

SAR TEST REPORT

For

Mobile Phone
Model Number: RMX3063
FCC ID: 2AUYFRMX3063

Report Number: WT208003086

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Test report declaration

Applicant : Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address : No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China.
Manufacturer : Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address : No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China.
EUT Description : Mobile Phone
Model No : **RMX3063**
Trade mark : realme

FCC ID: 2AUYFRMX3063;

Test Standards:

IEEE Std 1528-2013, KDB941225 D01, KDB941225 D05, KDB941225 D06, KDB447498

D01, KDB648474 D04, KDB248227 D01, KDB 865664 D01, KDB865664 D02, KDB690783 D01

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the compliance of the applicable standards stated above. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results.

The results documented in this report only apply to the tested sample, under the conditions and modes of operation as described herein.

The test report shall not be reproduced in part without written approval of the laboratory.

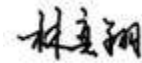
Project Engineer:



Date: Oct.30,2020

(Liu Zheng)

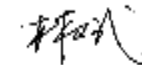
Checked by:



Date: Oct.30,2020

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Approved by:



Date: Oct.30,2020

(Lin Bin)

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1. REPORTED SAR SUMMARY

1.1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing are as follows.

| Band | Max Reported SAR(W/kg) | Max Reported SAR(W/kg) | Max Reported SAR(W/kg) | Max Reported SAR(W/kg) |
|--------------|------------------------|------------------------|----------------------------------|------------------------|
| | 1-g head | 1-g Hotspot Body(10mm) | 10-g Extremity Hotspot Body(0mm) | 1-g Body Worn(15mm) |
| GSM850 | 0.185 | 0.341 | 0.936 | 0.134 |
| PCS1900 | 0.161 | 0.132 | -- | 0.150 |
| WCDMA Band 2 | 0.174 | 0.089 | -- | 0.056 |
| WCDMA Band 4 | 0.324 | 0.080 | -- | 0.085 |
| WCDMA Band 5 | 0.202 | 0.307 | 1.733 | 0.141 |
| LTE Band 2 | 0.098 | 0.279 | -- | 0.124 |
| LTE Band 4 | 0.026 | 0.101 | -- | 0.038 |
| LTE Band 5 | 0.216 | 0.337 | -- | 0.154 |
| LTE Band 7 | 0.075 | 0.658 | 1.730 | 0.131 |
| LTE Band 12 | 0.156 | 0.242 | -- | 0.215 |
| LTE Band 17 | 0.163 | 0.243 | -- | 0.214 |
| LTE Band 26 | 0.205 | 0.257 | -- | 0.121 |
| LTE Band 38 | 0.022 | 0.167 | -- | 0.081 |
| LTE Band 41 | 0.042 | 0.151 | -- | 0.167 |
| LTE Band 66 | 0.022 | 0.137 | -- | 0.066 |
| Wi-Fi 2.4G | 0.533 | 0.162 | 0.931 | 0.043 |
| BT | 0.027 | 0.016 | 0.113 | 0.005 |

| | Maximum Report SAR (W/kg) | Limit (W/kg) | Verdict |
|------------------------|---------------------------|---------------|---------|
| Head | 0.533 | 1.6 | Pass |
| Hotspot Body | 0.658 | 1.6 | Pass |
| Body Worn | 0.215 | 1.6 | Pass |
| Extremity Hotspot Body | 1.733 | 4.0 | Pass |

| Highest Simultaneous SAR | | | | |
|--------------------------|----------------------------|-------------------------|---------------|---------|
| Position | Simultaneous Configuration | Simultaneous SAR (W/kg) | Limit (W/kg) | Verdict |
| Head | WCDMA Band V+2.4G WLAN | 0.538 | 1.6 | Pass |
| Hotspot Body | LTE Band 7 +2.4G WLAN | 0.732 | 1.6 | Pass |
| Body Worn | LTE Band 12 +2.4G WLAN | 0.253 | 1.6 | Pass |
| Extremity Hotspot Body | WCDMA Band V+2.4G WLAN | 2.542 | 4.0 | Pass |

Table 1: Summary of test result

Note:

*For body-worn operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and that positions the handset a minimum of 15mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The device is in compliance with Specific Absorption Rate (SAR) for general population/ uncontrolled exposure limits according to the FCC rule 2.1093 , the ANSI/IEEE C95.1:1992, the NCRP Report Number 86 for uncontrolled environment, according to the Industry Canada Radio Standards Specification RSS-102 for General Population/ Uncontrolled exposure, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013& IEEE Std 1528a-2005.

1.2. RF exposure limits

| Human Exposure | Uncontrolled Environment General Population | Controlled Environment Occupational |
|-------------------------------|--|--|
| Spatial Peak SAR*(Brain/Body) | 1.60mW/g | 8.00mW/g |

| | | |
|---------------------------------------|----------|-----------|
| Spatial Average SAR** (Whole Body) | 0.08mW/g | 0.40mW/g |
| Spatial Peak SAR***(Limbs) | 4.00mW/g | 20.00mW/g |

Table 2: RF exposure limits

The limit applied in this test report is shown in bold letters

Notes:

- * The Spatial Peak value of the SAR averaged over any 1 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time
- ** The Spatial Average value of the SAR averaged over the whole body.
- *** The Spatial Peak value of the SAR averaged over any 1 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time. Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. 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.)

1.3 Ratings and System Details

| | |
|----------------------------------|--|
| Product Name: | Mobile Phone |
| Model No.(EUT): | RMX3063 |
| Trade mark: | realme |
| EUT Supports Radios application: | <p>BT4.2, 2.1+EDR: 2402MHz to 2480MHz</p> <p>Wi-Fi : IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz</p> <p>IEEE 802.11n(HT40): 2422MHz to 2452MHz</p> <p>GPS: 1559MHz to 1610MHz</p> <p>GSM/GPRS/EDGE 850:</p> <p>Tx:824.20 -848.80MHz; Rx: 869.20 – 893.80MHz</p> <p>GSM/GPRS/EDGE 1900:</p> <p>Tx:1850.20 – 1909.80MHz; Rx:1930.20 – 1989.80MHz</p> <p>WCDMA/HSDPA/HSUPA/HSPA+(Down Link) Band V:</p> <p>Tx:826.40 -846.60MHz; Rx: 871.40 – 891.60MHz</p> <p>WCDMA/HSDPA/HSUPA/HSPA+(Down Link) Band II:</p> <p>Tx:1852.40 – 1907.60MHz; Rx:1932.40 – 1987.60MHz</p> <p>LTE Band 2:TX:1850MHz to 1910MHz RX:1930MHz to 1990MHz.</p> <p>LTE Band 4:TX:1710MHz to 1755MHz RX:2110MHz to 2155MHz.</p> <p>LTE Band 5:TX:824MHz to 849MHz RX:869MHz to 894MHz.</p> <p>LTE Band 7:TX:2500MHz to 2570MHz RX: 2620MHz to 2690MHz.</p> <p>LTE Band 12:TX:698MHz to 716MHz RX:729MHz to 746MHz.</p> <p>LTE Band 17:TX:704MHz to 716MHz RX:734MHz to 746MHz.</p> <p>LTE Band 26:TX:815MHz to 847MHz RX:860MHz to 892MHz.</p> <p>LTE Band 38: TX:2575MHz to 2620MHz RX: 2575MHz to 2620MHz</p> <p>LTE Band 41:TX:2555MHz to 2655 MHz RX: 2555MHz to 2655 MHz</p> <p>LTE Band 66:TX:1711MHz to 1770 MHz RX: 2111MHz to 2170 MHz</p> |
| Battery Model | BLP729 |
| Battery Specification | 3.87Vdc, 4880mAh 18.89Wh Lithium Battery |
| Battery Applicant 1# | Huizhou Desay Battery Co., Ltd. |
| Battery Applicant 2# | Sunwoda Electronic Co., Ltd. |
| Hardware version: | 11 |

| | |
|-------------------|----------------|
| Software version: | realme UI V1.0 |
|-------------------|----------------|

1.4 Product Function and Intended Use

RMX3063 is subscriber equipment in the GSM/UMTS/LTE system.

The GSM frequency band is 850MHz, 900MHz,1800MHz and 1900MHz , only 850MHz and 1900MHz can be used in this report. The UMTS frequency band is Band1, Band2, Band4, Band5 and Band 8 , only Band2 and Band5 can be used in this report. The LTE frequency band is Band 1, Band 2, Band 3, Band 4, Band 5, Band 7, Band 8, Band 12, Band 17, Band 20,Band 26, Band 28,Band 38, Band 40,Band 41, Band 66, only Band 2,4,5,7,12,17,26,38,41,66 can be used in this report. The Mobile Phone implements such functions as RF signal receiving/transmitting, HSUPA/HSDPA/UMTS and GSM/GPRS/EDGE protocol processing, voice, video, MMS service, GPS, AGPS and WIFI etc. Externally it provides micro SD card interface, earphone port (to provide voice service) and Micro USIM card interface.

1.5 Power Reduction Description

This device uses the hotspot function status as indicator of power reduction.

When the hotspot indicator is set to on, which indicating the device is in hotspot mode and the software will trigger to reduced the power.

Body exposure conditions

Once the device is set to hotspot mode, Power reduction will be enabled for -GSM1900, WCDM A B2/4, LTE B2/4/7/38/41/66 and Wi-Fi 2.4G.

1.6 Test specification(s)

| | |
|--|--|
| IEEE Std 1528-2013 | Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques |
| KDB941225 D01 SAR test for 3G devices v03r01 | 3G SAR MEAUREMENT PROCEDURES |
| KDB941225 D05 SAR for LTE Devices v02r05 | SAR Evaluation Considerations for LTE Devices |
| KDB941225 D06 Hotspot Mode v02r01 | SAR Evaluation Procedures for portable Devices with Wireless Router Capabilities |

| | |
|--|---|
| KDB447498 D01 General RF Exposure Guidance v06 | Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies |
| KDB 648474 D04 Handset SAR v01r03 | SAR Evaluation Considerations for Wireless Handsets. |
| KDB 248227 D01 802.11 Wi-Fi SAR v02r02 | SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS |
| KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04 | SAR Measurement Requirements for 100 MHz to 6 GHz |
| KDB 865664 D02 RF Exposure Reporting v01r02 | RF Exposure Compliance Reporting and Documentation Considerations |
| KDB 690783 D01 SAR Listings on Grants v01r03 | SAR Listings on Equipment Authorization Grants |

1.7 List of Test and Measurement Instruments

| | Equipment | Model No. | Serial No. | Manufacturer | Last Calibration Date | Period |
|-------------------------------------|-----------------------------|-----------|----------------------|--------------|-----------------------|--------|
| <input checked="" type="checkbox"/> | SAR test system | TX60L | F08/5AY8A1/A/01+F08/ | SPEAG | NCR | NCR |
| <input checked="" type="checkbox"/> | Electronic Data Transmitter | DAE4 | 876 | SPEAG | 2020.03.03 | 1year |
| <input checked="" type="checkbox"/> | SAR Probe | EX3DV4 | 3881 | SPEAG | 2020.06.16 | 1year |
| <input checked="" type="checkbox"/> | Software | 85070 | -- | Agilent | -- | -- |
| <input checked="" type="checkbox"/> | Software | DASY5 | -- | SPEAG | -- | -- |
| <input checked="" type="checkbox"/> | System Validation | D750V3 | 1103 | SPEAG | 2020.01.06 | 3year |

| | | | | | | |
|-------------------------------------|---|---------|-------------|---------------|------------|-------|
| | Dipole,750MHz | | | | | |
| <input type="checkbox"/> | System Validation Dipole,835MHz | D835V2 | 4d141 | SPEAG | 2018.09.06 | 3year |
| <input checked="" type="checkbox"/> | System Validation Dipole,900MHz | D900V2 | 1d077 | SPEAG | 2018.09.07 | 3year |
| <input checked="" type="checkbox"/> | System Validation Dipole,1800MHz | D1800V2 | 2d171 | SPEAG | 2018.09.12 | 3year |
| <input checked="" type="checkbox"/> | System Validation Dipole,1900MHz | D1900V2 | 5d162 | SPEAG | 2018.09.11 | 3year |
| <input type="checkbox"/> | System Validation Dipole,2300MHz | D2300V2 | 1034 | SPEAG | 2020.01.02 | 3year |
| <input checked="" type="checkbox"/> | System Validation Dipole,2450MHz | D2450V2 | 818 | SPEAG | 2018.08.31 | 3year |
| <input checked="" type="checkbox"/> | System Validation Dipole,2600MHz | D2600V2 | 1074 | SPEAG | 2020.01.02 | 3year |
| <input checked="" type="checkbox"/> | System Validation Dipole,1750MHz | D1750V2 | 1108 | SPEAG | 2020.01.03 | 3year |
| <input checked="" type="checkbox"/> | System Validation Dipole,5GHz | D5GzV2 | 1185 | SPEAG | 2019.12.31 | 3year |
| <input checked="" type="checkbox"/> | Dielectric Probe Kit | 85070E | MY44300455 | Agilent | NCR | NCR |
| <input checked="" type="checkbox"/> | Dual-directional coupler,0.10-2.0GHz | 778D | MY48220198 | Agilent | NCR | NCR |
| <input checked="" type="checkbox"/> | Dual-directional coupler,2.00-18GHz | 772D | MY46151160 | Agilent | NCR | NCR |
| <input checked="" type="checkbox"/> | Power Amplifier | ZVE-8G | SC280800926 | MINI-CIRCUITS | NCR | NCR |
| <input checked="" type="checkbox"/> | Power Amplifier | ZHL42W | 81709 | MINI-CIRCUITS | NCR | NCR |
| <input checked="" type="checkbox"/> | Signal Generator | SMR20 | 100047 | R&S | 2020.02.20 | 1year |
| <input checked="" type="checkbox"/> | Power Sensor | NRP-Z21 | 102626 | R&S | 2020.06.04 | 1year |
| <input checked="" type="checkbox"/> | Power Sensor | NRP-Z21 | 102627 | R&S | 2020.06.04 | 1year |
| <input checked="" type="checkbox"/> | Call Tester | CMU 200 | 100110 | R&S | 2019.12.02 | 1year |
| <input checked="" type="checkbox"/> | Network Analyzer | E5071C | MY46109550 | Agilent | 2020.02.20 | 1Year |
| <input checked="" type="checkbox"/> | Flat Phantom | ELI4.0 | TP-1904 | SPEAG | NCR | NCR |
| <input checked="" type="checkbox"/> | Twin Phantom | SAM | TP-1504 | SPEAG | NCR | NCR |
| <input checked="" type="checkbox"/> | Wideband Radio Communication Tester | CMW500 | 125469 | R&S | 2019.10.24 | 1Year |
| <input checked="" type="checkbox"/> | Precision | -- | -- | -- | 2020.08.07 | 1Year |

| | | | | | | |
|--|-------------|--|--|--|--|--|
| | Thermometer | | | | | |
|--|-------------|--|--|--|--|--|

Table 3: List of Test and Measurement Equipment

Note: All the test equipments are calibrated once a year, except the dipoles, which are calibrated every three years. Moreover, we have self-calibration every year to the dipoles.

2. GENERAL INFORMATION

2.1. Report information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

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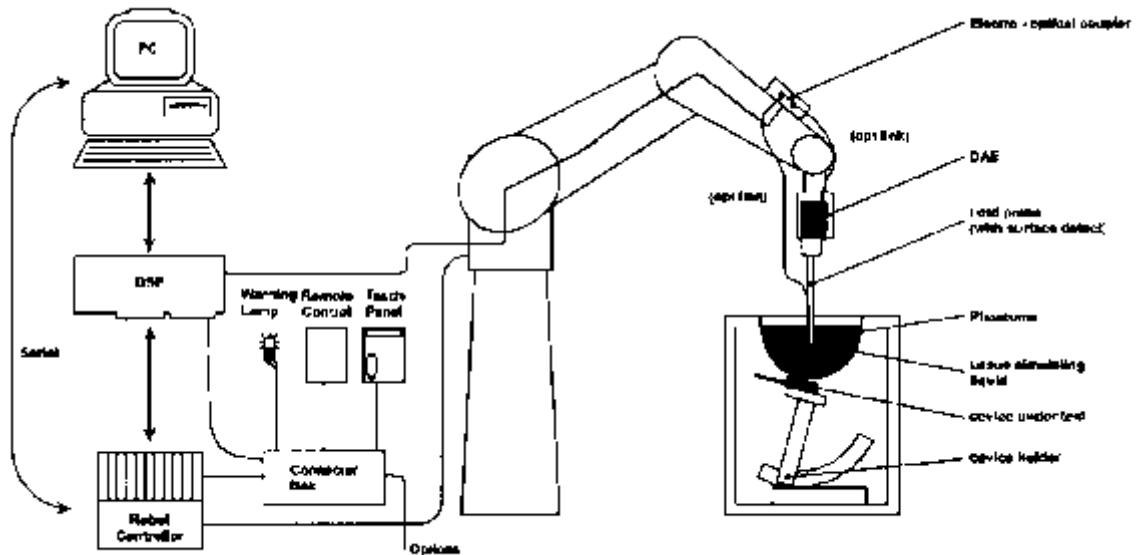
The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations: China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Industry Canada (IC), and the registration number is 11177A.

3. SAR MEASUREMENT SYSTEM CONFIGURATION

3.1. SAR Measurement Set-up



The DASY5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronic (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.
- A unit to operate the optical surface detector which is connected to the EOC.
- The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
- The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation.
- A computer operating Windows XP.
- DASY5 software and SEMCAD data evaluation software.



Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.

- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- System checks dipoles allowing validating the proper functioning of the system.
- Test environment
- The DASY5 measurement system is placed at the head end of a room with dimensions: 4.5 x 4 x 3 m³, the SAM phantom is placed in a distance of 1.3 m from the side walls and 1.1m from the rear wall.

Picture 1 of the photo documentation shows a complete view of the test environment.

3.2. Probe description

Isotropic E-Field Probe EX3DV4 for Dosimetric Measurements

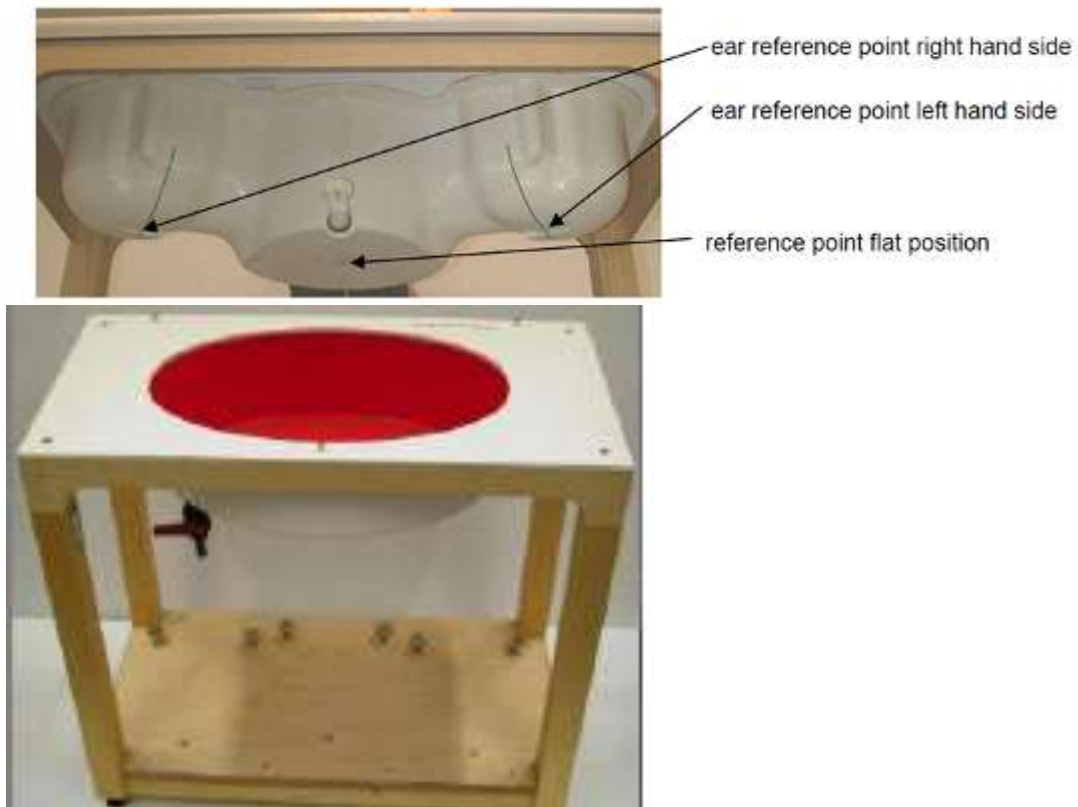
| | | |
|---------------|--|---|
| Construction | Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |  |
| Calibration | ISO/IEC 17025 calibration service available. | |
| Frequency | 10 MHz to >6 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 6 GHz) |  |
| Directivity | ± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis) | |
| Dynamic range | 10 µW/g to > 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 µW/g) | |
| Dimensions | Overall length: 337 mm (Tip: 20mm) Tip length: 2.5 mm (Body: 12mm) Typical distance from probe tip to dipole centers: 1mm | |

| | | |
|-------------|---|--|
| Application | High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%. | |
|-------------|---|--|

3.3. Phantom description

The used SAM Phantom meets the requirements specified in Edition 01-01 of Supplement C to OET Bulletin 65 for Specific Absorption Rate (SAR) measurements.

The phantom consists of a fibreglass shell integrated in a wooden table. It allows left-hand and right-hand head as well as body-worn measurements with a maximum liquid depth of 18 cm in head position and 22 cm in planar position (body measurements). The thickness of the Phantom shell is 2 mm +/- 0.1 mm.



ELI4 Phantom

| | |
|-------------------|-------------------------|
| Shell Thickness | 2mm+/- 0.2mm |
| Filling Volume | Approximately 30 liters |
| Measurement Areas | Flat phantom |

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6GHz. ELI4 is fully compatible with the latest draft of the standard IEC 62209-2 and all known tissue simulating liquids.

The phantom shell material is resistant to all ingredients used in the tissue-equivalent liquid recipes. The shell of the phantom including ear spacers is constructed from low permittivity and low loss material, with a relative permittivity ≤ 5 and a loss tangent ≤ 0.05 .

3.4. Device holder description

The DASY5 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65° . The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard



mobile phones or PDA's only. If necessary an additional support of polystyrene material is used.

Larger DUT's (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values.

Therefore those devices are normally only tested at the flat part of the SAM.

4. SAR MEASUREMENT PROCEDURE

4.1. Scanning procedure

- The DASY5 installation includes predefined files with recommended procedures for measurements and system check. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.
- The reference and drift measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT's output power and should vary max. +/- 5 %.
- The surface check measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above $\pm 0.1\text{mm}$). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within $\pm 30^\circ$.)
- The area scan measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strength is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement. Standard grid spacing for head measurements is 15 mm in x- and y- dimension ($\leq 2\text{GHz}$), 12 mm in x- and y- dimension (2-4 GHz) and 10mm in x- and y- dimension (4-6GHz). If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in

orientation.

Results of this coarse scan are shown in Appendix B.

- A “zoom scan” measures the field in a volume around the 2D peak SAR value acquired in the previous “coarse” scan. This is a fine grid with maximum scan spatial resolution: Δx_{zoom} , $\Delta y_{zoom} \leq 2\text{GHz} \leq 8 \text{ mm}$, $2\text{-}4\text{GHz} - \leq 5 \text{ mm}$ and $4\text{-}6 \text{ GHz} - \leq 4 \text{ mm}$; $\Delta z_{zoom} \leq 3\text{GHz} - \leq 5 \text{ mm}$, $3\text{-}4 \text{ GHz} - \leq 4 \text{ mm}$ and $4\text{-}6\text{GHz} - \leq 2\text{mm}$ where the robot additionally moves the probe along the z-axis away from the bottom of the Phantom. DASY5 is also able to perform repeated zoom scans if more than 1 peak is found during area scan. Test results relevant for the specified standard (see chapter 1.5.) are shown in table form in chapter 3.2.
- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 2mm steps. This measurement shows the continuity of the liquid and can – depending in the field strength- also show the liquid depth. A z-axis scan of the measurement with maximum SAR value is shown in Appendix B.

The following table summarizes the area scan and zoom scan resolutions per FCC KDB 865664D01:

| Frequency | Maximum Area Scan resolution ($\Delta x_{area}, \Delta y_{area}$) | Maximum Zoom Scan spatial resolution ($\Delta x_{zoom}, \Delta y_{zoom}$) | Maximum Zoom Scan spatial resolution | | | Minimum zoom scan volume (x,y,z) |
|--------------------|---|---|--------------------------------------|----------------------|-----------------------------------|----------------------------------|
| | | | Uniform Grid | Graded Grad | | |
| | | | | $\Delta z_{zoom}(n)$ | $\Delta z_{zoom}(1)$ | |
| $\leq 2\text{GHz}$ | $\leq 15\text{mm}$ | $\leq 8\text{mm}$ | $\leq 5\text{mm}$ | $\leq 4\text{mm}$ | $\leq 1.5 * \Delta z_{zoom}(n-1)$ | $\geq 30\text{mm}$ |
| 2-3GHz | $\leq 12\text{mm}$ | $\leq 5\text{mm}$ | $\leq 5\text{mm}$ | $\leq 4\text{mm}$ | $\leq 1.5 * \Delta z_{zoom}(n-1)$ | $\geq 30\text{mm}$ |
| 3-4GHz | $\leq 10\text{mm}$ | $\leq 5\text{mm}$ | $\leq 4\text{mm}$ | $\leq 3\text{mm}$ | $\leq 1.5 * \Delta z_{zoom}(n-1)$ | $\geq 28\text{mm}$ |
| 4-5GHz | $\leq 10\text{mm}$ | $\leq 4\text{mm}$ | $\leq 3\text{mm}$ | $\leq 2.5\text{mm}$ | $\leq 1.5 * \Delta z_{zoom}(n-1)$ | $\geq 25\text{mm}$ |
| 5-6GHz | $\leq 10\text{mm}$ | $\leq 4\text{mm}$ | $\leq 2\text{mm}$ | $\leq 2\text{mm}$ | \leq | $\geq 22\text{mm}$ |

| | | | | | | |
|--|--|--|--|--|------------------------------------|--|
| | | | | | 1.5* $\Delta z_{\text{zoom}}(n-1)$ | |
|--|--|--|--|--|------------------------------------|--|

Spatial Peak SAR Evaluation

- The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The bases of the evaluation are the SAR values measured at the points of the fine cube grid consisting of 5 x 5 x 7 points (with 8mm horizontal resolution) or 7 x 7 x 7 points (with 5mm horizontal resolution).
- The algorithm that finds the maximal averaged volume is separated into three different stages.
- The data between the dipole center of the probe and the surface of the phantom are extrapolated. This data cannot be measured since the center of the dipole is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is about 1 mm (see probe calibration sheet). The extrapolated data from a cube measurement can be visualized by selecting 'Graph Evaluated'.
- The maximum interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.
- All neighboring volumes are evaluated until no neighboring volume with a higher average value is found.
- Extrapolation
- The extrapolation is based on a least square algorithm [W. Gander, Computermathematik, p.168-180]. Through the points in the first 3 cm along the z-axis, polynomials of order four are calculated. These polynomials are then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from each other.

Interpolation

- The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition [W. Gander, Computermathematik, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff].
- Volume Averaging
- At First the size of the cube is calculated. Then the volume is integrated with the trapezoidal algorithm. 8000 points (20x20x20) are interpolated to calculate the average.
- Advanced Extrapolation

- DASY5 uses the advanced extrapolation option which is able to compensate boundary effects on E-field probes.

4.1.1. Data Storage and Evaluation

Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension DAE4. The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

| | | |
|---------------------------|----------------|----------------------|
| Probe parameters: | - Sensitivity | Normi, ai0, ai1, ai2 |
| - Conversion factor | ConvFi | |
| - Diode compression point | Dcpi | |
| Device parameters: | - Frequency | f |
| - Crest factor | cf | |
| Media parameters: | - Conductivity | σ |
| - Density | ρ | |

These parameters must be set correctly in the software. They can be found in the component

documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot cf/dcpi$$

with V_i = compensated signal of channel i ($i = x, y, z$)

U_i = input signal of channel i ($i = x, y, z$)

cf = crest factor of exciting field (DASY parameter)

$dcpi$ = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$

H-field probes: $H_i = (V_i)^{1/2} \cdot (ai_0 + ai_1f + ai_2f^2)/f$

with V_i = compensated signal of channel i ($i = x, y, z$)

$Norm_i$ = sensor sensitivity of channel i ($i = x, y, z$)

[mV/(V/m)²] for E-field Probes

$ConvF$ = sensitivity enhancement in solution

ai_j = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_x^2 + E_y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = (E_{tot}^2 \cdot \sigma) / (\rho \cdot 1000)$$

with SAR = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m

σ = conductivity in [mho/m] or [Siemens/m]

ρ = equivalent tissue density in g/cm³

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \quad \text{or} \quad P_{pwe} = H_{tot}^2 \cdot 37.7$$

with P_{pwe} = equivalent power density of a plane wave in mW/cm²

E_{tot} = total electric field strength in V/m

H_{tot} = total magnetic field strength in A/m

5. SYSTEM VERIFICATION PROCEDURE

5.1. Tissue Verification

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within $\pm 5\%$ of the target values.

The following materials are used for producing the tissue-equivalent materials

| Ingredient (% by weight) | Head Tissue | | | | | |
|------------------------------|-------------|-------|-------|------|--------|-------|
| | 835 | 1750 | 1900 | 2450 | 2600 | 5G |
| Water | 41.45 | 52.64 | 55.24 | 62.7 | 55.242 | 56 |
| Salt(NaCl) | 1.45 | 0.36 | 0.306 | 0.5 | 0.306 | 0.0 |
| Sugar | 56.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HEC | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bactericide | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Triton X-100 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.24 |
| DGBE | 0.0 | 47.0 | 44.54 | 36.8 | 44.452 | 0.0 |

Table 4 : Tissue Dielectric Properties

Salt: 99+% Pure Sodium Chloride; Sugar: 98+% Pure Sucrose; Water: De-ionized, 16M Ω + resistivity

HEC: Hydroxyethyl Cellulose; DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100(ultra pure): Polyethylene glycol mono[4-(1,1,3,3-tetramethylbutyl)phenyl]ether

Head & Body Tissue-equivalent liquid measurements:

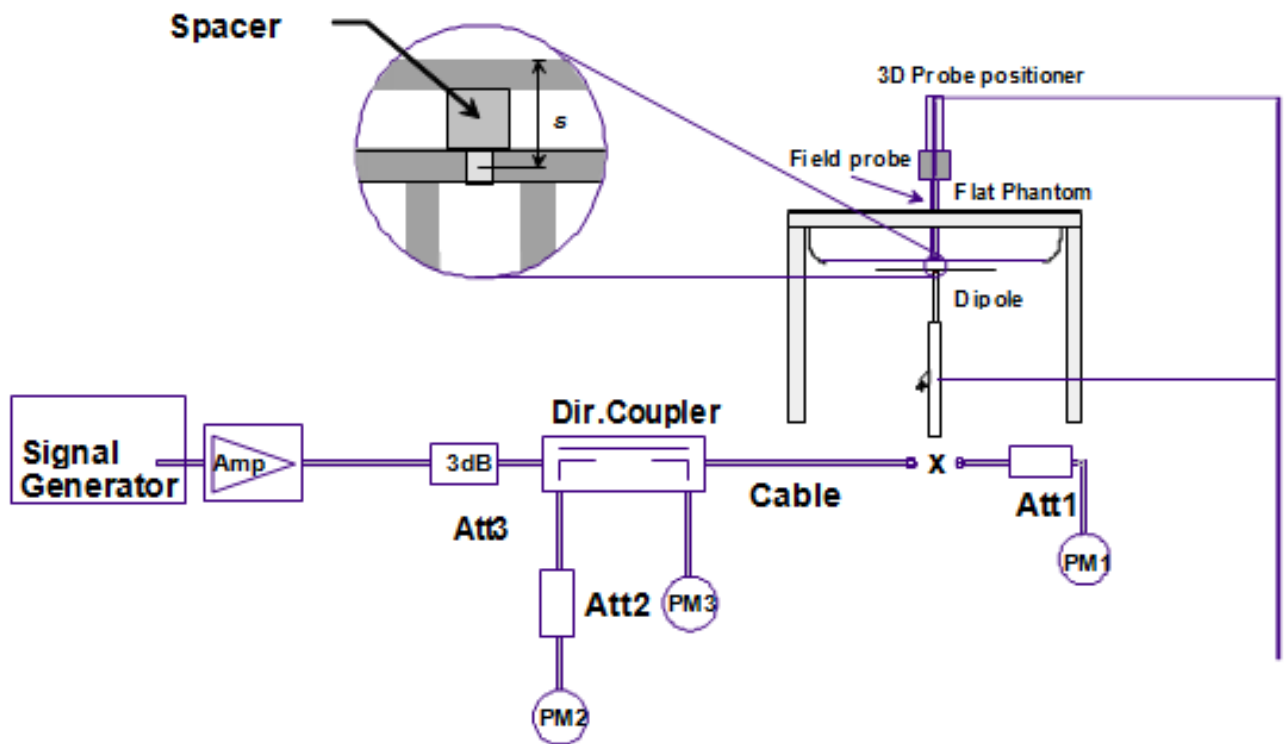
| Used Target Frequency | Target Tissue | | Measured Tissue | | Liquid Temp | Test Date |
|---|-------------------------|---------------------------|--------------------|-------------------|----------------|------------|
| | ϵ_r (+/-5%) | σ (S/m) (+/-5%) | ϵ_r | σ (S/m) | | |
| 750MHz Head | 43.19 (41.03~45.35) | 0.89 (0.85~0.93) | 41.30 | 0.88 | 22°C | 2020.10.16 |
| 835MHz Head | 42.77 (40.63~44.91) | 0.93 (0.88~0.98) | 42.20 | 0.93 | 21°C | 2020.10.17 |
| 1750MHz Head | 39.31 (37.34~41.28) | 1.35 (1.28~1.42) | 39.72 | 1.40 | 21°C | 2020.10.18 |
| 1900MHz Head | 38.81 (36.87~40.75) | 1.39 (1.32~1.46) | 39.65 | 1.43 | 22°C | 2020.10.19 |
| 2300MHz Head | 38.91 (36.87~40.75) | 1.62 (1.46~1.78) | 38.45 | 1.48 | 22°C | 2020.10.20 |
| 2450MHz Head | 39.60 (37.62~41.58) | 1.75 (1.66~1.84) | 37.97 | 1.76 | 21°C | 2020.10.21 |
| 2600MHz Head | 40.40 (38.38~42.42) | 2.04 (1.94~2.14) | 37.70 | 1.88 | 21°C | 2020.10.22 |
| ϵ_r = Relative permittivity, σ = Conductivity | | | | | | |

System checking, Head & Body Tissue-equivalent liquid:

| System Check | Target SAR (1W) (+/-10%) | | Measured SAR (Normalized to 1W) | | Liquid Temp. | Test Date |
|-----------------|--------------------------|-----------------------|---------------------------------|-------------|--------------|------------|
| | 1-g (W/kg) | 10-g (W/kg) | 1-g (W/kg) | 10-g (W/kg) | | |
| D750V2 Head | 8.66 (7.79~9.53) | 5.83 (5.25~6.41) | 8.16 | 5.36 | 22°C | 2020.10.16 |
| D835V2 Head | 9.31 (8.38~10.24) | 6.13 (5.52~6.74) | 9.24 | 6.04 | 21°C | 2020.10.17 |
| D1750V2 Head | 35.7 (33.13~39.27) | 18.8 (16.92~20.68) | 36.04 | 18.80 | 21°C | 2020.10.18 |
| D1900V2 Head | 39.8 (35.82~43.78) | 21.1 (18.99~23.21) | 36.92 | 19.28 | 22°C | 2020.10.19 |
| D2300V2 Head | 47.5 (42.75~52.25) | 22.4 (20.16~24.64) | 49.20 | 23.96 | 22°C | 2020.10.20 |
| D2450V2 Head | 53.1 (47.79~58.41) | 24.7 (22.23~27.17) | 50.40 | 26.60 | 21°C | 2020.10.21 |
| D2600V3 Head | 56.9 (51.21~62.59) | 25.2 (22.68~27.72) | 54.80 | 25.00 | 21°C | 2020.10.22 |

System Checking

The manufacturer calibrates the probes annually. A system check measurement was made following the determination of the dielectric parameters of the tissue-equivalent liquid, using the dipole validation kit. A power level of 250mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom.



The system checking results (dielectric parameters and SAR values) are given in the table below.

The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE P1528 (described above). The following table shows system check results for all frequency bands and tissue liquids used during the tests (Graphic Plot(s) see Appendix A).

6. SAR MEASUREMENT VARIABILITY AND UNCERTAINTY

6.1. SAR measurement variability

Per KDB865664 D01 SAR measurement 100MHz to 6GHz v01r04, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurement requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

- 1) Repeated measurement is not required when the original highest measured SAR is <0.80 W/kg; step2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.8 W/kg , repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is >1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is >1.20 .

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

6.2. SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100MHz to 6GHz v01r03, when the highest measured 1-g SAR within a frequency band is <1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2003 is not required in SAR reports submitted for equipment approval. The equivalent ratio(1.5/1.6) is applied to

extremity and occupational exposure conditions.

7. Test Configuration

The DUT is tested using a CMU 200 or E5515C communications tester as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted peak power.

Test positions as described in the tables above are in accordance with the specified test standard.

GSM Test Configuration

The tests for GSM850 and GSM1900, a communication link is set up with a System Simulator by air link. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 975, 37 and 124 respectively in the case of GSM900, to 512, 698 and 885 respectively in the case of GSM1900. The tests in the band of GSM850 and GSM1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 10 for this EUT, it has at most 2 timeslots in Up antenna and at most 4 timeslots in Down antenna, the maximum total timeslot is 5. The EGPRS class is 10 for this EUT, it has at most 2 timeslots in Up antenna, and at most 4 timeslots in Down antenna, the maximum total timeslot is 5. The device output power was set to maximum power level for all tests. Using CMU200 the power control level is set to “5”for GSM850, set to “0”for GSM1900.

WCDMA Test Configuration

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

| | Mode | Rel99 |
|------------------------|-------------------------|--------------|
| | Subtest | --- |
| WCDMA General Settings | Loopback Mode | Test Mode 1 |
| | Rel99 RMC | 12.2kbps RMC |
| | Power Control Algorithm | Algorithm2 |
| | β_c / β_d | 8/15 |

Handsets with Release 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the “Release 5 HSDPA Data Devices” section of this document, for the highest reported SAR body-worn accessory exposure configuration in 12.2 kbps RMC. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

HSDPA should be configured according to the UE category of a test device. The number of HSDSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

| Sub-set | β_c | β_d | β_d (SF) | β_c/β_d | β_{hs} (note 1, note 2) | CM(dB) (note 3) | MPR(dB) |
|---------|-------------------|-------------------|-------------------|-------------------|----------------------------------|--------------------|---------|
| 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 |

Note1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8$ $\beta_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$
Note2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.
Note3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TFC1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

HSUPA Test Configuration

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices” section of this document, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory

measurements is tested for next to the ear head exposure.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in Table 2 and other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Devices' sections of this document

| Sub-set | β_c | β_d | β_d (SF) | β_c/β_d | $\beta_{hs}^{(1)}$ | β_{ec} | β_{ed} | β_{ed} (SF) | β_{ed} (codes) | CM ⁽²⁾ (dB) | MPR (dB) | AG ⁽⁴⁾ Index | E-TFCI |
|---------|----------------------|----------------------|----------------|----------------------|--------------------|--------------|--|-------------------|----------------------|------------------------|----------|-------------------------|--------|
| 1 | 11/15 ⁽³⁾ | 15/15 ⁽³⁾ | 64 | 11/15 ⁽³⁾ | 22/15 | 209/225 | 1039/225 | 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 | β_{ed1} :47/15 β_{ed2} :47/15 | 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 ⁽⁴⁾ | 15/15 ⁽⁴⁾ | 64 | 15/15 ⁽⁴⁾ | 30/15 | 24/15 | 134/15 | 4 | 1 | 1.0 | 0.0 | 21 | 81 |

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

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 β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.

Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

| UE E-DCH Category | Maximum E-DCH Codes Transmitted | Number of HARQ Processes | E-DCH TTI (ms) | Minimum Spreading Factor | Maximum E-DCH Transport Block Bits | Max Rate (Mbps) |
|-------------------|---------------------------------|--------------------------|----------------|--------------------------|------------------------------------|-----------------|
| 1 | 1 | 4 | 10 | 4 | 7110 | 0.7296 |
| 2 | 2 | 8 | 2 | 4 | 2798 | 1.4592 |
| | 2 | 4 | 10 | 4 | 14484 | |
| 3 | 2 | 4 | 10 | 4 | 14484 | 1.4592 |
| 4 | 2 | 8 | 2 | 2 | 5772 | 2.9185 |
| | 2 | 4 | 10 | 2 | 20000 | 2.00 |
| 5 | 2 | 4 | 10 | 2 | 20000 | 2.00 |
| 6 (No DPDCH) | 4 | 8 | 2 | 2 SF2 & 2 SF4 | 11484 | 5.76 |
| | 4 | 4 | 10 | | 20000 | 2.00 |
| 7 (No DPDCH) | 4 | 8 | 2 | 2 SF2 & 2 SF4 | 22996 | ? |
| | 4 | 4 | 10 | | 20000 | ? |

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.
UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM. (TS25.306-7.3.0)

HSPA, HSPA+ and DC-HSDPA Test Configuration

measurement is required for HSPA, HSPA+ or DC-HSDPA, a KDB inquiry is required to confirm that the wireless mode configurations in the test setup have remained stable throughout the SAR measurements.³⁵ Without prior KDB confirmation to determine the SAR results are acceptable, a PBA is required for TCB approval. SAR test exclusion for HSPA, HSPA+ and DC-HSDPA is determined according to the following:

- 1) The HSPA procedures are applied to configure 3GPP Rel. 6 HSPA devices in the required Sub-test mode(s) to determine SAR test exclusion.
- 2) SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (Up antenna) HSPA+ with 12.2 kbps RMC as the primary mode.³⁶ Power is measured for HSPA+ that supports Up antenna 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.
- 3) SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.
- 4) Regardless of whether a PBA is required, the following information must be verified and included in the SAR report for devices supporting HSPA, HSPA+ or DC-HSDPA:
 - a) The output power measurement results and applicable release version(s) of 3GPP TS 34.121.
 - i) Power measurement difficulties due to test equipment setup or availability must be resolved between the grantee and its test lab.
 - b) The power measurement results are in agreement with the individual device implementation and specifications. When Enhanced MPR (E-MPR) applies, the normal MPR targets may be modified according to the Cubic Metric (CM) measured by the device, which must be taken into consideration.
 - c) The UE category, operating parameters, such as the β and Δ values used to configure the device for testing, power setback procedures described in 3GPP TS 34.121 for the power measurements, and HSPA/HSPA+ channel conditions (active and stable) for the entire duration

of the measurement according to the required E-TFCI and AG index values.

5) When SAR measurement is required, the test configurations, procedures and power measurement results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

| HS-DSCH category | Maximum number of HS-DSCH codes received | Minimum inter-TTI interval | Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI NOTE 1 | Total number of soft channel bits | Supported modulations without MIMO operation or dual cell operation | Supported modulations with MIMO operation and without dual cell operation | Supported modulations with dual cell operation |
|-----------------------|--|----------------------------|---|-----------------------------------|---|---|--|
| Category 1 | 5 | 3 | 7298 | 19200 | QPSK, 16QAM | Not applicable (MIMO not supported) | Not applicable (dual cell operation not supported) |
| Category 2 | 5 | 3 | 7298 | 26800 | | | |
| Category 3 | 5 | 2 | 7298 | 28800 | | | |
| Category 4 | 5 | 2 | 7298 | 38400 | | | |
| Category 5 | 5 | 1 | 7298 | 57600 | | | |
| Category 6 | 5 | 1 | 7298 | 67200 | | | |
| Category 7 | 10 | 1 | 14411 | 115200 | | | |
| Category 8 | 10 | 1 | 14411 | 134400 | | | |
| Category 9 | 15 | 1 | 20251 | 172800 | | | |
| Category 10 | 15 | 1 | 27952 | 172800 | | | |
| Category 11 | 5 | 2 | 3630 | 14400 | QPSK | Not applicable (dual cell operation not supported) | |
| Category 12 | 5 | 1 | 3630 | 28800 | QPSK, 16QAM, 64QAM | | |
| Category 13 | 15 | 1 | 35280 | 259200 | | | |
| Category 14 | 15 | 1 | 42192 | 259200 | QPSK, 16QAM | | |
| Category 15 | 15 | 1 | 23370 | 345600 | | | |
| Category 16 | 15 | 1 | 27952 | 345600 | QPSK, 16QAM, 64QAM | | |
| Category 17 NOTE 2 | 15 | 1 | 35280 | 259200 | | | - |
| | | | 23370 | 345600 | | | - |
| Category 18 NOTE 3 | 15 | 1 | 42192 | 259200 | QPSK, 16QAM, 64QAM | | - |
| | | | 27952 | 345600 | - | | QPSK, 16QAM |
| Category 19 | 15 | 1 | 35280 | 518400 | QPSK, 16QAM, 64QAM | | |
| Category 20 | 15 | 1 | 42192 | 518400 | | | |
| Category 21 | 15 | 1 | 23370 | 345600 | - | - | QPSK, 16QAM |
| Category 22 | 15 | 1 | 27952 | 345600 | | | |
| Category 23 | 15 | 1 | 35280 | 518400 | | | |
| Category 24 | 15 | 1 | 42192 | 518400 | | | |

LTE Test Configuration

SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02r05. The CMW500 WideBand Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR test were performed with the same number of RB and RB offsets transmitting on all TTI frames (Maximum TTI)

1) Spectrum Plots for RB configurations

A properly configured base station simulator was used for LTE output power

measurements and SAR testing. Therefore, spectrum plots for RB configurations were not required to be included in this report.

2) MPR

When MPR is implemented permanently within the UE, regardless of network requirements, only those RB configurations allowed by 3GPP for the channel bandwidth and modulation combinations may be tested with MPR active. Configurations with RB allocations less than the RB thresholds required by 3GPP must be tested without MPR.

The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101:

Maximum Power Reduction(MPR) for Power Class 3

| Modulation | Channel bandwidth / Transmission bandwidth(N_{RB}) | | | | | | MPR(dB) |
|------------|--|----------|----------|-----------|-----------|-----------|----------|
| | 1.4 MHz | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz | |
| QPSK | >5 | >4 | >8 | >12 | >16 | >18 | ≤ 1 |
| 16 QAM | ≤ 5 | ≤ 4 | ≤ 8 | ≤ 12 | ≤ 16 | ≤ 18 | ≤ 1 |
| 64 QAM | >5 | >4 | >8 | >12 | >16 | >18 | ≤ 2 |

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 | $6592 T_S$ | $2192 T_S$ | $2560 T_S$ | $7680 T_S$ | $2192 T_S$ | $2560 T_S$ |
| 1 | $19760 T_S$ | | | $20480 T_S$ | | |
| 2 | $21952 T_S$ | | | $23040 T_S$ | | |
| 3 | $24144 T_S$ | | | $25600 T_S$ | | |
| 4 | $26336 T_S$ | | | $7680 T_S$ | $4384 T_S$ | $5120 T_S$ |

| | | | | | | |
|---|-------------|------------|------------|-------------|---|---|
| 5 | 6592 T_S | 4384 T_S | 5120 T_S | 20480 T_S | | |
| 6 | 19760 T_S | | | 23040 T_S | | |
| 7 | 21952 T_S | | | 12800 T_S | | |
| 8 | 24144 T_S | | | - | - | - |
| 9 | 13168 T_S | | | - | - | - |

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 | | |

Calculated Duty Cycle = Extended cyclic prefix in uplink x (T_s) x # of S + # of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle = $5120 \times [1/(15000 \times 2048)] \times 2 + 6 \text{ ms} = 63.33\%$

Where $T_s = 1/(15000 \times 2048)$ seconds

3) A-MPR

A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signalling Value of "NS_01" on the base station simulator.

4) LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test requirements

i) QPSK with 1 RB allocation

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. When the reported SAR is $\leq 0.8\text{W/kg}$, testing of the remaining RB offset configurations and required test channels is not required for 1RB allocation; otherwise,

SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

ii) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in i) are applied to measure the SAR for QPSK with 50% RB allocation.

iii) QPSK with 100% RB allocation

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 in i) and ii) 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.

iv) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

B) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

8. TUNE-UP LIMIT

The GSM850 power adjust procedure

GSM (CS): 33dBm [-1.0dB~+0.3dB]
GPRS/GSM (GMSK, 1 Tx slot): 33dBm [-1.0dB~+0.3dB]
GPRS/GSM (GMSK, 2 Tx slot):32dBm [-1.0dB~+0.5dB]
GPRS/GSM (GMSK, 3Tx slot):30dBm [-1.0dB~+0.5dB]
GPRS/GSM (GMSK, 4Tx slot): 30dBm [-1.0dB~+0.0dB]
EDGE (8PSK, 1 Tx slot) : 27dBm [-1.0dB~+1.0dB]
EDGE (8PSK, 2 Tx slot) : 26dBm [-1.0dB~+1.0dB]
EDGE (8PSK, 3 Tx slot) : 24dBm[-1.0dB~+1.0dB]
EDGE (8PSK, 4 Tx slot) : 23dBm [-1.0dB~+1.0dB]

The PCS1900 power adjust procedure

GSM (CS): 30dBm [-1.0dB~+0.3dB]
GPRS/GSM (GMSK, 1 Tx slot): 30dBm [-1.0dB~+0.3dB]
GPRS/GSM (GMSK, 2 Tx slot): 23dBm [-1.0dB~+1.0dB]
GPRS/GSM (GMSK, 3Tx slot): 22dBm [-1.0dB~+1.0dB]
GPRS/GSM (GMSK, 4Tx slot): 20dBm [-1.0dB~+0.5dB]
EDGE (8PSK, 1 Tx slot) : 22dBm [-4.0dB~+1.0dB]
EDGE (8PSK, 2 Tx slot) : 18dBm [-4.0dB~+1.0dB]
EDGE (8PSK, 3 Tx slot) : 18dBm[-4.0dB~+1.0dB]
EDGE (8PSK, 4 Tx slot) :18dBm[-4.0dB~+1.0dB]

The reduced of PCS1900 power adjust procedure

GSM (CS): 23dBm [-1.0dB~+0.3dB]
GPRS/GSM (GMSK, 1 Tx slot): 23dBm [-1.0dB~+0.3dB]
GPRS/GSM (GMSK, 2 Tx slot): 20dBm [-1.0dB~+1.0dB]
GPRS/GSM (GMSK, 3Tx slot): 18dBm [-1.0dB~+1.0dB]
GPRS/GSM (GMSK, 4Tx slot): 17dBm [-1.0dB~+0.5dB]
EDGE (8PSK, 1 Tx slot) : 18dBm [-1.0dB~+0.5dB]
EDGE (8PSK, 2 Tx slot) : 15dBm [-1.0dB~+1.0dB]
EDGE (8PSK, 3 Tx slot) : 13dBm [-1.0dB~+1.0dB]

EDGE (8PSK, 4 Tx slot) : 12dBm [-1.0dB~+1.0dB]

The WCDMA Band 2 power adjust procedure

RMC: 23dBm [-1.0dB~+0.8dB]

HSDPA: 22.5dBm[-1.0dB~+1.0dB]

HSUPA: 21.5dBm [-1.0dB~+1.0dB]

HSUPA+: 20.5dBm[-1.0dB~+1.0dB]

The reduced of WCDMA Band 2 power adjust procedure

RMC:18dBm [-1.0dB~+0.8dB]

HSDPA: 18dBm[-1.0dB~+1.0dB]

HSUPA: 17dBm [-1.0dB~+1.0dB]

HSUPA+:15dBm[-1.0dB~+1.0dB]

The WCDMA Band 4 power adjust procedure

RMC: 24dBm [-1.0dB~+0.1dB]

HSDPA: 22.5dBm[-1.0dB~+1.0dB]

HSUPA: 21.5dBm [-1.0dB~+1.0dB]

HSUPA+: 20.5dBm[-1.0dB~+1.0dB]

The reduced of WCDMA Band 4 power adjust procedure

RMC: 19dBm [-1.0dB~+0.1dB]

HSDPA: 18dBm[-1.0dB~+1.0dB]

HSUPA: 17dBm [-1.0dB~+1.0dB]

HSUPA+: 17dBm[-1.0dB~+1.0dB]

The WCDMA Band 5 power adjust procedure

RMC: 24dBm [-1.0dB~+0.1dB]

HSDPA: 22.5dBm[-1.0dB~+1.0dB]

HSUPA: 21.5dBm [-1.0dB~+1.0dB]

HSUPA+: 20.5dBm[-1.0dB~+1.0dB]

The LTE Band 2power adjust procedure

1.4 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

3 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

5 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

The reduced of LTE Band 2power adjust procedure

1.4 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

3 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

5 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

The LTE Band 4power adjust procedure

1.4 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

3 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

5 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

The reduced of LTE Band 4power adjust procedure

1.4 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

3 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

5 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

The LTE Band 5 power adjust procedure

1.4 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

3 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

5 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

10 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

The LTE Band 7 power adjust procedure

5 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.3dB]

10 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.3dB]

15 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.3dB]

20 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.3dB]

The reduced of LTE Band 7 power adjust procedure

5 MHz QPSK/16QAM: 21dBm [-3.0dB~~+0.3dB]

10 MHz QPSK/16QAM: 21dBm [-3.0dB~~+0.3dB]

15 MHz QPSK/16QAM: 21dBm [-3.0dB~~+0.3dB]

20 MHz QPSK/16QAM: 21dBm [-3.0dB~~+0.3dB]

The LTE Band 12 power adjust procedure

1.4 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

3 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

5 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

10 MHz QPSK/16QAM: 23.3dBm [-3.0dB~~+1.0dB]

The LTE Band 17 power adjust procedure

5 MHz QPSK/16QAM: 24dBm [-3.0dB~~+0.1dB]

10 MHz QPSK/16QAM: 24dBm [-3.0dB~~+0.1dB]

The LTE Band 26 power adjust procedure

1.4 MHz QPSK/16QAM: 24dBm [-3.0dB~~+0.1dB]

3 MHz QPSK/16QAM: 24dBm [-3.0dB~~+0.1dB]

5 MHz QPSK/16QAM: 24dBm [-3.0dB~~+0.1dB]

10 MHz QPSK/16QAM: 24dBm [-3.0dB~~+0.1dB]

The LTE Band 38 power adjust procedure

5 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

The reduced of LTE Band 38 power adjust procedure

5 MHz QPSK/16QAM: 20dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 20dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 20dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 20dBm [-3.0dB~~+0.8dB]

The LTE Band 41 power adjust procedure

5 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

The reduced of LTE Band 41 power adjust procedure

5 MHz QPSK/16QAM: 19dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 19dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 19dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 19dBm [-3.0dB~~+0.8dB]

The LTE Band 66 power adjust procedure

5 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 23dBm [-3.0dB~~+0.8dB]

The reduced of LTE Band 66 power adjust procedure

5 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

10 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

15 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

20 MHz QPSK/16QAM: 18dBm [-3.0dB~~+0.8dB]

The Wi-Fi 2.4G power adjust procedure

802.11b: 18dBm [-2.0dB~~+0.0dB]

802.11g 18dBm [-3.0dB~~+0.0dB]

802.11n-HT20: 18dBm [-2.0dB~~+0.0dB]

The Reduced of Wi-Fi 2.4Gpower adjust procedure

802.11b: 16dBm [-2.0dB~~+0.0dB]

802.11g: 16dBm [-2.0dB~~+0.0dB]

802.11n-HT20: 16dBm [-2.0dB~~+0.0dB]

The BT power adjust procedure

BT: 7dBm [-2dB~~+1.0dB]

BLE: 0dBm[-2dB~~+2.0dB]

9. MEASUREMENT RESULTS

Result: Passed

Date of testing : 2020.10.16~2018.10.22
Ambient temperature : 20°C~22°C
Relative humidity : 50~68%

9.1. Conducted Power

For the measurements a Rohde & Schwarz Radio Communication Tester CMU 200 was used. SAR drift measured at the same position in liquid before and after each SAR test.

Note: CMU200 measures GSM peak and average output power for active timeslots. For SAR the time based average power is relevant. The difference in between depends on the duty cycle of the TDMA signal:

| No. of Timeslots | 1 | 2 | 3 | 4 |
|--|---------|----------|---------|---------|
| Duty Cycle | 1:8.3 | 1:4.1 | 1:2.77 | 1:2.08 |
| Time based avg. power compared to slotted avg. power | -9.00dB | -6.00 dB | -4.26dB | -3.00dB |

The signalling modes differ as follows:

| Mode | Coding scheme | Modulation |
|------|---------------|------------|
| GPRS | CS1 to CS4 | GMSK |
| EDGE | MCS1 to MCS4 | GMSK |
| EDGE | MCS5 to MCS9 | 8PSK |

Apart from modulation change (GMSK/8PSK) coding schemes differ in code rate without influence on the RF signal. Therefore one coding scheme per mode was selected for conducted power measurements.

GSM Conducted Power Measurement Results

| Band: GSM850 | Burst Average Power (dBm) | | | Frame Average Power (dBm) | | |
|-------------------------------------|---------------------------|--------------|--------------|---------------------------|--------------|--------------|
| Channel | 128 | 190 | 251 | 128 | 190 | 251 |
| GSM(CS) | 33.27 | 33.24 | 33.25 | 24.27 | 24.24 | 24.25 |
| GPRS/EDGE (GMSK, 1 Tx slot) | 33.15 | 33.17 | 33.16 | 24.15 | 24.17 | 24.16 |
| GPRS/EDGE (GMSK, 2 Tx slots) | 31.88 | 31.82 | 31.81 | 25.88 | 25.82 | 25.81 |
| GPRS/EDGE (GMSK, 3 Tx slots) | 28.72 | 28.66 | 28.68 | 24.46 | 24.40 | 24.42 |
| GPRS/EDGE (GMSK, 4 Tx slots) | 26.86 | 26.84 | 26.82 | 23.86 | 23.84 | 23.82 |
| EDGE (8PSK, 1 Tx slot) | 27.03 | 26.81 | 26.87 | 18.03 | 17.81 | 17.87 |
| EDGE (8PSK, 2 Tx slots) | 25.47 | 25.28 | 25.32 | 19.47 | 19.28 | 19.32 |
| EDGE (8PSK, 3 Tx slots) | 23.78 | 23.64 | 23.69 | 19.52 | 19.38 | 19.43 |
| EDGE (8PSK, 4 Tx slots) | 21.34 | 21.42 | 21.35 | 18.34 | 18.42 | 18.35 |

Remark:

- 1) The conducted power of GSM850 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- 3) The bolded GPRS 2 Tx mode was selected as the primary mode for SAR testing according to the highest frame- averaged output power table.

GSM Conducted Power Measurement Results

| Band: DCS1900 | Burst Average Power (dBm) | | | Frame Average Power (dBm) | | |
|-------------------------------------|---------------------------|--------------|--------------|---------------------------|--------------|--------------|
| | 513 | 661 | 810 | 513 | 661 | 810 |
| Channel | 513 | 661 | 810 | 513 | 661 | 810 |
| GSM1900(CS) | 28.68 | 28.68 | 26.54 | 19.68 | 19.68 | 19.54 |
| GPRS/EDGE (GMSK, 1 Tx slot) | 28.62 | 28.64 | 28.47 | 19.62 | 19.64 | 19.47 |
| GPRS/EDGE (GMSK, 2 Tx slots) | 23.65 | 23.66 | 23.50 | 17.65 | 17.66 | 17.50 |
| GPRS/EDGE (GMSK, 3 Tx slots) | 21.88 | 21.91 | 21.76 | 17.62 | 17.65 | 17.50 |
| GPRS/EDGE (GMSK, 4 Tx slots) | 20.60 | 20.61 | 20.36 | 17.60 | 17.61 | 17.36 |
| EGPRS (8PSK, 1 Tx slot) | 22.18 | 22.25 | 22.16 | 13.18 | 13.25 | 13.16 |
| EGPRS (8PSK, 2 Tx slots) | 18.94 | 19.04 | 19.00 | 12.94 | 13.04 | 13.00 |
| EGPRS (8PSK, 3 Tx slots) | 17.16 | 17.19 | 17.15 | 12.9 | 12.93 | 12.89 |
| EGPRS (8PSK, 4 Tx slots) | 15.80 | 15.91 | 15.84 | 12.8 | 12.91 | 12.84 |

Remark:

- 1) The conducted power of GSM1900 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.

The bolded GPRS 2 Tx mode was selected as the primary mode for SAR testing according to the highest frame- averaged output power table.

The reduced of GSM Conducted Power Measurement Results

| Band: DCS1900 | Burst Average Power (dBm) | | | Frame Average Power (dBm) | | |
|-------------------------------------|---------------------------|--------------|--------------|---------------------------|--------------|--------------|
| | 513 | 661 | 810 | 513 | 661 | 810 |
| Channel | | | | | | |
| GSM1900(CS) | 23.26 | 23.26 | 23.12 | 14.26 | 14.26 | 14.12 |
| GPRS/EDGE (GMSK, 1 Tx slot) | 23.20 | 23.22 | 23.05 | 14.20 | 14.22 | 14.05 |
| GPRS/EDGE (GMSK, 2 Tx slots) | 20.23 | 20.24 | 20.08 | 14.23 | 14.24 | 14.08 |
| GPRS/EDGE (GMSK, 3 Tx slots) | 18.46 | 18.49 | 18.34 | 14.20 | 14.23 | 14.08 |
| GPRS/EDGE (GMSK, 4 Tx slots) | 17.18 | 17.19 | 16.94 | 14.18 | 14.19 | 13.94 |
| EGPRS (8PSK, 1 Tx slot) | 18.76 | 18.83 | 18.74 | 9.76 | 9.83 | 9.74 |
| EGPRS (8PSK, 2 Tx slots) | 15.52 | 15.62 | 15.58 | 9.52 | 9.62 | 9.58 |
| EGPRS (8PSK, 3 Tx slots) | 13.74 | 13.77 | 13.73 | 9.48 | 9.51 | 9.47 |
| EGPRS (8PSK, 4 Tx slots) | 12.38 | 12.49 | 12.42 | 9.38 | 9.49 | 9.42 |

Remark:

- 1) The conducted power of GSM1900 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.

The bolded GPRS 2 Tx mode was selected as the primary mode for SAR testing according to the highest frame- averaged output power table.

| UMTS Band II | | Conducted Power (dBm) | | |
|--------------|-------------|-----------------------|--------------|--------------|
| | | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbpsRMC | 23.60 | 23.48 | 23.50 |
| | 64kbps RMC | 22.10 | 22.05 | 22.09 |
| | 144kbps RMC | 22.12 | 21.97 | 22.14 |
| | 384kbps RMC | 22.15 | 22.09 | 22.14 |
| HSDPA | Subtest 1 | 22.59 | 22.45 | 22.51 |
| | Subtest 2 | 21.84 | 21.72 | 21.75 |
| | Subtest 3 | 21.85 | 21.76 | 21.71 |
| | Subtest 4 | 21.85 | 21.77 | 21.69 |
| HSUPA | Subtest 1 | 20.30 | 20.17 | 20.22 |
| | Subtest 2 | 20.38 | 20.25 | 20.27 |
| | Subtest 3 | 21.31 | 21.21 | 21.20 |
| | Subtest 4 | 19.90 | 19.75 | 19.82 |
| | Subtest 5 | 21.25 | 21.12 | 21.14 |

| The reduced of UMTS Band II | | Conducted Power (dBm) | | |
|-----------------------------|-------------|-----------------------|--------------|--------------|
| | | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbpsRMC | 18.63 | 18.51 | 18.53 |
| | 64kbps RMC | 17.13 | 17.08 | 17.12 |
| | 144kbps RMC | 17.15 | 17.00 | 17.17 |
| | 384kbps RMC | 17.18 | 17.12 | 17.17 |
| HSDPA | Subtest 1 | 17.62 | 17.48 | 17.54 |
| | Subtest 2 | 16.87 | 16.75 | 16.78 |
| | Subtest 3 | 16.88 | 16.79 | 16.74 |
| | Subtest 4 | 16.88 | 16.80 | 16.72 |
| HSUPA | Subtest 1 | 15.33 | 15.20 | 15.25 |
| | Subtest 2 | 15.41 | 15.28 | 15.30 |
| | Subtest 3 | 16.34 | 16.24 | 16.23 |
| | Subtest 4 | 14.93 | 14.78 | 14.85 |
| | Subtest 5 | 16.28 | 16.15 | 16.17 |

| UMTS Band IV | | Conducted Power (dBm) | | |
|--------------|-------------|-----------------------|--------------|--------------|
| | | 1312CH | 1412CH | 1513CH |
| WCDMA | 12.2kbpsRMC | 23.44 | 23.42 | 23.44 |
| | 64kbps RMC | 23.22 | 23.33 | 23.40 |
| | 144kbps RMC | 23.19 | 23.30 | 23.44 |
| | 384kbps RMC | 23.17 | 23.34 | 23.40 |
| HSDPA | Subtest 1 | 23.16 | 23.26 | 23.36 |
| | Subtest 2 | 22.36 | 22.35 | 22.59 |
| | Subtest 3 | 21.76 | 21.85 | 21.99 |
| | Subtest 4 | 21.49 | 21.59 | 21.69 |
| HSUPA | Subtest 1 | 22.14 | 22.21 | 22.38 |
| | Subtest 2 | 20.08 | 20.22 | 20.39 |
| | Subtest 3 | 20.96 | 21.10 | 21.22 |
| | Subtest 4 | 20.37 | 20.63 | 20.76 |
| | Subtest 5 | 22.23 | 22.30 | 22.43 |

| The reduced of UMTS Band IV | | Conducted Power (dBm) | | |
|-----------------------------|-------------|-----------------------|--------------|--------------|
| | | 1312CH | 1412CH | 1513CH |
| WCDMA | 12.2kbpsRMC | 18.47 | 18.45 | 18.47 |
| | 64kbps RMC | 18.25 | 18.36 | 18.43 |
| | 144kbps RMC | 18.22 | 18.33 | 18.47 |
| | 384kbps RMC | 18.20 | 18.37 | 18.43 |
| HSDPA | Subtest 1 | 18.19 | 18.29 | 18.39 |
| | Subtest 2 | 17.39 | 17.38 | 17.62 |
| | Subtest 3 | 16.79 | 16.88 | 17.02 |
| | Subtest 4 | 16.52 | 16.62 | 16.72 |
| HSUPA | Subtest 1 | 17.17 | 17.24 | 17.41 |
| | Subtest 2 | 15.11 | 15.25 | 15.42 |
| | Subtest 3 | 15.99 | 16.13 | 16.25 |
| | Subtest 4 | 15.40 | 15.66 | 15.79 |
| | Subtest 5 | 17.26 | 17.33 | 17.46 |

| UMTS Band V | | Conducted Power (dBm) | | |
|-------------|-------------|-----------------------|--------------|--------------|
| | | 4132CH | 4182CH | 4233CH |
| WCDMA | 12.2kbpsRMC | 23.54 | 23.53 | 23.59 |
| | 64kbpsRMC | 23.17 | 23.25 | 23.14 |
| | 144kbpsRMC | 23.19 | 23.17 | 23.19 |
| | 384kbpsRMC | 23.22 | 23.29 | 23.19 |
| HSDPA | Subtest 1 | 23.22 | 23.22 | 23.14 |
| | Subtest 2 | 22.44 | 22.46 | 22.32 |
| | Subtest 3 | 21.86 | 21.85 | 21.75 |
| | Subtest 4 | 21.55 | 21.58 | 21.46 |
| HSUPA | Subtest 1 | 22.27 | 22.27 | 22.14 |
| | Subtest 2 | 20.19 | 20.21 | 20.09 |
| | Subtest 3 | 21.12 | 21.14 | 21.04 |
| | Subtest 4 | 20.91 | 20.91 | 20.84 |
| | Subtest 5 | 22.36 | 22.40 | 22.26 |

Conducted power measurements of LTE Band 2

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18607 | 18900 | 19193 |
| 1.4MHz | QPSK | 1 | 0 | 23.67 | 23.51 | 23.44 |
| | | 1 | 3 | 23.77 | 23.62 | 23.55 |
| | | 1 | 5 | 23.63 | 23.44 | 23.46 |
| | | 3 | 0 | 23.72 | 23.56 | 23.54 |
| | | 3 | 2 | 23.75 | 23.56 | 23.58 |
| | | 3 | 3 | 23.73 | 23.57 | 23.54 |
| | | 6 | 0 | 22.73 | 22.57 | 22.56 |
| | 16QAM | 1 | 0 | 22.55 | 22.40 | 22.41 |
| | | 1 | 3 | 22.75 | 22.52 | 22.59 |
| | | 1 | 5 | 22.53 | 22.39 | 22.38 |
| | | 3 | 0 | 22.52 | 22.34 | 22.37 |
| | | 3 | 2 | 22.51 | 22.37 | 22.32 |
| | | 3 | 3 | 22.50 | 22.32 | 22.32 |
| | | 6 | 0 | 21.71 | 21.55 | 21.55 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18615 | 18900 | 19185 |
| 3MHz | QPSK | 1 | 0 | 23.69 | 23.51 | 23.52 |
| | | 1 | 7 | 23.66 | 23.54 | 23.57 |
| | | 1 | 14 | 23.66 | 23.55 | 23.45 |
| | | 8 | 0 | 22.63 | 22.49 | 22.52 |
| | | 8 | 4 | 22.61 | 22.52 | 22.54 |
| | | 8 | 7 | 22.58 | 22.50 | 22.50 |
| | | 15 | 0 | 22.55 | 22.48 | 22.49 |
| | 16QAM | 1 | 0 | 22.52 | 22.30 | 22.56 |
| | | 1 | 7 | 22.47 | 22.27 | 22.54 |
| | | 1 | 14 | 22.43 | 22.28 | 22.49 |
| | | 8 | 0 | 21.60 | 21.46 | 21.54 |
| | | 8 | 4 | 21.58 | 21.48 | 21.52 |
| | | 8 | 7 | 21.55 | 21.43 | 21.45 |
| | | 15 | 0 | 21.44 | 21.35 | 21.49 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18625 | 18900 | 19175 |
| 5MHz | QPSK | 1 | 0 | 23.60 | 23.45 | 23.49 |
| | | 1 | 12 | 23.70 | 23.57 | 23.65 |
| | | 1 | 24 | 23.56 | 23.44 | 23.47 |
| | | 12 | 0 | 22.68 | 22.49 | 22.50 |
| | | 12 | 6 | 22.64 | 22.48 | 22.50 |
| | | 12 | 13 | 22.66 | 22.47 | 22.51 |
| | | 25 | 0 | 22.71 | 22.50 | 22.52 |
| | 16QAM | 1 | 0 | 22.63 | 22.36 | 22.39 |
| | | 1 | 13 | 22.80 | 22.44 | 22.54 |
| | | 1 | 24 | 22.61 | 22.28 | 22.37 |
| | | 12 | 0 | 21.67 | 21.46 | 21.45 |
| | | 12 | 6 | 21.64 | 21.44 | 21.44 |
| | | 12 | 13 | 21.67 | 21.44 | 21.42 |
| | | 25 | 0 | 21.60 | 21.50 | 21.51 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18650 | 18900 | 19150 |
| 10MHz | QPSK | 1 | 0 | 23.65 | 23.54 | 23.53 |
| | | 1 | 24 | 23.69 | 23.64 | 23.58 |
| | | 1 | 49 | 23.62 | 23.46 | 23.53 |
| | | 25 | 0 | 22.67 | 22.52 | 22.61 |
| | | 25 | 12 | 22.67 | 22.54 | 22.67 |
| | | 25 | 25 | 22.70 | 22.51 | 22.56 |
| | | 50 | 0 | 22.68 | 22.51 | 22.58 |
| | 16QAM | 1 | 0 | 22.69 | 22.41 | 22.52 |
| | | 1 | 24 | 22.81 | 22.53 | 22.72 |
| | | 1 | 49 | 22.66 | 22.21 | 22.49 |
| | | 25 | 0 | 21.66 | 21.54 | 21.61 |
| | | 25 | 12 | 21.66 | 21.56 | 21.61 |
| | | 25 | 25 | 21.63 | 21.52 | 21.52 |
| | | 50 | 0 | 21.66 | 21.54 | 21.55 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18675 | 18900 | 19125 |
| 15MHz | QPSK | 1 | 0 | 23.55 | 23.43 | 23.38 |
| | | 1 | 24 | 23.66 | 23.45 | 23.57 |
| | | 1 | 49 | 23.56 | 23.28 | 23.45 |
| | | 25 | 0 | 22.53 | 22.58 | 22.15 |
| | | 25 | 12 | 22.65 | 22.60 | 22.37 |
| | | 25 | 25 | 22.55 | 22.42 | 22.18 |
| | | 50 | 0 | 22.67 | 22.56 | 22.52 |
| | 16QAM | 1 | 0 | 22.58 | 22.54 | 22.13 |
| | | 1 | 24 | 22.64 | 22.58 | 22.37 |
| | | 1 | 49 | 22.57 | 22.41 | 22.19 |
| | | 25 | 0 | 22.55 | 22.53 | 22.13 |
| | | 25 | 12 | 22.64 | 22.58 | 22.35 |
| | | 25 | 25 | 22.58 | 22.39 | 22.18 |
| | | 50 | 0 | 21.57 | 21.45 | 21.54 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 18700 | 18900 | 19100 |
| 20MHz | QPSK | 1 | 0 | 23.35 | 23.28 | 23.18 |
| | | 1 | 24 | 23.79 | 23.76 | 23.78 |
| | | 1 | 49 | 23.38 | 23.16 | 23.25 |
| | | 25 | 0 | 22.48 | 22.53 | 22.54 |
| | | 25 | 12 | 22.52 | 22.46 | 22.52 |
| | | 25 | 25 | 22.55 | 22.51 | 22.49 |
| | | 50 | 0 | 22.46 | 22.48 | 22.52 |
| | 16QAM | 1 | 0 | 22.41 | 22.10 | 22.05 |
| | | 1 | 24 | 22.86 | 22.30 | 22.49 |
| | | 1 | 49 | 22.49 | 21.98 | 22.14 |
| | | 25 | 0 | 21.50 | 21.55 | 21.52 |
| | | 25 | 12 | 21.48 | 21.57 | 21.55 |
| | | 25 | 25 | 21.53 | 21.56 | 21.48 |
| | | 50 | 0 | 21.46 | 21.48 | 21.50 |

The reduced of Conducted power measurements of LTE Band 2

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18607 | 18900 | 19193 |
| 1.4MHz | QPSK | 1 | 0 | 18.70 | 18.54 | 18.47 |
| | | 1 | 3 | 18.80 | 18.65 | 18.58 |
| | | 1 | 5 | 18.66 | 18.47 | 18.49 |
| | | 3 | 0 | 18.75 | 18.59 | 18.57 |
| | | 3 | 2 | 18.78 | 18.59 | 18.61 |
| | | 3 | 3 | 18.76 | 18.60 | 18.57 |
| | | 6 | 0 | 17.76 | 17.60 | 17.59 |
| | 16QAM | 1 | 0 | 17.58 | 17.43 | 17.44 |
| | | 1 | 3 | 17.78 | 17.55 | 17.62 |
| | | 1 | 5 | 17.56 | 17.42 | 17.41 |
| | | 3 | 0 | 17.55 | 17.37 | 17.40 |
| | | 3 | 2 | 17.54 | 17.40 | 17.35 |
| | | 3 | 3 | 17.53 | 17.35 | 17.35 |
| | | 6 | 0 | 18.70 | 18.54 | 18.47 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18615 | 18900 | 19185 |
| 3MHz | QPSK | 1 | 0 | 18.72 | 18.54 | 18.55 |
| | | 1 | 7 | 18.69 | 18.57 | 18.60 |
| | | 1 | 14 | 18.69 | 18.58 | 18.48 |
| | | 8 | 0 | 17.66 | 17.52 | 17.55 |
| | | 8 | 4 | 17.64 | 17.55 | 17.57 |
| | | 8 | 7 | 17.61 | 17.53 | 17.53 |
| | | 15 | 0 | 17.58 | 17.51 | 17.52 |
| | 16QAM | 1 | 0 | 17.55 | 17.33 | 17.59 |
| | | 1 | 7 | 17.50 | 17.30 | 17.57 |
| | | 1 | 14 | 17.46 | 17.31 | 17.52 |
| | | 8 | 0 | 16.63 | 16.49 | 16.57 |
| | | 8 | 4 | 16.61 | 16.51 | 16.55 |
| | | 8 | 7 | 16.58 | 16.46 | 16.48 |
| | | 15 | 0 | 18.72 | 18.54 | 18.55 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18625 | 18900 | 19175 |
| 5MHz | QPSK | 1 | 0 | 18.63 | 18.48 | 18.52 |
| | | 1 | 12 | 18.73 | 18.60 | 18.68 |
| | | 1 | 24 | 18.59 | 18.47 | 18.50 |
| | | 12 | 0 | 17.71 | 17.52 | 17.53 |
| | | 12 | 6 | 17.67 | 17.51 | 17.53 |
| | | 12 | 13 | 17.69 | 17.50 | 17.54 |
| | | 25 | 0 | 17.74 | 17.53 | 17.55 |
| | 16QAM | 1 | 0 | 17.66 | 17.39 | 17.42 |
| | | 1 | 13 | 17.83 | 17.47 | 17.57 |
| | | 1 | 24 | 17.64 | 17.31 | 17.40 |
| | | 12 | 0 | 16.70 | 16.49 | 16.48 |
| | | 12 | 6 | 16.67 | 16.47 | 16.47 |
| | | 12 | 13 | 16.70 | 16.47 | 16.45 |
| | | 25 | 0 | 18.63 | 18.48 | 18.52 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18650 | 18900 | 19150 |
| 10MHz | QPSK | 1 | 0 | 18.68 | 18.57 | 18.56 |
| | | 1 | 24 | 18.82 | 18.67 | 18.61 |
| | | 1 | 49 | 18.65 | 18.49 | 18.56 |
| | | 25 | 0 | 17.70 | 17.55 | 17.64 |
| | | 25 | 12 | 17.70 | 17.57 | 17.70 |
| | | 25 | 25 | 17.73 | 17.54 | 17.59 |
| | | 50 | 0 | 17.71 | 17.54 | 17.61 |
| | 16QAM | 1 | 0 | 17.72 | 17.44 | 17.55 |
| | | 1 | 24 | 17.84 | 17.56 | 17.75 |
| | | 1 | 49 | 17.69 | 17.24 | 17.52 |
| | | 25 | 0 | 16.69 | 16.57 | 16.64 |
| | | 25 | 12 | 16.69 | 16.59 | 16.64 |
| | | 25 | 25 | 16.66 | 16.55 | 16.55 |
| | | 50 | 0 | 18.68 | 18.57 | 18.56 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 18675 | 18900 | 19125 |
| 15MHz | QPSK | 1 | 0 | 18.58 | 18.46 | 18.41 |
| | | 1 | 24 | 18.69 | 18.48 | 18.60 |
| | | 1 | 49 | 18.59 | 18.31 | 18.48 |
| | | 25 | 0 | 17.56 | 17.61 | 17.18 |
| | | 25 | 12 | 17.68 | 17.63 | 17.40 |
| | | 25 | 25 | 17.58 | 17.45 | 17.21 |
| | | 50 | 0 | 17.70 | 17.59 | 17.55 |
| | 16QAM | 1 | 0 | 17.61 | 17.57 | 17.16 |
| | | 1 | 24 | 17.67 | 17.61 | 17.40 |
| | | 1 | 49 | 17.60 | 17.44 | 17.22 |
| | | 25 | 0 | 17.58 | 17.56 | 17.16 |
| | | 25 | 12 | 17.67 | 17.61 | 17.38 |
| | | 25 | 25 | 17.61 | 17.42 | 17.21 |
| | | 50 | 0 | 18.58 | 18.46 | 18.41 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 18700 | 18900 | 19100 |
| 20MHz | QPSK | 1 | 0 | 18.38 | 18.31 | 18.21 |
| | | 1 | 24 | 18.77 | 18.76 | 18.72 |
| | | 1 | 49 | 18.41 | 18.19 | 18.28 |
| | | 25 | 0 | 17.51 | 17.56 | 17.57 |
| | | 25 | 12 | 17.55 | 17.49 | 17.55 |
| | | 25 | 25 | 17.58 | 17.54 | 17.52 |
| | | 50 | 0 | 17.49 | 17.51 | 17.55 |
| | 16QAM | 1 | 0 | 17.44 | 17.13 | 17.08 |
| | | 1 | 24 | 17.89 | 17.33 | 17.52 |
| | | 1 | 49 | 17.52 | 17.01 | 17.17 |
| | | 25 | 0 | 16.53 | 16.58 | 16.55 |
| | | 25 | 12 | 16.51 | 16.60 | 16.58 |
| | | 25 | 25 | 16.56 | 16.59 | 16.51 |
| | | 50 | 0 | 18.38 | 18.31 | 18.21 |

Conducted power measurements of LTE Band 4

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 19957 | 20175 | 20393 |
| 1.4MHz | QPSK | 1 | 0 | 23.56 | 23.39 | 23.38 |
| | | 1 | 3 | 23.5 | 23.6 | 23.5 |
| | | 1 | 5 | 23.45 | 23.43 | 23.41 |
| | | 3 | 0 | 23.56 | 23.48 | 23.49 |
| | | 3 | 2 | 23.59 | 23.39 | 23.46 |
| | | 3 | 3 | 23.55 | 23.43 | 23.45 |
| | | 6 | 0 | 22.54 | 22.44 | 22.46 |
| | 16QAM | 1 | 0 | 22.36 | 22.21 | 22.35 |
| | | 1 | 3 | 22.58 | 22.24 | 22.45 |
| | | 1 | 5 | 22.37 | 22.21 | 22.26 |
| | | 3 | 0 | 22.36 | 22.26 | 22.27 |
| | | 3 | 2 | 22.36 | 22.19 | 22.24 |
| | | 3 | 3 | 22.36 | 22.27 | 22.22 |
| | | 6 | 0 | 21.49 | 21.25 | 21.45 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 19965 | 20175 | 20385 |
| 3MHz | QPSK | 1 | 0 | 23.37 | 23.25 | 23.2 |
| | | 1 | 7 | 23.42 | 23.19 | 23.18 |
| | | 1 | 14 | 23.3 | 23.24 | 23.19 |
| | | 8 | 0 | 22.29 | 22.2 | 22.22 |
| | | 8 | 4 | 22.3 | 22.19 | 22.23 |
| | | 8 | 7 | 22.26 | 22.18 | 22.2 |
| | | 15 | 0 | 22.28 | 22.19 | 22.18 |
| | 16QAM | 1 | 0 | 22.21 | 21.92 | 22.26 |
| | | 1 | 7 | 22.18 | 21.99 | 22.18 |
| | | 1 | 14 | 22.1 | 21.99 | 22.19 |
| | | 8 | 0 | 21.27 | 21.18 | 21.23 |
| | | 8 | 4 | 21.23 | 21.18 | 21.26 |
| | | 8 | 7 | 21.25 | 21.2 | 21.2 |
| | | 15 | 0 | 21.19 | 21.09 | 21.24 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 19975 | 20175 | 20375 |
| 5MHz | QPSK | 1 | 0 | 23.33 | 23.11 | 23.18 |
| | | 1 | 12 | 23.39 | 23.21 | 23.29 |
| | | 1 | 24 | 23.18 | 23.14 | 23.2 |
| | | 12 | 0 | 22.27 | 22.15 | 22.21 |
| | | 12 | 6 | 22.28 | 22.22 | 22.2 |
| | | 12 | 13 | 22.26 | 22.17 | 22.21 |
| | | 25 | 0 | 22.26 | 22.2 | 22.21 |
| | 16QAM | 1 | 0 | 22.18 | 22.12 | 22.06 |
| | | 1 | 13 | 22.25 | 22.29 | 22.14 |
| | | 1 | 24 | 22.08 | 22.19 | 22.09 |
| | | 12 | 0 | 21.17 | 21.21 | 21.17 |
| | | 12 | 6 | 21.23 | 21.17 | 21.13 |
| | | 12 | 13 | 21.24 | 21.18 | 21.17 |
| | | 25 | 0 | 21.27 | 21.19 | 21.23 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20000 | 20175 | 20350 |
| 10MHz | QPSK | 1 | 0 | 23.42 | 23.29 | 23.27 |
| | | 1 | 24 | 23.43 | 23.5 | 23.39 |
| | | 1 | 49 | 23.31 | 23.35 | 23.3 |
| | | 25 | 0 | 22.36 | 22.29 | 22.3 |
| | | 25 | 12 | 22.39 | 22.29 | 22.3 |
| | | 25 | 25 | 22.39 | 22.36 | 22.32 |
| | | 50 | 0 | 22.33 | 22.31 | 22.28 |
| | 16QAM | 1 | 0 | 22.47 | 22.09 | 22 |
| | | 1 | 24 | 22.54 | 22.24 | 22.16 |
| | | 1 | 49 | 22.28 | 22.14 | 22.07 |
| | | 25 | 0 | 21.35 | 21.31 | 21.34 |
| | | 25 | 12 | 21.34 | 21.3 | 21.37 |
| | | 25 | 25 | 21.35 | 21.34 | 21.33 |
| | | 50 | 0 | 21.32 | 21.34 | 21.36 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20025 | 20175 | 20325 |
| 15MHz | QPSK | 1 | 0 | 23.31 | 23.07 | 23.17 |
| | | 1 | 24 | 23.29 | 23.22 | 23.22 |
| | | 1 | 49 | 23.14 | 23.17 | 23.17 |
| | | 25 | 0 | 22.26 | 22.17 | 22.14 |
| | | 25 | 12 | 22.31 | 22.3 | 22.27 |
| | | 25 | 25 | 22.15 | 22.32 | 22.18 |
| | | 50 | 0 | 22.32 | 22.28 | 22.27 |
| | 16QAM | 1 | 0 | 22.29 | 22.2 | 22.17 |
| | | 1 | 24 | 22.27 | 22.26 | 22.23 |
| | | 1 | 49 | 22.15 | 22.32 | 22.18 |
| | | 25 | 0 | 22.27 | 22.14 | 22.2 |
| | | 25 | 12 | 22.3 | 22.29 | 22.23 |
| | | 25 | 25 | 22.17 | 22.27 | 22.16 |
| | | 50 | 0 | 21.23 | 21.28 | 21.25 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 20050 | 20175 | 20175 |
| 20MHz | QPSK | 1 | 0 | 23.70 | 23.51 | 23.56 |
| | | 1 | 24 | 23.74 | 23.73 | 23.79 |
| | | 1 | 49 | 23.60 | 23.72 | 23.64 |
| | | 25 | 0 | 22.83 | 22.70 | 22.93 |
| | | 25 | 12 | 22.75 | 22.73 | 22.91 |
| | | 25 | 25 | 22.92 | 22.89 | 22.85 |
| | | 50 | 0 | 22.86 | 22.75 | 22.83 |
| | 16QAM | 1 | 0 | 22.58 | 22.64 | 22.41 |
| | | 1 | 24 | 22.80 | 23.10 | 22.91 |
| | | 1 | 49 | 22.49 | 22.85 | 22.55 |
| | | 25 | 0 | 21.79 | 21.78 | 21.95 |
| | | 25 | 12 | 21.75 | 21.76 | 21.91 |
| | | 25 | 25 | 21.92 | 21.91 | 21.86 |
| | | 50 | 0 | 21.83 | 21.74 | 21.91 |

The reduced of Conducted power measurements of LTE Band 4

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 19957 | 20175 | 20393 |
| 1.4MHz | QPSK | 1 | 0 | 18.50 | 18.33 | 18.32 |
| | | 1 | 3 | 18.44 | 18.54 | 18.44 |
| | | 1 | 5 | 18.39 | 18.37 | 18.35 |
| | | 3 | 0 | 18.50 | 18.42 | 18.43 |
| | | 3 | 2 | 18.53 | 18.33 | 18.40 |
| | | 3 | 3 | 18.49 | 18.37 | 18.39 |
| | | 6 | 0 | 17.48 | 17.38 | 17.40 |
| | 16QAM | 1 | 0 | 17.30 | 17.15 | 17.29 |
| | | 1 | 3 | 17.52 | 17.18 | 17.39 |
| | | 1 | 5 | 17.31 | 17.15 | 17.20 |
| | | 3 | 0 | 17.30 | 17.20 | 17.21 |
| | | 3 | 2 | 17.30 | 17.13 | 17.18 |
| | | 3 | 3 | 17.30 | 17.21 | 17.16 |
| | | 6 | 0 | 18.50 | 18.33 | 18.32 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 19965 | 20175 | 20385 |
| 3MHz | QPSK | 1 | 0 | 18.31 | 18.19 | 18.14 |
| | | 1 | 7 | 18.36 | 18.13 | 18.12 |
| | | 1 | 14 | 18.24 | 18.18 | 18.13 |
| | | 8 | 0 | 17.23 | 17.14 | 17.16 |
| | | 8 | 4 | 17.24 | 17.13 | 17.17 |
| | | 8 | 7 | 17.20 | 17.12 | 17.14 |
| | | 15 | 0 | 17.22 | 17.13 | 17.12 |
| | 16QAM | 1 | 0 | 17.15 | 16.86 | 17.20 |
| | | 1 | 7 | 17.12 | 16.93 | 17.12 |
| | | 1 | 14 | 17.04 | 16.93 | 17.13 |
| | | 8 | 0 | 16.21 | 16.12 | 16.17 |
| | | 8 | 4 | 16.17 | 16.12 | 16.20 |
| | | 8 | 7 | 16.19 | 16.14 | 16.14 |
| | | 15 | 0 | 18.31 | 18.19 | 18.14 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 19975 | 20175 | 20375 |
| 5MHz | QPSK | 1 | 0 | 18.27 | 18.05 | 18.12 |
| | | 1 | 12 | 18.33 | 18.15 | 18.23 |
| | | 1 | 24 | 18.12 | 18.08 | 18.14 |
| | | 12 | 0 | 17.21 | 17.09 | 17.15 |
| | | 12 | 6 | 17.22 | 17.16 | 17.14 |
| | | 12 | 13 | 17.20 | 17.11 | 17.15 |
| | | 25 | 0 | 17.20 | 17.14 | 17.15 |
| | 16QAM | 1 | 0 | 17.12 | 17.06 | 17.00 |
| | | 1 | 13 | 17.19 | 17.23 | 17.08 |
| | | 1 | 24 | 17.02 | 17.13 | 17.03 |
| | | 12 | 0 | 16.11 | 16.15 | 16.11 |
| | | 12 | 6 | 16.17 | 16.11 | 16.07 |
| | | 12 | 13 | 16.18 | 16.12 | 16.11 |
| | | 25 | 0 | 18.27 | 18.05 | 18.12 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20000 | 20175 | 20350 |
| 10MHz | QPSK | 1 | 0 | 18.36 | 18.23 | 18.21 |
| | | 1 | 24 | 18.37 | 18.44 | 18.33 |
| | | 1 | 49 | 18.25 | 18.29 | 18.24 |
| | | 25 | 0 | 17.30 | 17.23 | 17.24 |
| | | 25 | 12 | 17.33 | 17.23 | 17.24 |
| | | 25 | 25 | 17.33 | 17.30 | 17.26 |
| | | 50 | 0 | 17.27 | 17.25 | 17.22 |
| | 16QAM | 1 | 0 | 17.41 | 17.03 | 16.94 |
| | | 1 | 24 | 17.48 | 17.18 | 17.10 |
| | | 1 | 49 | 17.22 | 17.08 | 17.01 |
| | | 25 | 0 | 16.29 | 16.25 | 16.28 |
| | | 25 | 12 | 16.28 | 16.24 | 16.31 |
| | | 25 | 25 | 16.29 | 16.28 | 16.27 |
| | | 50 | 0 | 18.36 | 18.23 | 18.21 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20025 | 20175 | 20325 |
| 15MHz | QPSK | 1 | 0 | 18.25 | 18.01 | 18.11 |
| | | 1 | 24 | 18.23 | 18.16 | 18.16 |
| | | 1 | 49 | 18.08 | 18.11 | 18.11 |
| | | 25 | 0 | 17.20 | 17.11 | 17.08 |
| | | 25 | 12 | 17.25 | 17.24 | 17.21 |
| | | 25 | 25 | 17.09 | 17.26 | 17.12 |
| | | 50 | 0 | 17.26 | 17.22 | 17.21 |
| | 16QAM | 1 | 0 | 17.23 | 17.14 | 17.11 |
| | | 1 | 24 | 17.21 | 17.20 | 17.17 |
| | | 1 | 49 | 17.09 | 17.26 | 17.12 |
| | | 25 | 0 | 17.21 | 17.08 | 17.14 |
| | | 25 | 12 | 17.24 | 17.23 | 17.17 |
| | | 25 | 25 | 17.11 | 17.21 | 17.10 |
| | | 50 | 0 | 18.25 | 18.01 | 18.11 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 20050 | 20175 | 20175 |
| 20MHz | QPSK | 1 | 0 | 18.04 | 17.85 | 17.90 |
| | | 1 | 24 | 18.55 | 18.57 | 18.58 |
| | | 1 | 49 | 17.94 | 18.06 | 17.98 |
| | | 25 | 0 | 17.17 | 17.04 | 17.27 |
| | | 25 | 12 | 17.09 | 17.07 | 17.25 |
| | | 25 | 25 | 17.26 | 17.23 | 17.19 |
| | | 50 | 0 | 17.20 | 17.09 | 17.17 |
| | 16QAM | 1 | 0 | 16.92 | 16.98 | 16.75 |
| | | 1 | 24 | 17.14 | 17.44 | 17.25 |
| | | 1 | 49 | 16.83 | 17.19 | 16.89 |
| | | 25 | 0 | 16.13 | 16.12 | 16.29 |
| | | 25 | 12 | 16.09 | 16.10 | 16.25 |
| | | 25 | 25 | 16.26 | 16.25 | 16.20 |
| | | 50 | 0 | 18.04 | 17.85 | 17.90 |

Conducted power measurements of LTE Band 5

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20407 | 20525 | 20643 |
| 1.4MHz | QPSK | 1 | 0 | 23.31 | 23.11 | 23.24 |
| | | 1 | 3 | 23.38 | 23.25 | 23.41 |
| | | 1 | 5 | 23.28 | 23.10 | 23.26 |
| | | 3 | 0 | 23.37 | 23.23 | 23.35 |
| | | 3 | 2 | 23.34 | 23.21 | 23.33 |
| | | 3 | 3 | 23.39 | 23.23 | 23.35 |
| | | 6 | 0 | 22.26 | 22.10 | 22.27 |
| | 16QAM | 1 | 0 | 22.10 | 21.98 | 22.07 |
| | | 1 | 3 | 22.25 | 22.06 | 22.21 |
| | | 1 | 5 | 22.08 | 21.91 | 22.03 |
| | | 3 | 0 | 22.18 | 22.02 | 22.16 |
| | | 3 | 2 | 22.21 | 22.03 | 22.15 |
| | | 3 | 3 | 22.17 | 22.00 | 22.11 |
| | | 6 | 0 | 21.13 | 20.98 | 21.11 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20415 | 20525 | 20635 |
| 3MHz | QPSK | 1 | 0 | 23.31 | 23.16 | 23.21 |
| | | 1 | 7 | 23.33 | 23.14 | 23.23 |
| | | 1 | 14 | 23.25 | 23.11 | 23.25 |
| | | 8 | 0 | 22.28 | 22.14 | 22.24 |
| | | 8 | 4 | 22.25 | 22.17 | 22.22 |
| | | 8 | 7 | 22.23 | 22.11 | 22.27 |
| | | 15 | 0 | 22.23 | 22.09 | 22.22 |
| | 16QAM | 1 | 0 | 22.20 | 21.88 | 22.19 |
| | | 1 | 7 | 22.23 | 21.89 | 22.18 |
| | | 1 | 14 | 22.10 | 21.89 | 22.18 |
| | | 8 | 0 | 21.28 | 21.14 | 21.24 |
| | | 8 | 4 | 21.27 | 21.12 | 21.26 |
| | | 8 | 7 | 21.30 | 21.12 | 21.29 |
| | | 15 | 0 | 21.20 | 21.00 | 21.29 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20425 | 20525 | 20625 |
| 5MHz | QPSK | 1 | 0 | 23.26 | 23.05 | 23.11 |
| | | 1 | 12 | 23.37 | 23.15 | 23.29 |
| | | 1 | 24 | 23.28 | 23.07 | 23.22 |
| | | 12 | 0 | 22.27 | 22.17 | 22.26 |
| | | 12 | 6 | 22.19 | 22.21 | 22.22 |
| | | 12 | 13 | 22.26 | 22.07 | 22.21 |
| | | 25 | 0 | 22.31 | 22.18 | 22.24 |
| | 16QAM | 1 | 0 | 22.22 | 22.14 | 22.08 |
| | | 1 | 13 | 22.32 | 22.19 | 22.19 |
| | | 1 | 24 | 22.20 | 22.07 | 22.06 |
| | | 12 | 0 | 21.26 | 21.23 | 21.26 |
| | | 12 | 6 | 21.21 | 21.22 | 21.23 |
| | | 12 | 13 | 21.23 | 21.14 | 21.20 |
| | | 25 | 0 | 21.36 | 21.10 | 21.32 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 20450 | 20525 | 20600 |
| 10MHz | QPSK | 1 | 0 | 23.24 | 23.16 | 23.16 |
| | | 1 | 24 | 23.55 | 23.60 | 23.65 |
| | | 1 | 49 | 23.15 | 23.16 | 23.29 |
| | | 25 | 0 | 22.32 | 22.25 | 22.28 |
| | | 25 | 12 | 22.28 | 22.20 | 22.24 |
| | | 25 | 25 | 22.31 | 22.12 | 22.19 |
| | | 50 | 0 | 22.29 | 22.16 | 22.20 |
| | 16QAM | 1 | 0 | 22.26 | 22.16 | 22.05 |
| | | 1 | 24 | 22.31 | 22.24 | 22.18 |
| | | 1 | 49 | 22.12 | 22.14 | 22.08 |
| | | 25 | 0 | 21.28 | 21.23 | 21.30 |
| | | 25 | 12 | 21.28 | 21.20 | 21.30 |
| | | 25 | 25 | 21.26 | 21.10 | 21.20 |
| | | 50 | 0 | 21.32 | 21.19 | 21.22 |

Conducted power measurements of LTE Band 7

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20775 | 21100 | 21425 |
| 5MHz | QPSK | 1 | 0 | 21.90 | 21.90 | 21.95 |
| | | 1 | 12 | 21.99 | 22.07 | 22.12 |
| | | 1 | 24 | 21.89 | 21.98 | 22.06 |
| | | 12 | 0 | 20.92 | 20.99 | 20.97 |
| | | 12 | 6 | 20.92 | 20.97 | 20.93 |
| | | 12 | 13 | 20.95 | 20.97 | 21.04 |
| | | 25 | 0 | 21.00 | 20.98 | 21.01 |
| | 16QAM | 1 | 0 | 20.95 | 20.77 | 20.89 |
| | | 1 | 13 | 21.04 | 20.99 | 21.08 |
| | | 1 | 24 | 21.00 | 20.83 | 21.00 |
| | | 12 | 0 | 19.97 | 19.99 | 20.02 |
| | | 12 | 6 | 19.96 | 20.06 | 20.03 |
| | | 12 | 13 | 20.01 | 20.03 | 20.09 |
| | | 25 | 0 | 20.00 | 20.11 | 20.04 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20800 | 21100 | 21400 |
| 10MHz | QPSK | 1 | 0 | 21.99 | 21.94 | 21.96 |
| | | 1 | 24 | 22.15 | 22.16 | 22.19 |
| | | 1 | 49 | 22.04 | 22.06 | 22.13 |
| | | 25 | 0 | 21.06 | 21.10 | 21.05 |
| | | 25 | 12 | 21.07 | 21.11 | 21.04 |
| | | 25 | 25 | 21.14 | 21.09 | 21.13 |
| | | 50 | 0 | 21.07 | 21.06 | 21.05 |
| | 16QAM | 1 | 0 | 20.83 | 20.75 | 20.95 |
| | | 1 | 24 | 21.05 | 20.88 | 21.07 |
| | | 1 | 49 | 20.89 | 20.80 | 21.09 |
| | | 25 | 0 | 20.10 | 20.19 | 20.11 |
| | | 25 | 12 | 20.07 | 20.19 | 20.07 |
| | | 25 | 25 | 20.14 | 20.17 | 20.20 |
| | | 50 | 0 | 20.11 | 20.14 | 20.17 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20825 | 21100 | 21375 |
| 15MHz | QPSK | 1 | 0 | 21.79 | 21.85 | 21.88 |
| | | 1 | 24 | 21.96 | 22.04 | 22.08 |
| | | 1 | 49 | 21.81 | 21.97 | 22.00 |
| | | 25 | 0 | 20.94 | 20.63 | 20.94 |
| | | 25 | 12 | 21.11 | 20.77 | 21.07 |
| | | 25 | 25 | 20.94 | 20.71 | 20.96 |
| | | 50 | 0 | 21.10 | 21.03 | 21.06 |
| | 16QAM | 1 | 0 | 20.97 | 20.64 | 20.93 |
| | | 1 | 24 | 21.10 | 20.85 | 21.09 |
| | | 1 | 49 | 20.98 | 20.77 | 21.01 |
| | | 25 | 0 | 20.96 | 20.63 | 20.92 |
| | | 25 | 12 | 21.12 | 20.82 | 21.11 |
| | | 25 | 25 | 20.98 | 20.70 | 20.97 |
| | | 50 | 0 | 20.06 | 20.08 | 20.11 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 20850 | 21100 | 21350 |
| 20MHz | QPSK | 1 | 0 | 21.93 | 22.00 | 22.03 |
| | | 1 | 24 | 22.36 | 22.34 | 22.42 |
| | | 1 | 49 | 22.00 | 22.09 | 22.15 |
| | | 25 | 0 | 21.20 | 21.31 | 21.30 |
| | | 25 | 12 | 21.18 | 21.24 | 21.33 |
| | | 25 | 25 | 21.32 | 21.28 | 21.36 |
| | | 50 | 0 | 21.25 | 21.28 | 21.29 |
| | 16QAM | 1 | 0 | 20.72 | 20.86 | 21.12 |
| | | 1 | 24 | 21.23 | 21.35 | 21.55 |
| | | 1 | 49 | 20.80 | 20.99 | 21.24 |
| | | 25 | 0 | 20.24 | 20.40 | 20.39 |
| | | 25 | 12 | 20.37 | 20.31 | 20.43 |
| | | 25 | 25 | 20.24 | 20.30 | 20.39 |
| | | 50 | 0 | 20.27 | 20.32 | 20.35 |

The reduced of Conducted power measurements of LTE Band 7

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20775 | 21100 | 21425 |
| 5MHz | QPSK | 1 | 0 | 19.90 | 19.90 | 19.95 |
| | | 1 | 12 | 19.99 | 20.07 | 20.12 |
| | | 1 | 24 | 19.89 | 19.98 | 20.06 |
| | | 12 | 0 | 18.92 | 18.99 | 18.97 |
| | | 12 | 6 | 18.92 | 18.97 | 18.93 |
| | | 12 | 13 | 18.95 | 18.97 | 19.04 |
| | | 25 | 0 | 19.00 | 18.98 | 19.01 |
| | 16QAM | 1 | 0 | 18.95 | 18.77 | 18.89 |
| | | 1 | 13 | 19.04 | 18.99 | 19.08 |
| | | 1 | 24 | 19.00 | 18.83 | 19.00 |
| | | 12 | 0 | 17.97 | 17.99 | 18.02 |
| | | 12 | 6 | 17.96 | 18.06 | 18.03 |
| | | 12 | 13 | 18.01 | 18.03 | 18.09 |
| | | 25 | 0 | 18.01 | 18.03 | 18.09 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20800 | 21100 | 21400 |
| 10MHz | QPSK | 1 | 0 | 19.99 | 19.94 | 19.96 |
| | | 1 | 24 | 20.15 | 20.16 | 20.19 |
| | | 1 | 49 | 20.04 | 20.06 | 20.13 |
| | | 25 | 0 | 19.06 | 19.10 | 19.05 |
| | | 25 | 12 | 19.07 | 19.11 | 19.04 |
| | | 25 | 25 | 19.14 | 19.09 | 19.13 |
| | | 50 | 0 | 19.07 | 19.06 | 19.05 |
| | 16QAM | 1 | 0 | 18.83 | 18.75 | 18.95 |
| | | 1 | 24 | 19.05 | 18.88 | 19.07 |
| | | 1 | 49 | 18.89 | 18.80 | 19.09 |
| | | 25 | 0 | 18.10 | 18.19 | 18.11 |
| | | 25 | 12 | 18.07 | 18.19 | 18.07 |
| | | 25 | 25 | 18.14 | 18.17 | 18.20 |
| | | 50 | 0 | 18.01 | 18.03 | 18.09 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20825 | 21100 | 21375 |
| 15MHz | QPSK | 1 | 0 | 19.79 | 19.85 | 19.88 |
| | | 1 | 24 | 19.96 | 20.04 | 20.08 |
| | | 1 | 49 | 19.81 | 19.97 | 20.00 |
| | | 25 | 0 | 18.94 | 18.63 | 18.94 |
| | | 25 | 12 | 19.11 | 18.77 | 19.07 |
| | | 25 | 25 | 18.94 | 18.71 | 18.96 |
| | | 50 | 0 | 19.10 | 19.03 | 19.06 |
| | 16QAM | 1 | 0 | 18.97 | 18.64 | 18.93 |
| | | 1 | 24 | 19.10 | 18.85 | 19.09 |
| | | 1 | 49 | 18.98 | 18.77 | 19.01 |
| | | 25 | 0 | 18.96 | 18.63 | 18.92 |
| | | 25 | 12 | 19.12 | 18.82 | 19.11 |
| | | 25 | 25 | 18.98 | 18.70 | 18.97 |
| | | 50 | 0 | 18.98 | 18.70 | 18.97 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 20850 | 21100 | 21350 |
| 20MHz | QPSK | 1 | 0 | 19.70 | 19.72 | 19.73 |
| | | 1 | 24 | 20.37 | 20.38 | 20.32 |
| | | 1 | 49 | 19.76 | 19.83 | 19.81 |
| | | 25 | 0 | 18.93 | 19.02 | 18.99 |
| | | 25 | 12 | 18.93 | 19.01 | 19.03 |
| | | 25 | 25 | 19.08 | 19.07 | 19.08 |
| | | 50 | 0 | 18.95 | 19.04 | 19.06 |
| | 16QAM | 1 | 0 | 18.63 | 18.83 | 18.58 |
| | | 1 | 24 | 19.01 | 19.23 | 18.87 |
| | | 1 | 49 | 18.63 | 18.97 | 18.62 |
| | | 25 | 0 | 17.95 | 18.14 | 18.14 |
| | | 25 | 12 | 17.94 | 18.11 | 18.09 |
| | | 25 | 25 | 18.07 | 18.14 | 18.24 |
| | | 50 | 0 | 19.70 | 19.72 | 19.73 |

Conducted power measurements of LTE Band 12

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 23017 | 23095 | 23173 |
| 1.4MHz | QPSK | 1 | 0 | 23.20 | 23.03 | 23.00 |
| | | 1 | 3 | 23.17 | 23.19 | 23.13 |
| | | 1 | 5 | 23.09 | 22.98 | 22.96 |
| | | 3 | 0 | 23.21 | 23.12 | 23.09 |
| | | 3 | 2 | 23.18 | 23.13 | 23.06 |
| | | 3 | 3 | 23.23 | 23.18 | 23.09 |
| | | 6 | 0 | 22.15 | 22.03 | 22.06 |
| | 16QAM | 1 | 0 | 21.98 | 21.80 | 21.90 |
| | | 1 | 3 | 22.09 | 21.97 | 22.08 |
| | | 1 | 5 | 21.93 | 21.79 | 21.85 |
| | | 3 | 0 | 22.00 | 21.87 | 21.86 |
| | | 3 | 2 | 22.02 | 21.86 | 21.86 |
| | | 3 | 3 | 22.03 | 21.85 | 21.78 |
| | | 6 | 0 | 21.00 | 21.06 | 21.10 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 23025 | 23095 | 23165 |
| 3MHz | QPSK | 1 | 0 | 23.20 | 23.10 | 23.09 |
| | | 1 | 7 | 23.13 | 23.09 | 23.08 |
| | | 1 | 14 | 23.13 | 23.11 | 23.03 |
| | | 8 | 0 | 22.16 | 22.01 | 22.03 |
| | | 8 | 4 | 22.17 | 21.98 | 22.03 |
| | | 8 | 7 | 22.14 | 21.99 | 22.03 |
| | | 15 | 0 | 22.13 | 22.00 | 21.99 |
| | 16QAM | 1 | 0 | 22.19 | 21.96 | 21.76 |
| | | 1 | 7 | 22.16 | 21.90 | 21.84 |
| | | 1 | 14 | 22.16 | 21.85 | 21.77 |
| | | 8 | 0 | 21.21 | 21.06 | 21.10 |
| | | 8 | 4 | 21.20 | 21.05 | 21.07 |
| | | 8 | 7 | 21.19 | 21.01 | 21.05 |
| | | 15 | 0 | 21.18 | 20.94 | 20.95 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 23035 | 23095 | 23155 |
| 5MHz | QPSK | 1 | 0 | 23.11 | 23.03 | 23.01 |
| | | 1 | 12 | 23.30 | 23.11 | 23.13 |
| | | 1 | 24 | 23.18 | 22.95 | 22.99 |
| | | 12 | 0 | 22.11 | 22.02 | 22.07 |
| | | 12 | 6 | 22.10 | 22.00 | 22.11 |
| | | 12 | 13 | 22.19 | 22.02 | 22.05 |
| | | 25 | 0 | 22.22 | 22.03 | 22.11 |
| | 16QAM | 1 | 0 | 22.07 | 22.08 | 21.88 |
| | | 1 | 13 | 22.21 | 22.12 | 21.97 |
| | | 1 | 24 | 22.04 | 22.00 | 21.84 |
| | | 12 | 0 | 21.13 | 21.16 | 21.09 |
| | | 12 | 6 | 21.14 | 21.09 | 21.13 |
| | | 12 | 13 | 21.21 | 21.02 | 21.06 |
| | | 25 | 0 | 21.24 | 21.02 | 21.17 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 23060 | 23095 | 23130 |
| 10MHz | QPSK | 1 | 0 | 23.08 | 23.06 | 23.04 |
| | | 1 | 24 | 23.67 | 23.65 | 23.64 |
| | | 1 | 49 | 23.07 | 23.07 | 23.07 |
| | | 25 | 0 | 22.08 | 22.00 | 22.08 |
| | | 25 | 12 | 22.10 | 21.99 | 22.11 |
| | | 25 | 25 | 22.16 | 22.03 | 22.07 |
| | | 50 | 0 | 22.14 | 22.03 | 22.07 |
| | 16QAM | 1 | 0 | 21.87 | 22.09 | 21.93 |
| | | 1 | 24 | 22.01 | 22.18 | 21.98 |
| | | 1 | 49 | 21.82 | 22.04 | 21.85 |
| | | 25 | 0 | 21.15 | 21.04 | 21.15 |
| | | 25 | 12 | 21.17 | 21.04 | 21.13 |
| | | 25 | 25 | 21.26 | 21.02 | 21.13 |
| | | 50 | 0 | 21.16 | 20.99 | 21.19 |

Conducted power measurements of LTE Band 17

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 23755 | 23790 | 23825 |
| 5MHz | QPSK | 1 | 0 | 23.23 | 23.08 | 23.08 |
| | | 1 | 12 | 23.31 | 23.11 | 23.24 |
| | | 1 | 24 | 23.18 | 23.01 | 23.10 |
| | | 12 | 0 | 22.12 | 22.13 | 22.07 |
| | | 12 | 6 | 22.14 | 22.12 | 22.17 |
| | | 12 | 13 | 22.22 | 22.02 | 22.05 |
| | | 25 | 0 | 22.21 | 22.15 | 22.11 |
| | 16QAM | 1 | 0 | 22.10 | 22.11 | 21.93 |
| | | 1 | 13 | 22.27 | 22.20 | 22.09 |
| | | 1 | 24 | 22.09 | 22.10 | 21.96 |
| | | 12 | 0 | 21.12 | 21.12 | 21.19 |
| | | 12 | 6 | 21.17 | 21.17 | 21.16 |
| | | 12 | 13 | 21.18 | 21.10 | 21.14 |
| | | 25 | 0 | 21.24 | 21.13 | 21.18 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 23450 | 23790 | 23800 |
| 10MHz | QPSK | 1 | 0 | 23.14 | 23.19 | 23.19 |
| | | 1 | 24 | 23.50 | 23.54 | 23.57 |
| | | 1 | 49 | 23.08 | 23.12 | 23.18 |
| | | 25 | 0 | 22.14 | 22.15 | 22.21 |
| | | 25 | 12 | 22.12 | 22.14 | 22.23 |
| | | 25 | 25 | 22.05 | 22.12 | 22.16 |
| | | 50 | 0 | 22.12 | 22.15 | 22.18 |
| | 16QAM | 1 | 0 | 22.19 | 21.99 | 21.94 |
| | | 1 | 24 | 22.29 | 22.08 | 22.00 |
| | | 1 | 49 | 22.18 | 22.01 | 21.92 |
| | | 25 | 0 | 21.15 | 21.18 | 21.26 |
| | | 25 | 12 | 21.13 | 21.23 | 21.32 |
| | | 25 | 25 | 21.06 | 21.16 | 21.20 |
| | | 50 | 0 | 21.09 | 21.20 | 21.21 |

Conducted power measurements of LTE Band 26

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 26697 | 26865 | 27033 |
| 1.4MHz | QPSK | 1 | 0 | 23.05 | 23.00 | 23.03 |
| | | 1 | 3 | 23.12 | 23.13 | 23.11 |
| | | 1 | 5 | 23.05 | 23.06 | 22.96 |
| | | 3 | 0 | 23.06 | 23.15 | 23.13 |
| | | 3 | 2 | 23.08 | 23.16 | 23.13 |
| | | 3 | 3 | 23.08 | 23.18 | 23.12 |
| | | 6 | 0 | 22.03 | 22.04 | 22.08 |
| | 16QAM | 1 | 0 | 21.83 | 21.74 | 21.92 |
| | | 1 | 3 | 22.02 | 21.94 | 22.05 |
| | | 1 | 5 | 21.89 | 21.78 | 21.93 |
| | | 3 | 0 | 21.91 | 21.87 | 21.89 |
| | | 3 | 2 | 21.89 | 21.88 | 21.92 |
| | | 3 | 3 | 21.88 | 21.89 | 21.90 |
| | | 6 | 0 | 20.91 | 21.01 | 21.07 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 26705 | 26865 | 27025 |
| 3MHz | QPSK | 1 | 0 | 23.06 | 23.06 | 23.08 |
| | | 1 | 7 | 23.15 | 23.06 | 23.05 |
| | | 1 | 14 | 23.08 | 23.15 | 23.10 |
| | | 8 | 0 | 21.99 | 22.01 | 22.04 |
| | | 8 | 4 | 22.01 | 22.03 | 22.07 |
| | | 8 | 7 | 22.04 | 22.06 | 22.04 |
| | | 15 | 0 | 22.00 | 22.03 | 22.00 |
| | 16QAM | 1 | 0 | 21.92 | 21.87 | 22.12 |
| | | 1 | 7 | 21.96 | 21.86 | 22.09 |
| | | 1 | 14 | 21.92 | 21.87 | 22.10 |
| | | 8 | 0 | 21.02 | 21.09 | 21.11 |
| | | 8 | 4 | 20.99 | 21.06 | 21.11 |
| | | 8 | 7 | 21.03 | 21.08 | 21.12 |
| | | 15 | 0 | 20.93 | 20.98 | 21.09 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 26715 | 26865 | 27015 |
| 5MHz | QPSK | 1 | 0 | 22.93 | 23.04 | 23.03 |
| | | 1 | 12 | 23.39 | 23.36 | 23.33 |
| | | 1 | 24 | 23.03 | 23.05 | 23.05 |
| | | 12 | 0 | 21.97 | 21.99 | 22.07 |
| | | 12 | 6 | 22.01 | 22.05 | 22.10 |
| | | 12 | 13 | 22.00 | 22.05 | 22.06 |
| | | 25 | 0 | 21.99 | 22.08 | 22.13 |
| | 16QAM | 1 | 0 | 22.03 | 21.92 | 22.01 |
| | | 1 | 13 | 22.09 | 22.04 | 22.03 |
| | | 1 | 24 | 22.07 | 21.95 | 21.97 |
| | | 12 | 0 | 21.01 | 21.08 | 21.10 |
| | | 12 | 6 | 21.11 | 21.09 | 21.03 |
| | | 12 | 13 | 21.08 | 21.08 | 21.08 |
| | | 25 | 0 | 21.06 | 21.12 | 21.17 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 26740 | 26865 | 26990 |
| 10MHz | QPSK | 1 | 0 | 23.02 | -- | -- |
| | | 1 | 24 | 23.16 | -- | -- |
| | | 1 | 49 | 23.10 | -- | -- |
| | | 25 | 0 | 22.05 | -- | -- |
| | | 25 | 12 | 22.05 | -- | -- |
| | | 25 | 25 | 22.16 | -- | -- |
| | | 50 | 0 | 22.08 | -- | -- |
| | 16QAM | 1 | 0 | 21.84 | -- | -- |
| | | 1 | 24 | 22.06 | -- | -- |
| | | 1 | 49 | 21.98 | -- | -- |
| | | 25 | 0 | 21.16 | -- | -- |
| | | 25 | 12 | 21.12 | -- | -- |
| | | 25 | 25 | 21.19 | -- | -- |
| | | 50 | 0 | 21.14 | -- | -- |

Conducted power measurements of LTE Band 38

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 37775 | 38000 | 38225 |
| 5MHz | QPSK | 1 | 0 | 23.75 | 23.39 | 23.46 |
| | | 1 | 12 | 23.52 | 23.53 | 23.61 |
| | | 1 | 24 | 23.38 | 23.44 | 23.51 |
| | | 12 | 0 | 22.43 | 22.44 | 22.46 |
| | | 12 | 6 | 22.42 | 22.46 | 22.45 |
| | | 12 | 13 | 22.45 | 22.44 | 22.47 |
| | | 25 | 0 | 22.42 | 22.49 | 22.48 |
| | 16QAM | 1 | 0 | 22.39 | 22.30 | 22.35 |
| | | 1 | 13 | 22.51 | 22.40 | 22.49 |
| | | 1 | 24 | 22.42 | 22.28 | 22.36 |
| | | 12 | 0 | 21.41 | 21.44 | 21.41 |
| | | 12 | 6 | 21.44 | 21.40 | 21.42 |
| | | 12 | 13 | 21.42 | 21.37 | 21.44 |
| | | 25 | 0 | 21.40 | 21.50 | 21.48 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 37800 | 38000 | 38200 |
| 10MHz | QPSK | 1 | 0 | 23.44 | 23.43 | 23.56 |
| | | 1 | 24 | 23.75 | 23.71 | 23.66 |
| | | 1 | 49 | 23.40 | 23.45 | 23.60 |
| | | 25 | 0 | 22.49 | 22.51 | 22.51 |
| | | 25 | 12 | 22.51 | 22.53 | 22.55 |
| | | 25 | 25 | 22.45 | 22.52 | 22.55 |
| | | 50 | 0 | 22.50 | 22.46 | 22.54 |
| | 16QAM | 1 | 0 | 22.17 | 22.38 | 22.30 |
| | | 1 | 24 | 22.45 | 22.71 | 22.60 |
| | | 1 | 49 | 22.11 | 22.45 | 22.34 |
| | | 25 | 0 | 21.50 | 21.47 | 21.54 |
| | | 25 | 12 | 21.49 | 21.47 | 21.54 |
| | | 25 | 25 | 21.46 | 21.44 | 21.55 |
| | | 50 | 0 | 21.44 | 21.50 | 21.54 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 37825 | 38000 | 38175 |
| 15MHz | QPSK | 1 | 0 | 23.34 | 23.30 | 23.26 |
| | | 1 | 24 | 23.45 | 23.49 | 23.45 |
| | | 1 | 49 | 23.34 | 23.35 | 23.37 |
| | | 25 | 0 | 22.07 | 22.29 | 22.41 |
| | | 25 | 12 | 22.22 | 22.45 | 22.55 |
| | | 25 | 25 | 22.08 | 22.38 | 22.47 |
| | | 50 | 0 | 22.49 | 22.52 | 22.54 |
| | 16QAM | 1 | 0 | 22.06 | 22.28 | 22.38 |
| | | 1 | 24 | 22.18 | 22.45 | 22.56 |
| | | 1 | 49 | 22.05 | 22.35 | 22.48 |
| | | 25 | 0 | 22.05 | 22.30 | 22.42 |
| | | 25 | 12 | 22.20 | 22.47 | 22.56 |
| | | 25 | 25 | 22.06 | 22.37 | 22.45 |
| | | 50 | 0 | 21.43 | 21.39 | 21.48 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 37850 | 38000 | 38150 |
| 20MHz | QPSK | 1 | 0 | 23.18 | 23.13 | 23.14 |
| | | 1 | 24 | 23.78 | 23.74 | 23.72 |
| | | 1 | 49 | 23.27 | 23.20 | 23.19 |
| | | 25 | 0 | 22.38 | 22.44 | 22.43 |
| | | 25 | 12 | 22.35 | 22.42 | 22.39 |
| | | 25 | 25 | 22.35 | 22.39 | 22.42 |
| | | 50 | 0 | 22.41 | 22.41 | 22.45 |
| | 16QAM | 1 | 0 | 22.01 | 22.22 | 21.95 |
| | | 1 | 24 | 22.52 | 22.81 | 22.55 |
| | | 1 | 49 | 22.14 | 22.29 | 22.05 |
| | | 25 | 0 | 21.36 | 21.41 | 21.45 |
| | | 25 | 12 | 21.36 | 21.46 | 21.44 |
| | | 25 | 25 | 21.34 | 21.42 | 21.48 |
| | | 50 | 0 | 21.38 | 21.44 | 21.48 |

The reduced of Conducted power measurements of LTE Band 38

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 37775 | 38000 | 38225 |
| 5MHz | QPSK | 1 | 0 | 19.09 | 18.73 | 18.80 |
| | | 1 | 12 | 18.86 | 18.87 | 18.95 |
| | | 1 | 24 | 18.72 | 18.78 | 18.85 |
| | | 12 | 0 | 17.77 | 17.78 | 17.80 |
| | | 12 | 6 | 17.76 | 17.80 | 17.79 |
| | | 12 | 13 | 17.79 | 17.78 | 17.81 |
| | | 25 | 0 | 17.76 | 17.83 | 17.82 |
| | 16QAM | 1 | 0 | 17.73 | 17.64 | 17.69 |
| | | 1 | 13 | 17.85 | 17.74 | 17.83 |
| | | 1 | 24 | 17.76 | 17.62 | 17.70 |
| | | 12 | 0 | 16.75 | 16.78 | 16.75 |
| | | 12 | 6 | 16.78 | 16.74 | 16.76 |
| | | 12 | 13 | 16.76 | 16.71 | 16.78 |
| | | 25 | 0 | 19.09 | 18.73 | 18.80 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 37800 | 38000 | 38200 |
| 10MHz | QPSK | 1 | 0 | 18.78 | 18.77 | 18.90 |
| | | 1 | 24 | 19.09 | 19.05 | 19.20 |
| | | 1 | 49 | 18.74 | 18.79 | 18.94 |
| | | 25 | 0 | 17.83 | 17.85 | 17.85 |
| | | 25 | 12 | 17.85 | 17.87 | 17.89 |
| | | 25 | 25 | 17.79 | 17.86 | 17.89 |
| | | 50 | 0 | 17.84 | 17.80 | 17.88 |
| | 16QAM | 1 | 0 | 17.51 | 17.72 | 17.64 |
| | | 1 | 24 | 17.79 | 18.05 | 17.94 |
| | | 1 | 49 | 17.45 | 17.79 | 17.68 |
| | | 25 | 0 | 16.84 | 16.81 | 16.88 |
| | | 25 | 12 | 16.83 | 16.81 | 16.88 |
| | | 25 | 25 | 16.80 | 16.78 | 16.89 |
| | | 50 | 0 | 18.78 | 18.77 | 18.90 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 37825 | 38000 | 38175 |
| 15MHz | QPSK | 1 | 0 | 18.68 | 18.64 | 18.60 |
| | | 1 | 24 | 18.79 | 18.83 | 18.79 |
| | | 1 | 49 | 18.68 | 18.69 | 18.71 |
| | | 25 | 0 | 17.41 | 17.63 | 17.75 |
| | | 25 | 12 | 17.56 | 17.79 | 17.89 |
| | | 25 | 25 | 17.42 | 17.72 | 17.81 |
| | | 50 | 0 | 17.83 | 17.86 | 17.88 |
| | 16QAM | 1 | 0 | 17.40 | 17.62 | 17.72 |
| | | 1 | 24 | 17.52 | 17.79 | 17.90 |
| | | 1 | 49 | 17.39 | 17.69 | 17.82 |
| | | 25 | 0 | 17.39 | 17.64 | 17.76 |
| | | 25 | 12 | 17.54 | 17.81 | 17.90 |
| | | 25 | 25 | 17.40 | 17.71 | 17.79 |
| | | 50 | 0 | 18.68 | 18.64 | 18.60 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 37850 | 38000 | 38150 |
| 20MHz | QPSK | 1 | 0 | 18.52 | 18.47 | 18.48 |
| | | 1 | 24 | 19.92 | 19.98 | 19.96 |
| | | 1 | 49 | 18.61 | 18.54 | 18.53 |
| | | 25 | 0 | 17.72 | 17.78 | 17.77 |
| | | 25 | 12 | 17.69 | 17.76 | 17.73 |
| | | 25 | 25 | 17.69 | 17.73 | 17.76 |
| | | 50 | 0 | 17.75 | 17.75 | 17.79 |
| | 16QAM | 1 | 0 | 17.35 | 17.56 | 17.29 |
| | | 1 | 24 | 17.86 | 18.15 | 17.89 |
| | | 1 | 49 | 17.48 | 17.63 | 17.39 |
| | | 25 | 0 | 16.70 | 16.75 | 16.79 |
| | | 25 | 12 | 16.70 | 16.80 | 16.78 |
| | | 25 | 25 | 16.68 | 16.76 | 16.82 |
| | | 50 | 0 | 18.52 | 18.47 | 18.48 |

Conducted power measurements of LTE Band 41

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 39675 | 40620 | 41565 |
| 5MHz | QPSK | 1 | 0 | 23.47 | 23.37 | 23.55 |
| | | 1 | 12 | 23.65 | 23.56 | 23.69 |
| | | 1 | 24 | 23.44 | 23.39 | 23.52 |
| | | 12 | 0 | 22.52 | 22.44 | 22.57 |
| | | 12 | 6 | 22.51 | 22.43 | 22.58 |
| | | 12 | 13 | 22.57 | 22.45 | 22.51 |
| | | 25 | 0 | 22.50 | 22.44 | 22.51 |
| | 16QAM | 1 | 0 | 22.50 | 22.27 | 22.43 |
| | | 1 | 13 | 22.63 | 22.43 | 22.55 |
| | | 1 | 24 | 22.48 | 22.29 | 22.41 |
| | | 12 | 0 | 21.49 | 21.38 | 21.55 |
| | | 12 | 6 | 21.48 | 21.44 | 21.59 |
| | | 12 | 13 | 21.56 | 21.41 | 21.51 |
| | | 25 | 0 | 21.45 | 21.45 | 21.63 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 39700 | 40620 | 41540 |
| 10MHz | QPSK | 1 | 0 | 23.18 | 23.00 | 23.11 |
| | | 1 | 24 | 23.44 | 23.30 | 23.39 |
| | | 1 | 49 | 23.14 | 23.04 | 23.11 |
| | | 25 | 0 | 22.08 | 22.09 | 22.14 |
| | | 25 | 12 | 22.02 | 22.08 | 22.15 |
| | | 25 | 25 | 22.21 | 22.08 | 22.07 |
| | | 50 | 0 | 22.11 | 22.02 | 22.13 |
| | 16QAM | 1 | 0 | 21.91 | 21.75 | 22.10 |
| | | 1 | 24 | 22.17 | 22.07 | 22.38 |
| | | 1 | 49 | 21.88 | 21.78 | 22.06 |
| | | 25 | 0 | 21.06 | 21.10 | 21.20 |
| | | 25 | 12 | 21.04 | 21.10 | 21.15 |
| | | 25 | 25 | 21.17 | 21.07 | 21.10 |
| | | 50 | 0 | 21.12 | 21.03 | 21.16 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 39725 | 40620 | 41515 |
| 15MHz | QPSK | 1 | 0 | 23.48 | 23.22 | 23.46 |
| | | 1 | 24 | 23.52 | 23.41 | 23.57 |
| | | 1 | 49 | 23.40 | 23.31 | 23.41 |
| | | 25 | 0 | 22.44 | 22.37 | 22.22 |
| | | 25 | 12 | 22.51 | 22.49 | 22.35 |
| | | 25 | 25 | 22.36 | 22.38 | 22.17 |
| | | 50 | 0 | 22.62 | 22.48 | 22.56 |
| | 16QAM | 1 | 0 | 22.47 | 22.39 | 22.19 |
| | | 1 | 24 | 22.53 | 22.49 | 22.29 |
| | | 1 | 49 | 22.36 | 22.41 | 22.14 |
| | | 25 | 0 | 22.45 | 22.37 | 22.21 |
| | | 25 | 12 | 22.53 | 22.50 | 22.33 |
| | | 25 | 25 | 22.34 | 22.41 | 22.16 |
| | | 50 | 0 | 21.53 | 21.45 | 21.55 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 39750 | 40620 | 41490 |
| 20MHz | QPSK | 1 | 0 | 23.30 | 23.18 | 23.33 |
| | | 1 | 24 | 23.75 | 23.74 | 23.77 |
| | | 1 | 49 | 23.19 | 23.25 | 23.35 |
| | | 25 | 0 | 22.38 | 22.47 | 22.61 |
| | | 25 | 12 | 22.37 | 22.46 | 22.59 |
| | | 25 | 25 | 22.52 | 22.40 | 22.48 |
| | | 50 | 0 | 22.51 | 22.44 | 22.53 |
| | 16QAM | 1 | 0 | 22.07 | 22.04 | 22.42 |
| | | 1 | 24 | 22.55 | 22.63 | 22.90 |
| | | 1 | 49 | 22.02 | 22.11 | 22.42 |
| | | 25 | 0 | 21.38 | 21.47 | 21.69 |
| | | 25 | 12 | 21.40 | 21.41 | 21.68 |
| | | 25 | 25 | 21.61 | 21.40 | 21.53 |
| | | 50 | 0 | 21.48 | 21.46 | 21.59 |

The reduced of Conducted power measurements of LTE Band 41

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 39675 | 40620 | 41565 |
| 5MHz | QPSK | 1 | 0 | 19.50 | 19.40 | 19.58 |
| | | 1 | 12 | 19.68 | 19.59 | 19.72 |
| | | 1 | 24 | 19.47 | 19.42 | 19.55 |
| | | 12 | 0 | 18.55 | 18.47 | 18.60 |
| | | 12 | 6 | 18.54 | 18.46 | 18.61 |
| | | 12 | 13 | 18.60 | 18.48 | 18.54 |
| | | 25 | 0 | 18.53 | 18.47 | 18.54 |
| | 16QAM | 1 | 0 | 18.53 | 18.30 | 18.46 |
| | | 1 | 13 | 18.66 | 18.46 | 18.58 |
| | | 1 | 24 | 18.51 | 18.32 | 18.44 |
| | | 12 | 0 | 17.52 | 17.41 | 17.58 |
| | | 12 | 6 | 17.51 | 17.47 | 17.62 |
| | | 12 | 13 | 17.59 | 17.44 | 17.54 |
| | | 25 | 0 | 19.50 | 19.40 | 19.58 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 39700 | 40620 | 41540 |
| 10MHz | QPSK | 1 | 0 | 19.64 | 19.46 | 19.57 |
| | | 1 | 24 | 19.70 | 19.72 | 19.65 |
| | | 1 | 49 | 19.60 | 19.50 | 19.57 |
| | | 25 | 0 | 18.54 | 18.55 | 18.60 |
| | | 25 | 12 | 18.48 | 18.54 | 18.61 |
| | | 25 | 25 | 18.67 | 18.54 | 18.53 |
| | | 50 | 0 | 18.57 | 18.48 | 18.59 |
| | 16QAM | 1 | 0 | 18.37 | 18.21 | 18.56 |
| | | 1 | 24 | 18.63 | 18.53 | 18.84 |
| | | 1 | 49 | 18.34 | 18.24 | 18.52 |
| | | 25 | 0 | 17.52 | 17.56 | 17.66 |
| | | 25 | 12 | 17.50 | 17.56 | 17.61 |
| | | 25 | 25 | 17.63 | 17.53 | 17.56 |
| | | 50 | 0 | 19.64 | 19.46 | 19.57 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 39725 | 40620 | 41515 |
| 15MHz | QPSK | 1 | 0 | 19.51 | 19.25 | 19.49 |
| | | 1 | 24 | 19.55 | 19.44 | 19.60 |
| | | 1 | 49 | 19.43 | 19.34 | 19.44 |
| | | 25 | 0 | 18.47 | 18.40 | 18.25 |
| | | 25 | 12 | 18.54 | 18.52 | 18.38 |
| | | 25 | 25 | 18.39 | 18.41 | 18.20 |
| | | 50 | 0 | 18.65 | 18.51 | 18.59 |
| | 16QAM | 1 | 0 | 18.50 | 18.42 | 18.22 |
| | | 1 | 24 | 18.56 | 18.52 | 18.32 |
| | | 1 | 49 | 18.39 | 18.44 | 18.17 |
| | | 25 | 0 | 18.48 | 18.40 | 18.24 |
| | | 25 | 12 | 18.56 | 18.53 | 18.36 |
| | | 25 | 25 | 18.37 | 18.44 | 18.19 |
| | | 50 | 0 | 19.51 | 19.25 | 19.49 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 39750 | 40620 | 41490 |
| 20MHz | QPSK | 1 | 0 | 19.33 | 19.21 | 19.36 |
| | | 1 | 24 | 19.78 | 19.77 | 19.80 |
| | | 1 | 49 | 19.22 | 19.28 | 19.38 |
| | | 25 | 0 | 18.41 | 18.50 | 18.64 |
| | | 25 | 12 | 18.40 | 18.49 | 18.62 |
| | | 25 | 25 | 18.55 | 18.43 | 18.51 |
| | | 50 | 0 | 18.54 | 18.47 | 18.56 |
| | 16QAM | 1 | 0 | 18.10 | 18.07 | 18.45 |
| | | 1 | 24 | 18.58 | 18.66 | 18.93 |
| | | 1 | 49 | 18.05 | 18.14 | 18.45 |
| | | 25 | 0 | 17.41 | 17.50 | 17.72 |
| | | 25 | 12 | 17.43 | 17.44 | 17.71 |
| | | 25 | 25 | 17.64 | 17.43 | 17.56 |
| | | 50 | 0 | 19.33 | 19.21 | 19.36 |

Conducted power measurements of LTE Band 66

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 131997 | 132322 | 132647 |
| 1.4MHz | QPSK | 1 | 0 | 23.59 | 23.42 | 23.65 |
| | | 1 | 12 | 23.60 | 23.57 | 23.68 |
| | | 1 | 24 | 23.53 | 23.43 | 23.64 |
| | | 12 | 0 | 23.62 | 23.54 | 23.69 |
| | | 12 | 6 | 23.62 | 23.55 | 23.69 |
| | | 12 | 13 | 23.66 | 23.57 | 23.71 |
| | | 25 | 0 | 22.58 | 22.50 | 22.64 |
| | 16QAM | 1 | 0 | 22.38 | 22.17 | 22.44 |
| | | 1 | 13 | 22.57 | 22.33 | 22.63 |
| | | 1 | 24 | 22.36 | 22.17 | 22.46 |
| | | 12 | 0 | 22.44 | 22.28 | 22.47 |
| | | 12 | 6 | 22.46 | 22.30 | 22.48 |
| | | 12 | 13 | 22.39 | 22.28 | 22.48 |
| | | 25 | 0 | 21.40 | 21.44 | 21.50 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 132022 | 132322 | 132622 |
| 3MHz | QPSK | 1 | 0 | 23.57 | 23.52 | 23.71 |
| | | 1 | 24 | 23.61 | 23.57 | 23.68 |
| | | 1 | 49 | 23.59 | 23.51 | 23.66 |
| | | 25 | 0 | 22.59 | 22.49 | 22.68 |
| | | 25 | 12 | 22.57 | 22.54 | 22.70 |
| | | 25 | 25 | 22.60 | 22.46 | 22.63 |
| | | 50 | 0 | 22.50 | 22.49 | 22.60 |
| | 16QAM | 1 | 0 | 22.62 | 22.39 | 22.40 |
| | | 1 | 24 | 22.58 | 22.37 | 22.45 |
| | | 1 | 49 | 22.56 | 22.29 | 22.43 |
| | | 25 | 0 | 21.55 | 21.47 | 21.67 |
| | | 25 | 12 | 21.57 | 21.45 | 21.70 |
| | | 25 | 25 | 21.59 | 21.38 | 21.62 |
| | | 50 | 0 | 21.52 | 21.39 | 21.54 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 131997 | 132322 | 132647 |
| 5MHz | QPSK | 1 | 0 | 23.55 | 23.50 | 23.55 |
| | | 1 | 12 | 23.64 | 23.63 | 23.69 |
| | | 1 | 24 | 23.53 | 23.49 | 23.53 |
| | | 12 | 0 | 22.51 | 22.52 | 22.63 |
| | | 12 | 6 | 22.52 | 22.51 | 22.66 |
| | | 12 | 13 | 22.54 | 22.49 | 22.64 |
| | | 25 | 0 | 22.56 | 22.49 | 22.67 |
| | 16QAM | 1 | 0 | 22.39 | 22.38 | 22.63 |
| | | 1 | 13 | 22.54 | 22.50 | 22.76 |
| | | 1 | 24 | 22.40 | 22.40 | 22.58 |
| | | 12 | 0 | 21.45 | 21.45 | 21.65 |
| | | 12 | 6 | 21.50 | 21.49 | 21.67 |
| | | 12 | 13 | 21.54 | 21.41 | 21.62 |
| | | 25 | 0 | 21.60 | 21.54 | 21.58 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 132022 | 132322 | 132622 |
| 10MHz | QPSK | 1 | 0 | 23.58 | 23.47 | 23.55 |
| | | 1 | 24 | 23.69 | 23.70 | 23.66 |
| | | 1 | 49 | 23.52 | 23.43 | 23.59 |
| | | 25 | 0 | 22.59 | 22.54 | 22.70 |
| | | 25 | 12 | 22.57 | 22.53 | 22.64 |
| | | 25 | 25 | 22.57 | 22.47 | 22.66 |
| | | 50 | 0 | 22.59 | 22.47 | 22.64 |
| | 16QAM | 1 | 0 | 22.41 | 22.17 | 22.53 |
| | | 1 | 24 | 22.51 | 22.30 | 22.69 |
| | | 1 | 49 | 22.35 | 22.20 | 22.61 |
| | | 25 | 0 | 21.57 | 21.55 | 21.64 |
| | | 25 | 12 | 21.55 | 21.52 | 21.65 |
| | | 25 | 25 | 21.60 | 21.51 | 21.60 |
| | | 50 | 0 | 21.60 | 21.51 | 21.59 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 132047 | 132322 | 132597 |
| 15MHz | QPSK | 1 | 0 | 23.53 | 23.29 | 23.45 |
| | | 1 | 24 | 23.53 | 23.41 | 23.67 |
| | | 1 | 49 | 23.42 | 23.33 | 23.50 |
| | | 25 | 0 | 22.46 | 22.39 | 22.22 |
| | | 25 | 12 | 22.52 | 22.53 | 22.42 |
| | | 25 | 25 | 22.36 | 22.48 | 22.33 |
| | | 50 | 0 | 22.55 | 22.54 | 22.62 |
| | 16QAM | 1 | 0 | 22.46 | 22.44 | 22.20 |
| | | 1 | 24 | 22.56 | 22.58 | 22.42 |
| | | 1 | 49 | 22.40 | 22.45 | 22.28 |
| | | 25 | 0 | 22.45 | 22.42 | 22.21 |
| | | 25 | 12 | 22.55 | 22.53 | 22.38 |
| | | 25 | 25 | 22.36 | 22.44 | 22.32 |
| | | 50 | 0 | 21.48 | 21.52 | 21.61 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 132072 | 132322 | 132572 |
| 20MHz | QPSK | 1 | 0 | 23.69 | 23.56 | 23.60 |
| | | 1 | 24 | 23.77 | 23.75 | 23.75 |
| | | 1 | 49 | 23.63 | 23.67 | 23.72 |
| | | 25 | 0 | 22.88 | 22.98 | 22.76 |
| | | 25 | 12 | 22.88 | 22.96 | 22.75 |
| | | 25 | 25 | 22.98 | 22.84 | 22.94 |
| | | 50 | 0 | 22.90 | 22.91 | 22.92 |
| | 16QAM | 1 | 0 | 22.53 | 22.53 | 22.68 |
| | | 1 | 24 | 22.77 | 22.97 | 23.21 |
| | | 1 | 49 | 22.47 | 22.61 | 22.93 |
| | | 25 | 0 | 21.94 | 21.95 | 21.88 |
| | | 25 | 12 | 21.93 | 21.97 | 21.88 |
| | | 25 | 25 | 22.04 | 21.87 | 22.02 |
| | | 50 | 0 | 21.93 | 21.93 | 21.88 |

The reduced of Conducted power measurements of LTE Band 66

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 131997 | 132322 | 132647 |
| 1.4MHz | QPSK | 1 | 0 | 18.15 | 17.98 | 18.21 |
| | | 1 | 12 | 18.16 | 18.13 | 18.34 |
| | | 1 | 24 | 18.09 | 17.99 | 18.20 |
| | | 12 | 0 | 18.18 | 18.10 | 18.25 |
| | | 12 | 6 | 18.18 | 18.11 | 18.25 |
| | | 12 | 13 | 18.22 | 18.13 | 18.27 |
| | | 25 | 0 | 17.14 | 17.06 | 17.20 |
| | 16QAM | 1 | 0 | 16.94 | 16.73 | 17.00 |
| | | 1 | 13 | 17.13 | 16.89 | 17.19 |
| | | 1 | 24 | 16.92 | 16.73 | 17.02 |
| | | 12 | 0 | 17.00 | 16.84 | 17.03 |
| | | 12 | 6 | 17.02 | 16.86 | 17.04 |
| | | 12 | 13 | 16.95 | 16.84 | 17.04 |
| | | 25 | 0 | 18.15 | 17.98 | 18.21 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 132022 | 132322 | 132622 |
| 3MHz | QPSK | 1 | 0 | 18.13 | 18.08 | 18.27 |
| | | 1 | 24 | 18.17 | 18.13 | 18.24 |
| | | 1 | 49 | 18.15 | 18.07 | 18.22 |
| | | 25 | 0 | 17.15 | 17.05 | 17.24 |
| | | 25 | 12 | 17.13 | 17.10 | 17.26 |
| | | 25 | 25 | 17.16 | 17.02 | 17.19 |
| | | 50 | 0 | 17.06 | 17.05 | 17.16 |
| | 16QAM | 1 | 0 | 17.18 | 16.95 | 16.96 |
| | | 1 | 24 | 17.14 | 16.93 | 17.01 |
| | | 1 | 49 | 17.12 | 16.85 | 16.99 |
| | | 25 | 0 | 16.11 | 16.03 | 16.23 |
| | | 25 | 12 | 16.13 | 16.01 | 16.26 |
| | | 25 | 25 | 16.15 | 15.94 | 16.18 |
| | | 50 | 0 | 18.13 | 18.08 | 18.27 |

| .Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|------------|------------|---------|-----------|---------|---------|---------|
| | | | | 131997 | 132322 | 132647 |
| 5MHz | QPSK | 1 | 0 | 18.11 | 18.06 | 18.11 |
| | | 1 | 12 | 18.20 | 18.19 | 18.25 |
| | | 1 | 24 | 18.09 | 18.05 | 18.09 |
| | | 12 | 0 | 17.07 | 17.08 | 17.19 |
| | | 12 | 6 | 17.08 | 17.07 | 17.22 |
| | | 12 | 13 | 17.10 | 17.05 | 17.20 |
| | | 25 | 0 | 17.12 | 17.05 | 17.23 |
| | 16QAM | 1 | 0 | 16.95 | 16.94 | 17.19 |
| | | 1 | 13 | 17.10 | 17.06 | 17.32 |
| | | 1 | 24 | 16.96 | 16.96 | 17.14 |
| | | 12 | 0 | 16.01 | 16.01 | 16.21 |
| | | 12 | 6 | 16.06 | 16.05 | 16.23 |
| | | 12 | 13 | 16.10 | 15.97 | 16.18 |
| | | 25 | 0 | 18.11 | 18.06 | 18.11 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 132022 | 132322 | 132622 |
| 10MHz | QPSK | 1 | 0 | 18.14 | 18.03 | 18.11 |
| | | 1 | 24 | 18.25 | 18.26 | 18.22 |
| | | 1 | 49 | 18.08 | 17.99 | 18.15 |
| | | 25 | 0 | 17.15 | 17.10 | 17.26 |
| | | 25 | 12 | 17.13 | 17.09 | 17.20 |
| | | 25 | 25 | 17.13 | 17.03 | 17.22 |
| | | 50 | 0 | 17.15 | 17.03 | 17.20 |
| | 16QAM | 1 | 0 | 16.97 | 16.73 | 17.09 |
| | | 1 | 24 | 17.07 | 16.86 | 17.25 |
| | | 1 | 49 | 16.91 | 16.76 | 17.17 |
| | | 25 | 0 | 16.13 | 16.11 | 16.20 |
| | | 25 | 12 | 16.11 | 16.08 | 16.21 |
| | | 25 | 25 | 16.16 | 16.07 | 16.16 |
| | | 50 | 0 | 18.14 | 18.03 | 18.11 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|---------|---------|---------|
| | | | | 132047 | 132322 | 132597 |
| 15MHz | QPSK | 1 | 0 | 18.09 | 17.85 | 18.01 |
| | | 1 | 24 | 18.09 | 17.97 | 18.23 |
| | | 1 | 49 | 17.98 | 17.89 | 18.06 |
| | | 25 | 0 | 17.02 | 16.95 | 16.78 |
| | | 25 | 12 | 17.08 | 17.09 | 16.98 |
| | | 25 | 25 | 16.92 | 17.04 | 16.89 |
| | | 50 | 0 | 17.11 | 17.10 | 17.18 |
| | 16QAM | 1 | 0 | 17.02 | 17.00 | 16.76 |
| | | 1 | 24 | 17.12 | 17.14 | 16.98 |
| | | 1 | 49 | 16.96 | 17.01 | 16.84 |
| | | 25 | 0 | 17.01 | 16.98 | 16.77 |
| | | 25 | 12 | 17.11 | 17.09 | 16.94 |
| | | 25 | 25 | 16.92 | 17.00 | 16.88 |
| | | 50 | 0 | 18.09 | 17.85 | 18.01 |

| Bandwidth | Modulation | RB size | RB offset | Channel | Channel | Channel |
|-----------|------------|---------|-----------|--------------|--------------|--------------|
| | | | | 132072 | 132322 | 132572 |
| 20MHz | QPSK | 1 | 0 | 17.82 | 17.69 | 17.73 |
| | | 1 | 24 | 18.43 | 18.47 | 18.44 |
| | | 1 | 49 | 17.76 | 17.80 | 17.95 |
| | | 25 | 0 | 17.01 | 17.11 | 16.99 |
| | | 25 | 12 | 17.01 | 17.09 | 16.98 |
| | | 25 | 25 | 17.11 | 16.97 | 17.07 |
| | | 50 | 0 | 17.03 | 17.04 | 17.05 |
| | 16QAM | 1 | 0 | 16.66 | 16.66 | 16.81 |
| | | 1 | 24 | 16.90 | 17.10 | 17.34 |
| | | 1 | 49 | 16.60 | 16.74 | 17.06 |
| | | 25 | 0 | 16.07 | 16.08 | 16.01 |
| | | 25 | 12 | 16.06 | 16.10 | 16.01 |
| | | 25 | 25 | 16.17 | 16.00 | 16.15 |
| | | 50 | 0 | 17.82 | 17.69 | 17.73 |

| 802.11b (dBm) | | | | | |
|---------------|-----------------|-----------------|-------|-------|-------|
| Channel | Frequency (MHz) | Data Rate (bps) | | | |
| | | 1M | 2M | 5.5M | 11M |
| CH 01 | 2,412 | 16.51 | 16.39 | 16.34 | 16.23 |
| CH 06 | 2,437 | 16.55 | 16.21 | 16.18 | 16.24 |
| CH 11 | 2,462 | 16.34 | 16.04 | 15.70 | 15.68 |

| 802.11g (dBm) | | | | | | | | | |
|---------------|-----------------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Channel | Frequency (MHz) | Data Rate (bps) | | | | | | | |
| | | 6M | 9M | 12M | 18M | 24M | 36M | 48M | 54M |
| CH 01 | 2,412 | 16.31 | 15.56 | 15.61 | 15.53 | 15.45 | 15.33 | 15.11 | 14.99 |
| CH 06 | 2,437 | 16.38 | 16.19 | 16.16 | 16.22 | 16.27 | 15.94 | 15.66 | 15.51 |
| CH 11 | 2,462 | 16.33 | 16.16 | 16.11 | 15.91 | 15.96 | 15.86 | 15.48 | 15.34 |

| 802.11n-HT20 (dBm) | | | | | | | | | |
|--------------------|-----------------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Channel | Frequency (MHz) | Data Rate (bps) | | | | | | | |
| | | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
| CH 01 | 2,412 | 15.51 | 14.78 | 14.75 | 14.69 | 14.56 | 14.34 | 14.22 | 13.86 |
| CH 06 | 2,437 | 15.51 | 15.39 | 15.40 | 15.24 | 15.14 | 14.78 | 14.69 | 14.50 |
| CH 11 | 2,462 | 15.53 | 15.32 | 15.09 | 15.21 | 15.08 | 14.75 | 14.53 | 14.16 |

| The reduced power of 802.11b (dBm) | | | | | |
|------------------------------------|-----------------|-----------------|-------|-------|-------|
| Channel | Frequency (MHz) | Data Rate (bps) | | | |
| | | 1M | 2M | 5.5M | 11M |
| CH 01 | 2,412 | 15.11 | 14.99 | 14.94 | 14.83 |
| CH 06 | 2,437 | 15.16 | 14.82 | 14.79 | 14.85 |
| CH 11 | 2,462 | 15.12 | 14.82 | 14.48 | 14.46 |

| The Simultaneous Transmission reduced power of 802.11b (dBm) | | | | | |
|--|-----------------|-----------------|-------|-------|-------|
| Channel | Frequency (MHz) | Data Rate (bps) | | | |
| | | 1M | 2M | 5.5M | 11M |
| CH 01 | 2,412 | 16.07 | 15.95 | 15.90 | 15.79 |
| CH 06 | 2,437 | 16.16 | 15.82 | 15.79 | 15.85 |
| CH 11 | 2,462 | 16.10 | 15.80 | 15.46 | 15.44 |

| The reduced power of 802.11g (dBm) | | | | | | | | | |
|------------------------------------|-----------------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Channel | Frequency (MHz) | Data Rate (bps) | | | | | | | |
| | | 6M | 9M | 12M | 18M | 24M | 36M | 48M | 54M |
| CH 01 | 2,412 | 14.51 | 13.76 | 13.81 | 13.73 | 13.65 | 13.53 | 13.31 | 13.19 |
| CH 06 | 2,437 | 14.39 | 14.20 | 14.17 | 14.23 | 14.28 | 13.95 | 13.67 | 13.52 |
| CH 11 | 2,462 | 14.48 | 14.31 | 14.26 | 14.06 | 14.11 | 14.01 | 13.63 | 13.49 |

| The reduced power of 802.11n-HT20 (dBm) | | | | | | | | | |
|---|-----------------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Channel | Frequency (MHz) | Data Rate (bps) | | | | | | | |
| | | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
| CH 01 | 2,412 | 13.81 | 13.08 | 13.05 | 12.99 | 12.86 | 12.64 | 12.52 | 12.16 |
| CH 06 | 2,437 | 13.71 | 13.59 | 13.60 | 13.44 | 13.34 | 12.98 | 12.89 | 12.70 |
| CH 11 | 2,462 | 13.63 | 13.42 | 13.19 | 13.31 | 13.18 | 12.85 | 12.63 | 12.26 |

| Bluetooth 2.4GHz Band Conducted Power | | |
|---------------------------------------|----------------|---------------------|
| Channel | Frequency(MHz) | Average Power (dBm) |
| CH 0 | 2,402 | 7.10 |
| CH 39 | 2,441 | 7.04 |
| CH 78 | 2,480 | 7.06 |

| BLE2.4GHz Band Conducted Power | | |
|--------------------------------|----------------|---------------------|
| Channel | Frequency(MHz) | Average Power (dBm) |
| CH 0 | 2,402 | -2.27 |
| CH 19 | 2,440 | -0.71 |
| CH 39 | 2,480 | -1.48 |

9.2. SAR measurement Results

General Notes:

- 1) Per KDB447498 D01v06, all measurement SAR results are scaled to the maximum tune-up tolerance limit to demonstrate compliant.
- 2) Per KDB447498 D01v06, 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 2.0W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz. When the maximum output power variation across the required test channels is $> 1/2$ dB, instead of the middle channel, the highest output power channel must be used.

- 3) Per KDB865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measure SAR is ≥ 0.8 W/kg; if the deviation among the repeated measurement is $\leq 20\%$, and the measured SAR < 1.45 W/kg, only one repeated measurement is required.
- 4) Per KDB 941225 D06 Hotspot Mode SAR v02:r01, the DUT dimension is bigger than 9cm*5cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.
- 5) Per KDB648474 D04v01r03, SAR is evaluated without a headset connected to the device. When the standalone reported body-worn SAR is ≤ 1.2 W/kg, no additional SAR evaluations using a headset are required.
- 6) Per KDB865664 D02v01r02, SAR plot is only required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination; plots are also required when the measured SAR is > 1.5 W/kg, or > 7.0 W/kg for occupational exposure. The published RF exposure KDB procedures may require additional plots; for example, to support SAR to peak location separation ratio test exclusion and/or volume scan plots-processing (refer to appendix B for details).

9.3. WLAN Notes

Per KDB 248227 D01v02r02, for all positions/configurations tested using the initial test position and subsequent test positions, 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.

Per KDB 248227 D01v02r02, for 802.11g/n SAR testing is 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.

Per KDB 248227 D01v02r02, for OFDM transmission configurations in the 2.4 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 802.11g/n mode is used for SAR measurement, on the highest measured output power channel for each frequency band.

9.3. GSM850 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GSM(CS) | Left Cheek | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.108 | 0.110 |
| GSM(CS) | Left Tilted | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.046 | 0.047 |
| GSM(CS) | Right Cheek | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.182 | 0.185 |
| GSM(CS) | Right Tilted | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.057 | 0.058 |
| GSM(CS)(sim2) | Left Tilted | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.179 | 0.181 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-------------------------------------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GPRS (GMSK, 2 Tx slots) | Front Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.101 | 0.118 |
| GPRS (GMSK, 2 Tx slots) | Back Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.292 | 0.341 |
| GPRS (GMSK, 2 Tx slots) | Left Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.051 | 0.060 |
| GPRS (GMSK, 2 Tx slots) | Right Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.04 | 0.047 |
| GPRS (GMSK, 2 Tx slots) | Top Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.013 | 0.015 |
| GPRS (GMSK, 2 Tx slots) | Bottom Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.205 | 0.240 |
| GPRS (GMSK, 2 Tx slots) | Back Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.271 | 0.317 |
| GPRS (GMSK, 2 Tx slots)(battery 2#) | Back Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.289 | 0.338 |

Body Hotspot Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-------------------------------------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GPRS (GMSK, 2 Tx slots) | Front Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.520 | 0.608 |
| GPRS (GMSK, 2 Tx slots) | Back Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.801 | 0.936 |
| GPRS (GMSK, 2 Tx slots) | Left Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.160 | 0.187 |
| GPRS (GMSK, 2 Tx slots) | Right Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.630 | 0.736 |
| GPRS (GMSK, 2 Tx slots) | Top Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.310 | 0.362 |
| GPRS (GMSK, 2 Tx slots) | Bottom Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.150 | 0.175 |
| GPRS (GMSK, 2 Tx slots) | Back Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.787 | 0.920 |
| GPRS (GMSK, 2 Tx slots)(battery 2#) | Back Side | 190 | 836.6 | 31.82 | 32.50 | 1.169 | 0.789 | 0.922 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GSM(CS) | Front Side | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.083 | 0.084 |
| GSM(CS) | Back Side | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.132 | 0.134 |
| GSM(CS) | Back Side | 190 | 836.6 | 33.24 | 33.30 | 1.014 | 0.125 | 0.127 |

9.4.PCS1900 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------|--------------------|------------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GSM(CS) | Left Cheek | 661 | 1880 | 28.68 | 30.30 | 1.452 | 0.079 | 0.115 |
| GSM(CS) | Left Tilted | 661 | 1880 | 28.68 | 30.30 | 1.452 | 0.023 | 0.033 |
| GSM(CS) | Right Cheek | 661 | 1880 | 28.68 | 30.30 | 1.452 | 0.111 | 0.161 |
| GSM(CS) | Right Tilted | 661 | 1880 | 28.68 | 30.30 | 1.452 | 0.041 | 0.060 |
| GSM(CS) (sim2) | Right Cheek | 661 | 1880 | 28.68 | 30.30 | 1.452 | 0.101 | 0.147 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|--------------------------------|------------------|------------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GPRS (GMSK, 2 Tx slots) | Front Side | 661 | 1880 | 23.26 | 23.30 | 1.009 | 0.063 | 0.064 |
| GPRS (GMSK, 2 Tx slots) | Back Side | 661 | 1880 | 23.26 | 23.30 | 1.009 | 0.131 | 0.132 |
| GPRS (GMSK, 2 Tx slots) | Left Side | 661 | 1880 | 23.26 | 23.30 | 1.009 | 0.037 | 0.037 |
| GPRS (GMSK, 2 Tx slots) | Right Side | 661 | 1880 | 23.26 | 23.30 | 1.009 | 0.016 | 0.016 |
| GPRS (GMSK, 2 Tx slots) | Top Side | 661 | 1880 | 23.26 | 23.30 | 1.009 | 0.007 | 0.007 |
| GPRS (GMSK, 2 Tx slots) | Bottom Side | 661 | 1880 | 23.26 | 23.30 | 1.009 | 0.105 | 0.106 |
| GPRS (GMSK, 2 Tx slots, SIM2) | Back Side | 661 | 1880 | 23.26 | 23.30 | 1.009 | 0.121 | 0.122 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------|------------------|------------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GSM(CS) | Front Side | 661 | 1880 | 20.24 | 21.00 | 1.191 | 0.089 | 0.106 |
| GSM(CS) | Back Side | 661 | 1880 | 20.24 | 21.00 | 1.191 | 0.126 | 0.150 |
| GSM(CS) | Back Side | 661 | 1880 | 20.24 | 21.00 | 1.191 | 0.121 | 0.144 |

9.5.WCDMA II SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GSM(CS) | Left Cheek | 661 | 1880 | 23.48 | 23.80 | 1.076 | 0.105 | 0.113 |
| GSM(CS) | Left Tilted | 661 | 1880 | 23.48 | 23.80 | 1.076 | 0.047 | 0.051 |
| GSM(CS) | Right Cheek | 661 | 1880 | 23.48 | 23.80 | 1.076 | 0.162 | 0.174 |
| GSM(CS) | Right Tilted | 661 | 1880 | 23.48 | 23.80 | 1.076 | 0.061 | 0.066 |
| GSM(CS)(sim 2) | Right Cheek | 661 | 1880 | 23.48 | 23.80 | 1.076 | 0.158 | 0.170 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Front Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.042 | 0.045 |
| RMC | Back Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.083 | 0.089 |
| RMC | Left Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.033 | 0.035 |
| RMC | Right Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.02 | 0.021 |
| RMC | Top Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.008 | 0.009 |
| RMC | Bottom Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.071 | 0.076 |
| RMC | Back Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.076 | 0.081 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Front Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.039 | 0.042 |
| RMC | Back Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.052 | 0.056 |
| RMC | Back Side | 661 | 1880 | 18.51 | 18.80 | 1.069 | 0.048 | 0.051 |

9.6.WCDMA IV SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Left Cheek | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.116 | 0.136 |
| RMC | Left Tilted | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.041 | 0.048 |
| RMC | Right Cheek | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.277 | 0.324 |
| RMC | Right Tilted | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.058 | 0.068 |
| RMC | Right Cheek | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.269 | 0.315 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Front Side | 1412 | 1732.4 | 18.45 | 19.10 | 1.161 | 0.032 | 0.037 |
| RMC | Back Side | 1412 | 1732.4 | 18.45 | 19.10 | 1.161 | 0.069 | 0.080 |
| RMC | Left Side | 1412 | 1732.4 | 18.45 | 19.10 | 1.161 | 0.019 | 0.022 |
| RMC | Right Side | 1412 | 1732.4 | 18.45 | 19.10 | 1.161 | 0.011 | 0.013 |
| RMC | Top Side | 1412 | 1732.4 | 18.45 | 19.10 | 1.161 | 0.005 | 0.006 |
| RMC | Bottom Side | 1412 | 1732.4 | 18.45 | 19.10 | 1.161 | 0.043 | 0.050 |
| RMC | Back Side | 1412 | 1732.4 | 18.45 | 19.10 | 1.161 | 0.062 | 0.072 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Front Side | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.037 | 0.043 |
| RMC | Back Side | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.073 | 0.085 |
| RMC | Back Side | 1412 | 1732.4 | 23.42 | 24.10 | 1.169 | 0.068 | 0.079 |

9.7.WCDMA V SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-----------|---------------|------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Left Cheek | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.131 | 0.149 |
| RMC | Left Tilted | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.039 | 0.044 |
| RMC | Right Cheek | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.177 | 0.202 |
| RMC | Right Tilted | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.042 | 0.048 |
| RMC(sim2) | Right Cheek | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.041 | 0.047 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------------|------------------|-------------|--------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Front Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.107 | 0.122 |
| RMC | Back Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.269 | 0.307 |
| RMC | Left Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.053 | 0.060 |
| RMC | Right Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.038 | 0.043 |
| RMC | Top Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.011 | 0.013 |
| RMC | Bottom Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.217 | 0.247 |
| RMC | Back Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.261 | 0.298 |

Body Hotspot Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------------|------------------|-------------|--------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Front Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.860 | 0.980 |
| RMC | Back Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 1.520 | 1.733 |
| RMC | Left Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.590 | 0.673 |
| RMC | Right Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.480 | 0.547 |
| RMC | Top Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.230 | 0.262 |
| RMC | Bottom Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 1.370 | 1.562 |
| RMC | Back Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 1.481 | 1.688 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| RMC | Front Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.088 | 0.100 |
| RMC | Back Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.124 | 0.141 |
| RMC | Back Side | 4182 | 836.4 | 23.53 | 24.10 | 1.140 | 0.119 | 0.136 |

9.8. LTE Band 2 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Left Cheek | 18900 | 1880 | 23.76 | 23.80 | 1.009 | 0.081 | 0.082 |
| 20M QPSK (1#25) | Left Tilted | 18900 | 1880 | 23.76 | 23.80 | 1.009 | 0.034 | 0.034 |
| 20M QPSK (1#25) | Right Cheek | 18900 | 1880 | 23.76 | 23.80 | 1.009 | 0.097 | 0.098 |
| 20M QPSK (1#25) | Right Tilted | 18900 | 1880 | 23.76 | 23.80 | 1.009 | 0.049 | 0.049 |
| 20M QPSK (1#25)(50%) | Right Cheek | 18900 | 1880 | 23.76 | 23.80 | 1.009 | 0.093 | 0.094 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 18900 | 1880 | 18.76 | 18.80 | 1.009 | 0.103 | 0.104 |
| 20M QPSK (1#25) | Back Side | 18900 | 1880 | 18.76 | 18.80 | 1.009 | 0.276 | 0.279 |
| 20M QPSK (1#25) | Left Side | 18900 | 1880 | 18.76 | 18.80 | 1.009 | 0.046 | 0.046 |
| 20M QPSK (1#25) | Right Side | 18900 | 1880 | 18.76 | 18.80 | 1.009 | 0.029 | 0.029 |
| 20M QPSK (1#25) | Top Side | 18900 | 1880 | 18.76 | 18.80 | 1.009 | 0.008 | 0.008 |
| 20M QPSK (1#25) | Bottom Side | 18900 | 1880 | 18.76 | 18.80 | 1.009 | 0.236 | 0.238 |
| 20M QPSK (1#25)(50%) | Back Side | 18900 | 1880 | 18.76 | 18.80 | 1.009 | 0.271 | 0.274 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 4182 | 836.4 | 18.76 | 18.80 | 1.009 | 0.068 | 0.069 |
| 20M QPSK (1#25) | Back Side | 4182 | 836.4 | 18.76 | 18.80 | 1.009 | 0.123 | 0.124 |
| 20M QPSK (1#25)(50%) | Back Side | 4182 | 836.4 | 18.76 | 18.80 | 1.009 | 0.121 | 0.122 |

9.9.LTE Band 4 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Left Cheek | 20175 | 1732.5 | 23.73 | 23.80 | 1.016 | 0.017 | 0.017 |
| 20M QPSK (1#25) | Left Tilted | 20175 | 1732.5 | 23.73 | 23.80 | 1.016 | 0.008 | 0.008 |
| 20M QPSK (1#25) | Right Cheek | 20175 | 1732.5 | 23.73 | 23.80 | 1.016 | 0.026 | 0.026 |
| 20M QPSK (1#25) | Right Tilted | 20175 | 1732.5 | 23.73 | 23.80 | 1.016 | 0.011 | 0.011 |
| 20M QPSK (1#25)(50%) | Right Cheek | 20175 | 1732.5 | 23.73 | 23.80 | 1.016 | 0.023 | 0.023 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.065 | 0.069 |
| 20M QPSK (1#25) | Back Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.096 | 0.101 |
| 20M QPSK (1#25) | Left Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.032 | 0.034 |
| 20M QPSK (1#25) | Right Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.019 | 0.020 |
| 20M QPSK (1#25) | Top Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.006 | 0.006 |
| 20M QPSK (1#25) | Bottom Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.072 | 0.076 |
| 20M QPSK (1#25)(50%) | Back Side | 20050 | 1720.0 | 18.57 | 18.80 | 1.054 | 0.093 | 0.098 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.021 | 0.022 |
| 20M QPSK (1#25) | Back Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.036 | 0.038 |
| 20M QPSK (1#25)(50%) | Back Side | 20175 | 1732.5 | 18.57 | 18.80 | 1.054 | 0.035 | 0.037 |

9.10. LTE Band 5 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Left Cheek | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.106 | 0.125 |
| 20M QPSK (1#25) | Left Tilted | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.042 | 0.049 |
| 20M QPSK (1#25) | Right Cheek | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.184 | 0.216 |
| 20M QPSK (1#25) | Right Tilted | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.055 | 0.065 |
| 20M QPSK (1#25)(50%) | Right Cheek | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.178 | 0.209 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.103 | 0.121 |
| 20M QPSK (1#25) | Back Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.287 | 0.337 |
| 20M QPSK (1#25) | Left Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.051 | 0.060 |
| 20M QPSK (1#25) | Right Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.033 | 0.039 |
| 20M QPSK (1#25) | Top Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.011 | 0.013 |
| 20M QPSK (1#25) | Bottom Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.253 | 0.297 |
| 20M QPSK (1#25)(50%) | Back Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.278 | 0.327 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.079 | 0.093 |
| 20M QPSK (1#25) | Back Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.131 | 0.154 |
| 20M QPSK (1#25)(50%) | Back Side | 20525 | 836.5 | 23.60 | 24.30 | 1.175 | 0.124 | 0.146 |

9.11. LTE Band 7 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Left Cheek | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.032 | 0.040 |
| 20M QPSK (1#25) | Left Tilted | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.011 | 0.014 |
| 20M QPSK (1#25) | Right Cheek | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.06 | 0.075 |
| 20M QPSK (1#25) | Right Tilted | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.02 | 0.025 |
| 20M QPSK (1#25)(50%) | Right Cheek | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.057 | 0.071 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.317 | 0.392 |
| 20M QPSK (1#25) | Back Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.532 | 0.658 |
| 20M QPSK (1#25) | Left Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.169 | 0.209 |
| 20M QPSK (1#25) | Right Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.179 | 0.221 |
| 20M QPSK (1#25) | Top Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.081 | 0.100 |
| 20M QPSK (1#25) | Bottom Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.494 | 0.611 |
| 20M QPSK (1#25)(50%) | Back Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.51 | 0.630 |

Body Hotspot Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.760 | 0.939 |
| 20M QPSK (1#25) | Back Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 1.400 | 1.730 |
| 20M QPSK (1#25) | Left Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.540 | 0.667 |
| 20M QPSK (1#25) | Right Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.460 | 0.569 |
| 20M QPSK (1#25) | Top Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 0.170 | 0.210 |
| 20M QPSK (1#25) | Bottom Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 1.230 | 1.520 |
| 20M QPSK (1#25)(50%) | Back Side | 21100 | 2535 | 20.38 | 21.30 | 1.236 | 1.358 | 1.678 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.058 | 0.072 |
| 20M QPSK (1#25) | Back Side | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.105 | 0.131 |
| 20M QPSK (1#25)(50%) | Back Side | 21100 | 2535 | 22.34 | 23.30 | 1.247 | 0.101 | 0.126 |

9.12. LTE Band12 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Left Cheek | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.096 | 0.111 |
| 20M QPSK (1#25) | Left Tilted | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.042 | 0.049 |
| 20M QPSK (1#25) | Right Cheek | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.134 | 0.156 |
| 20M QPSK (1#25) | Right Tilted | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.057 | 0.066 |
| 20M QPSK (1#25)(50%) | Right Cheek | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.128 | 0.149 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.109 | 0.127 |
| 20M QPSK (1#25) | Back Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.208 | 0.242 |
| 20M QPSK (1#25) | Left Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.012 | 0.014 |
| 20M QPSK (1#25) | Right Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.197 | 0.229 |
| 20M QPSK (1#25) | Top Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.043 | 0.050 |
| 20M QPSK (1#25) | Bottom Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.022 | 0.026 |
| 20M QPSK (1#25)(50%) | Back Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.196 | 0.228 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-----------------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK (1#25) | Front Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.102 | 0.118 |
| 20M QPSK (1#25) | Back Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.185 | 0.215 |
| 20M QPSK (1#25)(50%) | Back Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.178 | 0.207 |
| 20M QPSK (1#25)(battery 2#) | Back Side | 23095 | 707.5 | 23.65 | 24.30 | 1.161 | 0.180 | 0.209 |

9.13. LTE Band17 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-----------------|--------------------|--------------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 10M QPSK (1#24) | Left Cheek | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.123 | 0.140 |
| 10M QPSK (1#24) | Left Tilted | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.043 | 0.049 |
| 10M QPSK (1#24) | Right Cheek | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.143 | 0.163 |
| 10M QPSK (1#24) | Right Tilted | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.058 | 0.066 |
| 10M QPSK (1#24) | Right Cheek | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.137 | 0.156 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 10M QPSK (1#24) | Front Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.105 | 0.119 |
| 10M QPSK (1#24) | Back Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.214 | 0.243 |
| 10M QPSK (1#24) | Left Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.051 | 0.058 |
| 10M QPSK (1#24) | Right Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.037 | 0.042 |
| 10M QPSK (1#24) | Top Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.008 | 0.009 |
| 10M QPSK (1#24) | Bottom Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.201 | 0.229 |
| 10M QPSK (1#24) (50%) | Back Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.211 | 0.240 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 10M QPSK (1#24) | Front Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.106 | 0.121 |
| 10M QPSK (1#24) | Back Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.188 | 0.214 |
| 10M QPSK (1#24) (50%) | Back Side | 23790 | 710 | 23.54 | 24.10 | 1.138 | 0.182 | 0.207 |

9.14. LTE Band26 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 5M QPSK (1#12) | Left Cheek | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.106 | 0.126 |
| 5M QPSK (1#12) | Left Tilted | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.034 | 0.040 |
| 5M QPSK (1#12) | Right Cheek | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.173 | 0.205 |
| 5M QPSK (1#12) | Right Tilted | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.052 | 0.062 |
| 5M QPSK (1#12)(50%) | Right Cheek | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.168 | 0.199 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|-----------------------|------------------|--------------|--------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 5M QPSK (1#12) | Front Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.123 | 0.146 |
| 5M QPSK (1#12) | Back Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.217 | 0.257 |
| 5M QPSK (1#12) | Left Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.054 | 0.064 |
| 5M QPSK (1#12) | Right Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.032 | 0.038 |
| 5M QPSK (1#12) | Top Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.011 | 0.013 |
| 5M QPSK (1#12) | Bottom Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.209 | 0.248 |
| 5M QPSK (1#12)(50%) | Back Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.208 | 0.247 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 5M QPSK (1#12) | Front Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.076 | 0.090 |
| 5M QPSK (1#12) | Back Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.102 | 0.121 |
| 5M QPSK (1#12)(50%) | Back Side | 26865 | 831.5 | 23.36 | 24.10 | 1.186 | 0.1 | 0.119 |

9.15. LTE Band 38 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Left Cheek | 38000 | 2595 | 23.74 | 23.80 | 1.014 | 0.017 | 0.017 |
| 20M QPSK(1#50) | Left Tilted | 38000 | 2595 | 23.74 | 23.80 | 1.014 | 0.008 | 0.008 |
| 20M QPSK(1#50) | Right Cheek | 38000 | 2595 | 23.74 | 23.80 | 1.014 | 0.022 | 0.022 |
| 20M QPSK(1#50) | Right Tilted | 38000 | 2595 | 23.74 | 23.80 | 1.014 | 0.01 | 0.010 |
| 20M QPSK(1#50)(50%) | Right Cheek | 38000 | 2595 | 23.74 | 23.80 | 1.014 | 0.019 | 0.019 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Front Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.087 | 0.105 |
| 20M QPSK(1#50) | Back Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.138 | 0.167 |
| 20M QPSK(1#50) | Left Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.046 | 0.056 |
| 20M QPSK(1#50) | Right Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.029 | 0.035 |
| 20M QPSK(1#50) | Top Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.01 | 0.012 |
| 20M QPSK(1#50) | Bottom Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.116 | 0.140 |
| 20M QPSK(1#50) (50%) | Back Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.132 | 0.159 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Front Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.034 | 0.041 |
| 20M QPSK(1#50) | Back Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.067 | 0.081 |
| 20M QPSK(1#50) (50%) | Back Side | 38000 | 2595 | 19.98 | 20.80 | 1.208 | 0.055 | 0.066 |

9.16. LTE Band 41 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Left Cheek | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.029 | 0.029 |
| 20M QPSK(1#50) | Left Tilted | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.009 | 0.009 |
| 20M QPSK(1#50) | Right Cheek | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.041 | 0.042 |
| 20M QPSK(1#50) | Right Tilted | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.015 | 0.015 |
| 20M QPSK(1#50)(50%) | Left Cheek | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.038 | 0.039 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Front Side | 40620 | 2593.0 | 19.77 | 19.80 | 1.007 | 0.076 | 0.077 |
| 20M QPSK(1#50) | Back Side | 40620 | 2593.0 | 19.77 | 19.80 | 1.007 | 0.150 | 0.151 |
| 20M QPSK(1#50) | Left Side | 40620 | 2593.0 | 19.77 | 19.80 | 1.007 | 0.042 | 0.042 |
| 20M QPSK(1#50) | Right Side | 40620 | 2593.0 | 19.77 | 19.80 | 1.007 | 0.028 | 0.028 |
| 20M QPSK(1#50) | Top Side | 40620 | 2593.0 | 19.77 | 19.80 | 1.007 | 0.007 | 0.007 |
| 20M QPSK(1#50) | Bottom Side | 40620 | 2593.0 | 19.77 | 19.80 | 1.007 | 0.106 | 0.107 |
| 20M QPSK(1#50) (50%) | Back Side | 40620 | 2593.0 | 19.77 | 19.80 | 1.007 | 0.136 | 0.137 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|-------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Front Side | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.104 | 0.105 |
| 20M QPSK(1#50) | Back Side | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.165 | 0.167 |
| 20M QPSK(1#50) (50%) | Back Side | 40620 | 2593.0 | 23.74 | 23.80 | 1.014 | 0.142 | 0.144 |

9.17. LTE Band66 SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------------------|---------------|--------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Left Cheek | 132322 | 1745 | 23.75 | 23.80 | 1.012 | 0.015 | 0.015 |
| 20M QPSK(1#50) | Left Tilted | 132322 | 1745 | 23.75 | 23.80 | 1.012 | 0.007 | 0.007 |
| 20M QPSK(1#50) | Right Cheek | 132322 | 1745 | 23.75 | 23.80 | 1.012 | 0.022 | 0.022 |
| 20M QPSK(1#50) | Right Tilted | 132322 | 1745 | 23.75 | 23.80 | 1.012 | 0.009 | 0.009 |
| 20M QPSK(1#50)(50%) | Right Cheek | 132322 | 1745 | 23.75 | 23.80 | 1.012 | 0.02 | 0.020 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|--------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Front Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.068 | 0.073 |
| 20M QPSK(1#50) | Back Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.127 | 0.137 |
| 20M QPSK(1#50) | Left Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.034 | 0.037 |
| 20M QPSK(1#50) | Right Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.025 | 0.027 |
| 20M QPSK(1#50) | Top Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.008 | 0.009 |
| 20M QPSK(1#50) | Bottom Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.104 | 0.112 |
| 20M QPSK(1#50) (50%) | Bottom Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.121 | 0.131 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|----------------------|---------------|--------|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 20M QPSK(1#50) | Front Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.037 | 0.040 |
| 20M QPSK(1#50) | Back Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.061 | 0.066 |
| 20M QPSK(1#50) (50%) | Back Side | 132322 | 1745 | 18.47 | 18.80 | 1.079 | 0.057 | 0.061 |

9.18. Wi-Fi 2.4G SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 802.11b | Left Cheek | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.382 | 0.533 |
| 802.11b | Left Tilted | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.121 | 0.169 |
| 802.11b | Right Cheek | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.171 | 0.239 |
| 802.11b | Right Tilted | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.097 | 0.135 |
| 802.11b | Left Cheek | 6 | 2437 | 16.16 | 17.00 | 1.213 | 0.321 | 0.389 |
| 802.11b | Left Tilted | 6 | 2437 | 16.16 | 17.00 | 1.213 | 0.12 | 0.146 |
| 802.11b | Right Cheek | 6 | 2437 | 16.16 | 17.00 | 1.213 | 0.167 | 0.203 |
| 802.11b | Right Tilted | 6 | 2437 | 16.16 | 17.00 | 1.213 | 0.089 | 0.108 |
| 802.11b | Left Cheek | 6 | 2437 | 16.16 | 17.00 | 1.213 | 0.319 | 0.387 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 802.11b | Front Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.089 | 0.124 |
| 802.11b | Back Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.116 | 0.162 |
| 802.11b | Left Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.031 | 0.043 |
| 802.11b | Right Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.069 | 0.096 |
| 802.11b | Top Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.108 | 0.151 |
| 802.11b | Bottom Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.013 | 0.018 |
| 802.11b | Front Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.054 | 0.066 |
| 802.11b | Back Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.061 | 0.074 |

| | | | | | | | | |
|---------|-------------|---|------|-------|-------|-------|-------|-------|
| 802.11b | Left Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.027 | 0.033 |
| 802.11b | Right Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.033 | 0.040 |
| 802.11b | Top Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.041 | 0.050 |
| 802.11b | Bottom Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.011 | 0.013 |

Body Hotspot Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 802.11b | Front Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.415 | 0.579 |
| 802.11b | Back Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.667 | 0.931 |
| 802.11b | Left Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.278 | 0.388 |
| 802.11b | Right Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.196 | 0.274 |
| 802.11b | Top Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.433 | 0.604 |
| 802.11b | Bottom Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.102 | 0.142 |
| 802.11b | Front Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.415 | 0.503 |
| 802.11b | Back Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.667 | 0.809 |
| 802.11b | Left Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.278 | 0.337 |
| 802.11b | Right Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.196 | 0.238 |
| 802.11b | Top Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.433 | 0.525 |
| 802.11b | Bottom Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.102 | 0.124 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|---------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| 802.11b | Front Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.031 | 0.043 |
| 802.11b | Back Side | 6 | 2437 | 16.55 | 18.00 | 1.396 | 0.061 | 0.085 |
| 802.11b | Front Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.022 | 0.027 |
| 802.11b | Back Side | 6 | 2437 | 15.16 | 16.00 | 1.213 | 0.031 | 0.038 |

9.19. BT SAR results

Head Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GFSK | Left Cheek | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.022 | 0.027 |
| GFSK | Left Tilted | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.008 | 0.010 |
| GFSK | Right Cheek | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.019 | 0.024 |
| GFSK | Right Tilted | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.009 | 0.011 |

Body Hotspot Exposure Condition (Separation Distance is 10 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GFSK | Front Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.004 | 0.005 |
| GFSK | Back Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.013 | 0.016 |
| GFSK | Left Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.003 | 0.004 |
| GFSK | Right Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.003 | 0.004 |
| GFSK | Top Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.009 | 0.011 |
| GFSK | Bottom Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.001 | 0.001 |

Body Hotspot Exposure Condition (Separation Distance is 0 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GFSK | Front Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.021 | 0.026 |
| GFSK | Back Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.091 | 0.113 |
| GFSK | Left Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.016 | 0.020 |
| GFSK | Right Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.016 | 0.020 |
| GFSK | Top Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.049 | 0.061 |
| GFSK | Bottom Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.005 | 0.006 |

Body worn Exposure Condition (Separation Distance is 15 mm)

| Mode | Test Position | Ch. | Freq. (MHz) | Burst Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|---------------|-----|-------------|---------------------------|---------------------|----------------|---------------------|---------------------|
| GFSK | Front Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.001 | 0.001 |
| GFSK | Back Side | 39 | 2440 | 7.04 | 8.0 | 1.247 | 0.004 | 0.005 |

9.20. Repeated SAR results

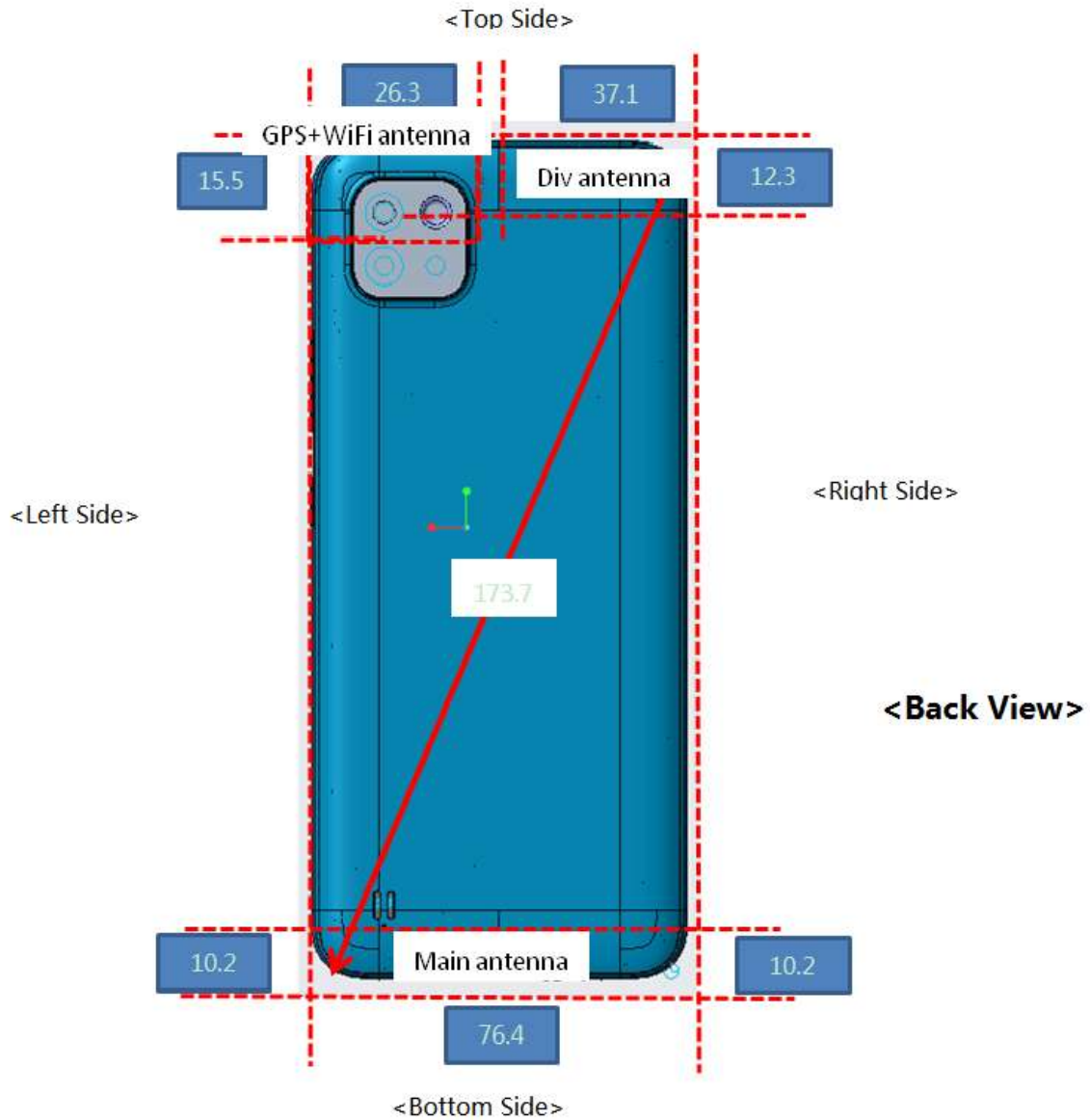
Remark:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, 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.

| Band | Mode | Test Position | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Scaling Factor | Measured SAR (W/kg) | Reported SAR (W/kg) |
|------|------|---------------|-----|-------------|---------------------|---------------------|----------------|---------------------|---------------------|
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

10. EXPOSURE POSITIONS CONSIDERATION

10.1. Multiple Transmitter Evaluation



| Mode | Front Side | Back Side | Left Side | Right Side | Top Side | Bottom Side |
|-----------------|------------|-----------|-----------|------------|----------|-------------|
| TX Main Antenna | YES | YES | YES | YES | YES | YES |
| Wi-Fi Antenna | YES | YES | YES | YES | YES | YES |

10.2. Simultaneous Transmission Possibilities

The Simultaneous Transmission Possibilities of this device are as below:

| No. | Configuration | |
|-----|---------------------------|-----|
| 1 | GSM(voice)+ WiFi2.4G | Yes |
| 2 | GPRS/EDGE(DATA)+ WiFi2.4G | Yes |
| 3 | GPRS/EDGE(DATA)+ BT | Yes |
| 4 | UMTS(Voice)+ WiFi2.4G | Yes |
| 5 | UMTS(DATA)+ WiFi2.4G | Yes |
| 6 | UMTS(DATA)+ BT | Yes |
| 7 | LTE(DATA)+WiFi2.4G | Yes |
| 8 | LTE(DATA)+BT | Yes |

Table 5: Simultaneous Transmission Possibilities

Note:

- 1) Wi-Fi 2.4G and Bluetooth share the same Tx antenna and can't transmit simultaneously.
- 2) 2G&3G&4G can't transmit simultaneously.
- 3) Held to ear configurations are not applicable to Bluetooth and therefore were not considered for simultaneous transmission.

10.3. SAR Summation Scenario

| Test Position | | Left Cheek | Left Tilted | Right Cheek | Right Tilted |
|------------------------------|---------------|--------------|--------------|--------------|--------------|
| MAX 1-g SAR (W/kg) | GSM 850 | 0.110 | 0.047 | 0.185 | 0.058 |
| | PCS 1900 | 0.115 | 0.033 | 0.161 | 0.060 |
| | WCDMA Band II | 0.113 | 0.051 | 0.174 | 0.066 |
| | WCDMA Band IV | 0.136 | 0.048 | 0.324 | 0.068 |
| | WCDMA Band V | 0.149 | 0.044 | 0.202 | 0.048 |
| | LTE Band 2 | 0.082 | 0.034 | 0.098 | 0.049 |
| | LTE Band 4 | 0.017 | 0.008 | 0.026 | 0.011 |
| | LTE Band 5 | 0.125 | 0.049 | 0.216 | 0.065 |
| | LTE Band 7 | 0.040 | 0.014 | 0.075 | 0.025 |
| | LTE Band 12 | 0.111 | 0.049 | 0.156 | 0.066 |
| | LTE Band 17 | 0.140 | 0.049 | 0.163 | 0.066 |
| | LTE Band 26 | 0.126 | 0.040 | 0.205 | 0.062 |
| | LTE Band 38 | 0.017 | 0.008 | 0.022 | 0.010 |
| | LTE Band 41 | 0.029 | 0.009 | 0.042 | 0.015 |
| | LTE Band 66 | 0.015 | 0.007 | 0.022 | 0.009 |
| | 2.4G Wi-Fi | 0.389 | 0.146 | 0.203 | 0.108 |
| | BT | 0.027 | 0.010 | 0.024 | 0.011 |
| Σ 1-g SAR(W/kg) | | 0.538 | 0.197 | 0.527 | 0.176 |

| Test Position | | Front Side (10mm) | Back Side (10mm) | Left Side (10mm) | Right Side (10mm) | Top Side (10mm) | Bottom Side (10mm) |
|------------------------------|---------------|----------------------|---------------------|---------------------|----------------------|--------------------|-----------------------|
| MAX 1-g SAR (W/kg) | GSM 850 | 0.118 | 0.341 | 0.060 | 0.047 | 0.015 | 0.240 |
| | PCS 1900 | 0.064 | 0.132 | 0.037 | 0.016 | 0.007 | 0.106 |
| | WCDMA Band II | 0.045 | 0.089 | 0.035 | 0.021 | 0.009 | 0.076 |
| | WCDMA Band IV | 0.037 | 0.080 | 0.022 | 0.013 | 0.006 | 0.050 |
| | WCDMA Band V | 0.122 | 0.307 | 0.060 | 0.043 | 0.013 | 0.247 |
| | LTE Band 2 | 0.104 | 0.279 | 0.046 | 0.029 | 0.008 | 0.238 |
| | LTE Band 4 | 0.069 | 0.101 | 0.034 | 0.020 | 0.006 | 0.076 |
| | LTE Band 5 | 0.121 | 0.337 | 0.060 | 0.039 | 0.013 | 0.297 |
| | LTE Band 7 | 0.392 | 0.658 | 0.209 | 0.221 | 0.100 | 0.611 |
| | LTE Band 12 | 0.127 | 0.242 | 0.014 | 0.229 | 0.050 | 0.026 |
| | LTE Band 17 | 0.119 | 0.243 | 0.058 | 0.042 | 0.009 | 0.229 |
| | LTE Band 26 | 0.146 | 0.257 | 0.064 | 0.038 | 0.013 | 0.248 |
| | LTE Band 38 | 0.105 | 0.167 | 0.056 | 0.035 | 0.012 | 0.140 |
| | LTE Band 41 | 0.077 | 0.151 | 0.042 | 0.028 | 0.007 | 0.107 |
| | LTE Band 66 | 0.073 | 0.137 | 0.037 | 0.027 | 0.009 | 0.112 |
| | 2.4G Wi-Fi | 0.066 | 0.074 | 0.027 | 0.033 | 0.041 | 0.011 |
| BT | 0.005 | 0.016 | 0.004 | 0.004 | 0.011 | 0.001 | |
| Σ1-g SAR(W/kg) | | 0.458 | 0.732 | 0.236 | 0.262 | 0.141 | 0.622 |

| Test Position | | Front Side (0mm) | Back Side (0mm) | Left Side (0mm) | Right Side (0mm) | Top Side (0mm) | Bottom Side (0mm) |
|-------------------------------|--------------|---------------------|--------------------|--------------------|---------------------|-------------------|----------------------|
| MAX 10-g SAR (W/kg) | GSM850 | 0.608 | 0.936 | 0.187 | 0.736 | 0.362 | 0.175 |
| | WCDMA Band V | 0.980 | 1.733 | 0.673 | 0.547 | 0.262 | 1.562 |
| | LTE Band 7 | 0.939 | 1.730 | 0.667 | 0.569 | 0.210 | 1.520 |
| | 2.4G Wi-Fi | 0.503 | 0.809 | 0.337 | 0.238 | 0.525 | 0.124 |
| | BT | 0.026 | 0.113 | 0.020 | 0.020 | 0.061 | 0.006 |
| Σ1-g SAR(W/kg) | | 1.483 | 2.542 | 1.010 | 0.974 | 0.887 | 1.686 |





| Test Position | | Front Side (15mm) | Back Side (15mm) |
|--------------------------|---------------|----------------------|---------------------|
| MAX 1-g SAR (W/kg) | GSM 850 | 0.084 | 0.134 |
| | PCS 1900 | 0.106 | 0.150 |
| | WCDMA Band II | 0.042 | 0.056 |
| | WCDMA Band IV | 0.043 | 0.085 |
| | WCDMA Band V | 0.100 | 0.141 |
| | LTE Band 2 | 0.069 | 0.124 |
| | LTE Band 4 | 0.022 | 0.038 |
| | LTE Band 5 | 0.093 | 0.154 |
| | LTE Band 7 | 0.072 | 0.131 |
| | LTE Band 12 | 0.118 | 0.215 |
| | LTE Band 17 | 0.121 | 0.214 |
| | LTE Band 26 | 0.090 | 0.121 |
| | LTE Band 38 | 0.041 | 0.081 |
| | LTE Band 41 | 0.105 | 0.167 |
| | LTE Band 66 | 0.040 | 0.066 |
| | 2.4G Wi-Fi | 0.027 | 0.038 |
| | BT | 0.001 | 0.005 |
| Σ 1-g SAR(W/kg) | | 0.148 | 0.253 |



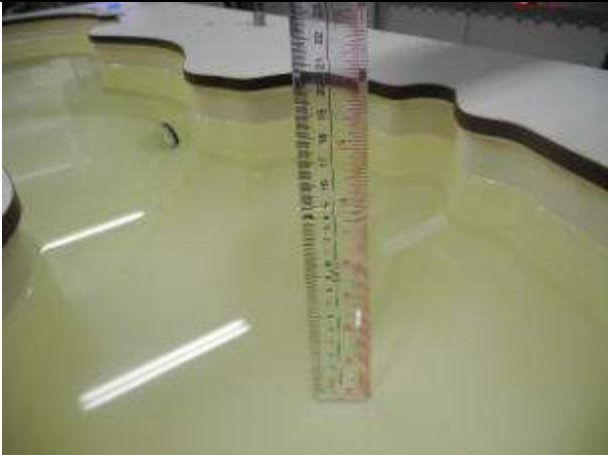
10.4. Simultaneous Transmission Conclusion

The above numeral summed SAR results and SPLSR analysis is sufficient to determine that simultaneous cases will not exceed the SAR limit and therefore simultaneous transmission SAR with Volume Scan is not required per KDB 447498 D01v06

11. PHOTOGRAPHS OF THE TEST SET-UP

Photograph: Liquid depth

| | |
|---|--|
| Photo 1: Body 750 Depth (15.0cm) | Photo 2: Body835 Depth (15.0cm) |
|  |  |
| Photo 3: Body1750 Depth (15.0cm) | Photo 4: Body1900 Depth(15.0cm) |
|  |  |

| | |
|--|--|
| Photo 5: Body 2300 Depth (15.0cm) | Photo 6: Body 2450 Depth (15.0cm) |
|  |  |
| Photo 7: Body2600 Depth (15.0cm) | N/A |
|  | N/A |

Appendix A. System Check Plots

(Pls see Appendix A)

Appendix B. MEASUREMENT SCANS

(Pls see Appendix B)

AppendixC RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)

(Pls see Appendix C)

Appendix D. RELEVANT PAGES FROM DAE&DIPOLE VALIDATION KIT REPORT(S)

(Pls see Appendix D)