 19.00 | | |
| 1.4 | QPSK | 1 | 5 | 18.94 | 19.06 | 18.98 | | |
| 1.4 | QPSK | 3 | 0 | 19.04 | 18.90 | 18.93 | | |
| 1.4 | QPSK | 3 | 1 | 19.00 | 19.08 | 19.01 | | |
| 1.4 | QPSK | 3 | 3 | 18.95 | 19.07 | 18.94 | | |
| 1.4 | QPSK | 6 | 0 | 18.95 | 18.97 | 19.07 | 19.8 | 0 |
| 1.4 | 16QAM | 1 | 0 | 18.94 | 19.08 | 19.00 | 19.8 | 0 |
| 1.4 | 16QAM | 1 | 3 | 18.94 | 19.09 | 19.07 | | |
| 1.4 | 16QAM | 1 | 5 | 19.05 | 19.07 | 18.99 | | |
| 1.4 | 16QAM | 3 | 0 | 18.90 | 19.01 | 19.10 | | |
| 1.4 | 16QAM | 3 | 1 | 19.07 | 19.08 | 19.02 | | |
| 1.4 | 16QAM | 3 | 3 | 19.00 | 19.07 | 19.10 | | |
| 1.4 | 16QAM | 6 | 0 | 18.96 | 18.98 | 19.03 | 19.8 | 0 |
| 1.4 | 64QAM | 1 | 0 | 18.99 | 18.90 | 19.09 | 19.8 | 0 |
| 1.4 | 64QAM | 1 | 3 | 18.95 | 18.94 | 18.94 | | |
| 1.4 | 64QAM | 1 | 5 | 18.91 | 19.01 | 18.91 | | |
| 1.4 | 64QAM | 3 | 0 | 19.07 | 19.08 | 19.06 | | |
| 1.4 | 64QAM | 3 | 1 | 18.95 | 18.95 | 18.92 | | |
| 1.4 | 64QAM | 3 | 3 | 18.93 | 18.94 | 19.03 | | |
| 13 | 64QAM | 6 | 0 | 18.94 | 18.93 | 19.10 | 19.8 | 0 |

**<LTE Band 4>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20050 | 20175 | 20300 | | |
| Frequency (MHz) | | | | 1720 | 1732.5 | 1745 | | |
| 20 | QPSK | 1 | 0 | 19.50 | 19.47 | 19.51 | 20 | 0 |
| 20 | QPSK | 1 | 49 | 19.32 | 19.35 | 19.36 | | |
| 20 | QPSK | 1 | 99 | 19.46 | 19.38 | 19.37 | | |
| 20 | QPSK | 50 | 0 | 19.37 | 19.37 | 19.48 | 20 | 0 |
| 20 | QPSK | 50 | 24 | 19.36 | 19.32 | 19.47 | | |
| 20 | QPSK | 50 | 50 | 19.45 | 19.36 | 19.38 | | |
| 20 | QPSK | 100 | 0 | 19.34 | 19.45 | 19.49 | | |
| 20 | 16QAM | 1 | 0 | 19.40 | 19.50 | 19.36 | 20 | 0 |
| 20 | 16QAM | 1 | 49 | 19.37 | 19.36 | 19.50 | | |
| 20 | 16QAM | 1 | 99 | 19.46 | 19.36 | 19.47 | | |
| 20 | 16QAM | 50 | 0 | 19.43 | 19.32 | 19.40 | 20 | 0 |
| 20 | 16QAM | 50 | 24 | 19.32 | 19.36 | 19.50 | | |
| 20 | 16QAM | 50 | 50 | 19.34 | 19.48 | 19.48 | | |
| 20 | 16QAM | 100 | 0 | 19.48 | 19.38 | 19.39 | | |
| 20 | 64QAM | 1 | 0 | 19.39 | 19.41 | 19.31 | 20 | 0 |
| 20 | 64QAM | 1 | 49 | 19.39 | 19.35 | 19.48 | | |
| 20 | 64QAM | 1 | 99 | 19.33 | 19.39 | 19.49 | | |
| 20 | 64QAM | 50 | 0 | 19.41 | 19.43 | 19.45 | 20 | 0 |
| 20 | 64QAM | 50 | 24 | 19.47 | 19.31 | 19.41 | | |
| 20 | 64QAM | 50 | 50 | 19.33 | 19.35 | 19.44 | | |
| 20 | 64QAM | 100 | 0 | 19.36 | 19.39 | 19.42 | | |
| Channel | | | | 20025 | 20175 | 20325 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1717.5 | 1732.5 | 1747.5 | | |
| 15 | QPSK | 1 | 0 | 19.46 | 19.44 | 19.39 | 20 | 0 |
| 15 | QPSK | 1 | 37 | 19.35 | 19.38 | 19.47 | | |
| 15 | QPSK | 1 | 74 | 19.35 | 19.46 | 19.45 | | |
| 15 | QPSK | 36 | 0 | 19.36 | 19.50 | 19.45 | 20 | 0 |
| 15 | QPSK | 36 | 20 | 19.49 | 19.37 | 19.31 | | |
| 15 | QPSK | 36 | 39 | 19.33 | 19.41 | 19.34 | | |
| 15 | QPSK | 75 | 0 | 19.37 | 19.35 | 19.30 | | |
| 15 | 16QAM | 1 | 0 | 19.35 | 19.49 | 19.44 | 20 | 0 |
| 15 | 16QAM | 1 | 37 | 19.39 | 19.33 | 19.35 | | |
| 15 | 16QAM | 1 | 74 | 19.32 | 19.41 | 19.39 | | |
| 15 | 16QAM | 36 | 0 | 19.34 | 19.34 | 19.30 | 20 | 0 |
| 15 | 16QAM | 36 | 20 | 19.31 | 19.43 | 19.37 | | |
| 15 | 16QAM | 36 | 39 | 19.42 | 19.32 | 19.30 | | |
| 15 | 16QAM | 75 | 0 | 19.36 | 19.43 | 19.49 | | |
| 15 | 64QAM | 1 | 0 | 19.50 | 19.30 | 19.48 | 20 | 0 |
| 15 | 64QAM | 1 | 37 | 19.50 | 19.31 | 19.33 | | |
| 15 | 64QAM | 1 | 74 | 19.47 | 19.49 | 19.41 | | |
| 15 | 64QAM | 36 | 0 | 19.33 | 19.47 | 19.48 | 20 | 0 |
| 15 | 64QAM | 36 | 20 | 19.33 | 19.33 | 19.47 | | |
| 15 | 64QAM | 36 | 39 | 19.40 | 19.32 | 19.41 | | |
| 15 | 64QAM | 75 | 0 | 19.43 | 19.49 | 19.36 | | |
| Channel | | | | 20000 | 20175 | 20350 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1715 | 1732.5 | 1750 | | |
| 10 | QPSK | 1 | 0 | 19.46 | 19.32 | 19.49 | 20 | 0 |
| 10 | QPSK | 1 | 25 | 19.42 | 19.37 | 19.50 | | |
| 10 | QPSK | 1 | 49 | 19.47 | 19.42 | 19.31 | | |
| 10 | QPSK | 25 | 0 | 19.33 | 19.46 | 19.38 | 20 | 0 |
| 10 | QPSK | 25 | 12 | 19.50 | 19.42 | 19.46 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 19.49 | 19.33 | 19.45 | | |
| 10 | QPSK | 50 | 0 | 19.43 | 19.32 | 19.50 | | |
| 10 | 16QAM | 1 | 0 | 19.40 | 19.49 | 19.36 | 20 | 0 |
| 10 | 16QAM | 1 | 25 | 19.48 | 19.48 | 19.37 | | |
| 10 | 16QAM | 1 | 49 | 19.44 | 19.37 | 19.50 | | |
| 10 | 16QAM | 25 | 0 | 19.47 | 19.40 | 19.34 | 20 | 0 |
| 10 | 24.5 | 25 | 12 | 19.43 | 19.40 | 19.35 | | |
| 10 | 24.5 | 25 | 25 | 19.31 | 19.33 | 19.35 | | |
| 10 | 16QAM | 50 | 0 | 19.44 | 19.38 | 19.41 | | |
| 10 | 64QAM | 1 | 0 | 19.47 | 19.48 | 19.38 | 20 | 0 |
| 10 | 64QAM | 1 | 25 | 19.36 | 19.36 | 19.48 | | |
| 10 | 64QAM | 1 | 49 | 19.37 | 19.43 | 19.38 | | |
| 10 | 64QAM | 25 | 0 | 19.40 | 19.49 | 19.34 | 20 | 0 |
| 10 | 64QAM | 25 | 12 | 19.32 | 19.30 | 19.31 | | |
| 10 | 64QAM | 25 | 25 | 19.34 | 19.48 | 19.38 | | |
| 10 | 64QAM | 50 | 0 | 19.44 | 19.33 | 19.32 | | |
| Channel | | | | 19975 | 20175 | 20375 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1712.5 | 1732.5 | 1752.5 | | |
| 5 | QPSK | 1 | 0 | 19.35 | 19.30 | 19.36 | 20 | 0 |
| 5 | QPSK | 1 | 12 | 19.38 | 19.45 | 19.50 | | |
| 5 | QPSK | 1 | 24 | 19.43 | 19.43 | 19.44 | | |
| 5 | QPSK | 12 | 0 | 19.39 | 19.32 | 19.46 | 20 | 0 |
| 5 | QPSK | 12 | 7 | 19.45 | 19.32 | 19.34 | | |
| 5 | QPSK | 12 | 13 | 19.50 | 19.37 | 19.46 | | |
| 5 | QPSK | 25 | 0 | 19.42 | 19.37 | 19.47 | | |
| 5 | 16QAM | 1 | 0 | 19.34 | 19.31 | 19.42 | 20 | 0 |
| 5 | 16QAM | 1 | 12 | 19.32 | 19.33 | 19.49 | | |
| 5 | 16QAM | 1 | 24 | 19.33 | 19.43 | 19.30 | | |
| 5 | 16QAM | 12 | 0 | 19.39 | 19.40 | 19.30 | 20 | 0 |
| 5 | 16QAM | 12 | 7 | 19.47 | 19.35 | 19.48 | | |
| 5 | 16QAM | 12 | 13 | 19.40 | 19.47 | 19.30 | | |
| 5 | 16QAM | 25 | 0 | 19.32 | 19.39 | 19.49 | | |
| 5 | 64QAM | 1 | 0 | 19.49 | 19.31 | 19.50 | 20 | 0 |
| 5 | 64QAM | 1 | 12 | 19.44 | 19.50 | 19.35 | | |
| 5 | 64QAM | 1 | 24 | 19.48 | 19.43 | 19.45 | | |
| 5 | 64QAM | 12 | 0 | 19.50 | 19.44 | 19.32 | 20 | 0 |
| 5 | 64QAM | 12 | 7 | 19.34 | 19.33 | 19.38 | | |
| 5 | 64QAM | 12 | 13 | 19.43 | 19.41 | 19.33 | | |
| 5 | 64QAM | 25 | 0 | 19.40 | 19.49 | 19.31 | | |
| Channel | | | | 19965 | 20175 | 20385 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1711.5 | 1732.5 | 1753.5 | | |
| 3 | QPSK | 1 | 0 | 19.31 | 19.46 | 19.37 | 20 | 0 |
| 3 | QPSK | 1 | 8 | 19.34 | 19.47 | 19.46 | | |
| 3 | QPSK | 1 | 14 | 19.47 | 19.35 | 19.43 | | |
| 3 | QPSK | 8 | 0 | 19.35 | 19.39 | 19.50 | 20 | 0 |
| 3 | QPSK | 8 | 4 | 19.32 | 19.50 | 19.30 | | |
| 3 | QPSK | 8 | 7 | 19.32 | 19.33 | 19.46 | | |
| 3 | QPSK | 15 | 0 | 19.45 | 19.50 | 19.37 | | |
| 3 | 16QAM | 1 | 0 | 19.44 | 19.49 | 19.42 | 20 | 0 |
| 3 | 16QAM | 1 | 8 | 19.32 | 19.46 | 19.47 | | |
| 3 | 16QAM | 1 | 14 | 19.32 | 19.46 | 19.39 | | |
| 3 | 16QAM | 8 | 0 | 19.31 | 19.30 | 19.50 | 20 | 0 |
| 3 | 16QAM | 8 | 4 | 19.48 | 19.30 | 19.50 | | |
| 3 | 16QAM | 8 | 7 | 19.33 | 19.39 | 19.45 | | |
| 3 | 16QAM | 15 | 0 | 19.38 | 19.49 | 19.47 | | |
| 3 | 64QAM | 1 | 0 | 19.36 | 19.49 | 19.39 | 20 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 19.34 | 19.45 | 19.36 | | |
| 3 | 64QAM | 1 | 14 | 19.36 | 19.32 | 19.50 | | |
| 3 | 64QAM | 8 | 0 | 19.37 | 19.35 | 19.38 | 20 | 0 |
| 3 | 64QAM | 8 | 4 | 19.32 | 19.45 | 19.44 | | |
| 3 | 64QAM | 8 | 7 | 19.34 | 19.48 | 19.41 | | |
| 3 | 64QAM | 15 | 0 | 19.32 | 19.50 | 19.41 | | |
| Channel | | | | 19957 | 20175 | 20393 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1710.7 | 1732.5 | 1754.3 | | |
| 1.4 | QPSK | 1 | 0 | 19.42 | 19.33 | 19.36 | 20 | 0 |
| 1.4 | QPSK | 1 | 3 | 19.38 | 19.40 | 19.45 | | |
| 1.4 | QPSK | 1 | 5 | 19.44 | 19.49 | 19.44 | | |
| 1.4 | QPSK | 3 | 0 | 19.40 | 19.50 | 19.37 | | |
| 1.4 | QPSK | 3 | 1 | 19.47 | 19.32 | 19.42 | | |
| 1.4 | QPSK | 3 | 3 | 19.46 | 19.37 | 19.46 | | |
| 1.4 | QPSK | 6 | 0 | 19.46 | 19.44 | 19.44 | 20 | 0 |
| 1.4 | 16QAM | 1 | 0 | 19.37 | 19.33 | 19.35 | 20 | 0 |
| 1.4 | 16QAM | 1 | 3 | 19.39 | 19.47 | 19.46 | | |
| 1.4 | 16QAM | 1 | 5 | 19.43 | 19.41 | 19.34 | | |
| 1.4 | 16QAM | 3 | 0 | 19.41 | 19.39 | 19.45 | | |
| 1.4 | 16QAM | 3 | 1 | 19.33 | 19.46 | 19.45 | | |
| 1.4 | 16QAM | 3 | 3 | 19.46 | 19.47 | 19.46 | | |
| 1.4 | 16QAM | 6 | 0 | 19.47 | 19.40 | 19.48 | 20 | 0 |
| 1.4 | 64QAM | 1 | 0 | 19.38 | 19.34 | 19.34 | 20 | 0 |
| 1.4 | 64QAM | 1 | 3 | 19.40 | 19.50 | 19.46 | | |
| 1.4 | 64QAM | 1 | 5 | 19.32 | 19.42 | 19.31 | | |
| 1.4 | 64QAM | 3 | 0 | 19.35 | 19.31 | 19.46 | | |
| 1.4 | 64QAM | 3 | 1 | 19.48 | 19.42 | 19.31 | | |
| 1.4 | 64QAM | 3 | 3 | 19.33 | 19.44 | 19.30 | | |
| 1.4 | 64QAM | 6 | 0 | 19.37 | 19.32 | 19.39 | 20 | 0 |

**<LTE Band 5>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20450 | 20525 | 20600 | | |
| Frequency (MHz) | | | | 829 | 836.5 | 844 | | |
| 10 | QPSK | 1 | 0 | 20.24 | 20.23 | 20.32 | 20.8 | 0 |
| 10 | QPSK | 1 | 25 | 20.18 | 20.13 | 20.15 | | |
| 10 | QPSK | 1 | 49 | 20.13 | 20.14 | 20.00 | | |
| 10 | QPSK | 25 | 0 | 20.08 | 20.20 | 20.03 | 20.8 | 0 |
| 10 | QPSK | 25 | 12 | 20.19 | 20.18 | 20.17 | | |
| 10 | QPSK | 25 | 25 | 20.07 | 20.14 | 20.10 | | |
| 10 | QPSK | 50 | 0 | 20.06 | 20.20 | 20.04 | | |
| 10 | 16QAM | 1 | 0 | 20.02 | 20.04 | 20.08 | 20.8 | 0 |
| 10 | 16QAM | 1 | 25 | 20.02 | 20.08 | 20.00 | | |
| 10 | 16QAM | 1 | 49 | 20.19 | 20.08 | 20.20 | | |
| 10 | 16QAM | 25 | 0 | 20.12 | 20.11 | 20.17 | 20.8 | 0 |
| 10 | 16QAM | 25 | 12 | 20.15 | 20.10 | 20.14 | | |
| 10 | 16QAM | 25 | 25 | 20.14 | 20.02 | 20.14 | | |
| 10 | 16QAM | 50 | 0 | 20.04 | 20.14 | 20.20 | | |
| 10 | 64QAM | 1 | 0 | 20.17 | 20.15 | 20.15 | 20.8 | 0 |
| 10 | 64QAM | 1 | 25 | 20.18 | 20.15 | 20.13 | | |
| 10 | 64QAM | 1 | 49 | 20.19 | 20.13 | 20.04 | | |
| 10 | 64QAM | 25 | 0 | 20.10 | 20.19 | 20.17 | 20.8 | 0 |
| 10 | 64QAM | 25 | 12 | 20.02 | 20.19 | 20.20 | | |
| 10 | 64QAM | 25 | 25 | 20.03 | 20.04 | 20.15 | | |
| 10 | 64QAM | 50 | 0 | 20.07 | 20.18 | 20.10 | | |
| Channel | | | | 20425 | 20525 | 20625 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 826.5 | 836.5 | 846.5 | | |
| 5 | QPSK | 1 | 0 | 20.03 | 20.20 | 20.15 | 20.8 | 0 |
| 5 | QPSK | 1 | 12 | 20.10 | 20.15 | 20.12 | | |
| 5 | QPSK | 1 | 24 | 20.02 | 20.00 | 20.15 | | |
| 5 | QPSK | 12 | 0 | 20.14 | 20.00 | 20.09 | 20.8 | 0 |
| 5 | QPSK | 12 | 7 | 20.07 | 20.18 | 20.09 | | |
| 5 | QPSK | 12 | 13 | 20.03 | 20.06 | 20.07 | | |
| 5 | QPSK | 25 | 0 | 20.14 | 20.13 | 20.13 | | |
| 5 | 16QAM | 1 | 0 | 20.00 | 20.03 | 20.06 | 20.8 | 0 |
| 5 | 16QAM | 1 | 12 | 20.06 | 20.17 | 20.06 | | |
| 5 | 16QAM | 1 | 24 | 20.14 | 20.04 | 20.14 | | |
| 5 | 16QAM | 12 | 0 | 20.11 | 20.20 | 20.14 | 20.8 | 0 |
| 5 | 16QAM | 12 | 7 | 20.07 | 20.14 | 20.17 | | |
| 5 | 16QAM | 12 | 13 | 20.02 | 20.09 | 20.07 | | |
| 5 | 16QAM | 25 | 0 | 20.18 | 20.11 | 20.11 | | |
| 5 | 64QAM | 1 | 0 | 20.04 | 20.19 | 20.17 | 20.8 | 0 |
| 5 | 64QAM | 1 | 12 | 20.02 | 20.09 | 20.19 | | |
| 5 | 64QAM | 1 | 24 | 20.02 | 20.05 | 20.17 | | |
| 5 | 64QAM | 12 | 0 | 20.13 | 20.00 | 20.20 | 20.8 | 0 |
| 5 | 64QAM | 12 | 7 | 20.01 | 20.00 | 20.16 | | |
| 5 | 64QAM | 12 | 13 | 20.00 | 20.08 | 20.18 | | |
| 5 | 64QAM | 25 | 0 | 20.04 | 20.06 | 20.02 | | |
| Channel | | | | 20415 | 20525 | 20635 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 825.5 | 836.5 | 847.5 | | |
| 3 | QPSK | 1 | 0 | 20.04 | 20.06 | 20.05 | 20.8 | 0 |
| 3 | QPSK | 1 | 8 | 20.04 | 20.02 | 20.14 | | |
| 3 | QPSK | 1 | 14 | 20.17 | 20.18 | 20.17 | | |
| 3 | QPSK | 8 | 0 | 20.07 | 20.08 | 20.03 | 20.8 | 0 |
| 3 | QPSK | 8 | 4 | 20.05 | 20.19 | 20.03 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | QPSK | 8 | 7 | 20.14 | 20.11 | 20.11 | | |
| 3 | QPSK | 15 | 0 | 20.08 | 20.13 | 20.09 | | |
| 3 | 16QAM | 1 | 0 | 20.05 | 20.14 | 20.00 | 20.8 | 0 |
| 3 | 16QAM | 1 | 8 | 20.01 | 20.12 | 20.19 | | |
| 3 | 16QAM | 1 | 14 | 20.19 | 20.13 | 20.10 | | |
| 3 | 16QAM | 8 | 0 | 20.15 | 20.03 | 20.10 | 20.8 | 0 |
| 3 | 16QAM | 8 | 4 | 20.06 | 20.08 | 20.20 | | |
| 3 | 16QAM | 8 | 7 | 20.11 | 20.05 | 20.16 | | |
| 3 | 16QAM | 15 | 0 | 20.00 | 20.09 | 20.04 | | |
| 3 | 64QAM | 1 | 0 | 20.00 | 20.13 | 20.02 | 20.8 | 0 |
| 3 | 64QAM | 1 | 8 | 20.05 | 20.06 | 20.17 | | |
| 3 | 64QAM | 1 | 14 | 20.02 | 20.15 | 20.08 | | |
| 3 | 64QAM | 8 | 0 | 20.18 | 20.07 | 20.07 | 20.8 | 0 |
| 3 | 64QAM | 8 | 4 | 20.01 | 20.11 | 20.04 | | |
| 3 | 64QAM | 8 | 7 | 20.10 | 20.07 | 20.04 | | |
| 3 | 64QAM | 15 | 0 | 20.13 | 20.04 | 20.01 | | |
| Channel | | | | 20407 | 20525 | 20643 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 824.7 | 836.5 | 848.3 | | |
| 1.4 | QPSK | 1 | 0 | 20.01 | 20.08 | 20.15 | 20.8 | 0 |
| 1.4 | QPSK | 1 | 3 | 20.08 | 20.12 | 20.05 | | |
| 1.4 | QPSK | 1 | 5 | 20.05 | 20.07 | 20.02 | | |
| 1.4 | QPSK | 3 | 0 | 20.12 | 20.19 | 20.01 | | |
| 1.4 | QPSK | 3 | 1 | 20.02 | 20.02 | 20.16 | | |
| 1.4 | QPSK | 3 | 3 | 20.06 | 20.18 | 20.17 | | |
| 1.4 | QPSK | 6 | 0 | 20.05 | 20.18 | 20.15 | 20.8 | 0 |
| 1.4 | 16QAM | 1 | 0 | 20.16 | 20.17 | 20.04 | 20.8 | 0 |
| 1.4 | 16QAM | 1 | 3 | 20.04 | 20.06 | 20.16 | | |
| 1.4 | 16QAM | 1 | 5 | 20.11 | 20.01 | 20.10 | | |
| 1.4 | 16QAM | 3 | 0 | 20.17 | 20.05 | 20.09 | | |
| 1.4 | 16QAM | 3 | 1 | 20.01 | 20.02 | 20.00 | | |
| 1.4 | 16QAM | 3 | 3 | 20.06 | 20.01 | 20.04 | | |
| 1.4 | 16QAM | 6 | 0 | 20.03 | 20.10 | 20.00 | 20.8 | 0 |
| 1.4 | 64QAM | 1 | 0 | 20.05 | 20.10 | 20.01 | 20.8 | 0 |
| 1.4 | 64QAM | 1 | 3 | 20.12 | 20.17 | 20.03 | | |
| 1.4 | 64QAM | 1 | 5 | 20.02 | 20.10 | 20.01 | | |
| 1.4 | 64QAM | 3 | 0 | 20.05 | 20.06 | 20.03 | | |
| 1.4 | 64QAM | 3 | 1 | 20.09 | 20.04 | 20.02 | | |
| 1.4 | 64QAM | 3 | 3 | 20.05 | 20.19 | 20.16 | | |
| 1.4 | 64QAM | 6 | 0 | 20.17 | 20.09 | 20.10 | 20.8 | 0 |

**<LTE Band 7>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20850 | 21100 | 21350 | | |
| Frequency (MHz) | | | | 2510 | 2535 | 2560 | | |
| 20 | QPSK | 1 | 0 | 17.88 | 17.95 | 17.97 | 18.6 | 0 |
| 20 | QPSK | 1 | 49 | 17.60 | 17.70 | 17.78 | | |
| 20 | QPSK | 1 | 99 | 17.67 | 17.74 | 17.77 | | |
| 20 | QPSK | 50 | 0 | 17.72 | 17.74 | 17.81 | 18.6 | 0 |
| 20 | QPSK | 50 | 24 | 17.77 | 17.69 | 17.75 | | |
| 20 | QPSK | 50 | 50 | 17.80 | 17.79 | 17.78 | | |
| 20 | QPSK | 100 | 0 | 17.74 | 17.78 | 17.80 | | |
| 20 | 16QAM | 1 | 0 | 17.69 | 17.75 | 17.66 | 18.6 | 0 |
| 20 | 16QAM | 1 | 49 | 17.74 | 17.62 | 17.62 | | |
| 20 | 16QAM | 1 | 99 | 17.64 | 17.67 | 17.70 | | |
| 20 | 16QAM | 50 | 0 | 17.66 | 17.74 | 17.61 | 18.6 | 0 |
| 20 | 16QAM | 50 | 24 | 17.77 | 17.68 | 17.74 | | |
| 20 | 16QAM | 50 | 50 | 17.66 | 17.66 | 17.60 | | |
| 20 | 16QAM | 100 | 0 | 17.69 | 17.67 | 17.74 | | |
| 20 | 64QAM | 1 | 0 | 17.73 | 17.79 | 17.78 | 18.6 | 0 |
| 20 | 64QAM | 1 | 49 | 17.78 | 17.61 | 17.74 | | |
| 20 | 64QAM | 1 | 99 | 17.70 | 17.73 | 17.76 | | |
| 20 | 64QAM | 50 | 0 | 17.74 | 17.74 | 17.75 | 18.6 | 0 |
| 20 | 64QAM | 50 | 24 | 17.77 | 17.71 | 17.68 | | |
| 20 | 64QAM | 50 | 50 | 17.74 | 17.76 | 17.65 | | |
| 20 | 64QAM | 100 | 0 | 17.69 | 17.80 | 17.64 | | |
| Channel | | | | 20825 | 21100 | 21375 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2507.5 | 2535 | 2562.5 | | |
| 15 | QPSK | 1 | 0 | 17.69 | 17.78 | 17.74 | 18.6 | 0 |
| 15 | QPSK | 1 | 37 | 17.72 | 17.63 | 17.76 | | |
| 15 | QPSK | 1 | 74 | 17.76 | 17.70 | 17.60 | | |
| 15 | QPSK | 36 | 0 | 17.72 | 17.71 | 17.69 | 18.6 | 0 |
| 15 | QPSK | 36 | 20 | 17.69 | 17.69 | 17.71 | | |
| 15 | QPSK | 36 | 39 | 17.80 | 17.61 | 17.80 | | |
| 15 | QPSK | 75 | 0 | 17.66 | 17.69 | 17.63 | | |
| 15 | 16QAM | 1 | 0 | 17.65 | 17.60 | 17.72 | 18.6 | 0 |
| 15 | 16QAM | 1 | 37 | 17.65 | 17.79 | 17.66 | | |
| 15 | 16QAM | 1 | 74 | 17.78 | 17.80 | 17.62 | | |
| 15 | 16QAM | 36 | 0 | 17.67 | 17.70 | 17.60 | 18.6 | 0 |
| 15 | 16QAM | 36 | 20 | 17.79 | 17.78 | 17.72 | | |
| 15 | 16QAM | 36 | 39 | 17.62 | 17.72 | 17.77 | | |
| 15 | 16QAM | 75 | 0 | 17.68 | 17.74 | 17.69 | | |
| 15 | 64QAM | 1 | 0 | 17.79 | 17.80 | 17.74 | 18.6 | 0 |
| 15 | 64QAM | 1 | 37 | 17.76 | 17.80 | 17.67 | | |
| 15 | 64QAM | 1 | 74 | 17.78 | 17.68 | 17.64 | | |
| 15 | 64QAM | 36 | 0 | 17.74 | 17.70 | 17.63 | 18.6 | 0 |
| 15 | 64QAM | 36 | 20 | 17.69 | 17.71 | 17.78 | | |
| 15 | 64QAM | 36 | 39 | 17.71 | 17.72 | 17.64 | | |
| 15 | 64QAM | 75 | 0 | 17.66 | 17.69 | 17.67 | | |
| Channel | | | | 20800 | 21100 | 21400 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2505 | 2535 | 2565 | | |
| 10 | QPSK | 1 | 0 | 17.62 | 17.72 | 17.68 | 18.6 | 0 |
| 10 | QPSK | 1 | 25 | 17.63 | 17.76 | 17.73 | | |
| 10 | QPSK | 1 | 49 | 17.73 | 17.66 | 17.70 | | |
| 10 | QPSK | 25 | 0 | 17.78 | 17.74 | 17.74 | 18.6 | 0 |
| 10 | QPSK | 25 | 12 | 17.78 | 17.72 | 17.71 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 17.76 | 17.72 | 17.67 | | |
| 10 | QPSK | 50 | 0 | 17.65 | 17.69 | 17.61 | | |
| 10 | 16QAM | 1 | 0 | 17.72 | 17.70 | 17.63 | 18.6 | 0 |
| 10 | 16QAM | 1 | 25 | 17.62 | 17.73 | 17.67 | | |
| 10 | 16QAM | 1 | 49 | 17.79 | 17.62 | 17.77 | | |
| 10 | 16QAM | 25 | 0 | 17.61 | 17.70 | 17.63 | 18.6 | 0 |
| 10 | 16QAM | 25 | 12 | 17.79 | 17.70 | 17.71 | | |
| 10 | 16QAM | 25 | 25 | 17.75 | 17.60 | 17.68 | | |
| 10 | 16QAM | 50 | 0 | 17.71 | 17.68 | 17.62 | | |
| 10 | 64QAM | 1 | 0 | 17.78 | 17.62 | 17.62 | 18.6 | 0 |
| 10 | 64QAM | 1 | 25 | 17.75 | 17.78 | 17.70 | | |
| 10 | 64QAM | 1 | 49 | 17.70 | 17.60 | 17.63 | | |
| 10 | 64QAM | 25 | 0 | 17.69 | 17.77 | 17.68 | 18.6 | 0 |
| 10 | 64QAM | 25 | 12 | 17.65 | 17.77 | 17.76 | | |
| 10 | 64QAM | 25 | 25 | 17.71 | 17.61 | 17.72 | | |
| 10 | 64QAM | 50 | 0 | 17.77 | 17.79 | 17.70 | | |
| Channel | | | | 20775 | 21100 | 21425 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2502.5 | 2535 | 2567.5 | | |
| 5 | QPSK | 1 | 0 | 17.68 | 17.73 | 17.71 | 18.6 | 0 |
| 5 | QPSK | 1 | 12 | 17.66 | 17.78 | 17.69 | | |
| 5 | QPSK | 1 | 24 | 17.73 | 17.71 | 17.72 | | |
| 5 | QPSK | 12 | 0 | 17.60 | 17.80 | 17.62 | 18.6 | 0 |
| 5 | QPSK | 12 | 7 | 17.76 | 17.63 | 17.64 | | |
| 5 | QPSK | 12 | 13 | 17.77 | 17.76 | 17.80 | | |
| 5 | QPSK | 25 | 0 | 17.77 | 17.62 | 17.68 | | |
| 5 | 16QAM | 1 | 0 | 17.62 | 17.61 | 17.65 | 18.6 | 0 |
| 5 | 16QAM | 1 | 12 | 17.78 | 17.74 | 17.73 | | |
| 5 | 16QAM | 1 | 24 | 17.74 | 17.79 | 17.61 | | |
| 5 | 16QAM | 12 | 0 | 17.62 | 17.75 | 17.72 | 18.6 | 0 |
| 5 | 16QAM | 12 | 7 | 17.72 | 17.61 | 17.78 | | |
| 5 | 16QAM | 12 | 13 | 17.78 | 17.62 | 17.67 | | |
| 5 | 16QAM | 25 | 0 | 17.76 | 17.62 | 17.68 | | |
| 5 | 64QAM | 1 | 0 | 17.72 | 17.74 | 17.64 | 18.6 | 0 |
| 5 | 64QAM | 1 | 12 | 17.60 | 17.66 | 17.70 | | |
| 5 | 64QAM | 1 | 24 | 17.64 | 17.75 | 17.66 | | |
| 5 | 64QAM | 12 | 0 | 17.80 | 17.74 | 17.77 | 18.6 | 0 |
| 5 | 64QAM | 12 | 7 | 17.65 | 17.72 | 17.60 | | |
| 5 | 64QAM | 12 | 13 | 17.79 | 17.77 | 17.75 | | |
| 5 | 64QAM | 25 | 0 | 17.75 | 17.65 | 17.65 | | |

**<LTE Band 12>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 23060 | 23095 | 23130 | | |
| Frequency (MHz) | | | | 704 | 707.5 | 711 | | |
| 10 | QPSK | 1 | 0 | 21.60 | 21.93 | 21.55 | 22.7 | 0 |
| 10 | QPSK | 1 | 25 | 21.54 | 21.63 | 21.60 | | |
| 10 | QPSK | 1 | 49 | 21.61 | 21.46 | 21.58 | | |
| 10 | QPSK | 25 | 0 | 21.64 | 21.83 | 21.51 | 22.7 | 0 |
| 10 | QPSK | 25 | 12 | 21.63 | 21.55 | 21.61 | | |
| 10 | QPSK | 25 | 25 | 21.51 | 21.46 | 21.56 | | |
| 10 | QPSK | 50 | 0 | 21.64 | 21.92 | 21.61 | | |
| 10 | 16QAM | 1 | 0 | 21.61 | 21.59 | 21.47 | 22.7 | 0 |
| 10 | 16QAM | 1 | 25 | 21.59 | 21.57 | 21.62 | | |
| 10 | 16QAM | 1 | 49 | 21.57 | 21.60 | 21.50 | | |
| 10 | 16QAM | 25 | 0 | 21.60 | 21.56 | 21.48 | 22.7 | 0 |
| 10 | 16QAM | 25 | 12 | 21.55 | 21.52 | 21.45 | | |
| 10 | 16QAM | 25 | 25 | 21.48 | 21.65 | 21.50 | | |
| 10 | 16QAM | 50 | 0 | 21.56 | 21.64 | 21.53 | | |
| 10 | 64QAM | 1 | 0 | 21.61 | 21.57 | 21.54 | 22.7 | 0 |
| 10 | 64QAM | 1 | 25 | 21.50 | 21.51 | 21.64 | | |
| 10 | 64QAM | 1 | 49 | 21.59 | 21.49 | 21.61 | | |
| 10 | 64QAM | 25 | 0 | 21.49 | 21.55 | 21.58 | 22.7 | 0 |
| 10 | 64QAM | 25 | 12 | 21.62 | 21.63 | 21.57 | | |
| 10 | 64QAM | 25 | 25 | 21.61 | 21.52 | 21.56 | | |
| 10 | 64QAM | 50 | 0 | 21.61 | 21.61 | 21.62 | | |
| Channel | | | | 23035 | 23095 | 23155 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 701.5 | 707.5 | 713.5 | | |
| 5 | QPSK | 1 | 0 | 21.53 | 21.50 | 21.53 | 22.7 | 0 |
| 5 | QPSK | 1 | 12 | 21.65 | 21.50 | 21.61 | | |
| 5 | QPSK | 1 | 24 | 21.59 | 21.54 | 21.64 | | |
| 5 | QPSK | 12 | 0 | 21.61 | 21.48 | 21.62 | 22.7 | 0 |
| 5 | QPSK | 12 | 7 | 21.47 | 21.58 | 21.52 | | |
| 5 | QPSK | 12 | 13 | 21.52 | 21.47 | 21.50 | | |
| 5 | QPSK | 25 | 0 | 21.56 | 21.53 | 21.59 | | |
| 5 | 16QAM | 1 | 0 | 21.57 | 21.52 | 21.50 | 22.7 | 0 |
| 5 | 16QAM | 1 | 12 | 21.61 | 21.46 | 21.64 | | |
| 5 | 16QAM | 1 | 24 | 21.50 | 21.53 | 21.56 | | |
| 5 | 16QAM | 12 | 0 | 21.55 | 21.47 | 21.48 | 22.7 | 0 |
| 5 | 16QAM | 12 | 7 | 21.59 | 21.64 | 21.65 | | |
| 5 | 16QAM | 12 | 13 | 21.52 | 21.58 | 21.62 | | |
| 5 | 16QAM | 25 | 0 | 21.57 | 21.58 | 21.59 | | |
| 5 | 64QAM | 1 | 0 | 21.50 | 21.51 | 21.51 | 22.7 | 0 |
| 5 | 64QAM | 1 | 12 | 21.50 | 21.58 | 21.51 | | |
| 5 | 64QAM | 1 | 24 | 21.53 | 21.56 | 21.50 | | |
| 5 | 64QAM | 12 | 0 | 21.51 | 21.48 | 21.58 | 22.7 | 0 |
| 5 | 64QAM | 12 | 7 | 21.46 | 21.62 | 21.56 | | |
| 5 | 64QAM | 12 | 13 | 21.46 | 21.58 | 21.47 | | |
| 5 | 64QAM | 25 | 0 | 21.62 | 21.49 | 21.54 | | |
| Channel | | | | 23025 | 23095 | 23165 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 700.5 | 707.5 | 714.5 | | |
| 3 | QPSK | 1 | 0 | 21.52 | 21.45 | 21.48 | 22.7 | 0 |
| 3 | QPSK | 1 | 8 | 21.59 | 21.65 | 21.64 | | |
| 3 | QPSK | 1 | 14 | 21.46 | 21.46 | 21.63 | | |
| 3 | QPSK | 8 | 0 | 21.46 | 21.47 | 21.51 | 22.7 | 0 |
| 3 | QPSK | 8 | 4 | 21.45 | 21.63 | 21.54 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | QPSK | 8 | 7 | 21.53 | 21.48 | 21.58 | | |
| 3 | QPSK | 15 | 0 | 21.50 | 21.52 | 21.57 | | |
| 3 | 16QAM | 1 | 0 | 21.64 | 21.48 | 21.60 | 22.7 | 0 |
| 3 | 16QAM | 1 | 8 | 21.54 | 21.49 | 21.57 | | |
| 3 | 16QAM | 1 | 14 | 21.47 | 21.54 | 21.47 | | |
| 3 | 16QAM | 8 | 0 | 21.47 | 21.59 | 21.61 | 22.7 | 0 |
| 3 | 16QAM | 8 | 4 | 21.57 | 21.58 | 21.52 | | |
| 3 | 16QAM | 8 | 7 | 21.50 | 21.51 | 21.54 | | |
| 3 | 16QAM | 15 | 0 | 21.54 | 21.51 | 21.46 | | |
| 3 | 64QAM | 1 | 0 | 21.64 | 21.65 | 21.57 | 22.7 | 0 |
| 3 | 64QAM | 1 | 8 | 21.54 | 21.45 | 21.51 | | |
| 3 | 64QAM | 1 | 14 | 21.65 | 21.50 | 21.54 | | |
| 3 | 64QAM | 8 | 0 | 21.50 | 21.52 | 21.61 | 22.7 | 0 |
| 3 | 64QAM | 8 | 4 | 21.60 | 21.65 | 21.56 | | |
| 3 | 64QAM | 8 | 7 | 21.64 | 21.55 | 21.62 | | |
| 3 | 64QAM | 15 | 0 | 21.60 | 21.55 | 21.46 | | |
| Channel | | | | 23017 | 23095 | 23173 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 699.7 | 707.5 | 715.3 | | |
| 1.4 | QPSK | 1 | 0 | 21.47 | 21.61 | 21.58 | 22.7 | 0 |
| 1.4 | QPSK | 1 | 3 | 21.59 | 21.55 | 21.63 | | |
| 1.4 | QPSK | 1 | 5 | 21.63 | 21.63 | 21.56 | | |
| 1.4 | QPSK | 3 | 0 | 21.65 | 21.46 | 21.54 | | |
| 1.4 | QPSK | 3 | 1 | 21.53 | 21.54 | 21.60 | | |
| 1.4 | QPSK | 3 | 3 | 21.57 | 21.60 | 21.50 | | |
| 1.4 | QPSK | 6 | 0 | 21.51 | 21.58 | 21.61 | 22.7 | 0 |
| 1.4 | 16QAM | 1 | 0 | 21.62 | 21.52 | 21.57 | 22.7 | 0 |
| 1.4 | 16QAM | 1 | 3 | 21.45 | 21.64 | 21.48 | | |
| 1.4 | 16QAM | 1 | 5 | 21.46 | 21.65 | 21.63 | | |
| 1.4 | 16QAM | 3 | 0 | 21.50 | 21.48 | 21.48 | | |
| 1.4 | 16QAM | 3 | 1 | 21.48 | 21.47 | 21.59 | | |
| 1.4 | 16QAM | 3 | 3 | 21.48 | 21.46 | 21.59 | | |
| 1.4 | 16QAM | 6 | 0 | 21.57 | 21.54 | 21.53 | 22.7 | 0 |
| 1.4 | 64QAM | 1 | 0 | 21.61 | 21.48 | 21.60 | 22.7 | 0 |
| 1.4 | 64QAM | 1 | 3 | 21.45 | 21.54 | 21.50 | | |
| 1.4 | 64QAM | 1 | 5 | 21.51 | 21.51 | 21.51 | | |
| 1.4 | 64QAM | 3 | 0 | 21.56 | 21.47 | 21.61 | | |
| 1.4 | 64QAM | 3 | 1 | 21.51 | 21.48 | 21.51 | | |
| 1.4 | 64QAM | 3 | 3 | 21.50 | 21.54 | 21.49 | | |
| 1.4 | 64QAM | 6 | 0 | 21.59 | 21.58 | 21.61 | 22.7 | 0 |

**<LTE Band 13>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 23230 | | | |
| Frequency (MHz) | | | | | 782 | | | |
| 10 | QPSK | 1 | 0 | | 21.31 | | 22.6 | 0 |
| 10 | QPSK | 1 | 25 | | 21.12 | | | |
| 10 | QPSK | 1 | 49 | | 21.10 | | | |
| 10 | QPSK | 25 | 0 | | 21.24 | | 22.6 | 0 |
| 10 | QPSK | 25 | 12 | | 21.19 | | | |
| 10 | QPSK | 25 | 25 | | 21.23 | | | |
| 10 | QPSK | 50 | 0 | | 21.23 | | | |
| 10 | 16QAM | 1 | 0 | | 21.28 | | 22.6 | 0 |
| 10 | 16QAM | 1 | 25 | | 21.21 | | | |
| 10 | 16QAM | 1 | 49 | | 21.11 | | | |
| 10 | 16QAM | 25 | 0 | | 21.15 | | 22.6 | 0 |
| 10 | 16QAM | 25 | 12 | | 21.10 | | | |
| 10 | 16QAM | 25 | 25 | | 21.25 | | | |
| 10 | 16QAM | 50 | 0 | | 21.14 | | | |
| 10 | 64QAM | 1 | 0 | | 21.13 | | 22.6 | 0 |
| 10 | 64QAM | 1 | 25 | | 21.17 | | | |
| 10 | 64QAM | 1 | 49 | | 21.22 | | | |
| 10 | 64QAM | 25 | 0 | | 21.10 | | 22.6 | 0 |
| 10 | 64QAM | 25 | 12 | | 21.17 | | | |
| 10 | 64QAM | 25 | 25 | | 21.12 | | | |
| 10 | 64QAM | 50 | 0 | | 21.17 | | | |
| Channel | | | | 23205 | 23230 | 23255 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 779.5 | 782 | 784.5 | | |
| 5 | QPSK | 1 | 0 | 21.28 | 21.21 | 21.25 | 22.6 | 0 |
| 5 | QPSK | 1 | 12 | 21.24 | 21.23 | 21.20 | | |
| 5 | QPSK | 1 | 24 | 21.24 | 21.20 | 21.20 | | |
| 5 | QPSK | 12 | 0 | 21.21 | 21.26 | 21.18 | 22.6 | 0 |
| 5 | QPSK | 12 | 7 | 21.14 | 21.15 | 21.14 | | |
| 5 | QPSK | 12 | 13 | 21.10 | 21.17 | 21.11 | | |
| 5 | QPSK | 25 | 0 | 21.25 | 21.16 | 21.15 | | |
| 5 | 16QAM | 1 | 0 | 21.15 | 21.20 | 21.18 | 22.6 | 0 |
| 5 | 16QAM | 1 | 12 | 21.22 | 21.26 | 21.30 | | |
| 5 | 16QAM | 1 | 24 | 21.18 | 21.12 | 21.27 | | |
| 5 | 16QAM | 12 | 0 | 21.23 | 21.14 | 21.22 | 22.6 | 0 |
| 5 | 16QAM | 12 | 7 | 21.18 | 21.11 | 21.17 | | |
| 5 | 16QAM | 12 | 13 | 21.17 | 21.26 | 21.13 | | |
| 5 | 16QAM | 25 | 0 | 21.17 | 21.10 | 21.14 | | |
| 5 | 64QAM | 1 | 0 | 21.24 | 21.11 | 21.20 | 22.6 | 0 |
| 5 | 64QAM | 1 | 12 | 21.11 | 21.22 | 21.19 | | |
| 5 | 64QAM | 1 | 24 | 21.30 | 21.23 | 21.23 | | |
| 5 | 64QAM | 12 | 0 | 21.30 | 21.12 | 21.13 | 22.6 | 0 |
| 5 | 64QAM | 12 | 7 | 21.12 | 21.27 | 21.24 | | |
| 5 | 64QAM | 12 | 13 | 21.16 | 21.15 | 21.13 | | |
| 5 | 64QAM | 25 | 0 | 21.17 | 21.29 | 21.12 | | |

**<LTE Band 14>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 23330 | | | |
| Frequency (MHz) | | | | | 793 | | | |
| 10 | QPSK | 1 | 0 | | 21.20 | | 22.4 | 0 |
| 10 | QPSK | 1 | 25 | | 20.92 | | | |
| 10 | QPSK | 1 | 49 | | 21.10 | | | |
| 10 | QPSK | 25 | 0 | | 21.05 | | 22.4 | 0 |
| 10 | QPSK | 25 | 12 | | 21.01 | | | |
| 10 | QPSK | 25 | 25 | | 21.03 | | | |
| 10 | QPSK | 50 | 0 | | 20.93 | | | |
| 10 | 16QAM | 1 | 0 | | 21.07 | | 22.4 | 0 |
| 10 | 16QAM | 1 | 25 | | 21.05 | | | |
| 10 | 16QAM | 1 | 49 | | 20.99 | | | |
| 10 | 16QAM | 25 | 0 | | 20.97 | | 22.4 | 0 |
| 10 | 16QAM | 25 | 12 | | 20.95 | | | |
| 10 | 16QAM | 25 | 25 | | 20.93 | | | |
| 10 | 16QAM | 50 | 0 | | 20.97 | | | |
| 10 | 64QAM | 1 | 0 | | 21.08 | | 22.4 | 0 |
| 10 | 64QAM | 1 | 25 | | 20.90 | | | |
| 10 | 64QAM | 1 | 49 | | 21.01 | | | |
| 10 | 64QAM | 25 | 0 | | 20.97 | | 22.4 | 0 |
| 10 | 64QAM | 25 | 12 | | 20.95 | | | |
| 10 | 64QAM | 25 | 25 | | 21.05 | | | |
| 10 | 64QAM | 50 | 0 | | 20.97 | | | |
| Channel | | | | 23305 | 23330 | 23355 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 790.5 | 793 | 795.5 | | |
| 5 | QPSK | 1 | 0 | 20.98 | 20.90 | 21.05 | 22.4 | 0 |
| 5 | QPSK | 1 | 12 | 21.01 | 21.05 | 20.96 | | |
| 5 | QPSK | 1 | 24 | 21.05 | 20.96 | 21.08 | | |
| 5 | QPSK | 12 | 0 | 20.94 | 21.07 | 20.97 | 22.4 | 0 |
| 5 | QPSK | 12 | 7 | 21.05 | 20.94 | 21.07 | | |
| 5 | QPSK | 12 | 13 | 21.07 | 21.01 | 21.07 | | |
| 5 | QPSK | 25 | 0 | 20.96 | 20.97 | 20.97 | | |
| 5 | 16QAM | 1 | 0 | 20.97 | 21.04 | 20.97 | 22.4 | 0 |
| 5 | 16QAM | 1 | 12 | 21.00 | 21.06 | 21.03 | | |
| 5 | 16QAM | 1 | 24 | 21.09 | 20.99 | 21.00 | | |
| 5 | 16QAM | 12 | 0 | 21.01 | 20.92 | 20.91 | 22.4 | 0 |
| 5 | 16QAM | 12 | 7 | 20.98 | 20.97 | 21.07 | | |
| 5 | 16QAM | 12 | 13 | 21.01 | 21.10 | 21.08 | | |
| 5 | 16QAM | 25 | 0 | 20.98 | 21.03 | 20.97 | | |
| 5 | 64QAM | 1 | 0 | 20.90 | 21.00 | 21.09 | 22.4 | 0 |
| 5 | 64QAM | 1 | 12 | 20.90 | 20.98 | 21.06 | | |
| 5 | 64QAM | 1 | 24 | 20.91 | 21.06 | 20.95 | | |
| 5 | 64QAM | 12 | 0 | 20.92 | 21.10 | 21.04 | 22.4 | 0 |
| 5 | 64QAM | 12 | 7 | 20.90 | 21.04 | 20.93 | | |
| 5 | 64QAM | 12 | 13 | 21.01 | 20.96 | 21.02 | | |
| 5 | 64QAM | 25 | 0 | 20.95 | 21.06 | 20.98 | | |

**<LTE Band 17>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 23780 | 23790 | 23800 | | |
| Frequency (MHz) | | | | 709 | 710 | 711 | | |
| 10 | QPSK | 1 | 0 | 21.64 | 21.66 | 21.63 | 22.7 | 0 |
| 10 | QPSK | 1 | 25 | 21.43 | 21.44 | 21.51 | | |
| 10 | QPSK | 1 | 49 | 21.40 | 21.45 | 21.55 | | |
| 10 | QPSK | 25 | 0 | 21.56 | 21.53 | 21.56 | 22.7 | 0 |
| 10 | QPSK | 25 | 12 | 21.54 | 21.46 | 21.44 | | |
| 10 | QPSK | 25 | 25 | 21.60 | 21.40 | 21.48 | | |
| 10 | QPSK | 50 | 0 | 21.51 | 21.53 | 21.52 | | |
| 10 | 16QAM | 1 | 0 | 21.53 | 21.60 | 21.43 | 22.7 | 0 |
| 10 | 16QAM | 1 | 25 | 21.41 | 21.41 | 21.52 | | |
| 10 | 16QAM | 1 | 49 | 21.52 | 21.48 | 21.60 | | |
| 10 | 16QAM | 25 | 0 | 21.54 | 21.51 | 21.48 | 22.7 | 0 |
| 10 | 16QAM | 25 | 12 | 21.45 | 21.44 | 21.60 | | |
| 10 | 16QAM | 25 | 25 | 21.46 | 21.56 | 21.43 | | |
| 10 | 16QAM | 50 | 0 | 21.54 | 21.50 | 21.46 | | |
| 10 | 64QAM | 1 | 0 | 21.44 | 21.41 | 21.59 | 22.7 | 0 |
| 10 | 64QAM | 1 | 25 | 21.53 | 21.58 | 21.48 | | |
| 10 | 64QAM | 1 | 49 | 21.60 | 21.42 | 21.57 | | |
| 10 | 64QAM | 25 | 0 | 21.43 | 21.40 | 21.56 | 22.7 | 0 |
| 10 | 64QAM | 25 | 12 | 21.58 | 21.59 | 21.57 | | |
| 10 | 64QAM | 25 | 25 | 21.52 | 21.53 | 21.55 | | |
| 10 | 64QAM | 50 | 0 | 21.49 | 21.46 | 21.52 | | |
| Channel | | | | 23755 | 23790 | 23825 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 706.5 | 710 | 713.5 | | |
| 5 | QPSK | 1 | 0 | 21.41 | 21.59 | 21.60 | 22.7 | 0 |
| 5 | QPSK | 1 | 12 | 21.57 | 21.58 | 21.57 | | |
| 5 | QPSK | 1 | 24 | 21.60 | 21.50 | 21.57 | | |
| 5 | QPSK | 12 | 0 | 21.59 | 21.52 | 21.43 | 22.7 | 0 |
| 5 | QPSK | 12 | 7 | 21.51 | 21.52 | 21.60 | | |
| 5 | QPSK | 12 | 13 | 21.48 | 21.45 | 21.44 | | |
| 5 | QPSK | 25 | 0 | 21.49 | 21.58 | 21.43 | | |
| 5 | 16QAM | 1 | 0 | 21.53 | 21.49 | 21.40 | 22.7 | 0 |
| 5 | 16QAM | 1 | 12 | 21.42 | 21.47 | 21.60 | | |
| 5 | 16QAM | 1 | 24 | 21.58 | 21.53 | 21.57 | | |
| 5 | 16QAM | 12 | 0 | 21.44 | 21.45 | 21.54 | 22.7 | 0 |
| 5 | 16QAM | 12 | 7 | 21.60 | 21.45 | 21.50 | | |
| 5 | 16QAM | 12 | 13 | 21.47 | 21.60 | 21.60 | | |
| 5 | 16QAM | 25 | 0 | 21.59 | 21.40 | 21.57 | | |
| 5 | 64QAM | 1 | 0 | 21.50 | 21.54 | 21.40 | 22.7 | 0 |
| 5 | 64QAM | 1 | 12 | 21.45 | 21.43 | 21.42 | | |
| 5 | 64QAM | 1 | 24 | 21.47 | 21.52 | 21.60 | | |
| 5 | 64QAM | 12 | 0 | 21.40 | 21.48 | 21.60 | 22.7 | 0 |
| 5 | 64QAM | 12 | 7 | 21.49 | 21.46 | 21.44 | | |
| 5 | 64QAM | 12 | 13 | 21.40 | 21.55 | 21.53 | | |
| 5 | 64QAM | 25 | 0 | 21.43 | 21.59 | 21.58 | | |

**<LTE Band 25>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 26140 | 26340 | 26590 | | |
| Frequency (MHz) | | | | 1860 | 1880 | 1905 | | |
| 20 | QPSK | 1 | 0 | 19.02 | 18.89 | 18.86 | 19.8 | 0 |
| 20 | QPSK | 1 | 49 | 18.85 | 18.89 | 18.99 | | |
| 20 | QPSK | 1 | 99 | 18.81 | 18.96 | 18.91 | | |
| 20 | QPSK | 50 | 0 | 19.00 | 18.88 | 18.92 | 19.8 | 0 |
| 20 | QPSK | 50 | 24 | 18.98 | 18.93 | 18.97 | | |
| 20 | QPSK | 50 | 50 | 18.83 | 18.97 | 18.98 | | |
| 20 | QPSK | 100 | 0 | 18.95 | 18.84 | 18.92 | | |
| 20 | 16QAM | 1 | 0 | 19.00 | 19.00 | 18.80 | 19.8 | 0 |
| 20 | 16QAM | 1 | 49 | 18.96 | 18.82 | 18.85 | | |
| 20 | 16QAM | 1 | 99 | 18.98 | 18.97 | 18.87 | | |
| 20 | 16QAM | 50 | 0 | 18.88 | 18.85 | 18.83 | 19.8 | 0 |
| 20 | 16QAM | 50 | 24 | 18.91 | 18.96 | 19.00 | | |
| 20 | 16QAM | 50 | 50 | 18.86 | 18.80 | 18.87 | | |
| 20 | 16QAM | 100 | 0 | 18.88 | 18.87 | 18.96 | | |
| 20 | 64QAM | 1 | 0 | 18.93 | 18.85 | 18.85 | 19.8 | 0 |
| 20 | 64QAM | 1 | 49 | 18.87 | 18.92 | 18.86 | | |
| 20 | 64QAM | 1 | 99 | 18.86 | 18.99 | 18.98 | | |
| 20 | 64QAM | 50 | 0 | 18.83 | 19.00 | 18.88 | 19.8 | 0 |
| 20 | 64QAM | 50 | 24 | 18.90 | 19.00 | 18.93 | | |
| 20 | 64QAM | 50 | 50 | 18.89 | 18.80 | 19.00 | | |
| 20 | 64QAM | 100 | 0 | 18.87 | 18.82 | 18.82 | | |
| Channel | | | | 26115 | 26340 | 26615 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1857.5 | 1880 | 1907.5 | | |
| 15 | QPSK | 1 | 0 | 18.83 | 18.86 | 18.84 | 19.8 | 0 |
| 15 | QPSK | 1 | 37 | 18.87 | 18.97 | 18.80 | | |
| 15 | QPSK | 1 | 74 | 18.87 | 18.82 | 18.99 | | |
| 15 | QPSK | 36 | 0 | 18.98 | 18.85 | 18.89 | 19.8 | 0 |
| 15 | QPSK | 36 | 20 | 18.87 | 18.84 | 18.85 | | |
| 15 | QPSK | 36 | 39 | 18.96 | 18.99 | 18.92 | | |
| 15 | QPSK | 75 | 0 | 18.80 | 18.90 | 18.93 | | |
| 15 | 16QAM | 1 | 0 | 18.89 | 18.93 | 18.89 | 19.8 | 0 |
| 15 | 16QAM | 1 | 37 | 19.00 | 18.88 | 18.87 | | |
| 15 | 16QAM | 1 | 74 | 18.97 | 18.87 | 18.85 | | |
| 15 | 16QAM | 36 | 0 | 18.85 | 18.92 | 18.96 | 19.8 | 0 |
| 15 | 16QAM | 36 | 20 | 18.89 | 18.87 | 18.90 | | |
| 15 | 16QAM | 36 | 39 | 18.93 | 18.87 | 18.81 | | |
| 15 | 16QAM | 75 | 0 | 18.81 | 18.97 | 18.81 | | |
| 15 | 64QAM | 1 | 0 | 18.95 | 18.82 | 18.81 | 19.8 | 0 |
| 15 | 64QAM | 1 | 37 | 18.85 | 19.00 | 18.81 | | |
| 15 | 64QAM | 1 | 74 | 18.96 | 19.00 | 18.81 | | |
| 15 | 64QAM | 36 | 0 | 19.00 | 18.89 | 18.82 | 19.8 | 0 |
| 15 | 64QAM | 36 | 20 | 18.89 | 18.98 | 18.85 | | |
| 15 | 64QAM | 36 | 39 | 18.99 | 18.80 | 19.00 | | |
| 15 | 64QAM | 75 | 0 | 18.84 | 18.92 | 18.84 | | |
| Channel | | | | 26090 | 26340 | 26640 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1855 | 1880 | 1910 | | |
| 10 | QPSK | 1 | 0 | 18.85 | 18.88 | 18.91 | 19.8 | 0 |
| 10 | QPSK | 1 | 25 | 18.85 | 18.86 | 18.95 | | |
| 10 | QPSK | 1 | 49 | 18.94 | 18.90 | 18.98 | | |
| 10 | QPSK | 25 | 0 | 19.00 | 18.99 | 18.84 | 19.8 | 0 |
| 10 | QPSK | 25 | 12 | 18.98 | 18.83 | 19.00 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 18.81 | 18.80 | 18.92 | | |
| 10 | QPSK | 50 | 0 | 18.94 | 18.93 | 18.85 | | |
| 10 | 16QAM | 1 | 0 | 18.91 | 18.84 | 18.96 | | |
| 10 | 16QAM | 1 | 25 | 18.93 | 18.94 | 18.91 | 19.8 | 0 |
| 10 | 16QAM | 1 | 49 | 18.99 | 18.80 | 18.88 | | |
| 10 | 16QAM | 25 | 0 | 18.93 | 18.80 | 18.85 | | |
| 10 | 16QAM | 25 | 12 | 18.81 | 18.90 | 18.96 | 19.8 | 0 |
| 10 | 16QAM | 25 | 25 | 18.98 | 18.87 | 18.80 | | |
| 10 | 16QAM | 50 | 0 | 18.99 | 18.95 | 18.95 | | |
| 10 | 64QAM | 1 | 0 | 18.95 | 18.93 | 18.87 | | |
| 10 | 64QAM | 1 | 25 | 18.94 | 18.81 | 19.00 | 19.8 | 0 |
| 10 | 64QAM | 1 | 49 | 18.87 | 18.80 | 18.85 | | |
| 10 | 64QAM | 25 | 0 | 18.95 | 18.86 | 18.98 | | |
| 10 | 64QAM | 25 | 12 | 18.93 | 18.94 | 18.87 | 19.8 | 0 |
| 10 | 64QAM | 25 | 25 | 18.86 | 18.92 | 19.00 | | |
| 10 | 64QAM | 50 | 0 | 18.90 | 18.89 | 18.94 | | |
| Channel | | | | 26065 | 26340 | 26665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1852.5 | 1880 | 1912.5 | | |
| 5 | QPSK | 1 | 0 | 18.93 | 18.82 | 18.86 | | |
| 5 | QPSK | 1 | 12 | 18.99 | 18.92 | 18.92 | 19.8 | 0 |
| 5 | QPSK | 1 | 24 | 18.91 | 18.87 | 18.94 | | |
| 5 | QPSK | 12 | 0 | 18.98 | 18.96 | 18.90 | | |
| 5 | QPSK | 12 | 7 | 18.94 | 18.86 | 18.96 | 19.8 | 0 |
| 5 | QPSK | 12 | 13 | 18.93 | 18.83 | 18.92 | | |
| 5 | QPSK | 25 | 0 | 18.93 | 18.91 | 18.91 | | |
| 5 | 16QAM | 1 | 0 | 18.91 | 18.82 | 18.91 | | |
| 5 | 16QAM | 1 | 12 | 18.90 | 18.96 | 18.84 | 19.8 | 0 |
| 5 | 16QAM | 1 | 24 | 19.00 | 18.85 | 18.87 | | |
| 5 | 16QAM | 12 | 0 | 18.96 | 18.87 | 18.97 | | |
| 5 | 16QAM | 12 | 7 | 18.80 | 18.80 | 18.98 | 19.8 | 0 |
| 5 | 16QAM | 12 | 13 | 18.98 | 18.87 | 18.94 | | |
| 5 | 16QAM | 25 | 0 | 18.97 | 18.80 | 18.82 | | |
| 5 | 64QAM | 1 | 0 | 18.98 | 18.88 | 18.83 | | |
| 5 | 64QAM | 1 | 12 | 18.96 | 18.86 | 18.83 | 19.8 | 0 |
| 5 | 64QAM | 1 | 24 | 18.84 | 18.82 | 18.83 | | |
| 5 | 64QAM | 12 | 0 | 19.00 | 18.92 | 18.87 | | |
| 5 | 64QAM | 12 | 7 | 18.87 | 18.82 | 18.97 | 19.8 | 0 |
| 5 | 64QAM | 12 | 13 | 18.87 | 18.89 | 18.82 | | |
| 5 | 64QAM | 25 | 0 | 18.81 | 18.93 | 18.81 | | |
| Channel | | | | 26055 | 26340 | 26675 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1851.5 | 1880 | 1913.5 | | |
| 3 | QPSK | 1 | 0 | 18.95 | 18.99 | 18.85 | | |
| 3 | QPSK | 1 | 8 | 18.94 | 18.93 | 18.80 | 19.8 | 0 |
| 3 | QPSK | 1 | 14 | 18.84 | 18.91 | 18.82 | | |
| 3 | QPSK | 8 | 0 | 18.85 | 18.87 | 18.87 | | |
| 3 | QPSK | 8 | 4 | 18.90 | 18.86 | 18.80 | 19.8 | 0 |
| 3 | QPSK | 8 | 7 | 18.83 | 18.93 | 18.86 | | |
| 3 | QPSK | 15 | 0 | 18.86 | 18.86 | 18.93 | | |
| 3 | 16QAM | 1 | 0 | 18.99 | 18.97 | 18.97 | | |
| 3 | 16QAM | 1 | 8 | 18.86 | 18.94 | 18.99 | 19.8 | 0 |
| 3 | 16QAM | 1 | 14 | 18.97 | 18.86 | 18.85 | | |
| 3 | 16QAM | 8 | 0 | 18.84 | 18.94 | 18.81 | | |
| 3 | 16QAM | 8 | 4 | 18.91 | 18.80 | 18.95 | 19.8 | 0 |
| 3 | 16QAM | 8 | 7 | 18.93 | 18.87 | 18.85 | | |
| 3 | 16QAM | 15 | 0 | 18.91 | 18.99 | 18.98 | | |
| 3 | 64QAM | 1 | 0 | 18.95 | 18.82 | 18.93 | 19.8 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 18.97 | 18.86 | 18.94 | | |
| 3 | 64QAM | 1 | 14 | 18.83 | 18.84 | 18.88 | | |
| 3 | 64QAM | 8 | 0 | 18.92 | 18.99 | 19.00 | 19.8 | 0 |
| 3 | 64QAM | 8 | 4 | 18.84 | 18.86 | 18.85 | | |
| 3 | 64QAM | 8 | 7 | 18.98 | 18.85 | 18.93 | | |
| 3 | 64QAM | 15 | 0 | 18.82 | 18.86 | 18.98 | | |
| Channel | | | | 26047 | 26340 | 26683 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1850.7 | 1880 | 1914.3 | | |
| 1.4 | QPSK | 1 | 0 | 18.95 | 18.95 | 18.92 | 19.8 | 0 |
| 1.4 | QPSK | 1 | 3 | 18.88 | 18.86 | 18.92 | | |
| 1.4 | QPSK | 1 | 5 | 18.87 | 18.99 | 18.91 | | |
| 1.4 | QPSK | 3 | 0 | 18.93 | 18.80 | 18.85 | | |
| 1.4 | QPSK | 3 | 1 | 18.81 | 18.95 | 18.86 | | |
| 1.4 | QPSK | 3 | 3 | 18.93 | 18.88 | 18.83 | | |
| 1.4 | QPSK | 6 | 0 | 18.86 | 18.81 | 18.86 | 19.8 | 0 |
| 1.4 | 16QAM | 1 | 0 | 19.00 | 18.92 | 18.81 | 19.8 | 0 |
| 1.4 | 16QAM | 1 | 3 | 18.93 | 18.91 | 18.83 | | |
| 1.4 | 16QAM | 1 | 5 | 18.90 | 18.97 | 18.84 | | |
| 1.4 | 16QAM | 3 | 0 | 18.98 | 18.91 | 18.98 | | |
| 1.4 | 16QAM | 3 | 1 | 18.80 | 18.82 | 18.96 | | |
| 1.4 | 16QAM | 3 | 3 | 18.89 | 18.87 | 18.93 | | |
| 1.4 | 16QAM | 6 | 0 | 18.80 | 18.82 | 18.82 | 19.8 | 0 |
| 1.4 | 64QAM | 1 | 0 | 18.86 | 18.95 | 18.92 | 19.8 | 0 |
| 1.4 | 64QAM | 1 | 3 | 19.00 | 18.94 | 19.00 | | |
| 1.4 | 64QAM | 1 | 5 | 18.82 | 18.92 | 18.90 | | |
| 1.4 | 64QAM | 3 | 0 | 18.99 | 18.96 | 18.85 | | |
| 1.4 | 64QAM | 3 | 1 | 18.90 | 18.88 | 18.96 | | |
| 1.4 | 64QAM | 3 | 3 | 18.81 | 18.92 | 19.00 | | |
| 1.4 | 64QAM | 6 | 0 | 18.80 | 18.81 | 18.87 | 19.8 | 0 |

**<LTE Band 26>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 26765 | 26865 | 26965 | | |
| Frequency (MHz) | | | | 821.5 | 831.5 | 841.5 | | |
| 15 | QPSK | 1 | 0 | 20.55 | 20.46 | 20.57 | 20.8 | 0 |
| 15 | QPSK | 1 | 37 | 20.35 | 20.45 | 20.33 | | |
| 15 | QPSK | 1 | 74 | 20.43 | 20.42 | 20.30 | | |
| 15 | QPSK | 36 | 0 | 20.36 | 20.50 | 20.36 | 20.8 | 0 |
| 15 | QPSK | 36 | 20 | 20.32 | 20.32 | 20.44 | | |
| 15 | QPSK | 36 | 39 | 20.39 | 20.48 | 20.31 | | |
| 15 | QPSK | 75 | 0 | 20.30 | 20.46 | 20.30 | | |
| 15 | 16QAM | 1 | 0 | 20.34 | 20.42 | 20.39 | 20.8 | 0 |
| 15 | 16QAM | 1 | 37 | 20.38 | 20.35 | 20.41 | | |
| 15 | 16QAM | 1 | 74 | 20.37 | 20.47 | 20.43 | | |
| 15 | 16QAM | 36 | 0 | 20.43 | 20.41 | 20.34 | 20.8 | 0 |
| 15 | 16QAM | 36 | 20 | 20.43 | 20.40 | 20.42 | | |
| 15 | 16QAM | 36 | 39 | 20.32 | 20.41 | 20.35 | | |
| 15 | 16QAM | 75 | 0 | 20.42 | 20.33 | 20.49 | | |
| 15 | 64QAM | 1 | 0 | 20.47 | 20.48 | 20.37 | 20.8 | 0 |
| 15 | 64QAM | 1 | 37 | 20.48 | 20.36 | 20.35 | | |
| 15 | 64QAM | 1 | 74 | 20.49 | 20.48 | 20.46 | | |
| 15 | 64QAM | 36 | 0 | 20.39 | 20.46 | 20.50 | 20.8 | 0 |
| 15 | 64QAM | 36 | 20 | 20.50 | 20.38 | 20.48 | | |
| 15 | 64QAM | 36 | 39 | 20.36 | 20.37 | 20.42 | | |
| 15 | 64QAM | 75 | 0 | 20.30 | 20.43 | 20.43 | | |
| Channel | | | | 26740 | 26865 | 26990 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 819 | 831.5 | 844 | | |
| 10 | QPSK | 1 | 0 | 20.48 | 20.39 | 20.37 | 20.8 | 0 |
| 10 | QPSK | 1 | 25 | 20.44 | 20.48 | 20.37 | | |
| 10 | QPSK | 1 | 49 | 20.38 | 20.36 | 20.44 | | |
| 10 | QPSK | 25 | 0 | 20.38 | 20.43 | 20.45 | 20.8 | 0 |
| 10 | QPSK | 25 | 12 | 20.32 | 20.49 | 20.30 | | |
| 10 | QPSK | 25 | 25 | 20.34 | 20.32 | 20.48 | | |
| 10 | QPSK | 50 | 0 | 20.30 | 20.36 | 20.39 | | |
| 10 | 16QAM | 1 | 0 | 20.49 | 20.38 | 20.50 | 20.8 | 0 |
| 10 | 16QAM | 1 | 25 | 20.41 | 20.47 | 20.39 | | |
| 10 | 16QAM | 1 | 49 | 20.35 | 20.32 | 20.36 | | |
| 10 | 16QAM | 25 | 0 | 20.37 | 20.50 | 20.34 | 20.8 | 0 |
| 10 | 16QAM | 25 | 12 | 20.46 | 20.44 | 20.39 | | |
| 10 | 16QAM | 25 | 25 | 20.38 | 20.34 | 20.37 | | |
| 10 | 16QAM | 50 | 0 | 20.45 | 20.46 | 20.43 | | |
| 10 | 64QAM | 1 | 0 | 20.44 | 20.45 | 20.48 | 20.8 | 0 |
| 10 | 64QAM | 1 | 25 | 20.38 | 20.48 | 20.46 | | |
| 10 | 64QAM | 1 | 49 | 20.34 | 20.32 | 20.49 | | |
| 10 | 64QAM | 25 | 0 | 20.49 | 20.39 | 20.34 | 20.8 | 0 |
| 10 | 64QAM | 25 | 12 | 20.39 | 20.32 | 20.44 | | |
| 10 | 64QAM | 25 | 25 | 20.45 | 20.33 | 20.35 | | |
| 10 | 64QAM | 50 | 0 | 20.46 | 20.37 | 20.43 | | |
| Channel | | | | 26715 | 26865 | 27015 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 816.5 | 831.5 | 846.5 | | |
| 5 | QPSK | 1 | 0 | 20.49 | 20.46 | 20.41 | 20.8 | 0 |
| 5 | QPSK | 1 | 12 | 20.44 | 20.34 | 20.38 | | |
| 5 | QPSK | 1 | 24 | 20.48 | 20.44 | 20.44 | | |
| 5 | QPSK | 12 | 0 | 20.45 | 20.46 | 20.34 | 20.8 | 0 |
| 5 | QPSK | 12 | 7 | 20.42 | 20.39 | 20.36 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | QPSK | 12 | 13 | 20.50 | 20.45 | 20.35 | | |
| 5 | QPSK | 25 | 0 | 20.50 | 20.42 | 20.45 | | |
| 5 | 16QAM | 1 | 0 | 20.35 | 20.42 | 20.37 | 20.8 | 0 |
| 5 | 16QAM | 1 | 12 | 20.48 | 20.34 | 20.37 | | |
| 5 | 16QAM | 1 | 24 | 20.36 | 20.47 | 20.33 | | |
| 5 | 16QAM | 12 | 0 | 20.47 | 20.32 | 20.31 | 20.8 | 0 |
| 5 | 16QAM | 12 | 7 | 20.35 | 20.42 | 20.41 | | |
| 5 | 16QAM | 12 | 13 | 20.36 | 20.48 | 20.42 | | |
| 5 | 16QAM | 25 | 0 | 20.48 | 20.43 | 20.48 | | |
| 5 | 64QAM | 1 | 0 | 20.40 | 20.36 | 20.48 | 20.8 | 0 |
| 5 | 64QAM | 1 | 12 | 20.37 | 20.49 | 20.40 | | |
| 5 | 64QAM | 1 | 24 | 20.45 | 20.42 | 20.41 | | |
| 5 | 64QAM | 12 | 0 | 20.46 | 20.39 | 20.36 | 20.8 | 0 |
| 5 | 64QAM | 12 | 7 | 20.36 | 20.37 | 20.33 | | |
| 5 | 64QAM | 12 | 13 | 20.33 | 20.40 | 20.39 | | |
| 5 | 64QAM | 25 | 0 | 20.36 | 20.47 | 20.34 | | |
| Channel | | | | 26705 | 26865 | 27025 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 815.5 | 831.5 | 847.5 | | |
| 3 | QPSK | 1 | 0 | 20.33 | 20.50 | 20.38 | 20.8 | 0 |
| 3 | QPSK | 1 | 8 | 20.40 | 20.32 | 20.35 | | |
| 3 | QPSK | 1 | 14 | 20.41 | 20.42 | 20.37 | | |
| 3 | QPSK | 8 | 0 | 20.47 | 20.45 | 20.39 | 20.8 | 0 |
| 3 | QPSK | 8 | 4 | 20.49 | 20.31 | 20.50 | | |
| 3 | QPSK | 8 | 7 | 20.40 | 20.44 | 20.45 | | |
| 3 | QPSK | 15 | 0 | 20.31 | 20.42 | 20.50 | | |
| 3 | 16QAM | 1 | 0 | 20.34 | 20.34 | 20.44 | 20.8 | 0 |
| 3 | 16QAM | 1 | 8 | 20.42 | 20.42 | 20.37 | | |
| 3 | 16QAM | 1 | 14 | 20.41 | 20.40 | 20.50 | | |
| 3 | 16QAM | 8 | 0 | 20.47 | 20.49 | 20.30 | 20.8 | 0 |
| 3 | 16QAM | 8 | 4 | 20.47 | 20.37 | 20.38 | | |
| 3 | 16QAM | 8 | 7 | 20.34 | 20.35 | 20.40 | | |
| 3 | 16QAM | 15 | 0 | 20.47 | 20.37 | 20.32 | | |
| 3 | 64QAM | 1 | 0 | 20.41 | 20.50 | 20.43 | 20.8 | 0 |
| 3 | 64QAM | 1 | 8 | 20.31 | 20.39 | 20.36 | | |
| 3 | 64QAM | 1 | 14 | 20.30 | 20.48 | 20.42 | | |
| 3 | 64QAM | 8 | 0 | 20.47 | 20.41 | 20.30 | 20.8 | 0 |
| 3 | 64QAM | 8 | 4 | 20.45 | 20.49 | 20.45 | | |
| 3 | 64QAM | 8 | 7 | 20.31 | 20.42 | 20.30 | | |
| 3 | 64QAM | 15 | 0 | 20.40 | 20.48 | 20.44 | | |
| Channel | | | | 26697 | 26865 | 27033 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 814.7 | 831.5 | 848.3 | | |
| 1.4 | QPSK | 1 | 0 | 20.32 | 20.31 | 20.30 | 20.8 | 0 |
| 1.4 | QPSK | 1 | 3 | 20.33 | 20.41 | 20.45 | | |
| 1.4 | QPSK | 1 | 5 | 20.49 | 20.41 | 20.42 | | |
| 1.4 | QPSK | 3 | 0 | 20.39 | 20.48 | 20.48 | | |
| 1.4 | QPSK | 3 | 1 | 20.32 | 20.38 | 20.44 | | |
| 1.4 | QPSK | 3 | 3 | 20.40 | 20.40 | 20.40 | | |
| 1.4 | QPSK | 6 | 0 | 20.46 | 20.39 | 20.36 | 20.8 | 0 |
| 1.4 | 16QAM | 1 | 0 | 20.40 | 20.31 | 20.30 | 20.8 | 0 |
| 1.4 | 16QAM | 1 | 3 | 20.49 | 20.46 | 20.31 | | |
| 1.4 | 16QAM | 1 | 5 | 20.33 | 20.48 | 20.36 | | |
| 1.4 | 16QAM | 3 | 0 | 20.49 | 20.50 | 20.42 | | |
| 1.4 | 16QAM | 3 | 1 | 20.39 | 20.40 | 20.36 | | |
| 1.4 | 16QAM | 3 | 3 | 20.41 | 20.30 | 20.36 | | |
| 1.4 | 16QAM | 6 | 0 | 20.46 | 20.38 | 20.33 | 20.8 | 0 |
| 1.4 | 64QAM | 1 | 0 | 20.36 | 20.35 | 20.38 | 20.8 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1.4 | 64QAM | 1 | 3 | 20.40 | 20.43 | 20.47 | | |
| 1.4 | 64QAM | 1 | 5 | 20.32 | 20.42 | 20.46 | | |
| 1.4 | 64QAM | 3 | 0 | 20.35 | 20.32 | 20.36 | | |
| 1.4 | 64QAM | 3 | 1 | 20.43 | 20.38 | 20.36 | | |
| 1.4 | 64QAM | 3 | 3 | 20.48 | 20.37 | 20.38 | | |
| 1.4 | 64QAM | 6 | 0 | 20.33 | 20.48 | 20.47 | 20.8 | 0 |

**<LTE Band 30>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 27710 | | | |
| Frequency (MHz) | | | | | 2310 | | | |
| 10 | QPSK | 1 | 0 | | 17.81 | | 19.6 | 0 |
| 10 | QPSK | 1 | 25 | | 17.68 | | | |
| 10 | QPSK | 1 | 49 | | 17.72 | | | |
| 10 | QPSK | 25 | 0 | | 17.71 | | 19.6 | 0 |
| 10 | QPSK | 25 | 12 | | 17.65 | | | |
| 10 | QPSK | 25 | 25 | | 17.70 | | | |
| 10 | QPSK | 50 | 0 | | 17.60 | | | |
| 10 | 16QAM | 1 | 0 | | 17.68 | | 19.6 | 0 |
| 10 | 16QAM | 1 | 25 | | 17.65 | | | |
| 10 | 16QAM | 1 | 49 | | 17.71 | | | |
| 10 | 16QAM | 25 | 0 | | 17.64 | | 19.6 | 0 |
| 10 | 16QAM | 25 | 12 | | 17.77 | | | |
| 10 | 16QAM | 25 | 25 | | 17.77 | | | |
| 10 | 16QAM | 50 | 0 | | 17.63 | | | |
| 10 | 64QAM | 1 | 0 | | 17.64 | | 19.6 | 0 |
| 10 | 64QAM | 1 | 25 | | 17.78 | | | |
| 10 | 64QAM | 1 | 49 | | 17.76 | | | |
| 10 | 64QAM | 25 | 0 | | 17.73 | | 19.6 | 0 |
| 10 | 64QAM | 25 | 12 | | 17.72 | | | |
| 10 | 64QAM | 25 | 25 | | 17.71 | | | |
| 10 | 64QAM | 50 | 0 | | 17.68 | | | |
| Channel | | | | 27685 | 27710 | 27735 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2307.5 | 2310 | 2312.5 | | |
| 5 | QPSK | 1 | 0 | 17.80 | 17.74 | 17.71 | 19.6 | 0 |
| 5 | QPSK | 1 | 12 | 17.78 | 17.80 | 17.78 | | |
| 5 | QPSK | 1 | 24 | 17.74 | 17.76 | 17.71 | | |
| 5 | QPSK | 12 | 0 | 17.74 | 17.76 | 17.71 | 19.6 | 0 |
| 5 | QPSK | 12 | 7 | 17.79 | 17.76 | 17.79 | | |
| 5 | QPSK | 12 | 13 | 17.80 | 17.72 | 17.80 | | |
| 5 | QPSK | 25 | 0 | 17.74 | 17.75 | 17.72 | | |
| 5 | 16QAM | 1 | 0 | 17.80 | 17.79 | 17.76 | 19.6 | 0 |
| 5 | 16QAM | 1 | 12 | 17.79 | 17.75 | 17.75 | | |
| 5 | 16QAM | 1 | 24 | 17.76 | 17.79 | 17.70 | | |
| 5 | 16QAM | 12 | 0 | 17.74 | 17.71 | 17.79 | 19.6 | 0 |
| 5 | 16QAM | 12 | 7 | 17.73 | 17.73 | 17.79 | | |
| 5 | 16QAM | 12 | 13 | 17.78 | 17.73 | 17.75 | | |
| 5 | 16QAM | 25 | 0 | 17.75 | 17.80 | 17.80 | | |
| 5 | 64QAM | 1 | 0 | 17.76 | 17.74 | 17.79 | 19.6 | 0 |
| 5 | 64QAM | 1 | 12 | 17.79 | 17.80 | 17.79 | | |
| 5 | 64QAM | 1 | 24 | 17.78 | 17.71 | 17.80 | | |
| 5 | 64QAM | 12 | 0 | 17.77 | 17.78 | 17.74 | 19.6 | 0 |
| 5 | 64QAM | 12 | 7 | 17.73 | 17.80 | 17.80 | | |
| 5 | 64QAM | 12 | 13 | 17.80 | 17.79 | 17.75 | | |
| 5 | 64QAM | 25 | 0 | 17.72 | 17.72 | 17.72 | | |

**<LTE Band 66>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 132072 | 132322 | 132572 | | |
| Frequency (MHz) | | | | 1720 | 1745 | 1770 | | |
| 20 | QPSK | 1 | 0 | 19.30 | 19.38 | 19.26 | 20 | 0 |
| 20 | QPSK | 1 | 49 | 19.18 | 19.24 | 19.12 | | |
| 20 | QPSK | 1 | 99 | 19.17 | 19.23 | 19.22 | | |
| 20 | QPSK | 50 | 0 | 19.24 | 19.30 | 19.14 | 20 | 0 |
| 20 | QPSK | 50 | 24 | 19.23 | 19.14 | 19.24 | | |
| 20 | QPSK | 50 | 50 | 19.29 | 19.23 | 19.22 | | |
| 20 | QPSK | 100 | 0 | 19.15 | 19.18 | 19.16 | | |
| 20 | 16QAM | 1 | 0 | 19.24 | 19.19 | 19.23 | 20 | 0 |
| 20 | 16QAM | 1 | 49 | 19.19 | 19.30 | 19.10 | | |
| 20 | 16QAM | 1 | 99 | 19.28 | 19.20 | 19.13 | | |
| 20 | 16QAM | 50 | 0 | 19.25 | 19.22 | 19.30 | 20 | 0 |
| 20 | 16QAM | 50 | 24 | 19.20 | 19.26 | 19.19 | | |
| 20 | 16QAM | 50 | 50 | 19.23 | 19.21 | 19.18 | | |
| 20 | 16QAM | 100 | 0 | 19.25 | 19.27 | 19.15 | | |
| 20 | 64QAM | 1 | 0 | 19.12 | 19.10 | 19.25 | 20 | 0 |
| 20 | 64QAM | 1 | 49 | 19.24 | 19.13 | 19.30 | | |
| 20 | 64QAM | 1 | 99 | 19.16 | 19.21 | 19.28 | | |
| 20 | 64QAM | 50 | 0 | 19.30 | 19.25 | 19.10 | 20 | 0 |
| 20 | 64QAM | 50 | 24 | 19.15 | 19.11 | 19.11 | | |
| 20 | 64QAM | 50 | 50 | 19.30 | 19.28 | 19.25 | | |
| 20 | 64QAM | 100 | 0 | 19.14 | 19.11 | 19.23 | | |
| Channel | | | | 132047 | 132322 | 132597 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1717.5 | 1745 | 1772.5 | | |
| 15 | QPSK | 1 | 0 | 19.12 | 19.26 | 19.24 | 20 | 0 |
| 15 | QPSK | 1 | 37 | 19.13 | 19.17 | 19.18 | | |
| 15 | QPSK | 1 | 74 | 19.16 | 19.21 | 19.28 | | |
| 15 | QPSK | 36 | 0 | 19.17 | 19.23 | 19.13 | 20 | 0 |
| 15 | QPSK | 36 | 20 | 19.13 | 19.12 | 19.15 | | |
| 15 | QPSK | 36 | 39 | 19.18 | 19.22 | 19.28 | | |
| 15 | QPSK | 75 | 0 | 19.20 | 19.10 | 19.13 | | |
| 15 | 16QAM | 1 | 0 | 19.19 | 19.25 | 19.11 | 20 | 0 |
| 15 | 16QAM | 1 | 37 | 19.16 | 19.23 | 19.28 | | |
| 15 | 16QAM | 1 | 74 | 19.19 | 19.28 | 19.28 | | |
| 15 | 16QAM | 36 | 0 | 19.14 | 19.30 | 19.12 | 20 | 0 |
| 15 | 16QAM | 36 | 20 | 19.23 | 19.12 | 19.21 | | |
| 15 | 16QAM | 36 | 39 | 19.18 | 19.10 | 19.15 | | |
| 15 | 16QAM | 75 | 0 | 19.11 | 19.10 | 19.18 | | |
| 15 | 64QAM | 1 | 0 | 19.28 | 19.12 | 19.26 | 20 | 0 |
| 15 | 64QAM | 1 | 37 | 19.15 | 19.26 | 19.10 | | |
| 15 | 64QAM | 1 | 74 | 19.21 | 19.20 | 19.28 | | |
| 15 | 64QAM | 36 | 0 | 19.23 | 19.12 | 19.27 | 20 | 0 |
| 15 | 64QAM | 36 | 20 | 19.27 | 19.17 | 19.16 | | |
| 15 | 64QAM | 36 | 39 | 19.19 | 19.17 | 19.25 | | |
| 15 | 64QAM | 75 | 0 | 19.17 | 19.11 | 19.30 | | |
| Channel | | | | 132022 | 132322 | 132622 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1715 | 1745 | 1775 | | |
| 10 | QPSK | 1 | 0 | 19.23 | 19.15 | 19.26 | 20 | 0 |
| 10 | QPSK | 1 | 25 | 19.12 | 19.25 | 19.13 | | |
| 10 | QPSK | 1 | 49 | 19.18 | 19.15 | 19.30 | | |
| 10 | QPSK | 25 | 0 | 19.24 | 19.20 | 19.26 | 20 | 0 |
| 10 | QPSK | 25 | 12 | 19.13 | 19.17 | 19.17 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 19.11 | 19.23 | 19.26 | | |
| 10 | QPSK | 50 | 0 | 19.24 | 19.11 | 19.20 | | |
| 10 | 16QAM | 1 | 0 | 19.20 | 19.14 | 19.26 | 20 | 0 |
| 10 | 16QAM | 1 | 25 | 19.10 | 19.30 | 19.30 | | |
| 10 | 16QAM | 1 | 49 | 19.20 | 19.14 | 19.19 | | |
| 10 | 16QAM | 25 | 0 | 19.14 | 19.23 | 19.16 | 20 | 0 |
| 10 | 16QAM | 25 | 12 | 19.17 | 19.24 | 19.20 | | |
| 10 | 16QAM | 25 | 25 | 19.15 | 19.17 | 19.26 | | |
| 10 | 16QAM | 50 | 0 | 19.28 | 19.26 | 19.18 | | |
| 10 | 64QAM | 1 | 0 | 19.10 | 19.20 | 19.22 | 20 | 0 |
| 10 | 64QAM | 1 | 25 | 19.12 | 19.11 | 19.28 | | |
| 10 | 64QAM | 1 | 49 | 19.14 | 19.26 | 19.30 | | |
| 10 | 64QAM | 25 | 0 | 19.20 | 19.10 | 19.29 | 20 | 0 |
| 10 | 64QAM | 25 | 12 | 19.28 | 19.27 | 19.20 | | |
| 10 | 64QAM | 25 | 25 | 19.20 | 19.15 | 19.12 | | |
| 10 | 64QAM | 50 | 0 | 19.13 | 19.22 | 19.24 | | |
| Channel | | | | 131997 | 132322 | 132647 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1712.5 | 1745 | 1777.5 | | |
| 5 | QPSK | 1 | 0 | 19.23 | 19.24 | 19.24 | 20 | 0 |
| 5 | QPSK | 1 | 12 | 19.18 | 19.12 | 19.16 | | |
| 5 | QPSK | 1 | 24 | 19.14 | 19.22 | 19.26 | | |
| 5 | QPSK | 12 | 0 | 19.14 | 19.30 | 19.16 | 20 | 0 |
| 5 | QPSK | 12 | 7 | 19.22 | 19.17 | 19.27 | | |
| 5 | QPSK | 12 | 13 | 19.20 | 19.21 | 19.24 | | |
| 5 | QPSK | 25 | 0 | 19.29 | 19.27 | 19.23 | | |
| 5 | 16QAM | 1 | 0 | 19.20 | 19.29 | 19.27 | 20 | 0 |
| 5 | 16QAM | 1 | 12 | 19.30 | 19.23 | 19.17 | | |
| 5 | 16QAM | 1 | 24 | 19.28 | 19.10 | 19.26 | | |
| 5 | 16QAM | 12 | 0 | 19.26 | 19.28 | 19.27 | 20 | 0 |
| 5 | 16QAM | 12 | 7 | 19.14 | 19.16 | 19.21 | | |
| 5 | 16QAM | 12 | 13 | 19.18 | 19.23 | 19.24 | | |
| 5 | 16QAM | 25 | 0 | 19.15 | 19.29 | 19.22 | | |
| 5 | 64QAM | 1 | 0 | 19.26 | 19.12 | 19.26 | 20 | 0 |
| 5 | 64QAM | 1 | 12 | 19.19 | 19.22 | 19.20 | | |
| 5 | 64QAM | 1 | 24 | 19.29 | 19.17 | 19.17 | | |
| 5 | 64QAM | 12 | 0 | 19.22 | 19.10 | 19.26 | 20 | 0 |
| 5 | 64QAM | 12 | 7 | 19.18 | 19.15 | 19.14 | | |
| 5 | 64QAM | 12 | 13 | 19.11 | 19.17 | 19.11 | | |
| 5 | 64QAM | 25 | 0 | 19.26 | 19.17 | 19.13 | | |
| Channel | | | | 131987 | 132322 | 132657 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1711.5 | 1745 | 1778.5 | | |
| 3 | QPSK | 1 | 0 | 19.17 | 19.29 | 19.17 | 20 | 0 |
| 3 | QPSK | 1 | 8 | 19.23 | 19.14 | 19.14 | | |
| 3 | QPSK | 1 | 14 | 19.15 | 19.23 | 19.21 | | |
| 3 | QPSK | 8 | 0 | 19.30 | 19.29 | 19.19 | 20 | 0 |
| 3 | QPSK | 8 | 4 | 19.10 | 19.20 | 19.15 | | |
| 3 | QPSK | 8 | 7 | 19.14 | 19.19 | 19.15 | | |
| 3 | QPSK | 15 | 0 | 19.19 | 19.30 | 19.23 | | |
| 3 | 16QAM | 1 | 0 | 19.11 | 19.20 | 19.29 | 20 | 0 |
| 3 | 16QAM | 1 | 8 | 19.14 | 19.16 | 19.24 | | |
| 3 | 16QAM | 1 | 14 | 19.25 | 19.16 | 19.28 | | |
| 3 | 16QAM | 8 | 0 | 19.28 | 19.28 | 19.11 | 20 | 0 |
| 3 | 16QAM | 8 | 4 | 19.17 | 19.24 | 19.17 | | |
| 3 | 16QAM | 8 | 7 | 19.25 | 19.29 | 19.28 | | |
| 3 | 16QAM | 15 | 0 | 19.18 | 19.21 | 19.29 | | |
| 3 | 64QAM | 1 | 0 | 19.29 | 19.11 | 19.27 | 20 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 19.20 | 19.11 | 19.28 | | |
| 3 | 64QAM | 1 | 14 | 19.17 | 19.15 | 19.26 | | |
| 3 | 64QAM | 8 | 0 | 19.18 | 19.11 | 19.15 | 20 | 0 |
| 3 | 64QAM | 8 | 4 | 19.14 | 19.14 | 19.27 | | |
| 3 | 64QAM | 8 | 7 | 19.21 | 19.25 | 19.20 | | |
| 3 | 64QAM | 15 | 0 | 19.13 | 19.21 | 19.28 | | |
| Channel | | | | 131979 | 132322 | 132665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1710.7 | 1745 | 1779.3 | | |
| 1.4 | QPSK | 1 | 0 | 19.18 | 19.24 | 19.22 | 20 | 0 |
| 1.4 | QPSK | 1 | 3 | 19.20 | 19.10 | 19.20 | | |
| 1.4 | QPSK | 1 | 5 | 19.23 | 19.23 | 19.18 | | |
| 1.4 | QPSK | 3 | 0 | 19.16 | 19.16 | 19.20 | | |
| 1.4 | QPSK | 3 | 1 | 19.18 | 19.17 | 19.21 | | |
| 1.4 | QPSK | 3 | 3 | 19.26 | 19.18 | 19.19 | | |
| 1.4 | QPSK | 6 | 0 | 19.27 | 19.13 | 19.18 | 20 | 0 |
| 1.4 | 16QAM | 1 | 0 | 19.17 | 19.15 | 19.17 | 20 | 0 |
| 1.4 | 16QAM | 1 | 3 | 19.13 | 19.30 | 19.14 | | |
| 1.4 | 16QAM | 1 | 5 | 19.11 | 19.18 | 19.23 | | |
| 1.4 | 16QAM | 3 | 0 | 19.20 | 19.24 | 19.21 | | |
| 1.4 | 16QAM | 3 | 1 | 19.23 | 19.30 | 19.20 | | |
| 1.4 | 16QAM | 3 | 3 | 19.21 | 19.24 | 19.11 | | |
| 1.4 | 16QAM | 6 | 0 | 19.14 | 19.13 | 19.24 | 20 | 0 |
| 1.4 | 64QAM | 1 | 0 | 19.16 | 19.29 | 19.29 | 20 | 0 |
| 1.4 | 64QAM | 1 | 3 | 19.16 | 19.23 | 19.28 | | |
| 1.4 | 64QAM | 1 | 5 | 19.22 | 19.18 | 19.19 | | |
| 1.4 | 64QAM | 3 | 0 | 19.26 | 19.21 | 19.26 | | |
| 1.4 | 64QAM | 3 | 1 | 19.28 | 19.23 | 19.17 | | |
| 1.4 | 64QAM | 3 | 3 | 19.28 | 19.24 | 19.12 | | |
| 1.4 | 64QAM | 6 | 0 | 19.24 | 19.23 | 19.18 | 20 | 0 |

**<LTE Band 71>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 133222 | 133322 | 133372 | | |
| Frequency (MHz) | | | | 673 | 683 | 688 | | |
| 20 | QPSK | 1 | 0 | 20.98 | 20.84 | 20.75 | 21.5 | 0 |
| 20 | QPSK | 1 | 49 | 20.89 | 20.80 | 20.82 | | |
| 20 | QPSK | 1 | 99 | 20.72 | 20.73 | 20.83 | | |
| 20 | QPSK | 50 | 0 | 20.82 | 20.74 | 20.86 | 21.5 | 0 |
| 20 | QPSK | 50 | 24 | 20.72 | 20.80 | 20.82 | | |
| 20 | QPSK | 50 | 50 | 20.83 | 20.72 | 20.79 | | |
| 20 | QPSK | 100 | 0 | 20.79 | 20.87 | 20.72 | | |
| 20 | 16QAM | 1 | 0 | 20.71 | 20.86 | 20.78 | 21.5 | 0 |
| 20 | 16QAM | 1 | 49 | 20.83 | 20.77 | 20.77 | | |
| 20 | 16QAM | 1 | 99 | 20.88 | 20.80 | 20.82 | | |
| 20 | 16QAM | 50 | 0 | 20.74 | 20.70 | 20.89 | 21.5 | 0 |
| 20 | 16QAM | 50 | 24 | 20.80 | 20.86 | 20.80 | | |
| 20 | 16QAM | 50 | 50 | 20.81 | 20.76 | 20.74 | | |
| 20 | 16QAM | 100 | 0 | 20.72 | 20.82 | 20.88 | | |
| 20 | 64QAM | 1 | 0 | 20.85 | 20.84 | 20.73 | 21.5 | 0 |
| 20 | 64QAM | 1 | 49 | 20.83 | 20.75 | 20.75 | | |
| 20 | 64QAM | 1 | 99 | 20.86 | 20.71 | 20.76 | | |
| 20 | 64QAM | 50 | 0 | 20.80 | 20.84 | 20.73 | 21.5 | 0 |
| 20 | 64QAM | 50 | 24 | 20.83 | 20.74 | 20.85 | | |
| 20 | 64QAM | 50 | 50 | 20.72 | 20.84 | 20.75 | | |
| 20 | 64QAM | 100 | 0 | 20.87 | 20.75 | 20.85 | | |
| Channel | | | | 133197 | 133297 | 133397 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 670.5 | 680.5 | 690.5 | | |
| 15 | QPSK | 1 | 0 | 20.82 | 20.71 | 20.83 | 21.5 | 0 |
| 15 | QPSK | 1 | 37 | 20.78 | 20.72 | 20.87 | | |
| 15 | QPSK | 1 | 74 | 20.73 | 20.72 | 20.76 | | |
| 15 | QPSK | 36 | 0 | 20.89 | 20.78 | 20.90 | 21.5 | 0 |
| 15 | QPSK | 36 | 20 | 20.78 | 20.88 | 20.89 | | |
| 15 | QPSK | 36 | 39 | 20.78 | 20.80 | 20.89 | | |
| 15 | QPSK | 75 | 0 | 20.75 | 20.70 | 20.85 | | |
| 15 | 16QAM | 1 | 0 | 20.75 | 20.90 | 20.86 | 21.5 | 0 |
| 15 | 16QAM | 1 | 37 | 20.89 | 20.90 | 20.84 | | |
| 15 | 16QAM | 1 | 74 | 20.86 | 20.75 | 20.79 | | |
| 15 | 16QAM | 36 | 0 | 20.85 | 20.88 | 20.76 | 21.5 | 0 |
| 15 | 16QAM | 36 | 20 | 20.79 | 20.76 | 20.85 | | |
| 15 | 16QAM | 36 | 39 | 20.71 | 20.74 | 20.90 | | |
| 15 | 16QAM | 75 | 0 | 20.75 | 20.83 | 20.86 | | |
| 15 | 64QAM | 1 | 0 | 20.76 | 20.89 | 20.89 | 21.5 | 0 |
| 15 | 64QAM | 1 | 37 | 20.82 | 20.80 | 20.83 | | |
| 15 | 64QAM | 1 | 74 | 20.73 | 20.80 | 20.88 | | |
| 15 | 64QAM | 36 | 0 | 20.70 | 20.89 | 20.74 | 21.5 | 0 |
| 15 | 64QAM | 36 | 20 | 20.84 | 20.84 | 20.70 | | |
| 15 | 64QAM | 36 | 39 | 20.87 | 20.77 | 20.83 | | |
| 15 | 64QAM | 75 | 0 | 20.79 | 20.77 | 20.88 | | |
| Channel | | | | 133172 | 133272 | 133422 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 668 | 678 | 693 | | |
| 10 | QPSK | 1 | 0 | 20.71 | 20.71 | 20.86 | 21.5 | 0 |
| 10 | QPSK | 1 | 25 | 20.72 | 20.83 | 20.75 | | |
| 10 | QPSK | 1 | 49 | 20.89 | 20.86 | 20.84 | | |
| 10 | QPSK | 25 | 0 | 20.90 | 20.90 | 20.75 | 21.5 | 0 |
| 10 | QPSK | 25 | 12 | 20.85 | 20.83 | 20.82 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 20.70 | 20.87 | 20.85 | | |
| 10 | QPSK | 50 | 0 | 20.82 | 20.70 | 20.88 | | |
| 10 | 16QAM | 1 | 0 | 20.89 | 20.83 | 20.84 | 21.5 | 0 |
| 10 | 16QAM | 1 | 25 | 20.88 | 20.83 | 20.75 | | |
| 10 | 16QAM | 1 | 49 | 20.70 | 20.87 | 20.80 | | |
| 10 | 16QAM | 25 | 0 | 20.71 | 20.89 | 20.87 | 21.5 | 0 |
| 10 | 16QAM | 25 | 12 | 20.81 | 20.78 | 20.74 | | |
| 10 | 16QAM | 25 | 25 | 20.89 | 20.77 | 20.85 | | |
| 10 | 16QAM | 50 | 0 | 20.72 | 20.79 | 20.74 | | |
| 10 | 64QAM | 1 | 0 | 20.70 | 20.89 | 20.70 | 21.5 | 0 |
| 10 | 64QAM | 1 | 25 | 20.89 | 20.81 | 20.90 | | |
| 10 | 64QAM | 1 | 49 | 20.71 | 20.83 | 20.80 | | |
| 10 | 64QAM | 25 | 0 | 20.78 | 20.74 | 20.83 | 21.5 | 0 |
| 10 | 64QAM | 25 | 12 | 20.81 | 20.84 | 20.82 | | |
| 10 | 64QAM | 25 | 25 | 20.72 | 20.89 | 20.83 | | |
| 10 | 64QAM | 50 | 0 | 20.75 | 20.73 | 20.74 | | |
| Channel | | | | 133147 | 133247 | 133447 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 665.5 | 675.5 | 695.5 | | |
| 5 | QPSK | 1 | 0 | 20.85 | 20.75 | 20.87 | 21.5 | 0 |
| 5 | QPSK | 1 | 12 | 20.82 | 20.82 | 20.79 | | |
| 5 | QPSK | 1 | 24 | 20.86 | 20.70 | 20.82 | | |
| 5 | QPSK | 12 | 0 | 20.89 | 20.75 | 20.90 | 21.5 | 0 |
| 5 | QPSK | 12 | 7 | 20.87 | 20.76 | 20.90 | | |
| 5 | QPSK | 12 | 13 | 20.85 | 20.80 | 20.83 | | |
| 5 | QPSK | 25 | 0 | 20.79 | 20.79 | 20.74 | | |
| 5 | 16QAM | 1 | 0 | 20.87 | 20.84 | 20.72 | 21.5 | 0 |
| 5 | 16QAM | 1 | 12 | 20.84 | 20.74 | 20.82 | | |
| 5 | 16QAM | 1 | 24 | 20.76 | 20.84 | 20.72 | | |
| 5 | 16QAM | 12 | 0 | 20.71 | 20.82 | 20.86 | 21.5 | 0 |
| 5 | 16QAM | 12 | 7 | 20.83 | 20.81 | 20.71 | | |
| 5 | 16QAM | 12 | 13 | 20.78 | 20.85 | 20.79 | | |
| 5 | 16QAM | 25 | 0 | 20.85 | 20.82 | 20.89 | | |
| 5 | 64QAM | 1 | 0 | 20.82 | 20.77 | 20.87 | 21.5 | 0 |
| 5 | 64QAM | 1 | 12 | 20.71 | 20.72 | 20.83 | | |
| 5 | 64QAM | 1 | 24 | 20.77 | 20.87 | 20.71 | | |
| 5 | 64QAM | 12 | 0 | 20.73 | 20.76 | 20.82 | 21.5 | 0 |
| 5 | 64QAM | 12 | 7 | 20.88 | 20.87 | 20.75 | | |
| 5 | 64QAM | 12 | 13 | 20.78 | 20.70 | 20.80 | | |
| 5 | 64QAM | 25 | 0 | 20.81 | 20.79 | 20.79 | | |

## <Reduced Power Mode for Tablet Mode>

### <LTE Band 2>

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 18700 | 18900 | 19100 | | |
| Frequency (MHz) | | | | 1860 | 1880 | 1900 | | |
| 20 | QPSK | 1 | 0 | 12.83 | 12.84 | 12.83 | 13.9 | 0 |
| 20 | QPSK | 1 | 49 | 12.76 | 12.79 | 12.74 | | |
| 20 | QPSK | 1 | 99 | 12.75 | 12.81 | 12.80 | | |
| 20 | QPSK | 50 | 0 | 12.70 | 12.73 | 12.71 | 13.9 | 0 |
| 20 | QPSK | 50 | 24 | 12.63 | 12.70 | 12.64 | | |
| 20 | QPSK | 50 | 50 | 12.67 | 12.71 | 12.61 | | |
| 20 | QPSK | 100 | 0 | 12.64 | 12.72 | 12.64 | | |
| 20 | 16QAM | 1 | 0 | 12.77 | 12.76 | 12.76 | 13.9 | 0 |
| 20 | 16QAM | 1 | 49 | 12.69 | 12.75 | 12.67 | | |
| 20 | 16QAM | 1 | 99 | 12.70 | 12.77 | 12.72 | | |
| 20 | 16QAM | 50 | 0 | 12.58 | 12.55 | 12.55 | 13.9 | 0 |
| 20 | 16QAM | 50 | 24 | 12.56 | 12.49 | 12.53 | | |
| 20 | 16QAM | 50 | 50 | 12.56 | 12.61 | 12.58 | | |
| 20 | 16QAM | 100 | 0 | 12.54 | 12.50 | 12.54 | | |
| 20 | 64QAM | 1 | 0 | 12.69 | 12.64 | 12.66 | 13.9 | 0 |
| 20 | 64QAM | 1 | 49 | 12.64 | 12.69 | 12.63 | | |
| 20 | 64QAM | 1 | 99 | 12.64 | 12.75 | 12.55 | | |
| 20 | 64QAM | 50 | 0 | 12.57 | 12.62 | 12.53 | 13.9 | 0 |
| 20 | 64QAM | 50 | 24 | 12.63 | 12.57 | 12.48 | | |
| 20 | 64QAM | 50 | 50 | 12.59 | 12.66 | 12.57 | | |
| 20 | 64QAM | 100 | 0 | 12.63 | 12.58 | 12.45 | | |
| Channel | | | | 18675 | 18900 | 19125 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1857.5 | 1880 | 1902.5 | | |
| 15 | QPSK | 1 | 0 | 12.79 | 12.83 | 12.82 | 13.9 | 0 |
| 15 | QPSK | 1 | 37 | 12.73 | 12.69 | 12.66 | | |
| 15 | QPSK | 1 | 74 | 12.71 | 12.73 | 12.72 | | |
| 15 | QPSK | 36 | 0 | 12.64 | 12.71 | 12.70 | 13.9 | 0 |
| 15 | QPSK | 36 | 20 | 12.59 | 12.62 | 12.54 | | |
| 15 | QPSK | 36 | 39 | 12.58 | 12.61 | 12.60 | | |
| 15 | QPSK | 75 | 0 | 12.64 | 12.64 | 12.55 | | |
| 15 | 16QAM | 1 | 0 | 12.73 | 12.66 | 12.75 | 13.9 | 0 |
| 15 | 16QAM | 1 | 37 | 12.60 | 12.72 | 12.66 | | |
| 15 | 16QAM | 1 | 74 | 12.63 | 12.68 | 12.65 | | |
| 15 | 16QAM | 36 | 0 | 12.58 | 12.47 | 12.46 | 13.9 | 0 |
| 15 | 16QAM | 36 | 20 | 12.53 | 12.44 | 12.50 | | |
| 15 | 16QAM | 36 | 39 | 12.48 | 12.56 | 12.50 | | |
| 15 | 16QAM | 75 | 0 | 12.48 | 12.42 | 12.51 | | |
| 15 | 64QAM | 1 | 0 | 12.65 | 12.60 | 12.60 | 13.9 | 0 |
| 15 | 64QAM | 1 | 37 | 12.62 | 12.66 | 12.53 | | |
| 15 | 64QAM | 1 | 74 | 12.55 | 12.71 | 12.47 | | |
| 15 | 64QAM | 36 | 0 | 12.55 | 12.62 | 12.49 | 13.9 | 0 |
| 15 | 64QAM | 36 | 20 | 12.59 | 12.54 | 12.46 | | |
| 15 | 64QAM | 36 | 39 | 12.53 | 12.60 | 12.50 | | |
| 15 | 64QAM | 75 | 0 | 12.56 | 12.56 | 12.44 | | |
| Channel | | | | 18650 | 18900 | 19150 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1855 | 1880 | 1905 | | |
| 10 | QPSK | 1 | 0 | 12.78 | 12.81 | 12.79 | 13.9 | 0 |
| 10 | QPSK | 1 | 25 | 12.66 | 12.77 | 12.67 | | |
| 10 | QPSK | 1 | 49 | 12.69 | 12.71 | 12.72 | | |
| 10 | QPSK | 25 | 0 | 12.65 | 12.69 | 12.61 | 13.9 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 12 | 12.56 | 12.60 | 12.59 | | |
| 10 | QPSK | 25 | 25 | 12.67 | 12.67 | 12.53 | | |
| 10 | QPSK | 50 | 0 | 12.57 | 12.68 | 12.61 | | |
| 10 | 16QAM | 1 | 0 | 12.70 | 12.66 | 12.75 | 13.9 | 0 |
| 10 | 16QAM | 1 | 25 | 12.69 | 12.69 | 12.65 | | |
| 10 | 16QAM | 1 | 49 | 12.65 | 12.75 | 12.71 | | |
| 10 | 16QAM | 25 | 0 | 12.48 | 12.48 | 12.51 | 13.9 | 0 |
| 10 | 16QAM | 25 | 12 | 12.54 | 12.48 | 12.45 | | |
| 10 | 16QAM | 25 | 25 | 12.47 | 12.51 | 12.57 | | |
| 10 | 16QAM | 50 | 22.53 | 12.46 | 12.46 | 12.53 | | |
| 10 | 64QAM | 1 | 22.02 | 12.59 | 12.59 | 12.64 | 13.9 | 0 |
| 10 | 64QAM | 1 | 22.09 | 12.58 | 12.66 | 12.60 | | |
| 10 | 64QAM | 1 | 49 | 12.59 | 12.75 | 12.46 | | |
| 10 | 64QAM | 25 | 0 | 12.52 | 12.60 | 12.43 | 13.9 | 0 |
| 10 | 64QAM | 25 | 12 | 12.63 | 12.47 | 12.47 | | |
| 10 | 64QAM | 25 | 25 | 12.51 | 12.58 | 12.54 | | |
| 10 | 64QAM | 50 | 0 | 12.56 | 12.56 | 12.41 | | |
| Channel | | | | 18625 | 18900 | 19175 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1852.5 | 1880 | 1907.5 | | |
| 5 | QPSK | 1 | 0 | 12.74 | 12.79 | 12.80 | 13.9 | 0 |
| 5 | QPSK | 1 | 12 | 12.66 | 12.73 | 12.69 | | |
| 5 | QPSK | 1 | 24 | 12.71 | 12.76 | 12.80 | | |
| 5 | QPSK | 12 | 0 | 12.66 | 12.68 | 12.64 | 13.9 | 0 |
| 5 | QPSK | 12 | 7 | 12.61 | 12.61 | 12.54 | | |
| 5 | QPSK | 12 | 13 | 12.62 | 12.65 | 12.53 | | |
| 5 | QPSK | 25 | 0 | 12.59 | 12.69 | 12.55 | | |
| 5 | 16QAM | 1 | 0 | 12.77 | 12.75 | 12.66 | 13.9 | 0 |
| 5 | 16QAM | 1 | 12 | 12.69 | 12.70 | 12.61 | | |
| 5 | 16QAM | 1 | 24 | 12.70 | 12.75 | 12.65 | | |
| 5 | 16QAM | 12 | 0 | 12.58 | 12.53 | 12.47 | 13.9 | 0 |
| 5 | 16QAM | 12 | 7 | 12.46 | 12.40 | 12.43 | | |
| 5 | 16QAM | 12 | 13 | 12.55 | 12.53 | 12.52 | | |
| 5 | 16QAM | 25 | 0 | 12.48 | 12.43 | 12.44 | | |
| 5 | 64QAM | 1 | 0 | 12.59 | 12.63 | 12.58 | 13.9 | 0 |
| 5 | 64QAM | 1 | 12 | 12.58 | 12.60 | 12.60 | | |
| 5 | 64QAM | 1 | 24 | 12.57 | 12.72 | 12.54 | | |
| 5 | 64QAM | 12 | 0 | 12.55 | 12.59 | 12.45 | 13.9 | 0 |
| 5 | 64QAM | 12 | 7 | 12.57 | 12.48 | 12.44 | | |
| 5 | 64QAM | 12 | 13 | 12.53 | 12.59 | 12.47 | | |
| 5 | 64QAM | 25 | 0 | 12.59 | 12.52 | 12.38 | | |
| Channel | | | | 18615 | 18900 | 19185 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1851.5 | 1880 | 1908.5 | | |
| 3 | QPSK | 1 | 0 | 12.79 | 12.77 | 12.74 | 13.9 | 0 |
| 3 | QPSK | 1 | 8 | 12.73 | 12.77 | 12.73 | | |
| 3 | QPSK | 1 | 14 | 12.67 | 12.73 | 12.73 | | |
| 3 | QPSK | 8 | 0 | 12.61 | 12.68 | 12.65 | 13.9 | 0 |
| 3 | QPSK | 8 | 4 | 12.56 | 12.61 | 12.56 | | |
| 3 | QPSK | 8 | 7 | 12.63 | 12.69 | 12.51 | | |
| 3 | QPSK | 15 | 0 | 12.60 | 12.63 | 12.56 | | |
| 3 | 16QAM | 1 | 0 | 12.73 | 12.67 | 12.75 | 13.9 | 0 |
| 3 | 16QAM | 1 | 8 | 12.68 | 12.72 | 12.60 | | |
| 3 | 16QAM | 1 | 14 | 12.70 | 12.75 | 12.68 | | |
| 3 | 16QAM | 8 | 0 | 12.52 | 12.55 | 12.45 | 13.9 | 0 |
| 3 | 16QAM | 8 | 4 | 12.49 | 12.45 | 12.53 | | |
| 3 | 16QAM | 8 | 7 | 12.48 | 12.51 | 12.58 | | |
| 3 | 16QAM | 15 | 0 | 12.46 | 12.46 | 12.45 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 0 | 12.60 | 12.56 | 12.60 | 13.9 | 0 |
| 3 | 64QAM | 1 | 8 | 12.61 | 12.61 | 12.63 | | |
| 3 | 64QAM | 1 | 14 | 12.54 | 12.73 | 12.53 | | |
| 3 | 64QAM | 8 | 0 | 12.55 | 12.52 | 12.46 | 13.9 | 0 |
| 3 | 64QAM | 8 | 4 | 12.53 | 12.56 | 12.39 | | |
| 3 | 64QAM | 8 | 7 | 12.58 | 12.63 | 12.51 | | |
| 3 | 64QAM | 15 | 0 | 12.56 | 12.53 | 12.41 | | |
| Channel | | | | 18607 | 18900 | 19193 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1850.7 | 1880 | 1909.3 | | |
| 1.4 | QPSK | 1 | 0 | 12.80 | 12.80 | 12.76 | 13.9 | 0 |
| 1.4 | QPSK | 1 | 3 | 12.74 | 12.74 | 12.72 | | |
| 1.4 | QPSK | 1 | 5 | 12.66 | 12.72 | 12.73 | | |
| 1.4 | QPSK | 3 | 0 | 12.64 | 12.72 | 12.61 | | |
| 1.4 | QPSK | 3 | 1 | 12.63 | 12.70 | 12.57 | | |
| 1.4 | QPSK | 3 | 3 | 12.65 | 12.69 | 12.53 | | |
| 1.4 | QPSK | 6 | 0 | 12.63 | 12.64 | 12.61 | 13.9 | 0 |
| 1.4 | 16QAM | 1 | 0 | 12.68 | 12.67 | 12.69 | 13.9 | 0 |
| 1.4 | 16QAM | 1 | 3 | 12.65 | 12.74 | 12.66 | | |
| 1.4 | 16QAM | 1 | 5 | 12.63 | 12.74 | 12.67 | | |
| 1.4 | 16QAM | 3 | 0 | 12.53 | 12.55 | 12.48 | | |
| 1.4 | 16QAM | 3 | 1 | 12.51 | 12.47 | 12.49 | | |
| 1.4 | 16QAM | 3 | 3 | 12.46 | 12.56 | 12.57 | | |
| 1.4 | 16QAM | 6 | 0 | 12.48 | 12.43 | 12.54 | 13.9 | 0 |
| 1.4 | 64QAM | 1 | 0 | 12.67 | 12.63 | 12.66 | 13.9 | 0 |
| 1.4 | 64QAM | 1 | 3 | 12.58 | 12.67 | 12.59 | | |
| 1.4 | 64QAM | 1 | 5 | 12.63 | 12.67 | 12.48 | | |
| 1.4 | 64QAM | 3 | 0 | 12.57 | 12.57 | 12.44 | | |
| 1.4 | 64QAM | 3 | 1 | 12.58 | 12.51 | 12.42 | | |
| 1.4 | 64QAM | 3 | 3 | 12.49 | 12.59 | 12.50 | | |
| 13 | 64QAM | 6 | 0 | 12.61 | 12.50 | 12.43 | 13.9 | 0 |

**<LTE Band 4>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20050 | 20175 | 20300 | | |
| Frequency (MHz) | | | | 1720 | 1732.5 | 1745 | | |
| 20 | QPSK | 1 | 0 | 13.83 | 13.92 | 13.88 | 14.8 | 0 |
| 20 | QPSK | 1 | 49 | 13.78 | 13.82 | 13.79 | | |
| 20 | QPSK | 1 | 99 | 13.79 | 13.81 | 13.83 | | |
| 20 | QPSK | 50 | 0 | 13.85 | 13.88 | 13.86 | 14.8 | 0 |
| 20 | QPSK | 50 | 24 | 13.85 | 13.81 | 13.81 | | |
| 20 | QPSK | 50 | 50 | 13.85 | 13.87 | 13.84 | | |
| 20 | QPSK | 100 | 0 | 13.76 | 13.84 | 13.79 | | |
| 20 | 16QAM | 1 | 0 | 13.86 | 13.91 | 13.90 | 14.8 | 0 |
| 20 | 16QAM | 1 | 49 | 13.83 | 13.90 | 13.87 | | |
| 20 | 16QAM | 1 | 99 | 13.82 | 13.82 | 13.83 | | |
| 20 | 16QAM | 50 | 0 | 13.56 | 13.65 | 13.63 | 14.8 | 0 |
| 20 | 16QAM | 50 | 24 | 13.64 | 13.64 | 13.60 | | |
| 20 | 16QAM | 50 | 50 | 13.71 | 13.71 | 13.72 | | |
| 20 | 16QAM | 100 | 0 | 13.68 | 13.67 | 13.64 | | |
| 20 | 64QAM | 1 | 0 | 13.80 | 13.86 | 13.85 | 14.8 | 0 |
| 20 | 64QAM | 1 | 49 | 13.69 | 13.74 | 13.77 | | |
| 20 | 64QAM | 1 | 99 | 13.82 | 13.78 | 13.76 | | |
| 20 | 64QAM | 50 | 0 | 13.66 | 13.74 | 13.74 | 14.8 | 0 |
| 20 | 64QAM | 50 | 24 | 13.72 | 13.70 | 13.67 | | |
| 20 | 64QAM | 50 | 50 | 13.65 | 13.71 | 13.64 | | |
| 20 | 64QAM | 100 | 0 | 13.71 | 13.69 | 13.67 | | |
| Channel | | | | 20025 | 20175 | 20325 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1717.5 | 1732.5 | 1747.5 | | |
| 15 | QPSK | 1 | 0 | 13.74 | 13.84 | 13.78 | 14.8 | 0 |
| 15 | QPSK | 1 | 37 | 13.77 | 13.72 | 13.77 | | |
| 15 | QPSK | 1 | 74 | 13.77 | 13.74 | 13.82 | | |
| 15 | QPSK | 36 | 0 | 13.76 | 13.79 | 13.86 | 14.8 | 0 |
| 15 | QPSK | 36 | 20 | 13.84 | 13.79 | 13.80 | | |
| 15 | QPSK | 36 | 39 | 13.85 | 13.79 | 13.75 | | |
| 15 | QPSK | 75 | 0 | 13.74 | 13.80 | 13.75 | | |
| 15 | 16QAM | 1 | 0 | 13.86 | 13.91 | 13.82 | 14.8 | 0 |
| 15 | 16QAM | 1 | 37 | 13.76 | 13.82 | 13.80 | | |
| 15 | 16QAM | 1 | 74 | 13.80 | 13.81 | 13.74 | | |
| 15 | 16QAM | 36 | 0 | 13.54 | 13.57 | 13.53 | 14.8 | 0 |
| 15 | 16QAM | 36 | 20 | 13.58 | 13.62 | 13.55 | | |
| 15 | 16QAM | 36 | 39 | 13.62 | 13.64 | 13.63 | | |
| 15 | 16QAM | 75 | 0 | 13.63 | 13.63 | 13.61 | | |
| 15 | 64QAM | 1 | 0 | 13.80 | 13.81 | 13.80 | 14.8 | 0 |
| 15 | 64QAM | 1 | 37 | 13.65 | 13.66 | 13.72 | | |
| 15 | 64QAM | 1 | 74 | 13.80 | 13.69 | 13.76 | | |
| 15 | 64QAM | 36 | 0 | 13.60 | 13.68 | 13.72 | 14.8 | 0 |
| 15 | 64QAM | 36 | 20 | 13.65 | 13.70 | 13.67 | | |
| 15 | 64QAM | 36 | 39 | 13.60 | 13.65 | 13.64 | | |
| 15 | 64QAM | 75 | 0 | 13.63 | 13.61 | 13.59 | | |
| Channel | | | | 20000 | 20175 | 20350 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1715 | 1732.5 | 1750 | | |
| 10 | QPSK | 1 | 0 | 13.74 | 13.82 | 13.86 | 14.8 | 0 |
| 10 | QPSK | 1 | 25 | 13.78 | 13.79 | 13.76 | | |
| 10 | QPSK | 1 | 49 | 13.77 | 13.76 | 13.75 | | |
| 10 | QPSK | 25 | 0 | 13.76 | 13.79 | 13.80 | 14.8 | 0 |
| 10 | QPSK | 25 | 12 | 13.79 | 13.72 | 13.75 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 13.78 | 13.83 | 13.75 | | |
| 10 | QPSK | 50 | 0 | 13.70 | 13.75 | 13.72 | | |
| 10 | 16QAM | 1 | 0 | 13.76 | 13.86 | 13.80 | 14.8 | 0 |
| 10 | 16QAM | 1 | 25 | 13.77 | 13.85 | 13.83 | | |
| 10 | 16QAM | 1 | 49 | 13.73 | 13.73 | 13.78 | | |
| 10 | 16QAM | 25 | 0 | 13.51 | 13.57 | 13.61 | 14.8 | 0 |
| 10 | 24.5 | 25 | 12 | 13.64 | 13.56 | 13.58 | | |
| 10 | 24.5 | 25 | 25 | 13.62 | 13.62 | 13.64 | | |
| 10 | 16QAM | 50 | 0 | 13.60 | 13.63 | 13.61 | | |
| 10 | 64QAM | 1 | 0 | 13.80 | 13.76 | 13.81 | 14.8 | 0 |
| 10 | 64QAM | 1 | 25 | 13.59 | 13.67 | 13.68 | | |
| 10 | 64QAM | 1 | 49 | 13.75 | 13.70 | 13.69 | | |
| 10 | 64QAM | 25 | 0 | 13.56 | 13.72 | 13.74 | 14.8 | 0 |
| 10 | 64QAM | 25 | 12 | 13.68 | 13.62 | 13.58 | | |
| 10 | 64QAM | 25 | 25 | 13.60 | 13.61 | 13.57 | | |
| 10 | 64QAM | 50 | 0 | 13.69 | 13.61 | 13.66 | | |
| Channel | | | | 19975 | 20175 | 20375 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1712.5 | 1732.5 | 1752.5 | | |
| 5 | QPSK | 1 | 0 | 13.73 | 13.86 | 13.87 | 14.8 | 0 |
| 5 | QPSK | 1 | 12 | 13.72 | 13.81 | 13.72 | | |
| 5 | QPSK | 1 | 24 | 13.76 | 13.71 | 13.77 | | |
| 5 | QPSK | 12 | 0 | 13.79 | 13.83 | 13.80 | 14.8 | 0 |
| 5 | QPSK | 12 | 7 | 13.75 | 13.77 | 13.78 | | |
| 5 | QPSK | 12 | 13 | 13.77 | 13.79 | 13.79 | | |
| 5 | QPSK | 25 | 0 | 13.67 | 13.81 | 13.72 | | |
| 5 | 16QAM | 1 | 0 | 13.82 | 13.91 | 13.87 | 14.8 | 0 |
| 5 | 16QAM | 1 | 12 | 13.73 | 13.88 | 13.78 | | |
| 5 | 16QAM | 1 | 24 | 13.75 | 13.77 | 13.83 | | |
| 5 | 16QAM | 12 | 0 | 13.53 | 13.64 | 13.53 | 14.8 | 0 |
| 5 | 16QAM | 12 | 7 | 13.62 | 13.54 | 13.55 | | |
| 5 | 16QAM | 12 | 13 | 13.66 | 13.61 | 13.68 | | |
| 5 | 16QAM | 25 | 0 | 13.68 | 13.61 | 13.55 | | |
| 5 | 64QAM | 1 | 0 | 13.78 | 13.84 | 13.78 | 14.8 | 0 |
| 5 | 64QAM | 1 | 12 | 13.67 | 13.68 | 13.73 | | |
| 5 | 64QAM | 1 | 24 | 13.81 | 13.72 | 13.74 | | |
| 5 | 64QAM | 12 | 0 | 13.63 | 13.74 | 13.68 | 14.8 | 0 |
| 5 | 64QAM | 12 | 7 | 13.70 | 13.70 | 13.57 | | |
| 5 | 64QAM | 12 | 13 | 13.58 | 13.68 | 13.64 | | |
| 5 | 64QAM | 25 | 0 | 13.61 | 13.67 | 13.62 | | |
| Channel | | | | 19965 | 20175 | 20385 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1711.5 | 1732.5 | 1753.5 | | |
| 3 | QPSK | 1 | 0 | 13.73 | 13.83 | 13.87 | 14.8 | 0 |
| 3 | QPSK | 1 | 8 | 13.78 | 13.73 | 13.79 | | |
| 3 | QPSK | 1 | 14 | 13.74 | 13.79 | 13.80 | | |
| 3 | QPSK | 8 | 0 | 13.76 | 13.82 | 13.76 | 14.8 | 0 |
| 3 | QPSK | 8 | 4 | 13.78 | 13.81 | 13.81 | | |
| 3 | QPSK | 8 | 7 | 13.81 | 13.83 | 13.80 | | |
| 3 | QPSK | 15 | 0 | 13.72 | 13.78 | 13.70 | | |
| 3 | 16QAM | 1 | 0 | 13.83 | 13.91 | 13.89 | 14.8 | 0 |
| 3 | 16QAM | 1 | 8 | 13.82 | 13.88 | 13.79 | | |
| 3 | 16QAM | 1 | 14 | 13.72 | 13.81 | 13.73 | | |
| 3 | 16QAM | 8 | 0 | 13.46 | 13.64 | 13.56 | 14.8 | 0 |
| 3 | 16QAM | 8 | 4 | 13.61 | 13.56 | 13.54 | | |
| 3 | 16QAM | 8 | 7 | 13.62 | 13.65 | 13.63 | | |
| 3 | 16QAM | 15 | 0 | 13.60 | 13.60 | 13.55 | | |
| 3 | 64QAM | 1 | 0 | 13.80 | 13.78 | 13.75 | 14.8 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 13.69 | 13.69 | 13.67 | | |
| 3 | 64QAM | 1 | 14 | 13.72 | 13.73 | 13.67 | | |
| 3 | 64QAM | 8 | 0 | 13.61 | 13.72 | 13.74 | 14.8 | 0 |
| 3 | 64QAM | 8 | 4 | 13.66 | 13.70 | 13.58 | | |
| 3 | 64QAM | 8 | 7 | 13.56 | 13.70 | 13.58 | | |
| 3 | 64QAM | 15 | 0 | 13.68 | 13.65 | 13.62 | | |
| Channel | | | | 19957 | 20175 | 20393 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1710.7 | 1732.5 | 1754.3 | | |
| 1.4 | QPSK | 1 | 0 | 13.78 | 13.88 | 13.85 | 14.8 | 0 |
| 1.4 | QPSK | 1 | 3 | 13.71 | 13.80 | 13.73 | | |
| 1.4 | QPSK | 1 | 5 | 13.74 | 13.73 | 13.73 | | |
| 1.4 | QPSK | 3 | 0 | 13.85 | 13.79 | 13.79 | | |
| 1.4 | QPSK | 3 | 1 | 13.78 | 13.80 | 13.79 | | |
| 1.4 | QPSK | 3 | 3 | 13.79 | 13.77 | 13.74 | | |
| 1.4 | QPSK | 6 | 0 | 13.74 | 13.77 | 13.69 | 14.8 | 0 |
| 1.4 | 16QAM | 1 | 0 | 13.79 | 13.87 | 13.86 | 14.8 | 0 |
| 1.4 | 16QAM | 1 | 3 | 13.79 | 13.81 | 13.86 | | |
| 1.4 | 16QAM | 1 | 5 | 13.80 | 13.81 | 13.80 | | |
| 1.4 | 16QAM | 3 | 0 | 13.46 | 13.62 | 13.59 | | |
| 1.4 | 16QAM | 3 | 1 | 13.60 | 13.56 | 13.54 | | |
| 1.4 | 16QAM | 3 | 3 | 13.68 | 13.69 | 13.68 | | |
| 1.4 | 16QAM | 6 | 0 | 13.58 | 13.66 | 13.59 | 14.8 | 0 |
| 1.4 | 64QAM | 1 | 0 | 13.79 | 13.81 | 13.80 | 14.8 | 0 |
| 1.4 | 64QAM | 1 | 3 | 13.68 | 13.74 | 13.67 | | |
| 1.4 | 64QAM | 1 | 5 | 13.80 | 13.69 | 13.74 | | |
| 1.4 | 64QAM | 3 | 0 | 13.60 | 13.67 | 13.65 | | |
| 1.4 | 64QAM | 3 | 1 | 13.62 | 13.62 | 13.57 | | |
| 1.4 | 64QAM | 3 | 3 | 13.64 | 13.62 | 13.64 | | |
| 1.4 | 64QAM | 6 | 0 | 13.63 | 13.59 | 13.62 | 14.8 | 0 |

**<LTE Band 5>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20450 | 20525 | 20600 | | |
| Frequency (MHz) | | | | 829 | 836.5 | 844 | | |
| 10 | QPSK | 1 | 0 | 15.24 | 15.27 | 15.23 | 16.5 | 0 |
| 10 | QPSK | 1 | 25 | 15.14 | 15.18 | 15.15 | | |
| 10 | QPSK | 1 | 49 | 15.25 | 15.20 | 15.23 | | |
| 10 | QPSK | 25 | 0 | 14.91 | 15.06 | 14.93 | 16.5 | 0 |
| 10 | QPSK | 25 | 12 | 14.88 | 14.95 | 15.02 | | |
| 10 | QPSK | 25 | 25 | 14.91 | 15.00 | 15.02 | | |
| 10 | QPSK | 50 | 0 | 14.87 | 14.96 | 14.92 | | |
| 10 | 16QAM | 1 | 0 | 14.87 | 14.86 | 14.93 | 16.5 | 0 |
| 10 | 16QAM | 1 | 25 | 14.77 | 14.90 | 14.88 | | |
| 10 | 16QAM | 1 | 49 | 14.89 | 14.87 | 14.83 | | |
| 10 | 16QAM | 25 | 0 | 14.86 | 14.93 | 14.94 | 16.5 | 0 |
| 10 | 16QAM | 25 | 12 | 14.97 | 14.99 | 14.99 | | |
| 10 | 16QAM | 25 | 25 | 14.99 | 15.02 | 14.98 | | |
| 10 | 16QAM | 50 | 0 | 14.96 | 14.93 | 14.93 | | |
| 10 | 64QAM | 1 | 0 | 15.05 | 14.90 | 15.15 | 16.5 | 0 |
| 10 | 64QAM | 1 | 25 | 15.06 | 14.92 | 15.15 | | |
| 10 | 64QAM | 1 | 49 | 15.12 | 15.10 | 15.06 | | |
| 10 | 64QAM | 25 | 0 | 14.87 | 14.98 | 14.98 | 16.5 | 0 |
| 10 | 64QAM | 25 | 12 | 14.97 | 14.98 | 15.03 | | |
| 10 | 64QAM | 25 | 25 | 15.01 | 15.05 | 15.05 | | |
| 10 | 64QAM | 50 | 0 | 14.98 | 14.97 | 14.99 | | |
| Channel | | | | 20425 | 20525 | 20625 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 826.5 | 836.5 | 846.5 | | |
| 5 | QPSK | 1 | 0 | 15.22 | 15.20 | 15.15 | 16.5 | 0 |
| 5 | QPSK | 1 | 12 | 15.07 | 15.08 | 15.15 | | |
| 5 | QPSK | 1 | 24 | 15.20 | 15.14 | 15.22 | | |
| 5 | QPSK | 12 | 0 | 14.86 | 15.02 | 14.87 | 16.5 | 0 |
| 5 | QPSK | 12 | 7 | 14.88 | 14.95 | 14.92 | | |
| 5 | QPSK | 12 | 13 | 14.86 | 14.99 | 14.96 | | |
| 5 | QPSK | 25 | 0 | 14.84 | 14.87 | 14.83 | | |
| 5 | 16QAM | 1 | 0 | 14.80 | 14.83 | 14.83 | 16.5 | 0 |
| 5 | 16QAM | 1 | 12 | 14.71 | 14.83 | 14.78 | | |
| 5 | 16QAM | 1 | 24 | 14.84 | 14.79 | 14.73 | | |
| 5 | 16QAM | 12 | 0 | 14.80 | 14.90 | 14.87 | 16.5 | 0 |
| 5 | 16QAM | 12 | 7 | 14.93 | 14.94 | 14.89 | | |
| 5 | 16QAM | 12 | 13 | 14.92 | 14.93 | 14.90 | | |
| 5 | 16QAM | 25 | 0 | 14.89 | 14.90 | 14.91 | | |
| 5 | 64QAM | 1 | 0 | 15.04 | 14.88 | 15.09 | 16.5 | 0 |
| 5 | 64QAM | 1 | 12 | 14.97 | 14.85 | 15.12 | | |
| 5 | 64QAM | 1 | 24 | 15.02 | 15.03 | 14.98 | | |
| 5 | 64QAM | 12 | 0 | 14.82 | 14.95 | 14.95 | 16.5 | 0 |
| 5 | 64QAM | 12 | 7 | 14.90 | 14.88 | 14.98 | | |
| 5 | 64QAM | 12 | 13 | 14.91 | 15.00 | 14.98 | | |
| 5 | 64QAM | 25 | 0 | 14.96 | 14.87 | 14.93 | | |
| Channel | | | | 20415 | 20525 | 20635 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 825.5 | 836.5 | 847.5 | | |
| 3 | QPSK | 1 | 0 | 15.24 | 15.18 | 15.13 | 16.5 | 0 |
| 3 | QPSK | 1 | 8 | 15.11 | 15.11 | 15.11 | | |
| 3 | QPSK | 1 | 14 | 15.18 | 15.18 | 15.22 | | |
| 3 | QPSK | 8 | 0 | 14.85 | 15.06 | 14.88 | 16.5 | 0 |
| 3 | QPSK | 8 | 4 | 14.87 | 14.91 | 14.95 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | QPSK | 8 | 7 | 14.91 | 14.93 | 15.01 | | |
| 3 | QPSK | 15 | 0 | 14.80 | 14.92 | 14.86 | | |
| 3 | 16QAM | 1 | 0 | 14.83 | 14.85 | 14.89 | 16.5 | 0 |
| 3 | 16QAM | 1 | 8 | 14.67 | 14.85 | 14.81 | | |
| 3 | 16QAM | 1 | 14 | 14.88 | 14.86 | 14.82 | | |
| 3 | 16QAM | 8 | 0 | 14.85 | 14.91 | 14.89 | 16.5 | 0 |
| 3 | 16QAM | 8 | 4 | 14.94 | 14.93 | 14.97 | | |
| 3 | 16QAM | 8 | 7 | 14.97 | 14.95 | 14.93 | | |
| 3 | 16QAM | 15 | 0 | 14.95 | 14.93 | 14.83 | | |
| 3 | 64QAM | 1 | 0 | 15.05 | 14.86 | 15.10 | 16.5 | 0 |
| 3 | 64QAM | 1 | 8 | 15.04 | 14.88 | 15.09 | | |
| 3 | 64QAM | 1 | 14 | 15.12 | 15.01 | 15.03 | | |
| 3 | 64QAM | 8 | 0 | 14.85 | 14.98 | 14.88 | 16.5 | 0 |
| 3 | 64QAM | 8 | 4 | 14.92 | 14.97 | 14.99 | | |
| 3 | 64QAM | 8 | 7 | 14.92 | 14.98 | 14.97 | | |
| 3 | 64QAM | 15 | 0 | 14.89 | 14.88 | 14.99 | | |
| Channel | | | | 20407 | 20525 | 20643 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 824.7 | 836.5 | 848.3 | | |
| 1.4 | QPSK | 1 | 0 | 15.15 | 15.25 | 15.23 | 16.5 | 0 |
| 1.4 | QPSK | 1 | 3 | 15.13 | 15.16 | 15.08 | | |
| 1.4 | QPSK | 1 | 5 | 15.18 | 15.16 | 15.18 | | |
| 1.4 | QPSK | 3 | 0 | 14.91 | 14.97 | 14.85 | | |
| 1.4 | QPSK | 3 | 1 | 14.78 | 14.90 | 14.97 | | |
| 1.4 | QPSK | 3 | 3 | 14.81 | 14.92 | 14.99 | | |
| 1.4 | QPSK | 6 | 0 | 14.79 | 14.94 | 14.86 | 16.5 | 0 |
| 1.4 | 16QAM | 1 | 0 | 14.78 | 14.86 | 14.90 | 16.5 | 0 |
| 1.4 | 16QAM | 1 | 3 | 14.72 | 14.88 | 14.78 | | |
| 1.4 | 16QAM | 1 | 5 | 14.88 | 14.87 | 14.73 | | |
| 1.4 | 16QAM | 3 | 0 | 14.81 | 14.88 | 14.87 | | |
| 1.4 | 16QAM | 3 | 1 | 14.95 | 14.94 | 14.90 | | |
| 1.4 | 16QAM | 3 | 3 | 14.96 | 14.99 | 14.89 | | |
| 1.4 | 16QAM | 6 | 0 | 14.88 | 14.83 | 14.92 | 16.5 | 0 |
| 1.4 | 64QAM | 1 | 0 | 14.97 | 14.90 | 15.09 | 16.5 | 0 |
| 1.4 | 64QAM | 1 | 3 | 15.06 | 14.84 | 15.06 | | |
| 1.4 | 64QAM | 1 | 5 | 15.04 | 15.01 | 14.99 | | |
| 1.4 | 64QAM | 3 | 0 | 14.77 | 14.90 | 14.96 | | |
| 1.4 | 64QAM | 3 | 1 | 14.94 | 14.92 | 15.03 | | |
| 1.4 | 64QAM | 3 | 3 | 14.96 | 15.00 | 15.05 | | |
| 1.4 | 64QAM | 6 | 0 | 14.91 | 14.92 | 14.95 | 16.5 | 0 |

**<LTE Band 7>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 20850 | 21100 | 21350 | | |
| Frequency (MHz) | | | | 2510 | 2535 | 2560 | | |
| 20 | QPSK | 1 | 0 | 11.74 | 11.76 | 11.75 | 12.4 | 0 |
| 20 | QPSK | 1 | 49 | 11.53 | 11.66 | 11.61 | | |
| 20 | QPSK | 1 | 99 | 11.43 | 11.51 | 11.50 | | |
| 20 | QPSK | 50 | 0 | 11.71 | 11.75 | 11.72 | 12.4 | 0 |
| 20 | QPSK | 50 | 24 | 11.69 | 11.73 | 11.64 | | |
| 20 | QPSK | 50 | 50 | 11.64 | 11.74 | 11.65 | | |
| 20 | QPSK | 100 | 0 | 11.70 | 11.72 | 11.69 | | |
| 20 | 16QAM | 1 | 0 | 11.57 | 11.67 | 11.67 | 12.4 | 0 |
| 20 | 16QAM | 1 | 49 | 11.63 | 11.71 | 11.63 | | |
| 20 | 16QAM | 1 | 99 | 11.68 | 11.70 | 11.73 | | |
| 20 | 16QAM | 50 | 0 | 11.32 | 11.54 | 11.52 | 12.4 | 0 |
| 20 | 16QAM | 50 | 24 | 11.46 | 11.54 | 11.58 | | |
| 20 | 16QAM | 50 | 50 | 11.54 | 11.60 | 11.55 | | |
| 20 | 16QAM | 100 | 0 | 11.54 | 11.51 | 11.57 | | |
| 20 | 64QAM | 1 | 0 | 11.41 | 11.49 | 11.54 | 12.4 | 0 |
| 20 | 64QAM | 1 | 49 | 11.44 | 11.56 | 11.52 | | |
| 20 | 64QAM | 1 | 99 | 11.62 | 11.70 | 11.63 | | |
| 20 | 64QAM | 50 | 0 | 11.34 | 11.54 | 11.55 | 12.4 | 0 |
| 20 | 64QAM | 50 | 24 | 11.52 | 11.56 | 11.60 | | |
| 20 | 64QAM | 50 | 50 | 11.61 | 11.67 | 11.62 | | |
| 20 | 64QAM | 100 | 0 | 11.54 | 11.51 | 11.57 | | |
| Channel | | | | 20825 | 21100 | 21375 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2507.5 | 2535 | 2562.5 | | |
| 15 | QPSK | 1 | 0 | 11.67 | 11.71 | 11.72 | 12.4 | 0 |
| 15 | QPSK | 1 | 37 | 11.52 | 11.61 | 11.52 | | |
| 15 | QPSK | 1 | 74 | 11.40 | 11.44 | 11.49 | | |
| 15 | QPSK | 36 | 0 | 11.61 | 11.75 | 11.69 | 12.4 | 0 |
| 15 | QPSK | 36 | 20 | 11.60 | 11.72 | 11.57 | | |
| 15 | QPSK | 36 | 39 | 11.55 | 11.69 | 11.62 | | |
| 15 | QPSK | 75 | 0 | 11.67 | 11.67 | 11.69 | | |
| 15 | 16QAM | 1 | 0 | 11.55 | 11.65 | 11.62 | 12.4 | 0 |
| 15 | 16QAM | 1 | 37 | 11.55 | 11.62 | 11.61 | | |
| 15 | 16QAM | 1 | 74 | 11.62 | 11.67 | 11.68 | | |
| 15 | 16QAM | 36 | 0 | 11.24 | 11.54 | 11.51 | 12.4 | 0 |
| 15 | 16QAM | 36 | 20 | 11.36 | 11.53 | 11.56 | | |
| 15 | 16QAM | 36 | 39 | 11.46 | 11.59 | 11.53 | | |
| 15 | 16QAM | 75 | 0 | 11.47 | 11.48 | 11.57 | | |
| 15 | 64QAM | 1 | 0 | 11.38 | 11.48 | 11.49 | 12.4 | 0 |
| 15 | 64QAM | 1 | 37 | 11.39 | 11.53 | 11.47 | | |
| 15 | 64QAM | 1 | 74 | 11.57 | 11.67 | 11.56 | | |
| 15 | 64QAM | 36 | 0 | 11.24 | 11.54 | 11.49 | 12.4 | 0 |
| 15 | 64QAM | 36 | 20 | 11.48 | 11.55 | 11.59 | | |
| 15 | 64QAM | 36 | 39 | 11.60 | 11.64 | 11.62 | | |
| 15 | 64QAM | 75 | 0 | 11.48 | 11.47 | 11.55 | | |
| Channel | | | | 20800 | 21100 | 21400 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2505 | 2535 | 2565 | | |
| 10 | QPSK | 1 | 0 | 11.64 | 11.66 | 11.75 | 12.4 | 0 |
| 10 | QPSK | 1 | 25 | 11.46 | 11.58 | 11.54 | | |
| 10 | QPSK | 1 | 49 | 11.38 | 11.50 | 11.45 | | |
| 10 | QPSK | 25 | 0 | 11.66 | 11.73 | 11.63 | 12.4 | 0 |
| 10 | QPSK | 25 | 12 | 11.63 | 11.70 | 11.55 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 11.56 | 11.73 | 11.62 | | |
| 10 | QPSK | 50 | 0 | 11.69 | 11.62 | 11.64 | | |
| 10 | 16QAM | 1 | 0 | 11.48 | 11.64 | 11.60 | 12.4 | 0 |
| 10 | 16QAM | 1 | 25 | 11.60 | 11.69 | 11.61 | | |
| 10 | 16QAM | 1 | 49 | 11.65 | 11.62 | 11.65 | | |
| 10 | 16QAM | 25 | 0 | 11.26 | 11.52 | 11.46 | 12.4 | 0 |
| 10 | 16QAM | 25 | 12 | 11.38 | 11.52 | 11.54 | | |
| 10 | 16QAM | 25 | 25 | 11.51 | 11.52 | 11.46 | | |
| 10 | 16QAM | 50 | 0 | 11.52 | 11.42 | 11.49 | | |
| 10 | 64QAM | 1 | 0 | 11.33 | 11.45 | 11.47 | 12.4 | 0 |
| 10 | 64QAM | 1 | 25 | 11.38 | 11.47 | 11.46 | | |
| 10 | 64QAM | 1 | 49 | 11.54 | 11.67 | 11.59 | | |
| 10 | 64QAM | 25 | 0 | 11.31 | 11.49 | 11.50 | 12.4 | 0 |
| 10 | 64QAM | 25 | 12 | 11.50 | 11.48 | 11.51 | | |
| 10 | 64QAM | 25 | 25 | 11.59 | 11.66 | 11.56 | | |
| 10 | 64QAM | 50 | 0 | 11.48 | 11.50 | 11.56 | | |
| Channel | | | | 20775 | 21100 | 21425 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2502.5 | 2535 | 2567.5 | | |
| 5 | QPSK | 1 | 0 | 11.67 | 11.69 | 11.70 | 12.4 | 0 |
| 5 | QPSK | 1 | 12 | 11.53 | 11.61 | 11.55 | | |
| 5 | QPSK | 1 | 24 | 11.41 | 11.45 | 11.50 | | |
| 5 | QPSK | 12 | 0 | 11.69 | 11.75 | 11.67 | 12.4 | 0 |
| 5 | QPSK | 12 | 7 | 11.68 | 11.64 | 11.57 | | |
| 5 | QPSK | 12 | 13 | 11.59 | 11.72 | 11.63 | | |
| 5 | QPSK | 25 | 0 | 11.67 | 11.69 | 11.67 | | |
| 5 | 16QAM | 1 | 0 | 11.54 | 11.65 | 11.62 | 12.4 | 0 |
| 5 | 16QAM | 1 | 12 | 11.59 | 11.65 | 11.54 | | |
| 5 | 16QAM | 1 | 24 | 11.63 | 11.65 | 11.70 | | |
| 5 | 16QAM | 12 | 0 | 11.27 | 11.45 | 11.50 | 12.4 | 0 |
| 5 | 16QAM | 12 | 7 | 11.36 | 11.45 | 11.53 | | |
| 5 | 16QAM | 12 | 13 | 11.45 | 11.59 | 11.48 | | |
| 5 | 16QAM | 25 | 0 | 11.44 | 11.43 | 11.47 | | |
| 5 | 64QAM | 1 | 0 | 11.37 | 11.49 | 11.49 | 12.4 | 0 |
| 5 | 64QAM | 1 | 12 | 11.40 | 11.52 | 11.43 | | |
| 5 | 64QAM | 1 | 24 | 11.59 | 11.70 | 11.63 | | |
| 5 | 64QAM | 12 | 0 | 11.34 | 11.46 | 11.45 | 12.4 | 0 |
| 5 | 64QAM | 12 | 7 | 11.47 | 11.47 | 11.59 | | |
| 5 | 64QAM | 12 | 13 | 11.59 | 11.63 | 11.55 | | |
| 5 | 64QAM | 25 | 0 | 11.49 | 11.43 | 11.51 | | |

**<LTE Band 12>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 23060 | 23095 | 23130 | | |
| Frequency (MHz) | | | | 704 | 707.5 | 711 | | |
| 10 | QPSK | 1 | 0 | 18.75 | 18.82 | 18.77 | 19.4 | 0 |
| 10 | QPSK | 1 | 25 | 18.74 | 18.73 | 18.70 | | |
| 10 | QPSK | 1 | 49 | 18.71 | 18.80 | 18.68 | | |
| 10 | QPSK | 25 | 0 | 18.56 | 18.72 | 18.57 | 19.4 | 0 |
| 10 | QPSK | 25 | 12 | 18.50 | 18.45 | 18.44 | | |
| 10 | QPSK | 25 | 25 | 18.52 | 18.55 | 18.51 | | |
| 10 | QPSK | 50 | 0 | 18.50 | 18.65 | 18.45 | | |
| 10 | 16QAM | 1 | 0 | 18.34 | 18.31 | 18.31 | 19.4 | 0 |
| 10 | 16QAM | 1 | 25 | 18.28 | 18.31 | 18.35 | | |
| 10 | 16QAM | 1 | 49 | 18.46 | 18.42 | 18.37 | | |
| 10 | 16QAM | 25 | 0 | 18.42 | 18.44 | 18.42 | 19.4 | 0 |
| 10 | 16QAM | 25 | 12 | 18.50 | 18.44 | 18.44 | | |
| 10 | 16QAM | 25 | 25 | 18.48 | 18.52 | 18.53 | | |
| 10 | 16QAM | 50 | 0 | 18.50 | 18.44 | 18.46 | | |
| 10 | 64QAM | 1 | 0 | 18.55 | 18.54 | 18.49 | 19.4 | 0 |
| 10 | 64QAM | 1 | 25 | 18.61 | 18.63 | 18.66 | | |
| 10 | 64QAM | 1 | 49 | 18.75 | 18.66 | 18.62 | | |
| 10 | 64QAM | 25 | 0 | 18.46 | 18.46 | 18.48 | 19.4 | 0 |
| 10 | 64QAM | 25 | 12 | 18.53 | 18.48 | 18.49 | | |
| 10 | 64QAM | 25 | 25 | 18.53 | 18.57 | 18.58 | | |
| 10 | 64QAM | 50 | 0 | 18.54 | 18.51 | 18.47 | | |
| Channel | | | | 23035 | 23095 | 23155 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 701.5 | 707.5 | 713.5 | | |
| 5 | QPSK | 1 | 0 | 18.72 | 18.80 | 18.74 | 19.4 | 0 |
| 5 | QPSK | 1 | 12 | 18.65 | 18.67 | 18.70 | | |
| 5 | QPSK | 1 | 24 | 18.70 | 18.80 | 18.65 | | |
| 5 | QPSK | 12 | 0 | 18.47 | 18.52 | 18.55 | 19.4 | 0 |
| 5 | QPSK | 12 | 7 | 18.41 | 18.35 | 18.37 | | |
| 5 | QPSK | 12 | 13 | 18.50 | 18.45 | 18.44 | | |
| 5 | QPSK | 25 | 0 | 18.43 | 18.44 | 18.44 | | |
| 5 | 16QAM | 1 | 0 | 18.34 | 18.22 | 18.29 | 19.4 | 0 |
| 5 | 16QAM | 1 | 12 | 18.23 | 18.24 | 18.33 | | |
| 5 | 16QAM | 1 | 24 | 18.46 | 18.38 | 18.28 | | |
| 5 | 16QAM | 12 | 0 | 18.39 | 18.36 | 18.36 | 19.4 | 0 |
| 5 | 16QAM | 12 | 7 | 18.42 | 18.36 | 18.38 | | |
| 5 | 16QAM | 12 | 13 | 18.43 | 18.46 | 18.51 | | |
| 5 | 16QAM | 25 | 0 | 18.46 | 18.43 | 18.44 | | |
| 5 | 64QAM | 1 | 0 | 18.47 | 18.50 | 18.42 | 19.4 | 0 |
| 5 | 64QAM | 1 | 12 | 18.61 | 18.53 | 18.65 | | |
| 5 | 64QAM | 1 | 24 | 18.75 | 18.59 | 18.60 | | |
| 5 | 64QAM | 12 | 0 | 18.44 | 18.40 | 18.40 | 19.4 | 0 |
| 5 | 64QAM | 12 | 7 | 18.50 | 18.38 | 18.47 | | |
| 5 | 64QAM | 12 | 13 | 18.49 | 18.55 | 18.53 | | |
| 5 | 64QAM | 25 | 0 | 18.48 | 18.42 | 18.44 | | |
| Channel | | | | 23025 | 23095 | 23165 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 700.5 | 707.5 | 714.5 | | |
| 3 | QPSK | 1 | 0 | 18.66 | 18.80 | 18.73 | 19.4 | 0 |
| 3 | QPSK | 1 | 8 | 18.70 | 18.70 | 18.69 | | |
| 3 | QPSK | 1 | 14 | 18.62 | 18.78 | 18.58 | | |
| 3 | QPSK | 8 | 0 | 18.52 | 18.53 | 18.48 | 19.4 | 0 |
| 3 | QPSK | 8 | 4 | 18.40 | 18.35 | 18.38 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | QPSK | 8 | 7 | 18.52 | 18.55 | 18.49 | | |
| 3 | QPSK | 15 | 0 | 18.43 | 18.47 | 18.38 | | |
| 3 | 16QAM | 1 | 0 | 18.30 | 18.22 | 18.30 | 19.4 | 0 |
| 3 | 16QAM | 1 | 8 | 18.26 | 18.21 | 18.30 | | |
| 3 | 16QAM | 1 | 14 | 18.39 | 18.42 | 18.31 | | |
| 3 | 16QAM | 8 | 0 | 18.33 | 18.34 | 18.39 | 19.4 | 0 |
| 3 | 16QAM | 8 | 4 | 18.45 | 18.41 | 18.38 | | |
| 3 | 16QAM | 8 | 7 | 18.44 | 18.42 | 18.46 | | |
| 3 | 16QAM | 15 | 0 | 18.40 | 18.44 | 18.41 | | |
| 3 | 64QAM | 1 | 0 | 18.48 | 18.54 | 18.43 | 19.4 | 0 |
| 3 | 64QAM | 1 | 8 | 18.52 | 18.56 | 18.66 | | |
| 3 | 64QAM | 1 | 14 | 18.70 | 18.59 | 18.56 | | |
| 3 | 64QAM | 8 | 0 | 18.43 | 18.37 | 18.48 | 19.4 | 0 |
| 3 | 64QAM | 8 | 4 | 18.48 | 18.38 | 18.44 | | |
| 3 | 64QAM | 8 | 7 | 18.44 | 18.54 | 18.48 | | |
| 3 | 64QAM | 15 | 0 | 18.44 | 18.46 | 18.45 | | |
| Channel | | | | 23017 | 23095 | 23173 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 699.7 | 707.5 | 715.3 | | |
| 1.4 | QPSK | 1 | 0 | 18.71 | 18.75 | 18.68 | 19.4 | 0 |
| 1.4 | QPSK | 1 | 3 | 18.70 | 18.71 | 18.70 | | |
| 1.4 | QPSK | 1 | 5 | 18.66 | 18.74 | 18.62 | | |
| 1.4 | QPSK | 3 | 0 | 18.53 | 18.52 | 18.54 | | |
| 1.4 | QPSK | 3 | 1 | 18.49 | 18.38 | 18.34 | | |
| 1.4 | QPSK | 3 | 3 | 18.49 | 18.53 | 18.42 | | |
| 1.4 | QPSK | 6 | 0 | 18.43 | 18.42 | 18.38 | 19.4 | 0 |
| 1.4 | 16QAM | 1 | 0 | 18.25 | 18.30 | 18.24 | 19.4 | 0 |
| 1.4 | 16QAM | 1 | 3 | 18.18 | 18.30 | 18.31 | | |
| 1.4 | 16QAM | 1 | 5 | 18.37 | 18.40 | 18.33 | | |
| 1.4 | 16QAM | 3 | 0 | 18.41 | 18.41 | 18.41 | | |
| 1.4 | 16QAM | 3 | 1 | 18.42 | 18.34 | 18.37 | | |
| 1.4 | 16QAM | 3 | 3 | 18.48 | 18.43 | 18.48 | | |
| 1.4 | 16QAM | 6 | 0 | 18.50 | 18.42 | 18.36 | 19.4 | 0 |
| 1.4 | 64QAM | 1 | 0 | 18.51 | 18.49 | 18.39 | 19.4 | 0 |
| 1.4 | 64QAM | 1 | 3 | 18.57 | 18.53 | 18.58 | | |
| 1.4 | 64QAM | 1 | 5 | 18.69 | 18.56 | 18.57 | | |
| 1.4 | 64QAM | 3 | 0 | 18.46 | 18.43 | 18.38 | | |
| 1.4 | 64QAM | 3 | 1 | 18.52 | 18.42 | 18.47 | | |
| 1.4 | 64QAM | 3 | 3 | 18.53 | 18.57 | 18.49 | | |
| 1.4 | 64QAM | 6 | 0 | 18.46 | 18.51 | 18.46 | 19.4 | 0 |

**<LTE Band 13>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 23230 | | | |
| Frequency (MHz) | | | | | 782 | | | |
| 10 | QPSK | 1 | 0 | | 16.85 | | 18.3 | 0 |
| 10 | QPSK | 1 | 25 | | 16.63 | | | |
| 10 | QPSK | 1 | 49 | | 16.68 | | | |
| 10 | QPSK | 25 | 0 | | 16.79 | | 18.3 | 0 |
| 10 | QPSK | 25 | 12 | | 16.77 | | | |
| 10 | QPSK | 25 | 25 | | 16.59 | | | |
| 10 | QPSK | 50 | 0 | | 16.68 | | | |
| 10 | 16QAM | 1 | 0 | | 16.61 | | 18.3 | 0 |
| 10 | 16QAM | 1 | 25 | | 16.77 | | | |
| 10 | 16QAM | 1 | 49 | | 16.73 | | | |
| 10 | 16QAM | 25 | 0 | | 16.43 | | 18.3 | 0 |
| 10 | 16QAM | 25 | 12 | | 16.59 | | | |
| 10 | 16QAM | 25 | 25 | | 16.49 | | | |
| 10 | 16QAM | 50 | 0 | | 16.36 | | | |
| 10 | 64QAM | 1 | 0 | | 16.53 | | 18.3 | 0 |
| 10 | 64QAM | 1 | 25 | | 16.81 | | | |
| 10 | 64QAM | 1 | 49 | | 16.61 | | | |
| 10 | 64QAM | 25 | 0 | | 16.64 | | 18.3 | 0 |
| 10 | 64QAM | 25 | 12 | | 16.68 | | | |
| 10 | 64QAM | 25 | 25 | | 16.77 | | | |
| 10 | 64QAM | 50 | 0 | | 16.57 | | | |
| Channel | | | | 23205 | 23230 | 23255 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 779.5 | 782 | 784.5 | | |
| 5 | QPSK | 1 | 0 | 16.75 | 16.81 | 16.82 | 18.3 | 0 |
| 5 | QPSK | 1 | 12 | 16.57 | 16.54 | 16.55 | | |
| 5 | QPSK | 1 | 24 | 16.65 | 16.62 | 16.58 | | |
| 5 | QPSK | 12 | 0 | 16.76 | 16.75 | 16.75 | 18.3 | 0 |
| 5 | QPSK | 12 | 7 | 16.69 | 16.70 | 16.70 | | |
| 5 | QPSK | 12 | 13 | 16.57 | 16.57 | 16.55 | | |
| 5 | QPSK | 25 | 0 | 16.54 | 16.54 | 16.60 | | |
| 5 | 16QAM | 1 | 0 | 16.54 | 16.51 | 16.51 | 18.3 | 0 |
| 5 | 16QAM | 1 | 12 | 16.74 | 16.70 | 16.67 | | |
| 5 | 16QAM | 1 | 24 | 16.73 | 16.68 | 16.71 | | |
| 5 | 16QAM | 12 | 0 | 16.35 | 16.34 | 16.42 | 18.3 | 0 |
| 5 | 16QAM | 12 | 7 | 16.54 | 16.56 | 16.55 | | |
| 5 | 16QAM | 12 | 13 | 16.43 | 16.47 | 16.48 | | |
| 5 | 16QAM | 25 | 0 | 16.30 | 16.39 | 16.38 | | |
| 5 | 64QAM | 1 | 0 | 16.45 | 16.46 | 16.45 | 18.3 | 0 |
| 5 | 64QAM | 1 | 12 | 16.76 | 16.80 | 16.76 | | |
| 5 | 64QAM | 1 | 24 | 16.55 | 16.61 | 16.51 | | |
| 5 | 64QAM | 12 | 0 | 16.61 | 16.62 | 16.61 | 18.3 | 0 |
| 5 | 64QAM | 12 | 7 | 16.64 | 16.65 | 16.64 | | |
| 5 | 64QAM | 12 | 13 | 16.75 | 16.74 | 16.69 | | |
| 5 | 64QAM | 25 | 0 | 16.54 | 16.53 | 16.56 | | |

**<LTE Band 14>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 23330 | | | |
| Frequency (MHz) | | | | | 793 | | | |
| 10 | QPSK | 1 | 0 | | 15.14 | | 16.7 | 0 |
| 10 | QPSK | 1 | 25 | | 15.12 | | | |
| 10 | QPSK | 1 | 49 | | 15.08 | | | |
| 10 | QPSK | 25 | 0 | | 15.10 | | 16.7 | 0 |
| 10 | QPSK | 25 | 12 | | 15.01 | | | |
| 10 | QPSK | 25 | 25 | | 15.08 | | | |
| 10 | QPSK | 50 | 0 | | 15.09 | | | |
| 10 | 16QAM | 1 | 0 | | 15.04 | | 16.7 | 0 |
| 10 | 16QAM | 1 | 25 | | 15.00 | | | |
| 10 | 16QAM | 1 | 49 | | 15.01 | | | |
| 10 | 16QAM | 25 | 0 | | 15.07 | | 16.7 | 0 |
| 10 | 16QAM | 25 | 12 | | 15.10 | | | |
| 10 | 16QAM | 25 | 25 | | 15.09 | | | |
| 10 | 16QAM | 50 | 0 | | 15.12 | | | |
| 10 | 64QAM | 1 | 0 | | 15.07 | | 16.7 | 0 |
| 10 | 64QAM | 1 | 25 | | 15.11 | | | |
| 10 | 64QAM | 1 | 49 | | 15.10 | | | |
| 10 | 64QAM | 25 | 0 | | 15.04 | | 16.7 | 0 |
| 10 | 64QAM | 25 | 12 | | 15.07 | | | |
| 10 | 64QAM | 25 | 25 | | 15.12 | | | |
| 10 | 64QAM | 50 | 0 | | 15.06 | | | |
| Channel | | | | 23305 | 23330 | 23355 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 790.5 | 793 | 795.5 | | |
| 5 | QPSK | 1 | 0 | 15.10 | 15.13 | 15.06 | 16.7 | 0 |
| 5 | QPSK | 1 | 12 | 15.11 | 15.13 | 15.03 | | |
| 5 | QPSK | 1 | 24 | 15.04 | 15.08 | 15.12 | | |
| 5 | QPSK | 12 | 0 | 15.03 | 15.00 | 15.07 | 16.7 | 0 |
| 5 | QPSK | 12 | 7 | 15.09 | 15.01 | 15.05 | | |
| 5 | QPSK | 12 | 13 | 15.07 | 15.13 | 15.13 | | |
| 5 | QPSK | 25 | 0 | 15.04 | 15.04 | 15.03 | | |
| 5 | 16QAM | 1 | 0 | 15.07 | 15.01 | 15.06 | 16.7 | 0 |
| 5 | 16QAM | 1 | 12 | 15.04 | 15.01 | 15.01 | | |
| 5 | 16QAM | 1 | 24 | 15.07 | 15.02 | 15.05 | | |
| 5 | 16QAM | 12 | 0 | 15.06 | 15.07 | 15.01 | 16.7 | 0 |
| 5 | 16QAM | 12 | 7 | 15.08 | 15.03 | 15.08 | | |
| 5 | 16QAM | 12 | 13 | 15.13 | 15.13 | 15.12 | | |
| 5 | 16QAM | 25 | 0 | 15.02 | 15.11 | 15.11 | | |
| 5 | 64QAM | 1 | 0 | 15.09 | 15.10 | 15.07 | 16.7 | 0 |
| 5 | 64QAM | 1 | 12 | 15.09 | 15.12 | 15.09 | | |
| 5 | 64QAM | 1 | 24 | 15.13 | 15.09 | 15.04 | | |
| 5 | 64QAM | 12 | 0 | 15.10 | 15.05 | 15.08 | 16.7 | 0 |
| 5 | 64QAM | 12 | 7 | 15.10 | 15.10 | 15.10 | | |
| 5 | 64QAM | 12 | 13 | 15.05 | 15.11 | 15.10 | | |
| 5 | 64QAM | 25 | 0 | 15.04 | 15.09 | 15.13 | | |

**<LTE Band 17>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 23780 | 23790 | 23800 | | |
| Frequency (MHz) | | | | 709 | 710 | 711 | | |
| 10 | QPSK | 1 | 0 | 18.27 | 18.32 | 18.30 | 19.4 | 0 |
| 10 | QPSK | 1 | 25 | 18.22 | 18.22 | 18.19 | | |
| 10 | QPSK | 1 | 49 | 18.22 | 18.16 | 18.12 | | |
| 10 | QPSK | 25 | 0 | 18.08 | 18.10 | 18.05 | 19.4 | 0 |
| 10 | QPSK | 25 | 12 | 18.02 | 18.04 | 17.96 | | |
| 10 | QPSK | 25 | 25 | 18.03 | 17.97 | 17.99 | | |
| 10 | QPSK | 50 | 0 | 17.86 | 17.91 | 17.77 | | |
| 10 | 16QAM | 1 | 0 | 17.85 | 17.85 | 17.86 | 19.4 | 0 |
| 10 | 16QAM | 1 | 25 | 17.94 | 17.88 | 17.91 | | |
| 10 | 16QAM | 1 | 49 | 17.83 | 17.86 | 17.87 | | |
| 10 | 16QAM | 25 | 0 | 18.01 | 17.94 | 17.95 | 19.4 | 0 |
| 10 | 16QAM | 25 | 12 | 18.05 | 18.05 | 18.07 | | |
| 10 | 16QAM | 25 | 25 | 17.92 | 17.93 | 17.95 | | |
| 10 | 16QAM | 50 | 0 | 17.91 | 17.93 | 17.94 | | |
| 10 | 64QAM | 1 | 0 | 17.99 | 17.92 | 18.01 | 19.4 | 0 |
| 10 | 64QAM | 1 | 25 | 18.15 | 18.13 | 18.16 | | |
| 10 | 64QAM | 1 | 49 | 18.27 | 18.17 | 18.18 | | |
| 10 | 64QAM | 25 | 0 | 17.93 | 17.89 | 17.91 | 19.4 | 0 |
| 10 | 64QAM | 25 | 12 | 18.07 | 17.99 | 17.98 | | |
| 10 | 64QAM | 25 | 25 | 18.09 | 18.10 | 18.10 | | |
| 10 | 64QAM | 50 | 0 | 17.95 | 17.95 | 17.96 | | |
| Channel | | | | 23755 | 23790 | 23825 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 706.5 | 710 | 713.5 | | |
| 5 | QPSK | 1 | 0 | 18.30 | 18.21 | 18.23 | 19.4 | 0 |
| 5 | QPSK | 1 | 12 | 18.16 | 18.16 | 18.15 | | |
| 5 | QPSK | 1 | 24 | 18.20 | 18.08 | 18.05 | | |
| 5 | QPSK | 12 | 0 | 18.03 | 17.99 | 17.95 | 19.4 | 0 |
| 5 | QPSK | 12 | 7 | 17.94 | 17.89 | 17.95 | | |
| 5 | QPSK | 12 | 13 | 18.00 | 17.83 | 17.99 | | |
| 5 | QPSK | 25 | 0 | 17.86 | 17.67 | 17.67 | | |
| 5 | 16QAM | 1 | 0 | 17.84 | 17.77 | 17.80 | 19.4 | 0 |
| 5 | 16QAM | 1 | 12 | 17.88 | 17.81 | 17.85 | | |
| 5 | 16QAM | 1 | 24 | 17.76 | 17.79 | 17.83 | | |
| 5 | 16QAM | 12 | 0 | 17.94 | 17.94 | 17.90 | 19.4 | 0 |
| 5 | 16QAM | 12 | 7 | 18.03 | 17.98 | 18.00 | | |
| 5 | 16QAM | 12 | 13 | 17.84 | 17.89 | 17.87 | | |
| 5 | 16QAM | 25 | 0 | 17.90 | 17.85 | 17.91 | | |
| 5 | 64QAM | 1 | 0 | 17.90 | 17.82 | 17.92 | 19.4 | 0 |
| 5 | 64QAM | 1 | 12 | 18.13 | 18.07 | 18.14 | | |
| 5 | 64QAM | 1 | 24 | 18.26 | 18.14 | 18.17 | | |
| 5 | 64QAM | 12 | 0 | 17.91 | 17.79 | 17.85 | 19.4 | 0 |
| 5 | 64QAM | 12 | 7 | 18.00 | 17.95 | 17.96 | | |
| 5 | 64QAM | 12 | 13 | 18.02 | 18.06 | 18.02 | | |
| 5 | 64QAM | 25 | 0 | 17.89 | 17.95 | 17.92 | | |

**<LTE Band 25>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 26140 | 26340 | 26590 | | |
| Frequency (MHz) | | | | 1860 | 1880 | 1905 | | |
| 20 | QPSK | 1 | 0 | 13.26 | 13.32 | 13.22 | 13.9 | 0 |
| 20 | QPSK | 1 | 49 | 13.23 | 13.31 | 13.16 | | |
| 20 | QPSK | 1 | 99 | 13.24 | 13.20 | 13.02 | | |
| 20 | QPSK | 50 | 0 | 13.12 | 13.22 | 13.11 | 13.9 | 0 |
| 20 | QPSK | 50 | 24 | 13.01 | 13.05 | 12.97 | | |
| 20 | QPSK | 50 | 50 | 12.97 | 13.12 | 12.99 | | |
| 20 | QPSK | 100 | 0 | 12.99 | 13.11 | 12.96 | | |
| 20 | 16QAM | 1 | 0 | 12.91 | 13.03 | 12.84 | 13.9 | 0 |
| 20 | 16QAM | 1 | 49 | 12.83 | 12.97 | 12.83 | | |
| 20 | 16QAM | 1 | 99 | 12.85 | 13.01 | 12.84 | | |
| 20 | 16QAM | 50 | 0 | 12.99 | 13.09 | 12.85 | 13.9 | 0 |
| 20 | 16QAM | 50 | 24 | 13.01 | 13.13 | 13.03 | | |
| 20 | 16QAM | 50 | 50 | 12.97 | 13.10 | 13.04 | | |
| 20 | 16QAM | 100 | 0 | 12.98 | 13.13 | 12.99 | | |
| 20 | 64QAM | 1 | 0 | 13.07 | 13.19 | 13.07 | 13.9 | 0 |
| 20 | 64QAM | 1 | 49 | 13.04 | 13.25 | 13.08 | | |
| 20 | 64QAM | 1 | 99 | 13.12 | 13.27 | 13.15 | | |
| 20 | 64QAM | 50 | 0 | 12.98 | 13.11 | 12.95 | 13.9 | 0 |
| 20 | 64QAM | 50 | 24 | 13.04 | 13.14 | 13.05 | | |
| 20 | 64QAM | 50 | 50 | 13.02 | 13.15 | 13.05 | | |
| 20 | 64QAM | 100 | 0 | 13.01 | 13.13 | 13.00 | | |
| Channel | | | | 26115 | 26340 | 26615 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1857.5 | 1880 | 1907.5 | | |
| 15 | QPSK | 1 | 0 | 13.06 | 13.10 | 13.01 | 13.9 | 0 |
| 15 | QPSK | 1 | 37 | 13.03 | 13.07 | 12.96 | | |
| 15 | QPSK | 1 | 74 | 12.99 | 13.03 | 12.82 | | |
| 15 | QPSK | 36 | 0 | 12.72 | 12.82 | 12.84 | 13.9 | 0 |
| 15 | QPSK | 36 | 20 | 12.81 | 12.75 | 12.72 | | |
| 15 | QPSK | 36 | 39 | 12.77 | 12.75 | 12.74 | | |
| 15 | QPSK | 75 | 0 | 12.74 | 12.74 | 12.67 | | |
| 15 | 16QAM | 1 | 0 | 12.63 | 12.63 | 12.55 | 13.9 | 0 |
| 15 | 16QAM | 1 | 37 | 12.53 | 12.59 | 12.57 | | |
| 15 | 16QAM | 1 | 74 | 12.62 | 12.68 | 12.59 | | |
| 15 | 16QAM | 36 | 0 | 12.69 | 12.78 | 12.55 | 13.9 | 0 |
| 15 | 16QAM | 36 | 20 | 12.80 | 12.77 | 12.79 | | |
| 15 | 16QAM | 36 | 39 | 12.68 | 12.77 | 12.79 | | |
| 15 | 16QAM | 75 | 0 | 12.68 | 12.76 | 12.73 | | |
| 15 | 64QAM | 1 | 0 | 12.86 | 12.85 | 12.79 | 13.9 | 0 |
| 15 | 64QAM | 1 | 37 | 12.74 | 12.88 | 12.87 | | |
| 15 | 64QAM | 1 | 74 | 12.91 | 12.91 | 12.86 | | |
| 15 | 64QAM | 36 | 0 | 12.78 | 12.81 | 12.75 | 13.9 | 0 |
| 15 | 64QAM | 36 | 20 | 12.75 | 12.74 | 12.75 | | |
| 15 | 64QAM | 36 | 39 | 12.73 | 12.80 | 12.85 | | |
| 15 | 64QAM | 75 | 0 | 12.74 | 12.82 | 12.79 | | |
| Channel | | | | 26090 | 26340 | 26640 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1855 | 1880 | 1910 | | |
| 10 | QPSK | 1 | 0 | 13.04 | 13.10 | 12.95 | 13.9 | 0 |
| 10 | QPSK | 1 | 25 | 12.96 | 13.05 | 12.95 | | |
| 10 | QPSK | 1 | 49 | 13.02 | 13.06 | 12.77 | | |
| 10 | QPSK | 25 | 0 | 12.79 | 12.75 | 12.89 | 13.9 | 0 |
| 10 | QPSK | 25 | 12 | 12.79 | 12.68 | 12.71 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 12.77 | 12.77 | 12.70 | | |
| 10 | QPSK | 50 | 0 | 12.79 | 12.81 | 12.73 | | |
| 10 | 16QAM | 1 | 0 | 12.70 | 12.73 | 12.63 | 13.9 | 0 |
| 10 | 16QAM | 1 | 25 | 12.53 | 12.64 | 12.63 | | |
| 10 | 16QAM | 1 | 49 | 12.62 | 12.65 | 12.60 | | |
| 10 | 16QAM | 25 | 0 | 12.74 | 12.70 | 12.59 | 13.9 | 0 |
| 10 | 16QAM | 25 | 12 | 12.76 | 12.83 | 12.74 | | |
| 10 | 16QAM | 25 | 25 | 12.73 | 12.79 | 12.75 | | |
| 10 | 16QAM | 50 | 0 | 12.68 | 12.79 | 12.76 | | |
| 10 | 64QAM | 1 | 0 | 12.81 | 12.87 | 12.86 | 13.9 | 0 |
| 10 | 64QAM | 1 | 25 | 12.76 | 12.92 | 12.83 | | |
| 10 | 64QAM | 1 | 49 | 12.92 | 12.90 | 12.93 | | |
| 10 | 64QAM | 25 | 0 | 12.68 | 12.71 | 12.68 | 13.9 | 0 |
| 10 | 64QAM | 25 | 12 | 12.74 | 12.76 | 12.75 | | |
| 10 | 64QAM | 25 | 25 | 12.74 | 12.81 | 12.84 | | |
| 10 | 64QAM | 50 | 0 | 12.73 | 12.76 | 12.71 | | |
| Channel | | | | 26065 | 26340 | 26665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1852.5 | 1880 | 1912.5 | | |
| 5 | QPSK | 1 | 0 | 13.03 | 13.07 | 13.02 | 13.9 | 0 |
| 5 | QPSK | 1 | 12 | 12.98 | 13.10 | 12.91 | | |
| 5 | QPSK | 1 | 24 | 12.98 | 12.99 | 12.72 | | |
| 5 | QPSK | 12 | 0 | 12.73 | 12.77 | 12.84 | 13.9 | 0 |
| 5 | QPSK | 12 | 7 | 12.77 | 12.65 | 12.74 | | |
| 5 | QPSK | 12 | 13 | 12.73 | 12.74 | 12.70 | | |
| 5 | QPSK | 25 | 0 | 12.75 | 12.74 | 12.66 | | |
| 5 | 16QAM | 1 | 0 | 12.67 | 12.71 | 12.62 | 13.9 | 0 |
| 5 | 16QAM | 1 | 12 | 12.54 | 12.65 | 12.56 | | |
| 5 | 16QAM | 1 | 24 | 12.59 | 12.67 | 12.54 | | |
| 5 | 16QAM | 12 | 0 | 12.79 | 12.77 | 12.62 | 13.9 | 0 |
| 5 | 16QAM | 12 | 7 | 12.71 | 12.80 | 12.80 | | |
| 5 | 16QAM | 12 | 13 | 12.68 | 12.71 | 12.83 | | |
| 5 | 16QAM | 25 | 0 | 12.70 | 12.79 | 12.74 | | |
| 5 | 64QAM | 1 | 0 | 12.79 | 12.83 | 12.85 | 13.9 | 0 |
| 5 | 64QAM | 1 | 12 | 12.84 | 12.85 | 12.81 | | |
| 5 | 64QAM | 1 | 24 | 12.88 | 12.90 | 12.86 | | |
| 5 | 64QAM | 12 | 0 | 12.70 | 12.74 | 12.66 | 13.9 | 0 |
| 5 | 64QAM | 12 | 7 | 12.75 | 12.74 | 12.78 | | |
| 5 | 64QAM | 12 | 13 | 12.74 | 12.83 | 12.78 | | |
| 5 | 64QAM | 25 | 0 | 12.74 | 12.76 | 12.76 | | |
| Channel | | | | 26055 | 26340 | 26675 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1851.5 | 1880 | 1913.5 | | |
| 3 | QPSK | 1 | 0 | 13.04 | 13.05 | 12.96 | 13.9 | 0 |
| 3 | QPSK | 1 | 8 | 12.97 | 13.09 | 12.91 | | |
| 3 | QPSK | 1 | 14 | 12.94 | 13.07 | 12.76 | | |
| 3 | QPSK | 8 | 0 | 12.81 | 12.77 | 12.83 | 13.9 | 0 |
| 3 | QPSK | 8 | 4 | 12.75 | 12.65 | 12.70 | | |
| 3 | QPSK | 8 | 7 | 12.67 | 12.77 | 12.79 | | |
| 3 | QPSK | 15 | 0 | 12.71 | 12.74 | 12.75 | | |
| 3 | 16QAM | 1 | 0 | 12.70 | 12.68 | 12.62 | 13.9 | 0 |
| 3 | 16QAM | 1 | 8 | 12.56 | 12.63 | 12.62 | | |
| 3 | 16QAM | 1 | 14 | 12.61 | 12.66 | 12.59 | | |
| 3 | 16QAM | 8 | 0 | 12.74 | 12.74 | 12.57 | 13.9 | 0 |
| 3 | 16QAM | 8 | 4 | 12.72 | 12.78 | 12.82 | | |
| 3 | 16QAM | 8 | 7 | 12.74 | 12.71 | 12.83 | | |
| 3 | 16QAM | 15 | 0 | 12.76 | 12.79 | 12.71 | | |
| 3 | 64QAM | 1 | 0 | 12.83 | 12.79 | 12.78 | 13.9 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 12.75 | 12.87 | 12.83 | | |
| 3 | 64QAM | 1 | 14 | 12.87 | 12.92 | 12.90 | | |
| 3 | 64QAM | 8 | 0 | 12.72 | 12.77 | 12.67 | 13.9 | 0 |
| 3 | 64QAM | 8 | 4 | 12.77 | 12.79 | 12.82 | | |
| 3 | 64QAM | 8 | 7 | 12.82 | 12.76 | 12.77 | | |
| 3 | 64QAM | 15 | 0 | 12.76 | 12.82 | 12.72 | | |
| Channel | | | | 26047 | 26340 | 26683 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1850.7 | 1880 | 1914.3 | | |
| 1.4 | QPSK | 1 | 0 | 13.06 | 13.09 | 12.98 | 13.9 | 0 |
| 1.4 | QPSK | 1 | 3 | 12.96 | 13.11 | 12.93 | | |
| 1.4 | QPSK | 1 | 5 | 12.98 | 13.04 | 12.81 | | |
| 1.4 | QPSK | 3 | 0 | 12.72 | 12.75 | 12.88 | | |
| 1.4 | QPSK | 3 | 1 | 12.75 | 12.74 | 12.74 | | |
| 1.4 | QPSK | 3 | 3 | 12.74 | 12.72 | 12.70 | | |
| 1.4 | QPSK | 6 | 0 | 12.74 | 12.79 | 12.69 | 13.9 | 0 |
| 1.4 | 16QAM | 1 | 0 | 12.65 | 12.63 | 12.61 | 13.9 | 0 |
| 1.4 | 16QAM | 1 | 3 | 12.63 | 12.63 | 12.62 | | |
| 1.4 | 16QAM | 1 | 5 | 12.64 | 12.71 | 12.54 | | |
| 1.4 | 16QAM | 3 | 0 | 12.69 | 12.71 | 12.57 | | |
| 1.4 | 16QAM | 3 | 1 | 12.80 | 12.82 | 12.74 | | |
| 1.4 | 16QAM | 3 | 3 | 12.76 | 12.79 | 12.80 | | |
| 1.4 | 16QAM | 6 | 0 | 12.75 | 12.81 | 12.75 | 13.9 | 0 |
| 1.4 | 64QAM | 1 | 0 | 12.80 | 12.83 | 12.79 | 13.9 | 0 |
| 1.4 | 64QAM | 1 | 3 | 12.83 | 12.95 | 12.84 | | |
| 1.4 | 64QAM | 1 | 5 | 12.89 | 12.93 | 12.93 | | |
| 1.4 | 64QAM | 3 | 0 | 12.72 | 12.79 | 12.71 | | |
| 1.4 | 64QAM | 3 | 1 | 12.75 | 12.76 | 12.80 | | |
| 1.4 | 64QAM | 3 | 3 | 12.76 | 12.76 | 12.84 | | |
| 1.4 | 64QAM | 6 | 0 | 12.81 | 12.74 | 12.71 | 13.9 | 0 |

**<LTE Band 26>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 26765 | 26865 | 26965 | | |
| Frequency (MHz) | | | | 821.5 | 831.5 | 841.5 | | |
| 15 | QPSK | 1 | 0 | 15.48 | 15.40 | 15.51 | 16.5 | 0 |
| 15 | QPSK | 1 | 37 | 15.39 | 15.37 | 15.48 | | |
| 15 | QPSK | 1 | 74 | 15.46 | 15.39 | 15.42 | | |
| 15 | QPSK | 36 | 0 | 15.25 | 15.23 | 15.33 | 16.5 | 0 |
| 15 | QPSK | 36 | 20 | 15.18 | 15.21 | 15.32 | | |
| 15 | QPSK | 36 | 39 | 15.20 | 15.20 | 15.30 | | |
| 15 | QPSK | 75 | 0 | 15.15 | 15.18 | 15.27 | | |
| 15 | 16QAM | 1 | 0 | 15.11 | 15.06 | 15.16 | 16.5 | 0 |
| 15 | 16QAM | 1 | 37 | 15.02 | 15.07 | 15.15 | | |
| 15 | 16QAM | 1 | 74 | 15.14 | 15.15 | 15.17 | | |
| 15 | 16QAM | 36 | 0 | 15.19 | 15.22 | 15.29 | 16.5 | 0 |
| 15 | 16QAM | 36 | 20 | 15.23 | 15.29 | 15.35 | | |
| 15 | 16QAM | 36 | 39 | 15.25 | 15.26 | 15.38 | | |
| 15 | 16QAM | 75 | 0 | 15.25 | 15.28 | 15.27 | | |
| 15 | 64QAM | 1 | 0 | 15.33 | 15.23 | 15.33 | 16.5 | 0 |
| 15 | 64QAM | 1 | 37 | 15.29 | 15.36 | 15.38 | | |
| 15 | 64QAM | 1 | 74 | 15.33 | 15.38 | 15.28 | | |
| 15 | 64QAM | 36 | 0 | 15.28 | 15.23 | 15.35 | 16.5 | 0 |
| 15 | 64QAM | 36 | 20 | 15.29 | 15.29 | 15.39 | | |
| 15 | 64QAM | 36 | 39 | 15.29 | 15.32 | 15.38 | | |
| 15 | 64QAM | 75 | 0 | 15.26 | 15.29 | 15.31 | | |
| Channel | | | | 26740 | 26865 | 26990 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 819 | 831.5 | 844 | | |
| 10 | QPSK | 1 | 0 | 15.41 | 15.40 | 15.42 | 16.5 | 0 |
| 10 | QPSK | 1 | 25 | 15.34 | 15.30 | 15.40 | | |
| 10 | QPSK | 1 | 49 | 15.36 | 15.38 | 15.40 | | |
| 10 | QPSK | 25 | 0 | 15.15 | 15.14 | 15.27 | 16.5 | 0 |
| 10 | QPSK | 25 | 12 | 15.13 | 15.12 | 15.25 | | |
| 10 | QPSK | 25 | 25 | 15.19 | 15.20 | 15.23 | | |
| 10 | QPSK | 50 | 0 | 15.10 | 15.13 | 15.27 | | |
| 10 | 16QAM | 1 | 0 | 15.02 | 15.00 | 15.13 | 16.5 | 0 |
| 10 | 16QAM | 1 | 25 | 14.93 | 15.00 | 15.15 | | |
| 10 | 16QAM | 1 | 49 | 15.07 | 15.15 | 15.17 | | |
| 10 | 16QAM | 25 | 0 | 15.19 | 15.22 | 15.24 | 16.5 | 0 |
| 10 | 16QAM | 25 | 12 | 15.14 | 15.25 | 15.35 | | |
| 10 | 16QAM | 25 | 25 | 15.16 | 15.21 | 15.28 | | |
| 10 | 16QAM | 50 | 0 | 15.17 | 15.20 | 15.22 | | |
| 10 | 64QAM | 1 | 0 | 15.33 | 15.15 | 15.28 | 16.5 | 0 |
| 10 | 64QAM | 1 | 25 | 15.19 | 15.29 | 15.38 | | |
| 10 | 64QAM | 1 | 49 | 15.30 | 15.36 | 15.24 | | |
| 10 | 64QAM | 25 | 0 | 15.28 | 15.20 | 15.26 | 16.5 | 0 |
| 10 | 64QAM | 25 | 12 | 15.29 | 15.22 | 15.34 | | |
| 10 | 64QAM | 25 | 25 | 15.19 | 15.30 | 15.38 | | |
| 10 | 64QAM | 50 | 0 | 15.17 | 15.20 | 15.23 | | |
| Channel | | | | 26715 | 26865 | 27015 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 816.5 | 831.5 | 846.5 | | |
| 5 | QPSK | 1 | 0 | 15.44 | 15.46 | 15.42 | 16.5 | 0 |
| 5 | QPSK | 1 | 12 | 15.34 | 15.37 | 15.39 | | |
| 5 | QPSK | 1 | 24 | 15.40 | 15.40 | 15.40 | | |
| 5 | QPSK | 12 | 0 | 15.15 | 15.22 | 15.23 | 16.5 | 0 |
| 5 | QPSK | 12 | 7 | 15.09 | 15.18 | 15.23 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | QPSK | 12 | 13 | 15.15 | 15.16 | 15.21 | | |
| 5 | QPSK | 25 | 0 | 15.11 | 15.17 | 15.18 | | |
| 5 | 16QAM | 1 | 0 | 15.04 | 15.00 | 15.08 | 16.5 | 0 |
| 5 | 16QAM | 1 | 12 | 14.95 | 15.00 | 15.07 | | |
| 5 | 16QAM | 1 | 24 | 15.04 | 15.08 | 15.17 | | |
| 5 | 16QAM | 12 | 0 | 15.19 | 15.22 | 15.25 | 16.5 | 0 |
| 5 | 16QAM | 12 | 7 | 15.14 | 15.29 | 15.27 | | |
| 5 | 16QAM | 12 | 13 | 15.19 | 15.17 | 15.29 | | |
| 5 | 16QAM | 25 | 0 | 15.25 | 15.21 | 15.17 | | |
| 5 | 64QAM | 1 | 0 | 15.26 | 15.17 | 15.28 | 16.5 | 0 |
| 5 | 64QAM | 1 | 12 | 15.26 | 15.36 | 15.37 | | |
| 5 | 64QAM | 1 | 24 | 15.32 | 15.33 | 15.26 | | |
| 5 | 64QAM | 12 | 0 | 15.18 | 15.22 | 15.29 | 16.5 | 0 |
| 5 | 64QAM | 12 | 7 | 15.28 | 15.19 | 15.38 | | |
| 5 | 64QAM | 12 | 13 | 15.21 | 15.32 | 15.31 | | |
| 5 | 64QAM | 25 | 0 | 15.23 | 15.20 | 15.22 | | |
| Channel | | | | 26705 | 26865 | 27025 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 815.5 | 831.5 | 847.5 | | |
| 3 | QPSK | 1 | 0 | 15.40 | 15.36 | 15.47 | 16.5 | 0 |
| 3 | QPSK | 1 | 8 | 15.33 | 15.32 | 15.44 | | |
| 3 | QPSK | 1 | 14 | 15.42 | 15.31 | 15.35 | | |
| 3 | QPSK | 8 | 0 | 15.21 | 15.14 | 15.23 | 16.5 | 0 |
| 3 | QPSK | 8 | 4 | 15.17 | 15.16 | 15.27 | | |
| 3 | QPSK | 8 | 7 | 15.18 | 15.10 | 15.26 | | |
| 3 | QPSK | 15 | 0 | 15.08 | 15.08 | 15.22 | | |
| 3 | 16QAM | 1 | 0 | 15.11 | 14.96 | 15.12 | 16.5 | 0 |
| 3 | 16QAM | 1 | 8 | 14.99 | 14.97 | 15.10 | | |
| 3 | 16QAM | 1 | 14 | 15.06 | 15.11 | 15.15 | | |
| 3 | 16QAM | 8 | 0 | 15.16 | 15.13 | 15.29 | 16.5 | 0 |
| 3 | 16QAM | 8 | 4 | 15.21 | 15.28 | 15.29 | | |
| 3 | 16QAM | 8 | 7 | 15.16 | 15.19 | 15.36 | | |
| 3 | 16QAM | 15 | 0 | 15.20 | 15.28 | 15.24 | | |
| 3 | 64QAM | 1 | 0 | 15.28 | 15.14 | 15.28 | 16.5 | 0 |
| 3 | 64QAM | 1 | 8 | 15.22 | 15.32 | 15.30 | | |
| 3 | 64QAM | 1 | 14 | 15.31 | 15.29 | 15.23 | | |
| 3 | 64QAM | 8 | 0 | 15.19 | 15.22 | 15.29 | 16.5 | 0 |
| 3 | 64QAM | 8 | 4 | 15.25 | 15.26 | 15.31 | | |
| 3 | 64QAM | 8 | 7 | 15.26 | 15.23 | 15.37 | | |
| 3 | 64QAM | 15 | 0 | 15.26 | 15.22 | 15.30 | | |
| Channel | | | | 26697 | 26865 | 27033 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 814.7 | 831.5 | 848.3 | | |
| 1.4 | QPSK | 1 | 0 | 15.46 | 15.44 | 15.43 | 16.5 | 0 |
| 1.4 | QPSK | 1 | 3 | 15.38 | 15.37 | 15.42 | | |
| 1.4 | QPSK | 1 | 5 | 15.38 | 15.33 | 15.37 | | |
| 1.4 | QPSK | 3 | 0 | 15.25 | 15.17 | 15.28 | | |
| 1.4 | QPSK | 3 | 1 | 15.18 | 15.19 | 15.26 | | |
| 1.4 | QPSK | 3 | 3 | 15.17 | 15.13 | 15.28 | | |
| 1.4 | QPSK | 6 | 0 | 15.10 | 15.10 | 15.17 | 16.5 | 0 |
| 1.4 | 16QAM | 1 | 0 | 15.07 | 15.03 | 15.07 | 16.5 | 0 |
| 1.4 | 16QAM | 1 | 3 | 14.99 | 15.06 | 15.07 | | |
| 1.4 | 16QAM | 1 | 5 | 15.08 | 15.09 | 15.08 | | |
| 1.4 | 16QAM | 3 | 0 | 15.19 | 15.17 | 15.19 | | |
| 1.4 | 16QAM | 3 | 1 | 15.23 | 15.25 | 15.35 | | |
| 1.4 | 16QAM | 3 | 3 | 15.19 | 15.24 | 15.37 | | |
| 1.4 | 16QAM | 6 | 0 | 15.17 | 15.19 | 15.19 | 16.5 | 0 |
| 1.4 | 64QAM | 1 | 0 | 15.24 | 15.18 | 15.30 | 16.5 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1.4 | 64QAM | 1 | 3 | 15.26 | 15.29 | 15.30 | | |
| 1.4 | 64QAM | 1 | 5 | 15.29 | 15.32 | 15.20 | | |
| 1.4 | 64QAM | 3 | 0 | 15.28 | 15.21 | 15.27 | | |
| 1.4 | 64QAM | 3 | 1 | 15.29 | 15.29 | 15.29 | | |
| 1.4 | 64QAM | 3 | 3 | 15.24 | 15.22 | 15.30 | | |
| 1.4 | 64QAM | 6 | 0 | 15.26 | 15.28 | 15.30 | 16.5 | 0 |

**<LTE Band 30>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | | 27710 | | | |
| Frequency (MHz) | | | | | 2310 | | | |
| 10 | QPSK | 1 | 0 | | 13.45 | | 14.6 | 0 |
| 10 | QPSK | 1 | 25 | | 13.38 | | | |
| 10 | QPSK | 1 | 49 | | 13.37 | | | |
| 10 | QPSK | 25 | 0 | | 13.40 | | 14.6 | 0 |
| 10 | QPSK | 25 | 12 | | 13.32 | | | |
| 10 | QPSK | 25 | 25 | | 13.28 | | | |
| 10 | QPSK | 50 | 0 | | 13.29 | | | |
| 10 | 16QAM | 1 | 0 | | 13.27 | | 14.6 | 0 |
| 10 | 16QAM | 1 | 25 | | 13.21 | | | |
| 10 | 16QAM | 1 | 49 | | 13.17 | | | |
| 10 | 16QAM | 25 | 0 | | 13.24 | | 14.6 | 0 |
| 10 | 16QAM | 25 | 12 | | 13.28 | | | |
| 10 | 16QAM | 25 | 25 | | 13.32 | | | |
| 10 | 16QAM | 50 | 0 | | 13.28 | | | |
| 10 | 64QAM | 1 | 0 | | 13.27 | | 14.6 | 0 |
| 10 | 64QAM | 1 | 25 | | 13.36 | | | |
| 10 | 64QAM | 1 | 49 | | 13.35 | | | |
| 10 | 64QAM | 25 | 0 | | 13.14 | | 14.6 | 0 |
| 10 | 64QAM | 25 | 12 | | 13.18 | | | |
| 10 | 64QAM | 25 | 25 | | 13.30 | | | |
| 10 | 64QAM | 50 | 0 | | 13.17 | | | |
| Channel | | | | 27685 | 27710 | 27735 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2307.5 | 2310 | 2312.5 | | |
| 5 | QPSK | 1 | 0 | 13.44 | 13.38 | 13.41 | 14.6 | 0 |
| 5 | QPSK | 1 | 12 | 13.36 | 13.32 | 13.35 | | |
| 5 | QPSK | 1 | 24 | 13.31 | 13.37 | 13.33 | | |
| 5 | QPSK | 12 | 0 | 13.28 | 13.26 | 13.29 | 14.6 | 0 |
| 5 | QPSK | 12 | 7 | 13.29 | 13.25 | 13.30 | | |
| 5 | QPSK | 12 | 13 | 13.23 | 13.22 | 13.27 | | |
| 5 | QPSK | 25 | 0 | 13.19 | 13.27 | 13.25 | | |
| 5 | 16QAM | 1 | 0 | 13.23 | 13.27 | 13.26 | 14.6 | 0 |
| 5 | 16QAM | 1 | 12 | 13.17 | 13.17 | 13.17 | | |
| 5 | 16QAM | 1 | 24 | 13.09 | 13.13 | 13.13 | | |
| 5 | 16QAM | 12 | 0 | 13.24 | 13.18 | 13.17 | 14.6 | 0 |
| 5 | 16QAM | 12 | 7 | 13.27 | 13.22 | 13.21 | | |
| 5 | 16QAM | 12 | 13 | 13.28 | 13.32 | 13.32 | | |
| 5 | 16QAM | 25 | 0 | 13.24 | 13.22 | 13.24 | | |
| 5 | 64QAM | 1 | 0 | 13.19 | 13.26 | 13.18 | 14.6 | 0 |
| 5 | 64QAM | 1 | 12 | 13.31 | 13.34 | 13.35 | | |
| 5 | 64QAM | 1 | 24 | 13.25 | 13.29 | 13.32 | | |
| 5 | 64QAM | 12 | 0 | 13.04 | 13.12 | 13.13 | 14.6 | 0 |
| 5 | 64QAM | 12 | 7 | 13.17 | 13.10 | 13.08 | | |
| 5 | 64QAM | 12 | 13 | 13.24 | 13.23 | 13.24 | | |
| 5 | 64QAM | 25 | 0 | 13.11 | 13.14 | 13.12 | | |

**<LTE Band 66>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 132072 | 132322 | 132572 | | |
| Frequency (MHz) | | | | 1720 | 1745 | 1770 | | |
| 20 | QPSK | 1 | 0 | 14.25 | 14.27 | 14.26 | 14.8 | 0 |
| 20 | QPSK | 1 | 49 | 14.04 | 14.24 | 13.99 | | |
| 20 | QPSK | 1 | 99 | 14.12 | 14.19 | 14.00 | | |
| 20 | QPSK | 50 | 0 | 14.08 | 14.10 | 13.98 | 14.8 | 0 |
| 20 | QPSK | 50 | 24 | 14.05 | 13.96 | 13.91 | | |
| 20 | QPSK | 50 | 50 | 14.04 | 13.90 | 13.82 | | |
| 20 | QPSK | 100 | 0 | 13.95 | 14.05 | 13.91 | | |
| 20 | 16QAM | 1 | 0 | 14.00 | 14.09 | 13.97 | 14.8 | 0 |
| 20 | 16QAM | 1 | 49 | 13.83 | 13.88 | 13.67 | | |
| 20 | 16QAM | 1 | 99 | 13.95 | 13.95 | 13.59 | | |
| 20 | 16QAM | 50 | 0 | 14.11 | 14.15 | 14.00 | 14.8 | 0 |
| 20 | 16QAM | 50 | 24 | 14.12 | 14.10 | 13.89 | | |
| 20 | 16QAM | 50 | 50 | 14.05 | 14.00 | 13.83 | | |
| 20 | 16QAM | 100 | 0 | 14.10 | 14.03 | 13.96 | | |
| 20 | 64QAM | 1 | 0 | 14.26 | 14.11 | 14.09 | 14.8 | 0 |
| 20 | 64QAM | 1 | 49 | 14.15 | 14.07 | 13.87 | | |
| 20 | 64QAM | 1 | 99 | 14.16 | 14.04 | 13.80 | | |
| 20 | 64QAM | 50 | 0 | 14.02 | 13.96 | 13.85 | 14.8 | 0 |
| 20 | 64QAM | 50 | 24 | 14.08 | 13.95 | 13.79 | | |
| 20 | 64QAM | 50 | 50 | 14.02 | 13.96 | 13.80 | | |
| 20 | 64QAM | 100 | 0 | 14.07 | 13.92 | 13.77 | | |
| Channel | | | | 132047 | 132322 | 132597 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1717.5 | 1745 | 1772.5 | | |
| 15 | QPSK | 1 | 0 | 14.21 | 14.23 | 14.06 | 14.8 | 0 |
| 15 | QPSK | 1 | 37 | 14.15 | 14.19 | 13.98 | | |
| 15 | QPSK | 1 | 74 | 14.21 | 14.15 | 13.97 | | |
| 15 | QPSK | 36 | 0 | 13.99 | 14.05 | 13.95 | 14.8 | 0 |
| 15 | QPSK | 36 | 20 | 13.95 | 13.95 | 13.82 | | |
| 15 | QPSK | 36 | 39 | 13.94 | 13.85 | 13.76 | | |
| 15 | QPSK | 75 | 0 | 13.86 | 13.97 | 13.88 | | |
| 15 | 16QAM | 1 | 0 | 13.94 | 14.02 | 13.91 | 14.8 | 0 |
| 15 | 16QAM | 1 | 37 | 13.78 | 13.84 | 13.63 | | |
| 15 | 16QAM | 1 | 74 | 13.89 | 13.87 | 13.56 | | |
| 15 | 16QAM | 36 | 0 | 14.10 | 14.14 | 13.99 | 14.8 | 0 |
| 15 | 16QAM | 36 | 20 | 14.08 | 14.01 | 13.81 | | |
| 15 | 16QAM | 36 | 39 | 13.99 | 14.00 | 13.73 | | |
| 15 | 16QAM | 75 | 0 | 14.10 | 13.95 | 13.88 | | |
| 15 | 64QAM | 1 | 0 | 14.18 | 14.03 | 14.07 | 14.8 | 0 |
| 15 | 64QAM | 1 | 37 | 14.15 | 14.04 | 13.83 | | |
| 15 | 64QAM | 1 | 74 | 14.16 | 14.04 | 13.77 | | |
| 15 | 64QAM | 36 | 0 | 13.92 | 13.86 | 13.78 | 14.8 | 0 |
| 15 | 64QAM | 36 | 20 | 14.00 | 13.91 | 13.72 | | |
| 15 | 64QAM | 36 | 39 | 13.95 | 13.90 | 13.77 | | |
| 15 | 64QAM | 75 | 0 | 13.99 | 13.86 | 13.71 | | |
| Channel | | | | 132022 | 132322 | 132622 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1715 | 1745 | 1775 | | |
| 10 | QPSK | 1 | 0 | 14.28 | 14.22 | 14.11 | 14.8 | 0 |
| 10 | QPSK | 1 | 25 | 14.09 | 14.20 | 13.91 | | |
| 10 | QPSK | 1 | 49 | 14.19 | 14.17 | 13.91 | | |
| 10 | QPSK | 25 | 0 | 14.07 | 14.02 | 13.96 | 14.8 | 0 |
| 10 | QPSK | 25 | 12 | 14.04 | 13.92 | 13.89 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 13.99 | 13.86 | 13.80 | | |
| 10 | QPSK | 50 | 0 | 13.89 | 14.05 | 13.81 | | |
| 10 | 16QAM | 1 | 0 | 13.91 | 14.03 | 13.95 | 14.8 | 0 |
| 10 | 16QAM | 1 | 25 | 13.82 | 13.86 | 13.57 | | |
| 10 | 16QAM | 1 | 49 | 13.91 | 13.86 | 13.53 | | |
| 10 | 16QAM | 25 | 0 | 14.06 | 14.14 | 13.99 | 14.8 | 0 |
| 10 | 16QAM | 25 | 12 | 14.11 | 14.08 | 13.81 | | |
| 10 | 16QAM | 25 | 25 | 13.99 | 13.94 | 13.74 | | |
| 10 | 16QAM | 50 | 0 | 14.05 | 14.00 | 13.93 | | |
| 10 | 64QAM | 1 | 0 | 14.17 | 14.02 | 14.02 | 14.8 | 0 |
| 10 | 64QAM | 1 | 25 | 14.14 | 14.07 | 13.83 | | |
| 10 | 64QAM | 1 | 49 | 14.07 | 14.01 | 13.71 | | |
| 10 | 64QAM | 25 | 0 | 13.95 | 13.86 | 13.75 | 14.8 | 0 |
| 10 | 64QAM | 25 | 12 | 14.07 | 13.88 | 13.74 | | |
| 10 | 64QAM | 25 | 25 | 14.01 | 13.92 | 13.71 | | |
| 10 | 64QAM | 50 | 0 | 14.03 | 13.83 | 13.76 | | |
| Channel | | | | 131997 | 132322 | 132647 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1712.5 | 1745 | 1777.5 | | |
| 5 | QPSK | 1 | 0 | 14.18 | 14.20 | 14.04 | 14.8 | 0 |
| 5 | QPSK | 1 | 12 | 14.15 | 14.19 | 13.99 | | |
| 5 | QPSK | 1 | 24 | 14.16 | 14.14 | 13.90 | | |
| 5 | QPSK | 12 | 0 | 14.07 | 14.08 | 13.98 | 14.8 | 0 |
| 5 | QPSK | 12 | 7 | 14.03 | 13.86 | 13.86 | | |
| 5 | QPSK | 12 | 13 | 14.03 | 13.90 | 13.74 | | |
| 5 | QPSK | 25 | 0 | 13.94 | 14.04 | 13.90 | | |
| 5 | 16QAM | 1 | 0 | 13.95 | 14.00 | 13.91 | 14.8 | 0 |
| 5 | 16QAM | 1 | 12 | 13.82 | 13.81 | 13.57 | | |
| 5 | 16QAM | 1 | 24 | 13.94 | 13.85 | 13.55 | | |
| 5 | 16QAM | 12 | 0 | 14.06 | 14.11 | 14.00 | 14.8 | 0 |
| 5 | 16QAM | 12 | 7 | 14.05 | 14.06 | 13.87 | | |
| 5 | 16QAM | 12 | 13 | 13.95 | 13.95 | 13.80 | | |
| 5 | 16QAM | 25 | 0 | 14.02 | 13.99 | 13.93 | | |
| 5 | 64QAM | 1 | 0 | 14.17 | 14.07 | 14.03 | 14.8 | 0 |
| 5 | 64QAM | 1 | 12 | 14.06 | 14.00 | 13.77 | | |
| 5 | 64QAM | 1 | 24 | 14.16 | 13.97 | 13.74 | | |
| 5 | 64QAM | 12 | 0 | 13.97 | 13.93 | 13.81 | 14.8 | 0 |
| 5 | 64QAM | 12 | 7 | 14.07 | 13.87 | 13.69 | | |
| 5 | 64QAM | 12 | 13 | 13.99 | 13.87 | 13.80 | | |
| 5 | 64QAM | 25 | 0 | 14.03 | 13.84 | 13.72 | | |
| Channel | | | | 131987 | 132322 | 132657 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1711.5 | 1745 | 1778.5 | | |
| 3 | QPSK | 1 | 0 | 14.24 | 14.26 | 14.12 | 14.8 | 0 |
| 3 | QPSK | 1 | 8 | 14.17 | 14.15 | 13.92 | | |
| 3 | QPSK | 1 | 14 | 14.16 | 14.09 | 13.93 | | |
| 3 | QPSK | 8 | 0 | 14.03 | 14.04 | 13.89 | 14.8 | 0 |
| 3 | QPSK | 8 | 4 | 13.95 | 13.91 | 13.89 | | |
| 3 | QPSK | 8 | 7 | 14.03 | 13.85 | 13.73 | | |
| 3 | QPSK | 15 | 0 | 13.85 | 13.99 | 13.89 | | |
| 3 | 16QAM | 1 | 0 | 13.93 | 14.05 | 13.90 | 14.8 | 0 |
| 3 | 16QAM | 1 | 8 | 13.73 | 13.82 | 13.59 | | |
| 3 | 16QAM | 1 | 14 | 13.86 | 13.85 | 13.57 | | |
| 3 | 16QAM | 8 | 0 | 14.09 | 14.06 | 14.00 | 14.8 | 0 |
| 3 | 16QAM | 8 | 4 | 14.12 | 14.03 | 13.88 | | |
| 3 | 16QAM | 8 | 7 | 13.97 | 13.98 | 13.76 | | |
| 3 | 16QAM | 15 | 0 | 14.03 | 13.94 | 13.88 | | |
| 3 | 64QAM | 1 | 0 | 14.21 | 14.02 | 14.04 | 14.8 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | 64QAM | 1 | 8 | 14.09 | 14.00 | 13.85 | | |
| 3 | 64QAM | 1 | 14 | 14.10 | 13.98 | 13.78 | | |
| 3 | 64QAM | 8 | 0 | 14.01 | 13.87 | 13.79 | 14.8 | 0 |
| 3 | 64QAM | 8 | 4 | 14.08 | 13.89 | 13.73 | | |
| 3 | 64QAM | 8 | 7 | 13.99 | 13.86 | 13.72 | | |
| 3 | 64QAM | 15 | 0 | 14.04 | 13.89 | 13.77 | | |
| Channel | | | | 131979 | 132322 | 132665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 1710.7 | 1745 | 1779.3 | | |
| 1.4 | QPSK | 1 | 0 | 14.17 | 14.23 | 14.09 | 14.8 | 0 |
| 1.4 | QPSK | 1 | 3 | 14.14 | 14.19 | 13.99 | | |
| 1.4 | QPSK | 1 | 5 | 14.16 | 14.18 | 13.90 | | |
| 1.4 | QPSK | 3 | 0 | 13.98 | 14.07 | 13.89 | | |
| 1.4 | QPSK | 3 | 1 | 13.97 | 13.95 | 13.85 | | |
| 1.4 | QPSK | 3 | 3 | 14.02 | 13.81 | 13.79 | | |
| 1.4 | QPSK | 6 | 0 | 13.94 | 14.01 | 13.91 | 14.8 | 0 |
| 1.4 | 16QAM | 1 | 0 | 13.91 | 14.04 | 13.89 | 14.8 | 0 |
| 1.4 | 16QAM | 1 | 3 | 13.81 | 13.85 | 13.57 | | |
| 1.4 | 16QAM | 1 | 5 | 13.92 | 13.86 | 13.51 | | |
| 1.4 | 16QAM | 3 | 0 | 14.02 | 14.15 | 13.98 | | |
| 1.4 | 16QAM | 3 | 1 | 14.10 | 14.04 | 13.86 | | |
| 1.4 | 16QAM | 3 | 3 | 14.00 | 13.93 | 13.73 | | |
| 1.4 | 16QAM | 6 | 0 | 14.05 | 13.97 | 13.90 | 14.8 | 0 |
| 1.4 | 64QAM | 1 | 0 | 14.24 | 14.06 | 14.01 | 14.8 | 0 |
| 1.4 | 64QAM | 1 | 3 | 14.08 | 14.01 | 13.79 | | |
| 1.4 | 64QAM | 1 | 5 | 14.13 | 13.97 | 13.80 | | |
| 1.4 | 64QAM | 3 | 0 | 13.93 | 13.95 | 13.82 | | |
| 1.4 | 64QAM | 3 | 1 | 14.02 | 13.87 | 13.74 | | |
| 1.4 | 64QAM | 3 | 3 | 13.99 | 13.96 | 13.75 | | |
| 1.4 | 64QAM | 6 | 0 | 13.98 | 13.86 | 13.76 | 14.8 | 0 |

**<LTE Band 71>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 133222 | 133322 | 133372 | | |
| Frequency (MHz) | | | | 673 | 683 | 688 | | |
| 20 | QPSK | 1 | 0 | 17.84 | 17.88 | 17.82 | 18.7 | 0 |
| 20 | QPSK | 1 | 49 | 17.76 | 17.80 | 17.73 | | |
| 20 | QPSK | 1 | 99 | 17.73 | 17.72 | 17.74 | | |
| 20 | QPSK | 50 | 0 | 17.73 | 17.72 | 17.59 | 18.7 | 0 |
| 20 | QPSK | 50 | 24 | 17.63 | 17.69 | 17.52 | | |
| 20 | QPSK | 50 | 50 | 17.63 | 17.68 | 17.53 | | |
| 20 | QPSK | 100 | 0 | 17.67 | 17.71 | 17.57 | | |
| 20 | 16QAM | 1 | 0 | 17.56 | 17.47 | 17.47 | 18.7 | 0 |
| 20 | 16QAM | 1 | 49 | 17.42 | 17.42 | 17.38 | | |
| 20 | 16QAM | 1 | 99 | 17.45 | 17.41 | 17.35 | | |
| 20 | 16QAM | 50 | 0 | 17.62 | 17.53 | 17.52 | 18.7 | 0 |
| 20 | 16QAM | 50 | 24 | 17.67 | 17.51 | 17.55 | | |
| 20 | 16QAM | 50 | 50 | 17.63 | 17.58 | 17.57 | | |
| 20 | 16QAM | 100 | 0 | 17.63 | 17.51 | 17.57 | | |
| 20 | 64QAM | 1 | 0 | 17.85 | 17.68 | 17.62 | 18.7 | 0 |
| 20 | 64QAM | 1 | 49 | 17.69 | 17.66 | 17.63 | | |
| 20 | 64QAM | 1 | 99 | 17.72 | 17.68 | 17.60 | | |
| 20 | 64QAM | 50 | 0 | 17.63 | 17.57 | 17.54 | 18.7 | 0 |
| 20 | 64QAM | 50 | 24 | 17.66 | 17.57 | 17.54 | | |
| 20 | 64QAM | 50 | 50 | 17.67 | 17.60 | 17.61 | | |
| 20 | 64QAM | 100 | 0 | 17.62 | 17.51 | 17.56 | | |
| Channel | | | | 133197 | 133297 | 133397 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 670.5 | 680.5 | 690.5 | | |
| 15 | QPSK | 1 | 0 | 17.83 | 17.82 | 17.75 | 18.7 | 0 |
| 15 | QPSK | 1 | 37 | 17.71 | 17.76 | 17.70 | | |
| 15 | QPSK | 1 | 74 | 17.65 | 17.65 | 17.71 | | |
| 15 | QPSK | 36 | 0 | 17.64 | 17.55 | 17.55 | 18.7 | 0 |
| 15 | QPSK | 36 | 20 | 17.59 | 17.58 | 17.52 | | |
| 15 | QPSK | 36 | 39 | 17.62 | 17.56 | 17.53 | | |
| 15 | QPSK | 75 | 0 | 17.61 | 17.60 | 17.47 | | |
| 15 | 16QAM | 1 | 0 | 17.47 | 17.43 | 17.44 | 18.7 | 0 |
| 15 | 16QAM | 1 | 37 | 17.37 | 17.39 | 17.34 | | |
| 15 | 16QAM | 1 | 74 | 17.38 | 17.39 | 17.35 | | |
| 15 | 16QAM | 36 | 0 | 17.59 | 17.52 | 17.45 | 18.7 | 0 |
| 15 | 16QAM | 36 | 20 | 17.67 | 17.43 | 17.54 | | |
| 15 | 16QAM | 36 | 39 | 17.59 | 17.57 | 17.47 | | |
| 15 | 16QAM | 75 | 0 | 17.53 | 17.44 | 17.47 | | |
| 15 | 64QAM | 1 | 0 | 17.82 | 17.66 | 17.56 | 18.7 | 0 |
| 15 | 64QAM | 1 | 37 | 17.60 | 17.65 | 17.62 | | |
| 15 | 64QAM | 1 | 74 | 17.70 | 17.61 | 17.60 | | |
| 15 | 64QAM | 36 | 0 | 17.60 | 17.55 | 17.49 | 18.7 | 0 |
| 15 | 64QAM | 36 | 20 | 17.63 | 17.54 | 17.48 | | |
| 15 | 64QAM | 36 | 39 | 17.58 | 17.50 | 17.58 | | |
| 15 | 64QAM | 75 | 0 | 17.53 | 17.49 | 17.49 | | |
| Channel | | | | 133172 | 133272 | 133422 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 668 | 678 | 693 | | |
| 10 | QPSK | 1 | 0 | 17.74 | 17.83 | 17.72 | 18.7 | 0 |
| 10 | QPSK | 1 | 25 | 17.72 | 17.78 | 17.70 | | |
| 10 | QPSK | 1 | 49 | 17.73 | 17.66 | 17.74 | | |
| 10 | QPSK | 25 | 0 | 17.69 | 17.61 | 17.57 | 18.7 | 0 |
| 10 | QPSK | 25 | 12 | 17.56 | 17.53 | 17.42 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 17.60 | 17.54 | 17.46 | | |
| 10 | QPSK | 50 | 0 | 17.65 | 17.52 | 17.47 | | |
| 10 | 16QAM | 1 | 0 | 17.56 | 17.45 | 17.46 | 18.7 | 0 |
| 10 | 16QAM | 1 | 25 | 17.36 | 17.39 | 17.35 | | |
| 10 | 16QAM | 1 | 49 | 17.37 | 17.36 | 17.29 | | |
| 10 | 16QAM | 25 | 0 | 17.52 | 17.53 | 17.46 | 18.7 | 0 |
| 10 | 16QAM | 25 | 12 | 17.62 | 17.44 | 17.48 | | |
| 10 | 16QAM | 25 | 25 | 17.59 | 17.48 | 17.55 | | |
| 10 | 16QAM | 50 | 0 | 17.58 | 17.48 | 17.50 | | |
| 10 | 64QAM | 1 | 0 | 17.75 | 17.60 | 17.53 | 18.7 | 0 |
| 10 | 64QAM | 1 | 25 | 17.59 | 17.64 | 17.62 | | |
| 10 | 64QAM | 1 | 49 | 17.68 | 17.67 | 17.60 | | |
| 10 | 64QAM | 25 | 0 | 17.54 | 17.47 | 17.48 | 18.7 | 0 |
| 10 | 64QAM | 25 | 12 | 17.65 | 17.47 | 17.51 | | |
| 10 | 64QAM | 25 | 25 | 17.61 | 17.54 | 17.60 | | |
| 10 | 64QAM | 50 | 0 | 17.54 | 17.43 | 17.54 | | |
| Channel | | | | 133147 | 133247 | 133447 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 665.5 | 675.5 | 695.5 | | |
| 5 | QPSK | 1 | 0 | 17.77 | 17.82 | 17.72 | 18.7 | 0 |
| 5 | QPSK | 1 | 12 | 17.75 | 17.78 | 17.67 | | |
| 5 | QPSK | 1 | 24 | 17.69 | 17.67 | 17.73 | | |
| 5 | QPSK | 12 | 0 | 17.67 | 17.58 | 17.58 | 18.7 | 0 |
| 5 | QPSK | 12 | 7 | 17.56 | 17.54 | 17.46 | | |
| 5 | QPSK | 12 | 13 | 17.62 | 17.51 | 17.45 | | |
| 5 | QPSK | 25 | 0 | 17.59 | 17.54 | 17.49 | | |
| 5 | 16QAM | 1 | 0 | 17.50 | 17.42 | 17.47 | 18.7 | 0 |
| 5 | 16QAM | 1 | 12 | 17.38 | 17.33 | 17.34 | | |
| 5 | 16QAM | 1 | 24 | 17.36 | 17.31 | 17.29 | | |
| 5 | 16QAM | 12 | 0 | 17.52 | 17.48 | 17.45 | 18.7 | 0 |
| 5 | 16QAM | 12 | 7 | 17.63 | 17.44 | 17.51 | | |
| 5 | 16QAM | 12 | 13 | 17.58 | 17.51 | 17.47 | | |
| 5 | 16QAM | 25 | 0 | 17.55 | 17.47 | 17.49 | | |
| 5 | 64QAM | 1 | 0 | 17.76 | 17.60 | 17.62 | 18.7 | 0 |
| 5 | 64QAM | 1 | 12 | 17.67 | 17.61 | 17.62 | | |
| 5 | 64QAM | 1 | 24 | 17.68 | 17.58 | 17.55 | | |
| 5 | 64QAM | 12 | 0 | 17.63 | 17.55 | 17.53 | 18.7 | 0 |
| 5 | 64QAM | 12 | 7 | 17.65 | 17.56 | 17.46 | | |
| 5 | 64QAM | 12 | 13 | 17.57 | 17.58 | 17.51 | | |
| 5 | 64QAM | 25 | 0 | 17.58 | 17.48 | 17.55 | | |

**<TDD LTE SAR Measurement>**

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations

b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS

c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

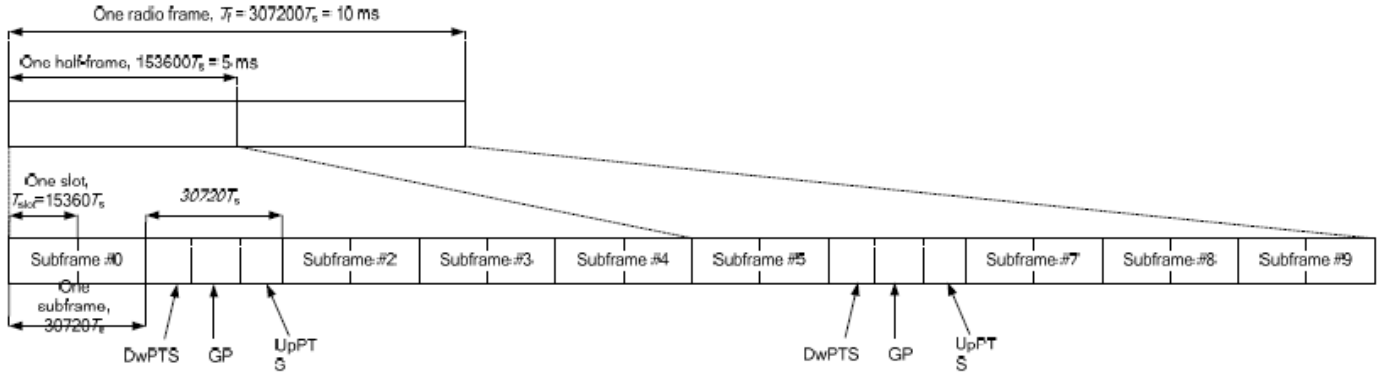



**Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).**

**Table 4.2-2: Uplink-downlink configurations.**

| Uplink-downlink configuration | Downlink-to-Uplink Switch-point periodicity | Subframe number | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0 | 5 ms | D | S | U | U | U | D | S | U | U | U |
| 1 | 5 ms | D | S | U | U | D | D | S | U | U | D |
| 2 | 5 ms | D | S | U | D | D | D | S | U | D | D |
| 3 | 10 ms | D | S | U | U | U | D | D | D | D | D |
| 4 | 10 ms | D | S | U | U | D | D | D | D | D | D |
| 5 | 10 ms | D | S | U | D | D | D | D | D | D | D |
| 6 | 5 ms | D | S | U | U | U | D | S | U | U | D |

**Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).**

| Special subframe configuration | Normal cyclic prefix in downlink | | | Extended cyclic prefix in downlink | | |
|---|---|---|---|---|---|---|
| | DwPTS | UpPTS | | DwPTS | UpPTS | |
| | | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink | | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |
| 0 | $6592 \cdot T_s$ | $2192 \cdot T_s$ | $2560 \cdot T_s$ | $7680 \cdot T_s$ | $2192 \cdot T_s$ | $2560 \cdot T_s$ |
| 1 | $19760 \cdot T_s$ | | | $20480 \cdot T_s$ | | |
| 2 | $21952 \cdot T_s$ | | | $23040 \cdot T_s$ | | |
| 3 | $24144 \cdot T_s$ | | | $25600 \cdot T_s$ | | |
| 4 | $26336 \cdot T_s$ | | | $7680 \cdot T_s$ | $4384 \cdot T_s$ | $5120 \cdot T_s$ |
| 5 | $6592 \cdot T_s$ | $4384 \cdot T_s$ | $5120 \cdot T_s$ | $20480 \cdot T_s$ | | |
| 6 | $19760 \cdot T_s$ | | | $23040 \cdot T_s$ | | |
| 7 | $21952 \cdot T_s$ | | | $12800 \cdot T_s$ | | |
| 8 | $24144 \cdot T_s$ | | | - | - | - |
| 9 | $13168 \cdot T_s$ | | | - | - | - |

| Special subframe (30720·$T_s$): Normal cyclic prefix in downlink (UpPTS) | | | |
|---|---|---|---|
| | **Special subframe configuration** | **Normal cyclic prefix in uplink** | **Extended cyclic prefix in uplink** |
| **Uplink duty factor in one special subframe** | **0~4** | 7.13% | 8.33% |
| | **5~9** | 14.3% | 16.7% |

| Special subframe(30720·$T_s$): Extended cyclic prefix in downlink (UpPTS) | | | |
|---|---|---|---|
| | **Special subframe configuration** | **Normal cyclic prefix in uplink** | **Extended cyclic prefix in uplink** |
| **Uplink duty factor in one special subframe** | **0~3** | 7.13% | 8.33% |
| | **4~7** | 14.3% | 16.7% |

The highest duty factor is resulted from:

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.

ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink

iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.167)/5 = 63.3%

iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.143)/5 = 62.9%

v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

## <Default Power Mode>

### <LTE Band 38>

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 37850 | 38000 | 38150 | | |
| Frequency (MHz) | | | | 2580 | 2595 | 2610 | | |
| 20 | QPSK | 1 | 0 | 23.86 | 23.80 | 23.81 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.82 | 23.83 | 23.80 | | |
| 20 | QPSK | 1 | 99 | 23.72 | 23.73 | 23.65 | | |
| 20 | QPSK | 50 | 0 | 22.85 | 22.88 | 22.79 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.81 | 22.84 | 22.82 | | |
| 20 | QPSK | 50 | 50 | 22.89 | 22.82 | 22.72 | | |
| 20 | QPSK | 100 | 0 | 22.90 | 22.91 | 22.79 | | |
| 20 | 16QAM | 1 | 0 | 22.76 | 22.80 | 22.74 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.71 | 22.70 | 22.66 | | |
| 20 | 16QAM | 1 | 99 | 22.71 | 22.74 | 22.68 | | |
| 20 | 16QAM | 50 | 0 | 21.26 | 21.30 | 21.24 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 21.35 | 21.30 | 21.20 | | |
| 20 | 16QAM | 50 | 50 | 21.31 | 21.29 | 21.14 | | |
| 20 | 16QAM | 100 | 0 | 21.36 | 21.22 | 21.13 | | |
| 20 | 64QAM | 1 | 0 | 21.30 | 21.35 | 21.23 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.30 | 21.31 | 21.22 | | |
| 20 | 64QAM | 1 | 99 | 21.26 | 21.26 | 21.25 | | |
| 20 | 64QAM | 50 | 0 | 20.28 | 20.29 | 20.29 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 20.33 | 20.28 | 20.16 | | |
| 20 | 64QAM | 50 | 50 | 20.32 | 20.29 | 20.13 | | |
| 20 | 64QAM | 100 | 0 | 20.32 | 20.25 | 19.93 | | |
| Channel | | | | 37825 | 38000 | 38175 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2577.5 | 2595 | 2612.5 | | |
| 15 | QPSK | 1 | 0 | 23.86 | 23.77 | 23.74 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.72 | 23.74 | 23.78 | | |
| 15 | QPSK | 1 | 74 | 23.66 | 23.65 | 23.60 | | |
| 15 | QPSK | 36 | 0 | 22.84 | 22.78 | 22.73 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.77 | 22.79 | 22.81 | | |
| 15 | QPSK | 36 | 39 | 22.79 | 22.73 | 22.69 | | |
| 15 | QPSK | 75 | 0 | 22.84 | 22.86 | 22.74 | | |
| 15 | 16QAM | 1 | 0 | 22.70 | 22.71 | 22.66 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.68 | 22.61 | 22.58 | | |
| 15 | 16QAM | 1 | 74 | 22.70 | 22.66 | 22.60 | | |
| 15 | 16QAM | 36 | 0 | 21.20 | 21.20 | 21.15 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.29 | 21.29 | 21.13 | | |
| 15 | 16QAM | 36 | 39 | 21.25 | 21.21 | 21.09 | | |
| 15 | 16QAM | 75 | 0 | 21.27 | 21.13 | 21.08 | | |
| 15 | 64QAM | 1 | 0 | 21.25 | 21.34 | 21.13 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.25 | 21.27 | 21.16 | | |
| 15 | 64QAM | 1 | 74 | 21.21 | 21.24 | 21.17 | | |
| 15 | 64QAM | 36 | 0 | 20.22 | 20.27 | 20.27 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.31 | 20.18 | 20.13 | | |
| 15 | 64QAM | 36 | 39 | 20.30 | 20.23 | 20.11 | | |
| 15 | 64QAM | 75 | 0 | 20.24 | 20.22 | 19.87 | | |
| Channel | | | | 37800 | 38000 | 38200 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2575 | 2595 | 2615 | | |
| 10 | QPSK | 1 | 0 | 23.79 | 23.79 | 23.72 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.76 | 23.76 | 23.79 | | |
| 10 | QPSK | 1 | 49 | 23.68 | 23.73 | 23.55 | | |
| 10 | QPSK | 25 | 0 | 22.77 | 22.83 | 22.77 | 23 | 1 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 12 | 22.80 | 22.80 | 22.76 | | |
| 10 | QPSK | 25 | 25 | 22.87 | 22.78 | 22.65 | | |
| 10 | QPSK | 50 | 0 | 22.83 | 22.87 | 22.74 | | |
| 10 | 16QAM | 1 | 0 | 22.70 | 22.75 | 22.67 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.67 | 22.69 | 22.65 | | |
| 10 | 16QAM | 1 | 49 | 22.67 | 22.74 | 22.65 | | |
| 10 | 16QAM | 25 | 0 | 21.21 | 21.27 | 21.14 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.30 | 21.28 | 21.18 | | |
| 10 | 16QAM | 25 | 25 | 21.22 | 21.21 | 21.13 | | |
| 10 | 16QAM | 50 | 22.53 | 21.27 | 21.22 | 21.03 | | |
| 10 | 64QAM | 1 | 22.02 | 21.29 | 21.34 | 21.16 | 22.2 | 22.32 |
| 10 | 64QAM | 1 | 22.09 | 21.23 | 21.29 | 21.19 | | |
| 10 | 64QAM | 1 | 49 | 21.19 | 21.19 | 21.25 | | |
| 10 | 64QAM | 25 | 0 | 20.19 | 20.27 | 20.26 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 20.26 | 20.18 | 20.13 | | |
| 10 | 64QAM | 25 | 25 | 20.31 | 20.20 | 20.08 | | |
| 10 | 64QAM | 50 | 0 | 20.30 | 20.20 | 19.84 | | |
| Channel | | | | 37775 | 38000 | 38225 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2572.5 | 2595 | 2617.5 | | |
| 5 | QPSK | 1 | 0 | 23.79 | 23.77 | 23.78 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.78 | 23.73 | 23.80 | | |
| 5 | QPSK | 1 | 24 | 23.71 | 23.71 | 23.58 | | |
| 5 | QPSK | 12 | 0 | 22.75 | 22.78 | 22.78 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.71 | 22.80 | 22.77 | | |
| 5 | QPSK | 12 | 13 | 22.79 | 22.81 | 22.71 | | |
| 5 | QPSK | 25 | 0 | 22.80 | 22.89 | 22.76 | | |
| 5 | 16QAM | 1 | 0 | 22.67 | 22.79 | 22.71 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.61 | 22.60 | 22.60 | | |
| 5 | 16QAM | 1 | 24 | 22.63 | 22.66 | 22.58 | | |
| 5 | 16QAM | 12 | 0 | 21.24 | 21.26 | 21.20 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.35 | 21.27 | 21.20 | | |
| 5 | 16QAM | 12 | 13 | 21.31 | 21.21 | 21.11 | | |
| 5 | 16QAM | 25 | 0 | 21.26 | 21.16 | 21.08 | | |
| 5 | 64QAM | 1 | 0 | 21.20 | 21.29 | 21.19 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.20 | 21.27 | 21.20 | | |
| 5 | 64QAM | 1 | 24 | 21.25 | 21.26 | 21.16 | | |
| 5 | 64QAM | 12 | 0 | 20.26 | 20.24 | 20.22 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.23 | 20.27 | 20.11 | | |
| 5 | 64QAM | 12 | 13 | 20.22 | 20.20 | 20.08 | | |
| 5 | 64QAM | 25 | 0 | 20.29 | 20.25 | 19.84 | | |

**<LTE Band 41>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 39750 | 40185 | 40620 | 41055 | 41490 | | |
| Frequency (MHz) | | | | 2506 | 2549.5 | 2593 | 2636.5 | 2680 | | |
| 20 | QPSK | 1 | 0 | 23.93 | 23.97 | 23.95 | 23.74 | 23.71 | 24 | 0 |
| 20 | QPSK | 1 | 49 | 23.92 | 23.80 | 23.86 | 23.62 | 23.58 | | |
| 20 | QPSK | 1 | 99 | 23.88 | 23.76 | 23.89 | 23.61 | 23.61 | | |
| 20 | QPSK | 50 | 0 | 22.99 | 22.89 | 22.97 | 22.82 | 22.72 | 23 | 1 |
| 20 | QPSK | 50 | 24 | 22.98 | 22.97 | 22.92 | 22.75 | 22.74 | | |
| 20 | QPSK | 50 | 50 | 22.94 | 22.95 | 22.98 | 22.74 | 22.70 | | |
| 20 | QPSK | 100 | 0 | 22.91 | 22.98 | 23.04 | 22.77 | 22.77 | | |
| 20 | 16QAM | 1 | 0 | 22.98 | 22.99 | 22.93 | 22.91 | 22.80 | 23 | 1 |
| 20 | 16QAM | 1 | 49 | 22.91 | 22.88 | 22.94 | 22.73 | 22.67 | | |
| 20 | 16QAM | 1 | 99 | 22.99 | 22.89 | 22.96 | 22.72 | 22.71 | | |
| 20 | 16QAM | 50 | 0 | 22.16 | 21.97 | 21.97 | 21.87 | 21.73 | 22 | 2 |
| 20 | 16QAM | 50 | 24 | 22.16 | 22.04 | 22.05 | 21.80 | 21.80 | | |
| 20 | 16QAM | 50 | 50 | 22.10 | 21.97 | 22.01 | 21.76 | 21.75 | | |
| 20 | 16QAM | 100 | 0 | 22.12 | 22.00 | 22.05 | 21.80 | 21.78 | | |
| 20 | 64QAM | 1 | 0 | 21.60 | 21.51 | 21.65 | 21.45 | 21.32 | 22 | 2 |
| 20 | 64QAM | 1 | 49 | 21.61 | 21.52 | 21.54 | 21.32 | 21.27 | | |
| 20 | 64QAM | 1 | 99 | 21.62 | 21.48 | 21.54 | 21.33 | 21.22 | | |
| 20 | 64QAM | 50 | 0 | 21.15 | 20.97 | 21.01 | 20.86 | 20.73 | 21 | 3 |
| 20 | 64QAM | 50 | 24 | 21.12 | 21.02 | 21.05 | 20.80 | 20.77 | | |
| 20 | 64QAM | 50 | 50 | 21.12 | 20.97 | 21.01 | 20.77 | 20.73 | | |
| 20 | 64QAM | 100 | 0 | 21.13 | 21.01 | 21.05 | 20.80 | 20.78 | | |
| Channel | | | | 39725 | 40173 | 40620 | 41068 | 41515 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2503.5 | 2548.3 | 2593 | 2637.8 | 2682.5 | | |
| 15 | QPSK | 1 | 0 | 23.96 | 23.87 | 23.96 | 23.68 | 23.21 | 24 | 0 |
| 15 | QPSK | 1 | 37 | 23.93 | 23.81 | 23.90 | 23.57 | 23.08 | | |
| 15 | QPSK | 1 | 74 | 23.92 | 23.92 | 23.96 | 23.67 | 23.11 | | |
| 15 | QPSK | 36 | 0 | 23.00 | 22.96 | 22.95 | 22.79 | 22.22 | 23 | 1 |
| 15 | QPSK | 36 | 20 | 22.98 | 22.98 | 22.98 | 22.75 | 22.24 | | |
| 15 | QPSK | 36 | 39 | 22.97 | 22.96 | 22.96 | 22.70 | 22.20 | | |
| 15 | QPSK | 75 | 0 | 22.90 | 22.98 | 22.98 | 22.75 | 22.27 | | |
| 15 | 16QAM | 1 | 0 | 22.85 | 22.99 | 22.96 | 22.83 | 22.30 | 23 | 1 |
| 15 | 16QAM | 1 | 37 | 22.92 | 22.87 | 22.95 | 22.61 | 22.17 | | |
| 15 | 16QAM | 1 | 74 | 22.94 | 22.97 | 22.96 | 22.77 | 22.21 | | |
| 15 | 16QAM | 36 | 0 | 21.99 | 21.91 | 21.93 | 21.76 | 21.23 | 22 | 2 |
| 15 | 16QAM | 36 | 20 | 21.94 | 21.96 | 21.97 | 21.74 | 21.30 | | |
| 15 | 16QAM | 36 | 39 | 21.91 | 21.89 | 21.93 | 21.70 | 21.25 | | |
| 15 | 16QAM | 75 | 0 | 21.93 | 21.92 | 21.94 | 21.79 | 21.28 | | |
| 15 | 64QAM | 1 | 0 | 21.58 | 21.52 | 21.60 | 21.35 | 20.82 | 22 | 2 |
| 15 | 64QAM | 1 | 37 | 21.67 | 21.52 | 21.56 | 21.32 | 20.77 | | |
| 15 | 64QAM | 1 | 74 | 21.60 | 21.58 | 21.62 | 21.32 | 20.72 | | |
| 15 | 64QAM | 36 | 0 | 20.98 | 20.96 | 20.97 | 20.82 | 20.23 | 21 | 3 |
| 15 | 64QAM | 36 | 20 | 20.94 | 20.97 | 21.00 | 20.73 | 20.27 | | |
| 15 | 64QAM | 36 | 39 | 20.99 | 20.97 | 20.98 | 20.74 | 20.23 | | |
| 15 | 64QAM | 75 | 0 | 20.94 | 20.97 | 20.98 | 20.78 | 20.28 | | |
| Channel | | | | 39700 | 40160 | 40620 | 41080 | 41540 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2501 | 2547 | 2593 | 2639 | 2685 | | |
| 10 | QPSK | 1 | 0 | 23.84 | 23.76 | 23.77 | 23.40 | 23.21 | 24 | 0 |
| 10 | QPSK | 1 | 25 | 23.70 | 23.72 | 23.68 | 23.42 | 23.08 | | |
| 10 | QPSK | 1 | 49 | 23.87 | 23.65 | 23.72 | 23.33 | 23.11 | | |
| 10 | QPSK | 25 | 0 | 22.90 | 22.83 | 22.75 | 22.51 | 22.22 | 23 | 1 |
| 10 | QPSK | 25 | 12 | 22.97 | 22.84 | 22.86 | 22.58 | 22.24 | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 22.91 | 22.78 | 22.81 | 22.57 | 22.20 | | |
| 10 | QPSK | 50 | 0 | 22.93 | 22.83 | 22.82 | 22.62 | 22.27 | | |
| 10 | 16QAM | 1 | 0 | 22.99 | 22.89 | 22.92 | 22.61 | 22.30 | 23 | 1 |
| 10 | 16QAM | 1 | 25 | 22.96 | 22.84 | 22.85 | 22.55 | 22.17 | | |
| 10 | 16QAM | 1 | 49 | 22.94 | 22.81 | 22.81 | 22.50 | 22.21 | | |
| 10 | 16QAM | 25 | 0 | 21.88 | 21.79 | 21.71 | 21.46 | 21.23 | 22 | 2 |
| 10 | 16QAM | 25 | 12 | 21.91 | 21.84 | 21.82 | 21.61 | 21.30 | | |
| 10 | 16QAM | 25 | 25 | 21.85 | 21.76 | 21.75 | 21.52 | 21.25 | | |
| 10 | 16QAM | 50 | 0 | 21.97 | 21.87 | 21.87 | 21.65 | 21.28 | | |
| 10 | 64QAM | 1 | 0 | 21.50 | 21.35 | 21.33 | 21.07 | 20.82 | 22 | 2 |
| 10 | 64QAM | 1 | 25 | 21.53 | 21.44 | 21.43 | 21.20 | 20.77 | | |
| 10 | 64QAM | 1 | 49 | 21.48 | 21.35 | 21.31 | 21.07 | 20.72 | | |
| 10 | 64QAM | 25 | 0 | 20.98 | 20.91 | 20.82 | 20.59 | 20.23 | 21 | 3 |
| 10 | 64QAM | 25 | 12 | 21.00 | 20.92 | 20.92 | 20.70 | 20.27 | | |
| 10 | 64QAM | 25 | 25 | 20.98 | 20.87 | 20.89 | 20.64 | 20.23 | | |
| 10 | 64QAM | 50 | 0 | 20.98 | 20.88 | 20.87 | 20.61 | 20.28 | | |
| Channel | | | | 39675 | 40148 | 40620 | 41093 | 41565 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2498.5 | 2545.8 | 2593 | 2640.30 | 2687.5 | | |
| 5 | QPSK | 1 | 0 | 23.87 | 23.74 | 23.70 | 23.41 | 23.21 | 24 | 0 |
| 5 | QPSK | 1 | 12 | 23.83 | 23.70 | 23.74 | 23.47 | 23.08 | | |
| 5 | QPSK | 1 | 24 | 23.87 | 23.74 | 23.73 | 23.43 | 23.11 | | |
| 5 | QPSK | 12 | 0 | 22.94 | 22.82 | 22.83 | 22.56 | 22.22 | 23 | 1 |
| 5 | QPSK | 12 | 7 | 22.94 | 22.86 | 22.88 | 22.58 | 22.24 | | |
| 5 | QPSK | 12 | 13 | 22.95 | 22.80 | 22.84 | 22.57 | 22.20 | | |
| 5 | QPSK | 25 | 0 | 22.92 | 22.84 | 22.79 | 22.57 | 22.27 | | |
| 5 | 16QAM | 1 | 0 | 22.98 | 22.89 | 22.86 | 22.58 | 22.30 | 23 | 1 |
| 5 | 16QAM | 1 | 12 | 22.86 | 22.92 | 23.00 | 22.68 | 22.17 | | |
| 5 | 16QAM | 1 | 24 | 22.92 | 22.91 | 22.90 | 22.66 | 22.21 | | |
| 5 | 16QAM | 12 | 0 | 21.88 | 21.80 | 21.80 | 21.51 | 21.23 | 22 | 2 |
| 5 | 16QAM | 12 | 7 | 21.91 | 21.80 | 21.84 | 21.59 | 21.30 | | |
| 5 | 16QAM | 12 | 13 | 21.90 | 21.80 | 21.82 | 21.52 | 21.25 | | |
| 5 | 16QAM | 25 | 0 | 21.94 | 21.83 | 21.85 | 21.58 | 21.28 | | |
| 5 | 64QAM | 1 | 0 | 21.61 | 21.45 | 21.41 | 21.18 | 20.82 | 22 | 2 |
| 5 | 64QAM | 1 | 12 | 21.62 | 21.51 | 21.50 | 21.24 | 20.77 | | |
| 5 | 64QAM | 1 | 24 | 21.63 | 21.48 | 21.43 | 21.22 | 20.72 | | |
| 5 | 64QAM | 12 | 0 | 20.99 | 20.90 | 20.92 | 20.61 | 20.23 | 21 | 3 |
| 5 | 64QAM | 12 | 7 | 20.98 | 20.88 | 20.90 | 20.64 | 20.27 | | |
| 5 | 64QAM | 12 | 13 | 20.90 | 20.90 | 20.88 | 20.61 | 20.23 | | |
| 5 | 64QAM | 25 | 0 | 20.90 | 20.89 | 20.88 | 20.62 | 20.28 | | |

**<LTE Band 41 HPUE>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 39750 | 40185 | 40620 | 41055 | 41490 | | |
| Frequency (MHz) | | | | 2506 | 2549.5 | 2593 | 2636.5 | 2680 | | |
| 20 | QPSK | 1 | 0 | 25.44 | 24.72 | 25.08 | 25.43 | 25.03 | 26 | 0 |
| 20 | QPSK | 1 | 49 | 24.45 | 24.80 | 25.10 | 25.34 | 24.98 | | |
| 20 | QPSK | 1 | 99 | 24.49 | 24.85 | 25.29 | 25.38 | 24.98 | | |
| 20 | QPSK | 50 | 0 | 23.64 | 23.99 | 24.36 | 24.60 | 24.21 | 25 | 1 |
| 20 | QPSK | 50 | 24 | 23.76 | 24.08 | 24.49 | 24.50 | 24.20 | | |
| 20 | QPSK | 50 | 50 | 23.77 | 24.11 | 24.53 | 24.51 | 24.22 | | |
| 20 | QPSK | 100 | 0 | 23.81 | 24.16 | 24.48 | 24.50 | 24.30 | | |
| 20 | 16QAM | 1 | 0 | 23.82 | 24.11 | 24.53 | 24.82 | 24.49 | 25 | 1 |
| 20 | 16QAM | 1 | 49 | 23.82 | 24.14 | 24.57 | 24.71 | 24.35 | | |
| 20 | 16QAM | 1 | 99 | 23.92 | 24.20 | 24.73 | 24.65 | 24.40 | | |
| 20 | 16QAM | 50 | 0 | 22.69 | 23.01 | 23.43 | 23.58 | 23.33 | 24 | 2 |
| 20 | 16QAM | 50 | 24 | 22.80 | 23.09 | 23.55 | 23.46 | 23.28 | | |
| 20 | 16QAM | 50 | 50 | 22.81 | 23.08 | 23.54 | 23.51 | 23.15 | | |
| 20 | 16QAM | 100 | 0 | 22.81 | 23.11 | 23.50 | 23.57 | 23.26 | | |
| 20 | 64QAM | 1 | 0 | 22.67 | 22.94 | 23.31 | 23.68 | 23.34 | 24 | 2 |
| 20 | 64QAM | 1 | 49 | 22.71 | 22.97 | 23.40 | 23.63 | 23.22 | | |
| 20 | 64QAM | 1 | 99 | 22.79 | 23.00 | 23.66 | 23.55 | 22.97 | | |
| 20 | 64QAM | 50 | 0 | 21.72 | 21.91 | 22.50 | 22.66 | 22.30 | 23 | 3 |
| 20 | 64QAM | 50 | 24 | 21.85 | 22.03 | 22.56 | 22.56 | 22.29 | | |
| 20 | 64QAM | 50 | 50 | 21.84 | 22.11 | 22.60 | 22.54 | 22.25 | | |
| 20 | 64QAM | 100 | 0 | 21.85 | 22.10 | 22.53 | 22.56 | 22.26 | | |
| Channel | | | | 39725 | 40173 | 40620 | 41068 | 41515 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2503.5 | 2548.3 | 2593 | 2637.8 | 2682.5 | | |
| 15 | QPSK | 1 | 0 | 24.40 | 24.71 | 25.13 | 25.32 | 25.01 | 26 | 0 |
| 15 | QPSK | 1 | 37 | 24.45 | 24.73 | 25.17 | 25.26 | 24.93 | | |
| 15 | QPSK | 1 | 74 | 24.39 | 24.95 | 25.30 | 25.35 | 24.97 | | |
| 15 | QPSK | 36 | 0 | 23.51 | 23.97 | 24.37 | 24.41 | 24.09 | 25 | 1 |
| 15 | QPSK | 36 | 20 | 23.62 | 24.05 | 24.46 | 24.41 | 24.08 | | |
| 15 | QPSK | 36 | 39 | 23.59 | 24.04 | 24.49 | 24.35 | 24.03 | | |
| 15 | QPSK | 75 | 0 | 23.63 | 24.03 | 24.44 | 24.40 | 24.07 | | |
| 15 | 16QAM | 1 | 0 | 23.65 | 24.11 | 24.52 | 24.69 | 24.37 | 25 | 1 |
| 15 | 16QAM | 1 | 37 | 23.67 | 24.09 | 24.56 | 24.73 | 24.28 | | |
| 15 | 16QAM | 1 | 74 | 23.85 | 24.23 | 24.66 | 24.82 | 24.36 | | |
| 15 | 16QAM | 36 | 0 | 22.57 | 22.91 | 23.30 | 23.59 | 23.16 | 24 | 2 |
| 15 | 16QAM | 36 | 20 | 22.67 | 22.96 | 23.39 | 23.54 | 23.17 | | |
| 15 | 16QAM | 36 | 39 | 22.70 | 22.99 | 23.41 | 23.45 | 23.15 | | |
| 15 | 16QAM | 75 | 0 | 22.77 | 22.99 | 23.39 | 23.46 | 23.18 | | |
| 15 | 64QAM | 1 | 0 | 22.66 | 22.82 | 23.28 | 23.53 | 23.23 | 24 | 2 |
| 15 | 64QAM | 1 | 37 | 22.69 | 22.93 | 23.29 | 23.53 | 23.13 | | |
| 15 | 64QAM | 1 | 74 | 22.72 | 23.06 | 23.39 | 23.54 | 22.93 | | |
| 15 | 64QAM | 36 | 0 | 21.65 | 21.90 | 22.22 | 22.52 | 22.17 | 23 | 3 |
| 15 | 64QAM | 36 | 20 | 21.76 | 21.96 | 22.29 | 22.50 | 22.12 | | |
| 15 | 64QAM | 36 | 39 | 21.75 | 21.97 | 22.39 | 22.42 | 22.11 | | |
| 15 | 64QAM | 75 | 0 | 21.78 | 21.97 | 22.38 | 22.43 | 22.11 | | |
| Channel | | | | 39700 | 40160 | 40620 | 41080 | 41540 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2501 | 2547 | 2593 | 2639 | 2685 | | |
| 10 | QPSK | 1 | 0 | 24.03 | 24.63 | 24.97 | 25.14 | 24.92 | 26 | 0 |
| 10 | QPSK | 1 | 25 | 24.02 | 24.69 | 24.96 | 25.19 | 24.89 | | |
| 10 | QPSK | 1 | 49 | 23.91 | 24.77 | 25.00 | 25.07 | 24.82 | | |
| 10 | QPSK | 25 | 0 | 23.09 | 23.79 | 24.00 | 24.30 | 24.07 | 25 | 1 |
| 10 | QPSK | 25 | 12 | 23.13 | 23.84 | 24.19 | 24.33 | 24.08 | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 23.09 | 23.81 | 24.13 | 24.31 | 24.04 | | |
| 10 | QPSK | 50 | 0 | 23.38 | 23.89 | 24.11 | 24.32 | 24.07 | | |
| 10 | 16QAM | 1 | 0 | 23.57 | 24.06 | 24.25 | 24.61 | 24.32 | 25 | 1 |
| 10 | 16QAM | 1 | 25 | 23.46 | 24.11 | 24.29 | 24.55 | 24.23 | | |
| 10 | 16QAM | 1 | 49 | 23.55 | 24.06 | 24.33 | 24.53 | 24.24 | | |
| 10 | 16QAM | 25 | 0 | 22.46 | 22.77 | 23.01 | 23.40 | 23.04 | 24 | 2 |
| 10 | 16QAM | 25 | 12 | 22.53 | 22.90 | 23.15 | 23.33 | 23.12 | | |
| 10 | 16QAM | 25 | 25 | 22.48 | 22.88 | 23.13 | 23.28 | 23.04 | | |
| 10 | 16QAM | 50 | 0 | 22.52 | 22.93 | 23.16 | 23.29 | 23.07 | | |
| 10 | 64QAM | 1 | 0 | 22.58 | 22.89 | 23.20 | 23.54 | 23.22 | 24 | 2 |
| 10 | 64QAM | 1 | 25 | 22.52 | 23.03 | 23.36 | 23.62 | 23.26 | | |
| 10 | 64QAM | 1 | 49 | 22.54 | 22.98 | 23.33 | 23.38 | 23.14 | | |
| 10 | 64QAM | 25 | 0 | 21.58 | 21.85 | 22.14 | 22.45 | 22.21 | 23 | 3 |
| 10 | 64QAM | 25 | 12 | 21.60 | 22.03 | 22.28 | 22.38 | 22.26 | | |
| 10 | 64QAM | 25 | 25 | 21.60 | 21.98 | 22.25 | 22.31 | 22.18 | | |
| 10 | 64QAM | 50 | 0 | 21.55 | 21.95 | 22.16 | 22.30 | 22.10 | | |
| Channel | | | | 39675 | 40148 | 40620 | 41093 | 41565 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2498.5 | 2545.8 | 2593 | 2640.30 | 2687.5 | | |
| 5 | QPSK | 1 | 0 | 24.30 | 24.59 | 24.98 | 25.17 | 24.81 | 26 | 0 |
| 5 | QPSK | 1 | 12 | 24.21 | 24.64 | 25.10 | 25.15 | 24.81 | | |
| 5 | QPSK | 1 | 24 | 24.26 | 24.57 | 25.09 | 25.14 | 24.77 | | |
| 5 | QPSK | 12 | 0 | 23.43 | 23.83 | 24.15 | 24.31 | 24.08 | 25 | 1 |
| 5 | QPSK | 12 | 7 | 23.46 | 23.88 | 24.25 | 24.35 | 24.02 | | |
| 5 | QPSK | 12 | 13 | 23.41 | 23.92 | 24.26 | 24.32 | 24.03 | | |
| 5 | QPSK | 25 | 0 | 23.44 | 23.89 | 24.23 | 24.28 | 24.02 | | |
| 5 | 16QAM | 1 | 0 | 23.57 | 23.98 | 24.34 | 24.53 | 24.30 | 25 | 1 |
| 5 | 16QAM | 1 | 12 | 23.57 | 24.02 | 24.42 | 24.47 | 24.30 | | |
| 5 | 16QAM | 1 | 24 | 23.59 | 24.07 | 24.46 | 24.48 | 24.33 | | |
| 5 | 16QAM | 12 | 0 | 22.46 | 22.87 | 23.23 | 23.32 | 23.14 | 24 | 2 |
| 5 | 16QAM | 12 | 7 | 22.52 | 22.87 | 23.29 | 23.33 | 23.19 | | |
| 5 | 16QAM | 12 | 13 | 22.47 | 22.88 | 23.28 | 23.31 | 23.15 | | |
| 5 | 16QAM | 25 | 0 | 22.51 | 22.89 | 23.23 | 23.34 | 23.16 | | |
| 5 | 64QAM | 1 | 0 | 22.52 | 22.88 | 23.23 | 23.41 | 23.23 | 24 | 2 |
| 5 | 64QAM | 1 | 12 | 22.48 | 22.93 | 23.33 | 23.40 | 23.17 | | |
| 5 | 64QAM | 1 | 24 | 22.53 | 22.95 | 23.35 | 23.43 | 23.11 | | |
| 5 | 64QAM | 12 | 0 | 21.52 | 21.94 | 22.24 | 22.39 | 22.10 | 23 | 3 |
| 5 | 64QAM | 12 | 7 | 21.55 | 21.98 | 22.33 | 22.45 | 22.14 | | |
| 5 | 64QAM | 12 | 13 | 21.51 | 21.95 | 22.32 | 22.42 | 22.09 | | |
| 5 | 64QAM | 25 | 0 | 21.53 | 21.96 | 22.30 | 22.44 | 22.15 | | |

**<LTE Band 48>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 55340 | 55830 | 56150 | 56640 | | |
| Frequency (MHz) | | | | 3560 | 3609 | 3641 | 3690 | | |
| 20 | QPSK | 1 | 0 | 22.00 | 22.30 | 22.27 | 22.13 | 23 | 0 |
| 20 | QPSK | 1 | 49 | 21.89 | 22.13 | 22.16 | 22.01 | | |
| 20 | QPSK | 1 | 99 | 21.99 | 22.28 | 22.19 | 22.11 | | |
| 20 | QPSK | 50 | 0 | 21.02 | 21.31 | 21.30 | 21.18 | 22 | 1 |
| 20 | QPSK | 50 | 24 | 21.02 | 21.26 | 21.29 | 21.19 | | |
| 20 | QPSK | 50 | 50 | 21.03 | 21.29 | 21.18 | 21.19 | | |
| 20 | QPSK | 100 | 0 | 21.02 | 21.29 | 21.28 | 21.18 | | |
| 20 | 16QAM | 1 | 0 | 21.09 | 21.27 | 21.37 | 21.23 | 22 | 1 |
| 20 | 16QAM | 1 | 49 | 20.98 | 21.21 | 21.25 | 21.12 | | |
| 20 | 16QAM | 1 | 99 | 21.12 | 21.36 | 21.32 | 21.23 | | |
| 20 | 16QAM | 50 | 0 | 20.09 | 20.26 | 20.33 | 20.19 | 21 | 2 |
| 20 | 16QAM | 50 | 24 | 20.10 | 20.31 | 20.35 | 20.20 | | |
| 20 | 16QAM | 50 | 50 | 20.07 | 20.30 | 20.26 | 20.23 | | |
| 20 | 16QAM | 100 | 0 | 20.07 | 20.29 | 20.31 | 20.22 | | |
| 20 | 64QAM | 1 | 0 | 19.72 | 19.90 | 20.00 | 19.81 | 21 | 2 |
| 20 | 64QAM | 1 | 49 | 19.65 | 19.87 | 19.89 | 19.77 | | |
| 20 | 64QAM | 1 | 99 | 19.81 | 20.06 | 19.93 | 19.84 | | |
| 20 | 64QAM | 50 | 0 | 19.16 | 19.38 | 19.46 | 19.31 | 20 | 3 |
| 20 | 64QAM | 50 | 24 | 19.18 | 19.40 | 19.43 | 19.32 | | |
| 20 | 64QAM | 50 | 50 | 19.13 | 19.42 | 19.33 | 19.33 | | |
| 20 | 64QAM | 100 | 0 | 19.13 | 19.40 | 19.41 | 19.29 | | |
| Channel | | | | 55315 | 55820 | 56160 | 56665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 3557.5 | 3608 | 3642 | 3692.5 | | |
| 15 | QPSK | 1 | 0 | 21.98 | 22.11 | 22.21 | 22.08 | 23 | 0 |
| 15 | QPSK | 1 | 37 | 21.86 | 22.09 | 22.16 | 21.97 | | |
| 15 | QPSK | 1 | 74 | 21.93 | 22.19 | 22.10 | 22.02 | | |
| 15 | QPSK | 36 | 0 | 20.99 | 21.24 | 21.23 | 21.10 | 22 | 1 |
| 15 | QPSK | 36 | 20 | 21.00 | 21.20 | 21.27 | 21.16 | | |
| 15 | QPSK | 36 | 39 | 20.93 | 21.22 | 21.16 | 21.10 | | |
| 15 | QPSK | 75 | 0 | 20.92 | 21.20 | 21.22 | 21.17 | | |
| 15 | 16QAM | 1 | 0 | 21.00 | 21.23 | 21.36 | 21.13 | 22 | 1 |
| 15 | 16QAM | 1 | 37 | 20.95 | 21.20 | 21.20 | 21.11 | | |
| 15 | 16QAM | 1 | 74 | 21.11 | 21.31 | 21.28 | 21.19 | | |
| 15 | 16QAM | 36 | 0 | 20.08 | 20.23 | 20.27 | 20.13 | 21 | 2 |
| 15 | 16QAM | 36 | 20 | 20.09 | 20.27 | 20.30 | 20.18 | | |
| 15 | 16QAM | 36 | 39 | 20.07 | 20.23 | 20.22 | 20.20 | | |
| 15 | 16QAM | 75 | 0 | 20.07 | 20.21 | 20.31 | 20.17 | | |
| 15 | 64QAM | 1 | 0 | 19.66 | 19.87 | 19.91 | 19.72 | 21 | 2 |
| 15 | 64QAM | 1 | 37 | 19.57 | 19.83 | 19.89 | 19.72 | | |
| 15 | 64QAM | 1 | 74 | 19.79 | 19.99 | 19.91 | 19.76 | | |
| 15 | 64QAM | 36 | 0 | 19.11 | 19.32 | 19.46 | 19.24 | 20 | 3 |
| 15 | 64QAM | 36 | 20 | 19.08 | 19.39 | 19.35 | 19.28 | | |
| 15 | 64QAM | 36 | 39 | 19.10 | 19.39 | 19.30 | 19.24 | | |
| 15 | 64QAM | 75 | 0 | 19.05 | 19.33 | 19.33 | 19.29 | | |
| Channel | | | | 55290 | 55815 | 56165 | 56690 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 3555 | 3607.5 | 3642.5 | 3695 | | |
| 10 | QPSK | 1 | 0 | 21.99 | 22.15 | 22.19 | 22.08 | 23 | 0 |
| 10 | QPSK | 1 | 25 | 21.87 | 22.07 | 22.14 | 22.00 | | |
| 10 | QPSK | 1 | 49 | 21.96 | 22.23 | 22.11 | 22.04 | | |
| 10 | QPSK | 25 | 0 | 20.99 | 21.16 | 21.25 | 21.16 | 22 | 1 |
| 10 | QPSK | 25 | 12 | 20.96 | 21.26 | 21.19 | 21.16 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 20.97 | 21.26 | 21.12 | 21.13 | | |
| 10 | QPSK | 50 | 0 | 20.95 | 21.19 | 21.27 | 21.11 | | |
| 10 | 16QAM | 1 | 0 | 21.08 | 21.27 | 21.34 | 21.16 | 22 | 1 |
| 10 | 16QAM | 1 | 25 | 20.94 | 21.19 | 21.19 | 21.12 | | |
| 10 | 16QAM | 1 | 49 | 21.03 | 21.33 | 21.27 | 21.17 | | |
| 10 | 16QAM | 25 | 0 | 20.05 | 20.23 | 20.30 | 20.19 | 21 | 2 |
| 10 | 16QAM | 25 | 12 | 20.04 | 20.29 | 20.26 | 20.14 | | |
| 10 | 16QAM | 25 | 25 | 20.07 | 20.29 | 20.20 | 20.23 | | |
| 10 | 16QAM | 50 | 0 | 20.05 | 20.19 | 20.27 | 20.19 | | |
| 10 | 64QAM | 1 | 0 | 19.63 | 19.85 | 19.95 | 19.74 | 21 | 2 |
| 10 | 64QAM | 1 | 25 | 19.56 | 19.85 | 19.80 | 19.75 | | |
| 10 | 64QAM | 1 | 49 | 19.71 | 19.96 | 19.89 | 19.76 | | |
| 10 | 64QAM | 25 | 0 | 19.14 | 19.30 | 19.45 | 19.25 | 20 | 3 |
| 10 | 64QAM | 25 | 12 | 19.11 | 19.31 | 19.39 | 19.24 | | |
| 10 | 64QAM | 25 | 25 | 19.06 | 19.36 | 19.33 | 19.33 | | |
| 10 | 64QAM | 50 | 0 | 19.07 | 19.33 | 19.40 | 19.21 | | |
| Channel | | | | 55265 | 55810 | 56170 | 56715 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 3552.5 | 3607 | 3643 | 3697.5 | | |
| 5 | QPSK | 1 | 0 | 21.96 | 22.11 | 22.18 | 22.07 | 23 | 0 |
| 5 | QPSK | 1 | 12 | 21.89 | 22.10 | 22.15 | 22.01 | | |
| 5 | QPSK | 1 | 24 | 21.94 | 22.24 | 22.18 | 22.07 | | |
| 5 | QPSK | 12 | 0 | 20.98 | 21.16 | 21.25 | 21.18 | 22 | 1 |
| 5 | QPSK | 12 | 7 | 20.97 | 21.18 | 21.29 | 21.13 | | |
| 5 | QPSK | 12 | 13 | 20.95 | 21.27 | 21.15 | 21.11 | | |
| 5 | QPSK | 25 | 0 | 20.95 | 21.18 | 21.19 | 21.18 | | |
| 5 | 16QAM | 1 | 0 | 21.04 | 21.22 | 21.31 | 21.14 | 22 | 1 |
| 5 | 16QAM | 1 | 12 | 20.95 | 21.13 | 21.19 | 21.02 | | |
| 5 | 16QAM | 1 | 24 | 21.10 | 21.35 | 21.23 | 21.22 | | |
| 5 | 16QAM | 12 | 0 | 20.02 | 20.17 | 20.30 | 20.13 | 21 | 2 |
| 5 | 16QAM | 12 | 7 | 20.00 | 20.23 | 20.29 | 20.13 | | |
| 5 | 16QAM | 12 | 13 | 20.06 | 20.21 | 20.17 | 20.16 | | |
| 5 | 16QAM | 25 | 0 | 19.98 | 20.25 | 20.21 | 20.20 | | |
| 5 | 64QAM | 1 | 0 | 19.62 | 19.80 | 19.94 | 19.79 | 21 | 2 |
| 5 | 64QAM | 1 | 12 | 19.57 | 19.86 | 19.82 | 19.73 | | |
| 5 | 64QAM | 1 | 24 | 19.78 | 19.97 | 19.84 | 19.79 | | |
| 5 | 64QAM | 12 | 0 | 19.16 | 19.31 | 19.46 | 19.23 | 20 | 3 |
| 5 | 64QAM | 12 | 7 | 19.17 | 19.32 | 19.33 | 19.29 | | |
| 5 | 64QAM | 12 | 13 | 19.11 | 19.33 | 19.26 | 19.31 | | |
| 5 | 64QAM | 25 | 0 | 19.08 | 19.34 | 19.40 | 19.28 | | |

## <Reduced Power Mode for NB Mode>

### <LTE Band 38>

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) |
|---|---|---|---|---|---|---|---|
| Channel | | | | 37850 | 38000 | 38150 | |
| Frequency (MHz) | | | | 2580 | 2595 | 2610 | |
| 20 | QPSK | 1 | 0 | 20.10 | 20.20 | 20.13 | 21 |
| 20 | QPSK | 1 | 49 | 19.91 | 19.96 | 19.94 | |
| 20 | QPSK | 1 | 99 | 19.84 | 19.84 | 19.82 | |
| 20 | QPSK | 50 | 0 | 20.00 | 20.02 | 20.02 | 20.5 |
| 20 | QPSK | 50 | 24 | 20.10 | 20.01 | 20.00 | |
| 20 | QPSK | 50 | 50 | 20.04 | 20.02 | 19.98 | |
| 20 | QPSK | 100 | 0 | 20.08 | 20.00 | 20.00 | |
| 20 | 16QAM | 1 | 0 | 20.03 | 20.05 | 20.03 | 20.5 |
| 20 | 16QAM | 1 | 49 | 20.00 | 20.04 | 20.02 | |
| 20 | 16QAM | 1 | 99 | 20.03 | 19.97 | 19.98 | |
| 20 | 16QAM | 50 | 0 | 20.03 | 20.08 | 20.09 | 20.5 |
| 20 | 16QAM | 50 | 24 | 20.09 | 20.05 | 20.04 | |
| 20 | 16QAM | 50 | 50 | 20.11 | 20.10 | 20.09 | |
| 20 | 16QAM | 100 | 0 | 20.10 | 20.04 | 20.01 | |
| 20 | 64QAM | 1 | 0 | 19.84 | 19.94 | 19.69 | 20.5 |
| 20 | 64QAM | 1 | 49 | 19.78 | 19.80 | 19.54 | |
| 20 | 64QAM | 1 | 99 | 19.71 | 19.74 | 19.59 | |
| 20 | 64QAM | 50 | 0 | 20.01 | 20.02 | 20.10 | 20.5 |
| 20 | 64QAM | 50 | 24 | 20.04 | 20.05 | 20.02 | |
| 20 | 64QAM | 50 | 50 | 20.03 | 20.09 | 20.03 | |
| 20 | 64QAM | 100 | 0 | 20.14 | 19.98 | 20.01 | |
| Channel | | | | 37825 | 38000 | 38175 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2577.5 | 2595 | 2612.5 | |
| 15 | QPSK | 1 | 0 | 20.10 | 20.15 | 20.13 | 21 |
| 15 | QPSK | 1 | 37 | 19.82 | 19.96 | 19.87 | |
| 15 | QPSK | 1 | 74 | 19.77 | 19.77 | 19.76 | |
| 15 | QPSK | 36 | 0 | 20.00 | 19.98 | 19.97 | 20 |
| 15 | QPSK | 36 | 20 | 20.05 | 19.95 | 19.99 | |
| 15 | QPSK | 36 | 39 | 20.03 | 19.95 | 19.96 | |
| 15 | QPSK | 75 | 0 | 20.00 | 20.00 | 19.94 | |
| 15 | 16QAM | 1 | 0 | 19.99 | 20.04 | 19.97 | 20 |
| 15 | 16QAM | 1 | 37 | 19.94 | 19.94 | 20.02 | |
| 15 | 16QAM | 1 | 74 | 19.95 | 19.92 | 19.98 | |
| 15 | 16QAM | 36 | 0 | 19.99 | 20.07 | 20.00 | 19 |
| 15 | 16QAM | 36 | 20 | 20.00 | 20.02 | 19.98 | |
| 15 | 16QAM | 36 | 39 | 20.10 | 20.08 | 20.08 | |
| 15 | 16QAM | 75 | 0 | 20.03 | 20.03 | 19.92 | |
| 15 | 64QAM | 1 | 0 | 19.77 | 19.91 | 19.68 | 19 |
| 15 | 64QAM | 1 | 37 | 19.77 | 19.70 | 19.47 | |
| 15 | 64QAM | 1 | 74 | 19.61 | 19.71 | 19.50 | |
| 15 | 64QAM | 36 | 0 | 19.99 | 19.97 | 20.09 | 18 |
| 15 | 64QAM | 36 | 20 | 19.99 | 19.98 | 19.96 | |
| 15 | 64QAM | 36 | 39 | 19.94 | 20.03 | 19.96 | |
| 15 | 64QAM | 75 | 0 | 20.08 | 19.94 | 19.91 | |
| Channel | | | | 37800 | 38000 | 38200 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2575 | 2595 | 2615 | |
| 10 | QPSK | 1 | 0 | 20.00 | 20.15 | 20.03 | 21 |
| 10 | QPSK | 1 | 25 | 19.86 | 19.89 | 19.86 | |
| 10 | QPSK | 1 | 49 | 19.78 | 19.75 | 19.74 | |
| 10 | QPSK | 25 | 0 | 19.92 | 20.01 | 19.93 | 20 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 12 | 20.01 | 19.95 | 19.99 | |
| 10 | QPSK | 25 | 25 | 19.94 | 20.01 | 19.97 | |
| 10 | QPSK | 50 | 0 | 20.02 | 19.94 | 19.95 | |
| 10 | 16QAM | 1 | 0 | 19.97 | 20.02 | 19.99 | 20 |
| 10 | 16QAM | 1 | 25 | 19.97 | 20.02 | 20.00 | |
| 10 | 16QAM | 1 | 49 | 19.99 | 19.90 | 19.88 | |
| 10 | 16QAM | 25 | 0 | 19.94 | 20.05 | 20.07 | 19 |
| 10 | 16QAM | 25 | 12 | 20.00 | 20.04 | 19.98 | |
| 10 | 16QAM | 25 | 25 | 20.03 | 20.10 | 20.02 | |
| 10 | 16QAM | 50 | 22.53 | 20.01 | 19.99 | 19.92 | |
| 10 | 64QAM | 1 | 22.02 | 19.74 | 19.85 | 19.60 | 22.2 |
| 10 | 64QAM | 1 | 22.09 | 19.72 | 19.78 | 19.54 | |
| 10 | 64QAM | 1 | 49 | 19.63 | 19.69 | 19.49 | |
| 10 | 64QAM | 25 | 0 | 19.98 | 19.93 | 20.06 | 18 |
| 10 | 64QAM | 25 | 12 | 19.96 | 19.97 | 19.92 | |
| 10 | 64QAM | 25 | 25 | 19.94 | 20.03 | 19.93 | |
| 10 | 64QAM | 50 | 0 | 20.07 | 19.92 | 19.95 | |
| Channel | | | | 37775 | 38000 | 38225 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2572.5 | 2595 | 2617.5 | |
| 5 | QPSK | 1 | 0 | 20.07 | 20.10 | 20.05 | 21 |
| 5 | QPSK | 1 | 12 | 19.86 | 19.89 | 19.88 | |
| 5 | QPSK | 1 | 24 | 19.78 | 19.81 | 19.81 | |
| 5 | QPSK | 12 | 0 | 19.98 | 19.92 | 19.94 | 20 |
| 5 | QPSK | 12 | 7 | 20.02 | 20.00 | 19.96 | |
| 5 | QPSK | 12 | 13 | 19.99 | 20.01 | 19.97 | |
| 5 | QPSK | 25 | 0 | 20.07 | 20.00 | 19.91 | |
| 5 | 16QAM | 1 | 0 | 19.94 | 20.01 | 19.97 | 20 |
| 5 | 16QAM | 1 | 12 | 19.94 | 19.98 | 19.95 | |
| 5 | 16QAM | 1 | 24 | 20.01 | 19.94 | 19.90 | |
| 5 | 16QAM | 12 | 0 | 20.02 | 19.99 | 20.09 | 19 |
| 5 | 16QAM | 12 | 7 | 19.99 | 19.95 | 20.03 | |
| 5 | 16QAM | 12 | 13 | 20.11 | 20.06 | 20.06 | |
| 5 | 16QAM | 25 | 0 | 20.01 | 20.03 | 20.00 | |
| 5 | 64QAM | 1 | 0 | 19.83 | 19.90 | 19.61 | 19 |
| 5 | 64QAM | 1 | 12 | 19.70 | 19.76 | 19.54 | |
| 5 | 64QAM | 1 | 24 | 19.68 | 19.69 | 19.50 | |
| 5 | 64QAM | 12 | 0 | 20.00 | 19.97 | 20.10 | 18 |
| 5 | 64QAM | 12 | 7 | 19.97 | 19.95 | 19.96 | |
| 5 | 64QAM | 12 | 13 | 19.98 | 20.05 | 20.00 | |
| 5 | 64QAM | 25 | 0 | 20.05 | 19.89 | 20.01 | |

**<LTE Band 41>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 39750 | 40185 | 40620 | 41055 | 41490 | |
| Frequency (MHz) | | | | 2506 | 2549.5 | 2593 | 2636.5 | 2680 | |
| 20 | QPSK | 1 | 0 | 20.34 | 20.23 | 20.30 | 20.21 | 20.19 | 21 |
| 20 | QPSK | 1 | 49 | 20.08 | 20.00 | 20.10 | 19.97 | 19.93 | |
| 20 | QPSK | 1 | 99 | 20.03 | 20.00 | 20.13 | 19.95 | 19.93 | |
| 20 | QPSK | 50 | 0 | 20.31 | 20.04 | 20.21 | 20.15 | 20.02 | 20.5 |
| 20 | QPSK | 50 | 24 | 20.27 | 20.12 | 20.28 | 20.13 | 20.04 | |
| 20 | QPSK | 50 | 50 | 20.23 | 20.12 | 20.26 | 20.08 | 20.05 | |
| 20 | QPSK | 100 | 0 | 20.30 | 20.18 | 20.29 | 20.12 | 20.08 | |
| 20 | 16QAM | 1 | 0 | 20.26 | 20.13 | 20.26 | 20.21 | 20.11 | 20.5 |
| 20 | 16QAM | 1 | 49 | 20.10 | 20.10 | 20.19 | 20.05 | 19.96 | |
| 20 | 16QAM | 1 | 99 | 20.11 | 20.08 | 20.21 | 20.02 | 20.02 | |
| 20 | 16QAM | 50 | 0 | 20.31 | 20.12 | 20.27 | 20.13 | 20.09 | 20.5 |
| 20 | 16QAM | 50 | 24 | 20.27 | 20.19 | 20.33 | 20.14 | 20.15 | |
| 20 | 16QAM | 50 | 50 | 20.23 | 20.16 | 20.27 | 20.09 | 20.10 | |
| 20 | 16QAM | 100 | 0 | 20.31 | 20.18 | 20.32 | 20.15 | 20.12 | |
| 20 | 64QAM | 1 | 0 | 19.85 | 19.69 | 19.86 | 19.68 | 19.70 | 20.5 |
| 20 | 64QAM | 1 | 49 | 19.68 | 19.67 | 19.77 | 19.65 | 19.57 | |
| 20 | 64QAM | 1 | 99 | 19.65 | 19.69 | 19.78 | 19.57 | 19.54 | |
| 20 | 64QAM | 50 | 0 | 20.33 | 20.10 | 20.30 | 20.21 | 20.11 | 20.5 |
| 20 | 64QAM | 50 | 24 | 20.30 | 20.24 | 20.31 | 20.17 | 20.12 | |
| 20 | 64QAM | 50 | 50 | 20.28 | 20.21 | 20.29 | 20.14 | 20.10 | |
| 20 | 64QAM | 100 | 0 | 20.22 | 20.11 | 20.31 | 20.16 | 20.13 | |
| Channel | | | | 39725 | 40173 | 40620 | 41068 | 41515 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2503.5 | 2548.3 | 2593 | 2637.8 | 2682.5 | |
| 15 | QPSK | 1 | 0 | 20.25 | 20.20 | 20.23 | 20.21 | 20.13 | 21 |
| 15 | QPSK | 1 | 37 | 20.04 | 19.92 | 20.03 | 19.89 | 19.93 | |
| 15 | QPSK | 1 | 74 | 19.95 | 19.99 | 20.09 | 19.95 | 19.88 | |
| 15 | QPSK | 36 | 0 | 20.28 | 19.99 | 20.15 | 20.05 | 19.98 | 21 |
| 15 | QPSK | 36 | 20 | 20.26 | 20.09 | 20.23 | 20.09 | 19.97 | |
| 15 | QPSK | 36 | 39 | 20.19 | 20.05 | 20.19 | 20.03 | 20.05 | |
| 15 | QPSK | 75 | 0 | 20.16 | 20.16 | 20.23 | 20.12 | 20.01 | |
| 15 | 16QAM | 1 | 0 | 20.24 | 20.13 | 20.18 | 20.13 | 20.01 | 21 |
| 15 | 16QAM | 1 | 37 | 20.10 | 20.09 | 20.18 | 19.99 | 19.92 | |
| 15 | 16QAM | 1 | 74 | 20.09 | 20.07 | 20.18 | 19.96 | 19.94 | |
| 15 | 16QAM | 36 | 0 | 20.30 | 20.07 | 20.22 | 20.09 | 20.08 | 21 |
| 15 | 16QAM | 36 | 20 | 20.27 | 20.09 | 20.32 | 20.09 | 20.14 | |
| 15 | 16QAM | 36 | 39 | 20.19 | 20.08 | 20.21 | 20.08 | 20.01 | |
| 15 | 16QAM | 75 | 0 | 20.27 | 20.12 | 20.30 | 20.05 | 20.12 | |
| 15 | 64QAM | 1 | 0 | 19.80 | 19.64 | 19.86 | 19.60 | 19.68 | 21 |
| 15 | 64QAM | 1 | 37 | 19.60 | 19.62 | 19.77 | 19.61 | 19.48 | |
| 15 | 64QAM | 1 | 74 | 19.65 | 19.65 | 19.78 | 19.55 | 19.50 | |
| 15 | 64QAM | 36 | 0 | 20.32 | 20.05 | 20.24 | 20.14 | 20.02 | 21 |
| 15 | 64QAM | 36 | 20 | 20.27 | 20.18 | 20.25 | 20.11 | 20.11 | |
| 15 | 64QAM | 36 | 39 | 20.20 | 20.12 | 20.24 | 20.08 | 20.01 | |
| 15 | 64QAM | 75 | 0 | 20.19 | 20.11 | 20.28 | 20.10 | 20.06 | |
| Channel | | | | 39700 | 40160 | 40620 | 41080 | 41540 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2501 | 2547 | 2593 | 2639 | 2685 | |
| 10 | QPSK | 1 | 0 | 20.30 | 20.18 | 20.26 | 20.14 | 20.13 | 21 |
| 10 | QPSK | 1 | 25 | 20.04 | 19.93 | 20.09 | 19.97 | 19.83 | |
| 10 | QPSK | 1 | 49 | 19.95 | 19.95 | 20.10 | 19.92 | 19.89 | |
| 10 | QPSK | 25 | 0 | 20.22 | 19.99 | 20.17 | 20.11 | 19.96 | 21 |
| 10 | QPSK | 25 | 12 | 20.26 | 20.02 | 20.24 | 20.08 | 20.01 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 20.19 | 20.12 | 20.18 | 20.01 | 19.96 | |
| 10 | QPSK | 50 | 0 | 20.22 | 20.13 | 20.19 | 20.03 | 20.08 | |
| 10 | 16QAM | 1 | 0 | 20.23 | 20.09 | 20.21 | 20.21 | 20.11 | 21 |
| 10 | 16QAM | 1 | 25 | 20.05 | 20.09 | 20.17 | 19.99 | 19.86 | |
| 10 | 16QAM | 1 | 49 | 20.04 | 20.00 | 20.16 | 20.00 | 19.99 | |
| 10 | 16QAM | 25 | 0 | 20.23 | 20.03 | 20.18 | 20.13 | 20.08 | 21 |
| 10 | 16QAM | 25 | 12 | 20.26 | 20.10 | 20.25 | 20.08 | 20.13 | |
| 10 | 16QAM | 25 | 25 | 20.20 | 20.11 | 20.24 | 20.04 | 20.08 | |
| 10 | 16QAM | 50 | 0 | 20.26 | 20.11 | 20.29 | 20.14 | 20.03 | |
| 10 | 64QAM | 1 | 0 | 19.76 | 19.61 | 19.76 | 19.59 | 19.61 | 21 |
| 10 | 64QAM | 1 | 25 | 19.68 | 19.62 | 19.71 | 19.55 | 19.52 | |
| 10 | 64QAM | 1 | 49 | 19.59 | 19.68 | 19.75 | 19.52 | 19.50 | |
| 10 | 64QAM | 25 | 0 | 20.23 | 20.01 | 20.23 | 20.13 | 20.04 | 21 |
| 10 | 64QAM | 25 | 12 | 20.24 | 20.14 | 20.29 | 20.11 | 20.05 | |
| 10 | 64QAM | 25 | 25 | 20.19 | 20.21 | 20.19 | 20.04 | 20.09 | |
| 10 | 64QAM | 50 | 0 | 20.17 | 20.01 | 20.24 | 20.12 | 20.03 | |
| Channel | | | | 39675 | 40148 | 40620 | 41093 | 41565 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2498.5 | 2545.8 | 2593 | 2640.30 | 2687.5 | |
| 5 | QPSK | 1 | 0 | 20.25 | 20.20 | 20.26 | 20.15 | 20.15 | 21 |
| 5 | QPSK | 1 | 12 | 19.98 | 19.90 | 20.10 | 19.94 | 19.86 | |
| 5 | QPSK | 1 | 24 | 20.03 | 19.92 | 20.03 | 19.91 | 19.93 | |
| 5 | QPSK | 12 | 0 | 20.27 | 19.99 | 20.18 | 20.05 | 19.93 | 21 |
| 5 | QPSK | 12 | 7 | 20.19 | 20.03 | 20.24 | 20.07 | 19.99 | |
| 5 | QPSK | 12 | 13 | 20.22 | 20.03 | 20.18 | 20.08 | 19.99 | |
| 5 | QPSK | 25 | 0 | 20.21 | 20.10 | 20.21 | 20.08 | 20.01 | |
| 5 | 16QAM | 1 | 0 | 20.23 | 20.06 | 20.26 | 20.11 | 20.02 | 21 |
| 5 | 16QAM | 1 | 12 | 20.05 | 20.05 | 20.11 | 20.03 | 19.90 | |
| 5 | 16QAM | 1 | 24 | 20.08 | 20.08 | 20.18 | 19.98 | 20.00 | |
| 5 | 16QAM | 12 | 0 | 20.21 | 20.09 | 20.21 | 20.03 | 20.06 | 21 |
| 5 | 16QAM | 12 | 7 | 20.21 | 20.19 | 20.25 | 20.05 | 20.12 | |
| 5 | 16QAM | 12 | 13 | 20.21 | 20.14 | 20.23 | 19.99 | 20.10 | |
| 5 | 16QAM | 25 | 0 | 20.27 | 20.15 | 20.22 | 20.10 | 20.07 | |
| 5 | 64QAM | 1 | 0 | 19.75 | 19.66 | 19.84 | 19.63 | 19.66 | 21 |
| 5 | 64QAM | 1 | 12 | 19.59 | 19.57 | 19.68 | 19.62 | 19.54 | |
| 5 | 64QAM | 1 | 24 | 19.57 | 19.63 | 19.74 | 19.47 | 19.53 | |
| 5 | 64QAM | 12 | 0 | 20.32 | 20.09 | 20.27 | 20.19 | 20.05 | 21 |
| 5 | 64QAM | 12 | 7 | 20.28 | 20.19 | 20.27 | 20.16 | 20.12 | |
| 5 | 64QAM | 12 | 13 | 20.28 | 20.17 | 20.20 | 20.14 | 20.06 | |
| 5 | 64QAM | 25 | 0 | 20.20 | 20.01 | 20.22 | 20.14 | 20.06 | |

**<LTE Band 41 HPUE>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 39750 | 40185 | 40620 | 41055 | 41490 | |
| Frequency (MHz) | | | | 2506 | 2549.5 | 2593 | 2636.5 | 2680 | |
| 20 | QPSK | 1 | 0 | 20.48 | 20.80 | 21.14 | 21.80 | 21.08 | 23 |
| 20 | QPSK | 1 | 49 | 20.41 | 20.80 | 21.16 | 21.28 | 20.90 | |
| 20 | QPSK | 1 | 99 | 20.52 | 20.91 | 21.37 | 21.32 | 20.97 | |
| 20 | QPSK | 50 | 0 | 21.50 | 21.00 | 21.35 | 21.55 | 21.24 | 23 |
| 20 | QPSK | 50 | 24 | 20.71 | 21.08 | 21.47 | 21.46 | 21.22 | |
| 20 | QPSK | 50 | 50 | 20.69 | 21.08 | 21.49 | 21.48 | 21.11 | |
| 20 | QPSK | 100 | 0 | 20.71 | 21.09 | 21.48 | 21.47 | 21.24 | |
| 20 | 16QAM | 1 | 0 | 20.89 | 21.12 | 21.51 | 21.76 | 21.43 | 23 |
| 20 | 16QAM | 1 | 49 | 20.79 | 21.17 | 21.51 | 21.67 | 21.34 | |
| 20 | 16QAM | 1 | 99 | 20.90 | 21.27 | 21.70 | 21.72 | 21.27 | |
| 20 | 16QAM | 50 | 0 | 20.64 | 20.99 | 21.51 | 21.62 | 21.28 | 23 |
| 20 | 16QAM | 50 | 24 | 20.75 | 21.11 | 21.52 | 21.52 | 21.26 | |
| 20 | 16QAM | 50 | 50 | 20.74 | 21.15 | 21.53 | 21.51 | 21.16 | |
| 20 | 16QAM | 100 | 0 | 20.74 | 21.09 | 21.51 | 21.52 | 21.24 | |
| 20 | 64QAM | 1 | 0 | 21.09 | 20.97 | 21.29 | 21.59 | 21.26 | 23 |
| 20 | 64QAM | 1 | 49 | 20.70 | 21.06 | 21.43 | 21.59 | 21.19 | |
| 20 | 64QAM | 1 | 99 | 20.83 | 21.13 | 21.56 | 21.50 | 21.09 | |
| 20 | 64QAM | 50 | 0 | 20.65 | 21.02 | 21.41 | 21.58 | 21.29 | 23 |
| 20 | 64QAM | 50 | 24 | 20.76 | 21.14 | 21.52 | 21.54 | 21.25 | |
| 20 | 64QAM | 50 | 50 | 20.76 | 21.16 | 21.56 | 21.51 | 21.18 | |
| 20 | 64QAM | 100 | 0 | 20.74 | 21.11 | 21.55 | 21.52 | 21.24 | |
| Channel | | | | 39725 | 40173 | 40620 | 41068 | 41515 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2503.5 | 2548.3 | 2593 | 2637.8 | 2682.5 | |
| 15 | QPSK | 1 | 0 | 20.43 | 20.80 | 21.22 | 21.41 | 21.11 | 23 |
| 15 | QPSK | 1 | 37 | 20.44 | 20.80 | 21.24 | 21.34 | 21.04 | |
| 15 | QPSK | 1 | 74 | 20.56 | 20.94 | 21.41 | 21.43 | 21.08 | |
| 15 | QPSK | 36 | 0 | 20.58 | 20.95 | 21.37 | 21.56 | 21.24 | 23 |
| 15 | QPSK | 36 | 20 | 20.66 | 21.02 | 21.45 | 21.55 | 21.21 | |
| 15 | QPSK | 36 | 39 | 20.64 | 21.05 | 21.47 | 21.46 | 21.18 | |
| 15 | QPSK | 75 | 0 | 20.63 | 21.03 | 21.45 | 21.46 | 21.22 | |
| 15 | 16QAM | 1 | 0 | 20.77 | 21.09 | 21.54 | 21.69 | 21.36 | 23 |
| 15 | 16QAM | 1 | 37 | 20.71 | 21.09 | 21.54 | 21.68 | 21.28 | |
| 15 | 16QAM | 1 | 74 | 20.89 | 21.27 | 21.63 | 21.73 | 21.35 | |
| 15 | 16QAM | 36 | 0 | 20.56 | 20.94 | 21.35 | 21.58 | 21.24 | 23 |
| 15 | 16QAM | 36 | 20 | 20.65 | 21.03 | 21.44 | 21.55 | 21.21 | |
| 15 | 16QAM | 36 | 39 | 20.68 | 21.06 | 21.50 | 21.46 | 21.19 | |
| 15 | 16QAM | 75 | 0 | 20.69 | 21.05 | 21.51 | 21.51 | 21.23 | |
| 15 | 64QAM | 1 | 0 | 20.62 | 20.88 | 21.30 | 21.59 | 21.21 | 23 |
| 15 | 64QAM | 1 | 37 | 20.66 | 21.03 | 21.45 | 21.59 | 21.15 | |
| 15 | 64QAM | 1 | 74 | 20.77 | 21.16 | 21.53 | 21.57 | 21.17 | |
| 15 | 64QAM | 36 | 0 | 20.64 | 20.98 | 21.41 | 21.60 | 21.26 | 23 |
| 15 | 64QAM | 36 | 20 | 20.69 | 21.08 | 21.50 | 21.58 | 21.23 | |
| 15 | 64QAM | 36 | 39 | 20.70 | 21.07 | 21.51 | 21.51 | 21.23 | |
| 15 | 64QAM | 75 | 0 | 20.69 | 21.07 | 21.49 | 21.50 | 21.25 | |
| Channel | | | | 39700 | 40160 | 40620 | 41080 | 41540 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2501 | 2547 | 2593 | 2639 | 2685 | |
| 10 | QPSK | 1 | 0 | 20.29 | 20.56 | 20.99 | 21.17 | 20.93 | 23 |
| 10 | QPSK | 1 | 25 | 20.21 | 20.65 | 21.05 | 21.23 | 20.94 | |
| 10 | QPSK | 1 | 49 | 20.36 | 20.73 | 21.15 | 21.18 | 20.97 | |
| 10 | QPSK | 25 | 0 | 20.43 | 20.75 | 21.18 | 21.36 | 21.15 | 23 |
| 10 | QPSK | 25 | 12 | 20.48 | 20.86 | 21.30 | 21.33 | 21.20 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 20.42 | 20.87 | 21.29 | 21.30 | 21.15 | |
| 10 | QPSK | 50 | 0 | 20.46 | 20.86 | 21.27 | 21.32 | 21.16 | |
| 10 | 16QAM | 1 | 0 | 21.07 | 20.98 | 21.44 | 21.58 | 21.38 | 23 |
| 10 | 16QAM | 1 | 25 | 20.60 | 21.03 | 21.46 | 21.54 | 21.31 | |
| 10 | 16QAM | 1 | 49 | 20.62 | 21.05 | 21.49 | 21.55 | 21.27 | |
| 10 | 16QAM | 25 | 0 | 20.50 | 20.79 | 21.19 | 21.36 | 21.13 | 23 |
| 10 | 16QAM | 25 | 12 | 20.51 | 20.92 | 21.34 | 21.32 | 21.17 | |
| 10 | 16QAM | 25 | 25 | 20.44 | 20.86 | 21.32 | 21.29 | 21.09 | |
| 10 | 16QAM | 50 | 0 | 20.53 | 20.92 | 21.37 | 21.35 | 21.15 | |
| 10 | 64QAM | 1 | 0 | 20.62 | 20.84 | 21.28 | 21.48 | 21.18 | 23 |
| 10 | 64QAM | 1 | 25 | 20.71 | 21.07 | 21.38 | 21.54 | 21.24 | |
| 10 | 64QAM | 1 | 49 | 20.60 | 21.00 | 21.37 | 21.36 | 21.21 | |
| 10 | 64QAM | 25 | 0 | 20.54 | 20.86 | 21.29 | 21.44 | 21.21 | 23 |
| 10 | 64QAM | 25 | 12 | 20.60 | 21.00 | 21.42 | 21.41 | 21.22 | |
| 10 | 64QAM | 25 | 25 | 20.57 | 21.00 | 21.40 | 21.38 | 21.18 | |
| 10 | 64QAM | 50 | 0 | 20.54 | 20.93 | 21.35 | 21.32 | 21.14 | |
| Channel | | | | 39675 | 40148 | 40620 | 41093 | 41565 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 2498.5 | 2545.8 | 2593 | 2640.30 | 2687.5 | |
| 5 | QPSK | 1 | 0 | 20.28 | 20.54 | 21.01 | 21.18 | 20.99 | 23 |
| 5 | QPSK | 1 | 12 | 20.28 | 20.65 | 21.08 | 21.16 | 21.02 | |
| 5 | QPSK | 1 | 24 | 20.26 | 20.64 | 21.10 | 21.18 | 20.94 | |
| 5 | QPSK | 12 | 0 | 20.45 | 20.82 | 21.19 | 21.37 | 21.13 | 23 |
| 5 | QPSK | 12 | 7 | 20.45 | 20.87 | 21.29 | 21.39 | 21.15 | |
| 5 | QPSK | 12 | 13 | 20.44 | 20.87 | 21.30 | 21.37 | 21.13 | |
| 5 | QPSK | 25 | 0 | 20.41 | 20.80 | 21.25 | 21.33 | 21.12 | |
| 5 | 16QAM | 1 | 0 | 21.04 | 20.90 | 21.38 | 21.46 | 21.28 | 23 |
| 5 | 16QAM | 1 | 12 | 20.53 | 20.98 | 21.43 | 21.45 | 21.29 | |
| 5 | 16QAM | 1 | 24 | 20.55 | 21.05 | 21.48 | 21.47 | 21.30 | |
| 5 | 16QAM | 12 | 0 | 20.48 | 20.86 | 21.25 | 21.34 | 21.14 | 23 |
| 5 | 16QAM | 12 | 7 | 20.52 | 20.92 | 21.34 | 21.41 | 21.18 | |
| 5 | 16QAM | 12 | 13 | 20.49 | 20.85 | 21.34 | 21.37 | 21.14 | |
| 5 | 16QAM | 25 | 0 | 20.50 | 20.87 | 21.30 | 21.36 | 21.14 | |
| 5 | 64QAM | 1 | 0 | 20.48 | 20.81 | 21.25 | 21.38 | 21.17 | 23 |
| 5 | 64QAM | 1 | 12 | 20.47 | 20.87 | 21.31 | 21.37 | 21.16 | |
| 5 | 64QAM | 1 | 24 | 20.50 | 20.92 | 21.38 | 21.42 | 21.17 | |
| 5 | 64QAM | 12 | 0 | 20.89 | 20.91 | 21.29 | 21.39 | 21.19 | 23 |
| 5 | 64QAM | 12 | 7 | 20.55 | 20.92 | 21.38 | 21.42 | 21.19 | |
| 5 | 64QAM | 12 | 13 | 20.53 | 20.91 | 21.36 | 21.41 | 21.13 | |
| 5 | 64QAM | 25 | 0 | 20.54 | 20.92 | 21.35 | 21.44 | 21.19 | |

**<LTE Band 48>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 55340 | 55830 | 56150 | 56640 | |
| Frequency (MHz) | | | | 3560 | 3609 | 3641 | 3690 | |
| 20 | QPSK | 1 | 0 | 18.58 | 18.58 | 18.80 | 18.66 | 19.1 |
| 20 | QPSK | 1 | 49 | 18.39 | 18.37 | 18.50 | 18.50 | |
| 20 | QPSK | 1 | 99 | 18.45 | 18.53 | 18.63 | 18.61 | |
| 20 | QPSK | 50 | 0 | 18.68 | 18.63 | 18.75 | 18.75 | 19.1 |
| 20 | QPSK | 50 | 24 | 18.51 | 18.51 | 18.64 | 18.68 | |
| 20 | QPSK | 50 | 50 | 18.50 | 18.54 | 18.63 | 18.69 | |
| 20 | QPSK | 100 | 0 | 18.51 | 18.51 | 18.68 | 18.68 | |
| 20 | 16QAM | 1 | 0 | 18.56 | 18.52 | 18.65 | 18.71 | 19.1 |
| 20 | 16QAM | 1 | 49 | 18.44 | 18.47 | 18.57 | 18.59 | |
| 20 | 16QAM | 1 | 99 | 18.56 | 18.48 | 18.61 | 18.62 | |
| 20 | 16QAM | 50 | 0 | 18.53 | 18.51 | 18.67 | 18.68 | 19.1 |
| 20 | 16QAM | 50 | 24 | 18.54 | 18.53 | 18.66 | 18.68 | |
| 20 | 16QAM | 50 | 50 | 18.51 | 18.55 | 18.60 | 18.66 | |
| 20 | 16QAM | 100 | 0 | 18.53 | 18.55 | 18.67 | 18.68 | |
| 20 | 64QAM | 1 | 0 | 18.12 | 18.08 | 18.23 | 18.24 | 19.1 |
| 20 | 64QAM | 1 | 49 | 18.05 | 18.02 | 18.15 | 18.18 | |
| 20 | 64QAM | 1 | 99 | 18.20 | 18.18 | 18.27 | 18.24 | |
| 20 | 64QAM | 50 | 0 | 18.51 | 18.52 | 18.65 | 18.69 | 19.1 |
| 20 | 64QAM | 50 | 24 | 18.55 | 18.56 | 18.66 | 18.68 | |
| 20 | 64QAM | 50 | 50 | 18.51 | 18.56 | 18.60 | 18.65 | |
| 20 | 64QAM | 100 | 0 | 18.57 | 18.53 | 18.65 | 18.71 | |
| Channel | | | | 55315 | 55820 | 56160 | 56665 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 3557.5 | 3608 | 3642 | 3692.5 | |
| 15 | QPSK | 1 | 0 | 18.59 | 18.57 | 18.60 | 18.71 | 19.1 |
| 15 | QPSK | 1 | 37 | 18.34 | 18.34 | 18.44 | 18.45 | |
| 15 | QPSK | 1 | 74 | 18.44 | 18.51 | 18.54 | 18.52 | |
| 15 | QPSK | 36 | 0 | 18.45 | 18.52 | 18.58 | 18.55 | 19.1 |
| 15 | QPSK | 36 | 20 | 18.49 | 18.49 | 18.62 | 18.63 | |
| 15 | QPSK | 36 | 39 | 18.45 | 18.47 | 18.54 | 18.59 | |
| 15 | QPSK | 75 | 0 | 18.48 | 18.42 | 18.64 | 18.59 | |
| 15 | 16QAM | 1 | 0 | 18.52 | 18.51 | 18.61 | 18.61 | 19.1 |
| 15 | 16QAM | 1 | 37 | 18.36 | 18.41 | 18.52 | 18.50 | |
| 15 | 16QAM | 1 | 74 | 18.50 | 18.38 | 18.52 | 18.59 | |
| 15 | 16QAM | 36 | 0 | 18.49 | 18.42 | 18.58 | 18.68 | 19.1 |
| 15 | 16QAM | 36 | 20 | 18.48 | 18.47 | 18.58 | 18.59 | |
| 15 | 16QAM | 36 | 39 | 18.41 | 18.45 | 18.51 | 18.60 | |
| 15 | 16QAM | 75 | 0 | 18.43 | 18.50 | 18.59 | 18.59 | |
| 15 | 64QAM | 1 | 0 | 18.03 | 18.01 | 18.17 | 18.22 | 19.1 |
| 15 | 64QAM | 1 | 37 | 18.03 | 17.92 | 18.11 | 18.10 | |
| 15 | 64QAM | 1 | 74 | 18.18 | 18.18 | 18.22 | 18.16 | |
| 15 | 64QAM | 36 | 0 | 18.49 | 18.49 | 18.60 | 18.59 | 19.1 |
| 15 | 64QAM | 36 | 20 | 18.53 | 18.55 | 18.56 | 18.64 | |
| 15 | 64QAM | 36 | 39 | 18.47 | 18.48 | 18.55 | 18.57 | |
| 15 | 64QAM | 75 | 0 | 18.51 | 18.48 | 18.59 | 18.69 | |
| Channel | | | | 55290 | 55815 | 56165 | 56690 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 3555 | 3607.5 | 3642.5 | 3695 | |
| 10 | QPSK | 1 | 0 | 18.50 | 18.55 | 18.57 | 18.67 | 19.1 |
| 10 | QPSK | 1 | 25 | 18.37 | 18.35 | 18.50 | 18.44 | |
| 10 | QPSK | 1 | 49 | 18.37 | 18.53 | 18.55 | 18.60 | |
| 10 | QPSK | 25 | 0 | 18.53 | 18.51 | 18.57 | 18.64 | 19.1 |
| 10 | QPSK | 25 | 12 | 18.45 | 18.49 | 18.55 | 18.60 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 18.42 | 18.46 | 18.56 | 18.59 | |
| 10 | QPSK | 50 | 0 | 18.44 | 18.47 | 18.66 | 18.62 | |
| 10 | 16QAM | 1 | 0 | 18.49 | 18.50 | 18.57 | 18.67 | 19.1 |
| 10 | 16QAM | 1 | 25 | 18.38 | 18.42 | 18.47 | 18.54 | |
| 10 | 16QAM | 1 | 49 | 18.50 | 18.42 | 18.51 | 18.59 | |
| 10 | 16QAM | 25 | 0 | 18.51 | 18.44 | 18.64 | 18.64 | 19.1 |
| 10 | 16QAM | 25 | 12 | 18.46 | 18.45 | 18.62 | 18.60 | |
| 10 | 16QAM | 25 | 25 | 18.44 | 18.46 | 18.55 | 18.62 | |
| 10 | 16QAM | 50 | 0 | 18.51 | 18.45 | 18.61 | 18.66 | |
| 10 | 64QAM | 1 | 0 | 18.02 | 18.00 | 18.23 | 18.22 | 19.1 |
| 10 | 64QAM | 1 | 25 | 17.96 | 17.96 | 18.07 | 18.16 | |
| 10 | 64QAM | 1 | 49 | 18.20 | 18.09 | 18.26 | 18.17 | |
| 10 | 64QAM | 25 | 0 | 18.44 | 18.45 | 18.64 | 18.61 | 19.1 |
| 10 | 64QAM | 25 | 12 | 18.48 | 18.52 | 18.65 | 18.68 | |
| 10 | 64QAM | 25 | 25 | 18.49 | 18.49 | 18.59 | 18.55 | |
| 10 | 64QAM | 50 | 0 | 18.51 | 18.48 | 18.55 | 18.70 | |
| Channel | | | | 55265 | 55810 | 56170 | 56715 | Tune-up limit (dBm) |
| Frequency (MHz) | | | | 3552.5 | 3607 | 3643 | 3697.5 | |
| 5 | QPSK | 1 | 0 | 18.50 | 18.51 | 18.64 | 18.66 | 19.1 |
| 5 | QPSK | 1 | 12 | 18.34 | 18.32 | 18.48 | 18.41 | |
| 5 | QPSK | 1 | 24 | 18.39 | 18.51 | 18.56 | 18.54 | |
| 5 | QPSK | 12 | 0 | 18.49 | 18.49 | 18.61 | 18.63 | 19.1 |
| 5 | QPSK | 12 | 7 | 18.44 | 18.50 | 18.56 | 18.61 | |
| 5 | QPSK | 12 | 13 | 18.50 | 18.44 | 18.54 | 18.65 | |
| 5 | QPSK | 25 | 0 | 18.47 | 18.44 | 18.68 | 18.65 | |
| 5 | 16QAM | 1 | 0 | 18.55 | 18.52 | 18.56 | 18.69 | 19.1 |
| 5 | 16QAM | 1 | 12 | 18.43 | 18.39 | 18.51 | 18.57 | |
| 5 | 16QAM | 1 | 24 | 18.46 | 18.41 | 18.56 | 18.62 | |
| 5 | 16QAM | 12 | 0 | 18.44 | 18.43 | 18.63 | 18.58 | 19.1 |
| 5 | 16QAM | 12 | 7 | 18.44 | 18.48 | 18.65 | 18.63 | |
| 5 | 16QAM | 12 | 13 | 18.44 | 18.52 | 18.52 | 18.56 | |
| 5 | 16QAM | 25 | 0 | 18.46 | 18.49 | 18.57 | 18.62 | |
| 5 | 64QAM | 1 | 0 | 18.08 | 18.06 | 18.15 | 18.22 | 19.1 |
| 5 | 64QAM | 1 | 12 | 18.02 | 17.96 | 18.09 | 18.15 | |
| 5 | 64QAM | 1 | 24 | 18.14 | 18.15 | 18.18 | 18.21 | |
| 5 | 64QAM | 12 | 0 | 18.51 | 18.44 | 18.60 | 18.62 | 19.1 |
| 5 | 64QAM | 12 | 7 | 18.51 | 18.47 | 18.59 | 18.66 | |
| 5 | 64QAM | 12 | 13 | 18.45 | 18.47 | 18.57 | 18.55 | |
| 5 | 64QAM | 25 | 0 | 18.57 | 18.53 | 18.61 | 18.65 | |

## <Reduced Power Mode for Tablet Mode>

### <LTE Band 38>

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|
| Channel | | | | 37850 | 38000 | 38150 | | |
| Frequency (MHz) | | | | 2580 | 2595 | 2610 | | |
| 20 | QPSK | 1 | 0 | 14.05 | 14.12 | 14.07 | 14.9 | 0 |
| 20 | QPSK | 1 | 49 | 13.85 | 13.84 | 13.83 | | |
| 20 | QPSK | 1 | 99 | 13.78 | 13.80 | 13.76 | | |
| 20 | QPSK | 50 | 0 | 13.93 | 14.02 | 13.94 | 14.9 | 0 |
| 20 | QPSK | 50 | 24 | 13.99 | 13.97 | 13.92 | | |
| 20 | QPSK | 50 | 50 | 13.93 | 13.96 | 13.91 | | |
| 20 | QPSK | 100 | 0 | 13.99 | 13.94 | 13.91 | | |
| 20 | 16QAM | 1 | 0 | 14.03 | 14.02 | 14.00 | 14.9 | 0 |
| 20 | 16QAM | 1 | 49 | 13.94 | 13.98 | 13.95 | | |
| 20 | 16QAM | 1 | 99 | 13.90 | 13.90 | 13.84 | | |
| 20 | 16QAM | 50 | 0 | 13.98 | 14.05 | 14.00 | 14.9 | 0 |
| 20 | 16QAM | 50 | 24 | 14.03 | 13.98 | 13.95 | | |
| 20 | 16QAM | 50 | 50 | 14.02 | 13.99 | 13.96 | | |
| 20 | 16QAM | 100 | 0 | 14.07 | 13.96 | 13.93 | | |
| 20 | 64QAM | 1 | 0 | 13.51 | 13.69 | 13.67 | 14.9 | 0 |
| 20 | 64QAM | 1 | 49 | 13.61 | 13.63 | 13.61 | | |
| 20 | 64QAM | 1 | 99 | 13.54 | 13.57 | 13.55 | | |
| 20 | 64QAM | 50 | 0 | 13.96 | 14.01 | 13.97 | 14.9 | 0 |
| 20 | 64QAM | 50 | 24 | 13.99 | 13.97 | 13.93 | | |
| 20 | 64QAM | 50 | 50 | 13.98 | 14.04 | 13.91 | | |
| 20 | 64QAM | 100 | 0 | 13.99 | 13.94 | 13.91 | | |
| Channel | | | | 37825 | 38000 | 38175 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2577.5 | 2595 | 2612.5 | | |
| 15 | QPSK | 1 | 0 | 13.86 | 13.96 | 13.86 | 14.9 | 0 |
| 15 | QPSK | 1 | 37 | 13.85 | 13.93 | 13.80 | | |
| 15 | QPSK | 1 | 74 | 13.88 | 13.89 | 13.78 | | |
| 15 | QPSK | 36 | 0 | 13.99 | 13.95 | 13.90 | 14.9 | 0 |
| 15 | QPSK | 36 | 20 | 13.95 | 13.91 | 13.95 | | |
| 15 | QPSK | 36 | 39 | 13.91 | 13.93 | 13.86 | | |
| 15 | QPSK | 75 | 0 | 13.99 | 13.91 | 13.95 | | |
| 15 | 16QAM | 1 | 0 | 14.03 | 14.11 | 14.03 | 14.9 | 0 |
| 15 | 16QAM | 1 | 37 | 13.84 | 13.82 | 13.80 | | |
| 15 | 16QAM | 1 | 74 | 13.97 | 13.95 | 13.88 | | |
| 15 | 16QAM | 36 | 0 | 13.93 | 13.90 | 13.90 | 14.9 | 0 |
| 15 | 16QAM | 36 | 20 | 13.92 | 13.87 | 13.88 | | |
| 15 | 16QAM | 36 | 39 | 13.90 | 13.90 | 13.83 | | |
| 15 | 16QAM | 75 | 0 | 14.02 | 13.94 | 13.98 | | |
| 15 | 64QAM | 1 | 0 | 13.59 | 13.59 | 13.52 | 14.9 | 0 |
| 15 | 64QAM | 1 | 37 | 13.60 | 13.57 | 13.56 | | |
| 15 | 64QAM | 1 | 74 | 13.56 | 13.58 | 13.50 | | |
| 15 | 64QAM | 36 | 0 | 13.97 | 13.95 | 13.90 | 14.9 | 0 |
| 15 | 64QAM | 36 | 20 | 13.98 | 13.90 | 13.94 | | |
| 15 | 64QAM | 36 | 39 | 13.97 | 13.93 | 13.86 | | |
| 15 | 64QAM | 75 | 0 | 14.01 | 13.89 | 13.94 | | |
| Channel | | | | 37800 | 38000 | 38200 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2575 | 2595 | 2615 | | |
| 10 | QPSK | 1 | 0 | 14.04 | 14.02 | 13.98 | 14.9 | 0 |
| 10 | QPSK | 1 | 25 | 13.75 | 13.75 | 13.83 | | |
| 10 | QPSK | 1 | 49 | 13.72 | 13.69 | 13.77 | | |
| 10 | QPSK | 25 | 0 | 13.83 | 13.90 | 13.92 | 14.9 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 12 | 13.89 | 13.94 | 13.90 | | |
| 10 | QPSK | 25 | 25 | 13.92 | 13.83 | 13.88 | | |
| 10 | QPSK | 50 | 0 | 13.99 | 13.89 | 13.98 | | |
| 10 | 16QAM | 1 | 0 | 13.98 | 13.95 | 13.99 | 14.9 | 0 |
| 10 | 16QAM | 1 | 25 | 13.91 | 13.88 | 13.91 | | |
| 10 | 16QAM | 1 | 49 | 13.89 | 13.87 | 13.88 | | |
| 10 | 16QAM | 25 | 0 | 13.89 | 13.89 | 13.98 | 14.9 | 0 |
| 10 | 16QAM | 25 | 12 | 13.97 | 13.99 | 13.93 | | |
| 10 | 16QAM | 25 | 25 | 13.95 | 13.92 | 13.94 | | |
| 10 | 16QAM | 50 | 22.53 | 14.07 | 13.98 | 14.04 | | |
| 10 | 64QAM | 1 | 22.02 | 13.48 | 13.48 | 13.44 | 22.2 | 22.32 |
| 10 | 64QAM | 1 | 22.09 | 13.58 | 13.53 | 13.57 | | |
| 10 | 64QAM | 1 | 49 | 13.50 | 13.45 | 13.53 | | |
| 10 | 64QAM | 25 | 0 | 13.87 | 13.94 | 13.89 | 14.9 | 0 |
| 10 | 64QAM | 25 | 12 | 13.89 | 13.94 | 13.98 | | |
| 10 | 64QAM | 25 | 25 | 13.92 | 13.89 | 13.98 | | |
| 10 | 64QAM | 50 | 0 | 13.91 | 13.98 | 13.93 | | |
| Channel | | | | 37775 | 38000 | 38225 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2572.5 | 2595 | 2617.5 | | |
| 5 | QPSK | 1 | 0 | 14.00 | 14.07 | 13.99 | 14.9 | 0 |
| 5 | QPSK | 1 | 12 | 13.81 | 13.79 | 13.79 | | |
| 5 | QPSK | 1 | 24 | 13.69 | 13.77 | 13.74 | | |
| 5 | QPSK | 12 | 0 | 13.91 | 13.89 | 13.84 | 14.9 | 0 |
| 5 | QPSK | 12 | 7 | 13.93 | 13.90 | 13.95 | | |
| 5 | QPSK | 12 | 13 | 13.89 | 13.84 | 13.91 | | |
| 5 | QPSK | 25 | 0 | 13.99 | 13.92 | 13.94 | | |
| 5 | 16QAM | 1 | 0 | 13.99 | 14.02 | 13.94 | 14.9 | 0 |
| 5 | 16QAM | 1 | 12 | 13.88 | 13.89 | 13.86 | | |
| 5 | 16QAM | 1 | 24 | 13.84 | 13.86 | 13.85 | | |
| 5 | 16QAM | 12 | 0 | 13.98 | 13.94 | 13.91 | 14.9 | 0 |
| 5 | 16QAM | 12 | 7 | 13.97 | 13.93 | 13.96 | | |
| 5 | 16QAM | 12 | 13 | 13.93 | 13.98 | 13.94 | | |
| 5 | 16QAM | 25 | 0 | 14.04 | 14.03 | 13.99 | | |
| 5 | 64QAM | 1 | 0 | 13.41 | 13.44 | 13.45 | 14.9 | 0 |
| 5 | 64QAM | 1 | 12 | 13.54 | 13.56 | 13.55 | | |
| 5 | 64QAM | 1 | 24 | 13.51 | 13.45 | 13.48 | | |
| 5 | 64QAM | 12 | 0 | 13.91 | 13.94 | 13.93 | 14.9 | 0 |
| 5 | 64QAM | 12 | 7 | 13.91 | 13.97 | 13.98 | | |
| 5 | 64QAM | 12 | 13 | 13.94 | 13.90 | 13.97 | | |
| 5 | 64QAM | 25 | 0 | 13.95 | 13.93 | 13.99 | | |

**<LTE Band 41>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 39750 | 40185 | 40620 | 41055 | 41490 | | |
| Frequency (MHz) | | | | 2506 | 2549.5 | 2593 | 2636.5 | 2680 | | |
| 20 | QPSK | 1 | 0 | 13.45 | 13.35 | 13.38 | 13.41 | 13.39 | 14.9 | 0 |
| 20 | QPSK | 1 | 49 | 13.07 | 13.10 | 13.16 | 13.01 | 13.11 | | |
| 20 | QPSK | 1 | 99 | 12.96 | 13.09 | 13.21 | 13.07 | 13.18 | | |
| 20 | QPSK | 50 | 0 | 13.32 | 13.22 | 13.29 | 13.24 | 13.22 | 14.9 | 0 |
| 20 | QPSK | 50 | 24 | 13.12 | 13.25 | 13.30 | 13.22 | 13.29 | | |
| 20 | QPSK | 50 | 50 | 13.22 | 13.25 | 13.31 | 13.15 | 13.26 | | |
| 20 | QPSK | 100 | 0 | 13.35 | 13.23 | 13.33 | 13.16 | 13.19 | | |
| 20 | 16QAM | 1 | 0 | 13.21 | 13.18 | 13.37 | 13.25 | 13.25 | 14.9 | 0 |
| 20 | 16QAM | 1 | 49 | 13.22 | 13.14 | 13.25 | 13.07 | 13.20 | | |
| 20 | 16QAM | 1 | 99 | 13.16 | 13.16 | 13.27 | 13.16 | 13.28 | | |
| 20 | 16QAM | 50 | 0 | 13.31 | 13.29 | 13.32 | 13.24 | 13.24 | 14.9 | 0 |
| 20 | 16QAM | 50 | 24 | 13.36 | 13.31 | 13.41 | 13.25 | 13.36 | | |
| 20 | 16QAM | 50 | 50 | 13.36 | 13.28 | 13.31 | 13.19 | 13.32 | | |
| 20 | 16QAM | 100 | 0 | 13.34 | 13.27 | 13.39 | 13.18 | 13.29 | | |
| 20 | 64QAM | 1 | 0 | 12.71 | 12.68 | 12.84 | 12.76 | 12.85 | 14.9 | 0 |
| 20 | 64QAM | 1 | 49 | 12.74 | 12.67 | 12.81 | 12.69 | 12.94 | | |
| 20 | 64QAM | 1 | 99 | 12.74 | 12.74 | 12.79 | 12.67 | 13.08 | | |
| 20 | 64QAM | 50 | 0 | 13.32 | 13.25 | 13.31 | 13.23 | 13.24 | 14.9 | 0 |
| 20 | 64QAM | 50 | 24 | 13.36 | 13.31 | 13.42 | 13.21 | 13.33 | | |
| 20 | 64QAM | 50 | 50 | 13.34 | 13.25 | 13.31 | 13.15 | 13.32 | | |
| 20 | 64QAM | 100 | 0 | 13.32 | 13.27 | 13.34 | 13.19 | 13.20 | | |
| Channel | | | | 39725 | 40173 | 40620 | 41068 | 41515 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2503.5 | 2548.3 | 2593 | 2637.8 | 2682.5 | | |
| 15 | QPSK | 1 | 0 | 13.21 | 13.18 | 13.26 | 13.19 | 13.22 | 14.9 | 0 |
| 15 | QPSK | 1 | 37 | 13.24 | 13.17 | 13.24 | 13.18 | 13.21 | | |
| 15 | QPSK | 1 | 74 | 13.18 | 13.19 | 13.27 | 13.16 | 13.19 | | |
| 15 | QPSK | 36 | 0 | 13.34 | 13.21 | 13.28 | 13.14 | 13.25 | 14.9 | 0 |
| 15 | QPSK | 36 | 20 | 13.33 | 13.27 | 13.36 | 13.20 | 13.30 | | |
| 15 | QPSK | 36 | 39 | 13.31 | 13.25 | 13.33 | 13.17 | 13.26 | | |
| 15 | QPSK | 75 | 0 | 13.33 | 13.28 | 13.37 | 13.21 | 13.24 | | |
| 15 | 16QAM | 1 | 0 | 13.35 | 13.23 | 13.39 | 13.25 | 13.26 | 14.9 | 0 |
| 15 | 16QAM | 1 | 37 | 13.21 | 13.07 | 13.21 | 13.04 | 13.11 | | |
| 15 | 16QAM | 1 | 74 | 13.28 | 13.29 | 13.32 | 13.20 | 13.29 | | |
| 15 | 16QAM | 36 | 0 | 13.31 | 13.16 | 13.27 | 13.13 | 13.22 | 14.9 | 0 |
| 15 | 16QAM | 36 | 20 | 13.27 | 13.22 | 13.33 | 13.20 | 13.28 | | |
| 15 | 16QAM | 36 | 39 | 13.29 | 13.21 | 13.30 | 13.15 | 13.27 | | |
| 15 | 16QAM | 75 | 0 | 13.38 | 13.34 | 13.41 | 13.22 | 13.24 | | |
| 15 | 64QAM | 1 | 0 | 12.69 | 12.68 | 12.85 | 12.76 | 12.91 | 14.9 | 0 |
| 15 | 64QAM | 1 | 37 | 12.83 | 12.80 | 12.90 | 12.79 | 12.98 | | |
| 15 | 64QAM | 1 | 74 | 12.71 | 12.81 | 12.85 | 12.75 | 13.09 | | |
| 15 | 64QAM | 36 | 0 | 13.36 | 13.19 | 13.32 | 13.15 | 13.25 | 14.9 | 0 |
| 15 | 64QAM | 36 | 20 | 13.36 | 13.24 | 13.34 | 13.18 | 13.28 | | |
| 15 | 64QAM | 36 | 39 | 13.33 | 13.23 | 13.32 | 13.15 | 13.29 | | |
| 15 | 64QAM | 75 | 0 | 13.40 | 13.30 | 13.42 | 13.23 | 13.26 | | |
| Channel | | | | 39700 | 40160 | 40620 | 41080 | 41540 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2501 | 2547 | 2593 | 2639 | 2685 | | |
| 10 | QPSK | 1 | 0 | 13.05 | 12.99 | 13.04 | 12.96 | 13.05 | 14.9 | 0 |
| 10 | QPSK | 1 | 25 | 13.01 | 12.96 | 13.06 | 12.97 | 13.05 | | |
| 10 | QPSK | 1 | 49 | 12.84 | 12.89 | 12.92 | 12.87 | 12.92 | | |
| 10 | QPSK | 25 | 0 | 13.14 | 13.07 | 13.06 | 12.93 | 13.08 | 14.9 | 0 |
| 10 | QPSK | 25 | 12 | 13.16 | 13.09 | 13.15 | 13.00 | 13.06 | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 13.14 | 13.06 | 13.15 | 12.99 | 13.14 | | |
| 10 | QPSK | 50 | 0 | 13.13 | 13.10 | 13.17 | 13.02 | 13.08 | | |
| 10 | 16QAM | 1 | 0 | 13.21 | 13.16 | 13.30 | 13.12 | 13.20 | 14.9 | 0 |
| 10 | 16QAM | 1 | 25 | 13.12 | 13.07 | 13.18 | 12.98 | 13.10 | | |
| 10 | 16QAM | 1 | 49 | 13.18 | 13.08 | 13.14 | 12.99 | 13.05 | | |
| 10 | 16QAM | 25 | 0 | 13.16 | 13.04 | 13.03 | 12.82 | 13.02 | 14.9 | 0 |
| 10 | 16QAM | 25 | 12 | 13.17 | 13.04 | 13.13 | 12.98 | 13.04 | | |
| 10 | 16QAM | 25 | 25 | 13.14 | 13.06 | 13.07 | 12.92 | 13.09 | | |
| 10 | 16QAM | 50 | 0 | 13.17 | 13.16 | 13.22 | 12.99 | 13.04 | | |
| 10 | 64QAM | 1 | 0 | 12.54 | 12.39 | 12.59 | 12.47 | 12.67 | 14.9 | 0 |
| 10 | 64QAM | 1 | 25 | 12.57 | 12.49 | 12.62 | 12.50 | 12.79 | | |
| 10 | 64QAM | 1 | 49 | 12.46 | 12.39 | 12.50 | 12.37 | 12.72 | | |
| 10 | 64QAM | 25 | 0 | 13.16 | 13.07 | 13.10 | 12.90 | 13.05 | 14.9 | 0 |
| 10 | 64QAM | 25 | 12 | 13.19 | 13.11 | 13.21 | 13.04 | 13.10 | | |
| 10 | 64QAM | 25 | 25 | 13.19 | 13.07 | 13.17 | 12.97 | 13.14 | | |
| 10 | 64QAM | 50 | 0 | 13.17 | 13.10 | 13.18 | 13.00 | 13.05 | | |
| Channel | | | | 39675 | 40148 | 40620 | 41093 | 41565 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2498.5 | 2545.8 | 2593 | 2640.30 | 2687.5 | | |
| 5 | QPSK | 1 | 0 | 13.00 | 12.87 | 12.96 | 12.73 | 12.99 | 14.9 | 0 |
| 5 | QPSK | 1 | 12 | 12.92 | 12.92 | 13.00 | 12.84 | 13.02 | | |
| 5 | QPSK | 1 | 24 | 12.97 | 12.93 | 12.98 | 12.77 | 13.01 | | |
| 5 | QPSK | 12 | 0 | 13.13 | 13.06 | 13.14 | 13.01 | 13.17 | 14.9 | 0 |
| 5 | QPSK | 12 | 7 | 13.16 | 13.12 | 13.17 | 13.04 | 13.16 | | |
| 5 | QPSK | 12 | 13 | 13.01 | 13.07 | 13.13 | 12.99 | 13.09 | | |
| 5 | QPSK | 25 | 0 | 13.10 | 13.06 | 13.15 | 12.95 | 13.10 | | |
| 5 | 16QAM | 1 | 0 | 13.19 | 13.08 | 13.16 | 13.02 | 13.23 | 14.9 | 0 |
| 5 | 16QAM | 1 | 12 | 13.31 | 13.25 | 13.36 | 13.29 | 13.29 | | |
| 5 | 16QAM | 1 | 24 | 13.15 | 13.20 | 13.24 | 13.13 | 13.20 | | |
| 5 | 16QAM | 12 | 0 | 12.97 | 13.05 | 13.10 | 12.95 | 13.09 | 14.9 | 0 |
| 5 | 16QAM | 12 | 7 | 12.94 | 13.05 | 13.14 | 12.97 | 13.04 | | |
| 5 | 16QAM | 12 | 13 | 12.90 | 13.00 | 13.09 | 12.93 | 13.06 | | |
| 5 | 16QAM | 25 | 0 | 12.96 | 13.07 | 13.14 | 12.97 | 13.09 | | |
| 5 | 64QAM | 1 | 0 | 12.71 | 12.50 | 12.63 | 12.51 | 12.79 | 14.9 | 0 |
| 5 | 64QAM | 1 | 12 | 12.63 | 12.55 | 12.73 | 12.58 | 12.86 | | |
| 5 | 64QAM | 1 | 24 | 12.70 | 12.61 | 12.71 | 12.61 | 12.87 | | |
| 5 | 64QAM | 12 | 0 | 13.19 | 13.09 | 13.18 | 13.03 | 13.12 | 14.9 | 0 |
| 5 | 64QAM | 12 | 7 | 13.17 | 13.09 | 13.19 | 13.00 | 13.16 | | |
| 5 | 64QAM | 12 | 13 | 13.14 | 13.04 | 13.14 | 12.97 | 13.13 | | |
| 5 | 64QAM | 25 | 0 | 13.17 | 13.11 | 13.24 | 13.01 | 13.15 | | |

**<LTE Band 41 HPUE>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 39750 | 40185 | 40620 | 41055 | 41490 | | |
| Frequency (MHz) | | | | 2506 | 2549.5 | 2593 | 2636.5 | 2680 | | |
| 20 | QPSK | 1 | 0 | 15.70 | 14.73 | 15.05 | 15.31 | 14.94 | 16.9 | 0 |
| 20 | QPSK | 1 | 49 | 14.44 | 14.77 | 15.15 | 15.20 | 14.88 | | |
| 20 | QPSK | 1 | 99 | 14.47 | 14.83 | 15.37 | 15.28 | 14.91 | | |
| 20 | QPSK | 50 | 0 | 14.63 | 14.98 | 15.34 | 15.46 | 15.14 | 16.9 | 0 |
| 20 | QPSK | 50 | 24 | 14.76 | 15.07 | 15.47 | 15.43 | 15.17 | | |
| 20 | QPSK | 50 | 50 | 14.76 | 15.11 | 15.45 | 15.39 | 15.05 | | |
| 20 | QPSK | 100 | 0 | 14.72 | 15.07 | 15.47 | 15.41 | 15.16 | | |
| 20 | 16QAM | 1 | 0 | 14.64 | 14.98 | 15.41 | 15.65 | 15.32 | 16.9 | 0 |
| 20 | 16QAM | 1 | 49 | 14.61 | 15.08 | 15.39 | 15.50 | 15.26 | | |
| 20 | 16QAM | 1 | 99 | 14.69 | 15.14 | 15.67 | 15.50 | 15.25 | | |
| 20 | 16QAM | 50 | 0 | 14.60 | 14.94 | 15.29 | 15.47 | 15.17 | 16.9 | 0 |
| 20 | 16QAM | 50 | 24 | 14.65 | 15.02 | 15.43 | 15.40 | 15.19 | | |
| 20 | 16QAM | 50 | 50 | 14.69 | 15.07 | 15.43 | 15.38 | 15.09 | | |
| 20 | 16QAM | 100 | 0 | 14.64 | 15.03 | 15.42 | 15.40 | 15.14 | | |
| 20 | 64QAM | 1 | 0 | 14.59 | 14.81 | 15.19 | 15.45 | 15.12 | 16.9 | 0 |
| 20 | 64QAM | 1 | 49 | 14.58 | 14.92 | 15.24 | 15.44 | 15.16 | | |
| 20 | 64QAM | 1 | 99 | 14.63 | 15.01 | 15.40 | 15.35 | 15.08 | | |
| 20 | 64QAM | 50 | 0 | 14.60 | 14.91 | 15.32 | 15.44 | 15.15 | 16.9 | 0 |
| 20 | 64QAM | 50 | 24 | 14.69 | 15.03 | 15.44 | 15.41 | 15.16 | | |
| 20 | 64QAM | 50 | 50 | 14.70 | 15.05 | 15.50 | 15.40 | 15.08 | | |
| 20 | 64QAM | 100 | 0 | 14.68 | 15.06 | 15.41 | 15.39 | 15.16 | | |
| Channel | | | | 39725 | 40173 | 40620 | 41068 | 41515 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2503.5 | 2548.3 | 2593 | 2637.8 | 2682.5 | | |
| 15 | QPSK | 1 | 0 | 14.49 | 14.80 | 15.17 | 15.37 | 15.05 | 16.9 | 0 |
| 15 | QPSK | 1 | 37 | 14.53 | 14.86 | 15.32 | 15.42 | 15.00 | | |
| 15 | QPSK | 1 | 74 | 14.51 | 14.97 | 15.38 | 15.42 | 14.99 | | |
| 15 | QPSK | 36 | 0 | 14.61 | 14.95 | 15.34 | 15.49 | 15.15 | 16.9 | 0 |
| 15 | QPSK | 36 | 20 | 14.68 | 15.02 | 15.42 | 15.47 | 15.14 | | |
| 15 | QPSK | 36 | 39 | 14.70 | 15.03 | 15.44 | 15.37 | 15.11 | | |
| 15 | QPSK | 75 | 0 | 14.71 | 15.04 | 15.42 | 15.38 | 15.14 | | |
| 15 | 16QAM | 1 | 0 | 14.65 | 15.00 | 15.47 | 15.55 | 15.28 | 16.9 | 0 |
| 15 | 16QAM | 1 | 37 | 14.55 | 15.02 | 15.38 | 15.52 | 15.21 | | |
| 15 | 16QAM | 1 | 74 | 14.66 | 15.24 | 15.67 | 15.61 | 15.34 | | |
| 15 | 16QAM | 36 | 0 | 14.50 | 14.84 | 15.26 | 15.43 | 15.12 | 16.9 | 0 |
| 15 | 16QAM | 36 | 20 | 14.54 | 14.91 | 15.33 | 15.40 | 15.10 | | |
| 15 | 16QAM | 36 | 39 | 14.57 | 14.93 | 15.37 | 15.31 | 15.07 | | |
| 15 | 16QAM | 75 | 0 | 14.59 | 14.96 | 15.41 | 15.39 | 15.11 | | |
| 15 | 64QAM | 1 | 0 | 14.56 | 14.82 | 15.20 | 15.41 | 15.11 | 16.9 | 0 |
| 15 | 64QAM | 1 | 37 | 14.65 | 15.01 | 15.31 | 15.44 | 15.10 | | |
| 15 | 64QAM | 1 | 74 | 14.58 | 15.09 | 15.42 | 15.41 | 15.12 | | |
| 15 | 64QAM | 36 | 0 | 14.54 | 14.92 | 15.32 | 15.47 | 15.13 | 16.9 | 0 |
| 15 | 64QAM | 36 | 20 | 14.58 | 15.04 | 15.41 | 15.47 | 15.16 | | |
| 15 | 64QAM | 36 | 39 | 14.59 | 15.03 | 15.42 | 15.37 | 15.11 | | |
| 15 | 64QAM | 75 | 0 | 14.60 | 14.97 | 15.38 | 15.37 | 15.14 | | |
| Channel | | | | 39700 | 40160 | 40620 | 41080 | 41540 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2501 | 2547 | 2593 | 2639 | 2685 | | |
| 10 | QPSK | 1 | 0 | 14.28 | 14.60 | 14.99 | 15.14 | 14.87 | 16.9 | 0 |
| 10 | QPSK | 1 | 25 | 14.21 | 14.57 | 15.00 | 15.01 | 14.76 | | |
| 10 | QPSK | 1 | 49 | 14.21 | 14.61 | 15.02 | 15.07 | 14.77 | | |
| 10 | QPSK | 25 | 0 | 14.45 | 14.72 | 15.12 | 15.27 | 14.99 | 16.9 | 0 |
| 10 | QPSK | 25 | 12 | 14.49 | 14.85 | 15.27 | 15.21 | 15.01 | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 14.48 | 14.85 | 15.25 | 15.20 | 14.98 | | |
| 10 | QPSK | 50 | 0 | 14.48 | 14.81 | 15.22 | 15.18 | 15.02 | | |
| 10 | 16QAM | 1 | 0 | 14.60 | 14.93 | 15.39 | 15.45 | 15.22 | 16.9 | 0 |
| 10 | 16QAM | 1 | 25 | 14.55 | 14.94 | 15.37 | 15.45 | 15.20 | | |
| 10 | 16QAM | 1 | 49 | 14.55 | 14.98 | 15.41 | 15.40 | 15.16 | | |
| 10 | 16QAM | 25 | 0 | 14.42 | 14.68 | 15.07 | 15.25 | 15.03 | 16.9 | 0 |
| 10 | 16QAM | 25 | 12 | 14.43 | 14.81 | 15.23 | 15.21 | 15.06 | | |
| 10 | 16QAM | 25 | 25 | 14.46 | 14.77 | 15.19 | 15.16 | 15.00 | | |
| 10 | 16QAM | 50 | 0 | 14.43 | 14.83 | 15.22 | 15.19 | 15.05 | | |
| 10 | 64QAM | 1 | 0 | 14.59 | 14.76 | 15.13 | 15.34 | 15.12 | 16.9 | 0 |
| 10 | 64QAM | 1 | 25 | 14.60 | 14.91 | 15.17 | 15.37 | 15.14 | | |
| 10 | 64QAM | 1 | 49 | 14.51 | 14.92 | 15.25 | 15.24 | 15.10 | | |
| 10 | 64QAM | 25 | 0 | 14.43 | 14.79 | 15.18 | 15.31 | 15.10 | 16.9 | 0 |
| 10 | 64QAM | 25 | 12 | 14.49 | 14.89 | 15.33 | 15.26 | 15.11 | | |
| 10 | 64QAM | 25 | 25 | 14.49 | 14.89 | 15.29 | 15.24 | 15.06 | | |
| 10 | 64QAM | 50 | 0 | 14.44 | 14.84 | 15.23 | 15.20 | 15.03 | | |
| Channel | | | | 39675 | 40148 | 40620 | 41093 | 41565 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 2498.5 | 2545.8 | 2593 | 2640.30 | 2687.5 | | |
| 5 | QPSK | 1 | 0 | 14.28 | 14.45 | 14.93 | 14.97 | 14.80 | 16.9 | 0 |
| 5 | QPSK | 1 | 12 | 14.26 | 14.63 | 15.03 | 15.01 | 14.81 | | |
| 5 | QPSK | 1 | 24 | 14.16 | 14.58 | 15.06 | 15.09 | 14.85 | | |
| 5 | QPSK | 12 | 0 | 14.44 | 14.81 | 15.16 | 15.24 | 14.99 | 16.9 | 0 |
| 5 | QPSK | 12 | 7 | 14.49 | 14.84 | 15.26 | 15.27 | 15.01 | | |
| 5 | QPSK | 12 | 13 | 14.43 | 14.82 | 15.24 | 15.22 | 14.98 | | |
| 5 | QPSK | 25 | 0 | 14.43 | 14.80 | 15.24 | 15.20 | 14.96 | | |
| 5 | 16QAM | 1 | 0 | 14.65 | 14.95 | 15.38 | 15.45 | 15.16 | 16.9 | 0 |
| 5 | 16QAM | 1 | 12 | 14.67 | 15.00 | 15.48 | 15.43 | 15.09 | | |
| 5 | 16QAM | 1 | 24 | 14.62 | 15.04 | 15.47 | 15.41 | 15.14 | | |
| 5 | 16QAM | 12 | 0 | 14.43 | 14.80 | 15.19 | 15.25 | 15.01 | 16.9 | 0 |
| 5 | 16QAM | 12 | 7 | 14.43 | 14.81 | 15.27 | 15.29 | 15.07 | | |
| 5 | 16QAM | 12 | 13 | 14.42 | 14.79 | 15.26 | 15.26 | 15.01 | | |
| 5 | 16QAM | 25 | 0 | 14.37 | 14.79 | 15.23 | 15.27 | 15.02 | | |
| 5 | 64QAM | 1 | 0 | 14.44 | 14.73 | 15.17 | 15.28 | 15.02 | 16.9 | 0 |
| 5 | 64QAM | 1 | 12 | 14.46 | 14.82 | 15.25 | 15.31 | 15.06 | | |
| 5 | 64QAM | 1 | 24 | 14.51 | 14.85 | 15.29 | 15.29 | 15.07 | | |
| 5 | 64QAM | 12 | 0 | 14.45 | 14.80 | 15.18 | 15.29 | 15.06 | 16.9 | 0 |
| 5 | 64QAM | 12 | 7 | 14.44 | 14.85 | 15.23 | 15.31 | 15.08 | | |
| 5 | 64QAM | 12 | 13 | 14.40 | 14.81 | 15.26 | 15.27 | 15.04 | | |
| 5 | 64QAM | 25 | 0 | 14.41 | 14.85 | 15.27 | 15.31 | 15.09 | | |

**<LTE Band 48>**

| BW [MHz] | Modulation | RB Size | RB Offset | Power Low Ch. / Freq. | Power Low Middle Ch. / Freq. | Power High Middle Ch. / Freq. | Power High Ch. / Freq. | Tune-up limit (dBm) | MPR (dB) |
|---|---|---|---|---|---|---|---|---|---|
| Channel | | | | 55340 | 55830 | 56150 | 56640 | | |
| Frequency (MHz) | | | | 3560 | 3609 | 3641 | 3690 | | |
| 20 | QPSK | 1 | 0 | 14.40 | 14.49 | 14.82 | 14.80 | 15.2 | 0 |
| 20 | QPSK | 1 | 49 | 14.37 | 14.37 | 14.80 | 14.80 | | |
| 20 | QPSK | 1 | 99 | 14.37 | 14.31 | 14.80 | 14.77 | | |
| 20 | QPSK | 50 | 0 | 14.37 | 14.42 | 14.77 | 14.77 | 15.2 | 0 |
| 20 | QPSK | 50 | 24 | 14.36 | 14.32 | 14.71 | 14.59 | | |
| 20 | QPSK | 50 | 50 | 14.36 | 14.35 | 14.57 | 14.57 | | |
| 20 | QPSK | 100 | 0 | 14.35 | 14.36 | 14.55 | 14.55 | | |
| 20 | 16QAM | 1 | 0 | 14.33 | 14.31 | 14.53 | 14.55 | 15.2 | 0 |
| 20 | 16QAM | 1 | 49 | 14.33 | 14.27 | 14.51 | 14.55 | | |
| 20 | 16QAM | 1 | 99 | 14.32 | 14.28 | 14.50 | 14.53 | | |
| 20 | 16QAM | 50 | 0 | 14.30 | 14.39 | 14.50 | 14.53 | 15.2 | 0 |
| 20 | 16QAM | 50 | 24 | 14.29 | 14.23 | 14.50 | 14.52 | | |
| 20 | 16QAM | 50 | 50 | 14.29 | 14.33 | 14.49 | 14.52 | | |
| 20 | 16QAM | 100 | 0 | 14.27 | 14.30 | 14.46 | 14.50 | | |
| 20 | 64QAM | 1 | 0 | 14.26 | 14.31 | 14.46 | 14.46 | 15.2 | 0 |
| 20 | 64QAM | 1 | 49 | 14.24 | 14.27 | 14.45 | 14.43 | | |
| 20 | 64QAM | 1 | 99 | 14.21 | 14.20 | 14.44 | 14.40 | | |
| 20 | 64QAM | 50 | 0 | 14.19 | 14.19 | 14.33 | 14.35 | 15.2 | 0 |
| 20 | 64QAM | 50 | 24 | 13.99 | 13.93 | 14.30 | 14.34 | | |
| 20 | 64QAM | 50 | 50 | 13.99 | 14.04 | 13.95 | 14.33 | | |
| 20 | 64QAM | 100 | 0 | 13.90 | 13.85 | 13.92 | 14.26 | | |
| Channel | | | | 55315 | 55820 | 56160 | 56665 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 3557.5 | 3608 | 3642 | 3692.5 | | |
| 15 | QPSK | 1 | 0 | 14.34 | 14.43 | 14.73 | 14.70 | 15.2 | 0 |
| 15 | QPSK | 1 | 37 | 14.32 | 14.36 | 14.73 | 14.79 | | |
| 15 | QPSK | 1 | 74 | 14.29 | 14.26 | 14.77 | 14.74 | | |
| 15 | QPSK | 36 | 0 | 14.33 | 14.38 | 14.76 | 14.67 | 15.2 | 0 |
| 15 | QPSK | 36 | 20 | 14.36 | 14.23 | 14.63 | 14.54 | | |
| 15 | QPSK | 36 | 39 | 14.32 | 14.26 | 14.54 | 14.55 | | |
| 15 | QPSK | 75 | 0 | 14.33 | 14.34 | 14.50 | 14.52 | | |
| 15 | 16QAM | 1 | 0 | 14.23 | 14.24 | 14.53 | 14.51 | 15.2 | 0 |
| 15 | 16QAM | 1 | 37 | 14.29 | 14.19 | 14.46 | 14.51 | | |
| 15 | 16QAM | 1 | 74 | 14.27 | 14.23 | 14.46 | 14.43 | | |
| 15 | 16QAM | 36 | 0 | 14.21 | 14.30 | 14.44 | 14.45 | 15.2 | 0 |
| 15 | 16QAM | 36 | 20 | 14.29 | 14.17 | 14.41 | 14.45 | | |
| 15 | 16QAM | 36 | 39 | 14.23 | 14.31 | 14.47 | 14.49 | | |
| 15 | 16QAM | 75 | 0 | 14.26 | 14.27 | 14.39 | 14.44 | | |
| 15 | 64QAM | 1 | 0 | 14.25 | 14.22 | 14.40 | 14.37 | 15.2 | 0 |
| 15 | 64QAM | 1 | 37 | 14.22 | 14.25 | 14.44 | 14.36 | | |
| 15 | 64QAM | 1 | 74 | 14.15 | 14.20 | 14.44 | 14.38 | | |
| 15 | 64QAM | 36 | 0 | 14.13 | 14.14 | 14.24 | 14.27 | 15.2 | 0 |
| 15 | 64QAM | 36 | 20 | 13.93 | 13.86 | 14.30 | 14.25 | | |
| 15 | 64QAM | 36 | 39 | 13.94 | 14.03 | 13.92 | 14.23 | | |
| 15 | 64QAM | 75 | 0 | 13.85 | 13.79 | 13.92 | 14.22 | | |
| Channel | | | | 55290 | 55815 | 56165 | 56690 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 3555 | 3607.5 | 3642.5 | 3695 | | |
| 10 | QPSK | 1 | 0 | 14.31 | 14.41 | 14.80 | 14.75 | 15.2 | 0 |
| 10 | QPSK | 1 | 25 | 14.28 | 14.35 | 14.70 | 14.70 | | |
| 10 | QPSK | 1 | 49 | 14.33 | 14.23 | 14.76 | 14.68 | | |
| 10 | QPSK | 25 | 0 | 14.33 | 14.32 | 14.68 | 14.68 | 15.2 | 0 |
| 10 | QPSK | 25 | 12 | 14.28 | 14.24 | 14.65 | 14.56 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10 | QPSK | 25 | 25 | 14.36 | 14.35 | 14.52 | 14.48 | | |
| 10 | QPSK | 50 | 0 | 14.27 | 14.30 | 14.47 | 14.49 | | |
| 10 | 16QAM | 1 | 0 | 14.27 | 14.29 | 14.47 | 14.48 | 15.2 | 0 |
| 10 | 16QAM | 1 | 25 | 14.24 | 14.20 | 14.49 | 14.55 | | |
| 10 | 16QAM | 1 | 49 | 14.28 | 14.27 | 14.41 | 14.53 | | |
| 10 | 16QAM | 25 | 0 | 14.26 | 14.29 | 14.42 | 14.50 | 15.2 | 0 |
| 10 | 16QAM | 25 | 12 | 14.24 | 14.21 | 14.49 | 14.42 | | |
| 10 | 16QAM | 25 | 25 | 14.21 | 14.24 | 14.48 | 14.43 | | |
| 10 | 16QAM | 50 | 0 | 14.17 | 14.25 | 14.38 | 14.41 | | |
| 10 | 64QAM | 1 | 0 | 14.17 | 14.21 | 14.37 | 14.36 | 15.2 | 0 |
| 10 | 64QAM | 1 | 25 | 14.17 | 14.20 | 14.44 | 14.40 | | |
| 10 | 64QAM | 1 | 49 | 14.15 | 14.20 | 14.42 | 14.38 | | |
| 10 | 64QAM | 25 | 0 | 14.17 | 14.11 | 14.25 | 14.26 | 15.2 | 0 |
| 10 | 64QAM | 25 | 12 | 13.90 | 13.93 | 14.21 | 14.34 | | |
| 10 | 64QAM | 25 | 25 | 13.90 | 13.99 | 13.92 | 14.24 | | |
| 10 | 64QAM | 50 | 0 | 13.85 | 13.82 | 13.92 | 14.16 | | |
| Channel | | | | 55265 | 55810 | 56170 | 56715 | Tune-up limit (dBm) | MPR (dB) |
| Frequency (MHz) | | | | 3552.5 | 3607 | 3643 | 3697.5 | | |
| 5 | QPSK | 1 | 0 | 14.31 | 14.47 | 14.76 | 14.76 | 15.2 | 0 |
| 5 | QPSK | 1 | 12 | 14.31 | 14.34 | 14.76 | 14.77 | | |
| 5 | QPSK | 1 | 24 | 14.34 | 14.29 | 14.73 | 14.67 | | |
| 5 | QPSK | 12 | 0 | 14.31 | 14.41 | 14.76 | 14.67 | 15.2 | 0 |
| 5 | QPSK | 12 | 7 | 14.35 | 14.28 | 14.71 | 14.54 | | |
| 5 | QPSK | 12 | 13 | 14.33 | 14.31 | 14.49 | 14.54 | | |
| 5 | QPSK | 25 | 0 | 14.33 | 14.33 | 14.45 | 14.46 | | |
| 5 | 16QAM | 1 | 0 | 14.30 | 14.28 | 14.53 | 14.55 | 15.2 | 0 |
| 5 | 16QAM | 1 | 12 | 14.27 | 14.26 | 14.41 | 14.51 | | |
| 5 | 16QAM | 1 | 24 | 14.29 | 14.22 | 14.48 | 14.53 | | |
| 5 | 16QAM | 12 | 0 | 14.25 | 14.37 | 14.45 | 14.44 | 15.2 | 0 |
| 5 | 16QAM | 12 | 7 | 14.28 | 14.19 | 14.43 | 14.50 | | |
| 5 | 16QAM | 12 | 13 | 14.29 | 14.33 | 14.43 | 14.46 | | |
| 5 | 16QAM | 25 | 0 | 14.17 | 14.27 | 14.44 | 14.46 | | |
| 5 | 64QAM | 1 | 0 | 14.20 | 14.25 | 14.41 | 14.37 | 15.2 | 0 |
| 5 | 64QAM | 1 | 12 | 14.21 | 14.26 | 14.38 | 14.33 | | |
| 5 | 64QAM | 1 | 24 | 14.11 | 14.14 | 14.42 | 14.37 | | |
| 5 | 64QAM | 12 | 0 | 14.09 | 14.12 | 14.28 | 14.26 | 15.2 | 0 |
| 5 | 64QAM | 12 | 7 | 13.89 | 13.87 | 14.28 | 14.27 | | |
| 5 | 64QAM | 12 | 13 | 13.96 | 14.02 | 13.93 | 14.33 | | |
| 5 | 64QAM | 25 | 0 | 13.85 | 13.80 | 13.83 | 14.16 | | |

## <LTE Carrier Aggregation combinations>

**General Note:**

1. This device supports Carrier Aggregation on downlink only for inter and intra band, Uplink CA is not supported. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.
3. All permutations exist. No restrictions on Pcell & Scell combinations. Only LTE Band 29A is limited to Scell.

| 2CC Downlink Carrier Aggregation | | | 3CC Downlink Carrier Aggregation | | | 4CC Downlink Carrier Aggregation | | |
|---|---|---|---|---|---|---|---|---|
| Number | Combination | Covered by Measurement Superset | Number | Combination | Covered by Measurement Superset | Number | Combination | Covered by Measurement Superset |
| 1 | 2A-14A | | 58 | 2A-13A-48A | | 106 | 2A-2A-66B | |
| 2 | 2A-2A | | 59 | 2A-14A-30A | | 107 | 2A-2A-66C | |
| 3 | 2A-30A | | 60 | 2A-2A-14A | | 108 | 2A-48A-48A-66A | |
| 4 | 2A-48A | | 61 | 2A-2A-4A | | 109 | 2A-48A-48C | |
| 5 | 2A-71A | | 62 | 2A-2A-5A | | 110 | 2A-48C-66A | |
| 6 | 2C | | 63 | 2A-2A-66A | | 111 | 2A-48D | |
| 7 | 4A-25A | | 64 | 2A-48A-48A | | 112 | 2A-4A-4A-5A | |
| 8 | 4A-30A | | 65 | 2A-48C | | 113 | 2A-4A-5A-30A | |
| 9 | 4A-48A | | 66 | 2A-4A-4A | | 114 | 2A-4A-5B | |
| 10 | 4A-4A | | 67 | 2A-5A-30A | | 115 | 2A-5A-30A-66A | |
| 11 | 4A-71A | | 68 | 2A-5A-48A | | 116 | 2A-5A-48A-48A | |
| 12 | 4C | | 69 | 2A-5A-66A | | 117 | 2A-5A-48A-66A | |
| 13 | 5A-25A | | 70 | 2A-5B | | 118 | 2A-5A-48C | |
| 14 | 5A-30A | | 71 | 2A-66A-66A | | 119 | 2A-5A-66A-66A | |
| 15 | 5A-38A | | 72 | 2A-66B | | 120 | 2A-5A-66B | |
| 16 | 5A-40A | | 73 | 2A-66C | | 121 | 2A-5A-66C | |
| 17 | 5A-46A | | 74 | 2A-48A-66A | | 122 | 2A-5B-30A | |
| 18 | 5A-48A | | 75 | 4A-48C | | 123 | 2A-5B-66A | |
| 19 | 5A-5A | | 76 | 4A-4A-5A | | 124 | 2A-66A-66A-66A | |
| 20 | 5B | | 77 | 4A-5A-30A | | 125 | 5A-30A-66A-66A | |
| 21 | 7A-12A | | 78 | 4A-5B | | 126 | 5A-48A-48A-66A | |
| 22 | 7A-40A | | 79 | 5A-48A-48A | | 127 | 5A-48A-48C | |
| 23 | 7A-42A | | 80 | 5A-48A-66A | | 128 | 5A-48C-66A | |
| 24 | 7A-66A | | 81 | 5A-48C | | 129 | 5A-48D | |
| 25 | 7A-7A | | 82 | 5A-5A-66A | | 130 | 5A-5A-66A-66A | |
| 26 | 7B | | 83 | 5A-66A-66A | | 131 | 5A-5A-66B | |
| 27 | 7C | | 84 | 5A-66B | | 132 | 5A-5A-66C | |
| 28 | 12A-12A | | 85 | 5A-66C | | 133 | 5B-30A-66A | |
| 29 | 12A-25A | | 86 | 5B-66A | | 134 | 5B-66A-66A | |
| 30 | 12A-30A | | 87 | 13A-48A-48A | | 135 | 5B-66B | |
| 31 | 12B | | 88 | 13A-48A-66A | | 136 | 5B-66C | |
| 32 | 13A-48A | | 89 | 13A-48C | | 137 | 4A-48D | |
| 33 | 14A-30A | | 90 | 13A-66B | | 138 | 4A-4A-5B | |
| 34 | 14A-66A | | 91 | 13A-66C | | 139 | 12A-30A-66A-66A | |
| 35 | 25A-25A | | 92 | 14A-30A-66A | | 140 | 13A-48A-48A-66A | |
| 36 | 25A-26A | | 93 | 14A-66A-66A | | 141 | 13A-48A-48C | |
| 37 | 25A-30A | | 94 | 25A-25A-26A | | 142 | 13A-48A-66B | |
| 38 | 25A-41A | | 95 | 41A-42C | | 143 | 13A-48A-66C | |
| 39 | 25A-48A | | 96 | 41C-42A | | 144 | 13A-48C-66A | |

| 2CC Downlink Carrier Aggregation | | | 3CC Downlink Carrier Aggregation | | | 4CC Downlink Carrier Aggregation | | |
|---|---|---|---|---|---|---|---|---|
| Number | Combination | Covered by Measurement Superset | Number | Combination | Covered by Measurement Superset | Number | Combination | Covered by Measurement Superset |
| 40 | 25C | | 97 | 41D | | 145 | 13A-48D | |
| 41 | 26A-41A | | 98 | 48A-48A-66A | | 146 | 13A-66A-66A-66A | |
| 42 | 30A-66A | | 99 | 48A-66A-66A | | 147 | 14A-30A-66A-66A | |
| 43 | 38A-40A | | 100 | 48A-66B | | 148 | 41A-41D | |
| 44 | 38C | | 101 | 48A-66C | | 149 | 41C-41C | |
| 45 | 41A-41A | | 102 | 48C-66A | | 150 | 48A-48A-66A-66A | |
| 46 | 41A-48A | | 103 | 48D | | 151 | 48A-48A-66B | |
| 47 | 41C | | 104 | 66A-66A-66A | | 152 | 48A-48A-66C | |
| 48 | 42A-42A | | 105 | 66A-66C | | 153 | 48A-48C-66A | |
| 49 | 42C | | | | | 154 | 48A-66A-66A-66A | |
| 50 | 48A-48A | | | | | 155 | 48C-66A-66A | |
| 51 | 48A-66A | | | | | 156 | 48C-66B | |
| 52 | 48A-71A | | | | | 157 | 48C-66C | |
| 53 | 48C | | | | | 158 | 48D-66A | |
| 54 | 66A-66A | | | | | 159 | 48E | |
| 55 | 66A-71A | | | | | | | |
| 56 | 66B | | | | | | | |
| 57 | 66C | | | | | | | |

| 5CC Downlink Carrier Aggregation | | | 6CC Downlink Carrier Aggregation | | |
|---|---|---|---|---|---|
| Number | Combination | Covered by Measurement Superset | Number | Combination | Covered by Measurement Superset |
| 160 | 2A-2A-14A-66A-66A | | 200 | 2A-2A-5A-30A-66A-66A | |
| 161 | 2A-2A-4A-4A-13A | | 201 | 2A-48E-66A | |
| 162 | 2A-2A-4A-4A-5A | | | | |
| 163 | 2A-2A-4A-5B | | | | |
| 164 | 2A-2A-5A-66B | | | | |
| 165 | 2A-2A-5A-66C | | | | |
| 166 | 2A-2A-5B-66A | | | | |
| 167 | 2A-48A-48C-66A | | | | |
| 168 | 2A-48A-48D | | | | |
| 169 | 2A-48C-48C | | | | |
| 170 | 2A-48D-66A | | | | |
| 171 | 2A-48E | | | | |
| 172 | 2A-4A-4A-5B | | | | |
| 173 | 2A-5A-48A-48A-66A | | | | |
| 174 | 2A-5A-48A-48C | | | | |
| 175 | 2A-5A-48C-66A | | | | |
| 176 | 2A-5A-48D | | | | |
| 177 | 2A-5B-30A-66A | | | | |
| 178 | 2A-5B-66A-66A | | | | |
| 179 | 2A-5B-66B | | | | |
| 180 | 2A-5B-66C | | | | |
| 181 | 4A-48E | | | | |
| 182 | 5A-48A-48C-66A | | | | |
| 183 | 5A-48C-48C | | | | |
| 184 | 5A-48E | | | | |
| 185 | 13A-48A-48C-66A | | | | |
| 186 | 13A-48A-48D | | | | |
| 187 | 13A-48C-48C | | | | |
| 188 | 13A-48C-66B | | | | |
| 189 | 13A-48C-66C | | | | |
| 190 | 13A-48D-66A | | | | |
| 191 | 13A-48E | | | | |
| 192 | 41C-41D | | | | |
| 193 | 48A-48C-66B | | | | |
| 194 | 48A-48C-66C | | | | |
| 195 | 48A-48D-66A | | | | |
| 196 | 48C-48C-66A | | | | |
| 197 | 48C-48D | | | | |
| 198 | 48C-66A-66A-66A | | | | |
| 199 | 48E-66A | | | | |

**<Power verification when LTE Carrier Aggregation Active>**

**General Note:**

i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.

ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.

iii. The device supports downlink two carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

v. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.

vi. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

$$\text{Nominal channel spacing} = \left\lfloor \frac{BW_{Channel(1)} + BW_{Channel(2)} - 0.1\left|BW_{Channel(1)} - BW_{Channel(2)}\right|}{0.6} \right\rfloor 0.3 \ \text{[MHz]}$$

**<Two Carrier power verification>**

| Configure | | CA Configuration (BCS) | PCC | | | | | | | SCC | | | | Power | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LTE Band | BW (MHz) | UL Freq. (MHz) | UL Channel | Mod. | UL# RB | UL RB Offset | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | With CA Tx.Power (dBm) | W/O CA Tx.Power (dBm) |
| Inter-Band | | 2A-30A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 30 | 10 | 2355 | 9820 | 23.39 | 23.35 |
| | | 2A-71A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 71 | 20 | 637 | 68786 | 23.36 | 23.27 |
| | | 4A-25A | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 25 | 20 | 1960 | 8340 | 23.39 | 23.28 |
| | | 4A-30A | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 30 | 10 | 2355 | 9820 | 23.30 | 23.34 |
| | | 4A-48A | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 23.25 | 23.33 |
| | | 4A-71A | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 71 | 20 | 637 | 68786 | 23.23 | 23.37 |
| | | 5A-25A | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 25 | 20 | 1960 | 8340 | 23.47 | 23.54 |
| | | 5A-38A | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 38 | 20 | 2595 | 38000 | 23.48 | 23.43 |
| | | 7A-12A | 7 | 20 | 2535 | 21100 | QPSK | 1 | 0 | 12 | 10 | 737.5 | 5095 | 23.59 | 23.51 |
| | | 7A-42A | 7 | 20 | 2535 | 21100 | QPSK | 1 | 0 | 42 | 20 | 3575 | 43340 | 23.55 | 23.41 |
| | | 7A-66A | 7 | 20 | 2535 | 21100 | QPSK | 1 | 0 | 66 | 20 | 2145 | 66786 | 23.56 | 23.43 |
| | | 12A-25A | 12 | 10 | 707.5 | 23095 | QPSK | 1 | 0 | 25 | 20 | 1960 | 8340 | 23.37 | 23.22 |
| | | 25A-30A | 25 | 20 | 1860 | 26140 | QPSK | 1 | 0 | 30 | 10 | 2355 | 9820 | 23.29 | 23.28 |
| | | 25A-41A | 25 | 20 | 1860 | 26140 | QPSK | 1 | 0 | 41 | 20 | 2593 | 40620 | 23.27 | 23.40 |
| | | 25A-48A | 25 | 20 | 1860 | 26140 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 23.21 | 23.34 |
| | | 26A-41A | 26 | 15 | 831.5 | 26865 | QPSK | 1 | 0 | 41 | 20 | 2593 | 40620 | 23.48 | 23.54 |
| | | 41A-48A | 41 | 20 | 2549.5 | 40185 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 23.46 | 23.45 |
| | | 48A-71A | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 71 | 20 | 637 | 68786 | 21.93 | 22.06 |
| | | 66A-71A | 66 | 20 | 1770 | 132572 | QPSK | 1 | 0 | 71 | 20 | 637 | 68786 | 23.49 | 23.48 |
| Intra-Band | Non-Contiguous | 7A-7A | 7 | 20 | 2535 | 21100 | QPSK | 1 | 0 | 7 | 5 | 2622.5 | 2775 | 23.45 | 23.46 |
| | | 12A-12A | 12 | 10 | 707.5 | 23095 | QPSK | 1 | 0 | 12 | 1.4 | 729.7 | 5017 | 23.24 | 23.22 |
| | | 41A-41A | 41 | 20 | 2549.5 | 40185 | QPSK | 1 | 0 | 41 | 5 | 2687.5 | 41565 | 23.55 | 23.55 |
| | | 42A-42A | 42 | 20 | 3575 | 43340 | QPSK | 1 | 0 | 42 | 5 | 3552.5 | 43115 | 23.45 | 23.46 |
| | Contiguous | 2C | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 20 | 1940.2 | 702 | 23.40 | 23.32 |
| | | 4C | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 4 | 20 | 2112.7 | 1977 | 23.26 | 23.31 |
| | | 7B | 7 | 15 | 2507.5 | 20825 | QPSK | 1 | 37 | 7 | 5 | 2636.8 | 2918 | 23.50 | 23.52 |
| | | 7C | 7 | 20 | 2535 | 21100 | QPSK | 1 | 0 | 7 | 20 | 2635.2 | 2902 | 23.41 | 23.49 |
| | | 12B | 12 | 10 | 707.5 | 23095 | QPSK | 1 | 0 | 12 | 10 | 747.4 | 5194 | 23.35 | 23.38 |
| | | 25C | 25 | 20 | 1860 | 26140 | QPSK | 1 | 0 | 25 | 20 | 1959.8 | 8338 | 23.34 | 23.36 |
| | | 38C | 38 | 20 | 2580 | 37850 | QPSK | 1 | 0 | 38 | 20 | 2599.8 | 38048 | 23.40 | 23.55 |

**<Three Carrier power verification>**

| Configure | CA Configuration (BCS) | PCC | | | | | | | SCC | | | | SCC2 | | | | Power | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LTE Band | BW (MHz) | UL Freq. (MHz) | UL Channel | Mod. | UL# RB | UL RB Offset | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | With CA Tx.Power (dBm) | W/O CA Tx.Power (dBm) |
| Inter-Band | 2A-13A-48A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 13 | 10 | 751 | 5230 | 48 | 20 | 3609 | 55830 | 23.21 | 23.27 |
| | 2A-14A-30A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 14 | 10 | 763 | 5330 | 30 | 10 | 2355 | 9820 | 23.28 | 23.24 |
| | 2A-2A-14A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 14 | 10 | 763 | 5330 | 23.32 | 23.38 |
| | 2A-5A-30A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 30 | 10 | 2355 | 9820 | 23.28 | 23.37 |
| | 2A-48A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 66 | 20 | 2145 | 66786 | 23.29 | 23.23 |
| | 13A-48A-66A | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 66 | 20 | 2145 | 66786 | 23.22 | 23.36 |
| | 14A-66A-66A | 14 | 10 | 793 | 23330 | QPSK | 1 | 0 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2197.5 | 67311 | 23.25 | 23.25 |
| | 25A-25A-26A | 25 | 20 | 1860 | 26140 | QPSK | 1 | 0 | 25 | 20 | 1985 | 8590 | 26 | 15 | 876.5 | 8865 | 23.28 | 23.20 |
| | 2A-66B | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.32 | 23.29 |
| | 2A-66C | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.22 | 23.20 |
| | 4A-48C | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 48 | 20 | 3625 | 55990 | 48 | 20 | 3644.8 | 56188 | 23.38 | 23.32 |
| | 13A-66B | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.23 | 23.32 |
| | 13A-66C | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.37 | 23.34 |
| | 41A-42C | 41 | 20 | 2549.5 | 40185 | QPSK | 1 | 0 | 42 | 20 | 3575 | 43340 | 42 | 15 | 3592.1 | 43511 | 23.56 | 23.52 |
| | 41C-42A | 41 | 20 | 2549.5 | 40185 | QPSK | 1 | 0 | 41 | 20 | 2569.3 | 40383 | 42 | 20 | 3575 | 43340 | 23.50 | 23.58 |
| | 66A-66C | 66 | 20 | 1770 | 132572 | QPSK | 1 | 0 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.53 | 23.42 |

**<Four Carrier power verification>**

| Configure | CA Configuration (BCS) | PCC | | | | | | | SCC1 | | | | SCC2 | | | | SCC3 | | | | Power | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LTE Band | BW (MHz) | UL Freq. (MHz) | UL Channel | Mod. | UL# RB | UL RB Offset | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | With CA Tx.Power (dBm) | W/O CA Tx.Power (dBm) |
| Inter-Band | 2A-2A-66B | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.33 | 23.38 |
| | 2A-2A-66C | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.34 | 23.25 |
| | 2A-48A-48A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 66 | 20 | 2145 | 66786 | 23.37 | 23.28 |
| | 2A-48C-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2145 | 66786 | 23.22 | 23.25 |
| | 2A-4A-5A-30A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 4 | 20 | 2132.5 | 2175 | 5 | 10 | 881.5 | 2525 | 30 | 10 | 2355 | 9820 | 23.23 | 23.37 |
| | 2A-5A-48A-48A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 48 | 20 | 3625 | 55990 | 48 | 5 | 3697.5 | 56715 | 23.35 | 23.37 |
| | 2A-5A-48A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 48 | 20 | 3625 | 55990 | 66 | 20 | 2145 | 66786 | 23.40 | 23.25 |
| | 2A-5A-66A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 23.20 | 23.26 |
| | 2A-66A-66A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 66 | 20 | 2155 | 66886 | 23.24 | 23.33 |
| | 5A-48A-48A-66A | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 66 | 20 | 2145 | 66786 | 23.57 | 23.60 |
| | 5A-5A-66A-66A | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 5 | 5 | 871.5 | 2425 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 23.55 | 23.54 |
| | 5A-5A-66B | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 5 | 5 | 871.5 | 2425 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.43 | 23.41 |
| | 5A-5A-66C | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 5 | 5 | 871.5 | 2425 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.59 | 23.49 |
| | 4A-48D | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3628.8 | 56028 | 48 | 20 | 3648.6 | 56226 | 23.37 | 23.24 |
| | 4A-4A-5B | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 4 | 5 | 2112.5 | 1975 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 23.34 | 23.32 |
| | 12A-30A-66A-66A | 12 | 10 | 707.5 | 23095 | QPSK | 1 | 0 | 30 | 10 | 2355 | 9820 | 66 | 5 | 2112.5 | 66461 | 66 | 20 | 2155 | 66886 | 23.48 | 23.47 |
| | 13A-48A-48A-66A | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 66 | 20 | 2145 | 66786 | 23.54 | 23.60 |
| | 13A-48A-66B | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.52 | 23.53 |
| | 13A-48A-66C | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.44 | 23.50 |
| | 13A-48C-66A | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2145 | 66786 | 23.54 | 23.43 |
| | 13A-66A-66A-66A | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 66 | 20 | 2155 | 66886 | 23.58 | 23.40 |
| | 14A-30A-66A-66A | 14 | 10 | 793 | 23330 | QPSK | 1 | 0 | 30 | 10 | 2355 | 9820 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 23.58 | 23.54 |
| | 41A-41D | 41 | 20 | 2549.5 | 40185 | QPSK | 1 | 0 | 41 | 5 | 2687.5 | 41565 | 41 | 20 | 2675.8 | 41448 | 41 | 20 | 2664.1 | 41331 | 22.80 | 22.80 |
| | 41C-41C | 41 | 20 | 2549.5 | 40185 | QPSK | 1 | 0 | 41 | 20 | 2569.3 | 40383 | 41 | 5 | 2687.5 | 41565 | 41 | 20 | 2675.8 | 41448 | 22.90 | 22.70 |
| | 48A-48A-66A-66A | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 5 | 3697.5 | 56715 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2197.5 | 67311 | 21.95 | 22.03 |
| | 48A-48A-66B | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 5 | 3697.5 | 56715 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 22.07 | 21.98 |
| | 48A-48A-66C | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 5 | 3697.5 | 56715 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 21.97 | 21.94 |
| | 48A-66A-66A-66A | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 66 | 20 | 2155 | 66886 | 21.93 | 22.00 |

**<Five Carrier power verification>**

| Configure | CA Configuration (BCS) | PCC | | | | | | | SCC1 | | | | SCC2 | | | | SCC3 | | | | SCC4 | | | | Power | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LTE Band | BW (MHz) | UL Freq. (MHz) | UL Channel | Mod. | UL# RB | UL RB Offset | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | With CA Tx.Power (dBm) | W/O CA Tx.Power (dBm) |
| Inter-Band | 2A-2A-14A-66A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 14 | 10 | 763 | 5330 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 23.23 | 23.35 |
| | 2A-2A-4A-4A-13A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 4 | 20 | 2132.5 | 2175 | 4 | 5 | 2112.5 | 1975 | 13 | 10 | 751 | 5230 | 23.20 | 23.20 |
| | 2A-2A-4A-4A-5A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 4 | 20 | 2132.5 | 2175 | 4 | 5 | 2112.5 | 1975 | 5 | 10 | 881.5 | 2525 | 23.28 | 23.40 |
| | 2A-2A-4A-5B | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 4 | 20 | 2132.5 | 2175 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 23.36 | 23.37 |
| | 2A-2A-5A-66B | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 5 | 10 | 881.5 | 2525 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.37 | 23.40 |
| | 2A-2A-5A-66C | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 5 | 10 | 881.5 | 2525 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.33 | 23.33 |
| | 2A-2A-5B-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 66 | 20 | 2145 | 66786 | 23.30 | 23.21 |
| | 2A-48A-48C-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2145 | 66786 | 23.35 | 23.31 |
| | 2A-48A-48D | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 48 | 20 | 3664.6 | 56386 | 23.29 | 23.31 |
| | 2A-48C-48C | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 23.22 | 23.21 |
| | 2A-48D-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 48 | 20 | 3664.6 | 56386 | 66 | 20 | 2145 | 66786 | 23.33 | 23.22 |
| | 2A-4A-4A-5B | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 4 | 20 | 2132.5 | 2175 | 4 | 5 | 2112.5 | 1975 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 23.35 | 23.36 |
| | 2A-5A-48A-48A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 48 | 20 | 3625 | 55990 | 48 | 5 | 3697.5 | 56715 | 66 | 20 | 2145 | 66786 | 23.27 | 23.28 |
| | 2A-5A-48A-48C | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 48 | 20 | 3625 | 55990 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 23.21 | 23.37 |
| | 2A-5A-48C-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 48 | 20 | 3625 | 55990 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2145 | 66786 | 23.38 | 23.27 |
| | 2A-5A-48D | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 48 | 20 | 3625 | 55990 | 48 | 20 | 3644.8 | 56188 | 48 | 20 | 3664.6 | 56386 | 23.26 | 23.28 |
| | 2A-5B-30A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 30 | 10 | 2355 | 9820 | 66 | 20 | 2145 | 66786 | 23.30 | 23.28 |
| | 2A-5B-66A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 66 | 20 | 2155 | 66886 | 66 | 5 | 2112.5 | 66461 | 23.21 | 23.30 |
| | 2A-5B-66B | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.39 | 23.31 |
| | 2A-5B-66C | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 5 | 10 | 881.5 | 2525 | 5 | 10 | 891.4 | 2624 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.22 | 23.37 |
| | 4A-48E | 4 | 20 | 1732.5 | 20175 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3628.8 | 56028 | 48 | 20 | 3648.6 | 56225 | 48 | 20 | 3668.4 | 56424 | 23.30 | 23.35 |
| | 5A-48A-48C-66A | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2145 | 66786 | 23.43 | 23.56 |
| | 5A-48C-48C | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 23.40 | 23.44 |
| | 5A-48E | 5 | 10 | 835.5 | 20525 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3628.8 | 56028 | 48 | 20 | 3648.6 | 56225 | 48 | 20 | 3668.4 | 56424 | 23.56 | 23.45 |
| | 13A-48A-48C-66A | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2145 | 66786 | 23.40 | 23.41 |
| | 13A-48A-48D | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 48 | 20 | 3664.6 | 56386 | 23.48 | 23.45 |
| | 13A-48C-48C | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 23.51 | 23.51 |
| | 13A-48C-66B | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 23.47 | 23.44 |
| | 13A-48C-66C | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 23.44 | 23.56 |
| | 13A-48D-66A | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3644.8 | 56188 | 48 | 20 | 3664.6 | 56386 | 66 | 20 | 2145 | 66786 | 23.54 | 23.50 |
| | 13A-48E | 13 | 10 | 782 | 23230 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3628.8 | 56028 | 48 | 20 | 3648.6 | 56226 | 48 | 20 | 3668.4 | 56424 | 23.31 | 23.36 |
| | 41C-41D | 41 | 20 | 2549.5 | 40185 | QPSK | 1 | 0 | 41 | 20 | 2569.3 | 40383 | 41 | 5 | 2687.5 | 41565 | 41 | 20 | 2675.8 | 41448 | 41 | 20 | 2656 | 41250 | 23.44 | 23.56 |
| | 48A-48C-66B | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 66 | 15 | 2155 | 66886 | 66 | 5 | 2164.3 | 66979 | 21.92 | 21.99 |
| | 48A-48C-66C | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2155 | 66886 | 66 | 20 | 2174.8 | 67084 | 21.92 | 21.97 |
| | 48A-48D-66A | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 48 | 20 | 3664.6 | 56386 | 66 | 20 | 2145 | 66786 | 21.95 | 22.07 |
| | 48C-48C-66A | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 20 | 3628.8 | 56028 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 66 | 20 | 2174.8 | 67084 | 22.09 | 22.08 |
| | 48C-48D | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 20 | 3628.8 | 56028 | 48 | 5 | 3697.5 | 56715 | 48 | 20 | 3644.8 | 56188 | 48 | 20 | 3664.6 | 56386 | 22.09 | 22.05 |
| | 48C-66A-66A-66A | 48 | 20 | 3609 | 55830 | QPSK | 1 | 0 | 48 | 20 | 3628.8 | 56028 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 66 | 20 | 2155 | 66886 | 21.99 | 21.95 |

**<Six Carrier power verification>**

| Configure | CA Configuration (BCS) | PCC | | | | | | | SCC1 | | | | SCC2 | | | | SCC3 | | | | SCC4 | | | | SCC5 | | | | Power | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LTE Band | BW (MHz) | UL Freq. (MHz) | UL Channel | Mod. | UL# RB | UL RB Offset | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | LTE Band | BW (MHz) | DL Freq. (MHz) | DL Channel | With CA Tx.Power (dBm) | W/O CA Tx.Power (dBm) |
| Inter-Band | 2A-2A-5A-30A-66A-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 2 | 5 | 1932.5 | 625 | 5 | 10 | 881.5 | 2525 | 30 | 10 | 2355 | 9820 | 66 | 20 | 2145 | 66786 | 66 | 5 | 2112.5 | 66461 | 23.30 | 23.27 |
| | 2A-48E-66A | 2 | 20 | 1880 | 18900 | QPSK | 1 | 0 | 48 | 20 | 3609 | 55830 | 48 | 20 | 3628.8 | 56028 | 48 | 20 | 3648.6 | 56225 | 48 | 20 | 3668.4 | 56424 | 66 | 20 | 2145 | 66786 | 23.21 | 23.37 |

## <LTE Uplink carrier aggregation>

| 2CC Uplink Carrier Aggregation | | | | |
|---|---|---|---|---|
| Number | Combination | 4X4 MIMO | Restriction | Covered by Measurement Superset |
| 1 | 5B | | | |
| 2 | 66B | | | |
| 3 | 66C | | | |

### <Intra-band>

**General Note:**

i. The device supports intra-band uplink carrier aggregation for LTE B66 with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

ii. The device supports uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre the 3GPP requirement.

iii. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

iv. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

v. Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

**<Default Power Mode>**

| CA_5B | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 10MHz+10MHz (50RB+50RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 20450 | 20549 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 23.52 | 24 |
| 20575 | 20476 | QPSK | 1 | 0 | 1 | 49 | 2 | 0 | 23.48 | 24 |
| 20600 | 20501 | QPSK | 1 | 0 | 1 | 49 | 2 | 0 | 23.38 | 24 |

| CA_66B | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 15MHz+5MHz (75RB+25RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 132047 | 132140 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 22.95 | 24 |
| 132322 | 132229 | QPSK | 1 | 0 | 1 | 24 | 2 | 0 | 23.01 | 24 |
| 132597 | 132504 | QPSK | 1 | 0 | 1 | 24 | 2 | 0 | 23.12 | 24 |

| CA_66C | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 20MHz+20MHz (100RB+100RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 132072 | 132270 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 23.24 | 24 |
| 132322 | 132124 | QPSK | 1 | 0 | 1 | 99 | 2 | 0 | 23.18 | 24 |
| 132572 | 132374 | QPSK | 1 | 0 | 1 | 99 | 2 | 0 | 23.22 | 24 |

**<Reduced Power for NB Mode>**

| CA_5B | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 10MHz+10MHz (50RB+50RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 20450 | 20549 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 20.64 | 20.8 |
| 20575 | 20476 | QPSK | 1 | 0 | 1 | 49 | 2 | 0 | 20.59 | 20.8 |
| 20600 | 20501 | QPSK | 1 | 0 | 1 | 49 | 2 | 0 | 20.61 | 20.8 |

| CA_66B | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 15MHz+5MHz (75RB+25RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 132047 | 132140 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 19.88 | 20 |
| 132322 | 132229 | QPSK | 1 | 0 | 1 | 24 | 2 | 0 | 19.9 | 20 |
| 132597 | 132504 | QPSK | 1 | 0 | 1 | 24 | 2 | 0 | 19.91 | 20 |

| CA_66C | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 20MHz+20MHz (100RB+100RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 132072 | 132270 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 19.66 | 20 |
| 132322 | 132124 | QPSK | 1 | 0 | 1 | 99 | 2 | 0 | 19.72 | 20 |
| 132572 | 132374 | QPSK | 1 | 0 | 1 | 99 | 2 | 0 | 19.75 | 20 |

**<Reduced Power for Tablet Mode>**

| CA_5B | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 10MHz+10MHz (50RB+50RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 20450 | 20549 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 16.23 | 16.5 |
| 20575 | 20476 | QPSK | 1 | 0 | 1 | 49 | 2 | 0 | 16.33 | 16.5 |
| 20600 | 20501 | QPSK | 1 | 0 | 1 | 49 | 2 | 0 | 16.34 | 16.5 |

| CA_66B | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 15MHz+5MHz (75RB+25RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 132047 | 132140 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 14.56 | 14.8 |
| 132322 | 132229 | QPSK | 1 | 0 | 1 | 24 | 2 | 0 | 14.61 | 14.8 |
| 132597 | 132504 | QPSK | 1 | 0 | 1 | 24 | 2 | 0 | 14.66 | 14.8 |

| CA_66C | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Combination 20MHz+20MHz (100RB+100RB) | | | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | PCC | | SCC | | Total RB Size | Target MPR Level (dB) | Measured Power (dBm) | Tune up Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | | | |
| 132072 | 132270 | QPSK | 1 | 0 | 0 | 0 | 1 | 0 | 14.67 | 14.8 |
| 132322 | 132124 | QPSK | 1 | 0 | 1 | 99 | 2 | 0 | 14.63 | 14.8 |
| 132572 | 132374 | QPSK | 1 | 0 | 1 | 99 | 2 | 0 | 14.59 | 14.8 |

# 13. WiFi/Bluetooth Output Power (Unit: dBm)

**General Note:**

1. For each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
2. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6W/kg and SAR peak to location ratio ≤ 0.04, no additional SAR measurements for MIMO.
3. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
4. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
5. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
6. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

## <2.4GHz WLAN ANT 1>

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 2.4GHz WLAN | 802.11b 1Mbps | 1 | 2412 | 14.60 | 15.00 | 100.00 |
| | | 6 | 2437 | 14.60 | 15.00 | |
| | | 11 | 2462 | 14.60 | 15.00 | |
| | | 12 | 2467 | 17.60 | 18.00 | |
| | | 13 | 2472 | 17.60 | 18.00 | |
| | 802.11g 6Mbps | 1 | 2412 | 14.60 | 15.00 | 98.33 |
| | | 6 | 2437 | 14.60 | 15.00 | |
| | | 11 | 2462 | 14.60 | 15.00 | |
| | | 12 | 2467 | 17.60 | 18.00 | |
| | | 13 | 2472 | 17.60 | 18.00 | |
| | 802.11n-HT20 MCS0 | 1 | 2412 | 14.60 | 15.00 | 98.22 |
| | | 6 | 2437 | 14.60 | 15.00 | |
| | | 11 | 2462 | 14.60 | 15.00 | |
| | | 12 | 2467 | 17.60 | 18.00 | |
| | | 13 | 2472 | 17.60 | 18.00 | |
| | 802.11n-HT40 MCS0 | 3 | 2422 | 14.10 | 14.50 | 94.80 |
| | | 6 | 2437 | 14.60 | 15.00 | |
| | | 9 | 2452 | 12.60 | 13.00 | |
| | | 10 | 2457 | 16.60 | 17.00 | |
| | | 11 | 2462 | 16.60 | 17.00 | |

## <2.4GHz WLAN ANT 2>

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 2.4GHz WLAN | 802.11b 1Mbps | 1 | 2412 | 14.90 | 15.50 | 100.00 |
| | | 6 | 2437 | 14.90 | 15.50 | |
| | | 11 | 2462 | 14.90 | 15.50 | |
| | | 12 | 2467 | 17.60 | 18.00 | |
| | | 13 | 2472 | 17.70 | 18.00 | |
| | 802.11g 6Mbps | 1 | 2412 | 14.90 | 15.50 | 98.10 |
| | | 6 | 2437 | 14.90 | 15.50 | |
| | | 11 | 2462 | 14.90 | 15.50 | |
| | | 12 | 2467 | 17.80 | 18.50 | |
| | | 13 | 2472 | 17.90 | 18.50 | |
| | 802.11n-HT20 MCS0 | 1 | 2412 | 14.70 | 15.00 | 98.22 |
| | | 6 | 2437 | 14.80 | 15.50 | |
| | | 11 | 2462 | 14.70 | 15.00 | |
| | | 12 | 2467 | 17.60 | 18.00 | |
| | | 13 | 2472 | 17.80 | 18.00 | |
| | 802.11n-HT40 MCS0 | 3 | 2422 | 14.40 | 15.00 | 94.60 |
| | | 6 | 2437 | 14.90 | 15.50 | |
| | | 9 | 2452 | 12.80 | 13.00 | |
| | | 10 | 2457 | 16.60 | 17.00 | |
| | | 11 | 2462 | 16.80 | 17.00 | |

## <2.4GHz WLAN ANT 1+2>

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 2.4GHz WLAN | 802.11b 1Mbps | 1 | 2412 | 17.97 | 18.27 | 100.00 |
| | | 6 | 2437 | 17.97 | 18.27 | |
| | | 11 | 2462 | 17.97 | 18.27 | |
| | | 12 | 2467 | 20.91 | 21.01 | |
| | | 13 | 2472 | 20.97 | 21.01 | |
| | 802.11g 6Mbps | 1 | 2412 | 17.97 | 18.27 | 98.33 |
| | | 6 | 2437 | 17.97 | 18.27 | |
| | | 11 | 2462 | 17.97 | 18.27 | |
| | | 12 | 2467 | 20.97 | 21.27 | |
| | | 13 | 2472 | 20.97 | 21.27 | |
| | 802.11n-HT20 MCS0 | 1 | 2412 | 17.97 | 18.01 | 97.96 |
| | | 6 | 2437 | 17.97 | 18.27 | |
| | | 11 | 2462 | 17.91 | 18.01 | |
| | | 12 | 2467 | 20.91 | 21.01 | |
| | | 13 | 2472 | 20.97 | 21.01 | |
| | 802.11n-HT40 MCS0 | 3 | 2422 | 17.47 | 17.77 | 94.70 |
| | | 6 | 2437 | 17.97 | 18.27 | |
| | | 9 | 2452 | 15.86 | 16.01 | |
| | | 10 | 2457 | 19.86 | 20.01 | |
| | | 11 | 2462 | 19.81 | 20.01 | |

## <5GHz WLAN ANT1>

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.2GHz WLAN | 802.11a 6Mbps | 36 | 5180 | 10.30 | 10.50 | 98.10 |
| | | 40 | 5200 | 10.20 | 10.50 | |
| | | 44 | 5220 | 10.20 | 10.50 | |
| | | 48 | 5240 | 10.10 | 10.50 | |
| | 802.11n-HT20 MCS0 | 36 | 5180 | 10.00 | 10.50 | 98.47 |
| | | 40 | 5200 | 10.00 | 10.50 | |
| | | 44 | 5220 | 10.00 | 10.50 | |
| | | 48 | 5240 | 10.00 | 10.50 | |
| | 802.11n-HT40 MCS0 | 38 | 5190 | 10.20 | 10.50 | 95.93 |
| | | 46 | 5230 | 10.00 | 10.50 | |
| | 802.11ac-VHT20 MCS0 | 36 | 5180 | 10.10 | 10.50 | 98.37 |
| | | 40 | 5200 | 10.10 | 10.50 | |
| | | 44 | 5220 | 10.10 | 10.50 | |
| | | 48 | 5240 | 10.10 | 10.50 | |
| | 802.11ac-VHT40 MCS0 | 38 | 5190 | 10.30 | 10.50 | 96.36 |
| | | 46 | 5230 | 10.10 | 10.50 | |
| | 802.11ac-VHT80 MCS0 | 42 | 5210 | 10.10 | 10.50 | 93.00 |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.3GHz WLAN | 802.11a 6Mbps | 52 | 5260 | 10.30 | 10.50 | 98.10 |
| | | 56 | 5280 | 10.20 | 10.50 | |
| | | 60 | 5300 | 10.20 | 10.50 | |
| | | 64 | 5320 | 10.10 | 10.50 | |
| | 802.11n-HT20 MCS0 | 52 | 5260 | 10.10 | 10.50 | 98.47 |
| | | 56 | 5280 | 10.10 | 10.50 | |
| | | 60 | 5300 | 10.00 | 10.50 | |
| | | 64 | 5320 | 10.00 | 10.50 | |
| | 802.11n-HT40 MCS0 | 54 | 5270 | 10.10 | 10.50 | 95.93 |
| | | 62 | 5310 | 10.10 | 10.50 | |
| | 802.11ac-VHT20 MCS0 | 52 | 5260 | 10.20 | 10.50 | 98.37 |
| | | 56 | 5280 | 10.20 | 10.50 | |
| | | 60 | 5300 | 10.10 | 10.50 | |
| | | 64 | 5320 | 10.10 | 10.50 | |
| | 802.11ac-VHT40 MCS0 | 54 | 5270 | 10.20 | 10.50 | 96.36 |
| | | 62 | 5310 | 10.20 | 10.50 | |
| | 802.11ac-VHT80 MCS0 | 58 | 5290 | 10.30 | 10.50 | 93.00 |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.5GHz WLAN | 802.11a 6Mbps | 100 | 5500 | 11.10 | 11.50 | 98.10 |
| | | 116 | 5580 | 11.30 | 11.50 | |
| | | 124 | 5620 | 11.30 | 11.50 | |
| | | 132 | 5660 | 11.30 | 11.50 | |
| | | 144 | 5720 | 11.40 | 11.50 | |
| | 802.11n-HT20 MCS0 | 100 | 5500 | 11.00 | 11.50 | 98.47 |
| | | 116 | 5580 | 11.00 | 11.50 | |
| | | 124 | 5620 | 11.00 | 11.50 | |
| | | 132 | 5660 | 11.00 | 11.50 | |
| | | 144 | 5720 | 11.00 | 11.50 | |
| | 802.11n-HT40 MCS0 | 102 | 5510 | 11.20 | 11.50 | 95.93 |
| | | 110 | 5550 | 11.00 | 11.50 | |
| | | 126 | 5630 | 11.20 | 11.50 | |
| | | 134 | 5670 | 11.30 | 11.50 | |
| | | 142 | 5710 | 11.10 | 11.50 | |
| | 802.11ac-VHT20 MCS0 | 100 | 5500 | 11.10 | 11.50 | 98.37 |
| | | 116 | 5580 | 11.10 | 11.50 | |
| | | 124 | 5620 | 11.10 | 11.50 | |
| | | 132 | 5660 | 11.10 | 11.50 | |
| | | 144 | 5720 | 11.10 | 11.50 | |
| | 802.11ac-VHT40 MCS0 | 102 | 5510 | 11.30 | 11.50 | 96.36 |
| | | 110 | 5550 | 11.10 | 11.50 | |
| | | 126 | 5630 | 11.30 | 11.50 | |
| | | 134 | 5670 | 11.40 | 11.50 | |
| | | 142 | 5710 | 11.20 | 11.50 | |
| | 802.11ac-VHT80 MCS0 | 106 | 5530 | 11.30 | 11.50 | 93.00 |
| | | 122 | 5610 | 11.40 | 11.50 | |
| | | 138 | 5690 | 11.40 | 11.50 | |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.8GHz WLAN | 802.11a 6Mbps | 149 | 5745 | 13.40 | 13.50 | 98.10 |
| | | 157 | 5785 | 13.40 | 13.50 | |
| | | 165 | 5825 | 13.40 | 13.50 | |
| | 802.11n-HT20 MCS0 | 149 | 5745 | 13.30 | 13.50 | 98.47 |
| | | 157 | 5785 | 13.00 | 13.50 | |
| | | 165 | 5825 | 13.00 | 13.50 | |
| | 802.11n-HT40 MCS0 | 151 | 5755 | 13.30 | 13.50 | 95.93 |
| | | 159 | 5795 | 13.30 | 13.50 | |
| | 802.11ac-VHT20 MCS0 | 149 | 5745 | 13.40 | 13.50 | 98.37 |
| | | 157 | 5785 | 13.10 | 13.50 | |
| | | 165 | 5825 | 13.10 | 13.50 | |
| | 802.11ac-VHT40 MCS0 | 151 | 5755 | 13.40 | 13.50 | 96.36 |
| | | 159 | 5795 | 13.40 | 13.50 | |
| | 802.11ac-VHT80 MCS0 | 155 | 5775 | 13.30 | 13.50 | 93.00 |

**<5GHz WLAN ANT2>**

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.2GHz WLAN | 802.11a 6Mbps | 36 | 5180 | 10.30 | 10.50 | 98.10 |
| | | 40 | 5200 | 10.20 | 10.50 | |
| | | 44 | 5220 | 10.30 | 10.50 | |
| | | 48 | 5240 | 10.30 | 10.50 | |
| | 802.11n-HT20 MCS0 | 36 | 5180 | 10.10 | 10.50 | 98.37 |
| | | 40 | 5200 | 10.10 | 10.50 | |
| | | 44 | 5220 | 10.10 | 10.50 | |
| | | 48 | 5240 | 10.10 | 10.50 | |
| | 802.11n-HT40 MCS0 | 38 | 5190 | 10.00 | 10.50 | 96.36 |
| | | 46 | 5230 | 10.00 | 10.50 | |
| | 802.11ac-VHT20 MCS0 | 36 | 5180 | 10.20 | 10.50 | 98.07 |
| | | 40 | 5200 | 10.20 | 10.50 | |
| | | 44 | 5220 | 10.20 | 10.50 | |
| | | 48 | 5240 | 10.20 | 10.50 | |
| | 802.11ac-VHT40 MCS0 | 38 | 5190 | 10.10 | 10.50 | 96.36 |
| | | 46 | 5230 | 10.10 | 10.50 | |
| | 802.11ac-VHT80 MCS0 | 42 | 5210 | 10.10 | 10.50 | 93.00 |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.3GHz WLAN | 802.11a 6Mbps | 52 | 5260 | 10.30 | 10.50 | 98.10 |
| | | 56 | 5280 | 10.20 | 10.50 | |
| | | 60 | 5300 | 10.30 | 10.50 | |
| | | 64 | 5320 | 10.10 | 10.50 | |
| | 802.11n-HT20 MCS0 | 52 | 5260 | 10.00 | 10.50 | 98.37 |
| | | 56 | 5280 | 10.10 | 10.50 | |
| | | 60 | 5300 | 10.10 | 10.50 | |
| | | 64 | 5320 | 10.20 | 10.50 | |
| | 802.11n-HT40 MCS0 | 54 | 5270 | 10.00 | 10.50 | 96.34 |
| | | 62 | 5310 | 10.30 | 10.50 | |
| | 802.11ac-VHT20 MCS0 | 52 | 5260 | 10.10 | 10.50 | 98.07 |
| | | 56 | 5280 | 10.20 | 10.50 | |
| | | 60 | 5300 | 10.20 | 10.50 | |
| | | 64 | 5320 | 10.30 | 10.50 | |
| | 802.11ac-VHT40 MCS0 | 54 | 5270 | 10.10 | 10.50 | 96.36 |
| | | 62 | 5310 | 10.40 | 10.50 | |
| | 802.11ac-VHT80 MCS0 | 58 | 5290 | 10.30 | 10.50 | 93.00 |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.5GHz WLAN | 802.11a 6Mbps | 100 | 5500 | 11.10 | 11.50 | 98.10 |
| | | 116 | 5580 | 11.10 | 11.50 | |
| | | 124 | 5620 | 11.10 | 11.50 | |
| | | 132 | 5660 | 11.10 | 11.50 | |
| | | 144 | 5720 | 11.10 | 11.50 | |
| | 802.11n-HT20 MCS0 | 100 | 5500 | 11.00 | 11.50 | 98.37 |
| | | 116 | 5580 | 11.00 | 11.50 | |
| | | 124 | 5620 | 11.00 | 11.50 | |
| | | 132 | 5660 | 11.00 | 11.50 | |
| | | 144 | 5720 | 11.00 | 11.50 | |
| | 802.11n-HT40 MCS0 | 102 | 5510 | 11.00 | 11.50 | 96.34 |
| | | 110 | 5550 | 11.00 | 11.50 | |
| | | 126 | 5630 | 11.00 | 11.50 | |
| | | 134 | 5670 | 11.00 | 11.50 | |
| | | 142 | 5710 | 11.00 | 11.50 | |
| | 802.11ac-VHT20 MCS0 | 100 | 5500 | 11.10 | 11.50 | 98.07 |
| | | 116 | 5580 | 11.10 | 11.50 | |
| | | 124 | 5620 | 11.10 | 11.50 | |
| | | 132 | 5660 | 11.10 | 11.50 | |
| | | 144 | 5720 | 11.10 | 11.50 | |
| | 802.11ac-VHT40 MCS0 | 102 | 5510 | 11.10 | 11.50 | 96.36 |
| | | 110 | 5550 | 11.10 | 11.50 | |
| | | 126 | 5630 | 11.10 | 11.50 | |
| | | 134 | 5670 | 11.10 | 11.50 | |
| | | 142 | 5710 | 11.10 | 11.50 | |
| | 802.11ac-VHT80 MCS0 | 106 | 5530 | 11.20 | 11.50 | 93.00 |
| | | 122 | 5610 | 11.10 | 11.50 | |
| | | 138 | 5690 | 11.10 | 11.50 | |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.8GHz WLAN | 802.11a 6Mbps | 149 | 5745 | 13.10 | 13.50 | 98.10 |
| | | 157 | 5785 | 13.10 | 13.50 | |
| | | 165 | 5825 | 13.10 | 13.50 | |
| | 802.11n-HT20 MCS0 | 149 | 5745 | 13.00 | 13.50 | 98.37 |
| | | 157 | 5785 | 13.00 | 13.50 | |
| | | 165 | 5825 | 13.00 | 13.50 | |
| | 802.11n-HT40 MCS0 | 151 | 5755 | 13.00 | 13.50 | 96.34 |
| | | 159 | 5795 | 13.00 | 13.50 | |
| | 802.11ac-VHT20 MCS0 | 149 | 5745 | 13.10 | 13.50 | 98.07 |
| | | 157 | 5785 | 13.10 | 13.50 | |
| | | 165 | 5825 | 13.10 | 13.50 | |
| | 802.11ac-VHT40 MCS0 | 151 | 5755 | 13.10 | 13.50 | 96.36 |
| | | 159 | 5795 | 13.10 | 13.50 | |
| | 802.11ac-VHT80 MCS0 | 155 | 5775 | 13.10 | 13.50 | 93.00 |

**<5GHz WLAN ANT1+2>**

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.2GHz WLAN | 802.11a 6Mbps | 36 | 5180 | 13.46 | 13.51 | 98.10 |
| | | 40 | 5200 | 13.36 | 13.51 | |
| | | 44 | 5220 | 13.46 | 13.51 | |
| | | 48 | 5240 | 13.46 | 13.51 | |
| | 802.11n-HT20 MCS0 | 36 | 5180 | 13.21 | 13.51 | 97.96 |
| | | 40 | 5200 | 13.16 | 13.51 | |
| | | 44 | 5220 | 13.16 | 13.51 | |
| | | 48 | 5240 | 13.21 | 13.51 | |
| | 802.11n-HT40 MCS0 | 38 | 5190 | 13.26 | 13.51 | 96.34 |
| | | 46 | 5230 | 13.16 | 13.51 | |
| | 802.11ac-VHT20 MCS0 | 36 | 5180 | 13.31 | 13.51 | 98.06 |
| | | 40 | 5200 | 13.26 | 13.51 | |
| | | 44 | 5220 | 13.26 | 13.51 | |
| | | 48 | 5240 | 13.31 | 13.51 | |
| | 802.11ac-VHT40 MCS0 | 38 | 5190 | 13.36 | 13.51 | 96.36 |
| | | 46 | 5230 | 13.26 | 13.51 | |
| | 802.11ac-VHT80 MCS0 | 42 | 5210 | 13.21 | 13.51 | 93.00 |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.3GHz WLAN | 802.11a 6Mbps | 52 | 5260 | 13.46 | 13.51 | 98.10 |
| | | 56 | 5280 | 13.26 | 13.51 | |
| | | 60 | 5300 | 13.36 | 13.51 | |
| | | 64 | 5320 | 13.46 | 13.51 | |
| | 802.11n-HT20 MCS0 | 52 | 5260 | 13.36 | 13.51 | 97.96 |
| | | 56 | 5280 | 13.36 | 13.51 | |
| | | 60 | 5300 | 13.36 | 13.51 | |
| | | 64 | 5320 | 13.31 | 13.51 | |
| | 802.11n-HT40 MCS0 | 54 | 5270 | 13.16 | 13.51 | 96.34 |
| | | 62 | 5310 | 13.36 | 13.51 | |
| | 802.11ac-VHT20 MCS0 | 52 | 5260 | 13.46 | 13.51 | 98.06 |
| | | 56 | 5280 | 13.46 | 13.51 | |
| | | 60 | 5300 | 13.46 | 13.51 | |
| | | 64 | 5320 | 13.41 | 13.51 | |
| | 802.11ac-VHT40 MCS0 | 54 | 5270 | 13.26 | 13.51 | 96.36 |
| | | 62 | 5310 | 13.46 | 13.51 | |
| | 802.11ac-VHT80 MCS0 | 58 | 5290 | 13.41 | 13.51 | 93.00 |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.5GHz WLAN | 802.11a 6Mbps | 100 | 5500 | 14.46 | 14.51 | 98.10 |
| | | 116 | 5580 | 14.47 | 14.51 | |
| | | 124 | 5620 | 14.47 | 14.51 | |
| | | 132 | 5660 | 14.47 | 14.51 | |
| | | 144 | 5720 | 14.47 | 14.51 | |
| | 802.11n-HT20 MCS0 | 100 | 5500 | 14.37 | 14.51 | 97.96 |
| | | 116 | 5580 | 14.37 | 14.51 | |
| | | 124 | 5620 | 14.37 | 14.51 | |
| | | 132 | 5660 | 14.37 | 14.51 | |
| | | 144 | 5720 | 14.37 | 14.51 | |
| | 802.11n-HT40 MCS0 | 102 | 5510 | 14.26 | 14.51 | 96.34 |
| | | 110 | 5550 | 14.16 | 14.51 | |
| | | 126 | 5630 | 14.27 | 14.51 | |
| | | 134 | 5670 | 14.37 | 14.51 | |
| | | 142 | 5710 | 14.21 | 14.51 | |
| | 802.11ac-VHT20 MCS0 | 100 | 5500 | 14.47 | 14.51 | 98.06 |
| | | 116 | 5580 | 14.47 | 14.51 | |
| | | 124 | 5620 | 14.47 | 14.51 | |
| | | 132 | 5660 | 14.47 | 14.51 | |
| | | 144 | 5720 | 14.47 | 14.51 | |
| | 802.11ac-VHT40 MCS0 | 102 | 5510 | 14.36 | 14.51 | 96.36 |
| | | 110 | 5550 | 14.26 | 14.51 | |
| | | 126 | 5630 | 14.37 | 14.51 | |
| | | 134 | 5670 | 14.47 | 14.51 | |
| | | 142 | 5710 | 14.31 | 14.51 | |
| | 802.11ac-VHT80 MCS0 | 106 | 5530 | 14.46 | 14.51 | 93.00 |
| | | 122 | 5610 | 14.47 | 14.51 | |
| | | 138 | 5690 | 14.47 | 14.51 | |

| | Mode | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Duty Cycle % |
|---|---|---|---|---|---|---|
| 5.8GHz WLAN | 802.11a 6Mbps | 149 | 5745 | 16.47 | 16.51 | 98.10 |
| | | 157 | 5785 | 16.47 | 16.51 | |
| | | 165 | 5825 | 16.47 | 16.51 | |
| | 802.11n-HT20 MCS0 | 149 | 5745 | 16.37 | 16.51 | 97.96 |
| | | 157 | 5785 | 16.11 | 16.51 | |
| | | 165 | 5825 | 16.11 | 16.51 | |
| | 802.11n-HT40 MCS0 | 151 | 5755 | 16.31 | 16.51 | 96.34 |
| | | 159 | 5795 | 16.37 | 16.51 | |
| | 802.11ac-VHT20 MCS0 | 149 | 5745 | 16.47 | 16.51 | 98.06 |
| | | 157 | 5785 | 16.21 | 16.51 | |
| | | 165 | 5825 | 16.21 | 16.51 | |
| | 802.11ac-VHT40 MCS0 | 151 | 5755 | 16.41 | 16.51 | 96.36 |
| | | 159 | 5795 | 16.47 | 16.51 | |
| | 802.11ac-VHT80 MCS0 | 155 | 5775 | 16.31 | 16.51 | 93.00 |

## 14. Bluetooth Exclusions Applied

| Mode Band | Max Average power(dBm) | |
|---|---|---|
| | BR/EDR | LE |
| 2.4GHz Bluetooth | 6.5 | 6.5 |

**Note:**

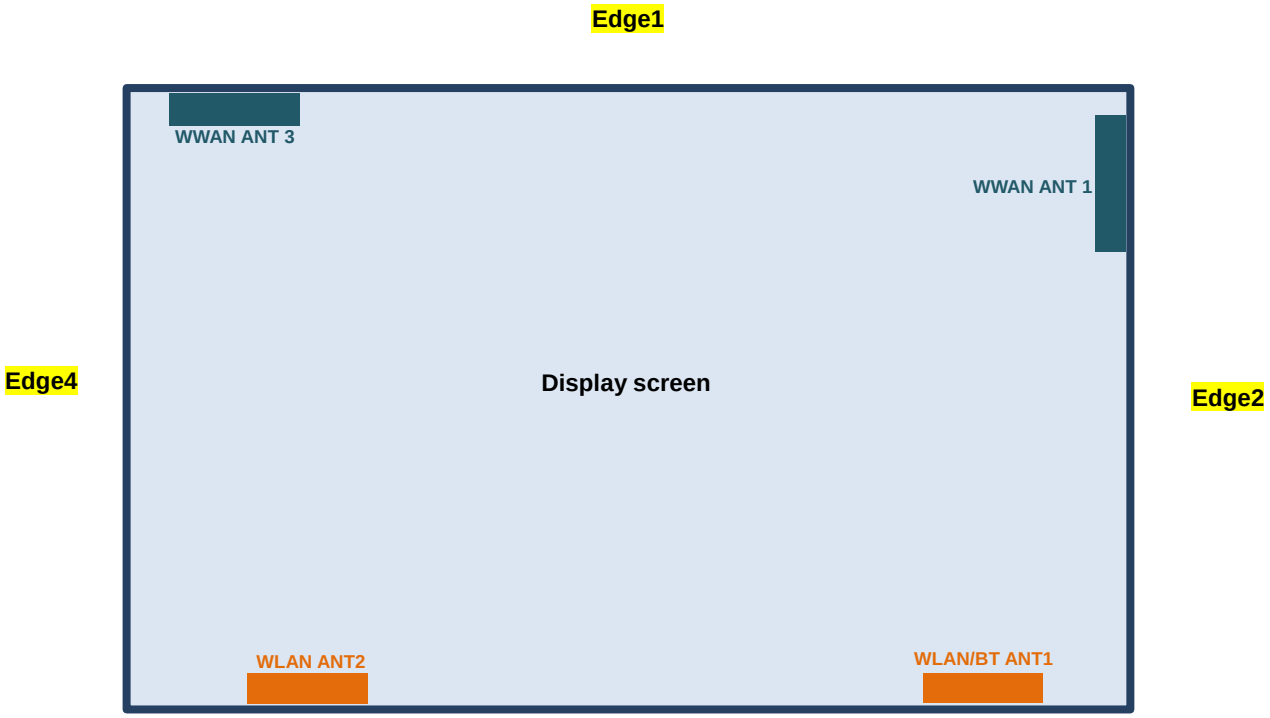
1. Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:
   [(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
   - f(GHz) is the RF channel transmit frequency in GHz
   - Power and distance are rounded to the nearest mW and mm before calculation
   - The result is rounded to one decimal place for comparison

| Bluetooth Max Power (dBm) | Separation Distance (mm) | Frequency (GHz) | exclusion thresholds |
|---|---|---|---|
| 6.5 | < 5 | 2.48 | 1.41 |

**Note:**
Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 1.41 which is <= 3, SAR testing is not required.

## 15. Antenna Location

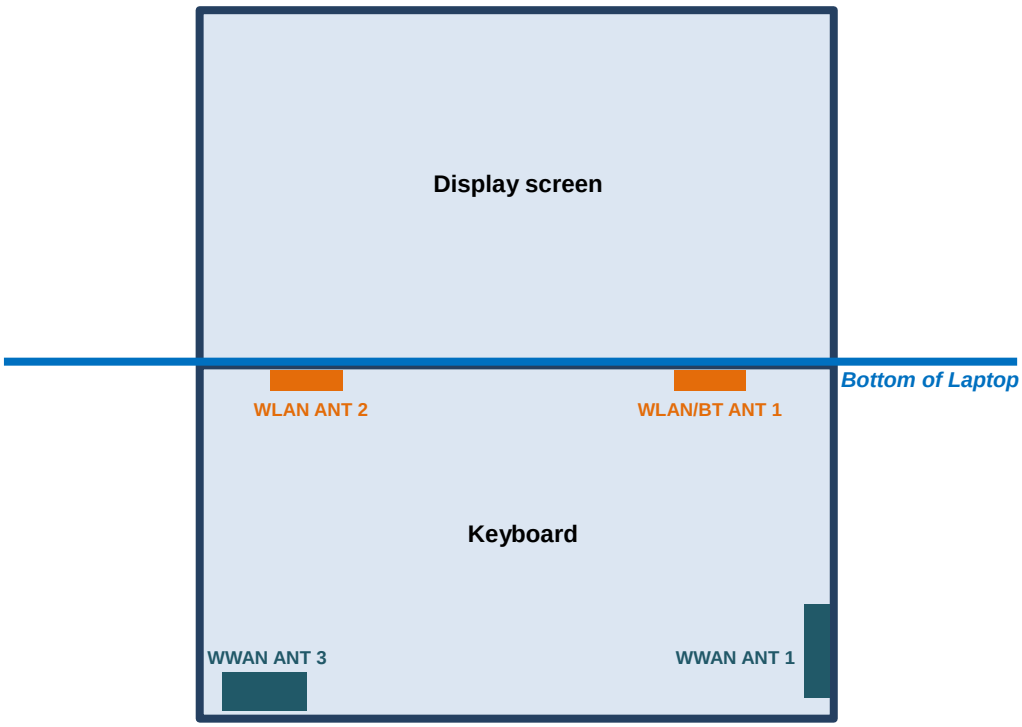
**<For Tablet>**




***Front View***

The separation distance for antenna to edge:

| Antenna | To Edge1 (mm) | To Edge2 (mm) | To Edge3 (mm) | To Edge4 (mm) |
|---|---|---|---|---|
| WWAN Antenna 1 | ≤ 25mm | ≤ 25mm | >25mm | >25mm |
| WWAN Antenna 3 | ≤ 25mm | >25mm | >25mm | ≤ 25mm |
| WLAN/BT Antenna 1 | >25mm | >25mm | ≤ 25mm | >25mm |
| WLAN Antenna 2 | >25mm | >25mm | ≤ 25mm | >25mm |




The separation distance for antenna to edge :

| Antenna | To Bottom of Laptop (mm) |
|---|---|
| WWAN Antenna 1 | ≤ 25mm |
| WWAN Antenna 3 | ≤ 25mm |
| WLAN/BT Antenna 1 | ≤ 25mm |
| WLAN Antenna 2 | ≤ 25mm |

# 16. SAR Test Results

**General Note:**

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   e. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
4. For the body SAR measurement was used a low-loss foam block performed testing, the relative permittivity and loss tangent of the foam material is 1.0 and $10^{-5}$, respectively, therefore holder perturbation verification is not required even highest reported SAR is >1.2W/kg.
5. For the exposure positions that proximity sensor power reduction is applied for SAR compliance, additional SAR testing with EUT transmitting full power in normal mode was performed; 1.4cm for bottom face, 1.1cm for edge1.

**UMTS Note:**

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”.
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

**LTE Note:**

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B12 / B26 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. The maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion.
   b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

**WLAN Note:**

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. For WLAN SAR testing was performed on single antenna RF power in SISO mode is larger or equal to the single antenna RF power in MIMO mode, and for RF exposure assessment of MIMO mode simultaneous transmission exclusion analysis was performed with SAR test results of each antenna in SISO mode.
6. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6W/kg and SAR peak to location ratio ≤ 0.04, no additional SAR measurements for MIMO.
7. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

## 16.1 Body SAR

### <WCDMA SAR>

| Plot No. | Band | Mode | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | WCDMA II | RMC 12.2Kbps | Bottom of Laptop | 0mm | ON | 9400 | 1880 | 18.68 | 19.50 | 1.208 | -0.12 | 0.654 | 0.790 |
| | WCDMA II | RMC 12.2Kbps | Bottom Face | 0mm | ON | 9538 | 1907.6 | 14.35 | 14.50 | 1.035 | -0.07 | 1.120 | 1.159 |
| | WCDMA II | RMC 12.2Kbps | Bottom Face | 0mm | ON | 9262 | 1852.4 | 14.30 | 14.50 | 1.047 | -0.06 | 1.090 | 1.141 |
| 01 | WCDMA II | RMC 12.2Kbps | Bottom Face | 0mm | ON | 9400 | 1880 | 14.33 | 14.50 | 1.040 | -0.1 | 1.150 | 1.196 |
| | WCDMA II | RMC 12.2Kbps | Edge 2 | 0mm | ON | 9538 | 1907.6 | 14.35 | 14.50 | 1.035 | 0.03 | 0.149 | 0.154 |
| | WCDMA II | RMC 12.2Kbps | Bottom of Laptop | 20mm | OFF | 9400 | 1880 | 23.81 | 24.00 | 1.045 | -0.05 | 0.109 | 0.114 |
| | WCDMA II | RMC 12.2Kbps | Bottom Face | 20mm | OFF | 9400 | 1880 | 23.81 | 24.00 | 1.045 | 0.06 | 0.043 | 0.045 |
| | WCDMA II | RMC 12.2Kbps | Edge 1 | 0mm | OFF | 9400 | 1880 | 23.81 | 24.00 | 1.045 | 0.06 | 0.485 | 0.507 |
| | WCDMA II | RMC 12.2Kbps | Edge 2 | 20mm | OFF | 9400 | 1880 | 23.81 | 24.00 | 1.045 | 0.06 | 0.244 | 0.255 |
| | WCDMA IV | RMC 12.2Kbps | Bottom of Laptop | 0mm | ON | 1513 | 1752.6 | 19.27 | 19.80 | 1.130 | -0.13 | 0.767 | 0.867 |
| | WCDMA IV | RMC 12.2Kbps | Bottom of Laptop | 0mm | ON | 1312 | 1712.4 | 19.10 | 19.80 | 1.175 | -0.05 | 0.638 | 0.750 |
| | WCDMA IV | RMC 12.2Kbps | Bottom of Laptop | 0mm | ON | 1413 | 1732.6 | 19.17 | 19.80 | 1.156 | -0.09 | 0.693 | 0.801 |
| | WCDMA IV | RMC 12.2Kbps | Bottom Face | 0mm | ON | 1513 | 1752.6 | 14.22 | 14.50 | 1.067 | -0.07 | 0.990 | 1.056 |
| 02 | WCDMA IV | RMC 12.2Kbps | Bottom Face | 0mm | ON | 1312 | 1712.4 | 14.10 | 14.50 | 1.096 | -0.07 | 1.030 | 1.129 |
| | WCDMA IV | RMC 12.2Kbps | Bottom Face | 0mm | ON | 1413 | 1732.6 | 14.19 | 14.50 | 1.074 | -0.07 | 0.992 | 1.065 |
| | WCDMA IV | RMC 12.2Kbps | Edge 2 | 0mm | ON | 1513 | 1752.6 | 14.22 | 14.50 | 1.067 | -0.03 | 0.177 | 0.189 |
| | WCDMA IV | RMC 12.2Kbps | Bottom of Laptop | 20mm | OFF | 1513 | 1752.6 | 23.57 | 24.00 | 1.104 | -0.01 | 0.116 | 0.128 |
| | WCDMA IV | RMC 12.2Kbps | Bottom Face | 20mm | OFF | 1513 | 1752.6 | 23.57 | 24.00 | 1.104 | -0.05 | 0.205 | 0.226 |
| | WCDMA IV | RMC 12.2Kbps | Edge 1 | 0mm | OFF | 1513 | 1752.6 | 23.57 | 24.00 | 1.104 | -0.14 | 0.612 | 0.676 |
| | WCDMA IV | RMC 12.2Kbps | Edge 2 | 20mm | OFF | 1513 | 1752.6 | 23.57 | 24.00 | 1.104 | -0.09 | 0.215 | 0.237 |
| 03 | WCDMA V | RMC 12.2Kbps | Bottom of Laptop | 0mm | ON | 4233 | 846.6 | 20.00 | 20.60 | 1.148 | -0.08 | 0.912 | 1.047 |
| | WCDMA V | RMC 12.2Kbps | Bottom of Laptop | 0mm | ON | 4132 | 826.4 | 19.75 | 20.60 | 1.216 | -0.06 | 0.856 | 1.041 |
| | WCDMA V | RMC 12.2Kbps | Bottom of Laptop | 0mm | ON | 4182 | 836.4 | 19.97 | 20.60 | 1.156 | -0.07 | 0.905 | 1.046 |
| | WCDMA V | RMC 12.2Kbps | Bottom Face | 0mm | ON | 4182 | 836.4 | 15.75 | 16.40 | 1.161 | -0.08 | 0.683 | 0.793 |
| | WCDMA V | RMC 12.2Kbps | Edge 2 | 0mm | ON | 4182 | 836.4 | 15.75 | 16.40 | 1.161 | -0.12 | 0.189 | 0.220 |
| | WCDMA V | RMC 12.2Kbps | Bottom of Laptop | 20mm | OFF | 4233 | 846.6 | 23.77 | 24.00 | 1.054 | -0.1 | 0.368 | 0.388 |
| | WCDMA V | RMC 12.2Kbps | Bottom Face | 20mm | OFF | 4233 | 846.6 | 23.77 | 24.00 | 1.054 | -0.1 | 0.249 | 0.263 |
| | WCDMA V | RMC 12.2Kbps | Edge 1 | 0mm | OFF | 4233 | 846.6 | 23.77 | 24.00 | 1.054 | -0.11 | 0.302 | 0.318 |
| | WCDMA V | RMC 12.2Kbps | Edge 2 | 20mm | OFF | 4233 | 846.6 | 23.77 | 24.00 | 1.054 | -0.17 | 0.063 | 0.066 |

## <FDD LTE SAR>

| Plot No. | Band | BW (MHz) | Modulation | RB Size | RB offset | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 21350 | 2560 | 17.97 | 18.60 | 1.156 | -0.14 | 0.770 | 0.890 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 20850 | 2510 | 17.88 | 18.60 | 1.180 | -0.12 | 0.938 | 1.107 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 21100 | 2535 | 17.95 | 18.60 | 1.161 | -0.13 | 0.844 | 0.980 |
| | LTE Band 7 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 21350 | 2560 | 17.81 | 18.60 | 1.199 | -0.14 | 0.875 | 1.050 |
| 04 | LTE Band 7 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 20850 | 2510 | 17.72 | 18.60 | 1.225 | 0 | 0.958 | 1.173 |
| | LTE Band 7 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 21100 | 2535 | 17.74 | 18.60 | 1.219 | -0.19 | 0.854 | 1.041 |
| | LTE Band 7 | 20M | QPSK | 100 | 0 | Bottom of Laptop | 0mm | ON | 21350 | 2560 | 17.80 | 18.60 | 1.202 | -0.1 | 0.802 | 0.964 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 21100 | 2535 | 11.76 | 12.40 | 1.159 | -0.01 | 0.857 | 0.993 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 20850 | 2510 | 11.74 | 12.40 | 1.164 | -0.07 | 0.930 | 1.083 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 21350 | 2560 | 11.75 | 12.40 | 1.161 | -0.06 | 0.804 | 0.934 |
| | LTE Band 7 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 21100 | 2535 | 11.75 | 12.40 | 1.161 | -0.02 | 0.881 | 1.023 |
| | LTE Band 7 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 20850 | 2510 | 11.71 | 12.40 | 1.172 | -0.06 | 0.947 | 1.110 |
| | LTE Band 7 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 21350 | 2560 | 11.72 | 12.40 | 1.169 | 0.01 | 0.841 | 0.984 |
| | LTE Band 7 | 20M | QPSK | 100 | 0 | Bottom Face | 0mm | ON | 21100 | 2535 | 11.72 | 12.40 | 1.169 | -0.05 | 0.860 | 1.006 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 21100 | 2535 | 11.76 | 12.40 | 1.159 | -0.03 | 0.123 | 0.143 |
| | LTE Band 7 | 20M | QPSK | 50 | 0 | Edge 2 | 0mm | ON | 21100 | 2535 | 11.75 | 12.40 | 1.161 | -0.03 | 0.124 | 0.144 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 21100 | 2535 | 23.88 | 24.00 | 1.028 | -0.12 | 0.372 | 0.382 |
| | LTE Band 7 | 20M | QPSK | 50 | 24 | Bottom of Laptop | 20mm | OFF | 20850 | 2510 | 22.93 | 23.00 | 1.016 | -0.11 | 0.334 | 0.339 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 21100 | 2535 | 23.88 | 24.00 | 1.028 | -0.07 | 0.312 | 0.321 |
| | LTE Band 7 | 20M | QPSK | 50 | 24 | Bottom Face | 20mm | OFF | 20850 | 2510 | 22.93 | 23.00 | 1.016 | -0.03 | 0.337 | 0.342 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 21100 | 2535 | 23.88 | 24.00 | 1.028 | -0.01 | 0.207 | 0.213 |
| | LTE Band 7 | 20M | QPSK | 50 | 24 | Edge 1 | 0mm | OFF | 20850 | 2510 | 22.93 | 23.00 | 1.016 | 0.16 | 0.132 | 0.134 |
| | LTE Band 7 | 20M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 21100 | 2535 | 23.88 | 24.00 | 1.028 | -0.02 | 0.092 | 0.095 |
| | LTE Band 7 | 20M | QPSK | 50 | 24 | Edge 2 | 20mm | OFF | 20850 | 2510 | 22.93 | 23.00 | 1.016 | -0.05 | 0.069 | 0.070 |
| | LTE Band 12 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 23095 | 707.5 | 21.93 | 22.70 | 1.194 | -0.09 | 0.981 | 1.171 |
| | LTE Band 12 | 10M | QPSK | 25 | 0 | Bottom of Laptop | 0mm | ON | 23095 | 707.5 | 21.83 | 22.70 | 1.222 | -0.13 | 0.977 | 1.194 |
| 05 | LTE Band 12 | 10M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 23095 | 707.5 | 21.92 | 22.70 | 1.197 | -0.08 | 1.000 | 1.197 |
| | LTE Band 12 | 10M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 23095 | 707.5 | 18.82 | 19.40 | 1.143 | 0.1 | 0.962 | 1.099 |
| | LTE Band 12 | 10M | QPSK | 25 | 0 | Bottom Face | 0mm | ON | 23095 | 707.5 | 18.72 | 19.40 | 1.169 | -0.18 | 1.010 | 1.181 |
| | LTE Band 12 | 10M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 23095 | 707.5 | 18.65 | 19.40 | 1.189 | 0.12 | 1.000 | 1.189 |
| | LTE Band 12 | 10M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 23095 | 707.5 | 18.82 | 19.40 | 1.143 | 0.09 | 0.356 | 0.407 |
| | LTE Band 12 | 10M | QPSK | 25 | 0 | Edge 2 | 0mm | ON | 23095 | 707.5 | 18.72 | 19.40 | 1.169 | -0.08 | 0.377 | 0.441 |
| | LTE Band 12 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 23095 | 707.5 | 23.58 | 24.00 | 1.102 | -0.12 | 0.203 | 0.224 |
| | LTE Band 12 | 10M | QPSK | 25 | 25 | Bottom of Laptop | 20mm | OFF | 23095 | 707.5 | 22.57 | 23.00 | 1.104 | -0.11 | 0.151 | 0.167 |
| | LTE Band 12 | 10M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 23095 | 707.5 | 23.58 | 24.00 | 1.102 | -0.14 | 0.169 | 0.186 |
| | LTE Band 12 | 10M | QPSK | 25 | 25 | Bottom Face | 20mm | OFF | 23095 | 707.5 | 22.57 | 23.00 | 1.104 | -0.11 | 0.126 | 0.139 |
| | LTE Band 12 | 10M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 23095 | 707.5 | 23.58 | 24.00 | 1.102 | -0.07 | 0.141 | 0.155 |
| | LTE Band 12 | 10M | QPSK | 25 | 25 | Edge 1 | 0mm | OFF | 23095 | 707.5 | 22.57 | 23.00 | 1.104 | -0.03 | 0.123 | 0.136 |
| | LTE Band 12 | 10M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 23095 | 707.5 | 23.58 | 24.00 | 1.102 | 0.06 | 0.037 | 0.041 |
| | LTE Band 12 | 10M | QPSK | 25 | 25 | Edge 2 | 20mm | OFF | 23095 | 707.5 | 22.57 | 23.00 | 1.104 | 0.14 | 0.031 | 0.034 |

| Plot No. | Band | BW (MHz) | Modulation | RB Size | RB offset | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 13 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 23230 | 782 | 21.31 | 22.10 | 1.199 | -0.05 | 0.905 | 1.086 |
| | LTE Band 13 | 10M | QPSK | 25 | 0 | Bottom of Laptop | 0mm | ON | 23230 | 782 | 21.24 | 22.10 | 1.219 | -0.05 | 0.905 | 1.103 |
| 06 | LTE Band 13 | 10M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 23230 | 782 | 21.23 | 22.10 | 1.222 | -0.08 | 0.981 | 1.199 |
| | LTE Band 13 | 10M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 23230 | 782 | 16.85 | 18.30 | 1.396 | 0.18 | 0.728 | 1.017 |
| | LTE Band 13 | 10M | QPSK | 25 | 0 | Bottom Face | 0mm | ON | 23230 | 782 | 16.79 | 18.30 | 1.416 | 0.05 | 0.765 | 1.083 |
| | LTE Band 13 | 10M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 23230 | 782 | 16.68 | 18.30 | 1.452 | -0.08 | 0.804 | 1.167 |
| | LTE Band 13 | 10M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 23230 | 782 | 16.85 | 18.30 | 1.396 | 0.06 | 0.382 | 0.533 |
| | LTE Band 13 | 10M | QPSK | 25 | 0 | Edge 2 | 0mm | ON | 23230 | 782 | 16.79 | 18.30 | 1.416 | 0.01 | 0.360 | 0.510 |
| | LTE Band 13 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 23230 | 782 | 23.60 | 24.00 | 1.096 | -0.08 | 0.156 | 0.171 |
| | LTE Band 13 | 10M | QPSK | 25 | 0 | Bottom of Laptop | 20mm | OFF | 23230 | 782 | 22.14 | 23.00 | 1.219 | -0.1 | 0.126 | 0.154 |
| | LTE Band 13 | 10M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 23230 | 782 | 23.60 | 24.00 | 1.096 | -0.18 | 0.185 | 0.203 |
| | LTE Band 13 | 10M | QPSK | 25 | 0 | Bottom Face | 20mm | OFF | 23230 | 782 | 22.14 | 23.00 | 1.219 | -0.01 | 0.149 | 0.182 |
| | LTE Band 13 | 10M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 23230 | 782 | 23.60 | 24.00 | 1.096 | -0.08 | 0.053 | 0.058 |
| | LTE Band 13 | 10M | QPSK | 25 | 0 | Edge 1 | 0mm | OFF | 23230 | 782 | 22.14 | 23.00 | 1.219 | 0.05 | 0.048 | 0.059 |
| | LTE Band 13 | 10M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 23230 | 782 | 23.60 | 24.00 | 1.096 | 0.02 | 0.034 | 0.037 |
| | LTE Band 13 | 10M | QPSK | 25 | 0 | Edge 2 | 20mm | OFF | 23230 | 782 | 22.14 | 23.00 | 1.219 | 0.01 | 0.027 | 0.033 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 23330 | 793 | 21.20 | 21.70 | 1.122 | -0.1 | 0.945 | 1.060 |
| | LTE Band 14 | 10M | QPSK | 25 | 0 | Bottom of Laptop | 0mm | ON | 23330 | 793 | 21.05 | 21.70 | 1.161 | -0.04 | 0.984 | 1.143 |
| 07 | LTE Band 14 | 10M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 23330 | 793 | 20.93 | 21.70 | 1.194 | -0.1 | 0.992 | 1.184 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 23330 | 793 | 15.14 | 16.70 | 1.432 | -0.1 | 0.586 | 0.839 |
| | LTE Band 14 | 10M | QPSK | 25 | 0 | Bottom Face | 0mm | ON | 23330 | 793 | 15.10 | 16.70 | 1.445 | -0.08 | 0.626 | 0.905 |
| | LTE Band 14 | 10M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 23330 | 793 | 15.09 | 16.70 | 1.449 | -0.07 | 0.628 | 0.910 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 23330 | 793 | 15.14 | 16.70 | 1.432 | -0.15 | 0.255 | 0.365 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 23330 | 793 | 15.10 | 16.70 | 1.445 | -0.15 | 0.255 | 0.369 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 23330 | 793 | 23.52 | 24.00 | 1.117 | -0.11 | 0.167 | 0.187 |
| | LTE Band 14 | 10M | QPSK | 25 | 25 | Bottom of Laptop | 20mm | OFF | 23330 | 793 | 22.53 | 23.00 | 1.114 | -0.1 | 0.140 | 0.156 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 23330 | 793 | 23.52 | 24.00 | 1.117 | -0.16 | 0.204 | 0.228 |
| | LTE Band 14 | 10M | QPSK | 25 | 25 | Bottom Face | 20mm | OFF | 23330 | 793 | 22.53 | 23.00 | 1.114 | -0.19 | 0.167 | 0.186 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 23330 | 793 | 23.52 | 24.00 | 1.117 | 0.03 | 0.265 | 0.296 |
| | LTE Band 14 | 10M | QPSK | 25 | 25 | Edge 1 | 0mm | OFF | 23330 | 793 | 22.53 | 23.00 | 1.114 | -0.03 | 0.231 | 0.257 |
| | LTE Band 14 | 10M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 23330 | 793 | 23.52 | 24.00 | 1.117 | -0.07 | 0.034 | 0.038 |
| | LTE Band 14 | 10M | QPSK | 25 | 25 | Edge 2 | 20mm | OFF | 23330 | 793 | 22.53 | 23.00 | 1.114 | 0.03 | 0.028 | 0.031 |

| Plot No. | Band | BW (MHz) | Modulation | RB Size | RB offset | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 26140 | 1860 | 19.02 | 19.80 | 1.197 | -0.12 | 0.770 | 0.921 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 26340 | 1880 | 18.89 | 19.80 | 1.233 | -0.05 | 0.733 | 0.904 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 26590 | 1905 | 18.86 | 19.80 | 1.242 | -0.11 | 0.721 | 0.895 |
| | LTE Band 25 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 26140 | 1860 | 19.00 | 19.80 | 1.202 | 0.1 | 0.753 | 0.905 |
| | LTE Band 25 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 26340 | 1880 | 18.88 | 19.80 | 1.236 | -0.05 | 0.733 | 0.906 |
| | LTE Band 25 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 26590 | 1905 | 18.92 | 19.80 | 1.225 | -0.13 | 0.714 | 0.874 |
| | LTE Band 25 | 20M | QPSK | 100 | 0 | Bottom of Laptop | 0mm | ON | 26140 | 1860 | 18.95 | 19.80 | 1.216 | -0.11 | 0.788 | 0.958 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 26340 | 1880 | 13.32 | 13.90 | 1.143 | 0.16 | 1.000 | 1.143 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 26140 | 1860 | 13.26 | 13.90 | 1.159 | -0.12 | 0.975 | 1.130 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 26590 | 1905 | 13.22 | 13.90 | 1.169 | -0.07 | 0.993 | 1.161 |
| 08 | LTE Band 25 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 26340 | 1880 | 13.22 | 13.90 | 1.169 | -0.03 | 1.020 | 1.193 |
| | LTE Band 25 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 26140 | 1860 | 13.12 | 13.90 | 1.197 | -0.06 | 0.981 | 1.174 |
| | LTE Band 25 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 26590 | 1905 | 13.11 | 13.90 | 1.199 | -0.03 | 0.977 | 1.172 |
| | LTE Band 25 | 20M | QPSK | 100 | 0 | Bottom Face | 0mm | ON | 26340 | 1880 | 13.11 | 13.90 | 1.199 | -0.07 | 0.987 | 1.184 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 26340 | 1880 | 13.32 | 13.90 | 1.143 | 0.03 | 0.137 | 0.157 |
| | LTE Band 25 | 20M | QPSK | 50 | 0 | Edge 2 | 0mm | ON | 26340 | 1880 | 13.22 | 13.90 | 1.169 | -0.01 | 0.138 | 0.161 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 26140 | 1860 | 23.53 | 24.00 | 1.114 | -0.05 | 0.132 | 0.147 |
| | LTE Band 25 | 20M | QPSK | 50 | 24 | Bottom of Laptop | 20mm | OFF | 26140 | 1860 | 22.62 | 23.00 | 1.091 | -0.03 | 0.111 | 0.121 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 26140 | 1860 | 23.53 | 24.00 | 1.114 | -0.04 | 0.210 | 0.234 |
| | LTE Band 25 | 20M | QPSK | 50 | 24 | Bottom Face | 20mm | OFF | 26140 | 1860 | 22.62 | 23.00 | 1.091 | -0.02 | 0.177 | 0.193 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 26140 | 1860 | 23.53 | 24.00 | 1.114 | 0.1 | 0.330 | 0.368 |
| | LTE Band 25 | 20M | QPSK | 50 | 24 | Edge 1 | 0mm | OFF | 26140 | 1860 | 22.62 | 23.00 | 1.091 | 0.1 | 0.263 | 0.287 |
| | LTE Band 25 | 20M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 26140 | 1860 | 23.53 | 24.00 | 1.114 | -0.12 | 0.091 | 0.101 |
| | LTE Band 25 | 20M | QPSK | 25 | 24 | Edge 2 | 20mm | OFF | 26140 | 1860 | 22.62 | 23.00 | 1.091 | -0.11 | 0.079 | 0.086 |
| | LTE Band 26 | 15M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 26865 | 831.5 | 20.46 | 20.80 | 1.081 | 0.14 | 1.000 | 1.081 |
| | LTE Band 26 | 15M | QPSK | 36 | 0 | Bottom of Laptop | 0mm | ON | 26865 | 831.5 | 20.50 | 20.80 | 1.072 | -0.02 | 1.060 | 1.136 |
| 09 | LTE Band 26 | 15M | QPSK | 75 | 0 | Bottom of Laptop | 0mm | ON | 26865 | 831.5 | 20.46 | 20.80 | 1.081 | -0.05 | 1.090 | 1.179 |
| | LTE Band 26 | 15M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 26865 | 831.5 | 15.40 | 16.50 | 1.288 | -0.1 | 0.692 | 0.891 |
| | LTE Band 26 | 15M | QPSK | 36 | 0 | Bottom Face | 0mm | ON | 26865 | 831.5 | 15.23 | 16.50 | 1.340 | -0.1 | 0.720 | 0.965 |
| | LTE Band 26 | 15M | QPSK | 75 | 0 | Bottom Face | 0mm | ON | 26865 | 831.5 | 15.18 | 16.50 | 1.355 | -0.11 | 0.726 | 0.984 |
| | LTE Band 26 | 15M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 26865 | 831.5 | 15.40 | 16.50 | 1.288 | -0.17 | 0.287 | 0.370 |
| | LTE Band 26 | 15M | QPSK | 36 | 0 | Edge 2 | 0mm | ON | 26865 | 831.5 | 15.23 | 16.50 | 1.340 | -0.16 | 0.297 | 0.398 |
| | LTE Band 26 | 15M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 26865 | 831.5 | 23.88 | 24.00 | 1.028 | -0.1 | 0.243 | 0.250 |
| | LTE Band 26 | 15M | QPSK | 36 | 39 | Bottom of Laptop | 20mm | OFF | 26865 | 831.5 | 22.99 | 23.00 | 1.002 | -0.14 | 0.196 | 0.196 |
| | LTE Band 26 | 15M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 26865 | 831.5 | 23.88 | 24.00 | 1.028 | 0.06 | 0.316 | 0.325 |
| | LTE Band 26 | 15M | QPSK | 36 | 39 | Bottom Face | 20mm | OFF | 26865 | 831.5 | 22.99 | 23.00 | 1.002 | -0.03 | 0.249 | 0.250 |
| | LTE Band 26 | 15M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 26865 | 831.5 | 23.88 | 24.00 | 1.028 | -0.03 | 0.257 | 0.264 |
| | LTE Band 26 | 15M | QPSK | 36 | 39 | Edge 1 | 0mm | OFF | 26865 | 831.5 | 22.99 | 23.00 | 1.002 | 0.03 | 0.223 | 0.224 |
| | LTE Band 26 | 15M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 26865 | 831.5 | 23.88 | 24.00 | 1.028 | -0.07 | 0.035 | 0.036 |
| | LTE Band 26 | 15M | QPSK | 36 | 39 | Edge 2 | 20mm | OFF | 26865 | 831.5 | 22.99 | 23.00 | 1.002 | 0.03 | 0.030 | 0.030 |
| | LTE Band 5B | 10M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 20450 | 829 | 20.64 | 20.80 | 1.038 | 0.14 | 0.990 | 1.027 |
| | LTE Band 5B | 10M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 20525 | 836.5 | 20.59 | 20.80 | 1.050 | -0.12 | 0.951 | 0.998 |
| | LTE Band 5B | 10M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 20600 | 844 | 20.61 | 20.80 | 1.045 | 0.08 | 0.933 | 0.975 |

| Plot No. | Band | BW (MHz) | Modulation | RB Size | RB offset | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 30 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 27710 | 2310 | 17.81 | 18.70 | 1.227 | -0.11 | 0.916 | 1.124 |
| | LTE Band 30 | 10M | QPSK | 25 | 0 | Bottom of Laptop | 0mm | ON | 27710 | 2310 | 17.71 | 18.70 | 1.256 | -0.1 | 0.928 | 1.166 |
| 10 | LTE Band 30 | 10M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 27710 | 2310 | 17.60 | 18.70 | 1.288 | -0.15 | 0.926 | 1.193 |
| | LTE Band 30 | 10M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 27710 | 2310 | 13.45 | 14.60 | 1.303 | -0.07 | 0.867 | 1.130 |
| | LTE Band 30 | 10M | QPSK | 25 | 0 | Bottom Face | 0mm | ON | 27710 | 2310 | 13.40 | 14.60 | 1.318 | -0.03 | 0.899 | 1.185 |
| | LTE Band 30 | 10M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 27710 | 2310 | 13.29 | 14.60 | 1.352 | -0.05 | 0.869 | 1.175 |
| | LTE Band 30 | 10M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 27710 | 2310 | 13.45 | 14.60 | 1.303 | -0.12 | 0.162 | 0.211 |
| | LTE Band 30 | 10M | QPSK | 25 | 0 | Edge 2 | 0mm | ON | 27710 | 2310 | 13.40 | 14.60 | 1.318 | -0.12 | 0.168 | 0.221 |
| | LTE Band 30 | 10M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 27710 | 2310 | 21.52 | 23.00 | 1.406 | -0.03 | 0.219 | 0.308 |
| | LTE Band 30 | 10M | QPSK | 25 | 0 | Bottom of Laptop | 20mm | OFF | 27710 | 2310 | 20.53 | 22.00 | 1.403 | -0.07 | 0.178 | 0.250 |
| | LTE Band 30 | 10M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 27710 | 2310 | 21.52 | 23.00 | 1.406 | -0.07 | 0.232 | 0.326 |
| | LTE Band 30 | 10M | QPSK | 25 | 0 | Bottom Face | 20mm | OFF | 27710 | 2310 | 20.53 | 22.00 | 1.403 | -0.05 | 0.192 | 0.269 |
| | LTE Band 30 | 10M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 27710 | 2310 | 21.52 | 23.00 | 1.406 | 0.15 | 0.553 | 0.778 |
| | LTE Band 30 | 10M | QPSK | 25 | 0 | Edge 1 | 0mm | OFF | 27710 | 2310 | 20.53 | 22.00 | 1.403 | 0.13 | 0.531 | 0.745 |
| | LTE Band 30 | 10M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 27710 | 2310 | 21.52 | 23.00 | 1.406 | -0.06 | 0.054 | 0.076 |
| | LTE Band 30 | 10M | QPSK | 25 | 0 | Edge 2 | 20mm | OFF | 27710 | 2310 | 20.53 | 22.00 | 1.403 | -0.07 | 0.045 | 0.063 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 132322 | 1745 | 19.38 | 20.00 | 1.153 | -0.09 | 0.816 | 0.941 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 132072 | 1720 | 19.30 | 20.00 | 1.175 | -0.12 | 0.741 | 0.871 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 132572 | 1770 | 19.26 | 20.00 | 1.186 | -0.11 | 0.876 | 1.039 |
| | LTE Band 66 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 132322 | 1745 | 19.30 | 20.00 | 1.175 | -0.11 | 0.830 | 0.975 |
| | LTE Band 66 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 132072 | 1720 | 19.24 | 20.00 | 1.191 | -0.1 | 0.750 | 0.893 |
| | LTE Band 66 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 132572 | 1770 | 19.14 | 20.00 | 1.219 | -0.12 | 0.895 | 1.091 |
| | LTE Band 66 | 20M | QPSK | 100 | 0 | Bottom of Laptop | 0mm | ON | 132322 | 1745 | 19.18 | 20.00 | 1.208 | -0.11 | 0.821 | 0.992 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132322 | 1745 | 14.27 | 14.80 | 1.130 | -0.02 | 0.998 | 1.128 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132072 | 1720 | 14.25 | 14.80 | 1.135 | -0.08 | 1.010 | 1.146 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132572 | 1770 | 14.26 | 14.80 | 1.132 | -0.15 | 1.050 | 1.189 |
| | LTE Band 66 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 132322 | 1745 | 14.10 | 14.80 | 1.175 | -0.09 | 1.000 | 1.175 |
| | LTE Band 66 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 132072 | 1720 | 14.08 | 14.80 | 1.180 | 0.07 | 0.951 | 1.122 |
| | LTE Band 66 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 132572 | 1770 | 13.98 | 14.80 | 1.208 | -0.04 | 0.935 | 1.129 |
| 11 | LTE Band 66 | 20M | QPSK | 100 | 0 | Bottom Face | 0mm | ON | 132322 | 1745 | 14.05 | 14.80 | 1.189 | -0.02 | 1.010 | 1.200 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 132322 | 1745 | 14.27 | 14.80 | 1.130 | -0.17 | 0.174 | 0.197 |
| | LTE Band 66 | 20M | QPSK | 50 | 0 | Edge 2 | 0mm | ON | 132322 | 1745 | 14.10 | 14.80 | 1.175 | 0 | 0.180 | 0.211 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 132572 | 1770 | 23.70 | 24.00 | 1.072 | -0.06 | 0.131 | 0.140 |
| | LTE Band 66 | 20M | QPSK | 50 | 24 | Bottom of Laptop | 20mm | OFF | 132572 | 1770 | 22.73 | 23.00 | 1.064 | -0.02 | 0.112 | 0.119 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 132572 | 1770 | 23.70 | 24.00 | 1.072 | -0.11 | 0.198 | 0.212 |
| | LTE Band 66 | 20M | QPSK | 50 | 24 | Bottom Face | 20mm | OFF | 132572 | 1770 | 22.73 | 23.00 | 1.064 | -0.03 | 0.161 | 0.171 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 132572 | 1770 | 23.70 | 24.00 | 1.072 | -0.09 | 0.554 | 0.594 |
| | LTE Band 66 | 20M | QPSK | 50 | 24 | Edge 1 | 0mm | OFF | 132572 | 1770 | 22.73 | 23.00 | 1.064 | -0.07 | 0.432 | 0.460 |
| | LTE Band 66 | 20M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 132572 | 1770 | 23.70 | 24.00 | 1.072 | -0.05 | 0.086 | 0.092 |
| | LTE Band 66 | 20M | QPSK | 50 | 24 | Edge 2 | 20mm | OFF | 132572 | 1770 | 22.73 | 23.00 | 1.064 | 0 | 0.070 | 0.074 |
| | LTE Band 66B | 15M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132047 | 1717.5 | 14.56 | 14.80 | 1.057 | -0.02 | 0.958 | 1.012 |
| | LTE Band 66B | 15M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132322 | 1745 | 14.61 | 14.80 | 1.045 | -0.04 | 0.958 | 1.001 |
| | LTE Band 66B | 15M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132597 | 1772.5 | 14.66 | 14.80 | 1.033 | 0.09 | 0.958 | 0.989 |
| | LTE Band 66C | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132072 | 1720 | 14.67 | 14.80 | 1.030 | 0.11 | 0.970 | 0.999 |
| | LTE Band 66C | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132322 | 1745 | 14.63 | 14.80 | 1.040 | -0.15 | 0.970 | 1.009 |
| | LTE Band 66C | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 132572 | 1770 | 14.59 | 14.80 | 1.050 | 0.02 | 0.970 | 1.018 |

| Plot No. | Band | BW (MHz) | Modulation | RB Size | RB offset | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 71 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 133322 | 683 | 20.84 | 21.50 | 1.164 | -0.04 | 0.761 | 0.886 |
| | LTE Band 71 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 133322 | 683 | 20.74 | 21.50 | 1.191 | -0.08 | 0.747 | 0.890 |
| | LTE Band 71 | 20M | QPSK | 100 | 0 | Bottom of Laptop | 0mm | ON | 133322 | 683 | 20.87 | 21.50 | 1.156 | -0.05 | 0.757 | 0.875 |
| | LTE Band 71 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 133322 | 683 | 17.88 | 18.70 | 1.208 | -0.09 | 0.905 | 1.093 |
| 12 | LTE Band 71 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 133322 | 683 | 17.72 | 18.70 | 1.253 | -0.09 | 0.929 | 1.164 |
| | LTE Band 71 | 20M | QPSK | 100 | 0 | Bottom Face | 0mm | ON | 133322 | 683 | 17.71 | 18.70 | 1.256 | -0.1 | 0.911 | 1.144 |
| | LTE Band 71 | 20M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 133322 | 683 | 17.88 | 18.70 | 1.208 | 0.03 | 0.456 | 0.551 |
| | LTE Band 71 | 20M | QPSK | 50 | 0 | Edge 2 | 0mm | ON | 133322 | 683 | 17.72 | 18.70 | 1.253 | 0.04 | 0.458 | 0.574 |
| | LTE Band 71 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 133322 | 683 | 23.11 | 24.00 | 1.227 | -0.06 | 0.224 | 0.275 |
| | LTE Band 71 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 20mm | OFF | 133322 | 683 | 22.27 | 23.00 | 1.183 | -0.11 | 0.180 | 0.213 |
| | LTE Band 71 | 20M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 133322 | 683 | 23.11 | 24.00 | 1.227 | -0.06 | 0.206 | 0.253 |
| | LTE Band 71 | 20M | QPSK | 50 | 0 | Bottom Face | 20mm | OFF | 133322 | 683 | 22.27 | 23.00 | 1.183 | -0.05 | 0.156 | 0.185 |
| | LTE Band 71 | 20M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 133322 | 683 | 23.11 | 24.00 | 1.227 | -0.09 | 0.208 | 0.255 |
| | LTE Band 71 | 20M | QPSK | 50 | 0 | Edge 1 | 0mm | OFF | 133322 | 683 | 22.27 | 23.00 | 1.183 | -0.06 | 0.175 | 0.207 |
| | LTE Band 71 | 20M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 133322 | 683 | 23.11 | 24.00 | 1.227 | 0.07 | 0.048 | 0.059 |
| | LTE Band 71 | 20M | QPSK | 50 | 0 | Edge 2 | 20mm | OFF | 133322 | 683 | 22.27 | 23.00 | 1.183 | 0.02 | 0.038 | 0.045 |

## <TDD LTE SAR>

| Plot No. | Band | BW (MHz) | Modulation | RB Size | RB offset | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 39750 | 2506 | 20.34 | 21.00 | 1.164 | 62.90 | 1.006 | -0.13 | 0.812 | 0.951 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 40185 | 2549.5 | 20.23 | 21.00 | 1.194 | 62.90 | 1.006 | -0.13 | 0.711 | 0.854 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 40620 | 2593 | 20.30 | 21.00 | 1.175 | 62.90 | 1.006 | -0.12 | 0.700 | 0.827 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 41055 | 2636.5 | 20.21 | 21.00 | 1.199 | 62.90 | 1.006 | -0.17 | 0.697 | 0.841 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 41490 | 2680 | 20.19 | 21.00 | 1.205 | 62.90 | 1.006 | -0.14 | 0.695 | 0.843 |
| 13 | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 39750 | 2506 | 20.31 | 21.00 | 1.172 | 62.90 | 1.006 | -0.16 | 0.848 | 1.000 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 40185 | 2549.5 | 20.04 | 21.00 | 1.247 | 62.90 | 1.006 | -0.12 | 0.739 | 0.927 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 40620 | 2593 | 20.21 | 21.00 | 1.199 | 62.90 | 1.006 | -0.14 | 0.704 | 0.850 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 41055 | 2636.5 | 20.15 | 21.00 | 1.216 | 62.90 | 1.006 | -0.11 | 0.707 | 0.865 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 41490 | 2680 | 20.02 | 21.00 | 1.253 | 62.90 | 1.006 | -0.09 | 0.693 | 0.874 |
| | LTE Band 41 | 20M | QPSK | 100 | 0 | Bottom of Laptop | 0mm | ON | 39750 | 2506 | 20.30 | 21.00 | 1.175 | 62.90 | 1.006 | -0.11 | 0.836 | 0.988 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 39750 | 2506 | 13.45 | 14.90 | 1.396 | 62.90 | 1.006 | -0.14 | 0.450 | 0.632 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 40185 | 2549.5 | 13.35 | 14.90 | 1.429 | 62.90 | 1.006 | -0.12 | 0.420 | 0.604 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 40620 | 2593 | 13.38 | 14.90 | 1.419 | 62.90 | 1.006 | -0.15 | 0.452 | 0.645 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 41055 | 2636.5 | 13.41 | 14.90 | 1.409 | 62.90 | 1.006 | -0.01 | 0.493 | 0.699 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 41490 | 2680 | 13.39 | 14.90 | 1.416 | 62.90 | 1.006 | -0.04 | 0.513 | 0.731 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 39750 | 2506 | 13.32 | 14.90 | 1.439 | 62.90 | 1.006 | -0.17 | 0.462 | 0.669 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 40185 | 2549.5 | 13.22 | 14.90 | 1.472 | 62.90 | 1.006 | -0.13 | 0.442 | 0.655 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 40620 | 2593 | 13.29 | 14.90 | 1.449 | 62.90 | 1.006 | -0.12 | 0.466 | 0.679 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 41055 | 2636.5 | 13.24 | 14.90 | 1.466 | 62.90 | 1.006 | -0.14 | 0.507 | 0.747 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 41190 | 2680 | 13.22 | 14.90 | 1.472 | 62.90 | 1.006 | -0.04 | 0.524 | 0.776 |
| | LTE Band 41 | 20M | QPSK | 100 | 0 | Bottom Face | 0mm | ON | 39750 | 2506 | 13.35 | 14.90 | 1.429 | 62.90 | 1.006 | -0.15 | 0.461 | 0.663 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Edge 2 | 0mm | ON | 39750 | 2506 | 13.45 | 14.90 | 1.396 | 62.90 | 1.006 | -0.11 | 0.107 | 0.150 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Edge 2 | 0mm | ON | 39750 | 2506 | 13.32 | 14.90 | 1.439 | 62.90 | 1.006 | -0.02 | 0.107 | 0.155 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 40185 | 2549.5 | 23.97 | 24.00 | 1.007 | 62.90 | 1.006 | -0.14 | 0.213 | 0.216 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 20mm | OFF | 39750 | 2506 | 22.99 | 23.00 | 1.002 | 62.90 | 1.006 | -0.15 | 0.215 | 0.217 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 40185 | 2549.5 | 23.97 | 24.00 | 1.007 | 62.90 | 1.006 | -0.05 | 0.215 | 0.218 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Bottom Face | 20mm | OFF | 39750 | 2506 | 22.99 | 23.00 | 1.002 | 62.90 | 1.006 | -0.07 | 0.221 | 0.223 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Edge 1 | 0mm | OFF | 40185 | 2549.5 | 23.97 | 24.00 | 1.007 | 62.90 | 1.006 | 0.13 | 0.109 | 0.110 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Edge 1 | 0mm | OFF | 39750 | 2506 | 22.99 | 23.00 | 1.002 | 62.90 | 1.006 | 0.16 | 0.083 | 0.084 |
| | LTE Band 41 | 20M | QPSK | 1 | 0 | Edge 2 | 20mm | OFF | 40185 | 2549.5 | 23.97 | 24.00 | 1.007 | 62.90 | 1.006 | 0.04 | 0.055 | 0.056 |
| | LTE Band 41 | 20M | QPSK | 50 | 0 | Edge 2 | 20mm | OFF | 39750 | 2506 | 22.99 | 23.00 | 1.002 | 62.90 | 1.006 | 0.15 | 0.042 | 0.042 |
| | LTE Band 41 (HPUE) | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 39750 | 2506 | 21.50 | 23.00 | 1.413 | 42.90 | 1.009 | -0.06 | 0.700 | 0.998 |
| | LTE Band 41 (HPUE) | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 40185 | 2549.5 | 21.00 | 23.00 | 1.585 | 42.90 | 1.009 | 0.03 | 0.612 | 0.979 |
| | LTE Band 41 (HPUE) | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 40620 | 2593 | 21.35 | 23.00 | 1.462 | 42.90 | 1.009 | -0.11 | 0.638 | 0.941 |
| | LTE Band 41 (HPUE) | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 41055 | 2636.5 | 21.55 | 23.00 | 1.396 | 42.90 | 1.009 | -0.05 | 0.668 | 0.941 |
| | LTE Band 41 (HPUE) | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 41490 | 2680 | 21.24 | 23.00 | 1.500 | 42.90 | 1.009 | -0.01 | 0.652 | 0.987 |

| Plot No. | Band | BW (MHz) | Modulation | RB Size | RB offset | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 56150 | 3641 | 18.80 | 19.10 | 1.072 | 62.90 | 1.006 | 0.18 | 1.110 | 1.197 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 53340 | 3560 | 18.58 | 19.10 | 1.127 | 62.90 | 1.006 | 0.04 | 1.040 | 1.179 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 55830 | 3609 | 18.58 | 19.10 | 1.127 | 62.90 | 1.006 | 0.05 | 1.000 | 1.134 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 0mm | ON | 56640 | 3690 | 18.66 | 19.10 | 1.107 | 62.90 | 1.006 | -0.05 | 0.947 | 1.054 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 56150 | 3641 | 18.75 | 19.10 | 1.084 | 62.90 | 1.006 | -0.17 | 0.982 | 1.071 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 53340 | 3560 | 18.68 | 19.10 | 1.102 | 62.90 | 1.006 | -0.05 | 1.060 | 1.175 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 55830 | 3609 | 18.63 | 19.10 | 1.114 | 62.90 | 1.006 | 0.05 | 0.904 | 1.013 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 0mm | ON | 56640 | 3690 | 18.75 | 19.10 | 1.084 | 62.90 | 1.006 | -0.09 | 1.010 | 1.101 |
| | LTE Band 48 | 20M | QPSK | 100 | 0 | Bottom of Laptop | 0mm | ON | 56150 | 3641 | 18.68 | 19.10 | 1.102 | 62.90 | 1.006 | -0.11 | 0.950 | 1.053 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 56150 | 3641 | 14.82 | 15.20 | 1.091 | 62.90 | 1.006 | -0.06 | 0.855 | 0.939 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 55340 | 3560 | 14.40 | 15.20 | 1.202 | 62.90 | 1.006 | -0.13 | 0.737 | 0.891 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 55830 | 3609 | 14.49 | 15.20 | 1.178 | 62.90 | 1.006 | -0.13 | 0.683 | 0.809 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom Face | 0mm | ON | 56640 | 3690 | 14.80 | 15.20 | 1.096 | 62.90 | 1.006 | 0.06 | 0.828 | 0.913 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 56150 | 3641 | 14.77 | 15.20 | 1.104 | 62.90 | 1.006 | 0.03 | 0.888 | 0.986 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 55340 | 3560 | 14.37 | 15.20 | 1.211 | 62.90 | 1.006 | 0.03 | 0.696 | 0.848 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 55830 | 3609 | 14.42 | 15.20 | 1.197 | 62.90 | 1.006 | -0.03 | 0.702 | 0.845 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom Face | 0mm | ON | 56640 | 3690 | 14.77 | 15.20 | 1.104 | 62.90 | 1.006 | -0.05 | 0.780 | 0.866 |
| | LTE Band 48 | 20M | QPSK | 100 | 0 | Bottom Face | 0mm | ON | 56150 | 3641 | 14.55 | 15.20 | 1.161 | 62.90 | 1.006 | -0.09 | 0.781 | 0.913 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Edge 1 | 0mm | ON | 56150 | 3641 | 14.82 | 15.20 | 1.091 | 62.90 | 1.006 | 0.03 | 0.210 | 0.231 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Edge 1 | 0mm | ON | 56150 | 3641 | 14.77 | 15.20 | 1.104 | 62.90 | 1.006 | 0.02 | 0.217 | 0.241 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom of Laptop | 20mm | OFF | 55830 | 3609 | 22.30 | 23.00 | 1.175 | 62.90 | 1.006 | -0.05 | 0.405 | 0.479 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom of Laptop | 20mm | OFF | 55830 | 3609 | 21.31 | 22.00 | 1.172 | 62.90 | 1.006 | 0.09 | 0.450 | 0.531 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Bottom Face | 20mm | OFF | 55830 | 3609 | 22.30 | 23.00 | 1.175 | 62.90 | 1.006 | 0.1 | 0.135 | 0.160 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Bottom Face | 20mm | OFF | 55830 | 3609 | 21.31 | 22.00 | 1.172 | 62.90 | 1.006 | 0.02 | 0.109 | 0.129 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Edge 1 | 10mm | OFF | 55830 | 3609 | 22.30 | 23.00 | 1.175 | 62.90 | 1.006 | -0.01 | 0.356 | 0.421 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Edge 1 | 10mm | OFF | 55830 | 3609 | 21.31 | 22.00 | 1.172 | 62.90 | 1.006 | 0.14 | 0.294 | 0.347 |
| | LTE Band 48 | 20M | QPSK | 1 | 0 | Edge 4 | 0mm | OFF | 55830 | 3609 | 22.30 | 23.00 | 1.175 | 62.90 | 1.006 | -0.08 | 0.611 | 0.722 |
| | LTE Band 48 | 20M | QPSK | 50 | 0 | Edge 4 | 0mm | OFF | 55830 | 3609 | 21.31 | 22.00 | 1.172 | 62.90 | 1.006 | -0.09 | 0.432 | 0.509 |

## <WLAN SAR>

| Plot No. | Band | Mode | Test Position | Gap (mm) | Antenna | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | WLAN2.4GHz | 802.11b 1Mbps | Bottom of Laptop | 0mm | Ant 1 | 6 | 2437 | 14.60 | 15.00 | 1.096 | 100.00 | 1.000 | 0.04 | 0.494 | 0.542 |
| | WLAN2.4GHz | 802.11b 1Mbps | Bottom Face | 0mm | Ant 1 | 6 | 2437 | 14.60 | 15.00 | 1.096 | 100.00 | 1.000 | -0.16 | 0.535 | 0.587 |
| | WLAN2.4GHz | 802.11b 1Mbps | Edge 3 | 0mm | Ant 1 | 6 | 2437 | 14.60 | 15.00 | 1.096 | 100.00 | 1.000 | -0.04 | 0.512 | 0.561 |
| 15 | WLAN2.4GHz | 802.11b 1Mbps | Bottom of Laptop | 0mm | Ant 2 | 6 | 2437 | 14.90 | 15.50 | 1.148 | 100.00 | 1.000 | -0.02 | 0.616 | 0.707 |
| | WLAN2.4GHz | 802.11b 1Mbps | Bottom Face | 0mm | Ant 2 | 6 | 2437 | 14.90 | 15.50 | 1.148 | 100.00 | 1.000 | 0.07 | 0.370 | 0.425 |
| | WLAN2.4GHz | 802.11b 1Mbps | Edge 3 | 0mm | Ant 2 | 6 | 2437 | 14.90 | 15.50 | 1.148 | 100.00 | 1.000 | -0.09 | 0.459 | 0.527 |
| 16 | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | 0 | 1.050 | 1.182 |
| | WLAN5GHz | 802.11n-HT40 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 54 | 5270 | 10.10 | 10.50 | 1.096 | 95.93 | 1.042 | -0.02 | 0.994 | 1.136 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom Face | 0mm | Ant 1 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | -0.09 | 0.423 | 0.476 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Edge 3 | 0mm | Ant 1 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | -0.18 | 0.616 | 0.693 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 2 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | 0.15 | 0.485 | 0.546 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom Face | 0mm | Ant 2 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | -0.18 | 0.177 | 0.199 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Edge 3 | 0mm | Ant 2 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | -0.18 | 0.546 | 0.615 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 138 | 5690 | 11.40 | 11.50 | 1.023 | 93.00 | 1.075 | -0.04 | 0.947 | 1.042 |
| 17 | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 122 | 5610 | 11.40 | 11.50 | 1.023 | 93.00 | 1.075 | -0.04 | 0.953 | 1.048 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom Face | 0mm | Ant 1 | 138 | 5690 | 11.40 | 11.50 | 1.023 | 93.00 | 1.075 | -0.14 | 0.530 | 0.583 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Edge 3 | 0mm | Ant 1 | 138 | 5690 | 11.40 | 11.50 | 1.023 | 93.00 | 1.075 | 0.15 | 0.559 | 0.615 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 2 | 106 | 5530 | 11.20 | 11.50 | 1.072 | 93.00 | 1.075 | 0.16 | 0.397 | 0.457 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom Face | 0mm | Ant 2 | 106 | 5530 | 11.20 | 11.50 | 1.072 | 93.00 | 1.075 | -0.15 | 0.227 | 0.261 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Edge 3 | 0mm | Ant 2 | 106 | 5530 | 11.20 | 11.50 | 1.072 | 93.00 | 1.075 | 0.15 | 0.579 | 0.667 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 155 | 5775 | 13.30 | 13.50 | 1.047 | 93.00 | 1.075 | -0.08 | 0.821 | 0.924 |
| | WLAN5GHz | 802.11n-HT40 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 151 | 5755 | 13.30 | 13.50 | 1.072 | 95.93 | 1.042 | -0.19 | 0.765 | 0.854 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom Face | 0mm | Ant 1 | 155 | 5775 | 13.30 | 13.50 | 1.047 | 93.00 | 1.075 | -0.11 | 0.375 | 0.422 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Edge 3 | 0mm | Ant 1 | 155 | 5775 | 13.30 | 13.50 | 1.047 | 93.00 | 1.075 | 0.11 | 0.543 | 0.611 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 2 | 155 | 5775 | 13.10 | 13.50 | 1.072 | 93.00 | 1.075 | -0.14 | 0.614 | 0.707 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom Face | 0mm | Ant 2 | 155 | 5775 | 13.10 | 13.50 | 1.072 | 93.00 | 1.075 | -0.11 | 0.472 | 0.544 |
| | WLAN5GHz | 802.11ac-VHT80 MCS0 | Edge 3 | 0mm | Ant 2 | 155 | 5775 | 13.10 | 13.50 | 1.072 | 93.00 | 1.075 | -0.13 | 0.888 | 1.023 |
| 18 | WLAN5GHz | 802.11n-HT40 MCS0 | Edge 3 | 0mm | Ant 2 | 159 | 5795 | 13.00 | 13.50 | 1.072 | 96.34 | 1.038 | -0.16 | 0.956 | 1.063 |

## 16.2 Repeated SAR Measurement

| No. | Band | Mode | Test Position | Gap (mm) | Power Reduction | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Ratio | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1st | WCDMA II | RMC 12.2Kbps | Bottom Face | 0mm | ON | 9400 | 1880 | 14.33 | 14.50 | 1.040 | - | - | -0.1 | 1.150 | - | 1.196 |
| 2nd | WCDMA II | RMC 12.2Kbps | Bottom Face | 0mm | ON | 9400 | 1880 | 14.33 | 14.50 | 1.040 | - | - | -0.1 | 1.070 | 1.07 | 1.113 |
| 1st | LTE Band 7 | 20M_QPSK_50_0 | Bottom of Laptop | 0mm | ON | 20850 | 2510 | 17.72 | 18.60 | 1.225 | - | - | 0 | 0.958 | - | 1.173 |
| 2nd | LTE Band 7 | 20M_QPSK_50_0 | Bottom of Laptop | 0mm | ON | 20850 | 2510 | 17.72 | 18.60 | 1.225 | - | - | 0 | 0.954 | 1.00 | 1.168 |
| 1st | LTE Band 12 | 10M_QPSK_25_0 | Bottom Face | 0mm | ON | 23095 | 707.5 | 18.72 | 19.40 | 1.169 | - | - | -0.18 | 1.010 | - | 1.181 |
| 2nd | LTE Band 12 | 10M_QPSK_25_0 | Bottom Face | 0mm | ON | 23095 | 707.5 | 18.72 | 19.40 | 1.169 | - | - | -0.15 | 0.934 | 1.08 | 1.092 |
| 1st | LTE Band 26 | 15M_QPSK_75_0 | Bottom of Laptop | 0mm | ON | 26865 | 831.5 | 20.46 | 20.80 | 1.081 | - | - | -0.05 | 1.090 | - | 1.179 |
| 2nd | LTE Band 26 | 15M_QPSK_75_0 | Bottom of Laptop | 0mm | ON | 26865 | 831.5 | 20.46 | 20.80 | 1.081 | - | - | -0.1 | 0.991 | 1.10 | 1.072 |
| 1st | LTE Band 30 | 10M_QPSK_25_0 | Bottom of Laptop | 0mm | ON | 27710 | 2310 | 17.71 | 18.70 | 1.256 | - | - | -0.1 | 0.928 | - | 1.166 |
| 2nd | LTE Band 30 | 10M_QPSK_25_0 | Bottom of Laptop | 0mm | ON | 27710 | 2310 | 17.71 | 18.70 | 1.256 | - | - | -0.14 | 0.907 | 1.02 | 1.139 |
| 1st | LTE Band 48 | 20M_QPSK_1_0 | Bottom of Laptop | 0mm | ON | 56150 | 3641 | 18.80 | 19.10 | 1.072 | 62.90 | 1.006 | 0.18 | 1.110 | - | 1.197 |
| 2nd | LTE Band 48 | 20M_QPSK_1_0 | Bottom of Laptop | 0mm | ON | 56150 | 3641 | 18.80 | 19.10 | 1.072 | 62.90 | 1.006 | -0.13 | 1.080 | 1.03 | 1.164 |
| 1st | LTE Band 66 | 20M_QPSK_1_0 | Bottom Face | 0mm | ON | 132572 | 1770 | 14.26 | 14.80 | 1.132 | - | - | -0.15 | 1.050 | - | 1.189 |
| 2nd | LTE Band 66 | 20M_QPSK_1_0 | Bottom Face | 0mm | ON | 132572 | 1770 | 14.26 | 14.80 | 1.132 | - | - | -0.02 | 1.020 | 1.03 | 1.155 |

| No. | Band | Mode | Test Position | Gap (mm) | Antenna | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Ratio | Reported 1g SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1st | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | 0 | 1.050 | - | 1.182 |
| 2nd | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 58 | 5290 | 10.30 | 10.50 | 1.047 | 93.00 | 1.075 | -0.02 | 1.010 | 1.04 | 1.137 |
| 1st | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 122 | 5610 | 11.40 | 11.50 | 1.023 | 93.00 | 1.075 | -0.04 | 0.953 | - | 1.048 |
| 2nd | WLAN5GHz | 802.11ac-VHT80 MCS0 | Bottom of Laptop | 0mm | Ant 1 | 122 | 5610 | 11.40 | 11.50 | 1.023 | 93.00 | 1.075 | 0 | 0.887 | 1.07 | 0.976 |
| 1st | WLAN5GHz | 802.11n-HT40 MCS0 | Edge 3 | 0mm | Ant 2 | 159 | 5795 | 13.00 | 13.50 | 1.072 | 96.34 | 1.038 | -0.16 | 0.956 | - | 1.063 |
| 2nd | WLAN5GHz | 802.11n-HT40 MCS0 | Edge 3 | 0mm | Ant 2 | 159 | 5795 | 13.00 | 13.50 | 1.072 | 96.34 | 1.038 | -0.13 | 0.897 | 1.07 | 0.998 |

**General Note:**

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

## 16.3 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required

| | LTE Band 41 (Power Class 3) | LTE Band 41 (Power Class 2) |
|---|---|---|
| Maximum Tune up Power (dBm) | 21 | 23 |
| Reported 1g SAR (W/kg) | 1 | 0.998 |
| Duty Cycle | 63.30% | 43.30% |
| Frame Averaged (mW) | 79.69 | 86.39 |
| Linearity SAR(W/kg) | 1.08 | |
| % deviation from expected linearity | | -7.95% |

# 17. Simultaneous Transmission Analysis

| NO. | Simultaneous Transmission Configurations | Body |
|---|---|---|
| 1. | WWAN + WLAN2.4GHz Ant 1 + WLAN 2.4GHz Ant 2 | Yes |
| 2. | WWAN + WLAN2.4GHz Ant 1 + Bluetooth Ant 2 | Yes |
| 3. | WWAN + WLAN5GHz Ant 1 + WLAN 5GHz Ant 2 | Yes |
| 4. | WWAN + WLAN5GHz Ant 1 + WLAN 5GHz Ant 2 + Bluetooth Ant 2 | Yes |

**General Note:**

1. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment.
2. The Scaled SAR summation is calculated based on the same configuration and test position.
3. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
   i) Scalar SAR summation < 1.6W/kg.
   ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
   iii) If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.
   iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
   v) The SPLSR calculated results please refer to section 17.2.
4. For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01v06 based on the formula below.
   i) (*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)]·[√f(GHz)/*x*] W/kg for *test separation distances* ≤ 50 mm; where *x* = 7.5 for 1-g SAR, and *x* = 18.75 for 10-g SAR.
   ii) When the minimum separation distance is < 5mm, the distance is used 5mm to determine SAR test exclusion.
   iii) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the *test separation distances* is > 50 mm.
   iv) Bluetooth estimated SAR is conservatively determined by 5mm separation, for all applicable exposure positions.

| Bluetooth Max Power | Exposure Position | All Positions |
|---|---|---|
| 6.5 dBm | Estimated SAR (W/kg) | 0.188 W/kg |

## 17.1 Body Exposure Conditions

### <Laptop Mode>

| WWAN Band | Exposure Position | 1 | 2 | 3 | 4 | 5 | 6 | 1+2+3 Summed 1g SAR (W/kg) | 1+4+5 Summed 1g SAR (W/kg) | 1+2+6 Summed 1g SAR (W/kg) | 1+4+6 Summed 1g SAR (W/kg) | 1+4+5+6 Summed 1g SAR (W/kg) | 1+5+6 Summed 1g SAR (W/kg) | SPLSR | Case No |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | WWAN | 2.4GHz WLAN Ant 1 | 2.4GHz WLAN Ant 2 | 5GHz WLAN Ant 1 | 5GHz WLAN Ant 2 | Bluetooth Ant 2 | | | | | | | | |
| | | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | Estimated 1g SAR (W/kg) | | | | | | | | |
| WCDMA II | Bottom of Laptop at 20mm | 0.114 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.363 | 2.003 | 0.844 | 1.484 | 2.191 | 1.009 | 0.01 | Case 16 |
| | Bottom of Laptop at 0mm | 0.790 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.039 | 2.679 | 1.520 | 2.160 | 2.867 | 1.685 | 0.02 | Case 1 |
| WCDMA IV | Bottom of Laptop at 20mm | 0.128 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.377 | 2.017 | 0.858 | 1.498 | 2.205 | 1.023 | 0.01 | Case 17 |
| | Bottom of Laptop at 0mm | 0.867 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.116 | 2.756 | 1.597 | 2.237 | 2.944 | 1.762 | 0.02 | Case 2 |
| WCDMA V | Bottom of Laptop at 20mm | 0.388 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.637 | 2.277 | 1.118 | 1.758 | 2.465 | 1.283 | 0.01 | Case 18 |
| | Bottom of Laptop at 0mm | 1.047 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.296 | 2.936 | 1.777 | 2.417 | 3.124 | 1.942 | 0.02 | Case 3 |
| LTE Band 7 | Bottom of Laptop at 20mm | 0.382 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.631 | 2.271 | 1.112 | 1.752 | 2.459 | 1.277 | 0.01 | Case 19 |
| | Bottom of Laptop at 0mm | 1.173 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.422 | 3.062 | 1.903 | 2.543 | 3.250 | 2.068 | 0.02 | Case 4 |
| LTE Band 12 | Bottom of Laptop at 20mm | 0.224 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.473 | 2.113 | 0.954 | 1.594 | 2.301 | 1.119 | 0.01 | Case 20 |
| | Bottom of Laptop at 0mm | 1.197 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.446 | 3.086 | 1.927 | 2.567 | 3.274 | 2.092 | 0.02 | Case 5 |
| LTE Band 13 | Bottom of Laptop at 20mm | 0.171 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.420 | 2.060 | 0.901 | 1.541 | 2.248 | 1.066 | 0.01 | Case 21 |
| | Bottom of Laptop at 0mm | 1.199 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.448 | 3.088 | 1.929 | 2.569 | 3.276 | 2.094 | 0.02 | Case 6 |
| LTE Band 14 | Bottom of Laptop at 20mm | 0.187 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.436 | 2.076 | 0.917 | 1.557 | 2.264 | 1.082 | 0.01 | Case 22 |
| | Bottom of Laptop at 0mm | 1.184 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.433 | 3.073 | 1.914 | 2.554 | 3.261 | 2.079 | 0.02 | Case 7 |
| LTE Band 25 | Bottom of Laptop at 20mm | 0.147 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.396 | 2.036 | 0.877 | 1.517 | 2.224 | 1.042 | 0.01 | Case 23 |
| | Bottom of Laptop at 0mm | 0.958 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.207 | 2.847 | 1.688 | 2.328 | 3.035 | 1.853 | 0.02 | Case 8 |
| LTE Band 26 | Bottom of Laptop at 20mm | 0.250 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.499 | 2.139 | 0.980 | 1.620 | 2.327 | 1.145 | 0.01 | Case 24 |
| | Bottom of Laptop at 0mm | 1.179 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.428 | 3.068 | 1.909 | 2.549 | 3.256 | 2.074 | 0.02 | Case 9 |
| LTE Band 30 | Bottom of Laptop at 20mm | 0.308 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.557 | 2.197 | 1.038 | 1.678 | 2.385 | 1.203 | 0.01 | Case 25 |
| | Bottom of Laptop at 0mm | 1.193 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.442 | 3.082 | 1.923 | 2.563 | 3.270 | 2.088 | 0.02 | Case 10 |
| LTE Band 41 | Bottom of Laptop at 20mm | 0.217 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.466 | 2.106 | 0.947 | 1.587 | 2.294 | 1.112 | 0.01 | Case 26 |
| | Bottom of Laptop at 0mm | 1.000 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.249 | 2.889 | 1.730 | 2.370 | 3.077 | 1.895 | 0.02 | Case 11 |
| LTE Band 48 | Bottom of Laptop at 20mm | 0.531 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.780 | 2.420 | 1.261 | 1.901 | 2.608 | 1.426 | 0.01 | Case 27 |
| | Bottom of Laptop at 0mm | 1.197 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.446 | 3.086 | 1.927 | 2.567 | 3.274 | 2.092 | 0.01 | Case 13 |
| LTE Band 66 | Bottom of Laptop at 20mm | 0.140 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.389 | 2.029 | 0.870 | 1.510 | 2.217 | 1.035 | 0.01 | Case 28 |
| | Bottom of Laptop at 0mm | 1.091 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.340 | 2.980 | 1.821 | 2.461 | 3.168 | 1.986 | 0.02 | Case 14 |
| LTE Band 71 | Bottom of Laptop at 20mm | 0.275 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 1.524 | 2.164 | 1.005 | 1.645 | 2.352 | 1.170 | 0.01 | Case 29 |
| | Bottom of Laptop at 0mm | 0.890 | 0.542 | 0.707 | 1.182 | 0.707 | 0.188 | 2.139 | 2.779 | 1.620 | 2.260 | 2.967 | 1.785 | 0.02 | Case 15 |

## <Tablet Mode>

| WWAN Band | Exposure Position | 1 | 2 | 3 | 4 | 5 | 6 | 1+2+3 Summed 1g SAR (W/kg) | 1+4+5 Summed 1g SAR (W/kg) | 1+2+6 Summed 1g SAR (W/kg) | 1+4+6 Summed 1g SAR (W/kg) | 1+4+5+6 Summed 1g SAR (W/kg) | 1+5+6 Summed 1g SAR (W/kg) | SPLSR | Case No |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | WWAN | 2.4GHz WLAN Ant 1 | 2.4GHz WLAN Ant 2 | 5GHz WLAN Ant 1 | 5GHz WLAN Ant 2 | Bluetooth Ant 2 | | | | | | | | |
| | | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | Estimated 1g SAR (W/kg) | | | | | | | | |
| WCDMA II | Bottom Face at 20mm | 0.045 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.057 | 1.172 | 0.820 | 0.816 | 1.360 | 0.777 | | |
| | Bottom Face at 0mm | 1.196 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.208 | 2.323 | 1.971 | 1.967 | 2.511 | 1.928 | 0.01 | Case 1 |
| | Edge 1 at 0mm | 0.507 | | | | | | 0.507 | 0.507 | 0.507 | 0.507 | 0.507 | 0.507 | | |
| | Edge 2 at 20mm | 0.255 | | | | | | 0.255 | 0.255 | 0.255 | 0.255 | 0.255 | 0.255 | | |
| | Edge 2 at 0mm | 0.154 | | | | | | 0.154 | 0.154 | 0.154 | 0.154 | 0.154 | 0.154 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| WCDMA IV | Bottom Face at 20mm | 0.226 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.238 | 1.353 | 1.001 | 0.997 | 1.541 | 0.958 | | |
| | Bottom Face at 0mm | 1.129 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.141 | 2.256 | 1.904 | 1.900 | 2.444 | 1.861 | 0.01 | Case 2 |
| | Edge 1 at 0mm | 0.676 | | | | | | 0.676 | 0.676 | 0.676 | 0.676 | 0.676 | 0.676 | | |
| | Edge 2 at 20mm | 0.237 | | | | | | 0.237 | 0.237 | 0.237 | 0.237 | 0.237 | 0.237 | | |
| | Edge 2 at 0mm | 0.189 | | | | | | 0.189 | 0.189 | 0.189 | 0.189 | 0.189 | 0.189 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| WCDMA V | Bottom Face at 20mm | 0.263 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.275 | 1.390 | 1.038 | 1.034 | 1.578 | 0.995 | | |
| | Bottom Face at 0mm | 0.793 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.805 | 1.920 | 1.568 | 1.564 | 2.108 | 1.525 | | |
| | Edge 1 at 0mm | 0.318 | | | | | | 0.318 | 0.318 | 0.318 | 0.318 | 0.318 | 0.318 | | |
| | Edge 2 at 20mm | 0.066 | | | | | | 0.066 | 0.066 | 0.066 | 0.066 | 0.066 | 0.066 | | |
| | Edge 2 at 0mm | 0.220 | | | | | | 0.220 | 0.220 | 0.220 | 0.220 | 0.220 | 0.220 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 7 | Bottom Face at 20mm | 0.342 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.354 | 1.469 | 1.117 | 1.113 | 1.657 | 1.074 | | |
| | Bottom Face at 0mm | 1.110 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.122 | 2.237 | 1.885 | 1.881 | 2.425 | 1.842 | 0.01 | Case 3 |
| | Edge 1 at 0mm | 0.213 | | | | | | 0.213 | 0.213 | 0.213 | 0.213 | 0.213 | 0.213 | | |
| | Edge 2 at 20mm | 0.095 | | | | | | 0.095 | 0.095 | 0.095 | 0.095 | 0.095 | 0.095 | | |
| | Edge 2 at 0mm | 0.144 | | | | | | 0.144 | 0.144 | 0.144 | 0.144 | 0.144 | 0.144 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 12 | Bottom Face at 20mm | 0.186 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.198 | 1.313 | 0.961 | 0.957 | 1.501 | 0.918 | | |
| | Bottom Face at 0mm | 1.189 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.201 | 2.316 | 1.964 | 1.960 | 2.504 | 1.921 | 0.02 | Case 4 |
| | Edge 1 at 0mm | 0.155 | | | | | | 0.155 | 0.155 | 0.155 | 0.155 | 0.155 | 0.155 | | |
| | Edge 2 at 20mm | 0.041 | | | | | | 0.041 | 0.041 | 0.041 | 0.041 | 0.041 | 0.041 | | |
| | Edge 2 at 0mm | 0.441 | | | | | | 0.441 | 0.441 | 0.441 | 0.441 | 0.441 | 0.441 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 13 | Bottom Face at 20mm | 0.203 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.215 | 1.330 | 0.978 | 0.974 | 1.518 | 0.935 | | |
| | Bottom Face at 0mm | 1.167 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.179 | 2.294 | 1.942 | 1.938 | 2.482 | 1.899 | 0.01 | Case 5 |
| | Edge 1 at 0mm | 0.059 | | | | | | 0.059 | 0.059 | 0.059 | 0.059 | 0.059 | 0.059 | | |
| | Edge 2 at 20mm | 0.037 | | | | | | 0.037 | 0.037 | 0.037 | 0.037 | 0.037 | 0.037 | | |
| | Edge 2 at 0mm | 0.533 | | | | | | 0.533 | 0.533 | 0.533 | 0.533 | 0.533 | 0.533 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 14 | Bottom Face at 20mm | 0.228 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.240 | 1.355 | 1.003 | 0.999 | 1.543 | 0.960 | | |
| | Bottom Face at 0mm | 0.910 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.922 | 2.037 | 1.685 | 1.681 | 2.225 | 1.642 | 0.01 | Case 6 |
| | Edge 1 at 0mm | 0.296 | | | | | | 0.296 | 0.296 | 0.296 | 0.296 | 0.296 | 0.296 | | |
| | Edge 2 at 20mm | 0.038 | | | | | | 0.038 | 0.038 | 0.038 | 0.038 | 0.038 | 0.038 | | |
| | Edge 2 at 0mm | 0.369 | | | | | | 0.369 | 0.369 | 0.369 | 0.369 | 0.369 | 0.369 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 25 | Bottom Face at 20mm | 0.234 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.246 | 1.361 | 1.009 | 1.005 | 1.549 | 0.966 | | |
| | Bottom Face at 0mm | 1.193 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.205 | 2.320 | 1.968 | 1.964 | 2.508 | 1.925 | 0.01 | Case 7 |
| | Edge 1 at 0mm | 0.368 | | | | | | 0.368 | 0.368 | 0.368 | 0.368 | 0.368 | 0.368 | | |
| | Edge 2 at 20mm | 0.101 | | | | | | 0.101 | 0.101 | 0.101 | 0.101 | 0.101 | 0.101 | | |
| | Edge 2 at 0mm | 0.161 | | | | | | 0.161 | 0.161 | 0.161 | 0.161 | 0.161 | 0.161 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 26 | Bottom Face at 20mm | 0.325 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.337 | 1.452 | 1.100 | 1.096 | 1.640 | 1.057 | | |
| | Bottom Face at 0mm | 0.984 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.996 | 2.111 | 1.759 | 1.755 | 2.299 | 1.716 | 0.01 | Case 8 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Edge 1 at 0mm | 0.264 | | | | | | 0.264 | 0.264 | 0.264 | 0.264 | 0.264 | 0.264 | | |
| | Edge 2 at 20mm | 0.036 | | | | | | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | | |
| | Edge 2 at 0mm | 0.398 | | | | | | 0.398 | 0.398 | 0.398 | 0.398 | 0.398 | 0.398 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 30 | Bottom Face at 20mm | 0.326 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.338 | 1.453 | 1.101 | 1.097 | 1.641 | 1.058 | | |
| | Bottom Face at 0mm | 1.185 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.197 | 2.312 | 1.960 | 1.956 | 2.500 | 1.917 | 0.01 | Case 9 |
| | Edge 1 at 0mm | 0.778 | | | | | | 0.778 | 0.778 | 0.778 | 0.778 | 0.778 | 0.778 | | |
| | Edge 2 at 20mm | 0.076 | | | | | | 0.076 | 0.076 | 0.076 | 0.076 | 0.076 | 0.076 | | |
| | Edge 2 at 0mm | 0.221 | | | | | | 0.221 | 0.221 | 0.221 | 0.221 | 0.221 | 0.221 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 41 | Bottom Face at 20mm | 0.223 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.235 | 1.350 | 0.998 | 0.994 | 1.538 | 0.955 | | |
| | Bottom Face at 0mm | 0.776 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.788 | 1.903 | 1.551 | 1.547 | 2.091 | 1.508 | 0.01 | Case 10 |
| | Edge 1 at 0mm | 0.110 | | | | | | 0.110 | 0.110 | 0.110 | 0.110 | 0.110 | 0.110 | | |
| | Edge 2 at 20mm | 0.056 | | | | | | 0.056 | 0.056 | 0.056 | 0.056 | 0.056 | 0.056 | | |
| | Edge 2 at 0mm | 0.155 | | | | | | 0.155 | 0.155 | 0.155 | 0.155 | 0.155 | 0.155 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 48 | Bottom Face at 20mm | 0.160 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.172 | 1.287 | 0.935 | 0.931 | 1.475 | 0.892 | | |
| | Bottom Face at 0mm | 0.986 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.998 | 2.113 | 1.761 | 1.757 | 2.301 | 1.718 | 0.01 | Case 11 |
| | Edge 1 at 10mm | 0.421 | | | | | | 0.421 | 0.421 | 0.421 | 0.421 | 0.421 | 0.421 | | |
| | Edge 1 at 0mm | 0.241 | | | | | | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| | Edge 4 at 0mm | 0.722 | | | | | | 0.722 | 0.722 | 0.722 | 0.722 | 0.722 | 0.722 | | |
| LTE Band 66 | Bottom Face at 20mm | 0.212 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.224 | 1.339 | 0.987 | 0.983 | 1.527 | 0.944 | | |
| | Bottom Face at 0mm | 1.200 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.212 | 2.327 | 1.975 | 1.971 | 2.515 | 1.932 | 0.01 | Case 12 |
| | Edge 1 at 0mm | 0.594 | | | | | | 0.594 | 0.594 | 0.594 | 0.594 | 0.594 | 0.594 | | |
| | Edge 2 at 20mm | 0.092 | | | | | | 0.092 | 0.092 | 0.092 | 0.092 | 0.092 | 0.092 | | |
| | Edge 2 at 0mm | 0.211 | | | | | | 0.211 | 0.211 | 0.211 | 0.211 | 0.211 | 0.211 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |
| LTE Band 71 | Bottom Face at 20mm | 0.253 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 1.265 | 1.380 | 1.028 | 1.024 | 1.568 | 0.985 | | |
| | Bottom Face at 0mm | 1.164 | 0.587 | 0.425 | 0.583 | 0.544 | 0.188 | 2.176 | 2.291 | 1.939 | 1.935 | 2.479 | 1.896 | 0.02 | Case 13 |
| | Edge 1 at 0mm | 0.255 | | | | | | 0.255 | 0.255 | 0.255 | 0.255 | 0.255 | 0.255 | | |
| | Edge 2 at 20mm | 0.059 | | | | | | 0.059 | 0.059 | 0.059 | 0.059 | 0.059 | 0.059 | | |
| | Edge 2 at 0mm | 0.574 | | | | | | 0.574 | 0.574 | 0.574 | 0.574 | 0.574 | 0.574 | | |
| | Edge 3 at 0mm | | 0.561 | 0.527 | 0.693 | 1.063 | 0.188 | 1.088 | 1.756 | 0.749 | 0.881 | 1.944 | 1.251 | 0.01 | Case 14 |

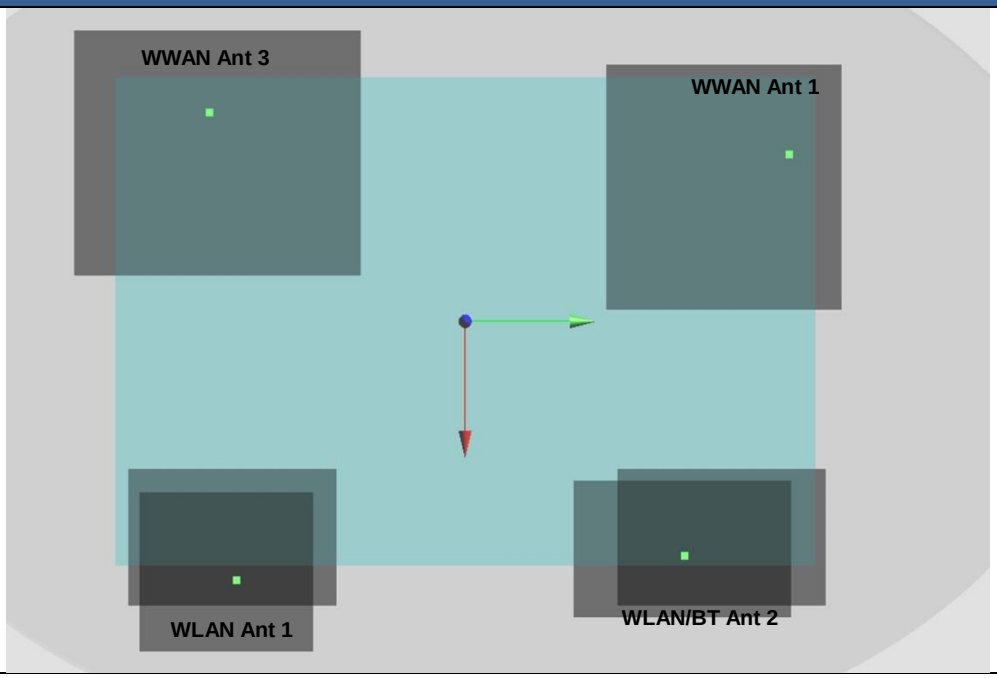
## 17.2 SPLSR Evaluation and Analysis

**General Note:**

1. SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (*min. separation distance, mm*). If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary
2. The detail hotspot point for each transmitter in each exposure condition are showing as below figure and the minimum 3D distance for each sum combination is used for SPLSR analysis.

**<Laptop Mode>**

Hotspot Point for Bottom of Laptop




| | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Case 1 | WCDMA II | Bottom of Laptop | 0.79 | 0mm | -69.3 | 148.9 | -0.34 | 176.6 | 1.33 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | WCDMA II | Bottom of Laptop | 0.79 | 0mm | -69.3 | 148.9 | -0.34 | 323.8 | 1.50 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WCDMA II | Bottom of Laptop | 0.79 | 0mm | -69.3 | 148.9 | -0.34 | 178.4 | 1.97 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | WCDMA II | Bottom of Laptop | 0.79 | 0mm | -69.3 | 148.9 | -0.34 | 312.4 | 1.69 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 2 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | WCDMA IV | Bottom of Laptop | 0.867 | 0mm | -69.5 | 150.5 | -0.34 | 177.2 | 1.41 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | WCDMA IV | Bottom of Laptop | 0.867 | 0mm | -69.5 | 150.5 | -0.34 | 325.2 | 1.57 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WCDMA IV | Bottom of Laptop | 0.867 | 0mm | -69.5 | 150.5 | -0.34 | 179.0 | 2.05 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | WCDMA IV | Bottom of Laptop | 0.867 | 0mm | -69.5 | 150.5 | -0.34 | 313.9 | 1.76 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 3 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | WCDMA V | Bottom of Laptop | 1.047 | 0mm | -63.4 | 155.1 | -0.33 | 172.7 | 1.59 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | WCDMA V | Bottom of Laptop | 1.047 | 0mm | -63.4 | 155.1 | -0.33 | 326.1 | 1.75 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WCDMA V | Bottom of Laptop | 1.047 | 0mm | -63.4 | 155.1 | -0.33 | 174.5 | 2.23 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | WCDMA V | Bottom of Laptop | 1.047 | 0mm | -63.4 | 155.1 | -0.33 | 314.2 | 1.94 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 4 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 7 | Bottom of Laptop | 1.173 | 0mm | -69.4 | 151 | 0.25 | 177.3 | 1.72 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 7 | Bottom of Laptop | 1.173 | 0mm | -69.4 | 151 | 0.25 | 325.6 | 1.88 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 7 | Bottom of Laptop | 1.173 | 0mm | -69.4 | 151 | 0.25 | 179.1 | 2.36 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 7 | Bottom of Laptop | 1.173 | 0mm | -69.4 | 151 | 0.25 | 314.2 | 2.07 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 5 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 12 | Bottom of Laptop | 1.197 | 0mm | -66.8 | 149.8 | 0.2 | 174.4 | 1.74 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 12 | Bottom of Laptop | 1.197 | 0mm | -66.8 | 149.8 | 0.2 | 323.2 | 1.90 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 12 | Bottom of Laptop | 1.197 | 0mm | -66.8 | 149.8 | 0.2 | 176.2 | 2.38 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 12 | Bottom of Laptop | 1.197 | 0mm | -66.8 | 149.8 | 0.2 | 311.7 | 2.09 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 6 | Band | Position | SAR | Gap | SAR peak location (mm) | | | 3D | Summed | SPLSR | Simultaneous |

| | | | (W/kg) | (mm) | X | Y | Z | distance (mm) | SAR (W/kg) | | SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 13 | Bottom of Laptop | 1.199 | 0mm | -64.6 | 153.9 | -0.57 | 173.5 | 1.74 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 13 | Bottom of Laptop | 1.199 | 0mm | -64.6 | 153.9 | -0.57 | 325.6 | 1.91 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 13 | Bottom of Laptop | 1.199 | 0mm | -64.6 | 153.9 | -0.57 | 175.3 | 2.38 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 13 | Bottom of Laptop | 1.199 | 0mm | -64.6 | 153.9 | -0.57 | 313.9 | 2.09 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 7 | LTE Band 14 | Bottom of Laptop | 1.184 | 0mm | -63 | 155.5 | -0.54 | 172.4 | 1.73 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 14 | Bottom of Laptop | 1.184 | 0mm | -63 | 155.5 | -0.54 | 326.2 | 1.89 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 14 | Bottom of Laptop | 1.184 | 0mm | -63 | 155.5 | -0.54 | 174.2 | 2.37 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 14 | Bottom of Laptop | 1.184 | 0mm | -63 | 155.5 | -0.54 | 314.3 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 8 | LTE Band 25 | Bottom of Laptop | 0.958 | 0mm | -69.3 | 150.5 | -0.34 | 177.0 | 1.50 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 25 | Bottom of Laptop | 0.958 | 0mm | -69.3 | 150.5 | -0.34 | 325.1 | 1.67 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 25 | Bottom of Laptop | 0.958 | 0mm | -69.3 | 150.5 | -0.34 | 178.9 | 2.14 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 25 | Bottom of Laptop | 0.958 | 0mm | -69.3 | 150.5 | -0.34 | 313.8 | 1.85 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 9 | LTE Band 26 | Bottom of Laptop | 1.179 | 0mm | -63.4 | 155.1 | -0.29 | 172.7 | 1.72 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 26 | Bottom of Laptop | 1.179 | 0mm | -63.4 | 155.1 | -0.29 | 326.1 | 1.89 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 26 | Bottom of Laptop | 1.179 | 0mm | -63.4 | 155.1 | -0.29 | 174.5 | 2.36 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 26 | Bottom of Laptop | 1.179 | 0mm | -63.4 | 155.1 | -0.29 | 314.2 | 2.07 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 10 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 30 | Bottom of Laptop | 1.193 | 0mm | -70.6 | 152.2 | -0.58 | 178.7 | 1.74 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 30 | Bottom of Laptop | 1.193 | 0mm | -70.6 | 152.2 | -0.58 | 327.3 | 1.90 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 30 | Bottom of Laptop | 1.193 | 0mm | -70.6 | 152.2 | -0.58 | 180.6 | 2.38 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 30 | Bottom of Laptop | 1.193 | 0mm | -70.6 | 152.2 | -0.58 | 315.9 | 2.09 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 11 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 41 | Bottom of Laptop | 1 | 0mm | -69.4 | 151 | 0.18 | 177.3 | 1.54 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 41 | Bottom of Laptop | 1 | 0mm | -69.4 | 151 | 0.18 | 325.6 | 1.71 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 41 | Bottom of Laptop | 1 | 0mm | -69.4 | 151 | 0.18 | 179.1 | 2.18 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 41 | Bottom of Laptop | 1 | 0mm | -69.4 | 151 | 0.18 | 314.2 | 1.90 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 13 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 48 | Bottom of Laptop | 1.197 | 0mm | -95 | -119.6 | 2.04 | 296.0 | 1.74 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 48 | Bottom of Laptop | 1.197 | 0mm | -95 | -119.6 | 2.04 | 195.0 | 1.90 | 0.01 | |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 48 | Bottom of Laptop | 1.197 | 0mm | -95 | -119.6 | 2.04 | 297.6 | 2.38 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 48 | Bottom of Laptop | 1.197 | 0mm | -95 | -119.6 | 2.04 | 207.1 | 2.09 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 14 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 66 | Bottom of Laptop | 1.091 | 0mm | -69.5 | 150.5 | -0.3 | 177.2 | 1.63 | 0.01 | Not required |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 66 | Bottom of Laptop | 1.091 | 0mm | -69.5 | 150.5 | -0.3 | 325.2 | 1.80 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 66 | Bottom of Laptop | 1.091 | 0mm | -69.5 | 150.5 | -0.3 | 179.0 | 2.27 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 66 | Bottom of Laptop | 1.091 | 0mm | -69.5 | 150.5 | -0.3 | 313.9 | 1.99 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 15 | LTE Band 71 | Bottom of Laptop | 0.89 | 0mm | -64.5 | 152.4 | -0.58 | 172.9 | 1.43 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 0mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 71 | Bottom of Laptop | 0.89 | 0mm | -64.5 | 152.4 | -0.58 | 324.3 | 1.60 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 0mm | 99.8 | -102 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 0mm | 101 | 102.2 | -0.22 | 208.3 | 0.73 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | LTE Band 71 | Bottom of Laptop | 0.89 | 0mm | -64.5 | 152.4 | -0.58 | 174.8 | 2.07 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 0mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 71 | Bottom of Laptop | 0.89 | 0mm | -64.5 | 152.4 | -0.58 | 312.6 | 1.79 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 0mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 0mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 16 | WCDMA II | Bottom of Laptop | 0.114 | 20mm | -71 | 142.8 | -2.71 | 176.7 | 0.66 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | WCDMA II | Bottom of Laptop | 0.114 | 20mm | -71 | 142.8 | -2.71 | 319.5 | 0.82 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | WCDMA II | Bottom of Laptop | 0.114 | 20mm | -71 | 142.8 | -2.71 | 178.6 | 1.30 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | WCDMA II | Bottom of Laptop | 0.114 | 20mm | -71 | 142.8 | -2.71 | 308.5 | 1.01 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 17 | WCDMA IV | Bottom of Laptop | 0.128 | 20mm | -68 | 142.7 | -2.73 | 173.8 | 0.67 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | WCDMA IV | Bottom of Laptop | 0.128 | 20mm | -68 | 142.7 | -2.73 | 317.8 | 0.84 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | WCDMA IV | Bottom of Laptop | 0.128 | 20mm | -68 | 142.7 | -2.73 | 175.7 | 1.31 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | WCDMA IV | Bottom of Laptop | 0.128 | 20mm | -68 | 142.7 | -2.73 | 306.7 | 1.02 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 18 | WCDMA V | Bottom of Laptop | 0.388 | 20mm | -63.9 | 139 | -0.77 | 169.0 | 0.93 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | WCDMA V | Bottom of Laptop | 0.388 | 20mm | -63.9 | 139 | -0.77 | 312.5 | 1.10 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | WCDMA V | Bottom of Laptop | 0.388 | 20mm | -63.9 | 139 | -0.77 | 170.8 | 1.57 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | WCDMA V | Bottom of Laptop | 0.388 | 20mm | -63.9 | 139 | -0.77 | 301.3 | 1.28 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 19 | LTE Band 7 | Bottom of Laptop | 0.382 | 20mm | -53.4 | 141.8 | -3.3 | 159.4 | 0.92 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 7 | Bottom of Laptop | 0.382 | 20mm | -53.4 | 141.8 | -3.3 | 309.6 | 1.09 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 7 | Bottom of Laptop | 0.382 | 20mm | -53.4 | 141.8 | -3.3 | 161.3 | 1.56 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 7 | Bottom of Laptop | 0.382 | 20mm | -53.4 | 141.8 | -3.3 | 297.6 | 1.28 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 20 | LTE Band 12 | Bottom of Laptop | 0.224 | 20mm | -71.4 | 139 | -0.69 | 176.3 | 0.77 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 12 | Bottom of Laptop | 0.224 | 20mm | -71.4 | 139 | -0.69 | 316.5 | 0.93 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 12 | Bottom of Laptop | 0.224 | 20mm | -71.4 | 139 | -0.69 | 178.2 | 1.41 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 12 | Bottom of Laptop | 0.224 | 20mm | -71.4 | 139 | -0.69 | 305.7 | 1.12 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 21 | LTE Band 13 | Bottom of Laptop | 0.171 | 20mm | -77.3 | 134.8 | -0.68 | 181.3 | 0.71 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 13 | Bottom of Laptop | 0.171 | 20mm | -77.3 | 134.8 | -0.68 | 316.2 | 0.88 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 13 | Bottom of Laptop | 0.171 | 20mm | -77.3 | 134.8 | -0.68 | 183.2 | 1.35 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 13 | Bottom of Laptop | 0.171 | 20mm | -77.3 | 134.8 | -0.68 | 305.9 | 1.07 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

| Case | Band | Position | SAR | Gap | SAR peak location (mm) | | | 3D | Summed | SPLSR | Simultaneous |
|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | (W/kg) | (mm) | X | Y | Z | distance (mm) | SAR (W/kg) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | | | | | | | | | | | |
| | LTE Band 14 | Bottom of Laptop | 0.187 | 20mm | -69.9 | 142.1 | -0.67 | 175.5 | 0.73 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 14 | Bottom of Laptop | 0.187 | 20mm | -69.9 | 142.1 | -0.67 | 318.3 | 0.89 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 14 | Bottom of Laptop | 0.187 | 20mm | -69.9 | 142.1 | -0.67 | 177.4 | 1.37 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 14 | Bottom of Laptop | 0.187 | 20mm | -69.9 | 142.1 | -0.67 | 307.3 | 1.08 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 23 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 25 | Bottom of Laptop | 0.147 | 20mm | -68 | 145.9 | -3.02 | 174.6 | 0.69 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 25 | Bottom of Laptop | 0.147 | 20mm | -68 | 145.9 | -3.02 | 320.5 | 0.85 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 25 | Bottom of Laptop | 0.147 | 20mm | -68 | 145.9 | -3.02 | 176.5 | 1.33 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 25 | Bottom of Laptop | 0.147 | 20mm | -68 | 145.9 | -3.02 | 309.3 | 1.04 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 24 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 26 | Bottom of Laptop | 0.25 | 20mm | -69.8 | 146.8 | -0.63 | 176.5 | 0.79 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 26 | Bottom of Laptop | 0.25 | 20mm | -69.8 | 146.8 | -0.63 | 322.2 | 0.96 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 26 | Bottom of Laptop | 0.25 | 20mm | -69.8 | 146.8 | -0.63 | 178.4 | 1.43 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 26 | Bottom of Laptop | 0.25 | 20mm | -69.8 | 146.8 | -0.63 | 311.0 | 1.15 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 25 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
| | LTE Band 30 | Bottom of Laptop | 0.308 | 20mm | -67.8 | 145.2 | -3.02 | 174.2 | 0.85 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 30 | Bottom of Laptop | 0.308 | 20mm | -67.8 | 145.2 | -3.02 | 319.8 | 1.02 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 30 | Bottom of Laptop | 0.308 | 20mm | -67.8 | 145.2 | -3.02 | 176.1 | 1.49 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 30 | Bottom of Laptop | 0.308 | 20mm | -67.8 | 145.2 | -3.02 | 308.6 | 1.20 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| Case 26 | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) X | Y | Z | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTE Band 41 | Bottom of Laptop | 0.217 | 20mm | -53.4 | 142.6 | -3.3 | 159.6 | 0.76 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 41 | Bottom of Laptop | 0.217 | 20mm | -53.4 | 142.6 | -3.3 | 310.3 | 0.92 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 41 | Bottom of Laptop | 0.217 | 20mm | -53.4 | 142.6 | -3.3 | 161.5 | 1.40 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 41 | Bottom of Laptop | 0.217 | 20mm | -53.4 | 142.6 | -3.3 | 298.3 | 1.11 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

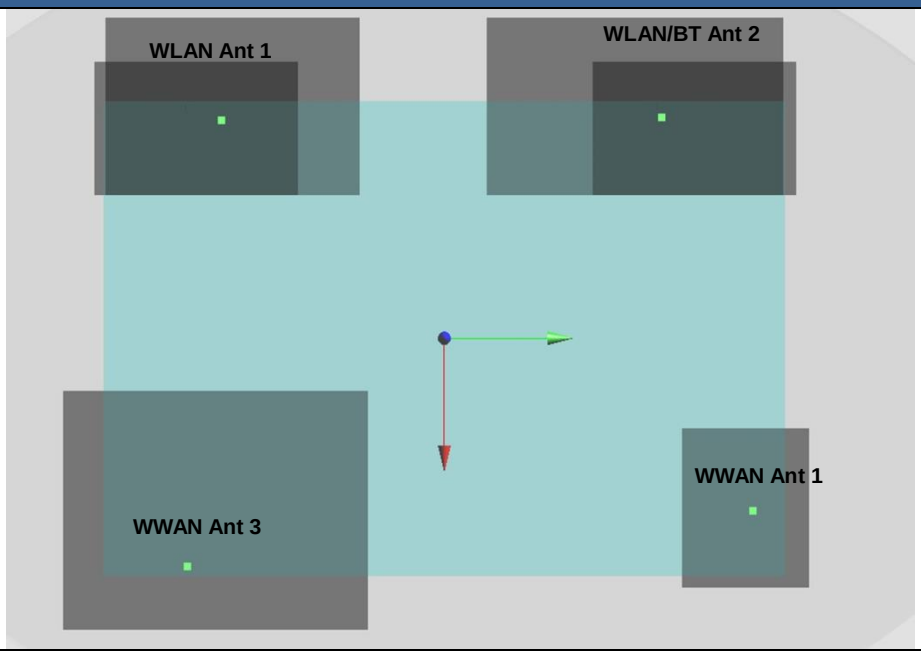
| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 27 | LTE Band 48 | Bottom of Laptop | 0.531 | 20mm | -93.8 | 145.2 | -0.38 | 199.5 | 1.07 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 48 | Bottom of Laptop | 0.531 | 20mm | -93.8 | 145.2 | -0.38 | 334.2 | 1.24 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 48 | Bottom of Laptop | 0.531 | 20mm | -93.8 | 145.2 | -0.38 | 201.4 | 1.71 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 48 | Bottom of Laptop | 0.531 | 20mm | -93.8 | 145.2 | -0.38 | 324.4 | 1.43 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 28 | LTE Band 66 | Bottom of Laptop | 0.14 | 20mm | -66.5 | 147.5 | -3.03 | 173.5 | 0.68 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 66 | Bottom of Laptop | 0.14 | 20mm | -66.5 | 147.5 | -3.03 | 321.1 | 0.85 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 66 | Bottom of Laptop | 0.14 | 20mm | -66.5 | 147.5 | -3.03 | 175.4 | 1.32 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 66 | Bottom of Laptop | 0.14 | 20mm | -66.5 | 147.5 | -3.03 | 309.7 | 1.04 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

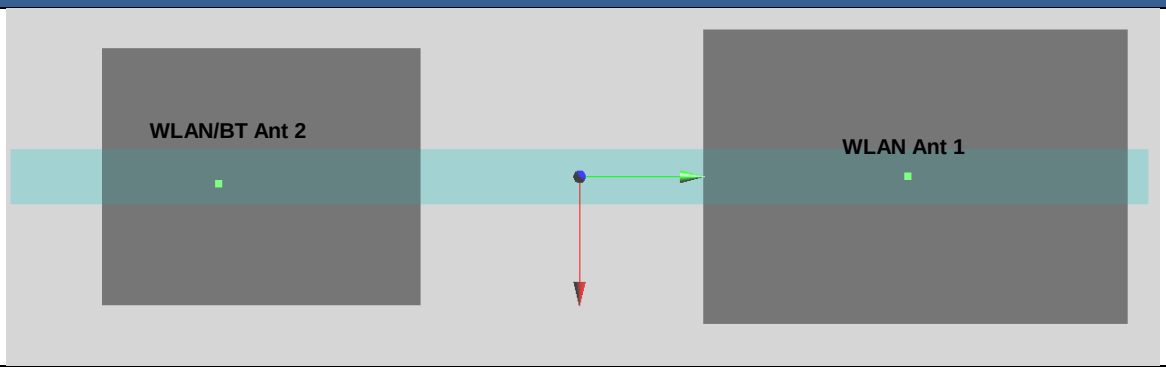
| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 29 | LTE Band 71 | Bottom of Laptop | 0.275 | 20mm | -66.9 | 142.2 | -0.73 | 172.6 | 0.82 | 0.00 | Not required |
| | WLAN 2.4G Ant 1 | | 0.542 | 20mm | 101 | 102.2 | -0.22 | | | | |
| | LTE Band 71 | Bottom of Laptop | 0.275 | 20mm | -66.9 | 142.2 | -0.73 | 316.8 | 0.98 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -127.2 | -0.26 | | | | |
| | WLAN 2.4G Ant 1 | Bottom of Laptop | 0.542 | 20mm | 101 | 102.2 | -0.22 | 204.2 | 1.25 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.707 | 20mm | 99.8 | -102 | -0.26 | | | | |
| | LTE Band 71 | Bottom of Laptop | 0.275 | 20mm | -66.9 | 142.2 | -0.73 | 174.5 | 1.46 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 1.182 | 20mm | 103 | 102.6 | 2.12 | | | | |
| | LTE Band 71 | Bottom of Laptop | 0.275 | 20mm | -66.9 | 142.2 | -0.73 | 305.6 | 1.17 | 0.00 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |
| | WLAN 5G Ant 1 | Bottom of Laptop | 1.182 | 20mm | 103 | 102.6 | 2.12 | 208.6 | 2.08 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.895 | 20mm | 111.6 | -105.8 | 4.71 | | | | |

**<Tablet Mode>**

Hotspot Point for Bottom Face




Hotspot Point for Edge 3




| | Band | Position | SAR (W/kg) | Gap (mm) | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | X | Y | Z | | | | |
| Case 1 | WCDMA II | Bottom Face | 1.196 | 0mm | 76.6 | 146.7 | -2.08 | 185.3 | 1.78 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | WCDMA II | Bottom Face | 1.196 | 0mm | 76.6 | 146.7 | -2.08 | 307.1 | 1.62 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WCDMA II | Bottom Face | 1.196 | 0mm | 76.6 | 146.7 | -2.08 | 187.8 | 1.78 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | WCDMA II | Bottom Face | 1.196 | 0mm | 76.6 | 146.7 | -2.08 | 313.4 | 1.93 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 2 | WCDMA IV | Bottom Face | 1.129 | 0mm | 76.5 | 146.7 | -2.07 | 185.2 | 1.72 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | WCDMA IV | Bottom Face | 1.129 | 0mm | 76.5 | 146.7 | -2.07 | 307.1 | 1.55 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WCDMA IV | Bottom Face | 1.129 | 0mm | 76.5 | 146.7 | -2.07 | 187.7 | 1.71 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | WCDMA IV | Bottom Face | 1.129 | 0mm | 76.5 | 146.7 | -2.07 | 313.4 | 1.86 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 1.129 | 0mm | 76.5 | 146.7 | -2.07 | 313.4 | 1.86 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 3 | LTE Band 7 | Bottom Face | 1.11 | 0mm | 76.2 | 147.6 | -1.87 | 185.2 | 1.70 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 7 | Bottom Face | 1.11 | 0mm | 76.2 | 147.6 | -1.87 | 307.6 | 1.54 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 7 | Bottom Face | 1.11 | 0mm | 76.2 | 147.6 | -1.87 | 187.6 | 1.69 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 7 | Bottom Face | 1.11 | 0mm | 76.2 | 147.6 | -1.87 | 313.9 | 1.84 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 4 | LTE Band 12 | Bottom Face | 1.189 | 0mm | 41.7 | 151.2 | -1.26 | 153.2 | 1.78 | 0.02 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 12 | Bottom Face | 1.189 | 0mm | 41.7 | 151.2 | -1.26 | 291.9 | 1.61 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 12 | Bottom Face | 1.189 | 0mm | 41.7 | 151.2 | -1.26 | 156.5 | 1.77 | 0.02 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 12 | Bottom Face | 1.189 | 0mm | 41.7 | 151.2 | -1.26 | 298.8 | 1.92 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 5 | LTE Band 13 | Bottom Face | 1.167 | 0mm | 75 | 148.1 | -1.53 | 184.1 | 1.75 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 13 | Bottom Face | 1.167 | 0mm | 75 | 148.1 | -1.53 | 307.3 | 1.59 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 13 | Bottom Face | 1.167 | 0mm | 75 | 148.1 | -1.53 | 186.6 | 1.75 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 13 | Bottom Face | 1.167 | 0mm | 75 | 148.1 | -1.53 | 313.7 | 1.90 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| Case 6 | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| | LTE Band 14 | Bottom Face | 0.91 | 0mm | 75 | 148.1 | -0.39 | 184.1 | 1.50 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 14 | Bottom Face | 0.91 | 0mm | 75 | 148.1 | -0.39 | 307.3 | 1.34 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 14 | Bottom Face | 0.91 | 0mm | 75 | 148.1 | -0.39 | 186.6 | 1.49 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 14 | Bottom Face | 0.91 | 0mm | 75 | 148.1 | -0.39 | 313.7 | 1.64 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| Case 7 | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| | LTE Band 25 | Bottom Face | 1.193 | 0mm | 75 | 145.2 | -2.33 | 183.4 | 1.78 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 25 | Bottom Face | 1.193 | 0mm | 75 | 145.2 | -2.33 | 305.0 | 1.62 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 25 | Bottom Face | 1.193 | 0mm | 75 | 145.2 | -2.33 | 185.8 | 1.78 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 25 | Bottom Face | 1.193 | 0mm | 75 | 145.2 | -2.33 | 311.3 | 1.93 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| Case 8 | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| | LTE Band 26 | Bottom Face | 0.984 | 0mm | 76.6 | 148.1 | -0.41 | 185.6 | 1.57 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 26 | Bottom Face | 0.984 | 0mm | 76.6 | 148.1 | -0.41 | 308.3 | 1.41 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 26 | Bottom Face | 0.984 | 0mm | 76.6 | 148.1 | -0.41 | 188.2 | 1.57 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 26 | Bottom Face | 0.984 | 0mm | 76.6 | 148.1 | -0.41 | 314.6 | 1.72 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 9 | LTE Band 30 | Bottom Face | 1.185 | 0mm | 76 | 147.6 | -1.9 | 185.0 | 1.77 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 30 | Bottom Face | 1.185 | 0mm | 76 | 147.6 | -1.9 | 307.5 | 1.61 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 30 | Bottom Face | 1.185 | 0mm | 76 | 147.6 | -1.9 | 187.5 | 1.77 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 30 | Bottom Face | 1.185 | 0mm | 76 | 147.6 | -1.9 | 313.8 | 1.92 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 10 | LTE Band 41 | Bottom Face | 0.776 | 0mm | 89.6 | 139.2 | 0.38 | 196.3 | 1.36 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 41 | Bottom Face | 0.776 | 0mm | 89.6 | 139.2 | 0.38 | 309.0 | 1.20 | 0.00 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 41 | Bottom Face | 0.776 | 0mm | 89.6 | 139.2 | 0.38 | 198.2 | 1.36 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 41 | Bottom Face | 0.776 | 0mm | 89.6 | 139.2 | 0.38 | 315.0 | 1.51 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 11 | LTE Band 48 | Bottom Face | 0.986 | 0mm | 103.2 | -124.2 | 1.13 | 304.8 | 1.57 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 48 | Bottom Face | 0.986 | 0mm | 103.2 | -124.2 | 1.13 | 208.0 | 1.41 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 48 | Bottom Face | 0.986 | 0mm | 103.2 | -124.2 | 1.13 | 297.6 | 1.57 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 48 | Bottom Face | 0.986 | 0mm | 103.2 | -124.2 | 1.13 | 206.3 | 1.72 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |

| | Band | Position | SAR (W/kg) | Gap | SAR peak location (mm) | | | 3D distance (mm) | Summed SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (mm) | X | Y | Z | | | | |
| Case 12 | LTE Band 66 | Bottom Face | 1.2 | 0mm | 76.5 | 146.7 | -1.87 | 185.2 | 1.79 | 0.01 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 66 | Bottom Face | 1.2 | 0mm | 76.5 | 146.7 | -1.87 | 307.1 | 1.63 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 66 | Bottom Face | 1.2 | 0mm | 76.5 | 146.7 | -1.87 | 187.7 | 1.78 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 66 | Bottom Face | 1.2 | 0mm | 76.5 | 146.7 | -1.87 | 313.4 | 1.93 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| Case 13 | **Band** | **Position** | **SAR (W/kg)** | **Gap** | **SAR peak location (mm)** | | | **3D distance (mm)** | **Summed SAR (W/kg)** | **SPLSR Results** | **Simultaneous SAR** |
| | | | | **(mm)** | **X** | **Y** | **Z** | | | | |
| | LTE Band 71 | Bottom Face | 1.164 | 0mm | 40.2 | 152.7 | -0.29 | 152.3 | 1.75 | 0.02 | Not required |
| | WLAN 2.4G Ant 1 | | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | | | | |
| | LTE Band 71 | Bottom Face | 1.164 | 0mm | 40.2 | 152.7 | -0.29 | 292.5 | 1.59 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 202.4 | 1.01 | 0.01 | Not required |
| | WLAN 2.4G Ant 2 | | 0.425 | 0mm | -103.6 | -102 | 0.17 | | | | |
| | WLAN 2.4G Ant 1 | Bottom Face | 0.587 | 0mm | -102.8 | 100.4 | 1.6 | 210.8 | 0.78 | 0.00 | Not required |
| | BT Ant 2 | | 0.188 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | LTE Band 71 | Bottom Face | 1.164 | 0mm | 40.2 | 152.7 | -0.29 | 155.7 | 1.75 | 0.01 | Not required |
| | WLAN 5G Ant 1 | | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | | | | |
| | LTE Band 71 | Bottom Face | 1.164 | 0mm | 40.2 | 152.7 | -0.29 | 299.4 | 1.90 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| | WLAN 5G Ant 1 | Bottom Face | 0.583 | 0mm | -102.6 | 90.8 | 2.05 | 201.2 | 1.32 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 0.732 | 0mm | -102.6 | -110.4 | 3.46 | | | | |
| Case 14 | **Band** | **Position** | **SAR (W/kg)** | **Gap** | **SAR peak location (mm)** | | | **3D distance (mm)** | **Summed SAR (W/kg)** | **SPLSR Results** | **Simultaneous SAR** |
| | | | | **(mm)** | **X** | **Y** | **Z** | | | | |
| | WLAN 5G Ant 1 | Edge 3 | 0.693 | 0mm | -3.2 | 93 | -0.11 | 192.7 | 1.76 | 0.01 | Not required |
| | WLAN 5G Ant 2 | | 1.063 | 0mm | -0.4 | -99.6 | 3.5 | | | | |
| | WLAN 5G Ant 1 | Edge 3 | 0.693 | 0mm | -3.2 | 93 | -0.11 | 192.7 | 1.94 | 0.01 | Not required |
| | WLAN 5G + BT Ant 2 | | 1.251 | 0mm | -0.4 | -99.6 | 3.5 | | | | |

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## 18. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg. Therefore, the measurement uncertainty table is not required in this report.

## 19. References


[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[6] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[7] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[8] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[9] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[10] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[11] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

[12] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[13] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.