# FCC SAR Compliance Test Report

| | |
|---|---|
| **Product Name:** | Smart Phone |
| **Model:** | STK-LX3 |
| **Report No.:** | SYBH(Z-SAR)20190309001001-2 |
| **FCC ID:** | QISSTK-LX3 |

| | APPROVED (Lab Manager) | PREPARED (Test Engineer) |
|---|---|---|
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| DATE | 2019-03-28 | 2019-03-28 |


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# ※※ Notice ※※

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2. The laboratory has passed the accreditation by The American Association for Laboratory Accreditation (A2LA). The accreditation number is 2174.01 & 2174.02 & 2174.03
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# ※※ Modified History ※※

| REV. | DESCRIPTION | ISSUED DATE | REMARK |
|---|---|---|---|
| Rev.1.0 | Initial Test Report Release | 2019-03-28 | Zhang Zufu |
| | | | |
| | | | |
| | | | |
| | | | |

# 1 General Information

## 1.1 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing are below Table 1.

| Band | Max Reported SAR(W/kg) | | | |
|---|---|---|---|---|
| | 1-g Head | 1-g Body-worn (15mm) * | 1-g Hotspot (10mm) | Product Specific 10-g SAR (0mm)** |
| **GSM850** | 0.62 | 0.28 | 0.60 | / |
| **GSM1900** | 0.52 | 0.20 | 0.54 | / |
| **UMTS Band II** | 0.63 | 0.31 | 0.44 | 1.73 |
| **UMTS Band IV** | 0.49 | 0.27 | 0.32 | / |
| **UMTS Band V** | 0.58 | 0.31 | **0.78** | / |
| **LTE Band 2** | **0.78** | **0.39** | 0.57 | **1.86** |
| **LTE Band 4** | 0.45 | 0.27 | 0.37 | / |
| **LTE Band 5** | 0.59 | 0.34 | 0.69 | / |
| **LTE Band 7** | 0.58 | 0.28 | 0.56 | / |
| **WiFi 2.4G** | 0.18 | 0.07 | 0.29 | / |
| **The highest reported SAR for Head, Body Worn, Hotspot, Product Specific 10-g SAR and Simultaneous transmission exposure conditions are 0.78 W/kg, 0.39 W/kg, 0.78 W/kg, 1.86 W/kg and 0.82 W/kg per KDB690783 D01.** | | | | |

Table 1: Summary of test result

Note:

1)* For body worn operation, this device has been tested and met 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.

2)** For Product Specific 10-g SAR operation, this device has been tested and meets the 10-g SAR limits of 4.0 W/kg for general population/ uncontrolled exposure according to ANSI C95.1:1992/IEEE C95.1:199.

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 C95.1:1992/IEEE C95.1:1991, the NCRP Report Number 86 for uncontrolled environment, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

## 1.2 RF exposure limits

| Human Exposure | Uncontrolled Environment General Population | Controlled Environment Occupational |
|---|---|---|
| **Spatial Peak SAR*** (Brain/Body/Arms/Legs) | **1.60 W/kg** | 8.00 W/kg |
| **Spatial Average SAR**** (Whole Body) | 0.08 W/kg | 0.40 W/kg |
| **Spatial Peak SAR***** (Hands/Feet/Ankle/Wrist) | **4.00 W/kg** | 20.00 W/kg |

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 gram 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 10 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 EUT Description

| Device Information： | | | |
|---|---|---|---|
| Product Name: | Smart Phone | | |
| Model: | STK-LX3 | | |
| FCC ID : | QISSTK-LX3 | | |
| SN: | 1#: 85L0119226000205<br>2#: 85L0119226000293<br>3#: 85L0119226000162<br>4#: 85L0119226000049<br>5#: 85L0119226000114<br>6#: 85L0119226000301<br>7#: 85L0119226000109 | | |
| Device Type : | Portable device | | |
| Device Phase: | Identical Prototype | | |
| Exposure Category: | Uncontrolled environment / general population | | |
| Hardware Version : | HL1STKM | | |
| Software Version : | 9.0.1.6(C900E6R1P2) | | |
| Antenna Type : | Internal antenna | | |
| Other Accessories | Headset | | |
| Device Operating Configurations: | | | |
| Supporting Mode(s) | GSM850/1900, UMTS Band II/IV/V,<br>LTE Band 2/4/5/7, WiFi 2.4G, BT | | |
| Test Modulation | GSM(GMSK/8PSK),UMTS(QPSK), LTE(QPSK/16QAM),<br>WiFi(DSSS/OFDM),BT(GFSK) | | |
| Device Class | B | | |
| Operating Frequency Range(s) | Band | Tx (MHz) | Rx (MHz) |
| | GSM850 | 824-849 | 869 - 894 |
| | GSM1900 | 1850-1910 | 1930-1990 |
| | UMTS Band II | 1850-1910 | 1930-1990 |
| | UMTS Band IV | 1710-1755 | 2110-2155 |
| | UMTS Band V | 824-849 | 869 - 894 |
| | LTE Band 2 | 1850-1910 | 1930-1990 |
| | LTE Band 4 | 1710-1755 | 2110-2155 |
| | LTE Band 5 | 824-849 | 869-894 |
| | LTE Band 7 | 2500-2570 | 2620 -2690 |
| | BT | 2400-2483.5 | |
| | WiFi 2.4G | 2412-2462 | |
| GPRS Multislot Class(12) | Max Number of Timeslots in Uplink: | | 4 |
| | Max Number of Timeslots in Downlink: | | 4 |
| | Max Total Timeslot: | | 5 |
| EGPRS Multislot Class(12) | Max Number of Timeslots in Uplink: | | 4 |
| | Max Number of Timeslots in Downlink: | | 4 |
| | Max Total Timeslot: | | 5 |
| HSDPA UE Category | 14 | | |
| HSUPA UE Category | 6 | | |
| DC-HSDPA UE Category | 24 | | |
| Power Class: | 4,tested with power level 5(GSM850) | | |
| | 1,tested with power level 0(GSM1900) | | |
| | 3, tested with power control “all 1”(UMTS Band II) | | |
| | 3, tested with power control “all 1”(UMTS Band IV) | | |

| | |
|---|---|
| | 3, tested with power control “all 1”(UMTS Band V) |
| | 3, tested with power control all Max.(LTE Band 2) |
| | 3, tested with power control all Max.(LTE Band 4) |
| | 3, tested with power control all Max.(LTE Band 5) |
| | 3, tested with power control all Max.(LTE Band 7) |
| Test Channels (low-mid-high): | 128-190-251(GSM850) |
| | 512-661-810(GSM1900) |
| | 9262-9400-9538(UMTS Band II) |
| | 1312-1413-1513(UMTS Band IV) |
| | 4132-4182-4233(UMTS Band V) |
| | 18607-18900-19193(LTE Band 2 BW=1.4MHz) |
| | 18615-18900-19185(LTE Band 2 BW=3MHz) |
| | 18625-18900-19175(LTE Band 2 BW=5MHz) |
| | 18650-18900-19150(LTE Band 2 BW=10MHz) |
| | 18675-18900-19125(LTE Band 2 BW=15MHz) |
| | 18700-18900-19100(LTE Band 2 BW=20MHz) |
| | 19957-20175-20393(LTE Band 4 BW=1.4MHz) |
| | 19965-20175-20385(LTE Band 4 BW=3MHz) |
| | 19975-20175-20375(LTE Band 4 BW=5MHz) |
| | 20000-20175-20350(LTE Band 4 BW=10MHz) |
| | 20025-20175-20325(LTE Band 4 BW=15MHz) |
| | 20050-20175-20300(LTE Band 4 BW=20MHz) |
| | 20407-20525-20643(LTE Band 5 BW=1.4MHz) |
| | 20415-20525-20635(LTE Band 5 BW=3MHz) |
| | 20425-20525-20625(LTE Band 5 BW=5MHz) |
| | 20450-20525-20600(LTE Band 5 BW=10MHz) |
| | 20775-21100-21425(LTE Band 7 BW=5MHz) |
| | 20800-21100-21400(LTE Band 7 BW=10MHz) |
| | 20825-21100-21375(LTE Band 7 BW=15MHz) |
| | 20850-21100-21350(LTE Band 7 BW=20MHz) |
| | 802.11b/g/n 20M:1-2-6-10-11(WiFi 2.4G)<br>802.11n 40M:3-4-6-8-9 (WiFi 2.4G) |
| | BT: 0-19-39-78 |

Table 3: Device information and operating configuration

### 1.3.1 General Description

STK-LX3 is subscriber equipment in the GSM/WCDMA/LTE system.
The GSM frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900.
The UMTS frequency band is B1 and B2 and B4 and B5 and B8.
The LTE frequency band is B1 and B2 and B3 and B4 and B5 and B7 and B8 and B28.
But only GSM850 and GSM1900, UMTS frequency B2 and B4 and B5, LTE frequency B2 and B4 and B5 and B7 bands test data included in this report.
The Mobile Phone implements such functions as RF signal receiving/transmitting, LTE/HSPA/UMTS and GSM/GPRS/EDGE protocol processing, voice, video MMS service, GPS, AGPS and WIFI etc. Externally it provides one micro SD card interface, earphone port and different versions of the software, the phone may support single SIM card or double SIM card. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

**Battery information:**

| Name | Manufacturer/trademark | Description |
|---|---|---|
| Rechargeable Li-ion 24022915 | Huawei Technologies Co., Ltd. (Manufacturer: Sunwoda) | Battery Model: HB446486ECW<br>Rated capacity: 3900mAh<br>Nominal Voltage: +3.82V<br>Charging Voltage: +4.4V |
| | Huawei Technologies Co., Ltd. (Manufacturer: SCUD) | |
| | Huawei Technologies Co., Ltd. (Manufacturer: Desay) | |

### 1.4 Test specification(s)

| | |
|---|---|
| ANSI C95.1:1992 /IEEE C95.1:1991 | Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz. |
| 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 |
| KDB 941225 D01 | 3G SAR Procedures v03r01 |
| KDB 941225 D05 | SAR for LTE Devices v02r05 |
| KDB 941225 D06 | Hotspot SAR v02r01 |
| KDB 447498 D01 | General RF Exposure Guidance v06 |
| KDB 648474 D04 | Handsets SAR v01r03 |
| KDB 248227 D01 | SAR Guidance for IEEE 802 11 Wi-Fi SAR v02r02 |
| KDB 865664 D01 | SAR measurement 100 MHz to 6 GHz v01r04 |
| KDB 865664 D02 | RF Exposure Reporting v01r02 |
| KDB 690783 D01 | SAR Listings on Grants v01r03 |

### 1.5 Testing laboratory

| | |
|---|---|
| Test Site | Reliability Laboratory of Huawei Technologies Co., Ltd. |
| Test Location | NO.2 New City Avenue Songshan Lake Sci. & Tech. Industry Park, Dongguan, Guangdong, P.R.C |
| Telephone | +86 769 23830808 |
| Fax | +86 769 23837628 |
| State of accreditation | The Test laboratory (area of testing) is accredited according to ISO/IEC 17025.<br>CNAS Registration number: L0310<br>A2LA TESTING CERT # 2174.01 & 2174.02 & 2174.03 |

### 1.6 Applicant and Manufacturer

| | |
|---|---|
| Company Name | HUAWEI TECHNOLOGIES CO., LTD |
| Address | Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C |

### 1.7 Application details

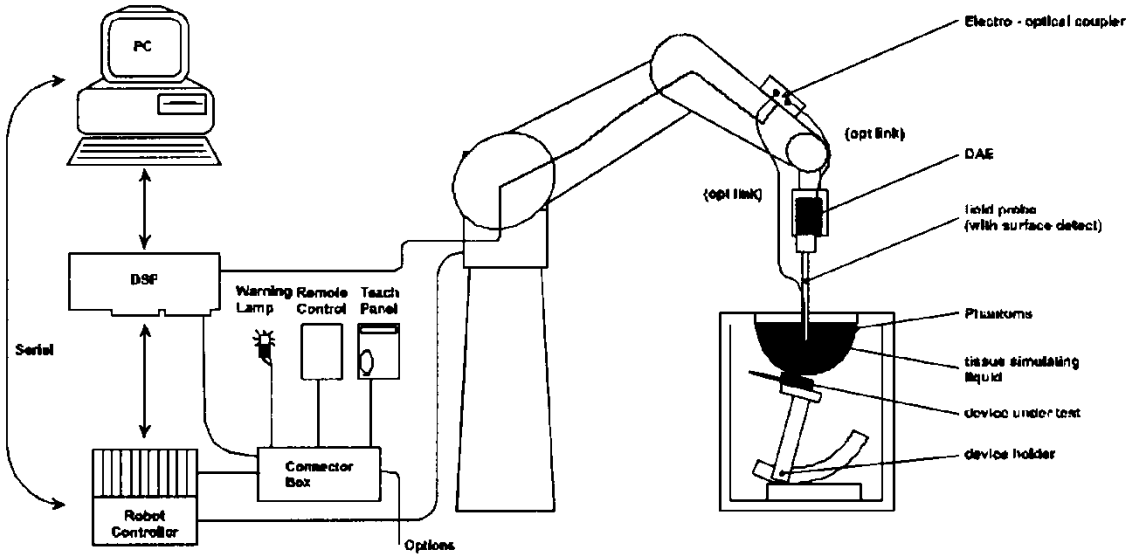
| | |
|---|---|
| Start Date of test | 2019-03-20 |
| End Date of test | 2019-03-25 |

### 1.8 Ambient Condition

| | |
|---|---|
| Ambient temperature | 18°C – 25°C |
| Relative Humidity | 30% – 70% |

# 2 SAR Measurement System

## 2.1 SAR Measurement Set-up




The DASY 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 DASY measurement server.
- The DASY 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 7.
- DASY 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 check dipoles allowing to validate the proper functioning of the system.

## 2.2 Test environment

The DASY measurement system is placed at the head end of a room with dimensions:
5 x 2.5 x 3 m³, the SAM phantom is placed in a distance of 75 cm from the side walls and 1.1m from the rear wall. Above the test system a 1.5 x 1.5 m² array of pyramid absorbers is installed to reduce reflections from the ceiling.
Picture 1 of the photo documentation shows a complete view of the test environment.
The system allows the measurement of SAR values larger than 0.005 mW/g.

## 2.3 Data Acquisition Electronics description

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

The mechanical probe mounting device includes two different sensor systems for frontal and sideways Probe contacts. They are used for mechanical surface detection and probe collision detection.

DAE

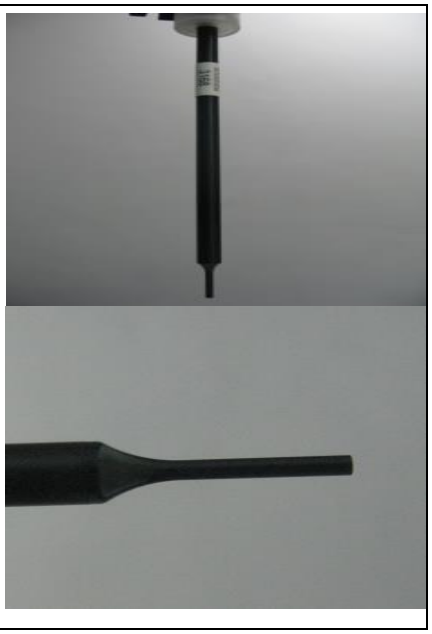
| | | |
|---|---|---|
| Input Impedance | 200MOhm |  |
| The Inputs | symmetrical and floating | |
| Common mode rejection | above 80 dB | |

## 2.4 Probe description

These probes are specially designed and calibrated for use in liquids with high permittivities. They should not be used in air, since the spherical isotropy in air is poor (±2 dB). The dosimetric probes have special calibrations in various liquids at different frequencies.

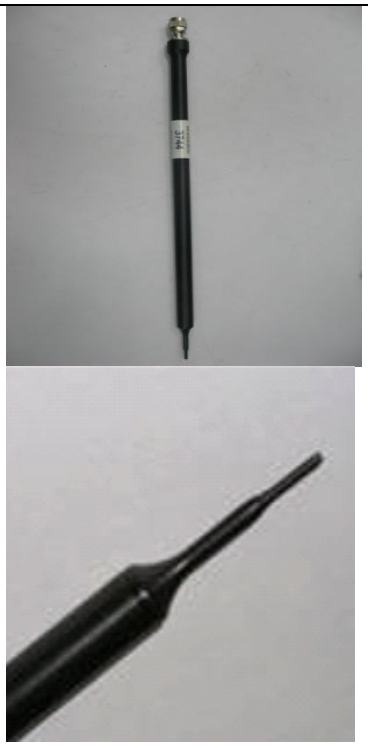
Isotropic E-Field Probe ES3DV3 for Dosimetric Measurements

| | |
|---|---|
| Construction | Symmetrical design with triangular core<br>Interleaved sensors<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |
| Calibration | ISO/IEC 17025 calibration service available. |
| Frequency | 10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz) |
| Directivity | ± 0.2 dB in HSL (rotation around probe axis)<br>± 0.3 dB in tissue material (rotation normal to probe axis) |
| Dynamic range | 5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB |
| Dimensions | Overall length: 337 mm (Tip: 20 mm)<br>Tip diameter: 3.9 mm (Body: 12 mm)<br>Distance from probe tip to dipole centers: 2.0 mm |
| Application | General dosimetry up to 4 GHz<br>Dosimetry in strong gradient fields<br>Compliance tests of mobile phones |



Isotropic E-Field Probe EX3DV4 for Dosimetric Measurements

| | |
|---|---|
| Construction | Symmetrical design with triangular core<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |
| Calibration | ISO/IEC 17025 calibration service available. |
| Frequency | 10 MHz to >6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz) |
| Directivity | ± 0.3 dB in HSL (rotation around probe axis)<br>± 0.5 dB in tissue material (rotation normal to probe axis) |
| Dynamic range | 10 µW/g to > 100 mW/g;<br>Linearity: ± 0.2 dB(noise: typically<1µW/g) |
| Dimensions | Overall length: 337 mm (Tip:20 mm)<br>Tip diameter:2.5 mm (Body:12 mm)<br>Typical distance from probe tip to dipole centers: 1mm |
| Application | High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields).<br>Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30% |

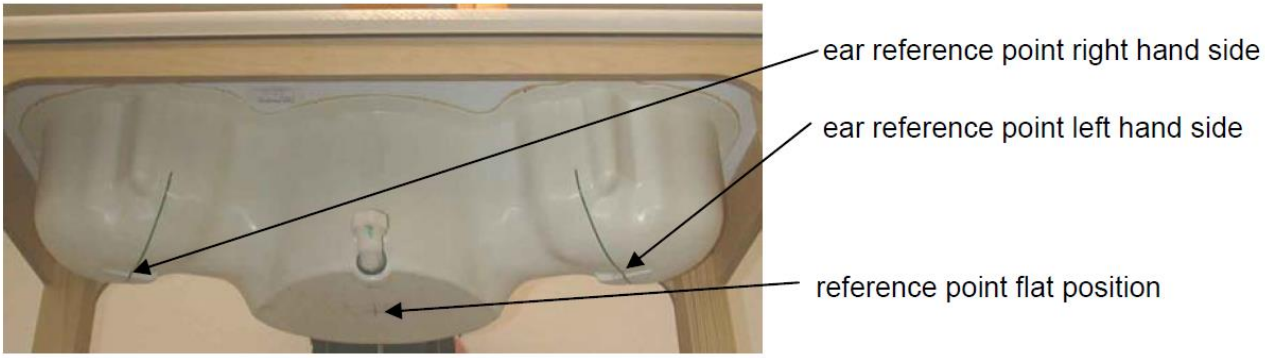


## 2.5 Phantom description

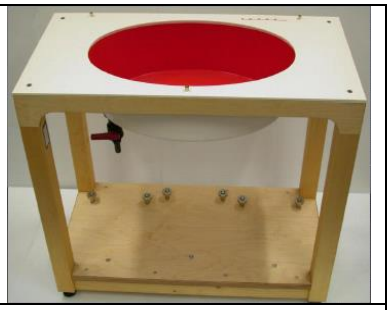
SAM Twin Phantom

| | | |
|---|---|---|
| Shell Thickness | 2mm±0.2mm;The ear region:6.0±0.2mm |  |
| Filling Volume | Approximately 25 liters | |
| Dimensions | Length:1000mm; Width:500mm;<br>Height: adjustable feet | |
| Measurement Areas | Left hand<br>Right hand<br>Flat phantom | |
| 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.<br>A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible. Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot. | | |

The following figure shows the definition of reference point:




ELI4 Phantom

| | | |
|---|---|---|
| Shell Thickness | 2mm±0.2mm |  |
| Filling Volume | Approximately 30 liters | |
| Dimensions | Major axis:600mm; Minor axis:400mm; | |
| 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 $2 \leq \varepsilon r \leq 5$ at ≤3 GHz, $3 \leq \varepsilon r \leq 4$ at >3 GHz and a loss tangent $\leqslant 0.05$.

Modular Triple Flat Phantom

| | | |
|---|---|---|
| Shell Thickness (bottom plate) | 2mm±0.2mm |  |
| Filling Volume (Module) | approx. 8.1 liters (filling height: 155 mm) | |
| Dimensions | Length: 292 mm<br>Width: 178 mm<br>Height: 178 mm<br>Useable area: 280 × 175 mm | |
| Measurement Areas | Flat phantom | |
| The Modular Flat Phantom consists of three identical modules that can be installed and removed separately without emptying the liquid. It is used for compliance testing of small wireless devices in body-worn configurations according to IEC 62209-2, etc. | | |

## 2.6 Device holder description

The DASY 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 pair 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.

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity $\varepsilon$ =3 and loss tangent $\sigma$ =0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.
The device holder permits the device to be positioned with a tolerance of ±1° in the tilt angle.

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.

## 2.7 Test Equipment List

This table gives a complete overview of the SAR measurement equipment.
Devices used during the test described are marked ☒

| | Manufacturer | Device | Type | Serial number | Date of last calibration | Valid period* |
|---|---|---|---|---|---|---|
| ☒ | SPEAG | Dosimetric E-Field Probe | EX3DV4 | 3744 | 2018-07-25 | One year |
| ☒ | SPEAG | Dosimetric E-Field Probe | EX3DV4 | 3168 | 2018-09-27 | One year |
| ☒ | SPEAG | Dosimetric E-Field Probe | EX3DV4 | 7505 | 2018-06-12 | One year |
| ☒ | SPEAG | Dosimetric E-Field Probe | EX3DV4 | 7381 | 2018-09-28 | One year |
| ☒ | SPEAG | Dosimetric E-Field Probe | EX3DV4 | 7375 | 2018-12-13 | One year |
| ☒ | SPEAG | 835 MHz Dipole | D835V2 | 4d126 | 2018-07-24 | Three years |
| ☒ | SPEAG | 1750 MHz Dipole | D1750V2 | 1123 | 2017-07-27 | Three years |
| ☒ | SPEAG | 1900 MHz Dipole | D1900V2 | 5d143 | 2017-09-20 | Three years |
| ☒ | SPEAG | 2450 MHz Dipole | D2450V2 | 860 | 2018-11-17 | Three years |
| ☒ | SPEAG | 2600 MHz Dipole | D2600V2 | 1032 | 2018-09-17 | Three years |
| ☒ | SPEAG | Data acquisition electronics | DAE4 | 851 | 2018-07-18 | One year |
| ☒ | SPEAG | Data acquisition electronics | DAE4 | 1492 | 2018-11-14 | One year |
| ☒ | SPEAG | Data acquisition electronics | DAE4 | 1554 | 2018-06-05 | One year |
| ☒ | SPEAG | Data acquisition electronics | DAE4 | 1236 | 2018-07-18 | One year |
| ☒ | SPEAG | Data acquisition electronics | DAE4 | 1235 | 2018-11-14 | One year |
| ☒ | SPEAG | Software | DASY52 | N/A | NCR | NCR |
| ☒ | SPEAG | Twin Phantom | SAM | 1475 | NCR | NCR |
| ☒ | SPEAG | Twin Phantom | SAM | 1620 | NCR | NCR |
| ☒ | SPEAG | Twin Phantom | SAM | 1892 | NCR | NCR |
| ☒ | SPEAG | Twin Phantom | SAM | 1958 | NCR | NCR |
| ☒ | SPEAG | Triple Flat Phantom | Triple Flat Phantom 5.1C | 1176/2 | NCR | NCR |
| ☒ | R & S | Universal Radio Communication Tester | CMU 200 | 123202 | 2018-12-18 | One year |
| ☒ | R & S | Universal Radio Communication Tester | CMW 500 | 116265 | 2019-03-11 | One year |
| ☒ | R & S | Universal Radio Communication Tester | CMW 500 | 166456 | 2018-10-31 | One year |
| ☒ | R & S | Universal Radio Communication Tester | CMW 500 | 165424 | 2018-07-07 | One year |
| ☒ | Anritsu | Singal Analyzer | MS2690A | 6261767335 | 2019-03-14 | One year |
| ☒ | Anritsu | Radio Communication Analyser | MT8821C | 6201735100 | 2019-03-14 | One year |
| ☒ | Agilent | Network Analyser | E5071C | MY46107368 | 2018-10-15 | One year |
| ☒ | Agilent | Dielectric Probe Kit | 85070E | 2484 | NCR | NCR |
| ☒ | Keysight | Signal Generator | E8257D | MY56440071 | 2018-12-18 | One year |
| ☒ | MINI-CIRCUITS | Amplifier | ZHL-42W | QA1402001 | NCR | NCR |
| ☒ | AR | Directional Coupler | DC7144A M1 | 0423264 | 2018-04-28 | One year |
| ☒ | Keysight | Power Meter | E4417A | MY57160005 | 2019-03-14 | One year |
| ☒ | Keysight | Power Meter Sensor | E9321A | MY57150002 | 2019-03-14 | One year |
| ☒ | R & S | Power Meter | NRP | 100740 | 2018-07-17 | One year |
| ☒ | R & S | Power Meter Sensor | NRP-Z11 | 106288 | 2018-07-17 | One year |

Note:
1) Per KDB865664 D01 requirements for dipole calibration, the test laboratory has adopted three-year extended calibration interval. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.

a) There is no physical damage on the dipole;
b) System check with specific dipole is within 10% of calibrated value;
c) The most recent return-loss result, measured at least annually, deviates by no more than 20% from the previous measurement.
d) The most recent measurement of the real or imaginary parts of the impedance, measured at least annually is within 5Ω from the previous measurement.

2) Network analyzer probe calibration against air, distilled water and a shorting block performed before measuring liquid parameters.
3) *All the equipment are within the valid period when the tests are performed.

# 3 SAR Measurement Procedure

## 3.1 Scanning procedure

The DASY 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 %.

- For power drift measurement, DASY software supports that the reference position can be either the selected section's grid reference point or a user point. If the E-field of power reference measurement in the default grid reference point is very small, the test lab may set the reference position to the user point near the hotspot location to avoid large measurement uncertainty.

- The “surface check” measurement tests the optical surface detection system of the DASY 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 ± 0.1mm). 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 ± 30°.)

- 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 (≤2GHz), 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: $\Delta x_{zoom}$, $\Delta y_{zoom}$≤ 2GHz - ≤8mm, 2-4GHz - ≤5 mm and 4-6 GHz-≤4mm; $\Delta z_{zoom}$ ≤3GHz - ≤5 mm, 3-4 GHz- ≤4mm and 4-6GHz-≤2mm where the robot additionally moves the probe along the z-axis away from the bottom of the Phantom. DASY is also able to perform repeated zoom scans if more than 1 peak is found during area scan. In this document, the evaluated peak 1g and 10g averaged SAR values are shown in the 2D-graphics in Appendix B. Test results relevant for the specified standard (see chapter 1.4.) are shown in table form in chapter 7.2.

- 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 2 mm 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 KDB865664 D01:

| 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 | | |
| | | | $\Delta z_{Zoom}(n)$ | $\Delta z_{Zoom}(1)$* | $\Delta z_{Zoom}(n>1)$* | |
| ≤2GHz | ≤15mm | ≤8mm | ≤5mm | ≤4mm | ≤1.5*$\Delta z_{Zoom}(n-1)$ | ≥30mm |
| 2-3GHz | ≤12mm | ≤5mm | ≤5mm | ≤4mm | ≤1.5*$\Delta z_{Zoom}(n-1)$ | ≥30mm |
| 3-4GHz | ≤12mm | ≤5mm | ≤4mm | ≤3mm | ≤1.5*$\Delta z_{Zoom}(n-1)$ | ≥28mm |
| 4-5GHz | ≤10mm | ≤4mm | ≤3mm | ≤2.5mm | ≤1.5*$\Delta z_{Zoom}(n-1)$ | ≥25mm |
| 5-6GHz | ≤10mm | ≤4mm | ≤2mm | ≤2mm | ≤1.5*$\Delta z_{Zoom}(n-1)$ | ≥22mm |

### 3.2 Spatial Peak SAR Evaluation

The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The basis 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) or 8 x 8 x 7 points (with 4mm 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**

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

### 3.3 Data Storage and Evaluation

Data Storage

The DASY 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 "DAE". 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 | $Norm_i$, $a_{i0}$, $a_{i1}$, $a_{i2}$ |
| | - Conversion factor | $ConvF_i$ |
| | - Diode compression point | Dcpi |
| Device parameters: | - Frequency | f |
| | - Crest factor | cf |
| Media parameters: | - Conductivity | $\sigma$ |
| | - Density | $\rho$ |

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 DASY 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:

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

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)
$dcp_i$ = 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: $H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1}f + a_{i2}f^2)/f$

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

$a_{ij}$ = 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

$\sigma$ = conductivity in [mho/m] or [Siemens/m]

$\rho$ = equivalent tissue density in g/cm$^3$

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.

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

with $P_{pwe}$ = equivalent power density of a plane wave in mW/cm$^2$

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

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

# 4 System Verification Procedure

## 4.1 Tissue Verification

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectic parameter are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within ± 5% of the target values.

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

| Ingredients (% of weight) | Head Tissue | | | | | |
|---|---|---|---|---|---|---|
| Frequency Band (MHz) | 750 | 835 | 1750 | 1900 | 2450 | 2600 |
| Water | 39.2 | 41.45 | 52.64 | 55.242 | 62.7 | 55.242 |
| Salt (NaCl) | 2.7 | 1.45 | 0.36 | 0.306 | 0.5 | 0.306 |
| Sugar | 57.0 | 56.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HEC | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bactericide | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Triton X-100 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DGBE | 0.0 | 0.0 | 47.0 | 44.542 | 36.8 | 44.452 |
| Ingredients (% of weight) | Body Tissue | | | | | |
| Frequency Band (MHz) | 750 | 835 | 1750 | 1900 | 2450 | 2600 |
| Water | 50.3 | 52.4 | 69.91 | 69.91 | 73.2 | 64.493 |
| Salt (NaCl) | 1.60 | 1.40 | 0.13 | 0.13 | 0.04 | 0.024 |
| Sugar | 47.0 | 45.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HEC | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bactericide | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Triton X-100 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| DGBE | 0.0 | 0.0 | 29.96 | 29.96 | 26.7 | 32.252 |

Table 4: Tissue Dielectric Properties

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

**☒Simulating Head Liquid (HBBL600-6000MHz),Manufactured by SPEAG:**

| Ingredients | (% by weight) |
|---|---|
| Water | 50-65% |
| Esters,Emulsifiers,Inhibitors | 10-30% |
| Sodium salt | 8-25% |

**☒Simulating Body Liquid (MBBL600-6000MHz),Manufactured by SPEAG:**

| Ingredients | (% by weight) |
|---|---|
| Water | 60-80% |
| Esters,Emulsifiers,Inhibitors | 20-40% |
| Sodium salt | 0-1.5% |

| Tissue Type | Target Frequency | Target Tissue | | Measured Tissue | | Deviation (Within +/-5% ) | | Liquid Temp. | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| | | εr | σ (S/m) | εr | σ (S/m) | $\Delta\varepsilon_r$ | Δσ | | |
| 835MHz Head | 825 | 41.6 | 0.90 | 41.77 | 0.933 | 0.41% | 3.69% | 22.0°C | 2019-03-20 |
| | 835 | 41.5 | 0.90 | 41.72 | 0.936 | 0.53% | 4.04% | | |
| | 850 | 41.5 | 0.92 | 41.69 | 0.942 | 0.46% | 2.39% | | |
| 1750MHz Head | 1710 | 40.1 | 1.35 | 38.83 | 1.358 | -3.17% | 0.59% | 22.0°C | 2019-03-21 |
| | 1730 | 40.1 | 1.36 | 38.79 | 1.369 | -3.27% | 0.66% | | |
| | 1750 | 40.1 | 1.37 | 38.75 | 1.380 | -3.37% | 0.73% | | |
| | 1800 | 40.0 | 1.40 | 38.67 | 1.408 | -3.33% | 0.57% | | |
| 1900MHz Head | 1850 | 40.0 | 1.40 | 40.41 | 1.413 | 1.02% | 0.93% | 21.0°C | 2019-03-20 |
| | 1880 | 40.0 | 1.40 | 40.37 | 1.432 | 0.92% | 2.29% | | |
| | 1900 | 40.0 | 1.40 | 40.32 | 1.445 | 0.80% | 3.21% | | |
| | 1910 | 40.0 | 1.40 | 40.31 | 1.451 | 0.78% | 3.64% | | |
| 2450MHz Head | 2410 | 39.3 | 1.76 | 39.03 | 1.844 | -0.69% | 4.77% | 22.1°C | 2019-03-22 |
| | 2435 | 39.2 | 1.79 | 38.96 | 1.865 | -0.61% | 4.19% | | |
| | 2450 | 39.2 | 1.80 | 38.94 | 1.875 | -0.66% | 4.17% | | |
| | 2460 | 39.2 | 1.81 | 38.93 | 1.883 | -0.69% | 4.03% | | |
| 2600MHz Head | 2510 | 39.1 | 1.87 | 38.84 | 1.922 | -0.66% | 2.78% | 21.7°C | 2019-03-20 |
| | 2535 | 39.1 | 1.89 | 38.81 | 1.944 | -0.74% | 2.86% | | |
| | 2560 | 39.1 | 1.92 | 38.76 | 1.963 | -0.87% | 2.24% | | |
| | 2600 | 39.0 | 1.96 | 38.68 | 1.998 | -0.82% | 1.94% | | |
| | 2610 | 39.0 | 1.97 | 38.67 | 2.007 | -0.85% | 1.88% | | |
| | 2645 | 39.0 | 2.01 | 38.59 | 2.035 | -1.05% | 1.24% | | |
| | | | | | | | | | |
| 835MHz Body | 825 | 55.20 | 0.97 | 54.16 | 0.994 | -1.88% | 2.52% | 22.0°C | 2019-03-23 |
| | 835 | 55.20 | 0.97 | 54.11 | 0.998 | -1.97% | 2.91% | | |
| | 850 | 55.20 | 0.99 | 54.05 | 1.004 | -2.08% | 1.41% | | |
| 835MHz Body | 825 | 55.2 | 0.97 | 56.93 | 0.950 | 3.13% | -2.07% | 22°C | 2019-03-25 |
| | 835 | 55.2 | 0.97 | 56.90 | 0.954 | 3.08% | -1.70% | | |
| | 850 | 55.2 | 0.99 | 56.88 | 0.960 | 3.04% | -3.07% | | |
| 1750MHz Body | 1710 | 53.5 | 1.46 | 51.58 | 1.460 | -3.59% | 0.00% | 22.0°C | 2019-03-22 |
| | 1730 | 53.5 | 1.48 | 51.58 | 1.474 | -3.59% | -0.41% | | |
| | 1750 | 53.4 | 1.49 | 51.57 | 1.484 | -3.43% | -0.40% | | |
| | 1800 | 53.3 | 1.52 | 51.55 | 1.522 | -3.28% | 0.13% | | |
| 1900MHz Body | 1850 | 53.3 | 1.52 | 55.09 | 1.490 | 3.36% | -1.97% | 22.0°C | 2019-03-20 |
| | 1880 | 53.3 | 1.52 | 55.03 | 1.511 | 3.25% | -0.59% | | |
| | 1900 | 53.3 | 1.52 | 54.97 | 1.525 | 3.13% | 0.33% | | |
| | 1910 | 53.3 | 1.52 | 54.96 | 1.532 | 3.11% | 0.79% | | |
| 2450MHz Body | 2410 | 52.8 | 1.91 | 54.12 | 1.933 | 2.50% | 1.20% | 22.3°C | 2019-03-22 |
| | 2435 | 52.7 | 1.94 | 54.04 | 1.956 | 2.54% | 0.82% | | |
| | 2450 | 52.7 | 1.95 | 53.98 | 1.973 | 2.43% | 1.18% | | |
| | 2460 | 52.7 | 1.96 | 54.03 | 1.979 | 2.52% | 0.97% | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2600MHz Body | 2510 | 52.6 | 2.04 | 53.53 | 2.039 | 1.77% | -0.05% | 22.5°C | 2019-03-23 |
| | 2535 | 52.6 | 2.07 | 53.51 | 2.062 | 1.73% | -0.39% | | |
| | 2560 | 52.6 | 2.11 | 53.46 | 2.085 | 1.63% | -1.18% | | |
| | 2600 | 52.5 | 2.16 | 53.40 | 2.125 | 1.71% | -1.62% | | |
| | 2610 | 52.5 | 2.18 | 53.40 | 2.135 | 1.71% | -2.06% | | |
| | 2645 | 52.5 | 2.23 | 53.32 | 2.169 | 1.56% | -2.74% | | |

Table 5: Measured Tissue Parameter

Note: 1) The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.

2) KDB865664 was ensured to be applied for probe calibration frequencies greater than or equal to 50MHz of the EUT frequencies.

3) The above measured tissue parameters were used in the DASY software to perform interpolation via the DASY software to determine actual dielectric parameters at the test frequencies. The SAR test plots may slightly differ from the table above since the DASY rounds to three significant digits.

### 4.2 System Check

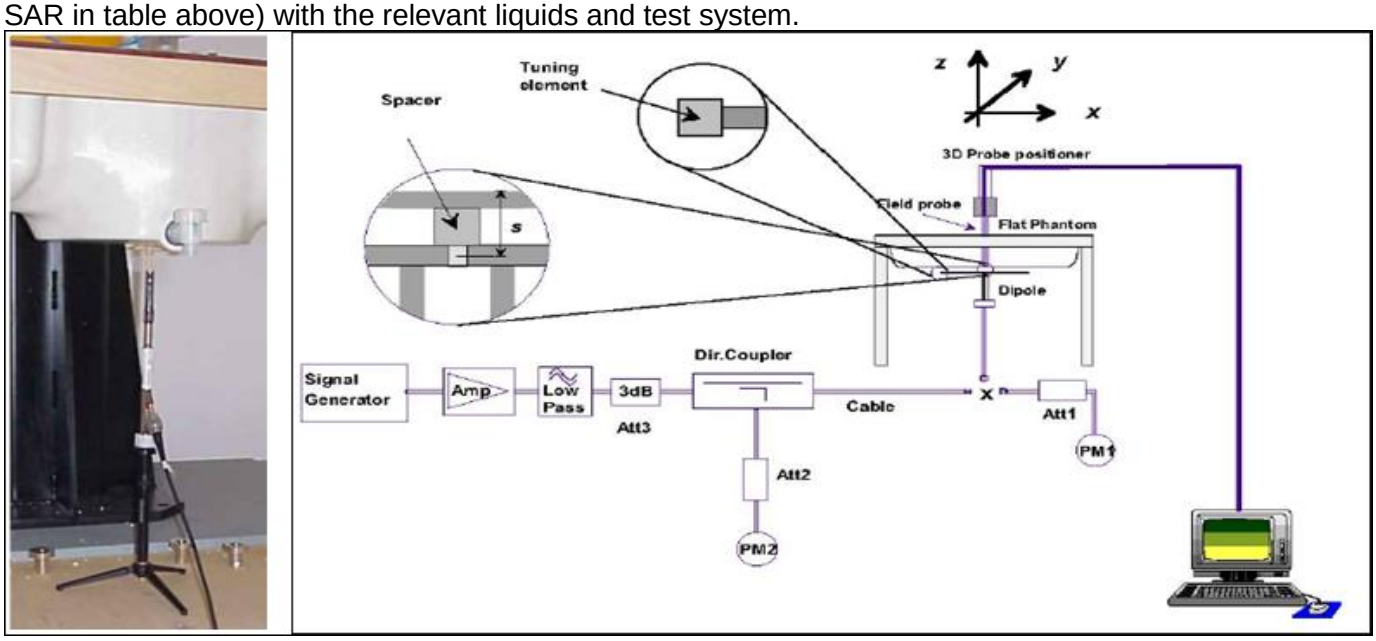
The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE 1528 (described above). The following table shows system check results for all frequency bands and tissue liquids used during the tests (Graphic Plot(s) see Appendix A).

| Dipole Information | System Check | Target SAR (Normalized to 1W) | | Measured SAR (Normalized to 1W) | | Deviation (Within +/-10% ) | | Test Date |
|---|---|---|---|---|---|---|---|---|
| SN | | 1-g (mW/g) | 10-g (mW/g) | 1-g (mW/g) | 10-g (mW/g) | Δ1-g | Δ10-g | |
| 4d126 | 835MHz Head | 9.44 | 6.06 | 9.92 | 6.40 | 5.08% | 5.61% | 2019-03-20 |
| 1123 | 1750MHz Head | 36.60 | 19.40 | 35.68 | 19.08 | -2.51% | -1.65% | 2019-03-21 |
| 5d143 | 1900MHz Head | 39.10 | 20.50 | 40.40 | 21.08 | 3.32% | 2.83% | 2019-03-20 |
| 860 | 2450MHz Head | 53.10 | 24.70 | 53.60 | 24.84 | 0.94% | 0.57% | 2019-03-22 |
| 1032 | 2600MHz Head | 56.40 | 25.20 | 58.80 | 26.64 | 4.26% | 5.71% | 2019-03-20 |
| | | | | | | | | |
| 4d126 | 835MHz Body | 9.65 | 6.32 | 9.24 | 6.00 | -4.25% | -5.06% | 2019-03-23 |
| 4d126 | 835MHz Body | 9.65 | 6.32 | 9.44 | 6.32 | -2.18% | 0.00% | 2019-03-25 |
| 1123 | 1750MHz Body | 36.40 | 19.40 | 39.20 | 20.84 | 7.69% | 7.42% | 2019-03-22 |
| 5d143 | 1900MHz Body | 39.40 | 20.80 | 40.00 | 21.20 | 1.52% | 1.92% | 2019-03-20 |
| 860 | 2450MHz Body | 51.60 | 24.20 | 49.20 | 23.16 | -4.65% | -4.30% | 2019-03-22 |
| 1032 | 2600MHz Body | 55.10 | 24.50 | 55.60 | 25.20 | 0.91% | 2.86% | 2019-03-23 |

Table 6: System Check Results

### 4.3 System check Procedure

The system check is performed by using a system check dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SAM. It is fed with a power of 250 mW (below 3GHz) or 100mW (3-6GHz). To adjust this power, a power meter is used. The power sensor is connected to the cable before the system check to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system check to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot). System check results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.



# 5 SAR measurement variability and uncertainty

## 5.1 SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, 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 measurements 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; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ⩾ 0.80 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.

The detailed repeated measurement results are shown in the following section.

## 5.2 SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, 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 1528-2013 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.

# 6 SAR Test Configuration

## 6.1 Test Positions Configuration

### 6.1.1 General considerations

Per IEEE 1528-2013,two imaginary lines on the handset were established: the vertical centerline and the horizontal line (See Figure 1).

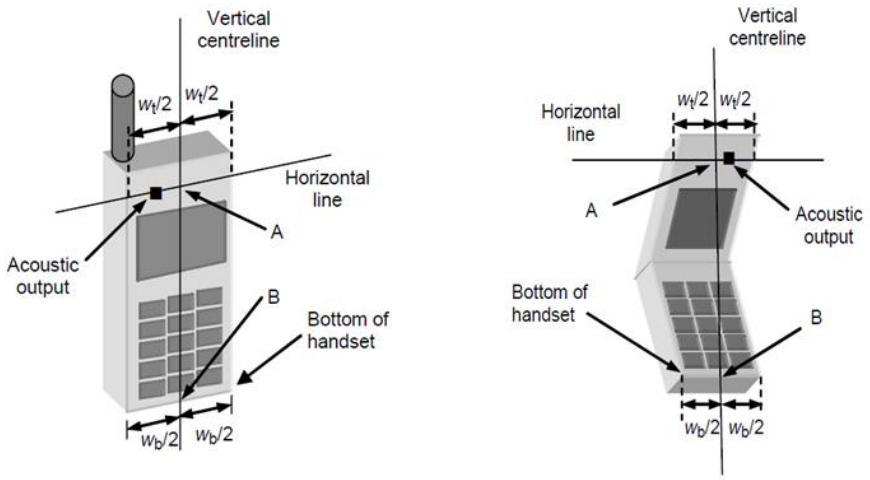



Figure 1 Hand Vertical Center & Horizontal Line Reference Points

### 6.1.2 Head Exposure Condition

Per IEEE 1528-2013, Head SAR measurements were made in the “cheek” position (See Figure 2) and the “tilt” position (See Figure 3). The device should be tested in both positions on left and right sides of the SAM phantom.

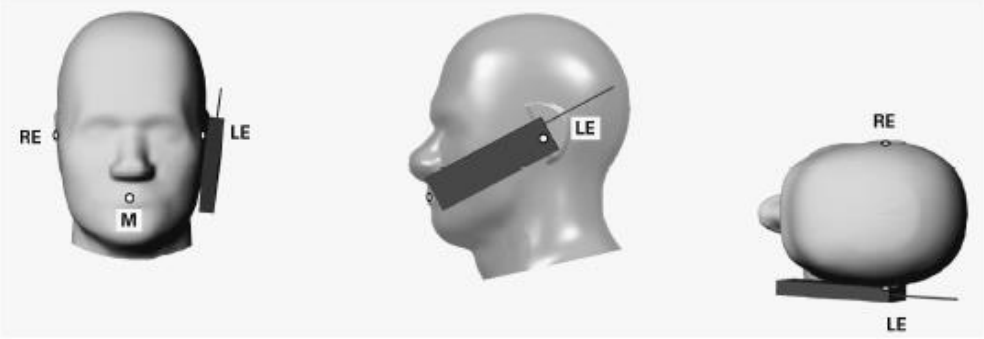



Figure 2 Front, Side and Top View of Cheek Position


Figure 3 Front, Side and Top View of Tilt 15° Position

Note:
M Mouth reference point
LE Left ear reference point (ERP)
RE Right ear reference point(ERP)

### 6.1.3 Body-worn Exposure Condition

Body-worn operating configurations are tested with the holder attached to the device and positioned against a flat phantom with test separation distance of 15mm in a normal use configuration (See Figure 4). Per FCC KDB648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB447498 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

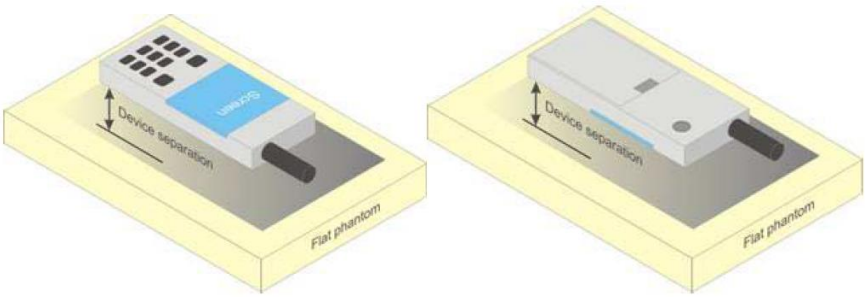



Figure 4 Test position for Body-Worn device

### 6.1.4 Hotspot Exposure Condition

Per FCC KDB941225 D06, the SAR test separation distance for hotspot mode is determined according to device form factor. When the overall length and width of a device is > 9 cm x 5 cm, a test separation distance of 10 mm is required for hotspot mode SAR measurements. A test separation distance of 5 mm or less is required for smaller devices. Hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge; for the data modes, wireless technologies and frequency bands supporting hotspot mode. The SAR results are used to determine simultaneous transmission SAR test exclusion for hotspot mode; otherwise, simultaneous transmission SAR measurement is required.

### 6.1.5 Product Specific 10-g SAR Exposure Condition

Per FCC KDB648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the device is marketed as “Phablet”.

The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for Product Specific 10-g SAR SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

## 6.2 3G SAR Test Reduction Procedure

Per KDB941225 D01, in the following procedures, the mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest *reported* SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

## 6.3 GSM Test Configuration

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link. The power lever is set to “5”and “0” in SAR of GSM850 and GSM1900 using a Radio Communication Tester. The tests in the band of GSM850 and GSM1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8 PSK.

## 6.4 UMTS Test Configuration

1) Output Power Verification

Maximum output power is verified on the high, middle and low channels according to procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all “1’s” for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) are requied in the SAR report. All configurations that are not supported by the handset or cannot be measured due to technical or equipment limitations must be clearly identified.

**2) WCDMA**

a. Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode.

b. Body SAR Measurements

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode

**3) HSDPA**

SAR for body exposure configurations is measured according to the “Body SAR Measurements’’ procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest *reported* SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

Per KDB941225 D01, the 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures for the highest reported SAR body exposure configuration in 12.2 kbps RMC.

HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HAPRQ 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 condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The $\beta_c$ and $\beta_d$ gain factors for DPCCH and DPDCH were set according to the values in the below table, $\beta_{hs}$ for HS-DPCCH is set automatically to the correct value when ΔACK, ΔNACK, ΔCQI = 8. The variation of the $\beta_c$ /$\beta_d$ ratio causes a power reduction at sub-tests 2 - 4.

| Sub-test | $\beta_c$ | $\beta_d$ | $\beta_d$ (SF) | $\beta_c / \beta_d$ | $\beta_{hs}$ (1) | CM(dB)(2) | MPR (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2/15 | 15/15 | 64 | 2/15 | 4/15 | 0.0 | 0 |
| 2 | 12/15(3) | 15/15(3) | 64 | 12/15(3) | 24/15 | 1.0 | 0 |
| 3 | 15/15 | 8/15 | 64 | 15/8 | 30/15 | 1.5 | 0.5 |
| 4 | 15/15 | 4/15 | 64 | 15/4 | 30/15 | 1.5 | 0.5 |

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

Note 2 : CM=1 for $\beta_c/\beta_d$= 12/15, $\beta_{hs}/\beta_c$ = 24/15. For all other combinations of DPDCH,DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 3 : For subtest 2 the $\beta_c/\beta_d$ ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c$ = 11/15 and $\beta_d$ = 15/15

Table 7: Sub-tests for UMTS Release 5 HSDPA

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.

| Parameter | Value |
|---|---|
| Nominal average inf. bit rate | 534 kbit/s |
| Inter-TTI Distance | 3 TTI's |
| Number of HARQ Processes | 2 Processes |
| Information Bit Payload | 3202 Bits |
| MAC-d PDU size | 336 Bits |
| Number Code Blocks | 1 Block |
| Binary Channel Bits Per TTI | 4800 Bits |
| Total Available SMLs in UE | 19200 SMLs |
| Number of SMLs per HARQ Process | 9600 SMLs |
| Coding Rate | 0.67 |
| Number of Physical Channel Codes | 5 |

Table 8: settings of required H-Set 1 QPSK acc. to 3GPP 34.121

| HS-DSCH Category | Maximum HS-DSCH Codes Received | Minimum Inter-TTI Interval | Maximum HS-DSCH Transport Block Bits/HS-DSCH TTI | Total Soft Channel Bits |
|---|---|---|---|---|
| 1 | 5 | 3 | 7298 | 19200 |
| 2 | 5 | 3 | 7298 | 28800 |
| 3 | 5 | 2 | 7298 | 28800 |
| 4 | 5 | 2 | 7298 | 38400 |
| 5 | 5 | 1 | 7298 | 57600 |
| 6 | 5 | 1 | 7298 | 67200 |
| 7 | 10 | 1 | 14411 | 115200 |
| 8 | 10 | 1 | 14411 | 134400 |
| 9 | 15 | 1 | 25251 | 172800 |
| 10 | 15 | 1 | 27952 | 172800 |
| 11 | 5 | 2 | 3630 | 14400 |
| 12 | 5 | 1 | 3630 | 28800 |
| 13 | 15 | 1 | 34800 | 259200 |
| 14 | 15 | 1 | 42196 | 259200 |
| 15 | 15 | 1 | 23370 | 345600 |

| | | | | |
|---|---|---|---|---|
| 16 | 15 | 1 | 27952 | 345600 |

Table 9: HSDPA UE category

**4) HSUPA**

SAR for body exposure configurations is measured according to the "Body SAR Measurements'' procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

Per KDB941225 D01, the 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures for the highest reported body exposure SAR configuration in 12.2 kbps RMC.

Due to inner loop power control requirements in HSDPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSDPA should be configured according to the values indicated below as well as other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Device' sections of 3G device.

| Sub-test | $\beta_c$ | $\beta_d$ | $\beta_d$ (SF) | $\beta_c/\beta_d$ | $\beta_{hs}$(1) | $\beta_{ec}$ | $\beta_{ed}$ | $\beta_{ec}$ (SF) | $\beta_{ed}$ (code) | 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 | $\beta_{ed1}$:47/15<br>$\beta_{ed2}$: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: $\Delta$ ACK, $\Delta$ NACK and $\Delta$ CQI = 8 $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$

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

Note 4 : For subtest 5 the $\beta_c/\beta_d$ ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c = 14/15$ 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 Table 5.1g

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

Table 10: Subtests for UMTS Release 6 HSUPA

| UE E-DCH Category | Maximum E-DCH Codes Transmitted | Number of HARQ Processes | E-DCH TTI(ms) | Minimum Speading 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 | 10 | 2SF2&2SF4 | 11484 | 5.76 |
| | 4 | 4 | 2 | | 20000 | 2.00 |
| 7 (No DPDCH) | 4 | 8 | 2 | 2SF2&2SF4 | 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 support QPSK only. UE category 7 supports QPSK and 16QAM. (TS25.306-7.3.0). | | | | | | |

Table 11: HSUPA UE category

**5) DC-HSDPA**

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 Second serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0. A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

**Table E.5.0: Levels for HSDPA connection setup**

| Parameter During Connection setup | Unit | Value |
|---|---|---|
| P-CPICH_Ec/Ior | dB | -10 |
| P-CCPCH and SCH_Ec/Ior | dB | -12 |
| PICH _Ec/Ior | dB | -15 |
| HS-PDSCH | dB | off |
| HS-SCCH_1 | dB | off |
| DPCH_Ec/Ior | dB | -5 |
| OCNS_Ec/Ior | dB | -3.1 |

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

The measurements were performed with a Fixed Reference Channel (FRC) H-Set 12 with QPSK

| Parameter | Value |
|---|---|
| Nominal average inf. bit rate | 60 kbit/s |
| Inter-TTI Distance | 1 TTI's |
| Number of HARQ Processes | 6 Processes |
| Information Bit Payload | 120 Bits |
| Number Code Blocks | 1 Block |
| Binary Channel Bits Per TTI | 960 Bits |
| Total Available SMLs in UE | 19200 SMLs |
| Number of SMLs per HARQ Process | 3200 SMLs |
| Coding Rate | 0.15 |
| Number of Physical Channel Codes | 1 |

Table 12: settings of required H-Set 12 QPSK acc. to 3GPP 34.121

Note:

1. The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table above.
2. Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.

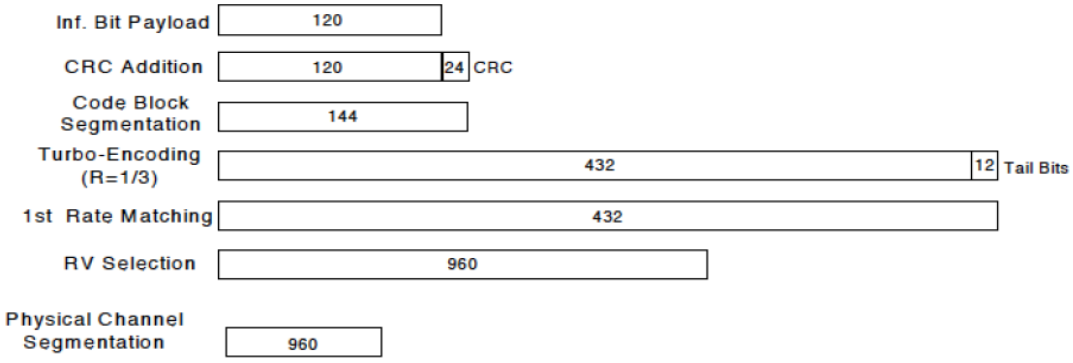



**Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)**

The following 4 Sub-tests for HSDPA were completed according to Release 5 procedures. A summary of subtest settings are illustrated below:

| Sub-test | $\beta_c$ | $\beta_d$ | $\beta_d$ (SF) | $\beta_c/\beta_d$ | $\beta_{hs}$ (1) | CM(dB)(2) | MPR (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2/15 | 15/15 | 64 | 2/15 | 4/15 | 0.0 | 0 |
| 2 | 12/15(3) | 15/15(3) | 64 | 12/15(3) | 24/15 | 1.0 | 0 |
| 3 | 15/15 | 8/15 | 64 | 15/8 | 30/15 | 1.5 | 0.5 |
| 4 | 15/15 | 4/15 | 64 | 15/4 | 30/15 | 1.5 | 0.5 |

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

Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 3: For subtest 2 the $\beta_c/\beta_d$ ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

Up commands are set continuously to set the UE to Max power.

Note:

1. The Dual Carriers transmission only applies to HSDPA physical channels
2. The Dual Carriers belong to the same Node and are on adjacent carriers.
3. The Dual Carriers do not support MIMO to serve UEs configured for dual cell operation
4. The Dual Carriers operate in the same frequency band.
5. The device doesn't support the modulation of 16QAM in uplink but 64QAM in downlink for DC-HSDPA mode.
6. The device doesn't support carrier aggregation for it just can operate in Release 8.

## 6.5 LTE Test Configuration

SAR for LTE band exposure configurations is measured according to the procedures of KDB941225 D05 SAR for LTE Devices. The 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.

| 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 |
| 16 QAM | > 5 | > 4 | > 8 | > 12 | > 16 | > 18 | ≤ 2 |

**3) A-MPR**

A-MPR (Additional MPR) has been disabled for all SAR tests by using Network Signaling 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 ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB 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.

ii) 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, 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 > ½ 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 > ½ 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.

## 6.6 WiFi Test Configuration

For WiFi SAR testing, a communication link is set up with the testing software for WiFi mode test. During the test,at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Per KDB248227 D01, a minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

### 6.6.1 Initial Test Position Procedure

For exposure condition with multiple test position, such as handsets operating next to the ear, devices with hotspot mode or UMPC mini-tablet , procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all position in an exposure condition. The test position with the highest extrapolated(peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4W/kg, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is ≤ 0.8W/kg or all test position are measured. 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.

### 6.6.2 Initial Test Configuration Procedure

An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required (see section 5.3.2 of KDB248227 D01). SAR test reduction of subsequent highest output test channels is based on the *reported* SAR of the initial test configuration.

For next to the ear, hotspot mode and UMC mini-tablet exposure configurations where multiple test positions are required, the initial test position procedure is applied to minimize the number of test positions required for SAR measurement using the initial test configuration transmission mode. For fixed exposure conditions that do not have multiple SAR test positions, SAR is measured in the transmission mode determined by the initial test configuration.

When the *reported* SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the *reported* SAR is ≤ 1.2 W/kg or all required channels are tested.

### 6.6.3 Sub Test Configuration Procedure

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units.

When the highest reported SAR for the initial test configuration, according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to

initial test configuration specified maximum output power and the adjusted SAR is ⩽ 1.2 W/kg, SAR is not required for that subsequent test configuration.

### 6.6.4 WiFi 2.4G SAR Test Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.

**A) 802.11b DSSS SAR Test Requirements**

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

1) When the *reported* SAR of the highest measured maximum output power channel (section 3.1 of of KDB248227 D01) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

2) When the *reported* SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any *reported* SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

**B) 2.4GHz 802.11g/n OFDM SAR Test Exclusion Requirements**

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3 of of KDB248227 D01). SAR is not required for the following 2.4 GHz OFDM conditions.

1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.

2) 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.

### 6.6.5 OFDM Transmission Mode SAR Test Channel Selection Requirements

For 2.4 GHz bands, When the same maximum output power was specified for
multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth,lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations(for example 802.11g and 802.11n with the same channel bandwidth, modulation, and data rate, etc), the lower order 802.11 mode (i.e., 802.11g is chosen over 802.11n) is used for SAR measurement. When the maximum output power are the same for multiple test channel, either according to the default or additional power measurement requirement, SAR is measured using the channel closest to the middle of the frequency band or aggregted band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

## 6.7 Dynamic antenna switching specification Dynamic antenna switching specification

The device supports dynamic Tx antenna switching function for 2G/3G/4G bands. It can transmit from either Main Antenna or Second Antenna, but they cannot transmit simultaneously (Refer to the Antenna location picture in the appendix for details).

SAR test procedure for dynamic antenna switching is as below:
During the SAR test, the Main Antenna and Second Antenna are set to the MAX transmit power level respectively and test the SAR respectively in all applicable RF exposure conditions. Some command are supplied to fix the operation state and choose the antenna so that only one TX antenna tested at a time. We can ensure that all independent antennas and modem are completely covered by the appropriate SAR measurements and all simultaneous transmission possibilities are fully considered.

## 6.8 Dynamic antenna tuning specification

The device supports the dynamic antenna tuning function to optimize transmission efficiency for 703MHz~960MHz frequency operations, especially in any hand usage scenario. The dynamic antenna tuning function is only applicable for the 2G/3G/4G second TX antenna: GSM850, UMTS Band V, and LTE Band 5; which is located in the top part of the device. The 2G/3G/4G second antenna has two fixed states for some bands: the state 1 and state 2. Two states shares the same antenna, RF path, test channel and conductive power. The software will choose better RSSI as the working state of the second TX antenna based on the RSSI comparison and switch algorithm.
The antenna tuning and operating parameters are implemented using a fixed table look-up mechanism that is fully contained within the approved transmitter; therefore, antenna tuning is static and remains unchanged for the same device operating configurations.

**SAR test procedure for dynamic antenna tuning is as below:**

a) Firstly, some commands are used to fix the tuning state at state1 or state 2, so that only one antenna tuning state is chosen at a time for SAR test. The antenna is set to the MAX transmit output power level.

b) Secondly, per KDB648474D04 section 5, in order to reduce the number of SAR tests required to demonstrate compliance for the numerous tuning states, we plan to perform one single point zoom scan SAR measurement between state1 and state 2 for each antenna tuning band and applicable RF exposure condition to identify the higher SAR tuning state that need the full set of normally required SAR measurements and allow SAR test reduction for the lower SAR conditions.

c) Thirdly, full normally required SAR measurements are performed for the higher SAR tuning state. Moreover, the SAR worst case check will also be tested for the other tuning state in each antenna tuning band and applicable RF exposure condition. We think it is conservative enough to ensure the SAR compliance.

## 6.9 Power Reduction Specification

### 6.9.1 Power reduction triggered by specific use conditions

This device uses the following power reduction features to reduce the transmit power and ensure SAR compliance. These power reduction features are implemented using a single fixed level of reduction through static table look-up for some wireless operating modes or frequency bands and triggered by a single event or operation. The published RF exposure KDB procedures are applicable to the specific implementation and applied for testing. So PAG is not required for these features.

1) A fixed level power reduction is applied for some frequency bands when hotspot mode becomes active. When the hotspot is disabled, the power value will be recovered.

2) This device uses the receiver to indicate whether the user is making a voice call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. A fixed level power reduction is applied for some frequency bands when the audio receiver is on.

The following tables summarize the key power reduction information triggered by specific use conditions. The detailed full power and reduced conducted power measurement results are provided in Section 7 of this report:

| **Band** | **Power Reduction Level (dBm)** | | |
|---|---|---|---|
| | **Second Antenna** | | |
| | Receiver on(Head) | Receiver off(Body) | |
| | | Hotspot on | Hotspot off (Full power) |
| GSM850 | 30.20 | 33.70 | 33.70 |
| GSM1900 | 26.70 | 28.70 | 31.00 |
| UMTS Band II | 18.60 | 19.50 | 24.40 |
| UMTS Band IV | 18.60 | 19.50 | 24.10 |
| UMTS Band V | 21.20 | 24.80 | 24.80 |
| LTE Band 2 | 18.90 | 19.90 | 24.50 |
| LTE Band 4 | 18.90 | 19.90 | 24.50 |
| LTE Band 5 | 21.20 | 24.80 | 24.80 |
| LTE Band 7 | 16.90 | 22.40 | 24.00 |

| Band | Power Reduction Level (dBm) | | |
|---|---|---|---|
| | Main Antenna | | |
| | Receiver off(Body) | | Receiver on(Head) |
| | Hotspot on | Hotspot off | Full power |
| GSM850 | 33.70 | 33.70 | 33.70 |
| GSM1900 | 29.00 | 31.00 | 31.00 |
| UMTS Band II | 20.40 | 22.90 | 24.50 |
| UMTS Band IV | 20.40 | 22.90 | 24.50 |
| UMTS Band V | 25.00 | 25.00 | 25.00 |
| LTE Band 2 | 20.60 | 23.20 | 24.50 |
| LTE Band 4 | 20.60 | 23.10 | 24.50 |
| LTE Band 5 | 25.00 | 25.00 | 25.00 |
| LTE Band 7 | 20.80 | 22.90 | 24.00 |

| Mode | Power Reduction Level (dBm) | |
|---|---|---|
| | WiFi Antenna | |
| | Receiver off(Body) | Receiver on(Head) |
| 802.11b | 19.00 | 12.00 |
| 802.11g | 19.00 | 12.00 |
| 802.11n 20M | 19.00 | 12.00 |
| 802.11n 40M | 15.00 | 12.00 |

The SAR test plan is as below:

a) For Head SAR test of 2G/3G/4G Second Antenna, standalone Head SAR should be evaluated with audio receiver on. The audio receiver only works in voice mode when the user is making a call in head scenario, lacking of the third-party VoIP server and the unstandardized VOIP operating characteristic, therefore, a test script is used to trigger the receiver on during the test. The test script is only used to trigger audio receiver on and simulate voice and VOIP usage scene. It can be ensured that the unmodified settings in production units, including maximum output power, amplifier gain and other RF performance or tuning parameters, are used for SAR measurement.

b) For WiFi Antenna, standalone Head SAR should be evaluated with reduced power levels according to the real usage scenarios. Body SAR is tested at the maximum output power level.

# 7 SAR Measurement Results

## 7.1 Conducted power measurements

For the measurements, Radio Communication Tester was used.

SAR drift measured at the same position in liquid before and after each SAR test as below 7.2 chapter.

Note: The Radio Communication Tester measures GSM peak and average output power for active timeslots. For SAR the timebased 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 |
| timebased avg. power compared to slotted avg. power | -9.19dB | -6.13dB | -4.42dB | -3.18dB |

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.

The 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.

### 7.1.1 Conducted power measurements of GSM850 (Second antenna)

| GSM850 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 128CH | 190CH | 251CH | | Tune-up Max. | 128CH | 190CH | 251CH |
| GSM (CS) | | 33.70 | 33.12 | **33.02** | 33.15 | -9.19 | 24.51 | 23.93 | 23.83 | 23.96 |
| GPRS (GMSK) | 1 Tx Slot | 33.70 | 33.18 | 33.01 | 33.16 | -9.19 | 24.51 | 23.99 | 23.82 | 23.97 |
| | 2 Tx Slots | 30.70 | 30.01 | **29.82** | 29.84 | -6.13 | 24.57 | 23.88 | 23.69 | 23.71 |
| | 3 Tx Slots | 28.90 | 28.00 | 27.79 | 27.79 | -4.42 | 24.48 | 23.58 | 23.37 | 23.37 |
| | 4 Tx Slots | 27.70 | 26.55 | 26.32 | 26.38 | -3.18 | 24.52 | 23.37 | 23.14 | 23.20 |
| EDGE (GMSK) | 1 Tx Slot | 33.70 | 33.23 | 33.13 | 33.22 | -9.19 | 24.51 | 24.04 | 23.94 | 24.03 |
| | 2 Tx Slots | 30.70 | 29.99 | 29.88 | 29.92 | -6.13 | 24.57 | 23.86 | 23.75 | 23.79 |
| | 3 Tx Slots | 28.90 | 28.00 | 27.78 | 27.78 | -4.42 | 24.48 | 23.58 | 23.36 | 23.36 |
| | 4 Tx Slots | 27.70 | 26.53 | 26.35 | 26.35 | -3.18 | 24.52 | 23.35 | 23.17 | 23.17 |
| EDGE (8PSK) | 1 Tx Slot | 27.30 | 26.70 | 26.85 | 26.76 | -9.19 | 18.11 | 17.51 | 17.66 | 17.57 |
| | 2 Tx Slots | 24.40 | 23.72 | 23.90 | 23.85 | -6.13 | 18.27 | 17.59 | 17.77 | 17.72 |
| | 3 Tx Slots | 22.50 | 21.74 | 21.84 | 21.75 | -4.42 | 18.08 | 17.32 | 17.42 | 17.33 |
| | 4 Tx Slots | 21.30 | 20.11 | 20.28 | 20.25 | -3.18 | 18.12 | 16.93 | 17.10 | 17.07 |

Table 13: Conducted power measurement results of GSM850 (Full Power)

| GSM850 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 128CH | 190CH | 251CH | | Tune-up Max. | 128CH | 190CH | 251CH |
| GSM (CS) | | 30.20 | 29.76 | **29.63** | 29.65 | -9.19 | 21.01 | 20.57 | 20.44 | 20.46 |
| GPRS (GMSK) | 1 Tx Slot | 30.20 | 29.76 | 29.63 | 29.69 | -9.19 | 21.01 | 20.57 | 20.44 | 20.50 |
| | 2 Tx Slots | 27.20 | 26.58 | 26.35 | 26.46 | -6.13 | 21.07 | 20.45 | 20.22 | 20.33 |
| | 3 Tx Slots | 25.40 | 24.69 | 24.46 | 24.50 | -4.42 | 20.98 | 20.27 | 20.04 | 20.08 |
| | 4 Tx Slots | 24.20 | 23.40 | 23.18 | 23.15 | -3.18 | 21.02 | 20.22 | 20.00 | 19.97 |
| EDGE (GMSK) | 1 Tx Slot | 30.20 | 29.87 | 29.67 | 29.75 | -9.19 | 21.01 | 20.68 | 20.48 | 20.56 |
| | 2 Tx Slots | 27.20 | 26.66 | 26.42 | 26.45 | -6.13 | 21.07 | 20.53 | 20.29 | 20.32 |
| | 3 Tx Slots | 25.40 | 24.70 | 24.48 | 24.47 | -4.42 | 20.98 | 20.28 | 20.06 | 20.05 |
| | 4 Tx Slots | 24.20 | 23.39 | 23.15 | 23.17 | -3.18 | 21.02 | 20.21 | 19.97 | 19.99 |
| EDGE (8PSK) | 1 Tx Slot | 24.00 | 23.63 | 23.75 | 23.73 | -9.19 | 14.81 | 14.44 | 14.56 | 14.54 |
| | 2 Tx Slots | 21.00 | 20.42 | 20.60 | 20.56 | -6.13 | 14.87 | 14.29 | 14.47 | 14.43 |
| | 3 Tx Slots | 19.20 | 18.44 | 18.50 | 18.41 | -4.42 | 14.78 | 14.02 | 14.08 | 13.99 |
| | 4 Tx Slots | 18.00 | 16.34 | 16.48 | 16.38 | -3.18 | 14.82 | 13.16 | 13.30 | 13.20 |

Table 14: Conducted power measurement results of GSM850 (Receiver ON)

Note:

1) The Conducted power measurements 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 Slots mode was selected for SAR testing according to the highest frame-averaged output power.

### 7.1.2 Conducted power measurements of GSM850 (Main antenna)

| GSM850 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 128CH | 190CH | 251CH | | Tune-up Max. | 128CH | 190CH | 251CH |
| GSM (CS) | | 33.70 | 32.91 | **32.62** | 32.86 | -9.19 | 24.51 | 23.72 | 23.43 | 23.67 |
| GPRS (GMSK) | 1 Tx Slot | 33.20 | 32.94 | 32.81 | 32.92 | -9.19 | 24.01 | 23.75 | 23.62 | 23.73 |
| | 2 Tx Slots | 30.20 | 29.63 | **29.42** | 29.56 | -6.13 | 24.07 | 23.50 | 23.29 | 23.43 |
| | 3 Tx Slots | 28.40 | 27.55 | 27.42 | 27.56 | -4.42 | 23.98 | 23.13 | 23.00 | 23.14 |
| | 4 Tx Slots | 27.20 | 26.22 | 25.99 | 26.14 | -3.18 | 24.02 | 23.04 | 22.81 | 22.96 |
| EDGE (GMSK) | 1 Tx Slot | 33.20 | 32.84 | 32.78 | 32.91 | -9.19 | 24.01 | 23.65 | 23.59 | 23.72 |
| | 2 Tx Slots | 30.20 | 29.64 | 29.41 | 29.56 | -6.13 | 24.07 | 23.51 | 23.28 | 23.43 |
| | 3 Tx Slots | 28.40 | 27.55 | 27.43 | 27.55 | -4.42 | 23.98 | 23.13 | 23.01 | 23.13 |
| | 4 Tx Slots | 27.20 | 26.23 | 25.98 | 26.12 | -3.18 | 24.02 | 23.05 | 22.80 | 22.94 |
| EDGE (8PSK) | 1 Tx Slot | 26.90 | 26.29 | 26.40 | 26.51 | -9.19 | 17.71 | 17.10 | 17.21 | 17.32 |
| | 2 Tx Slots | 24.10 | 23.47 | 23.56 | 23.60 | -6.13 | 17.97 | 17.34 | 17.43 | 17.47 |
| | 3 Tx Slots | 22.20 | 21.52 | 21.56 | 21.68 | -4.42 | 17.78 | 17.10 | 17.14 | 17.26 |
| | 4 Tx Slots | 20.90 | 20.04 | 20.11 | 20.12 | -3.18 | 17.72 | 16.86 | 16.93 | 16.94 |

Table 15: Conducted power measurement results of GSM850

Note:

1) The Conducted power measurements 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 Slots mode was selected for SAR testing according to the highest frame-averaged output power.

### 7.1.3 Conducted power measurements of GSM1900 (Second antenna)

| GSM1900 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 512CH | 661CH | 810CH | | Tune-up Max. | 512CH | 661CH | 810CH |
| GSM (CS) | | 31.00 | 30.04 | **30.04** | 30.17 | -9.19 | 21.81 | 20.85 | 20.85 | 20.98 |
| GPRS (GMSK) | 1 Tx Slot | 30.70 | 30.12 | 30.04 | 30.09 | -9.19 | 21.51 | 20.93 | 20.85 | 20.90 |
| | 2 Tx Slots | 27.70 | 26.61 | 26.69 | 26.75 | -6.13 | 21.57 | 20.48 | 20.56 | 20.62 |
| | 3 Tx Slots | 25.90 | 24.77 | 24.82 | 24.86 | -4.42 | 21.48 | 20.35 | 20.40 | 20.44 |
| | 4 Tx Slots | 24.70 | 23.49 | 23.55 | 23.57 | -3.18 | 21.52 | 20.31 | 20.37 | 20.39 |
| EDGE (GMSK) | 1 Tx Slot | 30.70 | 30.08 | 30.04 | 30.10 | -9.19 | 21.51 | 20.89 | 20.85 | 20.91 |
| | 2 Tx Slots | 27.70 | 26.63 | 26.69 | 26.77 | -6.13 | 21.57 | 20.50 | 20.56 | 20.64 |
| | 3 Tx Slots | 25.90 | 24.69 | 24.84 | 24.87 | -4.42 | 21.48 | 20.27 | 20.42 | 20.45 |
| | 4 Tx Slots | 24.70 | 23.51 | 23.56 | 23.59 | -3.18 | 21.52 | 20.33 | 20.38 | 20.41 |
| EDGE (8PSK) | 1 Tx Slot | 26.40 | 25.57 | 25.57 | 25.63 | -9.19 | 17.21 | 16.38 | 16.38 | 16.44 |
| | 2 Tx Slots | 23.40 | 22.46 | 22.47 | 22.58 | -6.13 | 17.27 | 16.33 | 16.34 | 16.45 |
| | 3 Tx Slots | 21.60 | 20.53 | 20.51 | 20.51 | -4.42 | 17.18 | 16.11 | 16.09 | 16.09 |
| | 4 Tx Slots | 20.40 | 19.03 | 19.08 | 19.08 | -3.18 | 17.22 | 15.85 | 15.90 | 15.90 |

Table 16: Conducted power measurement results of GSM1900 (Full Power)

| GSM1900 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 512CH | 661CH | 810CH | | Tune-up Max. | 512CH | 661CH | 810CH |
| GSM (CS) | | 26.70 | 25.79 | **25.81** | 25.96 | -9.19 | 17.51 | 16.60 | 16.62 | 16.77 |
| GPRS (GMSK) | 1 Tx Slot | 26.70 | 25.84 | 25.94 | 26.01 | -9.19 | 17.51 | 16.65 | 16.75 | 16.82 |
| | 2 Tx Slots | 23.70 | 22.70 | 22.83 | 22.86 | -6.13 | 17.57 | 16.57 | 16.70 | 16.73 |
| | 3 Tx Slots | 21.90 | 20.91 | 20.93 | 20.97 | -4.42 | 17.48 | 16.49 | 16.51 | 16.55 |
| | 4 Tx Slots | 20.70 | 19.71 | 19.70 | 19.73 | -3.18 | 17.52 | 16.53 | 16.52 | 16.55 |
| EDGE (GMSK) | 1 Tx Slot | 26.70 | 25.78 | 25.93 | 25.91 | -9.19 | 17.51 | 16.59 | 16.74 | 16.72 |
| | 2 Tx Slots | 23.70 | 22.72 | 22.74 | 22.79 | -6.13 | 17.57 | 16.59 | 16.61 | 16.66 |
| | 3 Tx Slots | 21.90 | 20.83 | 20.95 | 20.98 | -4.42 | 17.48 | 16.41 | 16.53 | 16.56 |
| | 4 Tx Slots | 20.70 | 19.71 | 19.72 | 19.75 | -3.18 | 17.52 | 16.53 | 16.54 | 16.57 |
| EDGE (8PSK) | 1 Tx Slot | 22.60 | 21.70 | 21.81 | 21.79 | -9.19 | 13.41 | 12.51 | 12.62 | 12.60 |
| | 2 Tx Slots | 19.60 | 18.64 | 18.71 | 18.72 | -6.13 | 13.47 | 12.51 | 12.58 | 12.59 |
| | 3 Tx Slots | 17.80 | 16.72 | 16.68 | 16.69 | -4.42 | 13.38 | 12.30 | 12.26 | 12.27 |
| | 4 Tx Slots | 16.60 | 15.24 | 15.27 | 15.26 | -3.18 | 13.42 | 12.06 | 12.09 | 12.08 |

Table 17: Conducted power measurement results of GSM1900 (Receiver ON)

| GSM1900 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 512CH | 661CH | 810CH | | Tune-up Max. | 512CH | 661CH | 810CH |
| GSM (CS) | | 28.70 | 27.76 | 27.85 | 27.91 | -9.19 | 19.51 | 18.57 | 18.66 | 18.72 |
| GPRS (GMSK) | 1 Tx Slot | 28.70 | 27.86 | 27.86 | 27.83 | -9.19 | 19.51 | 18.67 | 18.67 | 18.64 |
| | 2 Tx Slots | 25.70 | 24.34 | **24.60** | 24.58 | -6.13 | 19.57 | 18.21 | 18.47 | 18.45 |
| | 3 Tx Slots | 23.90 | 22.50 | 22.63 | 22.59 | -4.42 | 19.48 | 18.08 | 18.21 | 18.17 |
| | 4 Tx Slots | 22.70 | 21.22 | 21.35 | 21.30 | -3.18 | 19.52 | 18.04 | 18.17 | 18.12 |
| EDGE (GMSK) | 1 Tx Slot | 28.70 | 27.84 | 27.87 | 27.84 | -9.19 | 19.51 | 18.65 | 18.68 | 18.65 |
| | 2 Tx Slots | 25.70 | 24.36 | 24.51 | 24.50 | -6.13 | 19.57 | 18.23 | 18.38 | 18.37 |
| | 3 Tx Slots | 23.90 | 22.51 | 22.65 | 22.60 | -4.42 | 19.48 | 18.09 | 18.23 | 18.18 |
| | 4 Tx Slots | 22.70 | 21.23 | 21.38 | 21.32 | -3.18 | 19.52 | 18.05 | 18.20 | 18.14 |
| EDGE (8PSK) | 1 Tx Slot | 24.30 | 23.34 | 23.40 | 23.38 | -9.19 | 15.11 | 14.15 | 14.21 | 14.19 |
| | 2 Tx Slots | 21.30 | 20.18 | 20.38 | 20.32 | -6.13 | 15.17 | 14.05 | 14.25 | 14.19 |
| | 3 Tx Slots | 19.50 | 18.26 | 18.34 | 18.26 | -4.42 | 15.08 | 13.84 | 13.92 | 13.84 |
| | 4 Tx Slots | 18.30 | 16.85 | 18.14 | 16.82 | -3.18 | 15.12 | 13.67 | 14.96 | 13.64 |

Table 18: Conducted power measurement results of GSM1900 (Receiver OFF+Hotspot ON)

Note:

1) The Conducted power measurements 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.

3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.

### 7.1.4 Conducted power measurements of GSM1900 (Main antenna)

| GSM1900 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 512CH | 661CH | 810CH | | Tune-up Max. | 512CH | 661CH | 810CH |
| GSM (CS) | | 31.00 | 30.20 | **30.33** | 30.35 | -9.19 | 21.81 | 21.01 | 21.14 | 21.16 |
| GPRS (GMSK) | 1 Tx Slot | 31.00 | 30.24 | 30.37 | 30.40 | -9.19 | 21.81 | 21.05 | 21.18 | 21.21 |
| | 2 Tx Slots | 28.00 | 26.96 | 27.16 | 27.22 | -6.13 | 21.87 | 20.83 | 21.03 | 21.09 |
| | 3 Tx Slots | 26.20 | 25.04 | 25.21 | 25.27 | -4.42 | 21.78 | 20.62 | 20.79 | 20.85 |
| | 4 Tx Slots | 25.00 | 23.80 | 23.97 | 24.01 | -3.18 | 21.82 | 20.62 | 20.79 | 20.83 |
| EDGE (GMSK) | 1 Tx Slot | 31.00 | 30.19 | 30.36 | 30.41 | -9.19 | 21.81 | 21.00 | 21.17 | 21.22 |
| | 2 Tx Slots | 28.00 | 26.98 | 27.17 | 27.24 | -6.13 | 21.87 | 20.85 | 21.04 | 21.11 |
| | 3 Tx Slots | 26.20 | 25.05 | 25.23 | 25.28 | -4.42 | 21.78 | 20.63 | 20.81 | 20.86 |
| | 4 Tx Slots | 25.00 | 23.81 | 23.97 | 24.02 | -3.18 | 21.82 | 20.63 | 20.79 | 20.84 |
| EDGE (8PSK) | 1 Tx Slot | 26.80 | 25.80 | 26.03 | 26.11 | -9.19 | 17.61 | 16.61 | 16.84 | 16.92 |
| | 2 Tx Slots | 23.80 | 22.86 | 23.01 | 23.04 | -6.13 | 17.67 | 16.73 | 16.88 | 16.91 |
| | 3 Tx Slots | 22.00 | 20.92 | 21.03 | 21.04 | -4.42 | 17.58 | 16.50 | 16.61 | 16.62 |
| | 4 Tx Slots | 20.80 | 19.48 | 19.68 | 19.69 | -3.18 | 17.62 | 16.30 | 16.50 | 16.51 |

Table 19: Conducted power measurement results of GSM1900 (Full Power)

| GSM1900 | | Burst-Averaged output Power (dBm) | | | | Division Factors | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tune-up Max. | 512CH | 661CH | 810CH | | Tune-up Max. | 512CH | 661CH | 810CH |
| GSM (CS) | | 29.00 | 28.12 | 28.21 | 28.24 | -9.19 | 19.81 | 18.93 | 19.02 | 19.05 |
| GPRS (GMSK) | 1 Tx Slot | 29.00 | 28.12 | 28.25 | 28.28 | -9.19 | 19.81 | 18.93 | 19.06 | 19.09 |
| | 2 Tx Slots | 26.00 | 24.82 | **25.02** | 25.08 | -6.13 | 19.87 | 18.69 | 18.89 | 18.95 |
| | 3 Tx Slots | 24.20 | 22.88 | 23.06 | 23.11 | -4.42 | 19.78 | 18.46 | 18.64 | 18.69 |
| | 4 Tx Slots | 23.00 | 21.62 | 21.80 | 21.84 | -3.18 | 19.82 | 18.44 | 18.62 | 18.66 |
| EDGE (GMSK) | 1 Tx Slot | 29.00 | 28.09 | 28.24 | 28.29 | -9.19 | 19.81 | 18.90 | 19.05 | 19.10 |
| | 2 Tx Slots | 26.00 | 24.83 | 25.03 | 25.09 | -6.13 | 19.87 | 18.70 | 18.90 | 18.96 |
| | 3 Tx Slots | 24.20 | 22.90 | 23.08 | 23.13 | -4.42 | 19.78 | 18.48 | 18.66 | 18.71 |
| | 4 Tx Slots | 23.00 | 21.64 | 21.80 | 21.85 | -3.18 | 19.82 | 18.46 | 18.62 | 18.67 |
| EDGE (8PSK) | 1 Tx Slot | 24.90 | 23.70 | 23.91 | 23.98 | -9.19 | 15.71 | 14.51 | 14.72 | 14.79 |
| | 2 Tx Slots | 21.90 | 20.70 | 20.84 | 20.88 | -6.13 | 15.77 | 14.57 | 14.71 | 14.75 |
| | 3 Tx Slots | 20.10 | 18.72 | 18.84 | 18.86 | -4.42 | 15.68 | 14.30 | 14.42 | 14.44 |
| | 4 Tx Slots | 18.90 | 17.25 | 17.45 | 17.46 | -3.18 | 15.72 | 14.07 | 14.27 | 14.28 |

Table 20: Conducted power measurement results of GSM1900 (Hotspot ON)

Note:

1) The Conducted power measurements 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.

3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.

### 7.1.5 Conducted power measurements of UMTS Band II (Second antenna)

| UMTS Band II | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbps RMC | 24.40 | 23.41 | **23.48** | 23.41 |
| | 12.2kbps AMR | 24.40 | 23.42 | 23.42 | 23.42 |
| HSDPA | Subtest 1 | 23.90 | 22.91 | 22.92 | 22.89 |
| | Subtest 2 | 23.10 | 22.16 | 22.16 | 22.14 |
| | Subtest 3 | 22.60 | 21.63 | 21.63 | 21.62 |
| | Subtest 4 | 22.60 | 21.62 | 21.65 | 21.63 |
| HSUPA | Subtest 1 | 22.50 | 21.76 | 21.84 | 21.60 |
| | Subtest 2 | 20.30 | 20.14 | 20.17 | 20.19 |
| | Subtest 3 | 20.70 | 20.26 | 20.59 | 20.30 |
| | Subtest 4 | 20.20 | 20.02 | 19.96 | 19.72 |
| | Subtest 5 | 23.20 | 22.24 | 22.25 | 22.24 |
| DC-HSDPA | Subtest 1 | 23.90 | 22.92 | 22.92 | 22.91 |
| | Subtest 2 | 23.10 | 22.14 | 22.17 | 22.14 |
| | Subtest 3 | 22.60 | 21.61 | 21.66 | 21.63 |
| | Subtest 4 | 22.60 | 21.60 | 21.62 | 21.64 |

Table 21: Conducted power measurement results of UMTS Band II (Full Power)

| UMTS Band II | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbps RMC | 18.60 | 17.94 | **17.93** | 17.96 |
| | 12.2kbps AMR | 18.60 | 17.91 | 17.93 | 17.87 |
| HSDPA | Subtest 1 | 18.40 | 17.50 | 17.40 | 17.39 |
| | Subtest 2 | 17.60 | 16.60 | 16.63 | 16.58 |
| | Subtest 3 | 16.80 | 16.11 | 16.11 | 16.08 |
| | Subtest 4 | 17.10 | 16.11 | 16.16 | 16.09 |
| HSUPA | Subtest 1 | 17.20 | 15.77 | 16.06 | 16.15 |
| | Subtest 2 | 16.00 | 14.54 | 14.75 | 14.74 |
| | Subtest 3 | 16.50 | 15.49 | 14.80 | 14.68 |
| | Subtest 4 | 15.60 | 14.78 | 14.97 | 14.96 |
| | Subtest 5 | 17.80 | 16.74 | 16.73 | 16.71 |
| DC-HSDPA | Subtest 1 | 18.60 | 17.42 | 17.43 | 17.39 |
| | Subtest 2 | 17.60 | 16.63 | 16.65 | 16.60 |
| | Subtest 3 | 17.10 | 16.07 | 16.14 | 16.08 |
| | Subtest 4 | 17.20 | 16.14 | 16.10 | 16.09 |

Table 22: Conducted power measurement results of UMTS Band II (Receiver ON)

| UMTS Band II | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbps RMC | 19.50 | 18.91 | **18.89** | 18.87 |
| | 12.2kbps AMR | 19.50 | 18.88 | 18.90 | 18.84 |
| HSDPA | Subtest 1 | 19.00 | 18.44 | 18.38 | 18.40 |
| | Subtest 2 | 18.20 | 17.66 | 17.56 | 17.53 |
| | Subtest 3 | 17.70 | 17.20 | 17.11 | 17.09 |
| | Subtest 4 | 17.70 | 17.09 | 17.15 | 17.05 |
| HSUPA | Subtest 1 | 18.10 | 17.18 | 17.05 | 17.21 |
| | Subtest 2 | 16.40 | 15.51 | 15.54 | 15.67 |
| | Subtest 3 | 16.80 | 15.72 | 16.37 | 16.24 |
| | Subtest 4 | 15.80 | 15.69 | 15.64 | 15.62 |
| | Subtest 5 | 18.40 | 17.55 | 17.77 | 17.69 |
| DC-HSDPA | Subtest 1 | 19.00 | 18.46 | 18.33 | 18.41 |
| | Subtest 2 | 18.20 | 17.62 | 17.58 | 17.59 |
| | Subtest 3 | 17.70 | 17.26 | 17.22 | 17.19 |
| | Subtest 4 | 17.70 | 17.18 | 17.19 | 17.13 |

Table 23: Conducted power measurement results of UMTS Band II (Receiver OFF+Hotspot ON)

Note:

1) The bolded 12.2kbps RMC mode was selected for SAR testing.

2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is ⩽ ¼ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is ⩽ 75% of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

### 7.1.6 Conducted power measurements of UMTS Band II (Main antenna)

| UMTS Band II | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbps RMC | 24.50 | 23.63 | **23.49** | 23.45 |
| | 12.2kbps AMR | 24.50 | 23.53 | 23.51 | 23.44 |
| HSDPA | Subtest 1 | 23.90 | 23.03 | 23.00 | 22.97 |
| | Subtest 2 | 23.10 | 22.26 | 22.21 | 22.14 |
| | Subtest 3 | 22.60 | 21.72 | 21.72 | 21.65 |
| | Subtest 4 | 22.60 | 21.74 | 21.69 | 21.65 |
| HSUPA | Subtest 1 | 22.50 | 21.57 | 21.08 | 21.34 |
| | Subtest 2 | 20.10 | 19.55 | 19.41 | 19.35 |
| | Subtest 3 | 20.40 | 19.53 | 19.49 | 19.61 |
| | Subtest 4 | 20.00 | 19.44 | 19.40 | 19.37 |
| | Subtest 5 | 23.20 | 21.96 | 21.92 | 21.86 |
| DC-HSDPA | Subtest 1 | 23.90 | 23.03 | 23.01 | 22.95 |
| | Subtest 2 | 23.10 | 22.22 | 22.19 | 22.16 |
| | Subtest 3 | 22.60 | 21.76 | 21.70 | 21.66 |
| | Subtest 4 | 22.60 | 21.72 | 21.71 | 21.64 |

Table 24: Conducted power measurement results of UMTS Band II (Full Power)

| UMTS Band II | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbps RMC | 22.90 | 22.06 | **22.00** | 21.94 |
| | 12.2kbps AMR | 22.90 | 22.08 | 22.01 | 21.94 |
| HSDPA | Subtest 1 | 22.40 | 21.54 | 21.47 | 21.47 |
| | Subtest 2 | 21.60 | 20.77 | 20.69 | 20.65 |
| | Subtest 3 | 21.10 | 20.25 | 20.22 | 20.16 |
| | Subtest 4 | 21.10 | 20.28 | 20.21 | 20.16 |
| HSUPA | Subtest 1 | 20.80 | 20.19 | 20.47 | 20.28 |
| | Subtest 2 | 19.10 | 18.93 | 18.67 | 18.87 |
| | Subtest 3 | 19.30 | 18.72 | 18.73 | 18.66 |
| | Subtest 4 | 18.80 | 18.76 | 18.79 | 17.97 |
| | Subtest 5 | 21.70 | 20.87 | 20.79 | 20.72 |
| DC-HSDPA | Subtest 1 | 22.40 | 21.54 | 21.50 | 21.46 |
| | Subtest 2 | 21.60 | 20.76 | 20.71 | 20.65 |
| | Subtest 3 | 21.10 | 20.26 | 20.21 | 20.15 |
| | Subtest 4 | 21.10 | 20.25 | 20.22 | 20.18 |

Table 25: Conducted power measurement results of UMTS Band II (Receiver OFF)

| UMTS Band II | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 9262CH | 9400CH | 9538CH |
| WCDMA | 12.2kbps RMC | 20.40 | 19.53 | **19.48** | 19.47 |
| | 12.2kbps AMR | 20.40 | 19.57 | 19.51 | 19.42 |
| HSDPA | Subtest 1 | 19.90 | 18.22 | 18.21 | 18.10 |
| | Subtest 2 | 19.10 | 17.42 | 17.36 | 17.29 |
| | Subtest 3 | 18.60 | 16.93 | 16.91 | 16.79 |
| | Subtest 4 | 18.60 | 16.92 | 16.89 | 16.81 |
| HSUPA | Subtest 1 | 18.60 | 16.94 | 17.00 | 17.07 |
| | Subtest 2 | 17.30 | 16.00 | 15.45 | 15.25 |
| | Subtest 3 | 17.00 | 15.86 | 16.17 | 15.99 |
| | Subtest 4 | 17.30 | 14.83 | 15.58 | 15.40 |
| | Subtest 5 | 19.20 | 17.55 | 17.47 | 17.41 |
| DC-HSDPA | Subtest 1 | 19.90 | 18.24 | 18.19 | 18.08 |
| | Subtest 2 | 19.10 | 17.45 | 17.37 | 17.29 |
| | Subtest 3 | 18.60 | 16.95 | 16.88 | 16.78 |
| | Subtest 4 | 18.60 | 16.93 | 16.87 | 16.80 |

Table 26: Conducted power measurement results of UMTS Band II (Receiver OFF+Hotspot ON)

Note:

1) The bolded 12.2kbps RMC mode was selected for SAR testing.

2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is ⩽ ¼ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is ⩽ 75% of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

### 7.1.7 Conducted power measurements of UMTS Band IV (Second antenna)

| UMTS Band IV | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 1312CH | 1413CH | 1513CH |
| WCDMA | 12.2kbps RMC | 24.10 | 23.09 | **23.19** | 23.22 |
| | 12.2kbps AMR | 24.10 | 23.20 | 23.19 | 23.32 |
| HSDPA | Subtest 1 | 23.60 | 22.65 | 22.66 | 22.77 |
| | Subtest 2 | 22.80 | 21.85 | 21.83 | 22.01 |
| | Subtest 3 | 22.30 | 21.38 | 21.34 | 21.50 |
| | Subtest 4 | 22.30 | 21.35 | 21.33 | 21.50 |
| HSUPA | Subtest 1 | 22.20 | 21.18 | 21.31 | 21.62 |
| | Subtest 2 | 20.00 | 19.91 | 19.90 | 19.66 |
| | Subtest 3 | 20.10 | 20.09 | 19.87 | 19.84 |
| | Subtest 4 | 19.80 | 19.49 | 19.38 | 19.59 |
| | Subtest 5 | 22.90 | 21.99 | 21.93 | 22.10 |
| DC-HSDPA | Subtest 1 | 23.60 | 22.66 | 22.63 | 22.77 |
| | Subtest 2 | 22.80 | 21.88 | 21.86 | 21.98 |
| | Subtest 3 | 22.30 | 21.34 | 21.32 | 21.48 |
| | Subtest 4 | 22.30 | 21.35 | 21.32 | 21.50 |

Table 27: Conducted power measurement results of UMTS Band IV (Full Power)

| UMTS Band IV | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 1312CH | 1413CH | 1513CH |
| WCDMA | 12.2kbps RMC | 18.60 | 17.74 | **17.67** | 17.79 |
| | 12.2kbps AMR | 18.60 | 17.71 | 17.66 | 17.80 |
| HSDPA | Subtest 1 | 18.40 | 17.16 | 17.12 | 17.29 |
| | Subtest 2 | 17.60 | 16.37 | 16.33 | 16.48 |
| | Subtest 3 | 16.80 | 15.85 | 15.85 | 15.98 |
| | Subtest 4 | 17.10 | 15.86 | 15.86 | 15.97 |
| HSUPA | Subtest 1 | 17.20 | 15.38 | 15.60 | 15.71 |
| | Subtest 2 | 16.00 | 15.35 | 14.38 | 15.35 |
| | Subtest 3 | 16.50 | 15.10 | 14.76 | 15.91 |
| | Subtest 4 | 15.60 | 14.60 | 14.45 | 15.47 |
| | Subtest 5 | 17.80 | 16.44 | 16.45 | 16.58 |
| DC-HSDPA | Subtest 1 | 18.60 | 17.18 | 17.14 | 17.25 |
| | Subtest 2 | 17.60 | 16.35 | 16.33 | 16.45 |
| | Subtest 3 | 17.10 | 15.84 | 15.81 | 15.96 |
| | Subtest 4 | 16.80 | 15.82 | 15.82 | 15.96 |

Table 28: Conducted power measurement results of UMTS Band IV (Receiver ON)

| UMTS Band IV | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 1312CH | 1413CH | 1513CH |
| WCDMA | 12.2kbps RMC | 19.50 | 18.59 | **18.65** | 18.78 |
| | 12.2kbps AMR | 19.50 | 18.68 | 18.62 | 18.75 |
| HSDPA | Subtest 1 | 19.00 | 18.19 | 18.15 | 18.30 |
| | Subtest 2 | 18.20 | 17.15 | 17.32 | 17.42 |
| | Subtest 3 | 17.70 | 16.85 | 16.84 | 16.89 |
| | Subtest 4 | 17.70 | 17.00 | 16.83 | 16.94 |
| HSUPA | Subtest 1 | 17.60 | 16.62 | 16.77 | 16.57 |
| | Subtest 2 | 16.40 | 15.16 | 15.19 | 15.11 |
| | Subtest 3 | 16.80 | 15.86 | 16.09 | 16.01 |
| | Subtest 4 | 15.40 | 15.31 | 15.03 | 15.32 |
| | Subtest 5 | 18.40 | 17.50 | 17.54 | 17.58 |
| DC-HSDPA | Subtest 1 | 19.00 | 18.11 | 18.18 | 18.26 |
| | Subtest 2 | 18.20 | 17.17 | 17.12 | 17.46 |
| | Subtest 3 | 17.70 | 16.89 | 16.80 | 16.81 |
| | Subtest 4 | 17.70 | 17.01 | 16.86 | 16.91 |

Table 29: Conducted power measurement results of UMTS Band IV (Receiver OFF+Hotspot ON)

Note:

1) The bolded 12.2kbps RMC mode was selected for SAR testing.

2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is ⩽ ¼ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is ⩽ 75% of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

### 7.1.8 Conducted power measurements of UMTS Band IV (Main antenna)

| UMTS Band IV | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 1312CH | 1413CH | 1513CH |
| WCDMA | 12.2kbps RMC | 24.50 | 23.45 | **23.48** | 23.53 |
| | 12.2kbps AMR | 24.50 | 23.42 | 23.48 | 23.57 |
| HSDPA | Subtest 1 | 23.90 | 22.95 | 22.97 | 23.03 |
| | Subtest 2 | 23.10 | 22.13 | 22.17 | 22.21 |
| | Subtest 3 | 22.60 | 21.62 | 21.67 | 21.69 |
| | Subtest 4 | 22.60 | 21.63 | 21.65 | 21.68 |
| HSUPA | Subtest 1 | 22.50 | 21.32 | 21.44 | 21.66 |
| | Subtest 2 | 20.10 | 19.85 | 19.53 | 19.56 |
| | Subtest 3 | 20.40 | 19.56 | 19.61 | 19.90 |
| | Subtest 4 | 20.00 | 19.68 | 19.78 | 19.88 |
| | Subtest 5 | 23.20 | 22.25 | 22.26 | 22.34 |
| DC-HSDPA | Subtest 1 | 23.90 | 22.91 | 22.96 | 23.02 |
| | Subtest 2 | 23.10 | 22.14 | 22.17 | 22.19 |
| | Subtest 3 | 22.60 | 21.62 | 21.65 | 21.70 |
| | Subtest 4 | 22.60 | 21.62 | 21.67 | 21.72 |

Table 30: Conducted power measurement results of UMTS Band IV (Full Power)

| UMTS Band IV | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 1312CH | 1413CH | 1513CH |
| WCDMA | 12.2kbps RMC | 22.90 | 21.87 | **21.98** | 22.05 |
| | 12.2kbps AMR | 22.90 | 21.89 | 22.04 | 22.04 |
| HSDPA | Subtest 1 | 22.40 | 21.28 | 21.47 | 21.51 |
| | Subtest 2 | 21.60 | 20.54 | 20.67 | 20.69 |
| | Subtest 3 | 21.10 | 20.03 | 20.19 | 20.21 |
| | Subtest 4 | 21.10 | 20.07 | 20.17 | 20.22 |
| HSUPA | Subtest 1 | 21.00 | 20.29 | 20.33 | 20.39 |
| | Subtest 2 | 18.80 | 18.32 | 18.35 | 18.40 |
| | Subtest 3 | 19.60 | 19.04 | 19.10 | 19.17 |
| | Subtest 4 | 18.80 | 18.16 | 18.28 | 18.32 |
| | Subtest 5 | 21.90 | 20.65 | 20.76 | 20.82 |
| DC-HSDPA | Subtest 1 | 22.40 | 21.34 | 21.46 | 21.52 |
| | Subtest 2 | 21.60 | 20.54 | 20.63 | 20.71 |
| | Subtest 3 | 21.10 | 20.03 | 20.19 | 20.20 |
| | Subtest 4 | 21.10 | 20.06 | 20.18 | 20.22 |

Table 31: Conducted power measurement results of UMTS Band IV (Receiver OFF)

| UMTS Band IV | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 1312CH | 1413CH | 1513CH |
| WCDMA | 12.2kbps RMC | 20.40 | 19.36 | **19.53** | 19.52 |
| | 12.2kbps AMR | 20.40 | 19.36 | 19.32 | 19.49 |
| HSDPA | Subtest 1 | 19.90 | 18.13 | 18.13 | 18.26 |
| | Subtest 2 | 19.10 | 17.35 | 17.37 | 17.50 |
| | Subtest 3 | 18.60 | 16.80 | 16.87 | 17.00 |
| | Subtest 4 | 18.60 | 16.80 | 16.85 | 17.00 |
| HSUPA | Subtest 1 | 18.20 | 16.68 | 17.07 | 17.23 |
| | Subtest 2 | 16.80 | 15.59 | 15.39 | 15.44 |
| | Subtest 3 | 17.00 | 15.34 | 15.66 | 16.10 |
| | Subtest 4 | 16.70 | 15.38 | 15.49 | 15.65 |
| | Subtest 5 | 19.20 | 17.46 | 17.44 | 17.59 |
| DC-HSDPA | Subtest 1 | 19.90 | 18.11 | 18.13 | 18.24 |
| | Subtest 2 | 19.10 | 17.33 | 17.36 | 17.49 |
| | Subtest 3 | 18.60 | 16.84 | 16.87 | 16.97 |
| | Subtest 4 | 18.60 | 16.83 | 16.87 | 17.00 |

Table 32: Conducted power measurement results of UMTS Band IV (Receiver OFF+Hotspot ON)

Note:

1) The bolded 12.2kbps RMC mode was selected for SAR testing.

2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is ≤ ¼ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is ≤ 75% of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

### 7.1.9 Conducted power measurements of UMTS Band V (Second antenna)

| UMTS Band V | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 4132CH | 4182CH | 4233CH |
| WCDMA | 12.2kbps RMC | 24.80 | 23.90 | **23.87** | 23.90 |
| | 12.2kbps AMR | 24.80 | 23.90 | 23.88 | 23.96 |
| HSDPA | Subtest 1 | 24.20 | 23.36 | 23.36 | 23.39 |
| | Subtest 2 | 23.70 | 22.88 | 22.88 | 22.92 |
| | Subtest 3 | 23.30 | 22.47 | 22.47 | 22.50 |
| | Subtest 4 | 23.30 | 22.49 | 22.47 | 22.50 |
| HSUPA | Subtest 1 | 23.50 | 22.98 | 22.61 | 22.62 |
| | Subtest 2 | 21.40 | 21.27 | 20.96 | 20.95 |
| | Subtest 3 | 21.80 | 21.44 | 21.58 | 21.54 |
| | Subtest 4 | 21.00 | 20.81 | 20.86 | 20.89 |
| | Subtest 5 | 23.60 | 22.68 | 22.67 | 22.70 |
| DC-HSDPA | Subtest 1 | 24.20 | 23.36 | 23.34 | 23.40 |
| | Subtest 2 | 23.70 | 22.88 | 22.86 | 22.92 |
| | Subtest 3 | 23.30 | 22.48 | 22.46 | 22.50 |
| | Subtest 4 | 23.30 | 22.48 | 22.47 | 22.52 |

Table 33: Conducted power measurement results of UMTS Band V (Full Power)

| UMTS Band V | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 4132CH | 4182CH | 4233CH |
| WCDMA | 12.2kbps RMC | 21.20 | 20.36 | **20.33** | 20.38 |
| | 12.2kbps AMR | 21.20 | 20.41 | 20.39 | 20.41 |
| HSDPA | Subtest 1 | 20.70 | 19.86 | 19.79 | 19.88 |
| | Subtest 2 | 20.20 | 19.38 | 19.37 | 19.38 |
| | Subtest 3 | 19.80 | 18.96 | 18.93 | 19.00 |
| | Subtest 4 | 19.80 | 18.98 | 18.95 | 18.99 |
| HSUPA | Subtest 1 | 20.10 | 19.39 | 19.13 | 19.24 |
| | Subtest 2 | 17.90 | 17.80 | 17.71 | 17.74 |
| | Subtest 3 | 19.00 | 18.15 | 17.99 | 17.83 |
| | Subtest 4 | 17.50 | 17.14 | 17.28 | 17.32 |
| | Subtest 5 | 20.30 | 19.15 | 19.12 | 19.19 |
| DC-HSDPA | Subtest 1 | 20.70 | 19.86 | 19.82 | 19.90 |
| | Subtest 2 | 20.20 | 19.38 | 19.34 | 19.37 |
| | Subtest 3 | 19.80 | 18.97 | 18.93 | 18.99 |
| | Subtest 4 | 19.80 | 18.99 | 18.96 | 18.97 |

Table 34: Conducted power measurement results of UMTS Band V (Receiver ON)

Note:

1) The bolded 12.2kbps RMC mode was selected for SAR testing.

2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is ≤ ¼ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is ≤ 75% of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

### 7.1.10 Conducted power measurements of UMTS Band V (Main antenna)

| UMTS Band V | | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|---|
| | | Max. | 4132CH | 4182CH | 4233CH |
| WCDMA | 12.2kbps RMC | 25.00 | 23.97 | **24.00** | 24.03 |
| | 12.2kbps AMR | 25.00 | 24.01 | 24.02 | 24.11 |
| HSDPA | Subtest 1 | 24.30 | 23.45 | 23.51 | 23.52 |
| | Subtest 2 | 23.80 | 22.95 | 22.99 | 23.05 |
| | Subtest 3 | 23.40 | 22.59 | 22.59 | 22.66 |
| | Subtest 4 | 23.30 | 22.57 | 22.60 | 22.69 |
| HSUPA | Subtest 1 | 23.80 | 23.16 | 22.81 | 22.84 |
| | Subtest 2 | 21.40 | 21.19 | 21.12 | 21.15 |
| | Subtest 3 | 21.70 | 21.06 | 21.32 | 21.38 |
| | Subtest 4 | 21.10 | 20.73 | 20.69 | 20.68 |
| | Subtest 5 | 23.70 | 22.79 | 22.77 | 22.85 |
| DC-HSDPA | Subtest 1 | 24.40 | 23.44 | 23.49 | 23.53 |
| | Subtest 2 | 23.90 | 22.96 | 23.00 | 23.07 |
| | Subtest 3 | 23.50 | 22.56 | 22.60 | 22.66 |
| | Subtest 4 | 23.50 | 22.58 | 22.60 | 22.66 |

Table 35: Conducted power measurement results of UMTS Band V

Note:

1) The bolded 12.2kbps RMC mode was selected for SAR testing.

2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is ≤ ¼ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is ≤ 75% of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

### 7.1.11 Conducted power measurements of LTE Band 2(Second antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 18607CH | 18900CH | 19193CH |
| 1.4MHz | QPSK | 1 | 0 | 24.50 | 23.42 | 23.45 | 23.56 |
| | | 1 | 3 | 24.50 | 23.37 | 23.52 | 23.60 |
| | | 1 | 5 | 24.50 | 23.38 | 23.47 | 23.59 |
| | | 3 | 0 | 24.50 | 23.27 | 23.38 | 23.49 |
| | | 3 | 2 | 24.50 | 23.27 | 23.39 | 23.48 |
| | | 3 | 3 | 24.50 | 23.23 | 23.42 | 23.50 |
| | | 6 | 0 | 23.50 | 22.20 | 22.32 | 22.43 |
| | 16QAM | 1 | 0 | 23.50 | 22.46 | 22.37 | 22.50 |
| | | 1 | 3 | 23.50 | 22.39 | 22.52 | 22.63 |
| | | 1 | 5 | 23.50 | 22.49 | 22.37 | 22.60 |
| | | 3 | 0 | 23.50 | 22.30 | 22.48 | 22.36 |
| | | 3 | 2 | 23.50 | 22.31 | 22.44 | 22.49 |
| | | 3 | 3 | 23.50 | 22.35 | 22.62 | 22.59 |
| | | 6 | 0 | 22.50 | 21.20 | 21.42 | 21.27 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 18615CH | 18900CH | 19185CH |
| 3MHz | QPSK | 1 | 0 | 24.50 | 23.44 | 23.50 | 23.46 |
| | | 1 | 7 | 24.50 | 23.36 | 23.46 | 23.49 |
| | | 1 | 14 | 24.50 | 23.41 | 23.47 | 23.54 |
| | | 8 | 0 | 23.50 | 22.22 | 22.41 | 22.33 |
| | | 8 | 4 | 23.50 | 22.27 | 22.33 | 22.36 |
| | | 8 | 7 | 23.50 | 22.25 | 22.34 | 22.35 |
| | | 15 | 0 | 23.50 | 22.33 | 22.43 | 22.38 |
| | 16QAM | 1 | 0 | 23.50 | 22.53 | 22.63 | 22.60 |
| | | 1 | 7 | 23.50 | 22.48 | 22.72 | 22.60 |
| | | 1 | 14 | 23.50 | 22.38 | 22.54 | 22.69 |
| | | 8 | 0 | 22.50 | 21.27 | 21.31 | 21.47 |
| | | 8 | 4 | 22.50 | 21.27 | 21.32 | 21.35 |
| | | 8 | 7 | 22.50 | 21.16 | 21.42 | 21.49 |
| | | 15 | 0 | 22.50 | 21.29 | 21.39 | 21.33 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18625CH | Channel 18900CH | Channel 19175CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 24.50 | 23.30 | 23.41 | 23.42 |
| | | 1 | 13 | 24.50 | 23.25 | 23.43 | 23.43 |
| | | 1 | 24 | 24.50 | 23.36 | 23.45 | 23.41 |
| | | 12 | 0 | 23.50 | 22.38 | 22.51 | 22.53 |
| | | 12 | 6 | 23.50 | 22.38 | 22.51 | 22.52 |
| | | 12 | 13 | 23.50 | 22.38 | 22.51 | 22.51 |
| | | 25 | 0 | 23.50 | 22.31 | 22.40 | 22.49 |
| | 16QAM | 1 | 0 | 23.50 | 22.44 | 22.63 | 22.66 |
| | | 1 | 13 | 23.50 | 22.53 | 22.61 | 22.60 |
| | | 1 | 24 | 23.50 | 22.46 | 22.50 | 22.73 |
| | | 12 | 0 | 22.50 | 21.27 | 21.38 | 21.50 |
| | | 12 | 6 | 22.50 | 21.29 | 21.47 | 21.49 |
| | | 12 | 13 | 22.50 | 21.34 | 21.39 | 21.54 |
| | | 25 | 0 | 22.50 | 21.27 | 21.38 | 21.36 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18650CH | Channel 18900CH | Channel 19150CH |
| 10MHz | QPSK | 1 | 0 | 24.50 | 23.36 | 23.41 | 23.44 |
| | | 1 | 25 | 24.50 | 23.33 | 23.41 | 23.42 |
| | | 1 | 49 | 24.50 | 23.36 | 23.42 | 23.45 |
| | | 25 | 0 | 23.50 | 22.35 | 22.43 | 22.42 |
| | | 25 | 13 | 23.50 | 22.34 | 22.43 | 22.42 |
| | | 25 | 25 | 23.50 | 22.35 | 22.44 | 22.42 |
| | | 50 | 0 | 23.50 | 22.39 | 22.37 | 22.42 |
| | 16QAM | 1 | 0 | 23.50 | 22.47 | 22.40 | 22.62 |
| | | 1 | 25 | 23.50 | 22.39 | 22.46 | 22.38 |
| | | 1 | 49 | 23.50 | 22.35 | 22.40 | 22.42 |
| | | 25 | 0 | 22.50 | 21.24 | 21.46 | 21.31 |
| | | 25 | 13 | 22.50 | 21.23 | 21.40 | 21.36 |
| | | 25 | 25 | 22.50 | 21.27 | 21.40 | 21.36 |
| | | 50 | 0 | 22.50 | 21.29 | 21.35 | 21.37 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 18675CH | 18900CH | 19125CH |
| 15MHz | QPSK | 1 | 0 | 24.50 | 23.41 | 23.40 | 23.46 |
| | | 1 | 38 | 24.50 | 23.42 | 23.43 | 23.41 |
| | | 1 | 74 | 24.50 | 23.40 | 23.42 | 23.41 |
| | | 36 | 0 | 23.50 | 22.40 | 22.42 | 22.42 |
| | | 36 | 18 | 23.50 | 22.40 | 22.42 | 22.42 |
| | | 36 | 39 | 23.50 | 22.40 | 22.43 | 22.43 |
| | | 75 | 0 | 23.50 | 22.40 | 22.43 | 22.44 |
| | 16QAM | 1 | 0 | 23.50 | 22.36 | 22.52 | 22.42 |
| | | 1 | 38 | 23.50 | 22.44 | 22.55 | 22.26 |
| | | 1 | 74 | 23.50 | 22.36 | 22.43 | 22.46 |
| | | 36 | 0 | 22.50 | 21.35 | 21.41 | 21.38 |
| | | 36 | 18 | 22.50 | 21.33 | 21.38 | 21.32 |
| | | 36 | 39 | 22.50 | 21.36 | 21.41 | 21.35 |
| | | 75 | 0 | 22.50 | 21.31 | 21.34 | 21.37 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 18700CH | 18900CH | 19100CH |
| 20MHz | QPSK | 1 | 0 | 24.50 | 23.43 | 23.53 | 23.53 |
| | | 1 | 50 | 24.50 | 23.40 | 23.51 | 23.54 |
| | | 1 | 99 | 24.50 | 23.45 | **23.57** | 23.52 |
| | | 50 | 0 | 23.50 | 22.36 | 22.45 | **22.50** |
| | | 50 | 25 | 23.50 | 22.37 | 22.44 | 22.50 |
| | | 50 | 50 | 23.50 | 22.37 | 22.41 | 22.50 |
| | | 100 | 0 | 23.50 | 22.36 | 22.43 | 22.51 |
| | 16QAM | 1 | 0 | 23.50 | 22.61 | 22.83 | 22.75 |
| | | 1 | 50 | 23.50 | 22.50 | 22.69 | 22.80 |
| | | 1 | 99 | 23.50 | 22.66 | 22.74 | 22.76 |
| | | 50 | 0 | 22.50 | 21.35 | 21.36 | 21.44 |
| | | 50 | 25 | 22.50 | 21.33 | 21.35 | 21.41 |
| | | 50 | 50 | 22.50 | 21.29 | 21.38 | 21.39 |
| | | 100 | 0 | 22.50 | 21.36 | 21.34 | 21.37 |

Table 36: Conducted power measurement results of LTE Band 2 (Full Power)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18607CH | Channel 18900CH | Channel 19193CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 18.90 | 17.81 | 17.99 | 18.02 |
| | | 1 | 3 | 18.90 | 17.87 | 18.00 | 17.99 |
| | | 1 | 5 | 18.90 | 17.82 | 17.98 | 17.99 |
| | | 3 | 0 | 18.90 | 17.81 | 17.92 | 17.91 |
| | | 3 | 2 | 18.90 | 17.76 | 17.87 | 18.03 |
| | | 3 | 3 | 18.90 | 17.78 | 17.91 | 17.95 |
| | | 6 | 0 | 18.90 | 17.72 | 17.86 | 17.91 |
| | 16QAM | 1 | 0 | 18.90 | 18.02 | 17.98 | 18.21 |
| | | 1 | 3 | 18.90 | 17.87 | 18.00 | 18.10 |
| | | 1 | 5 | 18.90 | 17.83 | 17.87 | 18.09 |
| | | 3 | 0 | 18.90 | 17.81 | 17.83 | 17.99 |
| | | 3 | 2 | 18.90 | 17.86 | 17.83 | 17.90 |
| | | 3 | 3 | 18.90 | 17.80 | 17.96 | 18.03 |
| | | 6 | 0 | 18.80 | 17.68 | 17.79 | 17.90 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18615CH | Channel 18900CH | Channel 19185CH |
| 3MHz | QPSK | 1 | 0 | 18.90 | 17.89 | 17.91 | 18.01 |
| | | 1 | 7 | 18.90 | 17.86 | 17.90 | 17.96 |
| | | 1 | 14 | 18.90 | 17.82 | 17.87 | 17.99 |
| | | 8 | 0 | 18.90 | 17.76 | 17.89 | 17.94 |
| | | 8 | 4 | 18.90 | 17.78 | 17.88 | 17.93 |
| | | 8 | 7 | 18.90 | 17.73 | 17.97 | 17.89 |
| | | 15 | 0 | 18.90 | 17.80 | 17.95 | 17.93 |
| | 16QAM | 1 | 0 | 18.90 | 17.91 | 18.08 | 18.10 |
| | | 1 | 7 | 18.90 | 17.93 | 18.10 | 18.09 |
| | | 1 | 14 | 18.90 | 18.00 | 18.02 | 18.22 |
| | | 8 | 0 | 18.80 | 17.73 | 17.93 | 18.00 |
| | | 8 | 4 | 18.80 | 17.73 | 17.88 | 17.91 |
| | | 8 | 7 | 18.80 | 17.67 | 17.94 | 17.86 |
| | | 15 | 0 | 18.80 | 17.73 | 17.83 | 17.90 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18625CH | Channel 18900CH | Channel 19175CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 18.90 | 17.78 | 17.91 | 17.91 |
| | | 1 | 13 | 18.90 | 17.86 | 17.90 | 17.93 |
| | | 1 | 24 | 18.90 | 17.84 | 17.88 | 17.91 |
| | | 12 | 0 | 18.90 | 17.82 | 18.04 | 18.05 |
| | | 12 | 6 | 18.90 | 17.80 | 17.97 | 18.04 |
| | | 12 | 13 | 18.90 | 17.85 | 17.95 | 18.04 |
| | | 25 | 0 | 18.90 | 17.79 | 17.98 | 17.95 |
| | 16QAM | 1 | 0 | 18.90 | 17.98 | 18.16 | 18.19 |
| | | 1 | 13 | 18.90 | 18.15 | 18.20 | 18.32 |
| | | 1 | 24 | 18.90 | 18.03 | 18.10 | 18.26 |
| | | 12 | 0 | 18.80 | 17.79 | 17.95 | 18.06 |
| | | 12 | 6 | 18.80 | 17.81 | 17.93 | 18.03 |
| | | 12 | 13 | 18.80 | 17.76 | 17.99 | 18.03 |
| | | 25 | 0 | 18.80 | 17.77 | 17.89 | 17.91 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18650CH | Channel 18900CH | Channel 19150CH |
| 10MHz | QPSK | 1 | 0 | 18.90 | 17.81 | 17.95 | 17.90 |
| | | 1 | 25 | 18.90 | 17.86 | 17.99 | 17.90 |
| | | 1 | 49 | 18.90 | 17.83 | 17.95 | 17.92 |
| | | 25 | 0 | 18.90 | 17.84 | 17.93 | 17.96 |
| | | 25 | 13 | 18.90 | 17.83 | 17.94 | 17.96 |
| | | 25 | 25 | 18.90 | 17.84 | 17.94 | 17.95 |
| | | 50 | 0 | 18.90 | 17.89 | 17.94 | 17.91 |
| | 16QAM | 1 | 0 | 18.90 | 18.06 | 18.07 | 17.93 |
| | | 1 | 25 | 18.90 | 17.81 | 18.00 | 17.86 |
| | | 1 | 49 | 18.90 | 17.93 | 18.01 | 17.97 |
| | | 25 | 0 | 18.80 | 17.78 | 17.85 | 17.93 |
| | | 25 | 13 | 18.80 | 17.81 | 17.81 | 17.96 |
| | | 25 | 25 | 18.80 | 17.83 | 17.85 | 17.91 |
| | | 50 | 0 | 18.80 | 17.83 | 17.80 | 17.87 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18675CH | Channel 18900CH | Channel 19125CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 18.90 | 17.86 | 17.84 | 17.81 |
| | | 1 | 38 | 18.90 | 17.83 | 17.85 | 17.87 |
| | | 1 | 74 | 18.90 | 17.84 | 17.85 | 17.88 |
| | | 36 | 0 | 18.90 | 17.91 | 17.92 | 17.98 |
| | | 36 | 18 | 18.90 | 17.91 | 17.91 | 17.98 |
| | | 36 | 39 | 18.90 | 17.92 | 17.92 | 17.98 |
| | | 75 | 0 | 18.90 | 17.92 | 17.90 | 17.98 |
| | 16QAM | 1 | 0 | 18.90 | 17.90 | 18.05 | 17.91 |
| | | 1 | 38 | 18.90 | 17.91 | 17.85 | 18.05 |
| | | 1 | 74 | 18.90 | 18.02 | 18.04 | 18.11 |
| | | 36 | 0 | 18.80 | 17.88 | 17.92 | 17.95 |
| | | 36 | 18 | 18.80 | 17.89 | 18.01 | 17.94 |
| | | 36 | 39 | 18.80 | 17.90 | 17.90 | 17.93 |
| | | 75 | 0 | 18.80 | 17.84 | 17.87 | 17.84 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18700CH | Channel 18900CH | Channel 19100CH |
| 20MHz | QPSK | 1 | 0 | 18.90 | 17.95 | 18.06 | 18.03 |
| | | 1 | 50 | 18.90 | 17.95 | **18.07** | 18.00 |
| | | 1 | 99 | 18.90 | 17.93 | 18.05 | 18.04 |
| | | 50 | 0 | 18.90 | 17.96 | 17.89 | **17.98** |
| | | 50 | 25 | 18.90 | 17.96 | 17.92 | 17.98 |
| | | 50 | 50 | 18.90 | 17.96 | 17.90 | 17.98 |
| | | 100 | 0 | 18.90 | 17.97 | 17.98 | 17.99 |
| | 16QAM | 1 | 0 | 18.90 | 18.08 | 18.30 | 18.10 |
| | | 1 | 50 | 18.90 | 18.25 | 18.25 | 18.16 |
| | | 1 | 99 | 18.90 | 18.25 | 18.07 | 18.21 |
| | | 50 | 0 | 18.80 | 17.83 | 17.84 | 17.94 |
| | | 50 | 25 | 18.80 | 17.87 | 17.89 | 17.95 |
| | | 50 | 50 | 18.80 | 17.85 | 17.82 | 17.92 |
| | | 100 | 0 | 18.80 | 17.84 | 17.85 | 17.95 |

Table 37: Conducted power measurement results of LTE Band 2 (Receiver ON)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18607CH | Channel 18900CH | Channel 19193CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 19.90 | 18.88 | 18.98 | 18.95 |
| | | 1 | 3 | 19.90 | 18.79 | 18.99 | 19.00 |
| | | 1 | 5 | 19.90 | 18.85 | 18.96 | 18.99 |
| | | 3 | 0 | 19.90 | 18.89 | 18.90 | 18.89 |
| | | 3 | 2 | 19.90 | 18.89 | 18.86 | 18.95 |
| | | 3 | 3 | 19.90 | 18.76 | 18.95 | 18.91 |
| | | 6 | 0 | 19.90 | 18.86 | 18.92 | 18.81 |
| | 16QAM | 1 | 0 | 19.90 | 19.04 | 19.04 | 18.95 |
| | | 1 | 3 | 19.90 | 18.80 | 18.99 | 18.95 |
| | | 1 | 5 | 19.90 | 18.98 | 19.01 | 19.06 |
| | | 3 | 0 | 19.90 | 18.71 | 18.91 | 18.88 |
| | | 3 | 2 | 19.90 | 18.67 | 18.93 | 19.02 |
| | | 3 | 3 | 19.90 | 18.77 | 18.94 | 19.09 |
| | | 6 | 0 | 19.80 | 18.71 | 18.86 | 18.96 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18615CH | Channel 18900CH | Channel 19185CH |
| 3MHz | QPSK | 1 | 0 | 19.90 | 18.79 | 18.94 | 18.99 |
| | | 1 | 7 | 19.90 | 18.80 | 18.96 | 18.99 |
| | | 1 | 14 | 19.90 | 18.81 | 18.92 | 19.03 |
| | | 8 | 0 | 19.90 | 18.77 | 18.86 | 18.90 |
| | | 8 | 4 | 19.90 | 18.80 | 18.83 | 18.91 |
| | | 8 | 7 | 19.90 | 18.84 | 18.87 | 18.95 |
| | | 15 | 0 | 19.90 | 18.81 | 18.96 | 18.92 |
| | 16QAM | 1 | 0 | 19.90 | 18.91 | 19.01 | 18.99 |
| | | 1 | 7 | 19.90 | 18.79 | 19.10 | 19.02 |
| | | 1 | 14 | 19.90 | 18.90 | 19.01 | 19.23 |
| | | 8 | 0 | 19.80 | 18.73 | 18.83 | 18.88 |
| | | 8 | 4 | 19.80 | 18.78 | 18.82 | 18.80 |
| | | 8 | 7 | 19.80 | 18.72 | 18.84 | 18.85 |
| | | 15 | 0 | 19.80 | 18.72 | 18.90 | 18.86 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18625CH | Channel 18900CH | Channel 19175CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 19.90 | 18.82 | 18.92 | 18.99 |
| | | 1 | 13 | 19.90 | 18.80 | 18.97 | 19.00 |
| | | 1 | 24 | 19.90 | 18.84 | 18.95 | 18.96 |
| | | 12 | 0 | 19.90 | 18.87 | 19.03 | 19.01 |
| | | 12 | 6 | 19.90 | 18.88 | 19.01 | 19.00 |
| | | 12 | 13 | 19.90 | 18.86 | 19.02 | 19.01 |
| | | 25 | 0 | 19.90 | 18.82 | 18.93 | 18.95 |
| | 16QAM | 1 | 0 | 19.90 | 19.06 | 19.10 | 19.13 |
| | | 1 | 13 | 19.90 | 19.11 | 19.16 | 19.10 |
| | | 1 | 24 | 19.90 | 19.04 | 19.10 | 19.13 |
| | | 12 | 0 | 19.80 | 18.85 | 18.99 | 18.94 |
| | | 12 | 6 | 19.80 | 18.90 | 18.95 | 18.95 |
| | | 12 | 13 | 19.80 | 18.81 | 18.92 | 18.92 |
| | | 25 | 0 | 19.80 | 18.81 | 18.87 | 18.92 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18650CH | Channel 18900CH | Channel 19150CH |
| 10MHz | QPSK | 1 | 0 | 19.90 | 18.83 | 18.93 | 18.90 |
| | | 1 | 25 | 19.90 | 18.80 | 18.90 | 18.89 |
| | | 1 | 49 | 19.90 | 18.80 | 18.95 | 18.87 |
| | | 25 | 0 | 19.90 | 18.78 | 18.93 | 18.98 |
| | | 25 | 13 | 19.90 | 18.81 | 18.93 | 18.98 |
| | | 25 | 25 | 19.90 | 18.89 | 18.95 | 18.98 |
| | | 50 | 0 | 19.90 | 18.83 | 18.96 | 18.97 |
| | 16QAM | 1 | 0 | 19.90 | 18.82 | 18.96 | 18.73 |
| | | 1 | 25 | 19.90 | 18.83 | 18.99 | 19.05 |
| | | 1 | 49 | 19.90 | 19.00 | 18.94 | 18.97 |
| | | 25 | 0 | 19.80 | 18.76 | 18.91 | 18.91 |
| | | 25 | 13 | 19.80 | 18.75 | 18.90 | 18.91 |
| | | 25 | 25 | 19.80 | 18.69 | 18.89 | 18.90 |
| | | 50 | 0 | 19.80 | 18.77 | 18.86 | 18.94 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18675CH | Channel 18900CH | Channel 19125CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 19.90 | 18.85 | 18.90 | 18.84 |
| | | 1 | 38 | 19.90 | 18.83 | 18.92 | 18.88 |
| | | 1 | 74 | 19.90 | 18.85 | 18.92 | 18.83 |
| | | 36 | 0 | 19.90 | 18.87 | 18.92 | 18.95 |
| | | 36 | 18 | 19.90 | 18.86 | 18.92 | 18.96 |
| | | 36 | 39 | 19.90 | 18.85 | 18.94 | 18.95 |
| | | 75 | 0 | 19.90 | 18.86 | 18.93 | 18.97 |
| | 16QAM | 1 | 0 | 19.90 | 18.80 | 19.04 | 18.85 |
| | | 1 | 38 | 19.90 | 18.76 | 19.02 | 18.85 |
| | | 1 | 74 | 19.90 | 18.84 | 19.03 | 18.80 |
| | | 36 | 0 | 19.80 | 18.81 | 18.88 | 18.87 |
| | | 36 | 18 | 19.80 | 18.82 | 18.88 | 18.85 |
| | | 36 | 39 | 19.80 | 18.76 | 18.88 | 18.84 |
| | | 75 | 0 | 19.80 | 18.78 | 18.87 | 18.89 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18700CH | Channel 18900CH | Channel 19100CH |
| 20MHz | QPSK | 1 | 0 | 19.90 | 18.91 | 18.95 | **19.00** |
| | | 1 | 50 | 19.90 | 18.93 | 18.96 | 18.99 |
| | | 1 | 99 | 19.90 | 18.94 | 18.99 | 18.98 |
| | | 50 | 0 | 19.90 | 18.89 | 18.91 | 18.93 |
| | | 50 | 25 | 19.90 | 18.90 | 18.92 | 18.94 |
| | | 50 | 50 | 19.90 | 18.90 | 18.92 | **18.94** |
| | | 100 | 0 | 19.90 | 18.91 | 18.92 | 18.91 |
| | 16QAM | 1 | 0 | 19.90 | 19.04 | 19.25 | 19.21 |
| | | 1 | 50 | 19.90 | 19.15 | 19.24 | 19.08 |
| | | 1 | 99 | 19.90 | 19.00 | 19.20 | 19.18 |
| | | 50 | 0 | 19.80 | 18.83 | 18.89 | 18.97 |
| | | 50 | 25 | 19.80 | 18.83 | 18.87 | 18.97 |
| | | 50 | 50 | 19.80 | 18.82 | 18.87 | 18.85 |
| | | 100 | 0 | 19.80 | 18.84 | 18.84 | 18.90 |

Table 38: Conducted power measurement results of LTE Band 2 (Receiver OFF+Hotspot ON)

Note: The Conducted power measurements of LTE Band 2 is measured with RMS detector.

### 7.1.12 Conducted power measurements of LTE Band 2(Main antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 18607CH | 18900CH | 19193CH |
| 1.4MHz | QPSK | 1 | 0 | 24.50 | 23.59 | 23.73 | 23.67 |
| | | 1 | 3 | 24.50 | 23.55 | 23.68 | 23.73 |
| | | 1 | 5 | 24.50 | 23.56 | 23.72 | 23.70 |
| | | 3 | 0 | 24.50 | 23.45 | 23.64 | 23.65 |
| | | 3 | 2 | 24.50 | 23.41 | 23.68 | 23.52 |
| | | 3 | 3 | 24.50 | 23.54 | 23.62 | 23.59 |
| | | 6 | 0 | 23.50 | 22.38 | 22.53 | 22.53 |
| | 16QAM | 1 | 0 | 23.50 | 22.66 | 22.87 | 22.73 |
| | | 1 | 3 | 23.50 | 22.63 | 22.60 | 22.55 |
| | | 1 | 5 | 23.50 | 22.48 | 22.68 | 22.83 |
| | | 3 | 0 | 23.50 | 22.59 | 22.58 | 22.61 |
| | | 3 | 2 | 23.50 | 22.52 | 22.60 | 22.48 |
| | | 3 | 3 | 23.50 | 22.46 | 22.59 | 22.58 |
| | | 6 | 0 | 22.50 | 21.31 | 21.36 | 21.50 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 18615CH | 18900CH | 19185CH |
| 3MHz | QPSK | 1 | 0 | 24.50 | 23.55 | 23.65 | 23.65 |
| | | 1 | 7 | 24.50 | 23.58 | 23.73 | 23.67 |
| | | 1 | 14 | 24.50 | 23.55 | 23.66 | 23.57 |
| | | 8 | 0 | 23.50 | 22.50 | 22.59 | 22.61 |
| | | 8 | 4 | 23.50 | 22.51 | 22.61 | 22.51 |
| | | 8 | 7 | 23.50 | 22.41 | 22.58 | 22.52 |
| | | 15 | 0 | 23.50 | 22.48 | 22.69 | 22.59 |
| | 16QAM | 1 | 0 | 23.50 | 22.62 | 22.69 | 22.69 |
| | | 1 | 7 | 23.50 | 22.65 | 22.70 | 22.51 |
| | | 1 | 14 | 23.50 | 22.65 | 22.85 | 22.46 |
| | | 8 | 0 | 22.50 | 21.51 | 21.58 | 21.63 |
| | | 8 | 4 | 22.50 | 21.51 | 21.57 | 21.54 |
| | | 8 | 7 | 22.50 | 21.48 | 21.67 | 21.56 |
| | | 15 | 0 | 22.50 | 21.49 | 21.60 | 21.53 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18625CH | Channel 18900CH | Channel 19175CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 24.50 | 23.51 | 23.66 | 23.59 |
| | | 1 | 13 | 24.50 | 23.53 | 23.58 | 23.67 |
| | | 1 | 24 | 24.50 | 23.49 | 23.64 | 23.65 |
| | | 12 | 0 | 23.50 | 22.61 | 22.74 | 22.62 |
| | | 12 | 6 | 23.50 | 22.61 | 22.72 | 22.61 |
| | | 12 | 13 | 23.50 | 22.61 | 22.74 | 22.65 |
| | | 25 | 0 | 23.50 | 22.57 | 22.65 | 22.55 |
| | 16QAM | 1 | 0 | 23.50 | 22.61 | 22.79 | 22.73 |
| | | 1 | 13 | 23.50 | 22.61 | 22.74 | 22.81 |
| | | 1 | 24 | 23.50 | 22.66 | 22.81 | 22.60 |
| | | 12 | 0 | 22.50 | 21.54 | 21.68 | 21.65 |
| | | 12 | 6 | 22.50 | 21.53 | 21.57 | 21.65 |
| | | 12 | 13 | 22.50 | 21.55 | 21.73 | 21.61 |
| | | 25 | 0 | 22.50 | 21.50 | 21.61 | 21.53 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18650CH | Channel 18900CH | Channel 19150CH |
| 10MHz | QPSK | 1 | 0 | 24.50 | 23.53 | 23.64 | 23.59 |
| | | 1 | 25 | 24.50 | 23.53 | 23.63 | 23.58 |
| | | 1 | 49 | 24.50 | 23.56 | 23.63 | 23.59 |
| | | 25 | 0 | 23.50 | 22.55 | 22.65 | 22.58 |
| | | 25 | 13 | 23.50 | 22.58 | 22.65 | 22.57 |
| | | 25 | 25 | 23.50 | 22.55 | 22.65 | 22.57 |
| | | 50 | 0 | 23.50 | 22.54 | 22.62 | 22.61 |
| | 16QAM | 1 | 0 | 23.50 | 22.55 | 22.73 | 22.60 |
| | | 1 | 25 | 23.50 | 22.60 | 22.64 | 22.62 |
| | | 1 | 49 | 23.50 | 22.59 | 22.70 | 22.61 |
| | | 25 | 0 | 22.50 | 21.52 | 21.58 | 21.52 |
| | | 25 | 13 | 22.50 | 21.50 | 21.57 | 21.53 |
| | | 25 | 25 | 22.50 | 21.47 | 21.62 | 21.52 |
| | | 50 | 0 | 22.50 | 21.49 | 21.61 | 21.54 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18675CH | Channel 18900CH | Channel 19125CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 24.50 | 23.62 | 23.65 | 23.59 |
| | | 1 | 38 | 24.50 | 23.62 | 23.65 | 23.63 |
| | | 1 | 74 | 24.50 | 23.59 | 23.66 | 23.66 |
| | | 36 | 0 | 23.50 | 22.64 | 22.68 | 22.61 |
| | | 36 | 18 | 23.50 | 22.67 | 22.68 | 22.61 |
| | | 36 | 39 | 23.50 | 22.58 | 22.68 | 22.61 |
| | | 75 | 0 | 23.50 | 22.61 | 22.60 | 22.63 |
| | 16QAM | 1 | 0 | 23.50 | 22.61 | 22.59 | 22.59 |
| | | 1 | 38 | 23.50 | 22.51 | 22.68 | 22.58 |
| | | 1 | 74 | 23.50 | 22.62 | 22.68 | 22.57 |
| | | 36 | 0 | 22.50 | 21.58 | 21.62 | 21.56 |
| | | 36 | 18 | 22.50 | 21.55 | 21.60 | 21.56 |
| | | 36 | 39 | 22.50 | 21.60 | 21.61 | 21.54 |
| | | 75 | 0 | 22.50 | 21.50 | 21.58 | 21.59 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18700CH | Channel 18900CH | Channel 19100CH |
| 20MHz | QPSK | 1 | 0 | 24.50 | 23.58 | **23.77** | 23.68 |
| | | 1 | 50 | 24.50 | 23.65 | 23.74 | 23.68 |
| | | 1 | 99 | 24.50 | 23.65 | 23.74 | 23.70 |
| | | 50 | 0 | 23.50 | 22.55 | 22.62 | **22.68** |
| | | 50 | 25 | 23.50 | 22.60 | 22.62 | 22.67 |
| | | 50 | 50 | 23.50 | 22.58 | 22.62 | 22.68 |
| | | 100 | 0 | 23.50 | 22.57 | 22.68 | 22.65 |
| | 16QAM | 1 | 0 | 23.50 | 22.80 | 22.92 | 22.89 |
| | | 1 | 50 | 23.50 | 22.72 | 22.93 | 22.68 |
| | | 1 | 99 | 23.50 | 22.76 | 22.98 | 22.84 |
| | | 50 | 0 | 22.50 | 21.51 | 21.57 | 21.58 |
| | | 50 | 25 | 22.50 | 21.58 | 21.57 | 21.59 |
| | | 50 | 50 | 22.50 | 21.51 | 21.60 | 21.56 |
| | | 100 | 0 | 22.50 | 21.51 | 21.54 | 21.52 |

Table 39: Conducted power measurement results of LTE Band 2 (Full Power)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18607CH | Channel 18900CH | Channel 19193CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 23.20 | 22.07 | 22.21 | 22.18 |
| | | 1 | 3 | 23.20 | 22.05 | 22.17 | 22.19 |
| | | 1 | 5 | 23.20 | 22.05 | 22.21 | 22.17 |
| | | 3 | 0 | 23.20 | 21.95 | 22.12 | 22.15 |
| | | 3 | 2 | 23.20 | 21.94 | 22.15 | 22.06 |
| | | 3 | 3 | 23.20 | 21.93 | 22.01 | 22.09 |
| | | 6 | 0 | 23.20 | 21.98 | 22.16 | 22.06 |
| | 16QAM | 1 | 0 | 23.20 | 22.14 | 22.19 | 22.47 |
| | | 1 | 3 | 23.20 | 22.17 | 22.30 | 22.26 |
| | | 1 | 5 | 23.20 | 22.04 | 22.43 | 22.27 |
| | | 3 | 0 | 23.20 | 21.98 | 22.02 | 22.16 |
| | | 3 | 2 | 23.20 | 21.97 | 21.99 | 22.08 |
| | | 3 | 3 | 23.20 | 21.96 | 22.09 | 22.07 |
| | | 6 | 0 | 22.50 | 21.38 | 21.54 | 21.50 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18615CH | Channel 18900CH | Channel 19185CH |
| 3MHz | QPSK | 1 | 0 | 23.20 | 22.02 | 22.22 | 22.14 |
| | | 1 | 7 | 23.20 | 22.05 | 22.17 | 22.09 |
| | | 1 | 14 | 23.20 | 22.02 | 22.20 | 22.14 |
| | | 8 | 0 | 23.20 | 22.06 | 22.18 | 22.14 |
| | | 8 | 4 | 23.20 | 22.05 | 22.15 | 22.03 |
| | | 8 | 7 | 23.20 | 21.89 | 22.14 | 21.99 |
| | | 15 | 0 | 23.20 | 22.01 | 22.14 | 22.05 |
| | 16QAM | 1 | 0 | 23.20 | 22.12 | 22.26 | 22.30 |
| | | 1 | 7 | 23.20 | 22.07 | 22.39 | 22.12 |
| | | 1 | 14 | 23.20 | 22.10 | 22.21 | 22.45 |
| | | 8 | 0 | 22.50 | 21.42 | 21.69 | 21.60 |
| | | 8 | 4 | 22.50 | 21.50 | 21.69 | 21.56 |
| | | 8 | 7 | 22.50 | 21.39 | 21.60 | 21.58 |
| | | 15 | 0 | 22.50 | 21.50 | 21.60 | 21.52 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18625CH | Channel 18900CH | Channel 19175CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 23.20 | 22.03 | 22.18 | 22.06 |
| | | 1 | 13 | 23.20 | 22.00 | 22.14 | 22.10 |
| | | 1 | 24 | 23.20 | 22.03 | 22.17 | 22.11 |
| | | 12 | 0 | 23.20 | 22.01 | 22.17 | 22.21 |
| | | 12 | 6 | 23.20 | 22.01 | 22.17 | 22.19 |
| | | 12 | 13 | 23.20 | 22.01 | 22.17 | 22.19 |
| | | 25 | 0 | 23.20 | 22.04 | 22.18 | 22.11 |
| | 16QAM | 1 | 0 | 23.20 | 22.30 | 22.32 | 22.43 |
| | | 1 | 13 | 23.20 | 22.18 | 22.44 | 22.31 |
| | | 1 | 24 | 23.20 | 22.21 | 22.41 | 22.13 |
| | | 12 | 0 | 22.50 | 21.56 | 21.58 | 21.62 |
| | | 12 | 6 | 22.50 | 21.57 | 21.69 | 21.67 |
| | | 12 | 13 | 22.50 | 21.55 | 21.62 | 21.64 |
| | | 25 | 0 | 22.50 | 21.56 | 21.63 | 21.51 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18650CH | Channel 18900CH | Channel 19150CH |
| 10MHz | QPSK | 1 | 0 | 23.20 | 21.98 | 22.14 | 22.05 |
| | | 1 | 25 | 23.20 | 21.97 | 22.11 | 22.08 |
| | | 1 | 49 | 23.20 | 22.02 | 22.12 | 22.10 |
| | | 25 | 0 | 23.20 | 22.09 | 22.12 | 22.07 |
| | | 25 | 13 | 23.20 | 22.09 | 22.13 | 22.12 |
| | | 25 | 25 | 23.20 | 22.09 | 22.13 | 22.13 |
| | | 50 | 0 | 23.20 | 22.07 | 22.17 | 22.12 |
| | 16QAM | 1 | 0 | 23.20 | 21.82 | 22.26 | 22.14 |
| | | 1 | 25 | 23.20 | 22.30 | 22.25 | 22.18 |
| | | 1 | 49 | 23.20 | 22.13 | 22.16 | 22.20 |
| | | 25 | 0 | 22.50 | 21.52 | 21.56 | 21.52 |
| | | 25 | 13 | 22.50 | 21.47 | 21.58 | 21.54 |
| | | 25 | 25 | 22.50 | 21.50 | 21.57 | 21.56 |
| | | 50 | 0 | 22.50 | 21.46 | 21.58 | 21.53 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18675CH | Channel 18900CH | Channel 19125CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 23.20 | 22.07 | 22.14 | 22.11 |
| | | 1 | 38 | 23.20 | 21.97 | 22.12 | 22.10 |
| | | 1 | 74 | 23.20 | 22.00 | 22.15 | 22.11 |
| | | 36 | 0 | 23.20 | 22.06 | 22.15 | 22.18 |
| | | 36 | 18 | 23.20 | 22.06 | 22.16 | 22.17 |
| | | 36 | 39 | 23.20 | 22.07 | 22.16 | 22.17 |
| | | 75 | 0 | 23.20 | 22.12 | 22.15 | 22.08 |
| | 16QAM | 1 | 0 | 23.20 | 22.12 | 22.20 | 22.18 |
| | | 1 | 38 | 23.20 | 22.17 | 22.24 | 22.20 |
| | | 1 | 74 | 23.20 | 21.99 | 22.18 | 22.10 |
| | | 36 | 0 | 22.50 | 21.61 | 21.61 | 21.58 |
| | | 36 | 18 | 22.50 | 21.56 | 21.62 | 21.56 |
| | | 36 | 39 | 22.50 | 21.58 | 21.65 | 21.56 |
| | | 75 | 0 | 22.50 | 21.52 | 21.60 | 21.58 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18700CH | Channel 18900CH | Channel 19100CH |
| 20MHz | QPSK | 1 | 0 | 23.20 | 22.15 | **22.28** | 22.20 |
| | | 1 | 50 | 23.20 | 22.13 | 22.25 | 22.18 |
| | | 1 | 99 | 23.20 | 22.15 | 22.25 | 22.21 |
| | | 50 | 0 | 23.20 | 22.13 | **22.17** | 22.16 |
| | | 50 | 25 | 23.20 | 22.13 | 22.17 | 22.12 |
| | | 50 | 50 | 23.20 | 22.13 | 22.17 | 22.11 |
| | | 100 | 0 | 23.20 | 22.13 | 22.19 | 22.16 |
| | 16QAM | 1 | 0 | 23.20 | 22.36 | 22.44 | 22.28 |
| | | 1 | 50 | 23.20 | 22.34 | 22.44 | 22.37 |
| | | 1 | 99 | 23.20 | 22.20 | 22.44 | 22.53 |
| | | 50 | 0 | 22.50 | 21.56 | 21.58 | 21.57 |
| | | 50 | 25 | 22.50 | 21.61 | 21.59 | 21.57 |
| | | 50 | 50 | 22.50 | 21.48 | 21.60 | 21.60 |
| | | 100 | 0 | 22.50 | 21.50 | 21.58 | 21.51 |

Table 40: Conducted power measurement results of LTE Band 2 (Receiver OFF)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18607CH | Channel 18900CH | Channel 19193CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 20.60 | 19.47 | 19.65 | 19.66 |
| | | 1 | 3 | 20.60 | 19.50 | 19.65 | 19.63 |
| | | 1 | 5 | 20.60 | 19.47 | 19.61 | 19.63 |
| | | 3 | 0 | 20.60 | 19.42 | 19.63 | 19.65 |
| | | 3 | 2 | 20.60 | 19.46 | 19.54 | 19.61 |
| | | 3 | 3 | 20.60 | 19.51 | 19.60 | 19.52 |
| | | 6 | 0 | 20.60 | 19.43 | 19.64 | 19.57 |
| | 16QAM | 1 | 0 | 20.60 | 19.65 | 19.78 | 19.74 |
| | | 1 | 3 | 20.60 | 19.49 | 19.84 | 19.72 |
| | | 1 | 5 | 20.60 | 19.55 | 19.78 | 19.66 |
| | | 3 | 0 | 20.60 | 19.55 | 19.65 | 19.59 |
| | | 3 | 2 | 20.60 | 19.41 | 19.66 | 19.57 |
| | | 3 | 3 | 20.60 | 19.47 | 19.51 | 19.63 |
| | | 6 | 0 | 20.50 | 19.36 | 19.62 | 19.51 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18615CH | Channel 18900CH | Channel 19185CH |
| 3MHz | QPSK | 1 | 0 | 20.60 | 19.46 | 19.64 | 19.63 |
| | | 1 | 7 | 20.60 | 19.46 | 19.65 | 19.59 |
| | | 1 | 14 | 20.60 | 19.46 | 19.66 | 19.63 |
| | | 8 | 0 | 20.60 | 19.48 | 19.51 | 19.55 |
| | | 8 | 4 | 20.60 | 19.43 | 19.63 | 19.51 |
| | | 8 | 7 | 20.60 | 19.48 | 19.58 | 19.58 |
| | | 15 | 0 | 20.60 | 19.51 | 19.64 | 19.55 |
| | 16QAM | 1 | 0 | 20.60 | 19.79 | 19.79 | 19.64 |
| | | 1 | 7 | 20.60 | 19.45 | 19.83 | 19.78 |
| | | 1 | 14 | 20.60 | 19.53 | 19.72 | 19.72 |
| | | 8 | 0 | 20.50 | 19.45 | 19.58 | 19.53 |
| | | 8 | 4 | 20.50 | 19.42 | 19.54 | 19.55 |
| | | 8 | 7 | 20.50 | 19.34 | 19.61 | 19.52 |
| | | 15 | 0 | 20.50 | 19.48 | 19.63 | 19.54 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18625CH | Channel 18900CH | Channel 19175CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 20.60 | 19.50 | 19.68 | 19.65 |
| | | 1 | 13 | 20.60 | 19.50 | 19.68 | 19.70 |
| | | 1 | 24 | 20.60 | 19.53 | 19.65 | 19.62 |
| | | 12 | 0 | 20.60 | 19.51 | 19.65 | 19.65 |
| | | 12 | 6 | 20.60 | 19.51 | 19.65 | 19.64 |
| | | 12 | 13 | 20.60 | 19.56 | 19.65 | 19.63 |
| | | 25 | 0 | 20.60 | 19.52 | 19.66 | 19.55 |
| | 16QAM | 1 | 0 | 20.60 | 19.63 | 19.84 | 19.69 |
| | | 1 | 13 | 20.60 | 19.80 | 19.84 | 19.93 |
| | | 1 | 24 | 20.60 | 19.64 | 19.89 | 19.88 |
| | | 12 | 0 | 20.50 | 19.59 | 19.57 | 19.58 |
| | | 12 | 6 | 20.50 | 19.62 | 19.63 | 19.52 |
| | | 12 | 13 | 20.50 | 19.55 | 19.60 | 19.59 |
| | | 25 | 0 | 20.50 | 19.43 | 19.61 | 19.51 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18650CH | Channel 18900CH | Channel 19150CH |
| 10MHz | QPSK | 1 | 0 | 20.60 | 19.51 | 19.56 | 19.63 |
| | | 1 | 25 | 20.60 | 19.51 | 19.60 | 19.62 |
| | | 1 | 49 | 20.60 | 19.52 | 19.61 | 19.58 |
| | | 25 | 0 | 20.60 | 19.53 | 19.66 | 19.63 |
| | | 25 | 13 | 20.60 | 19.53 | 19.60 | 19.62 |
| | | 25 | 25 | 20.60 | 19.54 | 19.60 | 19.61 |
| | | 50 | 0 | 20.60 | 19.51 | 19.66 | 19.56 |
| | 16QAM | 1 | 0 | 20.60 | 19.44 | 19.67 | 19.58 |
| | | 1 | 25 | 20.60 | 19.72 | 19.64 | 19.76 |
| | | 1 | 49 | 20.60 | 19.62 | 19.61 | 19.68 |
| | | 25 | 0 | 20.50 | 19.45 | 19.54 | 19.60 |
| | | 25 | 13 | 20.50 | 19.46 | 19.65 | 19.61 |
| | | 25 | 25 | 20.50 | 19.48 | 19.57 | 19.62 |
| | | 50 | 0 | 20.50 | 19.46 | 19.57 | 19.54 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18675CH | Channel 18900CH | Channel 19125CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 20.60 | 19.50 | 19.53 | 19.56 |
| | | 1 | 38 | 20.60 | 19.52 | 19.56 | 19.52 |
| | | 1 | 74 | 20.60 | 19.52 | 19.55 | 19.64 |
| | | 36 | 0 | 20.60 | 19.63 | 19.68 | 19.61 |
| | | 36 | 18 | 20.60 | 19.65 | 19.66 | 19.61 |
| | | 36 | 39 | 20.60 | 19.64 | 19.70 | 19.60 |
| | | 75 | 0 | 20.60 | 19.59 | 19.66 | 19.64 |
| | 16QAM | 1 | 0 | 20.60 | 19.63 | 19.58 | 19.78 |
| | | 1 | 38 | 20.60 | 19.57 | 19.73 | 19.79 |
| | | 1 | 74 | 20.60 | 19.61 | 19.65 | 19.71 |
| | | 36 | 0 | 20.50 | 19.56 | 19.60 | 19.58 |
| | | 36 | 18 | 20.50 | 19.56 | 19.71 | 19.58 |
| | | 36 | 39 | 20.50 | 19.58 | 19.65 | 19.57 |
| | | 75 | 0 | 20.50 | 19.49 | 19.56 | 19.54 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 18700CH | Channel 18900CH | Channel 19100CH |
| 20MHz | QPSK | 1 | 0 | 20.60 | 19.63 | 19.72 | 19.71 |
| | | 1 | 50 | 20.60 | 19.60 | 19.73 | **19.74** |
| | | 1 | 99 | 20.60 | 19.61 | 19.73 | 19.73 |
| | | 50 | 0 | 20.60 | 19.60 | 19.66 | **19.68** |
| | | 50 | 25 | 20.60 | 19.60 | 19.66 | 19.67 |
| | | 50 | 50 | 20.60 | 19.59 | 19.66 | 19.67 |
| | | 100 | 0 | 20.60 | 19.63 | 19.67 | 19.59 |
| | 16QAM | 1 | 0 | 20.60 | 19.77 | 19.72 | 19.89 |
| | | 1 | 50 | 20.60 | 19.89 | 19.87 | 19.66 |
| | | 1 | 99 | 20.60 | 19.81 | 19.84 | 19.90 |
| | | 50 | 0 | 20.50 | 19.48 | 19.59 | 19.60 |
| | | 50 | 25 | 20.50 | 19.49 | 19.57 | 19.58 |
| | | 50 | 50 | 20.50 | 19.52 | 19.59 | 19.58 |
| | | 100 | 0 | 20.50 | 19.55 | 19.58 | 19.55 |

Table 41: Conducted power measurement results of LTE Band 2 (Receiver OFF+Hotspot ON)

Note: The Conducted power measurements of LTE Band 2 is measured with RMS detector.

### 7.1.13 Conducted power measurements of LTE Band 4(Second antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 19957CH | 20175CH | 20393CH |
| 1.4MHz | QPSK | 1 | 0 | 24.50 | 23.52 | 23.50 | 23.63 |
| | | 1 | 3 | 24.50 | 23.43 | 23.39 | 23.55 |
| | | 1 | 5 | 24.50 | 23.46 | 23.43 | 23.58 |
| | | 3 | 0 | 24.50 | 23.41 | 23.37 | 23.54 |
| | | 3 | 2 | 24.50 | 23.46 | 23.48 | 23.47 |
| | | 3 | 3 | 24.50 | 23.38 | 23.35 | 23.58 |
| | | 6 | 0 | 23.50 | 22.29 | 22.44 | 22.37 |
| | 16QAM | 1 | 0 | 23.50 | 22.52 | 22.56 | 22.67 |
| | | 1 | 3 | 23.50 | 22.47 | 22.64 | 22.51 |
| | | 1 | 5 | 23.50 | 22.59 | 22.48 | 22.67 |
| | | 3 | 0 | 23.50 | 22.33 | 22.45 | 22.57 |
| | | 3 | 2 | 23.50 | 22.43 | 22.36 | 22.56 |
| | | 3 | 3 | 23.50 | 22.36 | 22.47 | 22.43 |
| | | 6 | 0 | 22.50 | 21.22 | 21.32 | 21.39 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 19965CH | 20175CH | 20385CH |
| 3MHz | QPSK | 1 | 0 | 24.50 | 23.44 | 23.45 | 23.55 |
| | | 1 | 7 | 24.50 | 23.50 | 23.42 | 23.56 |
| | | 1 | 14 | 24.50 | 23.44 | 23.42 | 23.57 |
| | | 8 | 0 | 23.50 | 22.39 | 22.41 | 22.45 |
| | | 8 | 4 | 23.50 | 22.34 | 22.38 | 22.50 |
| | | 8 | 7 | 23.50 | 22.29 | 22.39 | 22.53 |
| | | 15 | 0 | 23.50 | 22.47 | 22.41 | 22.52 |
| | 16QAM | 1 | 0 | 23.50 | 22.52 | 22.64 | 22.53 |
| | | 1 | 7 | 23.50 | 22.47 | 22.62 | 22.72 |
| | | 1 | 14 | 23.50 | 22.59 | 22.51 | 22.74 |
| | | 8 | 0 | 22.50 | 21.31 | 21.29 | 21.36 |
| | | 8 | 4 | 22.50 | 21.48 | 21.46 | 21.34 |
| | | 8 | 7 | 22.50 | 21.38 | 21.44 | 21.57 |
| | | 15 | 0 | 22.50 | 21.47 | 21.41 | 21.50 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19975CH | Channel 20175CH | Channel 20375CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 24.50 | 23.44 | 23.42 | 23.56 |
| | | 1 | 13 | 24.50 | 23.40 | 23.44 | 23.53 |
| | | 1 | 24 | 24.50 | 23.43 | 23.44 | 23.55 |
| | | 12 | 0 | 23.50 | 22.52 | 22.42 | 22.55 |
| | | 12 | 6 | 23.50 | 22.51 | 22.52 | 22.55 |
| | | 12 | 13 | 23.50 | 22.51 | 22.47 | 22.55 |
| | | 25 | 0 | 23.50 | 22.43 | 22.46 | 22.53 |
| | 16QAM | 1 | 0 | 23.50 | 22.66 | 22.55 | 22.74 |
| | | 1 | 13 | 23.50 | 22.59 | 22.57 | 22.80 |
| | | 1 | 24 | 23.50 | 22.54 | 22.54 | 22.65 |
| | | 12 | 0 | 22.50 | 21.45 | 21.42 | 21.51 |
| | | 12 | 6 | 22.50 | 21.49 | 21.39 | 21.54 |
| | | 12 | 13 | 22.50 | 21.50 | 21.45 | 21.51 |
| | | 25 | 0 | 22.50 | 21.34 | 21.33 | 21.46 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20000CH | Channel 20175CH | Channel 20350CH |
| 10MHz | QPSK | 1 | 0 | 24.50 | 23.44 | 23.39 | 23.52 |
| | | 1 | 25 | 24.50 | 23.45 | 23.43 | 23.45 |
| | | 1 | 49 | 24.50 | 23.42 | 23.50 | 23.49 |
| | | 25 | 0 | 23.50 | 22.42 | 22.46 | 22.53 |
| | | 25 | 13 | 23.50 | 22.42 | 22.47 | 22.53 |
| | | 25 | 25 | 23.50 | 22.42 | 22.47 | 22.53 |
| | | 50 | 0 | 23.50 | 22.44 | 22.40 | 22.47 |
| | 16QAM | 1 | 0 | 23.50 | 22.63 | 22.40 | 22.66 |
| | | 1 | 25 | 23.50 | 22.53 | 22.56 | 22.59 |
| | | 1 | 49 | 23.50 | 22.60 | 22.39 | 22.54 |
| | | 25 | 0 | 22.50 | 21.42 | 21.38 | 21.51 |
| | | 25 | 13 | 22.50 | 21.42 | 21.37 | 21.49 |
| | | 25 | 25 | 22.50 | 21.41 | 21.33 | 21.50 |
| | | 50 | 0 | 22.50 | 21.34 | 21.41 | 21.43 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20025CH | Channel 20175CH | Channel 20325CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 24.50 | 23.48 | 23.42 | 23.47 |
| | | 1 | 38 | 24.50 | 23.50 | 23.46 | 23.49 |
| | | 1 | 74 | 24.50 | 23.44 | 23.45 | 23.57 |
| | | 36 | 0 | 23.50 | 22.46 | 22.52 | 22.61 |
| | | 36 | 18 | 23.50 | 22.45 | 22.53 | 22.59 |
| | | 36 | 39 | 23.50 | 22.46 | 22.51 | 22.59 |
| | | 75 | 0 | 23.50 | 22.46 | 22.47 | 22.53 |
| | 16QAM | 1 | 0 | 23.50 | 22.54 | 22.60 | 22.68 |
| | | 1 | 38 | 23.50 | 22.45 | 22.53 | 22.55 |
| | | 1 | 74 | 23.50 | 22.65 | 22.54 | 22.40 |
| | | 36 | 0 | 22.50 | 21.38 | 21.35 | 21.47 |
| | | 36 | 18 | 22.50 | 21.41 | 21.39 | 21.44 |
| | | 36 | 39 | 22.50 | 21.41 | 21.40 | 21.46 |
| | | 75 | 0 | 22.50 | 21.38 | 21.34 | 21.48 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20050CH | Channel 20175CH | Channel 20300CH |
| 20MHz | QPSK | 1 | 0 | 24.50 | 23.54 | 23.54 | 23.51 |
| | | 1 | 50 | 24.50 | 23.54 | 23.55 | 23.54 |
| | | 1 | 99 | 24.50 | 23.58 | 23.52 | **23.61** |
| | | 50 | 0 | 23.50 | 22.53 | 22.47 | 22.51 |
| | | 50 | 25 | 23.50 | 22.53 | 22.47 | **22.56** |
| | | 50 | 50 | 23.50 | 22.51 | 22.48 | 22.56 |
| | | 100 | 0 | 23.50 | 22.43 | 22.47 | 22.53 |
| | 16QAM | 1 | 0 | 23.50 | 22.76 | 22.86 | 22.74 |
| | | 1 | 50 | 23.50 | 22.78 | 22.61 | 22.69 |
| | | 1 | 99 | 23.50 | 22.76 | 22.79 | 22.72 |
| | | 50 | 0 | 22.50 | 21.46 | 21.46 | 21.42 |
| | | 50 | 25 | 22.50 | 21.43 | 21.45 | 21.43 |
| | | 50 | 50 | 22.50 | 21.40 | 21.45 | 21.43 |
| | | 100 | 0 | 22.50 | 21.34 | 21.33 | 21.38 |

Table 42: Conducted power measurement results of LTE Band 4 (Full Power)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19957CH | Channel 20175CH | Channel 20393CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 18.90 | 17.94 | 17.95 | 18.10 |
| | | 1 | 3 | 18.90 | 17.95 | 18.01 | 18.08 |
| | | 1 | 5 | 18.90 | 17.94 | 18.02 | 18.06 |
| | | 3 | 0 | 18.90 | 17.96 | 18.00 | 18.07 |
| | | 3 | 2 | 18.90 | 17.94 | 17.91 | 18.12 |
| | | 3 | 3 | 18.90 | 18.01 | 17.83 | 18.08 |
| | | 6 | 0 | 18.90 | 17.91 | 17.93 | 17.93 |
| | 16QAM | 1 | 0 | 18.90 | 18.07 | 17.87 | 18.15 |
| | | 1 | 3 | 18.90 | 18.00 | 18.05 | 18.21 |
| | | 1 | 5 | 18.90 | 18.14 | 17.90 | 18.13 |
| | | 3 | 0 | 18.90 | 17.90 | 18.02 | 18.11 |
| | | 3 | 2 | 18.90 | 17.85 | 17.77 | 18.00 |
| | | 3 | 3 | 18.90 | 17.85 | 17.93 | 18.20 |
| | | 6 | 0 | 18.80 | 17.78 | 17.81 | 17.98 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19965CH | Channel 20175CH | Channel 20385CH |
| 3MHz | QPSK | 1 | 0 | 18.90 | 18.00 | 17.94 | 18.05 |
| | | 1 | 7 | 18.90 | 18.02 | 17.96 | 18.05 |
| | | 1 | 14 | 18.90 | 18.00 | 17.94 | 18.03 |
| | | 8 | 0 | 18.90 | 17.93 | 17.85 | 18.02 |
| | | 8 | 4 | 18.90 | 17.89 | 17.87 | 17.97 |
| | | 8 | 7 | 18.90 | 17.92 | 17.89 | 18.06 |
| | | 15 | 0 | 18.90 | 17.94 | 17.85 | 17.97 |
| | 16QAM | 1 | 0 | 18.90 | 18.20 | 18.05 | 17.94 |
| | | 1 | 7 | 18.90 | 18.12 | 18.00 | 18.33 |
| | | 1 | 14 | 18.90 | 18.19 | 18.25 | 18.11 |
| | | 8 | 0 | 18.80 | 17.91 | 17.92 | 17.95 |
| | | 8 | 4 | 18.80 | 17.95 | 17.82 | 17.97 |
| | | 8 | 7 | 18.80 | 17.85 | 17.86 | 18.04 |
| | | 15 | 0 | 18.80 | 17.92 | 17.93 | 18.01 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19975CH | Channel 20175CH | Channel 20375CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 18.90 | 17.93 | 18.02 | 18.08 |
| | | 1 | 13 | 18.90 | 17.93 | 18.00 | 18.04 |
| | | 1 | 24 | 18.90 | 17.90 | 17.97 | 18.13 |
| | | 12 | 0 | 18.90 | 18.03 | 18.01 | 18.16 |
| | | 12 | 6 | 18.90 | 18.03 | 18.01 | 18.05 |
| | | 12 | 13 | 18.90 | 18.02 | 18.01 | 18.16 |
| | | 25 | 0 | 18.90 | 17.97 | 17.99 | 18.00 |
| | 16QAM | 1 | 0 | 18.90 | 18.07 | 18.13 | 18.36 |
| | | 1 | 13 | 18.90 | 18.16 | 18.17 | 18.17 |
| | | 1 | 24 | 18.90 | 18.12 | 18.14 | 18.41 |
| | | 12 | 0 | 18.80 | 17.97 | 17.82 | 18.02 |
| | | 12 | 6 | 18.80 | 17.98 | 17.88 | 18.05 |
| | | 12 | 13 | 18.80 | 18.00 | 17.88 | 18.04 |
| | | 25 | 0 | 18.80 | 17.93 | 17.83 | 17.98 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20000CH | Channel 20175CH | Channel 20350CH |
| 10MHz | QPSK | 1 | 0 | 18.90 | 17.94 | 18.00 | 18.04 |
| | | 1 | 25 | 18.90 | 17.92 | 17.91 | 18.02 |
| | | 1 | 49 | 18.90 | 17.92 | 17.85 | 18.00 |
| | | 25 | 0 | 18.90 | 17.90 | 17.98 | 18.03 |
| | | 25 | 13 | 18.90 | 17.93 | 17.98 | 18.03 |
| | | 25 | 25 | 18.90 | 18.00 | 17.92 | 18.04 |
| | | 50 | 0 | 18.90 | 17.98 | 17.94 | 18.06 |
| | 16QAM | 1 | 0 | 18.90 | 17.86 | 17.94 | 18.06 |
| | | 1 | 25 | 18.90 | 17.94 | 18.18 | 18.12 |
| | | 1 | 49 | 18.90 | 17.93 | 18.05 | 18.10 |
| | | 25 | 0 | 18.80 | 17.89 | 17.88 | 18.02 |
| | | 25 | 13 | 18.80 | 17.85 | 17.85 | 18.01 |
| | | 25 | 25 | 18.80 | 17.86 | 17.86 | 18.02 |
| | | 50 | 0 | 18.80 | 17.90 | 17.85 | 17.92 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20025CH | Channel 20175CH | Channel 20325CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 18.90 | 17.92 | 17.89 | 18.01 |
| | | 1 | 38 | 18.90 | 17.89 | 17.90 | 17.97 |
| | | 1 | 74 | 18.90 | 17.91 | 17.89 | 17.99 |
| | | 36 | 0 | 18.90 | 18.00 | 18.03 | 18.02 |
| | | 36 | 18 | 18.90 | 18.01 | 18.04 | 18.02 |
| | | 36 | 39 | 18.90 | 18.00 | 18.05 | 18.02 |
| | | 75 | 0 | 18.90 | 17.89 | 17.94 | 18.08 |
| | 16QAM | 1 | 0 | 18.90 | 17.95 | 17.85 | 18.01 |
| | | 1 | 38 | 18.90 | 17.92 | 17.94 | 18.00 |
| | | 1 | 74 | 18.90 | 18.07 | 18.06 | 18.19 |
| | | 36 | 0 | 18.80 | 17.96 | 17.89 | 17.99 |
| | | 36 | 18 | 18.80 | 17.95 | 17.91 | 17.97 |
| | | 36 | 39 | 18.80 | 17.95 | 17.89 | 17.98 |
| | | 75 | 0 | 18.80 | 17.91 | 17.89 | 17.93 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20050CH | Channel 20175CH | Channel 20300CH |
| 20MHz | QPSK | 1 | 0 | 18.90 | **18.16** | 18.07 | 18.04 |
| | | 1 | 50 | 18.90 | 18.14 | 18.06 | 18.05 |
| | | 1 | 99 | 18.90 | 18.15 | 18.07 | 18.03 |
| | | 50 | 0 | 18.90 | 17.95 | 17.92 | **18.02** |
| | | 50 | 25 | 18.90 | 17.94 | 17.92 | 18.01 |
| | | 50 | 50 | 18.90 | 17.95 | 17.93 | 18.00 |
| | | 100 | 0 | 18.90 | 17.99 | 17.93 | 18.01 |
| | 16QAM | 1 | 0 | 18.90 | 18.27 | 18.41 | 18.20 |
| | | 1 | 50 | 18.90 | 18.21 | 18.24 | 18.29 |
| | | 1 | 99 | 18.90 | 18.39 | 18.19 | 18.36 |
| | | 50 | 0 | 18.80 | 17.87 | 17.90 | 17.97 |
| | | 50 | 25 | 18.80 | 17.87 | 17.88 | 17.96 |
| | | 50 | 50 | 18.80 | 17.92 | 17.89 | 17.95 |
| | | 100 | 0 | 18.80 | 17.86 | 17.89 | 17.95 |

Table 43: Conducted power measurement results of LTE Band 4 (Receiver ON)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19957CH | Channel 20175CH | Channel 20393CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 19.90 | 18.88 | 18.87 | 19.00 |
| | | 1 | 3 | 19.90 | 18.91 | 18.92 | 19.00 |
| | | 1 | 5 | 19.90 | 18.86 | 18.90 | 19.04 |
| | | 3 | 0 | 19.90 | 18.90 | 18.83 | 18.91 |
| | | 3 | 2 | 19.90 | 18.86 | 18.91 | 18.98 |
| | | 3 | 3 | 19.90 | 18.84 | 18.78 | 18.90 |
| | | 6 | 0 | 19.90 | 18.89 | 18.94 | 18.96 |
| | 16QAM | 1 | 0 | 19.90 | 19.08 | 18.92 | 19.02 |
| | | 1 | 3 | 19.90 | 19.02 | 18.90 | 18.98 |
| | | 1 | 5 | 19.90 | 19.06 | 18.93 | 19.08 |
| | | 3 | 0 | 19.90 | 18.83 | 19.01 | 18.88 |
| | | 3 | 2 | 19.90 | 18.95 | 18.74 | 18.97 |
| | | 3 | 3 | 19.90 | 18.91 | 18.86 | 18.92 |
| | | 6 | 0 | 19.80 | 18.88 | 18.84 | 18.82 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19965CH | Channel 20175CH | Channel 20385CH |
| 3MHz | QPSK | 1 | 0 | 19.90 | 18.89 | 18.90 | 18.98 |
| | | 1 | 7 | 19.90 | 18.87 | 18.86 | 19.00 |
| | | 1 | 14 | 19.90 | 18.86 | 18.90 | 18.99 |
| | | 8 | 0 | 19.90 | 18.82 | 18.90 | 19.03 |
| | | 8 | 4 | 19.90 | 18.86 | 18.80 | 18.97 |
| | | 8 | 7 | 19.90 | 18.84 | 18.82 | 18.97 |
| | | 15 | 0 | 19.90 | 18.92 | 18.88 | 19.04 |
| | 16QAM | 1 | 0 | 19.90 | 18.93 | 18.99 | 19.21 |
| | | 1 | 7 | 19.90 | 19.04 | 19.06 | 19.09 |
| | | 1 | 14 | 19.90 | 19.13 | 18.84 | 19.15 |
| | | 8 | 0 | 19.80 | 18.93 | 18.88 | 18.92 |
| | | 8 | 4 | 19.80 | 18.76 | 18.85 | 18.96 |
| | | 8 | 7 | 19.80 | 18.76 | 18.83 | 18.96 |
| | | 15 | 0 | 19.80 | 18.85 | 18.82 | 18.94 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19975CH | Channel 20175CH | Channel 20375CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 19.90 | 18.93 | 18.91 | 18.96 |
| | | 1 | 13 | 19.90 | 18.94 | 18.90 | 18.99 |
| | | 1 | 24 | 19.90 | 18.94 | 18.89 | 18.99 |
| | | 12 | 0 | 19.90 | 18.93 | 18.92 | 19.08 |
| | | 12 | 6 | 19.90 | 19.00 | 18.90 | 19.09 |
| | | 12 | 13 | 19.90 | 18.95 | 18.91 | 19.06 |
| | | 25 | 0 | 19.90 | 18.95 | 18.94 | 19.02 |
| | 16QAM | 1 | 0 | 19.90 | 19.12 | 19.15 | 18.94 |
| | | 1 | 13 | 19.90 | 19.15 | 19.22 | 19.14 |
| | | 1 | 24 | 19.90 | 19.08 | 19.31 | 19.05 |
| | | 12 | 0 | 19.80 | 18.93 | 18.84 | 19.00 |
| | | 12 | 6 | 19.80 | 18.88 | 18.93 | 19.03 |
| | | 12 | 13 | 19.80 | 18.93 | 18.90 | 19.06 |
| | | 25 | 0 | 19.80 | 18.88 | 18.84 | 18.89 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20000CH | Channel 20175CH | Channel 20350CH |
| 10MHz | QPSK | 1 | 0 | 19.90 | 18.90 | 18.94 | 19.00 |
| | | 1 | 25 | 19.90 | 18.86 | 18.93 | 18.99 |
| | | 1 | 49 | 19.90 | 18.85 | 18.92 | 19.01 |
| | | 25 | 0 | 19.90 | 18.90 | 18.91 | 19.07 |
| | | 25 | 13 | 19.90 | 18.90 | 18.91 | 19.02 |
| | | 25 | 25 | 19.90 | 18.88 | 18.95 | 18.99 |
| | | 50 | 0 | 19.90 | 18.90 | 18.92 | 19.01 |
| | 16QAM | 1 | 0 | 19.90 | 19.03 | 18.92 | 19.08 |
| | | 1 | 25 | 19.90 | 18.98 | 18.92 | 18.99 |
| | | 1 | 49 | 19.90 | 18.79 | 19.17 | 19.12 |
| | | 25 | 0 | 19.80 | 18.78 | 18.89 | 18.99 |
| | | 25 | 13 | 19.80 | 18.84 | 18.87 | 18.94 |
| | | 25 | 25 | 19.80 | 18.88 | 18.87 | 18.94 |
| | | 50 | 0 | 19.80 | 18.85 | 18.82 | 18.93 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20025CH | Channel 20175CH | Channel 20325CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 19.90 | 18.84 | 18.86 | 18.86 |
| | | 1 | 38 | 19.90 | 18.86 | 18.86 | 18.90 |
| | | 1 | 74 | 19.90 | 18.90 | 18.86 | 18.86 |
| | | 36 | 0 | 19.90 | 18.98 | 18.99 | 18.97 |
| | | 36 | 18 | 19.90 | 18.98 | 19.00 | 19.01 |
| | | 36 | 39 | 19.90 | 18.98 | 19.00 | 19.01 |
| | | 75 | 0 | 19.90 | 18.88 | 18.88 | 18.96 |
| | 16QAM | 1 | 0 | 19.90 | 18.98 | 18.97 | 19.02 |
| | | 1 | 38 | 19.90 | 19.06 | 18.85 | 19.02 |
| | | 1 | 74 | 19.90 | 18.87 | 18.98 | 19.07 |
| | | 36 | 0 | 19.80 | 18.88 | 18.90 | 18.97 |
| | | 36 | 18 | 19.80 | 18.93 | 18.95 | 18.94 |
| | | 36 | 39 | 19.80 | 18.92 | 18.93 | 18.93 |
| | | 75 | 0 | 19.80 | 18.83 | 18.84 | 18.89 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20050CH | Channel 20175CH | Channel 20300CH |
| 20MHz | QPSK | 1 | 0 | 19.90 | **19.06** | 19.01 | 19.00 |
| | | 1 | 50 | 19.90 | 19.05 | 18.99 | 19.00 |
| | | 1 | 99 | 19.90 | 19.05 | 19.04 | 19.01 |
| | | 50 | 0 | 19.90 | 18.94 | 18.90 | 18.94 |
| | | 50 | 25 | 19.90 | 18.95 | 18.92 | 18.96 |
| | | 50 | 50 | 19.90 | 18.95 | 18.91 | **18.98** |
| | | 100 | 0 | 19.90 | 18.89 | 18.96 | 18.98 |
| | 16QAM | 1 | 0 | 19.90 | 19.37 | 19.03 | 19.22 |
| | | 1 | 50 | 19.90 | 19.38 | 19.24 | 19.21 |
| | | 1 | 99 | 19.90 | 19.19 | 19.07 | 19.07 |
| | | 50 | 0 | 19.80 | 18.89 | 18.83 | 18.90 |
| | | 50 | 25 | 19.80 | 18.86 | 18.82 | 18.84 |
| | | 50 | 50 | 19.80 | 18.87 | 18.84 | 18.84 |
| | | 100 | 0 | 19.80 | 18.82 | 18.87 | 18.92 |

Table 44: Conducted power measurement results of LTE Band 4 (Receiver OFF+Hotspot ON)

Note: The Conducted power measurements of LTE Band 4 is measured with RMS detector.

### 7.1.14 Conducted power measurements of LTE Band 4(Main antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 19957CH | 20175CH | 20393CH |
| 1.4MHz | QPSK | 1 | 0 | 24.50 | 23.62 | 23.59 | 23.85 |
| | | 1 | 3 | 24.50 | 23.61 | 23.65 | 23.81 |
| | | 1 | 5 | 24.50 | 23.59 | 23.66 | 23.82 |
| | | 3 | 0 | 24.50 | 23.64 | 23.49 | 23.76 |
| | | 3 | 2 | 24.50 | 23.54 | 23.58 | 23.76 |
| | | 3 | 3 | 24.50 | 23.51 | 23.56 | 23.77 |
| | | 6 | 0 | 23.50 | 22.56 | 22.46 | 22.53 |
| | 16QAM | 1 | 0 | 23.50 | 22.57 | 22.77 | 22.76 |
| | | 1 | 3 | 23.50 | 22.78 | 22.71 | 22.91 |
| | | 1 | 5 | 23.50 | 22.78 | 22.63 | 22.80 |
| | | 3 | 0 | 23.50 | 22.55 | 22.57 | 22.64 |
| | | 3 | 2 | 23.50 | 22.43 | 22.62 | 22.83 |
| | | 3 | 3 | 23.50 | 22.48 | 22.58 | 22.60 |
| | | 6 | 0 | 22.50 | 21.44 | 21.53 | 21.61 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 19965CH | 20175CH | 20385CH |
| 3MHz | QPSK | 1 | 0 | 24.50 | 23.55 | 23.64 | 23.80 |
| | | 1 | 7 | 24.50 | 23.60 | 23.62 | 23.80 |
| | | 1 | 14 | 24.50 | 23.55 | 23.61 | 23.82 |
| | | 8 | 0 | 23.50 | 22.56 | 22.57 | 22.66 |
| | | 8 | 4 | 23.50 | 22.53 | 22.59 | 22.73 |
| | | 8 | 7 | 23.50 | 22.53 | 22.62 | 22.74 |
| | | 15 | 0 | 23.50 | 22.54 | 22.60 | 22.73 |
| | 16QAM | 1 | 0 | 23.50 | 22.71 | 22.73 | 22.85 |
| | | 1 | 7 | 23.50 | 22.75 | 22.55 | 22.76 |
| | | 1 | 14 | 23.50 | 22.73 | 22.70 | 23.02 |
| | | 8 | 0 | 22.50 | 21.46 | 21.56 | 21.71 |
| | | 8 | 4 | 22.50 | 21.36 | 21.62 | 21.63 |
| | | 8 | 7 | 22.50 | 21.50 | 21.42 | 21.64 |
| | | 15 | 0 | 22.50 | 21.46 | 21.52 | 21.68 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19975CH | Channel 20175CH | Channel 20375CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 24.50 | 23.60 | 23.63 | 23.76 |
| | | 1 | 13 | 24.50 | 23.61 | 23.57 | 23.75 |
| | | 1 | 24 | 24.50 | 23.56 | 23.62 | 23.75 |
| | | 12 | 0 | 23.50 | 22.62 | 22.59 | 22.74 |
| | | 12 | 6 | 23.50 | 22.62 | 22.59 | 22.76 |
| | | 12 | 13 | 23.50 | 22.62 | 22.60 | 22.75 |
| | | 25 | 0 | 23.50 | 22.53 | 22.64 | 22.72 |
| | 16QAM | 1 | 0 | 23.50 | 22.77 | 22.63 | 22.86 |
| | | 1 | 13 | 23.50 | 22.82 | 22.62 | 22.79 |
| | | 1 | 24 | 23.50 | 22.82 | 22.79 | 22.90 |
| | | 12 | 0 | 22.50 | 21.59 | 21.60 | 21.77 |
| | | 12 | 6 | 22.50 | 21.55 | 21.62 | 21.73 |
| | | 12 | 13 | 22.50 | 21.61 | 21.59 | 21.75 |
| | | 25 | 0 | 22.50 | 21.56 | 21.50 | 21.68 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20000CH | Channel 20175CH | Channel 20350CH |
| 10MHz | QPSK | 1 | 0 | 24.50 | 23.59 | 23.63 | 23.72 |
| | | 1 | 25 | 24.50 | 23.64 | 23.55 | 23.66 |
| | | 1 | 49 | 24.50 | 23.55 | 23.55 | 23.68 |
| | | 25 | 0 | 23.50 | 22.59 | 22.63 | 22.77 |
| | | 25 | 13 | 23.50 | 22.59 | 22.64 | 22.74 |
| | | 25 | 25 | 23.50 | 22.59 | 22.64 | 22.74 |
| | | 50 | 0 | 23.50 | 22.58 | 22.58 | 22.74 |
| | 16QAM | 1 | 0 | 23.50 | 22.59 | 22.72 | 22.55 |
| | | 1 | 25 | 23.50 | 22.55 | 22.46 | 22.78 |
| | | 1 | 49 | 23.50 | 22.61 | 22.76 | 22.73 |
| | | 25 | 0 | 22.50 | 21.54 | 21.50 | 21.75 |
| | | 25 | 13 | 22.50 | 21.51 | 21.52 | 21.72 |
| | | 25 | 25 | 22.50 | 21.50 | 21.52 | 21.72 |
| | | 50 | 0 | 22.50 | 21.48 | 21.59 | 21.72 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20025CH | Channel 20175CH | Channel 20325CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 24.50 | 23.58 | 23.60 | 23.69 |
| | | 1 | 38 | 24.50 | 23.58 | 23.62 | 23.71 |
| | | 1 | 74 | 24.50 | 23.58 | 23.66 | 23.69 |
| | | 36 | 0 | 23.50 | 22.58 | 22.68 | 22.74 |
| | | 36 | 18 | 23.50 | 22.58 | 22.68 | 22.74 |
| | | 36 | 39 | 23.50 | 22.58 | 22.68 | 22.73 |
| | | 75 | 0 | 23.50 | 22.52 | 22.64 | 22.77 |
| | 16QAM | 1 | 0 | 23.50 | 22.84 | 22.68 | 22.77 |
| | | 1 | 38 | 23.50 | 22.73 | 22.72 | 22.67 |
| | | 1 | 74 | 23.50 | 22.52 | 22.57 | 22.84 |
| | | 36 | 0 | 22.50 | 21.55 | 21.56 | 21.69 |
| | | 36 | 18 | 22.50 | 21.51 | 21.55 | 21.73 |
| | | 36 | 39 | 22.50 | 21.52 | 21.55 | 21.73 |
| | | 75 | 0 | 22.50 | 21.54 | 21.53 | 21.64 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20050CH | Channel 20175CH | Channel 20300CH |
| 20MHz | QPSK | 1 | 0 | 24.50 | 23.70 | 23.69 | **23.74** |
| | | 1 | 50 | 24.50 | 23.71 | 23.68 | 23.72 |
| | | 1 | 99 | 24.50 | 23.68 | 23.70 | 23.70 |
| | | 50 | 0 | 23.50 | 22.57 | 22.65 | **22.71** |
| | | 50 | 25 | 23.50 | 22.57 | 22.61 | 22.70 |
| | | 50 | 50 | 23.50 | 22.58 | 22.60 | 22.70 |
| | | 100 | 0 | 23.50 | 22.55 | 22.63 | 22.75 |
| | 16QAM | 1 | 0 | 23.50 | 22.84 | 22.80 | 22.79 |
| | | 1 | 50 | 23.50 | 22.90 | 22.81 | 22.83 |
| | | 1 | 99 | 23.50 | 22.74 | 22.67 | 22.74 |
| | | 50 | 0 | 22.50 | 21.49 | 21.56 | 21.58 |
| | | 50 | 25 | 22.50 | 21.50 | 21.60 | 21.58 |
| | | 50 | 50 | 22.50 | 21.51 | 21.61 | 21.61 |
| | | 100 | 0 | 22.50 | 21.46 | 21.61 | 21.61 |

Table 45: Conducted power measurement results of LTE Band 4 (Full Power)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19957CH | Channel 20175CH | Channel 20393CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 23.10 | 22.12 | 22.17 | 22.33 |
| | | 1 | 3 | 23.10 | 22.07 | 22.14 | 22.34 |
| | | 1 | 5 | 23.10 | 22.10 | 22.15 | 22.24 |
| | | 3 | 0 | 23.10 | 21.96 | 22.13 | 22.25 |
| | | 3 | 2 | 23.10 | 21.98 | 22.02 | 22.19 |
| | | 3 | 3 | 23.10 | 22.04 | 22.16 | 22.23 |
| | | 6 | 0 | 23.10 | 21.90 | 22.04 | 22.05 |
| | 16QAM | 1 | 0 | 23.10 | 22.05 | 22.05 | 22.35 |
| | | 1 | 3 | 23.10 | 22.17 | 22.04 | 22.47 |
| | | 1 | 5 | 23.10 | 22.20 | 22.05 | 22.38 |
| | | 3 | 0 | 23.10 | 21.92 | 22.03 | 22.11 |
| | | 3 | 2 | 23.10 | 22.02 | 21.89 | 22.21 |
| | | 3 | 3 | 23.10 | 22.04 | 22.07 | 22.19 |
| | | 6 | 0 | 22.50 | 21.43 | 21.44 | 21.68 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19965CH | Channel 20175CH | Channel 20385CH |
| 3MHz | QPSK | 1 | 0 | 23.10 | 22.08 | 22.09 | 22.30 |
| | | 1 | 7 | 23.10 | 22.13 | 22.07 | 22.26 |
| | | 1 | 14 | 23.10 | 22.13 | 22.12 | 22.28 |
| | | 8 | 0 | 23.10 | 21.99 | 22.06 | 22.27 |
| | | 8 | 4 | 23.10 | 21.95 | 22.09 | 22.27 |
| | | 8 | 7 | 23.10 | 22.09 | 22.10 | 22.24 |
| | | 15 | 0 | 23.10 | 22.01 | 22.08 | 22.25 |
| | 16QAM | 1 | 0 | 23.10 | 22.18 | 22.34 | 22.42 |
| | | 1 | 7 | 23.10 | 22.35 | 22.30 | 22.32 |
| | | 1 | 14 | 23.10 | 22.02 | 22.30 | 22.24 |
| | | 8 | 0 | 22.50 | 21.54 | 21.52 | 21.75 |
| | | 8 | 4 | 22.50 | 21.54 | 21.54 | 21.75 |
| | | 8 | 7 | 22.50 | 21.38 | 21.51 | 21.74 |
| | | 15 | 0 | 22.50 | 21.49 | 21.61 | 21.74 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19975CH | Channel 20175CH | Channel 20375CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 23.10 | 22.08 | 22.10 | 22.23 |
| | | 1 | 13 | 23.10 | 22.07 | 22.08 | 22.27 |
| | | 1 | 24 | 23.10 | 22.05 | 22.07 | 22.28 |
| | | 12 | 0 | 23.10 | 22.12 | 22.12 | 22.26 |
| | | 12 | 6 | 23.10 | 22.13 | 22.18 | 22.27 |
| | | 12 | 13 | 23.10 | 22.12 | 22.12 | 22.26 |
| | | 25 | 0 | 23.10 | 22.05 | 22.15 | 22.23 |
| | 16QAM | 1 | 0 | 23.10 | 22.31 | 22.26 | 22.45 |
| | | 1 | 13 | 23.10 | 22.35 | 22.27 | 22.44 |
| | | 1 | 24 | 23.10 | 22.24 | 22.33 | 22.38 |
| | | 12 | 0 | 22.50 | 21.59 | 21.61 | 21.75 |
| | | 12 | 6 | 22.50 | 21.53 | 21.62 | 21.72 |
| | | 12 | 13 | 22.50 | 21.58 | 21.60 | 21.76 |
| | | 25 | 0 | 22.50 | 21.56 | 21.52 | 21.70 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20000CH | Channel 20175CH | Channel 20350CH |
| 10MHz | QPSK | 1 | 0 | 23.10 | 22.06 | 22.09 | 22.27 |
| | | 1 | 25 | 23.10 | 22.07 | 22.09 | 22.24 |
| | | 1 | 49 | 23.10 | 22.09 | 22.06 | 22.25 |
| | | 25 | 0 | 23.10 | 22.11 | 22.16 | 22.27 |
| | | 25 | 13 | 23.10 | 22.10 | 22.17 | 22.26 |
| | | 25 | 25 | 23.10 | 22.10 | 22.17 | 22.26 |
| | | 50 | 0 | 23.10 | 22.09 | 22.10 | 22.25 |
| | 16QAM | 1 | 0 | 23.10 | 22.13 | 22.06 | 22.31 |
| | | 1 | 25 | 23.10 | 21.92 | 22.11 | 22.21 |
| | | 1 | 49 | 23.10 | 22.17 | 22.05 | 22.22 |
| | | 25 | 0 | 22.50 | 21.51 | 21.53 | 21.71 |
| | | 25 | 13 | 22.50 | 21.49 | 21.53 | 21.72 |
| | | 25 | 25 | 22.50 | 21.51 | 21.50 | 21.74 |
| | | 50 | 0 | 22.50 | 21.48 | 21.57 | 21.71 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20025CH | Channel 20175CH | Channel 20325CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 23.10 | 22.04 | 22.10 | 22.24 |
| | | 1 | 38 | 23.10 | 22.05 | 22.09 | 22.22 |
| | | 1 | 74 | 23.10 | 22.08 | 22.13 | 22.23 |
| | | 36 | 0 | 23.10 | 22.10 | 22.20 | 22.26 |
| | | 36 | 18 | 23.10 | 22.10 | 22.13 | 22.26 |
| | | 36 | 39 | 23.10 | 22.10 | 22.21 | 22.25 |
| | | 75 | 0 | 23.10 | 22.03 | 22.11 | 22.29 |
| | 16QAM | 1 | 0 | 23.10 | 22.21 | 22.12 | 22.38 |
| | | 1 | 38 | 23.10 | 22.39 | 22.20 | 22.37 |
| | | 1 | 74 | 23.10 | 21.95 | 22.13 | 22.28 |
| | | 36 | 0 | 22.50 | 21.54 | 21.54 | 21.76 |
| | | 36 | 18 | 22.50 | 21.54 | 21.54 | 21.73 |
| | | 36 | 39 | 22.50 | 21.53 | 21.57 | 21.74 |
| | | 75 | 0 | 22.50 | 21.55 | 21.50 | 21.66 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20050CH | Channel 20175CH | Channel 20300CH |
| 20MHz | QPSK | 1 | 0 | 23.10 | 22.15 | 22.23 | **22.24** |
| | | 1 | 50 | 23.10 | 22.22 | 22.22 | 22.23 |
| | | 1 | 99 | 23.10 | 22.20 | 22.22 | 22.22 |
| | | 50 | 0 | 23.10 | 22.08 | 22.11 | **22.23** |
| | | 50 | 25 | 23.10 | 22.08 | 22.12 | 22.22 |
| | | 50 | 50 | 23.10 | 22.09 | 22.13 | 22.22 |
| | | 100 | 0 | 23.10 | 22.06 | 22.16 | 22.19 |
| | 16QAM | 1 | 0 | 23.10 | 22.34 | 22.48 | 22.46 |
| | | 1 | 50 | 23.10 | 22.42 | 22.33 | 22.33 |
| | | 1 | 99 | 23.10 | 22.35 | 22.29 | 22.49 |
| | | 50 | 0 | 22.50 | 21.48 | 21.57 | 21.59 |
| | | 50 | 25 | 22.50 | 21.53 | 21.59 | 21.64 |
| | | 50 | 50 | 22.50 | 21.51 | 21.59 | 21.59 |
| | | 100 | 0 | 22.50 | 21.48 | 21.60 | 21.60 |

Table 46: Conducted power measurement results of LTE Band 4 (Receiver OFF)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19957CH | Channel 20175CH | Channel 20393CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 20.60 | 19.55 | 19.66 | 19.80 |
| | | 1 | 3 | 20.60 | 19.58 | 19.68 | 19.82 |
| | | 1 | 5 | 20.60 | 19.61 | 19.69 | 19.85 |
| | | 3 | 0 | 20.60 | 19.49 | 19.66 | 19.78 |
| | | 3 | 2 | 20.60 | 19.54 | 19.60 | 19.77 |
| | | 3 | 3 | 20.60 | 19.52 | 19.68 | 19.70 |
| | | 6 | 0 | 20.60 | 19.40 | 19.49 | 19.69 |
| | 16QAM | 1 | 0 | 20.60 | 19.66 | 19.75 | 19.84 |
| | | 1 | 3 | 20.60 | 19.62 | 19.73 | 19.89 |
| | | 1 | 5 | 20.60 | 19.61 | 19.76 | 19.79 |
| | | 3 | 0 | 20.60 | 19.55 | 19.75 | 19.63 |
| | | 3 | 2 | 20.60 | 19.64 | 19.57 | 19.73 |
| | | 3 | 3 | 20.60 | 19.57 | 19.39 | 19.72 |
| | | 6 | 0 | 20.50 | 19.45 | 19.63 | 19.69 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19965CH | Channel 20175CH | Channel 20385CH |
| 3MHz | QPSK | 1 | 0 | 20.60 | 19.52 | 19.65 | 19.78 |
| | | 1 | 7 | 20.60 | 19.57 | 19.64 | 19.75 |
| | | 1 | 14 | 20.60 | 19.56 | 19.69 | 19.78 |
| | | 8 | 0 | 20.60 | 19.55 | 19.61 | 19.76 |
| | | 8 | 4 | 20.60 | 19.49 | 19.50 | 19.78 |
| | | 8 | 7 | 20.60 | 19.57 | 19.52 | 19.73 |
| | | 15 | 0 | 20.60 | 19.63 | 19.62 | 19.79 |
| | 16QAM | 1 | 0 | 20.60 | 19.62 | 19.60 | 19.86 |
| | | 1 | 7 | 20.60 | 19.58 | 19.84 | 19.69 |
| | | 1 | 14 | 20.60 | 19.73 | 19.75 | 19.80 |
| | | 8 | 0 | 20.50 | 19.53 | 19.65 | 19.77 |
| | | 8 | 4 | 20.50 | 19.48 | 19.67 | 19.77 |
| | | 8 | 7 | 20.50 | 19.49 | 19.53 | 19.74 |
| | | 15 | 0 | 20.50 | 19.42 | 19.65 | 19.73 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 19975CH | Channel 20175CH | Channel 20375CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 20.60 | 19.57 | 19.66 | 19.75 |
| | | 1 | 13 | 20.60 | 19.55 | 19.66 | 19.78 |
| | | 1 | 24 | 20.60 | 19.57 | 19.68 | 19.75 |
| | | 12 | 0 | 20.60 | 19.58 | 19.64 | 19.81 |
| | | 12 | 6 | 20.60 | 19.64 | 19.65 | 19.81 |
| | | 12 | 13 | 20.60 | 19.59 | 19.65 | 19.80 |
| | | 25 | 0 | 20.60 | 19.59 | 19.65 | 19.77 |
| | 16QAM | 1 | 0 | 20.60 | 19.84 | 19.93 | 19.98 |
| | | 1 | 13 | 20.60 | 19.64 | 19.80 | 19.92 |
| | | 1 | 24 | 20.60 | 19.70 | 19.85 | 19.99 |
| | | 12 | 0 | 20.50 | 19.59 | 19.62 | 19.81 |
| | | 12 | 6 | 20.50 | 19.58 | 19.64 | 19.81 |
| | | 12 | 13 | 20.50 | 19.62 | 19.66 | 19.81 |
| | | 25 | 0 | 20.50 | 19.56 | 19.55 | 19.68 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20000CH | Channel 20175CH | Channel 20350CH |
| 10MHz | QPSK | 1 | 0 | 20.60 | 19.63 | 19.62 | 19.69 |
| | | 1 | 25 | 20.60 | 19.60 | 19.62 | 19.73 |
| | | 1 | 49 | 20.60 | 19.59 | 19.62 | 19.72 |
| | | 25 | 0 | 20.60 | 19.56 | 19.59 | 19.76 |
| | | 25 | 13 | 20.60 | 19.54 | 19.58 | 19.81 |
| | | 25 | 25 | 20.60 | 19.55 | 19.57 | 19.83 |
| | | 50 | 0 | 20.60 | 19.61 | 19.63 | 19.79 |
| | 16QAM | 1 | 0 | 20.60 | 19.72 | 19.61 | 19.87 |
| | | 1 | 25 | 20.60 | 19.70 | 19.68 | 19.89 |
| | | 1 | 49 | 20.60 | 19.69 | 19.79 | 19.71 |
| | | 25 | 0 | 20.50 | 19.54 | 19.64 | 19.65 |
| | | 25 | 13 | 20.50 | 19.55 | 19.55 | 19.64 |
| | | 25 | 25 | 20.50 | 19.51 | 19.50 | 19.64 |
| | | 50 | 0 | 20.50 | 19.51 | 19.60 | 19.67 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20025CH | Channel 20175CH | Channel 20325CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 20.60 | 19.49 | 19.56 | 19.69 |
| | | 1 | 38 | 20.60 | 19.51 | 19.56 | 19.69 |
| | | 1 | 74 | 20.60 | 19.51 | 19.60 | 19.65 |
| | | 36 | 0 | 20.60 | 19.61 | 19.70 | 19.72 |
| | | 36 | 18 | 20.60 | 19.61 | 19.71 | 19.70 |
| | | 36 | 39 | 20.60 | 19.61 | 19.71 | 19.81 |
| | | 75 | 0 | 20.60 | 19.56 | 19.68 | 19.73 |
| | 16QAM | 1 | 0 | 20.60 | 19.72 | 19.87 | 19.84 |
| | | 1 | 38 | 20.60 | 19.55 | 19.66 | 19.68 |
| | | 1 | 74 | 20.60 | 19.58 | 19.57 | 19.84 |
| | | 36 | 0 | 20.50 | 19.53 | 19.66 | 19.68 |
| | | 36 | 18 | 20.50 | 19.56 | 19.62 | 19.68 |
| | | 36 | 39 | 20.50 | 19.58 | 19.69 | 19.66 |
| | | 75 | 0 | 20.50 | 19.53 | 19.52 | 19.67 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20050CH | Channel 20175CH | Channel 20300CH |
| 20MHz | QPSK | 1 | 0 | 20.60 | 19.73 | 19.71 | **19.78** |
| | | 1 | 50 | 20.60 | 19.71 | 19.65 | 19.73 |
| | | 1 | 99 | 20.60 | 19.72 | 19.69 | 19.77 |
| | | 50 | 0 | 20.60 | 19.59 | 19.59 | 19.68 |
| | | 50 | 25 | 20.60 | 19.57 | 19.60 | 19.66 |
| | | 50 | 50 | 20.60 | 19.59 | 19.61 | **19.75** |
| | | 100 | 0 | 20.60 | 19.60 | 19.64 | 19.69 |
| | 16QAM | 1 | 0 | 20.60 | 19.86 | 19.87 | 19.95 |
| | | 1 | 50 | 20.60 | 19.84 | 19.79 | 19.86 |
| | | 1 | 99 | 20.60 | 19.78 | 19.81 | 19.81 |
| | | 50 | 0 | 20.50 | 19.57 | 19.56 | 19.66 |
| | | 50 | 25 | 20.50 | 19.56 | 19.59 | 19.62 |
| | | 50 | 50 | 20.50 | 19.50 | 19.57 | 19.63 |
| | | 100 | 0 | 20.50 | 19.51 | 19.62 | 19.66 |

Table 47: Conducted power measurement results of LTE Band 4 (Receiver OFF+Hotspot ON)

Note: The Conducted power measurements of LTE Band 4 is measured with RMS detector.

### 7.1.15 Conducted power measurements of LTE Band 5(Second antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 20407CH | 20525CH | 20643CH |
| 1.4MHz | QPSK | 1 | 0 | 24.80 | 23.88 | 23.88 | 23.81 |
| | | 1 | 3 | 24.80 | 23.92 | 23.85 | 23.84 |
| | | 1 | 5 | 24.80 | 23.92 | 23.84 | 23.77 |
| | | 3 | 0 | 24.80 | 23.82 | 23.82 | 23.76 |
| | | 3 | 2 | 24.80 | 23.86 | 23.75 | 23.75 |
| | | 3 | 3 | 24.80 | 23.89 | 23.85 | 23.74 |
| | | 6 | 0 | 23.80 | 22.76 | 22.79 | 22.79 |
| | 16QAM | 1 | 0 | 23.80 | 23.02 | 22.91 | 22.82 |
| | | 1 | 3 | 23.80 | 22.95 | 22.90 | 22.89 |
| | | 1 | 5 | 23.80 | 23.06 | 22.76 | 22.91 |
| | | 3 | 0 | 23.80 | 22.96 | 22.83 | 22.85 |
| | | 3 | 2 | 23.80 | 22.94 | 22.66 | 22.72 |
| | | 3 | 3 | 23.80 | 22.89 | 22.87 | 22.73 |
| | | 6 | 0 | 22.80 | 21.79 | 21.84 | 21.73 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 20415CH | 20525CH | 20635CH |
| 3MHz | QPSK | 1 | 0 | 24.80 | 23.86 | 23.91 | 23.79 |
| | | 1 | 7 | 24.80 | 23.90 | 23.91 | 23.81 |
| | | 1 | 14 | 24.80 | 23.91 | 23.89 | 23.83 |
| | | 8 | 0 | 23.80 | 22.92 | 22.75 | 22.70 |
| | | 8 | 4 | 23.80 | 22.80 | 22.77 | 22.75 |
| | | 8 | 7 | 23.80 | 22.85 | 22.80 | 22.76 |
| | | 15 | 0 | 23.80 | 22.84 | 22.82 | 22.78 |
| | 16QAM | 1 | 0 | 23.80 | 22.91 | 22.95 | 22.75 |
| | | 1 | 7 | 23.80 | 22.88 | 22.88 | 22.80 |
| | | 1 | 14 | 23.80 | 22.82 | 22.82 | 22.73 |
| | | 8 | 0 | 22.80 | 21.82 | 21.81 | 21.72 |
| | | 8 | 4 | 22.80 | 21.73 | 21.80 | 21.70 |
| | | 8 | 7 | 22.80 | 21.82 | 21.79 | 21.75 |
| | | 15 | 0 | 22.80 | 21.85 | 21.78 | 21.76 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20425CH | Channel 20525CH | Channel 20625CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 24.80 | 23.85 | 23.86 | 23.82 |
| | | 1 | 13 | 24.80 | 23.85 | 23.76 | 23.83 |
| | | 1 | 24 | 24.80 | 23.90 | 23.83 | 23.80 |
| | | 12 | 0 | 23.80 | 22.98 | 22.87 | 22.86 |
| | | 12 | 6 | 23.80 | 22.97 | 22.88 | 22.84 |
| | | 12 | 13 | 23.80 | 22.98 | 22.89 | 22.85 |
| | | 25 | 0 | 23.80 | 22.91 | 22.86 | 22.88 |
| | 16QAM | 1 | 0 | 23.80 | 23.01 | 23.02 | 22.96 |
| | | 1 | 13 | 23.80 | 22.96 | 22.81 | 23.02 |
| | | 1 | 24 | 23.80 | 23.01 | 22.96 | 23.09 |
| | | 12 | 0 | 22.80 | 21.89 | 21.81 | 21.75 |
| | | 12 | 6 | 22.80 | 21.91 | 21.84 | 21.77 |
| | | 12 | 13 | 22.80 | 21.91 | 21.84 | 21.76 |
| | | 25 | 0 | 22.80 | 21.77 | 21.77 | 21.70 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20450CH | Channel 20525CH | Channel 20600CH |
| 10MHz | QPSK | 1 | 0 | 24.80 | 23.88 | 23.92 | 23.85 |
| | | 1 | 25 | 24.80 | 23.89 | 23.84 | 23.92 |
| | | 1 | 49 | 24.80 | **23.92** | 23.91 | 23.83 |
| | | 25 | 0 | 23.80 | **22.94** | 22.86 | 22.80 |
| | | 25 | 13 | 23.80 | 22.93 | 22.86 | 22.86 |
| | | 25 | 25 | 23.80 | 22.93 | 22.87 | 22.83 |
| | | 50 | 0 | 23.80 | 22.80 | 22.80 | 22.83 |
| | 16QAM | 1 | 0 | 23.80 | 23.01 | 22.87 | 23.05 |
| | | 1 | 25 | 23.80 | 22.99 | 23.01 | 22.84 |
| | | 1 | 49 | 23.80 | 22.91 | 22.97 | 22.85 |
| | | 25 | 0 | 22.80 | 21.86 | 21.77 | 21.82 |
| | | 25 | 13 | 22.80 | 21.82 | 21.78 | 21.80 |
| | | 25 | 25 | 22.80 | 21.81 | 21.82 | 21.71 |
| | | 50 | 0 | 22.80 | 21.78 | 21.82 | 21.78 |

Table 48: Conducted power measurement results of LTE Band 5 (Full Power)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20407CH | Channel 20525CH | Channel 20643CH |
|---|---|---|---|---|---|---|---|
| 1.4MHz | QPSK | 1 | 0 | 21.20 | 20.43 | 20.38 | 20.29 |
| | | 1 | 3 | 21.20 | 20.44 | 20.36 | 20.28 |
| | | 1 | 5 | 21.20 | 20.44 | 20.39 | 20.41 |
| | | 3 | 0 | 21.20 | 20.32 | 20.26 | 20.25 |
| | | 3 | 2 | 21.20 | 20.38 | 20.34 | 20.30 |
| | | 3 | 3 | 21.20 | 20.27 | 20.30 | 20.32 |
| | | 6 | 0 | 21.20 | 20.35 | 20.29 | 20.17 |
| | 16QAM | 1 | 0 | 21.20 | 20.30 | 20.37 | 20.55 |
| | | 1 | 3 | 21.20 | 20.37 | 20.41 | 20.36 |
| | | 1 | 5 | 21.20 | 20.45 | 20.30 | 20.34 |
| | | 3 | 0 | 21.20 | 20.37 | 20.42 | 20.18 |
| | | 3 | 2 | 21.20 | 20.39 | 20.44 | 20.18 |
| | | 3 | 3 | 21.20 | 20.37 | 20.22 | 20.13 |
| | | 6 | 0 | 21.20 | 20.31 | 20.21 | 20.20 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20415CH | Channel 20525CH | Channel 20635CH |
| 3MHz | QPSK | 1 | 0 | 21.20 | 20.35 | 20.34 | 20.35 |
| | | 1 | 7 | 21.20 | 20.36 | 20.40 | 20.30 |
| | | 1 | 14 | 21.20 | 20.42 | 20.36 | 20.33 |
| | | 8 | 0 | 21.20 | 20.33 | 20.34 | 20.22 |
| | | 8 | 4 | 21.20 | 20.29 | 20.31 | 20.23 |
| | | 8 | 7 | 21.20 | 20.33 | 20.28 | 20.28 |
| | | 15 | 0 | 21.20 | 20.40 | 20.33 | 20.28 |
| | 16QAM | 1 | 0 | 21.20 | 20.43 | 20.50 | 20.23 |
| | | 1 | 7 | 21.20 | 20.38 | 20.50 | 20.41 |
| | | 1 | 14 | 21.20 | 20.54 | 20.48 | 20.35 |
| | | 8 | 0 | 21.20 | 20.31 | 20.38 | 20.25 |
| | | 8 | 4 | 21.20 | 20.29 | 20.29 | 20.21 |
| | | 8 | 7 | 21.20 | 20.33 | 20.17 | 20.16 |
| | | 15 | 0 | 21.20 | 20.31 | 20.20 | 20.27 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20425CH | Channel 20525CH | Channel 20625CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 21.20 | 20.41 | 20.33 | 20.33 |
| | | 1 | 13 | 21.20 | 20.39 | 20.30 | 20.32 |
| | | 1 | 24 | 21.20 | 20.41 | 20.31 | 20.32 |
| | | 12 | 0 | 21.20 | 20.48 | 20.44 | 20.31 |
| | | 12 | 6 | 21.20 | 20.48 | 20.46 | 20.32 |
| | | 12 | 13 | 21.20 | 20.47 | 20.37 | 20.33 |
| | | 25 | 0 | 21.20 | 20.41 | 20.31 | 20.27 |
| | 16QAM | 1 | 0 | 21.20 | 20.59 | 20.51 | 20.38 |
| | | 1 | 13 | 21.20 | 20.62 | 20.45 | 20.49 |
| | | 1 | 24 | 21.20 | 20.58 | 20.42 | 20.52 |
| | | 12 | 0 | 21.20 | 20.33 | 20.43 | 20.39 |
| | | 12 | 6 | 21.20 | 20.37 | 20.35 | 20.36 |
| | | 12 | 13 | 21.20 | 20.46 | 20.35 | 20.31 |
| | | 25 | 0 | 21.20 | 20.34 | 20.25 | 20.21 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20450CH | Channel 20525CH | Channel 20600CH |
| 10MHz | QPSK | 1 | 0 | 21.20 | 20.36 | 20.31 | **20.37** |
| | | 1 | 25 | 21.20 | 20.35 | 20.34 | 20.36 |
| | | 1 | 49 | 21.20 | 20.32 | 20.35 | 20.34 |
| | | 25 | 0 | 21.20 | **20.44** | 20.30 | 20.32 |
| | | 25 | 13 | 21.20 | 20.41 | 20.30 | 20.31 |
| | | 25 | 25 | 21.20 | 20.43 | 20.31 | 20.33 |
| | | 50 | 0 | 21.20 | 20.37 | 20.34 | 20.30 |
| | 16QAM | 1 | 0 | 21.20 | 20.37 | 20.29 | 20.47 |
| | | 1 | 25 | 21.20 | 20.47 | 20.46 | 20.53 |
| | | 1 | 49 | 21.20 | 20.20 | 20.40 | 20.44 |
| | | 25 | 0 | 21.20 | 20.30 | 20.23 | 20.24 |
| | | 25 | 13 | 21.20 | 20.27 | 20.28 | 20.26 |
| | | 25 | 25 | 21.20 | 20.30 | 20.26 | 20.24 |
| | | 50 | 0 | 21.20 | 20.33 | 20.24 | 20.27 |

Table 49: Conducted power measurement results of LTE Band 5 (Receiver ON)

Note: The Conducted power measurements of LTE Band 5 is measured with RMS detector.

### 7.1.16 Conducted power measurements of LTE Band 5(Main antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 20407CH | 20525CH | 20643CH |
| 1.4MHz | QPSK | 1 | 0 | 25.00 | 23.92 | 24.00 | 24.09 |
| | | 1 | 3 | 25.00 | 23.91 | 23.93 | 24.05 |
| | | 1 | 5 | 25.00 | 23.99 | 24.03 | 24.13 |
| | | 3 | 0 | 25.00 | 23.81 | 23.92 | 23.94 |
| | | 3 | 2 | 25.00 | 23.82 | 23.80 | 23.90 |
| | | 3 | 3 | 25.00 | 23.84 | 23.87 | 23.97 |
| | | 6 | 0 | 24.00 | 22.80 | 22.95 | 22.86 |
| | 16QAM | 1 | 0 | 24.00 | 23.06 | 23.06 | 23.17 |
| | | 1 | 3 | 24.00 | 23.02 | 23.08 | 23.18 |
| | | 1 | 5 | 24.00 | 22.97 | 23.01 | 23.02 |
| | | 3 | 0 | 24.00 | 22.78 | 22.92 | 23.01 |
| | | 3 | 2 | 24.00 | 22.77 | 22.95 | 22.92 |
| | | 3 | 3 | 24.00 | 22.77 | 22.90 | 22.99 |
| | | 6 | 0 | 23.00 | 21.86 | 21.81 | 21.95 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 20415CH | 20525CH | 20635CH |
| 3MHz | QPSK | 1 | 0 | 25.00 | 24.00 | 23.96 | 24.05 |
| | | 1 | 7 | 25.00 | 23.88 | 23.94 | 24.03 |
| | | 1 | 14 | 25.00 | 23.98 | 24.02 | 24.01 |
| | | 8 | 0 | 24.00 | 22.86 | 22.93 | 22.96 |
| | | 8 | 4 | 24.00 | 22.87 | 22.88 | 22.93 |
| | | 8 | 7 | 24.00 | 22.85 | 22.89 | 22.89 |
| | | 15 | 0 | 24.00 | 22.87 | 22.91 | 22.93 |
| | 16QAM | 1 | 0 | 24.00 | 23.08 | 23.06 | 23.00 |
| | | 1 | 7 | 24.00 | 23.08 | 23.05 | 23.08 |
| | | 1 | 14 | 24.00 | 23.10 | 23.19 | 23.15 |
| | | 8 | 0 | 23.00 | 21.91 | 21.94 | 21.83 |
| | | 8 | 4 | 23.00 | 21.84 | 21.87 | 21.84 |
| | | 8 | 7 | 23.00 | 21.90 | 21.90 | 21.92 |
| | | 15 | 0 | 23.00 | 21.85 | 21.91 | 21.88 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20425CH | Channel 20525CH | Channel 20625CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 25.00 | 23.90 | 23.89 | 23.98 |
| | | 1 | 13 | 25.00 | 23.85 | 23.96 | 23.99 |
| | | 1 | 24 | 25.00 | 23.89 | 23.93 | 23.94 |
| | | 12 | 0 | 24.00 | 22.92 | 23.03 | 22.98 |
| | | 12 | 6 | 24.00 | 22.92 | 23.03 | 22.97 |
| | | 12 | 13 | 24.00 | 22.92 | 22.94 | 22.96 |
| | | 25 | 0 | 24.00 | 22.93 | 22.90 | 23.00 |
| | 16QAM | 1 | 0 | 24.00 | 22.98 | 23.15 | 23.21 |
| | | 1 | 13 | 24.00 | 22.94 | 23.00 | 23.17 |
| | | 1 | 24 | 24.00 | 22.94 | 23.01 | 23.01 |
| | | 12 | 0 | 23.00 | 21.93 | 21.96 | 21.90 |
| | | 12 | 6 | 23.00 | 21.97 | 21.93 | 21.94 |
| | | 12 | 13 | 23.00 | 21.98 | 21.98 | 21.88 |
| | | 25 | 0 | 23.00 | 21.88 | 21.86 | 21.89 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20450CH | Channel 20525CH | Channel 20600CH |
| 10MHz | QPSK | 1 | 0 | 25.00 | 24.00 | 24.00 | 24.04 |
| | | 1 | 25 | 25.00 | 23.90 | 24.01 | 24.00 |
| | | 1 | 49 | 25.00 | 23.92 | 24.02 | **24.09** |
| | | 25 | 0 | 24.00 | 22.91 | 22.95 | **23.01** |
| | | 25 | 13 | 24.00 | 22.88 | 22.90 | 22.98 |
| | | 25 | 25 | 24.00 | 22.92 | 22.91 | 22.99 |
| | | 50 | 0 | 24.00 | 22.84 | 22.98 | 23.00 |
| | 16QAM | 1 | 0 | 24.00 | 22.89 | 22.91 | 23.01 |
| | | 1 | 25 | 24.00 | 23.14 | 22.93 | 23.07 |
| | | 1 | 49 | 24.00 | 22.77 | 23.04 | 23.03 |
| | | 25 | 0 | 23.00 | 21.87 | 21.86 | 21.94 |
| | | 25 | 13 | 23.00 | 21.85 | 21.86 | 21.92 |
| | | 25 | 25 | 23.00 | 21.83 | 21.88 | 21.91 |
| | | 50 | 0 | 23.00 | 21.83 | 21.93 | 21.92 |

Table 50: Conducted power measurement results of LTE Band 5

Note: The Conducted power measurements of LTE Band 5 is measured with RMS detector.

### 7.1.17 Conducted power measurements of LTE Band 7(Second antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 20775CH | 21100CH | 21425CH |
| 5MHz | QPSK | 1 | 0 | 24.00 | 23.09 | 22.87 | 23.09 |
| | | 1 | 13 | 24.00 | 23.09 | 22.86 | 23.15 |
| | | 1 | 24 | 24.00 | 23.09 | 22.88 | 23.08 |
| | | 12 | 0 | 23.40 | 22.14 | 22.03 | 22.21 |
| | | 12 | 6 | 23.40 | 22.13 | 22.03 | 22.18 |
| | | 12 | 13 | 23.40 | 22.12 | 22.02 | 22.23 |
| | | 25 | 0 | 23.40 | 22.13 | 21.94 | 22.19 |
| | 16QAM | 1 | 0 | 23.40 | 22.27 | 22.20 | 22.32 |
| | | 1 | 13 | 23.40 | 22.36 | 22.12 | 22.31 |
| | | 1 | 24 | 23.40 | 22.44 | 22.05 | 22.31 |
| | | 12 | 0 | 22.40 | 21.16 | 21.02 | 21.27 |
| | | 12 | 6 | 22.40 | 21.16 | 21.00 | 21.26 |
| | | 12 | 13 | 22.40 | 21.13 | 21.03 | 21.25 |
| | | 25 | 0 | 22.40 | 21.02 | 21.02 | 21.19 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 20800CH | 21100CH | 21400CH |
| 10MHz | QPSK | 1 | 0 | 24.00 | 23.20 | 22.95 | 23.13 |
| | | 1 | 25 | 24.00 | 23.12 | 22.93 | 23.21 |
| | | 1 | 49 | 24.00 | 23.12 | 22.91 | 23.18 |
| | | 25 | 0 | 23.40 | 22.10 | 21.93 | 22.11 |
| | | 25 | 13 | 23.40 | 22.11 | 21.93 | 22.11 |
| | | 25 | 25 | 23.40 | 22.11 | 21.94 | 22.12 |
| | | 50 | 0 | 23.40 | 22.13 | 22.05 | 22.28 |
| | 16QAM | 1 | 0 | 23.40 | 22.65 | 22.18 | 22.33 |
| | | 1 | 25 | 23.40 | 22.30 | 22.10 | 22.61 |
| | | 1 | 49 | 23.40 | 22.41 | 22.05 | 22.50 |
| | | 25 | 0 | 22.40 | 21.34 | 21.22 | 21.45 |
| | | 25 | 13 | 22.40 | 21.41 | 21.20 | 21.42 |
| | | 25 | 25 | 22.40 | 21.45 | 21.26 | 21.40 |
| | | 50 | 0 | 22.40 | 21.40 | 21.28 | 21.52 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20825CH | Channel 21100CH | Channel 21375CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 24.00 | 23.15 | 23.02 | 23.10 |
| | | 1 | 38 | 24.00 | 23.17 | 23.01 | 23.12 |
| | | 1 | 74 | 24.00 | 23.14 | 22.96 | 23.12 |
| | | 36 | 0 | 23.40 | 22.08 | 21.94 | 22.12 |
| | | 36 | 18 | 23.40 | 22.08 | 21.94 | 22.12 |
| | | 36 | 39 | 23.40 | 22.08 | 21.95 | 22.13 |
| | | 75 | 0 | 23.40 | 22.20 | 22.09 | 22.29 |
| | 16QAM | 1 | 0 | 23.40 | 22.33 | 22.03 | 22.26 |
| | | 1 | 38 | 23.40 | 22.30 | 22.06 | 22.26 |
| | | 1 | 74 | 23.40 | 22.29 | 22.00 | 22.16 |
| | | 36 | 0 | 22.40 | 21.14 | 20.92 | 21.13 |
| | | 36 | 18 | 22.40 | 21.13 | 20.95 | 21.11 |
| | | 36 | 39 | 22.40 | 21.11 | 20.94 | 21.17 |
| | | 75 | 0 | 22.40 | 21.18 | 21.03 | 21.21 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20850CH | Channel 21100CH | Channel 21350CH |
| 20MHz | QPSK | 1 | 0 | 24.00 | 23.12 | 23.05 | 23.06 |
| | | 1 | 50 | 24.00 | **23.18** | 23.05 | 23.06 |
| | | 1 | 99 | 24.00 | 23.14 | 23.03 | 23.06 |
| | | 50 | 0 | 23.40 | 22.14 | 22.09 | 22.21 |
| | | 50 | 25 | 23.40 | 22.13 | 22.04 | 22.22 |
| | | 50 | 50 | 23.40 | 22.13 | 22.06 | **22.22** |
| | | 100 | 0 | 23.40 | 22.20 | 22.19 | 22.24 |
| | 16QAM | 1 | 0 | 23.40 | 22.50 | 22.17 | 22.19 |
| | | 1 | 50 | 23.40 | 22.41 | 22.13 | 22.26 |
| | | 1 | 99 | 23.40 | 22.37 | 22.38 | 22.22 |
| | | 50 | 0 | 22.40 | 21.15 | 21.06 | 21.15 |
| | | 50 | 25 | 22.40 | 21.15 | 21.08 | 21.13 |
| | | 50 | 50 | 22.40 | 21.08 | 21.07 | 21.15 |
| | | 100 | 0 | 22.40 | 21.15 | 21.16 | 21.32 |

Table 51: Conducted power measurement results of LTE Band 7 (Full Power)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20775CH | Channel 21100CH | Channel 21425CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 16.90 | 15.75 | 15.63 | 15.81 |
| | | 1 | 13 | 16.90 | 15.71 | 15.61 | 15.84 |
| | | 1 | 24 | 16.90 | 15.73 | 15.55 | 15.83 |
| | | 12 | 0 | 16.90 | 15.75 | 15.57 | 15.84 |
| | | 12 | 6 | 16.90 | 15.74 | 15.65 | 15.84 |
| | | 12 | 13 | 16.90 | 15.73 | 15.57 | 15.82 |
| | | 25 | 0 | 16.90 | 15.71 | 15.58 | 15.81 |
| | 16QAM | 1 | 0 | 16.90 | 15.96 | 15.79 | 16.02 |
| | | 1 | 13 | 16.90 | 15.93 | 15.82 | 16.00 |
| | | 1 | 24 | 16.90 | 15.81 | 15.83 | 15.84 |
| | | 12 | 0 | 16.80 | 15.69 | 15.66 | 15.78 |
| | | 12 | 6 | 16.80 | 15.68 | 15.65 | 15.75 |
| | | 12 | 13 | 16.80 | 15.70 | 15.61 | 15.77 |
| | | 25 | 0 | 16.80 | 15.66 | 15.51 | 15.75 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20800CH | Channel 21100CH | Channel 21400CH |
| 10MHz | QPSK | 1 | 0 | 16.90 | 15.80 | 15.61 | 15.73 |
| | | 1 | 25 | 16.90 | 15.76 | 15.55 | 15.75 |
| | | 1 | 49 | 16.90 | 15.73 | 15.59 | 15.77 |
| | | 25 | 0 | 16.90 | 15.68 | 15.63 | 15.79 |
| | | 25 | 13 | 16.90 | 15.70 | 15.64 | 15.78 |
| | | 25 | 25 | 16.90 | 15.69 | 15.65 | 15.81 |
| | | 50 | 0 | 16.90 | 15.67 | 15.59 | 15.76 |
| | 16QAM | 1 | 0 | 16.90 | 15.82 | 15.57 | 15.79 |
| | | 1 | 25 | 16.90 | 15.85 | 15.61 | 15.67 |
| | | 1 | 49 | 16.90 | 15.93 | 15.71 | 15.87 |
| | | 25 | 0 | 16.80 | 15.69 | 15.57 | 15.72 |
| | | 25 | 13 | 16.80 | 15.67 | 15.51 | 15.65 |
| | | 25 | 25 | 16.80 | 15.69 | 15.63 | 15.65 |
| | | 50 | 0 | 16.80 | 15.66 | 15.53 | 15.73 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20825CH | Channel 21100CH | Channel 21375CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 16.90 | 15.74 | 15.58 | 15.75 |
| | | 1 | 38 | 16.90 | 15.73 | 15.63 | 15.69 |
| | | 1 | 74 | 16.90 | 15.76 | 15.60 | 15.67 |
| | | 36 | 0 | 16.90 | 15.72 | 15.57 | 15.75 |
| | | 36 | 18 | 16.90 | 15.72 | 15.57 | 15.77 |
| | | 36 | 39 | 16.90 | 15.72 | 15.56 | 15.78 |
| | | 75 | 0 | 16.90 | 15.68 | 15.63 | 15.71 |
| | 16QAM | 1 | 0 | 16.90 | 15.89 | 15.64 | 15.77 |
| | | 1 | 38 | 16.90 | 15.70 | 15.65 | 15.79 |
| | | 1 | 74 | 16.90 | 15.90 | 15.58 | 15.70 |
| | | 36 | 0 | 16.80 | 15.73 | 15.55 | 15.71 |
| | | 36 | 18 | 16.80 | 15.65 | 15.52 | 15.74 |
| | | 36 | 39 | 16.80 | 15.73 | 15.54 | 15.73 |
| | | 75 | 0 | 16.80 | 15.56 | 15.51 | 15.64 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20850CH | Channel 21100CH | Channel 21350CH |
| 20MHz | QPSK | 1 | 0 | 16.90 | **15.89** | 15.73 | 15.78 |
| | | 1 | 50 | 16.90 | 15.85 | 15.80 | 15.78 |
| | | 1 | 99 | 16.90 | 15.86 | 15.69 | 15.75 |
| | | 50 | 0 | 16.90 | 15.71 | 15.63 | **15.76** |
| | | 50 | 25 | 16.90 | 15.71 | 15.64 | 15.69 |
| | | 50 | 50 | 16.90 | 15.71 | 15.64 | 15.68 |
| | | 100 | 0 | 16.90 | 15.62 | 15.58 | 15.74 |
| | 16QAM | 1 | 0 | 16.90 | 16.02 | 15.91 | 15.98 |
| | | 1 | 50 | 16.90 | 15.99 | 15.95 | 15.93 |
| | | 1 | 99 | 16.90 | 15.95 | 15.83 | 16.04 |
| | | 50 | 0 | 16.80 | 15.58 | 15.58 | 15.64 |
| | | 50 | 25 | 16.80 | 15.59 | 15.54 | 15.62 |
| | | 50 | 50 | 16.80 | 15.60 | 15.58 | 15.58 |
| | | 100 | 0 | 16.80 | 15.53 | 15.53 | 15.67 |

Table 52: Conducted power measurement results of LTE Band 7 (Receiver ON)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20775CH | Channel 21100CH | Channel 21425CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 22.40 | 21.01 | 20.83 | 21.06 |
| | | 1 | 13 | 22.40 | 21.01 | 20.89 | 21.10 |
| | | 1 | 24 | 22.40 | 21.05 | 20.87 | 21.09 |
| | | 12 | 0 | 22.40 | 21.09 | 20.97 | 21.18 |
| | | 12 | 6 | 22.40 | 21.08 | 20.97 | 21.17 |
| | | 12 | 13 | 22.40 | 21.14 | 20.96 | 21.18 |
| | | 25 | 0 | 22.40 | 21.07 | 20.91 | 21.16 |
| | 16QAM | 1 | 0 | 22.40 | 21.31 | 21.12 | 21.16 |
| | | 1 | 13 | 22.40 | 21.11 | 21.05 | 21.26 |
| | | 1 | 24 | 22.40 | 21.16 | 21.26 | 21.34 |
| | | 12 | 0 | 22.40 | 21.11 | 20.98 | 21.22 |
| | | 12 | 6 | 22.40 | 21.16 | 21.01 | 21.24 |
| | | 12 | 13 | 22.40 | 21.16 | 21.04 | 21.31 |
| | | 25 | 0 | 22.40 | 21.15 | 20.98 | 21.21 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20800CH | Channel 21100CH | Channel 21400CH |
| 10MHz | QPSK | 1 | 0 | 22.40 | 21.05 | 20.92 | 21.20 |
| | | 1 | 25 | 22.40 | 21.33 | 21.02 | 21.12 |
| | | 1 | 49 | 22.40 | 21.15 | 20.86 | 21.29 |
| | | 25 | 0 | 22.40 | 21.04 | 20.92 | 21.04 |
| | | 25 | 13 | 22.40 | 21.04 | 20.93 | 21.01 |
| | | 25 | 25 | 22.40 | 21.07 | 20.93 | 21.10 |
| | | 50 | 0 | 22.40 | 21.09 | 21.02 | 21.24 |
| | 16QAM | 1 | 0 | 22.40 | 21.66 | 21.21 | 21.57 |
| | | 1 | 25 | 22.40 | 21.28 | 21.33 | 21.63 |
| | | 1 | 49 | 22.40 | 21.52 | 21.21 | 21.33 |
| | | 25 | 0 | 22.40 | 21.32 | 21.23 | 21.32 |
| | | 25 | 13 | 22.40 | 21.32 | 21.20 | 21.28 |
| | | 25 | 25 | 22.40 | 21.32 | 21.28 | 21.33 |
| | | 50 | 0 | 22.40 | 21.39 | 21.24 | 21.48 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 20825CH | 21100CH | 21375CH |
| 15MHz | QPSK | 1 | 0 | 22.40 | 21.09 | 20.96 | 21.09 |
| | | 1 | 38 | 22.40 | 21.11 | 20.98 | 21.08 |
| | | 1 | 74 | 22.40 | 21.08 | 20.95 | 21.11 |
| | | 36 | 0 | 22.40 | 21.07 | 20.93 | 21.15 |
| | | 36 | 18 | 22.40 | 21.08 | 20.94 | 21.05 |
| | | 36 | 39 | 22.40 | 21.07 | 20.93 | 21.05 |
| | | 75 | 0 | 22.40 | 21.13 | 21.07 | 21.21 |
| | 16QAM | 1 | 0 | 22.40 | 21.09 | 20.95 | 21.20 |
| | | 1 | 38 | 22.40 | 21.22 | 21.16 | 21.20 |
| | | 1 | 74 | 22.40 | 21.06 | 20.92 | 21.12 |
| | | 36 | 0 | 22.40 | 21.08 | 20.97 | 21.07 |
| | | 36 | 18 | 22.40 | 21.05 | 20.99 | 21.11 |
| | | 36 | 39 | 22.40 | 21.02 | 20.93 | 21.09 |
| | | 75 | 0 | 22.40 | 21.20 | 21.03 | 21.21 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 20850CH | 21100CH | 21350CH |
| 20MHz | QPSK | 1 | 0 | 22.40 | **21.16** | 21.04 | 21.08 |
| | | 1 | 50 | 22.40 | 21.12 | 21.02 | 21.06 |
| | | 1 | 99 | 22.40 | 21.12 | 21.00 | 21.05 |
| | | 50 | 0 | 22.40 | **21.19** | 21.01 | 21.12 |
| | | 50 | 25 | 22.40 | 21.19 | 21.05 | 21.13 |
| | | 50 | 50 | 22.40 | 21.12 | 21.03 | 21.14 |
| | | 100 | 0 | 22.40 | 21.18 | 21.13 | 21.27 |
| | 16QAM | 1 | 0 | 22.40 | 21.31 | 21.24 | 21.26 |
| | | 1 | 50 | 22.40 | 21.25 | 21.16 | 21.18 |
| | | 1 | 99 | 22.40 | 21.30 | 21.21 | 21.34 |
| | | 50 | 0 | 22.40 | 21.17 | 21.05 | 21.14 |
| | | 50 | 25 | 22.40 | 21.15 | 21.03 | 21.10 |
| | | 50 | 50 | 22.40 | 21.13 | 21.07 | 21.17 |
| | | 100 | 0 | 22.40 | 21.14 | 21.15 | 21.24 |

Table 53: Conducted power measurement results of LTE Band 7 (Receiver OFF+Hotspot ON)

Note: The Conducted power measurements of LTE Band 7 is measured with RMS detector.

### 7.1.18 Conducted power measurements of LTE Band 7(Main antenna)

| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
|---|---|---|---|---|---|---|---|
| | | | | Max. | 20775CH | 21100CH | 21425CH |
| 5MHz | QPSK | 1 | 0 | 24.00 | 23.05 | 22.68 | 22.75 |
| | | 1 | 13 | 24.00 | 22.99 | 22.72 | 22.77 |
| | | 1 | 24 | 24.00 | 23.06 | 22.71 | 22.76 |
| | | 12 | 0 | 23.10 | 22.03 | 21.75 | 21.85 |
| | | 12 | 6 | 23.10 | 22.04 | 21.82 | 21.84 |
| | | 12 | 13 | 23.10 | 22.01 | 21.74 | 21.87 |
| | | 25 | 0 | 23.10 | 22.02 | 21.76 | 21.83 |
| | 16QAM | 1 | 0 | 23.10 | 22.14 | 21.94 | 21.90 |
| | | 1 | 13 | 23.10 | 22.10 | 21.77 | 21.85 |
| | | 1 | 24 | 23.10 | 22.14 | 21.73 | 21.89 |
| | | 12 | 0 | 22.20 | 21.14 | 20.81 | 20.86 |
| | | 12 | 6 | 22.20 | 21.11 | 20.81 | 20.87 |
| | | 12 | 13 | 22.20 | 21.00 | 20.82 | 20.87 |
| | | 25 | 0 | 22.20 | 21.09 | 20.71 | 20.89 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up | Channel | Channel | Channel |
| | | | | Max. | 20800CH | 21100CH | 21400CH |
| 10MHz | QPSK | 1 | 0 | 24.00 | 23.22 | 22.81 | 22.88 |
| | | 1 | 25 | 24.00 | 23.14 | 22.94 | 22.85 |
| | | 1 | 49 | 24.00 | 23.20 | 22.77 | 22.89 |
| | | 25 | 0 | 23.10 | 21.96 | 21.73 | 21.73 |
| | | 25 | 13 | 23.10 | 21.98 | 21.73 | 21.73 |
| | | 25 | 25 | 23.10 | 21.96 | 21.73 | 21.74 |
| | | 50 | 0 | 23.10 | 22.12 | 21.81 | 21.89 |
| | 16QAM | 1 | 0 | 23.10 | 22.44 | 21.98 | 22.01 |
| | | 1 | 25 | 23.10 | 22.39 | 21.90 | 22.08 |
| | | 1 | 49 | 23.10 | 22.27 | 22.04 | 22.07 |
| | | 25 | 0 | 22.20 | 21.26 | 20.96 | 21.00 |
| | | 25 | 13 | 22.20 | 21.27 | 20.95 | 21.02 |
| | | 25 | 25 | 22.20 | 21.20 | 20.95 | 21.01 |
| | | 50 | 0 | 22.20 | 21.30 | 21.04 | 21.12 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20825CH | Channel 21100CH | Channel 21375CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 24.00 | 23.03 | 22.76 | 22.72 |
| | | 1 | 38 | 24.00 | 23.02 | 22.78 | 22.75 |
| | | 1 | 74 | 24.00 | 23.02 | 22.82 | 22.72 |
| | | 36 | 0 | 23.10 | 22.10 | 21.77 | 21.77 |
| | | 36 | 18 | 23.10 | 22.07 | 21.80 | 21.77 |
| | | 36 | 39 | 23.10 | 22.07 | 21.81 | 21.78 |
| | | 75 | 0 | 23.10 | 22.14 | 21.88 | 21.87 |
| | 16QAM | 1 | 0 | 23.10 | 22.21 | 21.82 | 21.84 |
| | | 1 | 38 | 23.10 | 22.14 | 21.80 | 21.73 |
| | | 1 | 74 | 23.10 | 22.07 | 21.94 | 21.86 |
| | | 36 | 0 | 22.20 | 21.04 | 20.74 | 20.74 |
| | | 36 | 18 | 22.20 | 21.06 | 20.73 | 20.71 |
| | | 36 | 39 | 22.20 | 21.02 | 20.73 | 20.73 |
| | | 75 | 0 | 22.20 | 21.12 | 20.91 | 20.85 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20850CH | Channel 21100CH | Channel 21350CH |
| 20MHz | QPSK | 1 | 0 | 24.00 | 23.07 | **23.11** | 22.76 |
| | | 1 | 50 | 24.00 | 23.09 | 22.94 | 22.77 |
| | | 1 | 99 | 24.00 | 23.10 | 22.89 | 22.71 |
| | | 50 | 0 | 23.10 | 22.14 | **22.15** | 21.88 |
| | | 50 | 25 | 23.10 | 22.13 | 21.84 | 21.86 |
| | | 50 | 50 | 23.10 | 22.13 | 21.84 | 21.88 |
| | | 100 | 0 | 23.10 | 22.10 | 21.93 | 21.91 |
| | 16QAM | 1 | 0 | 23.10 | 22.30 | 22.10 | 21.92 |
| | | 1 | 50 | 23.10 | 22.33 | 22.12 | 21.91 |
| | | 1 | 99 | 23.10 | 22.11 | 22.04 | 21.87 |
| | | 50 | 0 | 22.20 | 21.12 | 20.86 | 20.77 |
| | | 50 | 25 | 22.20 | 21.12 | 20.87 | 20.83 |
| | | 50 | 50 | 22.20 | 21.05 | 20.88 | 20.81 |
| | | 100 | 0 | 22.20 | 21.10 | 20.88 | 20.90 |

Table 54: Conducted power measurement results of LTE Band 7 (Full Power)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20775CH | Channel 21100CH | Channel 21425CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 22.90 | 21.76 | 21.50 | 21.56 |
| | | 1 | 13 | 22.90 | 21.71 | 21.46 | 21.50 |
| | | 1 | 24 | 22.90 | 21.79 | 21.43 | 21.50 |
| | | 12 | 0 | 22.90 | 21.80 | 21.55 | 21.60 |
| | | 12 | 6 | 22.90 | 21.79 | 21.52 | 21.57 |
| | | 12 | 13 | 22.90 | 21.83 | 21.54 | 21.60 |
| | | 25 | 0 | 22.90 | 21.73 | 21.46 | 21.57 |
| | 16QAM | 1 | 0 | 22.90 | 21.94 | 21.68 | 21.68 |
| | | 1 | 13 | 22.90 | 22.04 | 21.57 | 21.68 |
| | | 1 | 24 | 22.90 | 22.07 | 21.53 | 21.65 |
| | | 12 | 0 | 22.20 | 21.14 | 20.82 | 20.88 |
| | | 12 | 6 | 22.20 | 21.03 | 20.84 | 20.91 |
| | | 12 | 13 | 22.20 | 21.15 | 20.83 | 20.83 |
| | | 25 | 0 | 22.20 | 21.00 | 20.71 | 20.91 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20800CH | Channel 21100CH | Channel 21400CH |
| 10MHz | QPSK | 1 | 0 | 22.90 | 21.79 | 21.55 | 21.81 |
| | | 1 | 25 | 22.90 | 21.93 | 21.57 | 21.53 |
| | | 1 | 49 | 22.90 | 22.03 | 21.52 | 21.62 |
| | | 25 | 0 | 22.90 | 21.73 | 21.48 | 21.50 |
| | | 25 | 13 | 22.90 | 21.73 | 21.47 | 21.49 |
| | | 25 | 25 | 22.90 | 21.81 | 21.47 | 21.49 |
| | | 50 | 0 | 22.90 | 21.82 | 21.56 | 21.60 |
| | 16QAM | 1 | 0 | 22.90 | 21.98 | 21.94 | 21.81 |
| | | 1 | 25 | 22.90 | 22.08 | 21.68 | 21.89 |
| | | 1 | 49 | 22.90 | 21.93 | 21.86 | 22.02 |
| | | 25 | 0 | 22.20 | 21.27 | 20.96 | 21.01 |
| | | 25 | 13 | 22.20 | 21.29 | 20.98 | 21.01 |
| | | 25 | 25 | 22.20 | 21.24 | 20.92 | 20.93 |
| | | 50 | 0 | 22.20 | 21.30 | 21.04 | 21.11 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20825CH | Channel 21100CH | Channel 21375CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 22.90 | 21.80 | 21.57 | 21.46 |
| | | 1 | 38 | 22.90 | 21.80 | 21.55 | 21.50 |
| | | 1 | 74 | 22.90 | 21.80 | 21.55 | 21.47 |
| | | 36 | 0 | 22.90 | 21.81 | 21.47 | 21.47 |
| | | 36 | 18 | 22.90 | 21.81 | 21.48 | 21.47 |
| | | 36 | 39 | 22.90 | 21.82 | 21.48 | 21.54 |
| | | 75 | 0 | 22.90 | 21.90 | 21.64 | 21.62 |
| | 16QAM | 1 | 0 | 22.90 | 21.75 | 21.53 | 21.50 |
| | | 1 | 38 | 22.90 | 21.81 | 21.57 | 21.50 |
| | | 1 | 74 | 22.90 | 21.72 | 21.54 | 21.33 |
| | | 36 | 0 | 22.20 | 20.99 | 20.73 | 20.70 |
| | | 36 | 18 | 22.20 | 21.04 | 20.71 | 20.72 |
| | | 36 | 39 | 22.20 | 21.06 | 20.73 | 20.73 |
| | | 75 | 0 | 22.20 | 21.07 | 20.85 | 20.83 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20850CH | Channel 21100CH | Channel 21350CH |
| 20MHz | QPSK | 1 | 0 | 22.90 | **21.81** | 21.62 | 21.55 |
| | | 1 | 50 | 22.90 | 21.77 | 21.64 | 21.44 |
| | | 1 | 99 | 22.90 | 21.80 | 21.63 | 21.50 |
| | | 50 | 0 | 22.90 | **21.84** | 21.59 | 21.63 |
| | | 50 | 25 | 22.90 | 21.80 | 21.59 | 21.65 |
| | | 50 | 50 | 22.90 | 21.83 | 21.60 | 21.65 |
| | | 100 | 0 | 22.90 | 21.86 | 21.67 | 21.71 |
| | 16QAM | 1 | 0 | 22.90 | 21.80 | 21.75 | 21.66 |
| | | 1 | 50 | 22.90 | 21.90 | 21.75 | 21.60 |
| | | 1 | 99 | 22.90 | 22.03 | 21.78 | 21.79 |
| | | 50 | 0 | 22.20 | 21.10 | 20.89 | 20.79 |
| | | 50 | 25 | 22.20 | 21.11 | 20.89 | 20.80 |
| | | 50 | 50 | 22.20 | 21.06 | 20.86 | 20.86 |
| | | 100 | 0 | 22.20 | 21.09 | 20.91 | 20.91 |

Table 55: Conducted power measurement results of LTE Band 7 (Receiver OFF)

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20775CH | Channel 21100CH | Channel 21425CH |
|---|---|---|---|---|---|---|---|
| 5MHz | QPSK | 1 | 0 | 20.80 | 19.67 | 19.45 | 19.52 |
| | | 1 | 13 | 20.80 | 19.73 | 19.41 | 19.55 |
| | | 1 | 24 | 20.80 | 19.73 | 19.40 | 19.52 |
| | | 12 | 0 | 20.80 | 19.81 | 19.50 | 19.59 |
| | | 12 | 6 | 20.80 | 19.80 | 19.56 | 19.64 |
| | | 12 | 13 | 20.80 | 19.80 | 19.52 | 19.63 |
| | | 25 | 0 | 20.80 | 19.80 | 19.50 | 19.55 |
| | 16QAM | 1 | 0 | 20.80 | 19.79 | 19.56 | 19.80 |
| | | 1 | 13 | 20.80 | 20.00 | 19.53 | 19.77 |
| | | 1 | 24 | 20.80 | 19.87 | 19.61 | 19.76 |
| | | 12 | 0 | 20.80 | 19.86 | 19.52 | 19.59 |
| | | 12 | 6 | 20.80 | 19.91 | 19.53 | 19.59 |
| | | 12 | 13 | 20.80 | 19.82 | 19.54 | 19.58 |
| | | 25 | 0 | 20.80 | 19.73 | 19.45 | 19.65 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20800CH | Channel 21100CH | Channel 21400CH |
| 10MHz | QPSK | 1 | 0 | 20.80 | 19.81 | 19.56 | 19.57 |
| | | 1 | 25 | 20.80 | 19.83 | 19.49 | 19.57 |
| | | 1 | 49 | 20.80 | 19.88 | 19.60 | 19.62 |
| | | 25 | 0 | 20.80 | 19.79 | 19.47 | 19.51 |
| | | 25 | 13 | 20.80 | 19.79 | 19.46 | 19.52 |
| | | 25 | 25 | 20.80 | 19.77 | 19.48 | 19.51 |
| | | 50 | 0 | 20.80 | 19.89 | 19.58 | 19.66 |
| | 16QAM | 1 | 0 | 20.80 | 20.05 | 19.63 | 19.93 |
| | | 1 | 25 | 20.80 | 20.10 | 19.92 | 19.96 |
| | | 1 | 49 | 20.80 | 20.06 | 19.84 | 19.53 |
| | | 25 | 0 | 20.80 | 20.04 | 19.76 | 19.66 |
| | | 25 | 13 | 20.80 | 20.02 | 19.82 | 19.80 |
| | | 25 | 25 | 20.80 | 20.00 | 19.79 | 19.80 |
| | | 50 | 0 | 20.80 | 20.06 | 19.80 | 20.00 |

| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20825CH | Channel 21100CH | Channel 21375CH |
|---|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 20.80 | 19.80 | 19.55 | 19.49 |
| | | 1 | 38 | 20.80 | 19.82 | 19.55 | 19.49 |
| | | 1 | 74 | 20.80 | 19.80 | 19.62 | 19.51 |
| | | 36 | 0 | 20.80 | 19.75 | 19.46 | 19.52 |
| | | 36 | 18 | 20.80 | 19.76 | 19.45 | 19.52 |
| | | 36 | 39 | 20.80 | 19.76 | 19.49 | 19.52 |
| | | 75 | 0 | 20.80 | 19.89 | 19.67 | 19.64 |
| | 16QAM | 1 | 0 | 20.80 | 19.62 | 19.73 | 19.60 |
| | | 1 | 38 | 20.80 | 19.79 | 19.67 | 19.54 |
| | | 1 | 74 | 20.80 | 19.90 | 19.56 | 19.62 |
| | | 36 | 0 | 20.80 | 19.78 | 19.54 | 19.52 |
| | | 36 | 18 | 20.80 | 19.75 | 19.50 | 19.50 |
| | | 36 | 39 | 20.80 | 19.74 | 19.50 | 19.51 |
| | | 75 | 0 | 20.80 | 19.84 | 19.60 | 19.64 |
| Bandwidth | Modulation | RB size | RB offset | Tune-up Max. | Channel 20850CH | Channel 21100CH | Channel 21350CH |
| 20MHz | QPSK | 1 | 0 | 20.80 | **19.84** | 19.61 | 19.50 |
| | | 1 | 50 | 20.80 | 19.80 | 19.59 | 19.49 |
| | | 1 | 99 | 20.80 | 19.84 | 19.59 | 19.47 |
| | | 50 | 0 | 20.80 | 19.88 | 19.61 | 19.58 |
| | | 50 | 25 | 20.80 | 19.90 | 19.62 | 19.56 |
| | | 50 | 50 | 20.80 | **19.90** | 19.61 | 19.56 |
| | | 100 | 0 | 20.80 | 19.83 | 19.69 | 19.71 |
| | 16QAM | 1 | 0 | 20.80 | 20.09 | 19.83 | 19.59 |
| | | 1 | 50 | 20.80 | 19.96 | 19.79 | 19.77 |
| | | 1 | 99 | 20.80 | 19.87 | 19.72 | 19.67 |
| | | 50 | 0 | 20.80 | 19.90 | 19.60 | 19.57 |
| | | 50 | 25 | 20.80 | 19.86 | 19.57 | 19.58 |
| | | 50 | 50 | 20.80 | 19.88 | 19.59 | 19.58 |
| | | 100 | 0 | 20.80 | 19.85 | 19.65 | 19.69 |

Table 56: Conducted power measurement results of LTE Band 7 (Receiver OFF+Hotspot ON)

Note: The Conducted power measurements of LTE Band 7 is measured with RMS detector.

### 7.1.19 Conducted power measurements of WiFi 2.4G

| Mode | Channel | Frequency (MHz) | Data Rate (Mbps) | Tune-up Max. | Average Power (dBm) | SAR Test (Yes/No) |
|---|---|---|---|---|---|---|
| 802.11b | 1 | 2412 | 1Mbps | 19.00 | 17.01 | No |
| | 6 | 2437 | | 19.00 | 17.20 | No |
| | 11 | 2462 | | 19.00 | **17.24** | Yes |
| 802.11g | 1 | 2412 | 6Mbps | 14.00 | 12.20 | No |
| | 2 | 2417 | | 19.00 | 16.61 | No |
| | 6 | 2437 | | 19.00 | 17.83 | No |
| | 10 | 2457 | | 19.00 | 17.33 | No |
| | 11 | 2462 | | 14.00 | 12.38 | No |
| 802.11n SISO 20M | 1 | 2412 | MCS0 | 12.00 | 10.27 | No |
| | 2 | 2417 | | 19.00 | 16.17 | No |
| | 6 | 2437 | | 19.00 | 17.41 | No |
| | 10 | 2457 | | 19.00 | 16.32 | No |
| | 11 | 2462 | | 12.00 | 10.57 | No |
| 802.11n SISO 40M | 3 | 2422 | MCS0 | 12.00 | 10.30 | No |
| | 4 | 2427 | | 15.00 | 12.65 | No |
| | 6 | 2437 | | 15.00 | 12.98 | No |
| | 8 | 2447 | | 15.00 | 12.26 | No |
| | 9 | 2452 | | 12.00 | 10.89 | No |

Table 57: Conducted power measurement results of WiFi 2.4G (Receiver OFF)

| Mode | Channel | Frequency (MHz) | Data Rate (Mbps) | Tune-up Max. | Average Power (dBm) | SAR Test (Yes/No) |
|---|---|---|---|---|---|---|
| 802.11b | 1 | 2412 | 1Mbps | 12.00 | 10.16 | No |
| | 6 | 2437 | | 12.00 | **10.50** | Yes |
| | 11 | 2462 | | 12.00 | 10.48 | No |
| 802.11g | 1 | 2412 | 6Mbps | 12.00 | 10.83 | No |
| | 6 | 2437 | | 12.00 | 10.65 | No |
| | 11 | 2462 | | 12.00 | 11.13 | No |
| 802.11n SISO 20M | 1 | 2412 | MCS0 | 12.00 | 10.27 | No |
| | 6 | 2437 | | 12.00 | 10.17 | No |
| | 11 | 2462 | | 12.00 | 10.57 | No |
| 802.11n SISO 40M | 3 | 2422 | MCS0 | 12.00 | 10.30 | No |
| | 6 | 2437 | | 12.00 | 11.17 | No |
| | 9 | 2452 | | 12.00 | 10.89 | No |

Table 58: Conducted power measurement results of WiFi 2.4G (Receiver ON)

Note:

1) The bolded mode was selected for SAR testing.

2) As different maximum tune-up output power is specified across the different channels range. So the additional conducted power measurement for the adjacent channel of each power level stage is also performed in this report to ensure compliance.

### 7.1.20 Conducted power measurements of BT

The output power of BT antenna is as the following:

| BT | Tune-up | Average Power (dBm) | | |
|---|---|---|---|---|
| | Max. | 0CH | 39CH | 78CH |
| DH5 | 9.70 | 7.10 | 6.91 | 9.07 |
| 2DH5 | 9.00 | 5.02 | 4.91 | 7.19 |
| 3DH5 | 9.00 | 5.03 | 4.90 | 7.17 |
| BT | Tune-up | Average Power (dBm) | | |
| | Max. | 0CH | 19CH | 39CH |
| BLE | 8.00 | 2.48 | 3.05 | 6.00 |

Table 59: Conducted power measurement results of BT

Note: The Conducted power measurements of BT is measured with RMS detector.

## 7.2 SAR measurement Results

**General Notes:**

1) Per KDB 447498 D01, all SAR measurement results are scaled to the maximum tune-up tolerance limit to demonstrate SAR compliance.

2) Per KDB 447498 D01, 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:

● ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.

● ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.

● ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

3) Per KDB 865664 D01,for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg; if the deviation among the repeated measurement is ≤20%, and the measured SAR <1.45W/kg, only one repeated measurement is required.

4) Per KDB 941225 D06, the DUT Dimension is bigger than 9 cm x 5 cm, 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 KDB 648474 D04, 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 KDB 865664 D02, 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 post-processing (Refer to appendix B for details).

7) Per KDB 648474 D04, Body-worn accessories that do not contain metallic or conductive components is tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.

**GSM Notes:**

1) Per KDB941225 D01, SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

2) Per KDB 648474 D04, the device does not support DTM function. Body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.

**UMTS Notes:**

1) Per KDB 941225 D01, When the maximum output power and tune-up tolerance specified for production units in a Second mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of Second to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the Second mode.

**CDMA Notes:**

1) Per KDB 941225 D01, When the maximum output power and tune-up tolerance specified for production units in a Second mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of Second to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the Second mode.

**LTE Notes:**

1) The LTE test configurations are determined according to KDB 941225 D05 SAR for LTE Devices.The general test procedures used for SAR testing can be found in Section 6.5.

2) A-MPR was disabled for all SAR test by setting NS_01 on the base station simulator.SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames(maximum TTI)

**WiFi Notes:**

Per KDB 248227D01:

1) When reported SAR for the initial test position is ≤ 0.4W/kg, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is ≤ 0.8W/kg or all test position are measured. 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..

2) When the DSSS *reported* SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

3) 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, SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations

4) The highest SAR measured for the initial test position or initial test configuration should be used to determine SAR test exclusion according to the sum of 1-g SAR and SAR peak to location ratio provisions in KDB 447498. In addition, a test lab may also choose to perform standalone SAR measurements for test positions and 802.11 configurations that are not required by the initial test position or initial test configuration procedures and apply the results to determine simultaneous transmission SAR test exclusion, according to sum of 1-g and SAR peak to location ratio requirements to reduce the number of simultaneous transmission SAR measurements.

### 7.2.1 SAR measurement Results of GSM850

| Test Position of Head | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Left cheek | Tuning State1 | 190/836.6 | GSM | 0.224 | 0.148 | 0.04 | 29.63 | 30.20 | 0.256 | Battery 1# | / |
| Left tilt | Tuning State1 | 190/836.6 | GSM | 0.122 | 0.080 | 0.07 | 29.63 | 30.20 | 0.139 | Battery 1# | / |
| Right cheek | Tuning State1 | 190/836.6 | GSM | 0.491 | 0.275 | -0.07 | 29.63 | 30.20 | 0.560 | Battery 1# | / |
| Right cheek | Tuning State2 | 190/836.6 | GSM | 0.393 | 0.222 | -0.07 | 29.63 | 30.20 | 0.448 | Battery 1# | / |
| Right tilt | Tuning State1 | 190/836.6 | GSM | 0.239 | 0.146 | -0.03 | 29.63 | 30.20 | 0.273 | Battery 1# | / |
| Right cheek | Tuning State1 | 190/836.6 | GSM | **0.543** | 0.296 | 0.02 | 29.63 | 30.20 | **0.620** | Battery 2# | Yes |
| Right cheek | Tuning State2 | 190/836.6 | GSM | 0.513 | 0.281 | -0.04 | 29.63 | 30.20 | 0.585 | Battery 2# | / |
| Right cheek | Tuning State1 | 190/836.6 | GSM | 0.498 | 0.273 | -0.17 | 29.63 | 30.20 | 0.568 | Battery 3# | / |
| Right cheek | Tuning State1 | 190/836.6 | GSM | 0.496 | 0.273 | -0.05 | 29.63 | 30.20 | 0.566 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Left cheek | / | 190/836.6 | GSM | 0.024 | 0.017 | 0.14 | 32.62 | 33.70 | 0.031 | Battery 1# | / |
| Left tilt | / | 190/836.6 | GSM | 0.011 | 0.008 | 0.15 | 32.62 | 33.70 | 0.014 | Battery 1# | / |
| Right cheek | / | 190/836.6 | GSM | **0.028** | 0.021 | -0.12 | 32.62 | 33.70 | **0.036** | Battery 1# | Yes |
| Right tilt | / | 190/836.6 | GSM | 0.011 | 0.007 | 0.13 | 32.62 | 33.70 | 0.014 | Battery 1# | / |
| Right cheek | / | 190/836.6 | GSM | 0.023 | 0.018 | -0.17 | 32.62 | 33.70 | 0.030 | Battery 2# | / |
| Right cheek | / | 190/836.6 | GSM | 0.027 | 0.021 | -0.13 | 32.62 | 33.70 | 0.034 | Battery 3# | / |
| Right cheek | / | 190/836.6 | GSM | 0.028 | 0.022 | 0.00 | 32.62 | 33.70 | 0.036 | With SIM2 | / |

Table 60: Head SAR test results of GSM850

| Test Position of Body-Worn | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | | |
| Front Side | 15mm | Tuning State1 | 190/836.6 | GSM | 0.175 | 0.120 | -0.07 | 33.02 | 33.70 | 0.205 | Battery 1# | / |
| Back Side | 15mm | Tuning State1 | 190/836.6 | GSM | 0.212 | 0.142 | -0.05 | 33.02 | 33.70 | 0.248 | Battery 1# | / |
| Back Side | 15mm | Tuning State2 | 190/836.6 | GSM | 0.188 | 0.127 | 0.04 | 33.02 | 33.70 | 0.220 | Battery 1# | / |
| Back Side | 15mm | Tuning State1 | 190/836.6 | GSM | **0.240** | 0.160 | -0.06 | 33.02 | 33.70 | **0.281** | Battery 2# | Yes |
| Back Side | 15mm | Tuning State2 | 190/836.6 | GSM | 0.206 | 0.138 | -0.05 | 33.02 | 33.70 | 0.241 | Battery 2# | / |
| Back Side | 15mm | Tuning State1 | 190/836.6 | GSM | 0.208 | 0.139 | -0.08 | 33.02 | 33.70 | 0.243 | Battery 3# | / |
| Back Side | 15mm | Tuning State1 | 190/836.6 | GSM | 0.210 | 0.141 | -0.04 | 33.02 | 33.70 | 0.246 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | | |
| Front Side | 15mm | / | 190/836.6 | GSM | 0.112 | 0.075 | -0.08 | 32.62 | 33.70 | 0.144 | Battery 1# | / |
| Back Side | 15mm | / | 190/836.6 | GSM | **0.157** | 0.110 | -0.03 | 32.62 | 33.70 | **0.201** | Battery 1# | Yes |
| Back Side | 15mm | / | 190/836.6 | GSM | 0.146 | 0.104 | 0.04 | 32.62 | 33.70 | 0.187 | Battery 2# | / |
| Back Side | 15mm | / | 190/836.6 | GSM | 0.155 | 0.110 | -0.03 | 32.62 | 33.70 | 0.199 | Battery 3# | / |
| Back Side | 15mm | / | 190/836.6 | GSM | 0.139 | 0.098 | 0.10 | 32.62 | 33.70 | 0.178 | With SIM2 | / |

Table 61: Body Worn SAR test results of GSM850

| Test Position of Hotspot | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | | |
| Front Side | 10mm | Tuning State1 | 190/836.6 | GPRS 2TS | 0.298 | 0.188 | 0.07 | 29.82 | 30.70 | 0.365 | Battery 1# | / |
| Back Side | 10mm | Tuning State1 | 190/836.6 | GPRS 2TS | 0.359 | 0.226 | 0.03 | 29.82 | 30.70 | 0.440 | Battery 1# | / |
| Back Side | 10mm | Tuning State2 | 190/836.6 | GPRS 2TS | 0.308 | 0.194 | -0.14 | 29.82 | 30.70 | 0.377 | Battery 1# | / |
| Left Side | 10mm | Tuning State1 | 190/836.6 | GPRS 2TS | 0.445 | 0.252 | -0.07 | 29.82 | 30.70 | 0.545 | Battery 1# | / |
| Top Side | 10mm | Tuning State1 | 190/836.6 | GPRS 2TS | 0.097 | 0.062 | 0.05 | 29.82 | 30.70 | 0.118 | Battery 1# | / |
| Left Side | 10mm | Tuning State2 | 190/836.6 | GPRS 2TS | 0.481 | 0.269 | 0.00 | 29.82 | 30.70 | 0.589 | Battery 2# | / |
| Left Side | 10mm | Tuning State1 | 190/836.6 | GPRS 2TS | 0.431 | 0.243 | -0.06 | 29.82 | 30.70 | 0.528 | Battery 3# | / |
| Left Side | 10mm | Tuning State1 | 190/836.6 | GPRS 2TS | **0.490** | 0.272 | -0.09 | 29.82 | 30.70 | **0.600** | With SIM2 | Yes |
| Left Side | 10mm | Tuning State2 | 190/836.6 | GPRS 2TS | 0.402 | 0.227 | -0.16 | 29.82 | 30.70 | 0.492 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | | |
| Front Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.192 | 0.130 | -0.03 | 29.42 | 30.20 | 0.230 | Battery 1# | / |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.218 | 0.142 | -0.18 | 29.42 | 30.20 | 0.261 | Battery 1# | / |
| Left Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.121 | 0.067 | 0.00 | 29.42 | 30.20 | 0.145 | Battery 1# | / |
| Right Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.056 | 0.035 | -0.04 | 29.42 | 30.20 | 0.067 | Battery 1# | / |
| Bottom Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.131 | 0.076 | -0.12 | 29.42 | 30.20 | 0.157 | Battery 1# | / |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | **0.235** | 0.148 | 0.09 | 29.42 | 30.20 | **0.281** | Battery 2# | Yes |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.224 | 0.143 | 0.08 | 29.42 | 30.20 | 0.268 | Battery 3# | / |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.223 | 0.143 | 0.08 | 29.42 | 30.20 | 0.267 | With SIM2 | / |

Table 62: Hotspot SAR test results of GSM850

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.298 | 0.188 | 0.07 | 29.82 | 30.70 | 0.365 | Yes |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.359 | 0.226 | 0.03 | 29.82 | 30.70 | 0.440 | Yes |
| Left Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.445 | 0.252 | -0.07 | 29.82 | 30.70 | 0.545 | Yes |
| Top Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.097 | 0.062 | 0.05 | 29.82 | 30.70 | 0.118 | Yes |
| Left Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.481 | 0.269 | 0.00 | 29.82 | 30.70 | 0.589 | Yes |
| Left Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.431 | 0.243 | -0.06 | 29.82 | 30.70 | 0.528 | Yes |
| Left Side | 10mm | / | 190/836.6 | GPRS 2TS | **0.490** | 0.272 | -0.09 | 29.82 | 30.70 | 0.600 | Yes |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.192 | 0.130 | -0.03 | 29.42 | 30.20 | 0.230 | Yes |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.218 | 0.142 | -0.18 | 29.42 | 30.20 | 0.261 | Yes |
| Left Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.121 | 0.067 | 0.00 | 29.42 | 30.20 | 0.145 | Yes |
| Right Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.056 | 0.035 | -0.04 | 29.42 | 30.20 | 0.067 | Yes |
| Bottom Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.131 | 0.076 | -0.12 | 29.42 | 30.20 | 0.157 | Yes |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | **0.235** | 0.148 | 0.09 | 29.42 | 30.20 | 0.281 | Yes |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.224 | 0.143 | 0.08 | 29.42 | 30.20 | 0.268 | Yes |
| Back Side | 10mm | / | 190/836.6 | GPRS 2TS | 0.223 | 0.143 | 0.08 | 29.42 | 30.20 | 0.267 | Yes |

Table 63: Product Specific 10-g SAR test reduction evaluation of GSM850

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

### 7.2.2 SAR measurement Results of GSM1900

| Test Position of Head | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | |
| Left cheek | 661/1880 | GSM | 0.164 | 0.084 | -0.02 | 25.81 | 26.70 | 0.201 | Battery 1# | / |
| Left tilt | 661/1880 | GSM | 0.094 | 0.054 | 0.07 | 25.81 | 26.70 | 0.115 | Battery 1# | / |
| Right cheek | 661/1880 | GSM | **0.424** | 0.222 | 0.04 | 25.81 | 26.70 | **0.520** | Battery 1# | Yes |
| Right tilt | 661/1880 | GSM | 0.218 | 0.112 | -0.02 | 25.81 | 26.70 | 0.268 | Battery 1# | / |
| Right cheek | 661/1880 | GSM | 0.421 | 0.220 | -0.05 | 25.81 | 26.70 | 0.517 | Battery 2# | / |
| Right cheek | 661/1880 | GSM | 0.419 | 0.220 | 0.09 | 25.81 | 26.70 | 0.514 | Battery 3# | / |
| Right cheek | 661/1880 | GSM | 0.422 | 0.219 | 0.18 | 25.81 | 26.70 | 0.518 | With SIM2 | / |
| Main Antenna | | | | | | | | | | |
| Left cheek | 661/1880 | GSM | **0.076** | 0.049 | 0.15 | 30.33 | 31.00 | **0.089** | Battery 1# | Yes |
| Left tilt | 661/1880 | GSM | 0.045 | 0.025 | -0.12 | 30.33 | 31.00 | 0.053 | Battery 1# | / |
| Right cheek | 661/1880 | GSM | 0.059 | 0.038 | 0.09 | 30.33 | 31.00 | 0.069 | Battery 1# | / |
| Right tilt | 661/1880 | GSM | 0.043 | 0.022 | 0.19 | 30.33 | 31.00 | 0.050 | Battery 1# | / |
| Left cheek | 661/1880 | GSM | 0.075 | 0.048 | 0.17 | 30.33 | 31.00 | 0.088 | Battery 2# | / |
| Left cheek | 661/1880 | GSM | 0.075 | 0.048 | 0.14 | 30.33 | 31.00 | 0.088 | Battery 3# | / |
| Left cheek | 661/1880 | GSM | 0.075 | 0.048 | -0.17 | 30.33 | 31.00 | 0.087 | With SIM2 | / |

Table 64: Head SAR test results of GSM1900

| Test Position of Body-Worn | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 15mm | 661/1880 | GSM | 0.041 | 0.023 | 0.01 | 30.04 | 31.00 | 0.051 | Battery 1# | / |
| Back Side | 15mm | 661/1880 | GSM | 0.124 | 0.073 | -0.15 | 30.04 | 31.00 | 0.155 | Battery 1# | / |
| Back Side | 15mm | 661/1880 | GSM | 0.137 | 0.081 | 0.08 | 30.04 | 31.00 | 0.171 | Battery 2# | / |
| Back Side | 15mm | 661/1880 | GSM | 0.130 | 0.076 | 0.12 | 30.04 | 31.00 | 0.162 | Battery 3# | / |
| Back Side | 15mm | 661/1880 | GSM | **0.140** | 0.083 | 0.13 | 30.04 | 31.00 | **0.175** | With SIM2 | Yes |
| Main Antenna | | | | | | | | | | | |
| Front Side | 15mm | 661/1880 | GSM | 0.122 | 0.080 | 0.13 | 30.33 | 31.00 | 0.142 | Battery 1# | / |
| Back Side | 15mm | 661/1880 | GSM | **0.170** | 0.107 | 0.11 | 30.33 | 31.00 | **0.198** | Battery 1# | Yes |
| Back Side | 15mm | 661/1880 | GSM | 0.152 | 0.097 | 0.05 | 30.33 | 31.00 | 0.177 | Battery 2# | / |
| Back Side | 15mm | 661/1880 | GSM | 0.163 | 0.103 | 0.03 | 30.33 | 31.00 | 0.190 | Battery 3# | / |
| Back Side | 15mm | 661/1880 | GSM | 0.167 | 0.105 | 0.07 | 30.33 | 31.00 | 0.195 | With SIM2 | / |

Table 65: Body Worn SAR test results of GSM1900

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | 661/1880 | GPRS 2TS | 0.149 | 0.076 | -0.16 | 24.60 | 25.70 | 0.192 | Battery 1# | / |
| Back Side | 10mm | 661/1880 | GPRS 2TS | 0.188 | 0.108 | -0.04 | 24.60 | 25.70 | 0.242 | Battery 1# | / |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.402 | 0.205 | -0.01 | 24.60 | 25.70 | 0.518 | Battery 1# | / |
| Top Side | 10mm | 661/1880 | GPRS 2TS | 0.088 | 0.049 | -0.15 | 24.60 | 25.70 | 0.113 | Battery 1# | / |
| Left Side | 10mm | 661/1880 | GPRS 2TS | **0.415** | 0.212 | -0.14 | 24.60 | 25.70 | **0.535** | Battery 2# | Yes |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.398 | 0.203 | -0.17 | 24.60 | 25.70 | 0.513 | Battery 3# | / |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.400 | 0.205 | 0.14 | 24.60 | 25.70 | 0.515 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | 661/1880 | GPRS 2TS | 0.130 | 0.075 | -0.08 | 25.02 | 26.00 | 0.163 | Battery 1# | / |
| Back Side | 10mm | 661/1880 | GPRS 2TS | 0.177 | 0.106 | -0.02 | 25.02 | 26.00 | 0.222 | Battery 1# | / |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.071 | 0.040 | 0.12 | 25.02 | 26.00 | 0.089 | Battery 1# | / |
| Right Side | 10mm | 661/1880 | GPRS 2TS | 0.056 | 0.032 | -0.03 | 25.02 | 26.00 | 0.071 | Battery 1# | / |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | **0.256** | 0.146 | -0.07 | 25.02 | 26.00 | **0.321** | Battery 1# | Yes |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | 0.243 | 0.140 | -0.08 | 25.02 | 26.00 | 0.305 | Battery 2# | / |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | 0.245 | 0.141 | -0.08 | 25.02 | 26.00 | 0.307 | Battery 3# | / |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | 0.228 | 0.132 | -0.02 | 25.02 | 26.00 | 0.286 | With SIM2 | / |

Table 66: Hotspot SAR test results of GSM1900

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | |
| Front Side | 10mm | 661/1880 | GPRS 2TS | 0.149 | 0.076 | -0.16 | 24.60 | 27.70 | 0.304 | Yes |
| Back Side | 10mm | 661/1880 | GPRS 2TS | 0.188 | 0.108 | -0.04 | 24.60 | 27.70 | 0.384 | Yes |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.402 | 0.205 | -0.01 | 24.60 | 27.70 | 0.821 | Yes |
| Top Side | 10mm | 661/1880 | GPRS 2TS | 0.088 | 0.049 | -0.15 | 24.60 | 27.70 | 0.179 | Yes |
| Left Side | 10mm | 661/1880 | GPRS 2TS | **0.415** | 0.212 | -0.14 | 24.60 | 27.70 | 0.847 | Yes |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.398 | 0.203 | -0.17 | 24.60 | 27.70 | 0.813 | Yes |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.400 | 0.205 | 0.14 | 24.60 | 27.70 | 0.817 | Yes |
| Main Antenna | | | | | | | | | | |
| Front Side | 10mm | 661/1880 | GPRS 2TS | 0.130 | 0.075 | -0.08 | 25.02 | 28.00 | 0.258 | Yes |
| Back Side | 10mm | 661/1880 | GPRS 2TS | 0.177 | 0.106 | -0.02 | 25.02 | 28.00 | 0.352 | Yes |
| Left Side | 10mm | 661/1880 | GPRS 2TS | 0.071 | 0.040 | 0.12 | 25.02 | 28.00 | 0.142 | Yes |
| Right Side | 10mm | 661/1880 | GPRS 2TS | 0.056 | 0.032 | -0.03 | 25.02 | 28.00 | 0.112 | Yes |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | **0.256** | 0.146 | -0.07 | 25.02 | 28.00 | 0.508 | Yes |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | 0.243 | 0.140 | -0.08 | 25.02 | 28.00 | 0.483 | Yes |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | 0.245 | 0.141 | -0.08 | 25.02 | 28.00 | 0.487 | Yes |
| Bottom Side | 10mm | 661/1880 | GPRS 2TS | 0.228 | 0.132 | -0.02 | 25.02 | 28.00 | 0.453 | Yes |

Table 67: Product Specific 10-g SAR test reduction evaluation of GSM1900

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

### 7.2.3 SAR measurement Results of UMTS Band II

| Test Position of Head | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | |
| Left cheek | 9400/1880 | RMC | 0.162 | 0.083 | 0.15 | 17.93 | 18.60 | 0.189 | Battery 1# | / |
| Left tilt | 9400/1880 | RMC | 0.111 | 0.058 | 0.12 | 17.93 | 18.60 | 0.130 | Battery 1# | / |
| Right cheek | 9400/1880 | RMC | 0.485 | 0.250 | -0.03 | 17.93 | 18.60 | 0.566 | Battery 1# | / |
| Right tilt | 9400/1880 | RMC | 0.228 | 0.118 | -0.18 | 17.93 | 18.60 | 0.266 | Battery 1# | / |
| Right cheek | 9400/1880 | RMC | **0.537** | 0.277 | -0.03 | 17.93 | 18.60 | **0.627** | Battery 2# | Yes |
| Right cheek | 9400/1880 | RMC | 0.480 | 0.248 | -0.09 | 17.93 | 18.60 | 0.560 | Battery 3# | / |
| Right cheek | 9400/1880 | RMC | 0.530 | 0.273 | -0.13 | 17.93 | 18.60 | 0.618 | With SIM2 | / |
| Main Antenna | | | | | | | | | | |
| Left cheek | 9400/1880 | RMC | **0.085** | 0.055 | -0.04 | 23.49 | 24.50 | **0.107** | Battery 1# | Yes |
| Left tilt | 9400/1880 | RMC | 0.045 | 0.025 | 0.12 | 23.49 | 24.50 | 0.057 | Battery 1# | / |
| Right cheek | 9400/1880 | RMC | 0.073 | 0.049 | -0.14 | 23.49 | 24.50 | 0.092 | Battery 1# | / |
| Right tilt | 9400/1880 | RMC | 0.037 | 0.021 | 0.15 | 23.49 | 24.50 | 0.046 | Battery 1# | / |
| Left cheek | 9400/1880 | RMC | 0.083 | 0.054 | -0.09 | 23.49 | 24.50 | 0.105 | Battery 2# | / |
| Left cheek | 9400/1880 | RMC | 0.083 | 0.054 | 0.04 | 23.49 | 24.50 | 0.105 | Battery 3# | / |
| Left cheek | 9400/1880 | RMC | 0.084 | 0.055 | 0.08 | 23.49 | 24.50 | 0.106 | With SIM2 | / |

Table 68: Head SAR test results of UMTS Band II

| Test Position of Body-Worn | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 15mm | 9400/1880 | RMC | 0.210 | 0.122 | -0.08 | 23.48 | 24.40 | 0.260 | Battery 1# | / |
| Back Side | 15mm | 9400/1880 | RMC | 0.197 | 0.117 | -0.09 | 23.48 | 24.40 | 0.243 | Battery 1# | / |
| Front Side | 15mm | 9400/1880 | RMC | **0.249** | 0.141 | -0.17 | 23.48 | 24.40 | **0.308** | Battery 2# | Yes |
| Front Side | 15mm | 9400/1880 | RMC | 0.215 | 0.123 | -0.03 | 23.48 | 24.40 | 0.266 | Battery 3# | / |
| Front Side | 15mm | 9400/1880 | RMC | 0.221 | 0.127 | -0.01 | 23.48 | 24.40 | 0.273 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 15mm | 9400/1880 | RMC | 0.129 | 0.083 | -0.05 | 22.00 | 22.90 | 0.159 | Battery 1# | / |
| Back Side | 15mm | 9400/1880 | RMC | 0.168 | 0.106 | 0.10 | 22.00 | 22.90 | 0.207 | Battery 1# | / |
| Back Side | 15mm | 9400/1880 | RMC | **0.182** | 0.113 | -0.01 | 22.00 | 22.90 | **0.224** | Battery 2# | Yes |
| Back Side | 15mm | 9400/1880 | RMC | 0.171 | 0.107 | 0.17 | 22.00 | 22.90 | 0.210 | Battery 3# | / |
| Back Side | 15mm | 9400/1880 | RMC | 0.171 | 0.108 | 0.15 | 22.00 | 22.90 | 0.210 | With SIM2 | / |

Table 69: Body Worn SAR test results of UMTS Band II

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | 9400/1880 | RMC | 0.139 | 0.073 | -0.11 | 18.89 | 19.50 | 0.160 | Battery 1# | / |
| Back Side | 10mm | 9400/1880 | RMC | 0.172 | 0.091 | -0.16 | 18.89 | 19.50 | 0.198 | Battery 1# | / |
| Left Side | 10mm | 9400/1880 | RMC | 0.359 | 0.183 | -0.09 | 18.89 | 19.50 | 0.413 | Battery 1# | / |
| Top Side | 10mm | 9400/1880 | RMC | 0.085 | 0.051 | 0.03 | 18.89 | 19.50 | 0.098 | Battery 1# | / |
| Left Side | 10mm | 9400/1880 | RMC | 0.379 | 0.192 | 0.08 | 18.89 | 19.50 | 0.436 | Battery 2# | / |
| Left Side | 10mm | 9400/1880 | RMC | 0.326 | 0.168 | -0.02 | 18.89 | 19.50 | 0.375 | Battery 3# | / |
| Left Side | 10mm | 9400/1880 | RMC | **0.385** | 0.195 | -0.15 | 18.89 | 19.50 | **0.443** | With SIM2 | Yes |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | 9400/1880 | RMC | 0.142 | 0.083 | 0.11 | 19.48 | 20.40 | 0.176 | Battery 1# | / |
| Back Side | 10mm | 9400/1880 | RMC | 0.194 | 0.109 | -0.10 | 19.48 | 20.40 | 0.240 | Battery 1# | / |
| Left Side | 10mm | 9400/1880 | RMC | 0.067 | 0.038 | -0.05 | 19.48 | 20.40 | 0.083 | Battery 1# | / |
| Right Side | 10mm | 9400/1880 | RMC | 0.047 | 0.028 | -0.11 | 19.48 | 20.40 | 0.058 | Battery 1# | / |
| Bottom Side | 10mm | 9400/1880 | RMC | 0.280 | 0.160 | 0.00 | 19.48 | 20.40 | 0.346 | Battery 1# | / |
| Bottom Side | 10mm | 9400/1880 | RMC | **0.283** | 0.162 | -0.02 | 19.48 | 20.40 | **0.350** | Battery 2# | Yes |
| Bottom Side | 10mm | 9400/1880 | RMC | 0.274 | 0.156 | -0.06 | 19.48 | 20.40 | 0.339 | Battery 3# | / |
| Bottom Side | 10mm | 9400/1880 | RMC | 0.262 | 0.152 | -0.03 | 19.48 | 20.40 | 0.324 | With SIM2 | / |

Table 70: Hotspot SAR test results of UMTS Band II

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | |
| Front Side | 10mm | 9400/1880 | RMC | 0.139 | 0.073 | -0.11 | 18.89 | 24.40 | 0.494 | Yes |
| Back Side | 10mm | 9400/1880 | RMC | 0.172 | 0.091 | -0.16 | 18.89 | 24.40 | 0.612 | Yes |
| Left Side | 10mm | 9400/1880 | RMC | 0.359 | 0.183 | -0.09 | 18.89 | 24.40 | 1.277 | No |
| Top Side | 10mm | 9400/1880 | RMC | 0.085 | 0.051 | 0.03 | 18.89 | 24.40 | 0.303 | Yes |
| Left Side | 10mm | 9400/1880 | RMC | 0.379 | 0.192 | 0.08 | 18.89 | 24.40 | 1.348 | No |
| Left Side | 10mm | 9400/1880 | RMC | 0.326 | 0.168 | -0.02 | 18.89 | 24.40 | 1.159 | Yes |
| Left Side | 10mm | 9400/1880 | RMC | **0.385** | 0.195 | -0.15 | 18.89 | 24.40 | 1.369 | No |
| Main Antenna | | | | | | | | | | |
| Front Side | 10mm | 9400/1880 | RMC | 0.142 | 0.083 | 0.11 | 19.48 | 24.50 | 0.451 | Yes |
| Back Side | 10mm | 9400/1880 | RMC | 0.194 | 0.109 | -0.10 | 19.48 | 24.50 | 0.616 | Yes |
| Left Side | 10mm | 9400/1880 | RMC | 0.067 | 0.038 | -0.05 | 19.48 | 24.50 | 0.213 | Yes |
| Right Side | 10mm | 9400/1880 | RMC | 0.047 | 0.028 | -0.11 | 19.48 | 24.50 | 0.149 | Yes |
| Bottom Side | 10mm | 9400/1880 | RMC | 0.280 | 0.160 | 0.00 | 19.48 | 24.50 | 0.890 | Yes |
| Bottom Side | 10mm | 9400/1880 | RMC | **0.283** | 0.162 | -0.02 | 19.48 | 24.50 | 0.899 | Yes |
| Bottom Side | 10mm | 9400/1880 | RMC | 0.274 | 0.156 | -0.06 | 19.48 | 24.50 | 0.870 | Yes |
| Bottom Side | 10mm | 9400/1880 | RMC | 0.262 | 0.152 | -0.03 | 19.48 | 24.50 | 0.832 | Yes |

Table 71: Product Specific 10-g SAR test reduction evaluation of UMTS Band II

Note: According to the table above, only Left side is required for Product Specific 10-g SAR test in this frequency band.

| Product Specific 10-g SAR | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 10-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Left Side | 0mm | 9400/1880 | RMC | 3.590 | 1.390 | -0.19 | 23.48 | 24.40 | 1.718 | Battery 1# | / |
| Left Side | 0mm | 9400/1880 | RMC | 3.290 | 1.350 | -0.09 | 23.48 | 24.40 | 1.669 | Battery 2# | / |
| Left Side | 0mm | 9400/1880 | RMC | 3.260 | 1.330 | -0.11 | 23.48 | 24.40 | 1.644 | Battery 3# | / |
| Left Side | 0mm | 9400/1880 | RMC | 3.670 | **1.400** | -0.16 | 23.48 | 24.40 | **1.730** | With SIM2 | Yes |

Table 72: Product Specific 10-g SAR test results of UMTS Band II

### 7.2.4 SAR measurement Results of UMTS Band IV

| Test Position of Head | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | |
| Left cheek | 1413/1732.6 | RMC | 0.159 | 0.105 | 0.17 | 17.67 | 18.60 | 0.197 | Battery 1# | / |
| Left tilt | 1413/1732.6 | RMC | 0.219 | 0.131 | -0.01 | 17.67 | 18.60 | 0.271 | Battery 1# | / |
| Right cheek | 1413/1732.6 | RMC | **0.394** | 0.218 | -0.12 | 17.67 | 18.60 | **0.488** | Battery 1# | Yes |
| Right tilt | 1413/1732.6 | RMC | 0.215 | 0.135 | -0.11 | 17.67 | 18.60 | 0.266 | Battery 1# | / |
| Right cheek | 1413/1732.6 | RMC | 0.307 | 0.179 | 0.02 | 17.67 | 18.60 | 0.380 | Battery 2# | / |
| Right cheek | 1413/1732.6 | RMC | 0.312 | 0.181 | 0.12 | 17.67 | 18.60 | 0.387 | Battery 3# | / |
| Right cheek | 1413/1732.6 | RMC | 0.347 | 0.190 | -0.14 | 17.67 | 18.60 | 0.430 | With SIM2 | / |
| Main Antenna | | | | | | | | | | |
| Left cheek | 1413/1732.6 | RMC | 0.109 | 0.071 | -0.03 | 23.48 | 24.50 | 0.138 | Battery 1# | / |
| Left tilt | 1413/1732.6 | RMC | 0.058 | 0.035 | 0.13 | 23.48 | 24.50 | 0.074 | Battery 1# | / |
| Right cheek | 1413/1732.6 | RMC | 0.099 | 0.059 | 0.08 | 23.48 | 24.50 | 0.126 | Battery 1# | / |
| Right tilt | 1413/1732.6 | RMC | 0.065 | 0.036 | 0.03 | 23.48 | 24.50 | 0.082 | Battery 1# | / |
| Left cheek | 1413/1732.6 | RMC | **0.132** | 0.085 | 0.12 | 23.48 | 24.50 | **0.167** | Battery 2# | Yes |
| Left cheek | 1413/1732.6 | RMC | 0.130 | 0.082 | 0.15 | 23.48 | 24.50 | 0.164 | Battery 3# | / |
| Left cheek | 1413/1732.6 | RMC | 0.120 | 0.077 | 0.18 | 23.48 | 24.50 | 0.152 | With SIM2 | / |

Table 73: Head SAR test results of UMTS Band IV

| Test Position of Body-Worn | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 15mm | 1413/1732.6 | RMC | 0.193 | 0.128 | 0.06 | 23.19 | 24.10 | 0.238 | Battery 1# | / |
| Back Side | 15mm | 1413/1732.6 | RMC | **0.218** | 0.145 | 0.10 | 23.19 | 24.10 | **0.269** | Battery 1# | Yes |
| Back Side | 15mm | 1413/1732.6 | RMC | 0.204 | 0.137 | 0.14 | 23.19 | 24.10 | 0.252 | Battery 2# | / |
| Back Side | 15mm | 1413/1732.6 | RMC | 0.203 | 0.135 | 0.15 | 23.19 | 24.10 | 0.250 | Battery 3# | / |
| Back Side | 15mm | 1413/1732.6 | RMC | 0.216 | 0.143 | 0.08 | 23.19 | 24.10 | 0.266 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 15mm | 1413/1732.6 | RMC | 0.132 | 0.086 | -0.13 | 21.98 | 22.90 | 0.163 | Battery 1# | / |
| Back Side | 15mm | 1413/1732.6 | RMC | **0.180** | 0.110 | -0.09 | 21.98 | 22.90 | **0.222** | Battery 1# | Yes |
| Back Side | 15mm | 1413/1732.6 | RMC | 0.168 | 0.102 | -0.04 | 21.98 | 22.90 | 0.208 | Battery 2# | / |
| Back Side | 15mm | 1413/1732.6 | RMC | 0.159 | 0.097 | -0.05 | 21.98 | 22.90 | 0.197 | Battery 3# | / |
| Back Side | 15mm | 1413/1732.6 | RMC | 0.170 | 0.103 | -0.05 | 21.98 | 22.90 | 0.210 | With SIM2 | / |

Table 74: Body Worn SAR test results of UMTS Band IV

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | 1413/1732.6 | RMC | 0.104 | 0.065 | -0.13 | 18.65 | 19.50 | 0.126 | Battery 1# | / |
| Back Side | 10mm | 1413/1732.6 | RMC | 0.118 | 0.079 | 0.09 | 18.65 | 19.50 | 0.144 | Battery 1# | / |
| Left Side | 10mm | 1413/1732.6 | RMC | 0.046 | 0.022 | -0.19 | 18.65 | 19.50 | 0.055 | Battery 1# | / |
| Top Side | 10mm | 1413/1732.6 | RMC | 0.126 | 0.076 | 0.06 | 18.65 | 19.50 | 0.153 | Battery 1# | / |
| Top Side | 10mm | 1413/1732.6 | RMC | **0.134** | 0.080 | 0.05 | 18.65 | 19.50 | **0.163** | Battery 2# | Yes |
| Top Side | 10mm | 1413/1732.6 | RMC | 0.125 | 0.074 | 0.02 | 18.65 | 19.50 | 0.152 | Battery 3# | / |
| Top Side | 10mm | 1413/1732.6 | RMC | 0.125 | 0.074 | 0.02 | 18.65 | 19.50 | 0.152 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | 1413/1732.6 | RMC | 0.121 | 0.075 | -0.17 | 19.53 | 20.40 | 0.148 | Battery 1# | / |
| Back Side | 10mm | 1413/1732.6 | RMC | 0.177 | 0.105 | -0.10 | 19.53 | 20.40 | 0.216 | Battery 1# | / |
| Left Side | 10mm | 1413/1732.6 | RMC | 0.081 | 0.047 | 0.01 | 19.53 | 20.40 | 0.099 | Battery 1# | / |
| Right Side | 10mm | 1413/1732.6 | RMC | 0.058 | 0.033 | -0.04 | 19.53 | 20.40 | 0.070 | Battery 1# | / |
| Bottom Side | 10mm | 1413/1732.6 | RMC | 0.252 | 0.144 | 0.02 | 19.53 | 20.40 | 0.308 | Battery 1# | / |
| Bottom Side | 10mm | 1413/1732.6 | RMC | **0.259** | 0.146 | 0.04 | 19.53 | 20.40 | **0.316** | Battery 2# | Yes |
| Bottom Side | 10mm | 1413/1732.6 | RMC | 0.221 | 0.126 | 0.02 | 19.53 | 20.40 | 0.270 | Battery 3# | / |
| Bottom Side | 10mm | 1413/1732.6 | RMC | 0.247 | 0.141 | 0.06 | 19.53 | 20.40 | 0.302 | With SIM2 | / |

Table 75: Hotspot SAR test results of UMTS Band IV

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | |
| Front Side | 10mm | 1413/1732.6 | RMC | 0.104 | 0.065 | -0.13 | 18.65 | 24.10 | 0.365 | Yes |
| Back Side | 10mm | 1413/1732.6 | RMC | 0.118 | 0.079 | 0.09 | 18.65 | 24.10 | 0.414 | Yes |
| Left Side | 10mm | 1413/1732.6 | RMC | 0.046 | 0.022 | -0.19 | 18.65 | 24.10 | 0.160 | Yes |
| Top Side | 10mm | 1413/1732.6 | RMC | 0.126 | 0.076 | 0.06 | 18.65 | 24.10 | 0.442 | Yes |
| Top Side | 10mm | 1413/1732.6 | RMC | **0.134** | 0.080 | 0.05 | 18.65 | 24.10 | 0.470 | Yes |
| Top Side | 10mm | 1413/1732.6 | RMC | 0.125 | 0.074 | 0.02 | 18.65 | 24.10 | 0.438 | Yes |
| Top Side | 10mm | 1413/1732.6 | RMC | 0.125 | 0.074 | 0.02 | 18.65 | 24.10 | 0.438 | Yes |
| Main Antenna | | | | | | | | | | |
| Front Side | 10mm | 1413/1732.6 | RMC | 0.121 | 0.075 | -0.17 | 19.53 | 24.50 | 0.380 | Yes |
| Back Side | 10mm | 1413/1732.6 | RMC | 0.177 | 0.105 | -0.10 | 19.53 | 24.50 | 0.556 | Yes |
| Left Side | 10mm | 1413/1732.6 | RMC | 0.081 | 0.047 | 0.01 | 19.53 | 24.50 | 0.254 | Yes |
| Right Side | 10mm | 1413/1732.6 | RMC | 0.058 | 0.033 | -0.04 | 19.53 | 24.50 | 0.181 | Yes |
| Bottom Side | 10mm | 1413/1732.6 | RMC | 0.252 | 0.144 | 0.02 | 19.53 | 24.50 | 0.791 | Yes |
| Bottom Side | 10mm | 1413/1732.6 | RMC | **0.259** | 0.146 | 0.04 | 19.53 | 24.50 | 0.813 | Yes |
| Bottom Side | 10mm | 1413/1732.6 | RMC | 0.221 | 0.126 | 0.02 | 19.53 | 24.50 | 0.694 | Yes |
| Bottom Side | 10mm | 1413/1732.6 | RMC | 0.247 | 0.141 | 0.06 | 19.53 | 24.50 | 0.776 | Yes |

Table 76: Product Specific 10-g SAR test reduction evaluation of UMTS Band IV

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

### 7.2.5 SAR measurement Results of UMTS Band V

| Test Position of Head | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Left cheek | Tuning State1 | 4182/836.4 | RMC | 0.199 | 0.129 | 0.04 | 20.33 | 21.20 | 0.243 | Battery 1# | / |
| Left tilt | Tuning State1 | 4182/836.4 | RMC | 0.134 | 0.088 | 0.03 | 20.33 | 21.20 | 0.164 | Battery 1# | / |
| Right cheek | Tuning State1 | 4182/836.4 | RMC | **0.475** | 0.258 | 0.00 | 20.33 | 21.20 | **0.580** | Battery 1# | Yes |
| Right cheek | Tuning State2 | 4182/836.4 | RMC | 0.434 | 0.240 | 0.08 | 20.33 | 21.20 | 0.530 | Battery 1# | / |
| Right tilt | Tuning State1 | 4182/836.4 | RMC | 0.223 | 0.131 | -0.02 | 20.33 | 21.20 | 0.272 | Battery 1# | / |
| Right cheek | Tuning State1 | 4182/836.4 | RMC | 0.431 | 0.235 | -0.08 | 20.33 | 21.20 | 0.527 | Battery 2# | / |
| Right cheek | Tuning State1 | 4182/836.4 | RMC | 0.443 | 0.241 | 0.05 | 20.33 | 21.20 | 0.541 | Battery 3# | / |
| Right cheek | Tuning State1 | 4182/836.4 | RMC | 0.447 | 0.244 | 0.07 | 20.33 | 21.20 | 0.546 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Left cheek | / | 4182/836.4 | RMC | 0.032 | 0.023 | 0.10 | 24.00 | 25.00 | 0.040 | Battery 1# | / |
| Left tilt | / | 4182/836.4 | RMC | 0.014 | 0.010 | -0.10 | 24.00 | 25.00 | 0.018 | Battery 1# | / |
| Right cheek | / | 4182/836.4 | RMC | 0.034 | 0.027 | -0.19 | 24.00 | 25.00 | 0.043 | Battery 1# | / |
| Right tilt | / | 4182/836.4 | RMC | 0.015 | 0.012 | -0.18 | 24.00 | 25.00 | 0.018 | Battery 1# | / |
| Right cheek | / | 4182/836.4 | RMC | **0.035** | 0.027 | 0.10 | 24.00 | 25.00 | **0.044** | Battery 2# | Yes |
| Right cheek | / | 4182/836.4 | RMC | 0.033 | 0.026 | -0.19 | 24.00 | 25.00 | 0.042 | Battery 3# | / |
| Right cheek | / | 4182/836.4 | RMC | 0.033 | 0.026 | -0.15 | 24.00 | 25.00 | 0.042 | With SIM2 | / |

Table 77: Head SAR test results of UMTS Band V

| Test Position of Body-Worn | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | | |
| Front Side | 15mm | Tuning State1 | 4182/836.4 | RMC | 0.198 | 0.129 | -0.04 | 23.87 | 24.80 | 0.245 | Battery 1# | / |
| Back Side | 15mm | Tuning State1 | 4182/836.4 | RMC | **0.248** | 0.157 | -0.03 | 23.87 | 24.80 | **0.307** | Battery 1# | Yes |
| Back Side | 15mm | Tuning State2 | 4182/836.4 | RMC | 0.240 | 0.157 | -0.07 | 23.87 | 24.80 | 0.297 | Battery 1# | / |
| Back Side | 15mm | Tuning State1 | 4182/836.4 | RMC | 0.247 | 0.157 | -0.02 | 23.87 | 24.80 | 0.306 | Battery 2# | / |
| Back Side | 15mm | Tuning State1 | 4182/836.4 | RMC | 0.231 | 0.148 | -0.01 | 23.87 | 24.80 | 0.286 | Battery 3# | / |
| Back Side | 15mm | Tuning State1 | 4182/836.4 | RMC | 0.239 | 0.152 | -0.01 | 23.87 | 24.80 | 0.296 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | | |
| Front Side | 15mm | / | 4182/836.4 | RMC | 0.181 | 0.124 | -0.03 | 24.00 | 25.00 | 0.228 | Battery 1# | / |
| Back Side | 15mm | / | 4182/836.4 | RMC | **0.203** | 0.140 | -0.08 | 24.00 | 25.00 | **0.256** | Battery 1# | Yes |
| Back Side | 15mm | / | 4182/836.4 | RMC | 0.198 | 0.136 | -0.03 | 24.00 | 25.00 | 0.249 | Battery 2# | / |
| Back Side | 15mm | / | 4182/836.4 | RMC | 0.197 | 0.135 | -0.10 | 24.00 | 25.00 | 0.248 | Battery 3# | / |
| Back Side | 15mm | / | 4182/836.4 | RMC | 0.202 | 0.138 | -0.08 | 24.00 | 25.00 | 0.254 | With SIM2 | / |

Table 78: Body Worn SAR test results of UMTS Band V

| Test Position of Hotspot | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | | |
| Front Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.355 | 0.218 | -0.15 | 23.87 | 24.80 | 0.440 | Battery 1# | / |
| Back Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.481 | 0.291 | -0.02 | 23.87 | 24.80 | 0.596 | Battery 1# | / |
| Back Side | 10mm | Tuning State2 | 4182/836.4 | RMC | 0.443 | 0.270 | -0.07 | 23.87 | 24.80 | 0.549 | Battery 3# | / |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.583 | 0.319 | -0.10 | 23.87 | 24.80 | 0.722 | Battery 1# | / |
| Top Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.127 | 0.081 | -0.05 | 23.87 | 24.80 | 0.157 | Battery 1# | / |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | **0.628** | 0.340 | -0.11 | 23.87 | 24.80 | **0.778** | Battery 2# | Yes |
| Left Side | 10mm | Tuning State2 | 4182/836.4 | RMC | 0.583 | 0.319 | -0.11 | 23.87 | 24.80 | 0.722 | Battery 2# | / |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.615 | 0.331 | -0.18 | 23.87 | 24.80 | 0.762 | Battery 3# | / |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.602 | 0.327 | -0.03 | 23.87 | 24.80 | 0.746 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | | |
| Front Side | 10mm | / | 4182/836.4 | RMC | 0.300 | 0.190 | -0.05 | 24.00 | 25.00 | 0.378 | Battery 1# | / |
| Back Side | 10mm | / | 4182/836.4 | RMC | 0.391 | 0.232 | -0.06 | 24.00 | 25.00 | 0.492 | Battery 1# | / |
| Left Side | 10mm | / | 4182/836.4 | RMC | 0.174 | 0.092 | -0.04 | 24.00 | 25.00 | 0.219 | Battery 1# | / |
| Right Side | 10mm | / | 4182/836.4 | RMC | 0.083 | 0.052 | -0.01 | 24.00 | 25.00 | 0.105 | Battery 1# | / |
| Bottom Side | 10mm | / | 4182/836.4 | RMC | 0.300 | 0.167 | 0.04 | 24.00 | 25.00 | 0.378 | Battery 1# | / |
| Back Side | 10mm | / | 4182/836.4 | RMC | **0.406** | 0.240 | -0.09 | 24.00 | 25.00 | **0.511** | Battery 2# | Yes |
| Back Side | 10mm | / | 4182/836.4 | RMC | 0.402 | 0.237 | -0.09 | 24.00 | 25.00 | 0.506 | Battery 3# | / |
| Back Side | 10mm | / | 4182/836.4 | RMC | 0.388 | 0.230 | -0.06 | 24.00 | 25.00 | 0.488 | With SIM2 | / |

Table 79: Hotspot SAR test results of UMTS Band V

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.355 | 0.218 | -0.15 | 23.87 | 24.80 | 0.440 | Yes |
| Back Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.481 | 0.291 | -0.02 | 23.87 | 24.80 | 0.596 | Yes |
| Back Side | 10mm | Tuning State2 | 4182/836.4 | RMC | 0.443 | 0.270 | -0.07 | 23.87 | 24.80 | 0.549 | Yes |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.583 | 0.319 | -0.10 | 23.87 | 24.80 | 0.722 | Yes |
| Top Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.127 | 0.081 | -0.05 | 23.87 | 24.80 | 0.157 | Yes |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | **0.628** | 0.340 | -0.11 | 23.87 | 24.80 | 0.778 | Yes |
| Left Side | 10mm | Tuning State2 | 4182/836.4 | RMC | 0.583 | 0.319 | -0.11 | 23.87 | 24.80 | 0.722 | Yes |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.615 | 0.331 | -0.18 | 23.87 | 24.80 | 0.762 | Yes |
| Left Side | 10mm | Tuning State1 | 4182/836.4 | RMC | 0.602 | 0.327 | -0.03 | 23.87 | 24.80 | 0.746 | Yes |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | / | 4182/836.4 | RMC | 0.300 | 0.190 | -0.05 | 24.00 | 25.00 | 0.378 | Yes |
| Back Side | 10mm | / | 4182/836.4 | RMC | 0.391 | 0.232 | -0.06 | 24.00 | 25.00 | 0.492 | Yes |
| Left Side | 10mm | / | 4182/836.4 | RMC | 0.174 | 0.092 | -0.04 | 24.00 | 25.00 | 0.219 | Yes |
| Right Side | 10mm | / | 4182/836.4 | RMC | 0.083 | 0.052 | -0.01 | 24.00 | 25.00 | 0.105 | Yes |
| Bottom Side | 10mm | / | 4182/836.4 | RMC | 0.300 | 0.167 | 0.04 | 24.00 | 25.00 | 0.378 | Yes |
| Back Side | 10mm | / | 4182/836.4 | RMC | **0.406** | 0.240 | -0.09 | 24.00 | 25.00 | 0.511 | Yes |
| Back Side | 10mm | / | 4182/836.4 | RMC | 0.402 | 0.237 | -0.09 | 24.00 | 25.00 | 0.506 | Yes |
| Back Side | 10mm | / | 4182/836.4 | RMC | 0.388 | 0.230 | -0.06 | 24.00 | 25.00 | 0.488 | Yes |

Table 80: Product Specific 10-g SAR test reduction evaluation of UMTS Band V

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

### 7.2.6 SAR measurement Results of LTE Band 2

| Test Position of Head | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | |
| Left cheek | 18900/1880 | 20M QPSK 1RB#50 | 0.172 | 0.085 | 0.12 | 18.07 | 18.90 | 0.208 | Battery 1# | / |
| Left tilt | 18900/1880 | 20M QPSK 1RB#50 | 0.104 | 0.057 | 0.09 | 18.07 | 18.90 | 0.126 | Battery 1# | / |
| Right cheek | 18900/1880 | 20M QPSK 1RB#50 | 0.519 | 0.266 | 0.00 | 18.07 | 18.90 | 0.628 | Battery 1# | / |
| Right tilt | 18900/1880 | 20M QPSK 1RB#50 | 0.227 | 0.112 | -0.11 | 18.07 | 18.90 | 0.275 | Battery 1# | / |
| Left cheek | 19100/1900 | 20M QPSK 50%RB#0 | 0.183 | 0.090 | 0.04 | 17.98 | 18.90 | 0.226 | Battery 1# | / |
| Left tilt | 19100/1900 | 20M QPSK 50%RB#0 | 0.139 | 0.076 | 0.05 | 17.98 | 18.90 | 0.172 | Battery 1# | / |
| Right cheek | 19100/1900 | 20M QPSK 50%RB#0 | 0.585 | 0.297 | -0.02 | 17.98 | 18.90 | 0.723 | Battery 1# | / |
| Right tilt | 19100/1900 | 20M QPSK 50%RB#0 | 0.280 | 0.137 | -0.13 | 17.98 | 18.90 | 0.346 | Battery 1# | / |
| Right cheek | 19100/1900 | 20M QPSK 50%RB#0 | **0.632** | 0.319 | -0.10 | 17.98 | 18.90 | **0.781** | Battery 2# | Yes |
| Right cheek | 19100/1900 | 20M QPSK 50%RB#0 | 0.547 | 0.277 | -0.09 | 17.98 | 18.90 | 0.676 | Battery 3# | / |
| Right cheek | 19100/1900 | 20M QPSK 50%RB#0 | 0.577 | 0.295 | -0.14 | 17.98 | 18.90 | 0.713 | With SIM2 | / |
| Main Antenna | | | | | | | | | | |
| Left cheek | 18900/1880 | 20M QPSK 1RB#0 | 0.095 | 0.061 | 0.16 | 23.77 | 24.50 | 0.113 | Battery 1# | / |
| Left tilt | 18900/1880 | 20M QPSK 1RB#0 | 0.056 | 0.028 | 0.11 | 23.77 | 24.50 | 0.066 | Battery 1# | / |
| Right cheek | 18900/1880 | 20M QPSK 1RB#0 | 0.078 | 0.042 | 0.01 | 23.77 | 24.50 | 0.092 | Battery 1# | / |
| Right tilt | 18900/1880 | 20M QPSK 1RB#0 | 0.039 | 0.021 | 0.15 | 23.77 | 24.50 | 0.046 | Battery 1# | / |
| Left cheek | 19100/1900 | 20M QPSK 50%RB#0 | 0.092 | 0.059 | 0.02 | 22.68 | 23.50 | 0.111 | Battery 1# | / |
| Left tilt | 19100/1900 | 20M QPSK 50%RB#0 | 0.047 | 0.026 | 0.14 | 22.68 | 23.50 | 0.057 | Battery 1# | / |
| Right cheek | 19100/1900 | 20M QPSK 50%RB#0 | 0.072 | 0.040 | 0.10 | 22.68 | 23.50 | 0.087 | Battery 1# | / |
| Right tilt | 19100/1900 | 20M QPSK 50%RB#0 | 0.042 | 0.023 | 0.12 | 22.68 | 23.50 | 0.050 | Battery 1# | / |
| Left cheek | 18900/1880 | 20M QPSK 1RB#0 | **0.104** | 0.067 | 0.06 | 23.77 | 24.50 | **0.123** | Battery 2# | Yes |
| Left cheek | 18900/1880 | 20M QPSK 1RB#0 | 0.089 | 0.059 | -0.10 | 23.77 | 24.50 | 0.105 | Battery 3# | / |
| Left cheek | 18900/1880 | 20M QPSK 1RB#0 | 0.096 | 0.062 | 0.09 | 23.77 | 24.50 | 0.113 | With SIM2 | / |

Table 81: Head SAR test results of LTE Band 2

| Test Position of Body-Worn | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 15mm | 18900/1880 | 20M QPSK 1RB#99 | 0.207 | 0.114 | -0.15 | 23.57 | 24.50 | 0.256 | Battery 1# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#99 | 0.270 | 0.154 | 0.04 | 23.57 | 24.50 | 0.334 | Battery 1# | / |
| Front Side | 15mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.163 | 0.090 | -0.07 | 22.50 | 23.50 | 0.205 | Battery 1# | / |
| Back Side | 15mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.193 | 0.107 | -0.18 | 22.50 | 23.50 | 0.243 | Battery 1# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#99 | **0.311** | 0.178 | -0.02 | 23.57 | 24.50 | **0.385** | Battery 2# | Yes |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#99 | 0.232 | 0.136 | -0.17 | 23.57 | 24.50 | 0.287 | Battery 3# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#99 | 0.249 | 0.145 | -0.13 | 23.57 | 24.50 | 0.308 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 15mm | 18900/1880 | 20M QPSK 1RB#0 | 0.146 | 0.091 | 0.09 | 22.28 | 23.20 | 0.180 | Battery 1# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#0 | **0.199** | 0.124 | -0.02 | 22.28 | 23.20 | **0.246** | Battery 1# | Yes |
| Front Side | 15mm | 18900/1880 | 20M QPSK 50%RB#0 | 0.139 | 0.087 | 0.06 | 22.17 | 23.20 | 0.176 | Battery 1# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 50%RB#0 | 0.178 | 0.109 | 0.04 | 22.17 | 23.20 | 0.226 | Battery 1# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#0 | 0.171 | 0.107 | -0.02 | 22.28 | 23.20 | 0.211 | Battery 2# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#0 | 0.186 | 0.116 | 0.02 | 22.28 | 23.20 | 0.230 | Battery 3# | / |
| Back Side | 15mm | 18900/1880 | 20M QPSK 1RB#0 | 0.172 | 0.107 | 0.06 | 22.28 | 23.20 | 0.213 | With SIM2 | / |

Table 82: Body Worn SAR test results of LTE Band 2

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.220 | 0.117 | -0.06 | 19.00 | 19.90 | 0.271 | Battery 1# | / |
| Back Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.193 | 0.107 | -0.18 | 19.00 | 19.90 | 0.237 | Battery 1# | / |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.426 | 0.217 | 0.02 | 19.00 | 19.90 | 0.524 | Battery 1# | / |
| Top Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.144 | 0.062 | -0.07 | 19.00 | 19.90 | 0.177 | Battery 1# | / |
| Front Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.202 | 0.108 | -0.17 | 18.94 | 19.90 | 0.252 | Battery 1# | / |
| Back Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.188 | 0.101 | -0.15 | 18.94 | 19.90 | 0.235 | Battery 1# | / |
| Left Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.411 | 0.191 | -0.19 | 18.94 | 19.90 | 0.513 | Battery 1# | / |
| Top Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.136 | 0.074 | -0.09 | 18.94 | 19.90 | 0.170 | Battery 1# | / |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | **0.466** | 0.235 | -0.01 | 19.00 | 19.90 | **0.573** | Battery 2# | Yes |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.387 | 0.196 | -0.08 | 19.00 | 19.90 | 0.476 | Battery 3# | / |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.437 | 0.223 | 0.06 | 19.00 | 19.90 | 0.538 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.119 | 0.070 | -0.14 | 19.74 | 20.60 | 0.145 | Battery 1# | / |
| Back Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.161 | 0.095 | 0.03 | 19.74 | 20.60 | 0.196 | Battery 1# | / |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.055 | 0.031 | -0.10 | 19.74 | 20.60 | 0.067 | Battery 1# | / |
| Right Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.035 | 0.021 | -0.17 | 19.74 | 20.60 | 0.043 | Battery 1# | / |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.298 | 0.170 | -0.11 | 19.74 | 20.60 | 0.363 | Battery 1# | / |
| Front Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.130 | 0.076 | 0.05 | 19.68 | 20.60 | 0.161 | Battery 1# | / |
| Back Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.176 | 0.104 | 0.01 | 19.68 | 20.60 | 0.218 | Battery 1# | / |
| Left Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.062 | 0.035 | 0.06 | 19.68 | 20.60 | 0.076 | Battery 1# | / |
| Right Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.040 | 0.023 | -0.15 | 19.68 | 20.60 | 0.049 | Battery 1# | / |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.270 | 0.155 | -0.05 | 19.68 | 20.60 | 0.334 | Battery 1# | / |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | **0.306** | 0.176 | -0.03 | 19.74 | 20.60 | **0.373** | Battery 2# | Yes |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.269 | 0.154 | 0.01 | 19.74 | 20.60 | 0.328 | Battery 3# | / |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.274 | 0.156 | 0.01 | 19.74 | 20.60 | 0.334 | With SIM2 | / |

Table 83: Hotspot SAR test results of LTE Band 2

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | |
| Front Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.220 | 0.117 | -0.06 | 19.00 | 24.50 | 0.781 | Yes |
| Back Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.193 | 0.107 | -0.18 | 19.00 | 24.50 | 0.685 | Yes |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.426 | 0.217 | 0.02 | 19.00 | 24.50 | 1.512 | No |
| Top Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.144 | 0.062 | -0.07 | 19.00 | 24.50 | 0.511 | Yes |
| Front Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.202 | 0.108 | -0.17 | 18.94 | 23.50 | 0.577 | Yes |
| Back Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.188 | 0.101 | -0.15 | 18.94 | 23.50 | 0.537 | Yes |
| Left Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.411 | 0.191 | -0.19 | 18.94 | 23.50 | 1.174 | Yes |
| Top Side | 10mm | 19100/1900 | 20M QPSK 50%RB#50 | 0.136 | 0.074 | -0.09 | 18.94 | 23.50 | 0.389 | Yes |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | **0.466** | 0.235 | -0.01 | 19.00 | 24.50 | 1.653 | No |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.387 | 0.196 | -0.08 | 19.00 | 24.50 | 1.373 | No |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#0 | 0.437 | 0.223 | 0.06 | 19.00 | 24.50 | 1.551 | No |
| Main Antenna | | | | | | | | | | |
| Front Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.119 | 0.070 | -0.14 | 19.74 | 24.50 | 0.356 | Yes |
| Back Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.161 | 0.095 | 0.03 | 19.74 | 24.50 | 0.482 | Yes |
| Left Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.055 | 0.031 | -0.10 | 19.74 | 24.50 | 0.163 | Yes |
| Right Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.035 | 0.021 | -0.17 | 19.74 | 24.50 | 0.105 | Yes |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.298 | 0.170 | -0.11 | 19.74 | 24.50 | 0.892 | Yes |
| Front Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.130 | 0.076 | 0.05 | 19.68 | 23.50 | 0.313 | Yes |
| Back Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.176 | 0.104 | 0.01 | 19.68 | 23.50 | 0.424 | Yes |
| Left Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.062 | 0.035 | 0.06 | 19.68 | 23.50 | 0.149 | Yes |
| Right Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.040 | 0.023 | -0.15 | 19.68 | 23.50 | 0.096 | Yes |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 50%RB#0 | 0.270 | 0.155 | -0.05 | 19.68 | 23.50 | 0.651 | Yes |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | **0.306** | 0.176 | -0.03 | 19.74 | 24.50 | 0.916 | Yes |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.269 | 0.154 | 0.01 | 19.74 | 24.50 | 0.805 | Yes |
| Bottom Side | 10mm | 19100/1900 | 20M QPSK 1RB#50 | 0.274 | 0.156 | 0.01 | 19.74 | 24.50 | 0.820 | Yes |

Table 84: Product Specific 10-g SAR test reduction evaluation of LTE Band 2

Note: According to the table above, only Left side is required for Product Specific 10-g SAR test in this frequency band.

| Product Specific 10-g SAR | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 10-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Left Side | 0mm | 18900/1880 | 20M QPSK 1RB#99 | 3.920 | **1.500** | -0.11 | 23.57 | 24.50 | **1.858** | Battery 1# | Yes |
| Left Side | 0mm | 19100/1900 | 20M QPSK 50%RB#0 | 3.150 | 1.200 | 0.02 | 22.50 | 23.50 | 1.511 | Battery 1# | / |
| Left Side | 0mm | 18900/1880 | 20M QPSK 1RB#99 | 3.850 | 1.490 | -0.05 | 23.57 | 24.50 | 1.846 | Battery 2# | / |
| Left Side | 0mm | 18900/1880 | 20M QPSK 1RB#99 | 3.350 | 1.280 | -0.19 | 23.57 | 24.50 | 1.586 | Battery 3# | / |
| Left Side | 0mm | 18900/1880 | 20M QPSK 1RB#99 | 3.850 | 1.490 | -0.06 | 23.57 | 24.50 | 1.846 | With SIM2 | / |

Table 85: Product Specific 10-g SAR test results of LTE Band 2

### 7.2.7 SAR measurement Results of LTE Band 4

| Test Position of Head | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | |
| Left cheek | 20050/1720 | 20M QPSK 1RB#0 | 0.141 | 0.086 | -0.03 | 18.16 | 18.90 | 0.167 | Battery 1# | / |
| Left tilt | 20050/1720 | 20M QPSK 1RB#0 | 0.183 | 0.109 | -0.01 | 18.16 | 18.90 | 0.217 | Battery 1# | / |
| Right cheek | 20050/1720 | 20M QPSK 1RB#0 | 0.314 | 0.176 | 0.00 | 18.16 | 18.90 | 0.372 | Battery 1# | / |
| Right tilt | 20050/1720 | 20M QPSK 1RB#0 | 0.189 | 0.112 | 0.04 | 18.16 | 18.90 | 0.224 | Battery 1# | / |
| Left cheek | 20300/1745 | 20M QPSK 50%RB#0 | 0.150 | 0.091 | 0.00 | 18.02 | 18.90 | 0.184 | Battery 1# | / |
| Left tilt | 20300/1745 | 20M QPSK 50%RB#0 | 0.189 | 0.113 | 0.00 | 18.02 | 18.90 | 0.231 | Battery 1# | / |
| Right cheek | 20300/1745 | 20M QPSK 50%RB#0 | 0.354 | 0.192 | 0.08 | 18.02 | 18.90 | 0.434 | Battery 1# | / |
| Right tilt | 20300/1745 | 20M QPSK 50%RB#0 | 0.190 | 0.113 | 0.06 | 18.02 | 18.90 | 0.233 | Battery 1# | / |
| Right cheek | 20300/1745 | 20M QPSK 50%RB#0 | **0.367** | 0.203 | 0.10 | 18.02 | 18.90 | **0.449** | Battery 2# | Yes |
| Right cheek | 20300/1745 | 20M QPSK 50%RB#0 | 0.342 | 0.187 | -0.16 | 18.02 | 18.90 | 0.419 | Battery 3# | / |
| Right cheek | 20300/1745 | 20M QPSK 50%RB#0 | 0.352 | 0.199 | 0.08 | 18.02 | 18.90 | 0.431 | With SIM2 | / |
| Main Antenna | | | | | | | | | | |
| Left cheek | 20300/1745 | 20M QPSK 1RB#0 | **0.150** | 0.097 | 0.11 | 23.74 | 24.50 | **0.179** | Battery 1# | Yes |
| Left tilt | 20300/1745 | 20M QPSK 1RB#0 | 0.062 | 0.038 | 0.18 | 23.74 | 24.50 | 0.074 | Battery 1# | / |
| Right cheek | 20300/1745 | 20M QPSK 1RB#0 | 0.120 | 0.070 | 0.19 | 23.74 | 24.50 | 0.143 | Battery 1# | / |
| Right tilt | 20300/1745 | 20M QPSK 1RB#0 | 0.083 | 0.048 | 0.06 | 23.74 | 24.50 | 0.099 | Battery 1# | / |
| Left cheek | 20300/1745 | 20M QPSK 50%RB#0 | 0.108 | 0.064 | 0.14 | 22.71 | 23.50 | 0.130 | Battery 1# | / |
| Left tilt | 20300/1745 | 20M QPSK 50%RB#0 | 0.050 | 0.030 | 0.06 | 22.71 | 23.50 | 0.060 | Battery 1# | / |
| Right cheek | 20300/1745 | 20M QPSK 50%RB#0 | 0.093 | 0.054 | 0.18 | 22.71 | 23.50 | 0.111 | Battery 1# | / |
| Right tilt | 20300/1745 | 20M QPSK 50%RB#0 | 0.065 | 0.037 | 0.14 | 22.71 | 23.50 | 0.077 | Battery 1# | / |
| Left cheek | 20300/1745 | 20M QPSK 1RB#0 | 0.135 | 0.087 | 0.02 | 23.74 | 24.50 | 0.161 | Battery 2# | / |
| Left cheek | 20300/1745 | 20M QPSK 1RB#0 | 0.137 | 0.087 | 0.11 | 23.74 | 24.50 | 0.163 | Battery 3# | / |
| Left cheek | 20300/1745 | 20M QPSK 1RB#0 | 0.139 | 0.089 | 0.12 | 23.74 | 24.50 | 0.166 | With SIM2 | / |

Table 86: Head SAR test results of LTE Band 4

| Test Position of Body-Worn | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 15mm | 20300/1745 | 20M QPSK 1RB#99 | 0.201 | 0.132 | -0.01 | 23.61 | 24.50 | 0.247 | Battery 1# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#99 | 0.209 | 0.138 | -0.07 | 23.61 | 24.50 | 0.257 | Battery 1# | / |
| Front Side | 15mm | 20300/1745 | 20M QPSK 50%RB#25 | 0.167 | 0.105 | -0.18 | 22.56 | 23.50 | 0.207 | Battery 1# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 50%RB#25 | 0.161 | 0.102 | -0.18 | 22.56 | 23.50 | 0.200 | Battery 1# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#99 | **0.221** | 0.146 | -0.07 | 23.61 | 24.50 | **0.271** | Battery 2# | Yes |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#99 | 0.192 | 0.127 | -0.11 | 23.61 | 24.50 | 0.236 | Battery 3# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#99 | 0.196 | 0.129 | 0.00 | 23.61 | 24.50 | 0.241 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 15mm | 20300/1745 | 20M QPSK 1RB#0 | 0.130 | 0.082 | -0.06 | 22.24 | 23.10 | 0.158 | Battery 1# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#0 | 0.171 | 0.105 | -0.15 | 22.24 | 23.10 | 0.208 | Battery 1# | / |
| Front Side | 15mm | 20300/1745 | 20M QPSK 50%RB#0 | 0.129 | 0.082 | -0.09 | 22.23 | 23.10 | 0.158 | Battery 1# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 50%RB#0 | 0.170 | 0.104 | -0.13 | 22.23 | 23.10 | 0.208 | Battery 1# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#0 | **0.187** | 0.115 | -0.14 | 22.24 | 23.10 | **0.228** | Battery 2# | Yes |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#0 | 0.164 | 0.101 | -0.11 | 22.24 | 23.10 | 0.200 | Battery 3# | / |
| Back Side | 15mm | 20300/1745 | 20M QPSK 1RB#0 | 0.164 | 0.099 | -0.16 | 22.24 | 23.10 | 0.200 | With SIM2 | / |

Table 87: Body Worn SAR test results of LTE Band 4

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.103 | 0.064 | 0.04 | 19.06 | 19.90 | 0.125 | Battery 1# | / |
| Back Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.118 | 0.074 | -0.05 | 19.06 | 19.90 | 0.143 | Battery 1# | / |
| Left Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.042 | 0.020 | -0.10 | 19.06 | 19.90 | 0.051 | Battery 1# | / |
| Top Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.123 | 0.073 | -0.03 | 19.06 | 19.90 | 0.149 | Battery 1# | / |
| Front Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.097 | 0.063 | -0.19 | 18.98 | 19.90 | 0.120 | Battery 1# | / |
| Back Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.114 | 0.075 | -0.09 | 18.98 | 19.90 | 0.141 | Battery 1# | / |
| Left Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.047 | 0.024 | -0.03 | 18.98 | 19.90 | 0.059 | Battery 1# | / |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.136 | 0.081 | -0.02 | 18.98 | 19.90 | 0.168 | Battery 1# | / |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | **0.164** | 0.096 | 0.03 | 18.98 | 19.90 | **0.203** | Battery 2# | Yes |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.159 | 0.093 | 0.01 | 18.98 | 19.90 | 0.197 | Battery 3# | / |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.155 | 0.092 | 0.03 | 18.98 | 19.90 | 0.192 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.132 | 0.081 | -0.13 | 19.78 | 20.60 | 0.159 | Battery 1# | / |
| Back Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.189 | 0.113 | -0.11 | 19.78 | 20.60 | 0.228 | Battery 1# | / |
| Left Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.097 | 0.055 | -0.11 | 19.78 | 20.60 | 0.118 | Battery 1# | / |
| Right Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.065 | 0.037 | -0.13 | 19.78 | 20.60 | 0.078 | Battery 1# | / |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | **0.309** | 0.175 | -0.04 | 19.78 | 20.60 | **0.373** | Battery 1# | Yes |
| Front Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.131 | 0.080 | -0.08 | 19.75 | 20.60 | 0.159 | Battery 1# | / |
| Back Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.200 | 0.117 | -0.19 | 19.75 | 20.60 | 0.243 | Battery 1# | / |
| Left Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.102 | 0.058 | -0.12 | 19.75 | 20.60 | 0.124 | Battery 1# | / |
| Right Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.067 | 0.038 | -0.10 | 19.75 | 20.60 | 0.081 | Battery 1# | / |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.306 | 0.173 | -0.08 | 19.75 | 20.60 | 0.372 | Battery 1# | / |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.269 | 0.152 | 0.04 | 19.78 | 20.60 | 0.325 | Battery 2# | / |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.260 | 0.148 | 0.07 | 19.78 | 20.60 | 0.314 | Battery 3# | / |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.285 | 0.158 | -0.03 | 19.78 | 20.60 | 0.344 | With SIM2 | / |

Table 88: Hotspot SAR test results of LTE Band 4

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | |
| Front Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.103 | 0.064 | 0.04 | 19.06 | 24.50 | 0.360 | Yes |
| Back Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.118 | 0.074 | -0.05 | 19.06 | 24.50 | 0.413 | Yes |
| Left Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.042 | 0.020 | -0.10 | 19.06 | 24.50 | 0.148 | Yes |
| Top Side | 10mm | 20050/1720 | 20M QPSK 1RB#0 | 0.123 | 0.073 | -0.03 | 19.06 | 24.50 | 0.430 | Yes |
| Front Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.097 | 0.063 | -0.19 | 18.98 | 23.50 | 0.275 | Yes |
| Back Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.114 | 0.075 | -0.09 | 18.98 | 23.50 | 0.323 | Yes |
| Left Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.047 | 0.024 | -0.03 | 18.98 | 23.50 | 0.134 | Yes |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.136 | 0.081 | -0.02 | 18.98 | 23.50 | 0.385 | Yes |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | **0.164** | 0.096 | 0.03 | 18.98 | 23.50 | 0.464 | Yes |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.159 | 0.093 | 0.01 | 18.98 | 23.50 | 0.450 | Yes |
| Top Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.155 | 0.092 | 0.03 | 18.98 | 23.50 | 0.439 | Yes |
| Main Antenna | | | | | | | | | | |
| Front Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.132 | 0.081 | -0.13 | 19.78 | 24.50 | 0.391 | Yes |
| Back Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.189 | 0.113 | -0.11 | 19.78 | 24.50 | 0.560 | Yes |
| Left Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.097 | 0.055 | -0.11 | 19.78 | 24.50 | 0.289 | Yes |
| Right Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.065 | 0.037 | -0.13 | 19.78 | 24.50 | 0.192 | Yes |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | **0.309** | 0.175 | -0.04 | 19.78 | 24.50 | 0.916 | Yes |
| Front Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.131 | 0.080 | -0.08 | 19.75 | 23.50 | 0.311 | Yes |
| Back Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.200 | 0.117 | -0.19 | 19.75 | 23.50 | 0.474 | Yes |
| Left Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.102 | 0.058 | -0.12 | 19.75 | 23.50 | 0.242 | Yes |
| Right Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.067 | 0.038 | -0.10 | 19.75 | 23.50 | 0.159 | Yes |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 50%RB#50 | 0.306 | 0.173 | -0.08 | 19.75 | 23.50 | 0.726 | Yes |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.269 | 0.152 | 0.04 | 19.78 | 24.50 | 0.798 | Yes |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.260 | 0.148 | 0.07 | 19.78 | 24.50 | 0.771 | Yes |
| Bottom Side | 10mm | 20300/1745 | 20M QPSK 1RB#0 | 0.285 | 0.158 | -0.03 | 19.78 | 24.50 | 0.845 | Yes |

Table 89: Product Specific 10-g SAR test reduction evaluation of LTE Band 4

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

### 7.2.8 SAR measurement Results of LTE Band 5

| Test Position of Head | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Left cheek | Tuning State1 | 20600/844 | 10M QPSK 1RB#0 | 0.154 | 0.103 | 0.00 | 20.37 | 21.20 | 0.186 | Battery 1# | / |
| Left tilt | Tuning State1 | 20600/844 | 10M QPSK 1RB#0 | 0.102 | 0.067 | 0.00 | 20.37 | 21.20 | 0.123 | Battery 1# | / |
| Right cheek | Tuning State1 | 20600/844 | 10M QPSK 1RB#0 | 0.489 | 0.274 | -0.01 | 20.37 | 21.20 | **0.592** | Battery 1# | / |
| Right tilt | Tuning State1 | 20600/844 | 10M QPSK 1RB#0 | 0.197 | 0.113 | 0.01 | 20.37 | 21.20 | 0.238 | Battery 1# | / |
| Left cheek | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.226 | 0.152 | -0.01 | 20.44 | 21.20 | 0.269 | Battery 1# | / |
| Left tilt | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.152 | 0.100 | 0.01 | 20.44 | 21.20 | 0.181 | Battery 1# | / |
| Right cheek | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | **0.496** | 0.272 | -0.06 | 20.44 | 21.20 | 0.591 | Battery 1# | Yes |
| Right cheek | Tuning State2 | 20450/829 | 10M QPSK 50%RB#0 | 0.450 | 0.249 | -0.04 | 20.44 | 21.20 | 0.536 | Battery 1# | / |
| Right tilt | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.295 | 0.185 | 0.11 | 20.44 | 21.20 | 0.351 | Battery 1# | / |
| Right cheek | Tuning State1 | 20600/844 | 10M QPSK 1RB#0 | 0.488 | 0.268 | -0.07 | 20.37 | 21.20 | 0.591 | Battery 2# | / |
| Right cheek | Tuning State1 | 20600/844 | 10M QPSK 1RB#0 | 0.477 | 0.268 | -0.08 | 20.37 | 21.20 | 0.577 | Battery 3# | / |
| Right cheek | Tuning State1 | 20600/844 | 10M QPSK 1RB#0 | 0.464 | 0.261 | 0.00 | 20.37 | 21.20 | 0.562 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Left cheek | / | 20600/844 | 10M QPSK 1RB#49 | 0.032 | 0.023 | 0.17 | 24.09 | 25.00 | 0.039 | Battery 1# | / |
| Left tilt | / | 20600/844 | 10M QPSK 1RB#49 | 0.013 | 0.010 | 0.19 | 24.09 | 25.00 | 0.017 | Battery 1# | / |
| Right cheek | / | 20600/844 | 10M QPSK 1RB#49 | 0.028 | 0.022 | -0.06 | 24.09 | 25.00 | 0.035 | Battery 1# | / |
| Right tilt | / | 20600/844 | 10M QPSK 1RB#49 | 0.012 | 0.008 | -0.05 | 24.09 | 25.00 | 0.014 | Battery 1# | / |
| Left cheek | / | 20600/844 | 10M QPSK 50%RB#0 | 0.025 | 0.018 | 0.13 | 23.01 | 24.00 | 0.032 | Battery 1# | / |
| Left tilt | / | 20600/844 | 10M QPSK 50%RB#0 | 0.012 | 0.008 | 0.11 | 23.01 | 24.00 | 0.015 | Battery 1# | / |
| Right cheek | / | 20600/844 | 10M QPSK 50%RB#0 | 0.024 | 0.017 | -0.12 | 23.01 | 24.00 | 0.030 | Battery 1# | / |
| Right tilt | / | 20600/844 | 10M QPSK 50%RB#0 | 0.014 | 0.009 | 0.11 | 23.01 | 24.00 | 0.017 | Battery 1# | / |
| Left cheek | / | 20600/844 | 10M QPSK 1RB#49 | **0.041** | 0.031 | -0.03 | 24.09 | 25.00 | **0.051** | Battery 2# | Yes |
| Left cheek | / | 20600/844 | 10M QPSK 1RB#49 | 0.038 | 0.028 | -0.07 | 24.09 | 25.00 | 0.047 | Battery 3# | / |
| Left cheek | / | 20600/844 | 10M QPSK 1RB#49 | 0.040 | 0.030 | -0.03 | 24.09 | 25.00 | 0.050 | With SIM2 | / |

Table 90: Head SAR test results of LTE Band 5

| Test Position of Body-Worn | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | | |
| Front Side | 15mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.238 | 0.156 | -0.09 | 23.92 | 24.80 | 0.291 | Battery 1# | / |
| Back Side | 15mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | **0.274** | 0.178 | -0.06 | 23.92 | 24.80 | **0.336** | Battery 1# | Yes |
| Back Side | 15mm | Tuning State2 | 20450/829 | 10M QPSK 1RB#49 | 0.233 | 0.151 | -0.07 | 23.92 | 24.80 | 0.285 | Battery 1# | / |
| Front Side | 15mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.171 | 0.112 | -0.11 | 22.94 | 23.80 | 0.208 | Battery 1# | / |
| Back Side | 15mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.216 | 0.140 | 0.01 | 22.94 | 23.80 | 0.263 | Battery 1# | / |
| Back Side | 15mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.264 | 0.171 | -0.02 | 23.92 | 24.80 | 0.323 | Battery 2# | / |
| Back Side | 15mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.228 | 0.149 | -0.15 | 23.92 | 24.80 | 0.279 | Battery 3# | / |
| Back Side | 15mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.270 | 0.176 | 0.01 | 23.92 | 24.80 | 0.331 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | | |
| Front Side | 15mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.193 | 0.129 | -0.07 | 24.09 | 25.00 | 0.238 | Battery 1# | / |
| Back Side | 15mm | / | 20600/844 | 10M QPSK 1RB#49 | **0.204** | 0.142 | -0.06 | 24.09 | 25.00 | **0.252** | Battery 1# | Yes |
| Front Side | 15mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.154 | 0.102 | -0.07 | 23.01 | 24.00 | 0.193 | Battery 1# | / |
| Back Side | 15mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.170 | 0.113 | -0.11 | 23.01 | 24.00 | 0.214 | Battery 1# | / |
| Back Side | 15mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.194 | 0.135 | -0.08 | 24.09 | 25.00 | 0.239 | Battery 2# | / |
| Back Side | 15mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.192 | 0.133 | 0.01 | 24.09 | 25.00 | 0.237 | Battery 3# | / |
| Back Side | 15mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.203 | 0.142 | -0.08 | 24.09 | 25.00 | 0.250 | With SIM2 | / |

Table 91: Body Worn SAR test results of LTE Band 5

| Test Position of Hotspot | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | | |
| Front Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.416 | 0.263 | -0.07 | 23.92 | 24.80 | 0.509 | Battery 1# | / |
| Back Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.444 | 0.274 | -0.02 | 23.92 | 24.80 | 0.544 | Battery 1# | / |
| Back Side | 10mm | Tuning State2 | 20450/829 | 10M QPSK 1RB#49 | 0.373 | 0.230 | -0.04 | 23.92 | 24.80 | 0.457 | Battery 1# | / |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | **0.567** | 0.313 | -0.04 | 23.92 | 24.80 | **0.694** | Battery 1# | Yes |
| Left Side | 10mm | Tuning State2 | 20450/829 | 10M QPSK 1RB#49 | 0.465 | 0.260 | 0.00 | 23.92 | 24.80 | 0.569 | Battery 1# | / |
| Top Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.157 | 0.101 | -0.05 | 23.92 | 24.80 | 0.192 | Battery 1# | / |
| Front Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.317 | 0.201 | -0.08 | 22.94 | 23.80 | 0.386 | Battery 1# | / |
| Back Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.351 | 0.223 | -0.05 | 22.94 | 23.80 | 0.428 | Battery 1# | / |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.415 | 0.232 | -0.02 | 22.94 | 23.80 | 0.506 | Battery 1# | / |
| Top Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.113 | 0.072 | -0.02 | 22.94 | 23.80 | 0.138 | Battery 1# | / |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.563 | 0.313 | -0.03 | 23.92 | 24.80 | 0.689 | Battery 2# | / |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.547 | 0.304 | -0.02 | 23.92 | 24.80 | 0.670 | Battery 3# | / |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.524 | 0.294 | -0.02 | 23.92 | 24.80 | 0.642 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | | |
| Front Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.306 | 0.197 | -0.02 | 24.09 | 25.00 | 0.377 | Battery 1# | / |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | **0.344** | 0.222 | -0.07 | 24.09 | 25.00 | **0.424** | Battery 1# | Yes |
| Left Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.183 | 0.099 | 0.01 | 24.09 | 25.00 | 0.226 | Battery 1# | / |
| Right Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.081 | 0.049 | 0.00 | 24.09 | 25.00 | 0.100 | Battery 1# | / |
| Bottom Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.280 | 0.154 | -0.02 | 24.09 | 25.00 | 0.345 | Battery 1# | / |
| Front Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.284 | 0.180 | -0.01 | 23.01 | 24.00 | 0.357 | Battery 1# | / |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.295 | 0.182 | -0.04 | 23.01 | 24.00 | 0.371 | Battery 1# | / |
| Left Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.143 | 0.076 | 0.01 | 23.01 | 24.00 | 0.180 | Battery 1# | / |
| Right Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.070 | 0.043 | 0.01 | 23.01 | 24.00 | 0.088 | Battery 1# | / |
| Bottom Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.225 | 0.122 | 0.00 | 23.01 | 24.00 | 0.283 | Battery 1# | / |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.306 | 0.201 | -0.13 | 24.09 | 25.00 | 0.377 | Battery 2# | / |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.343 | 0.215 | -0.08 | 24.09 | 25.00 | 0.423 | Battery 3# | / |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.313 | 0.198 | 0.04 | 24.09 | 25.00 | 0.386 | With SIM2 | / |

Table 92: Hotspot SAR test results of LTE Band 5

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | ANT State | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.416 | 0.263 | -0.07 | 23.92 | 24.80 | 0.509 | Yes |
| Back Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.444 | 0.274 | -0.02 | 23.92 | 24.80 | 0.544 | Yes |
| Back Side | 10mm | Tuning State2 | 20450/829 | 10M QPSK 1RB#49 | 0.373 | 0.230 | -0.04 | 23.92 | 24.80 | 0.457 | Yes |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | **0.567** | 0.313 | -0.04 | 23.92 | 24.80 | 0.694 | Yes |
| Left Side | 10mm | Tuning State2 | 20450/829 | 10M QPSK 1RB#49 | 0.465 | 0.260 | 0.00 | 23.92 | 24.80 | 0.569 | Yes |
| Top Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.157 | 0.101 | -0.05 | 23.92 | 24.80 | 0.192 | Yes |
| Front Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.317 | 0.201 | -0.08 | 22.94 | 23.80 | 0.386 | Yes |
| Back Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.351 | 0.223 | -0.05 | 22.94 | 23.80 | 0.428 | Yes |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.415 | 0.232 | -0.02 | 22.94 | 23.80 | 0.506 | Yes |
| Top Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 50%RB#0 | 0.113 | 0.072 | -0.02 | 22.94 | 23.80 | 0.138 | Yes |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.563 | 0.313 | -0.03 | 23.92 | 24.80 | 0.689 | Yes |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.547 | 0.304 | -0.02 | 23.92 | 24.80 | 0.670 | Yes |
| Left Side | 10mm | Tuning State1 | 20450/829 | 10M QPSK 1RB#49 | 0.524 | 0.294 | -0.02 | 23.92 | 24.80 | 0.642 | Yes |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.306 | 0.197 | -0.02 | 24.09 | 25.00 | 0.377 | Yes |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | **0.344** | 0.222 | -0.07 | 24.09 | 25.00 | 0.424 | Yes |
| Left Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.183 | 0.099 | 0.01 | 24.09 | 25.00 | 0.226 | Yes |
| Right Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.081 | 0.049 | 0.00 | 24.09 | 25.00 | 0.100 | Yes |
| Bottom Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.280 | 0.154 | -0.02 | 24.09 | 25.00 | 0.345 | Yes |
| Front Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.284 | 0.180 | -0.01 | 23.01 | 24.00 | 0.357 | Yes |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.295 | 0.182 | -0.04 | 23.01 | 24.00 | 0.371 | Yes |
| Left Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.143 | 0.076 | 0.01 | 23.01 | 24.00 | 0.180 | Yes |
| Right Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.070 | 0.043 | 0.01 | 23.01 | 24.00 | 0.088 | Yes |
| Bottom Side | 10mm | / | 20600/844 | 10M QPSK 50%RB#0 | 0.225 | 0.122 | 0.00 | 23.01 | 24.00 | 0.283 | Yes |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.306 | 0.201 | -0.13 | 24.09 | 25.00 | 0.377 | Yes |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.343 | 0.215 | -0.08 | 24.09 | 25.00 | 0.423 | Yes |
| Back Side | 10mm | / | 20600/844 | 10M QPSK 1RB#49 | 0.313 | 0.198 | 0.04 | 24.09 | 25.00 | 0.386 | Yes |

Table 93: Product Specific 10-g SAR test reduction evaluation of LTE Band 5

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

### 7.2.9 SAR measurement Results of LTE Band 7

| Test Position of Head | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | |
| Left cheek | 20850/2510 | 20M QPSK 1RB#0 | 0.221 | 0.102 | 0.17 | 15.89 | 16.90 | 0.279 | Battery 1# | / |
| Left tilt | 20850/2510 | 20M QPSK 1RB#0 | 0.087 | 0.042 | 0.13 | 15.89 | 16.90 | 0.109 | Battery 1# | / |
| Right cheek | 20850/2510 | 20M QPSK 1RB#0 | 0.328 | 0.127 | 0.18 | 15.89 | 16.90 | 0.414 | Battery 1# | / |
| Right tilt | 20850/2510 | 20M QPSK 1RB#0 | 0.185 | 0.089 | 0.07 | 15.89 | 16.90 | 0.233 | Battery 1# | / |
| Left cheek | 21350/2560 | 20M QPSK 50%RB#0 | 0.270 | 0.127 | 0.16 | 15.76 | 16.90 | 0.351 | Battery 1# | / |
| Left tilt | 21350/2560 | 20M QPSK 50%RB#0 | 0.218 | 0.189 | 0.11 | 15.76 | 16.90 | 0.283 | Battery 1# | / |
| Right cheek | 21350/2560 | 20M QPSK 50%RB#0 | 0.432 | 0.178 | 0.17 | 15.76 | 16.90 | 0.562 | Battery 1# | / |
| Right tilt | 21350/2560 | 20M QPSK 50%RB#0 | 0.192 | 0.081 | 0.02 | 15.76 | 16.90 | 0.250 | Battery 1# | / |
| Right cheek | 21350/2560 | 20M QPSK 50%RB#0 | **0.443** | 0.162 | 0.17 | 15.76 | 16.90 | **0.576** | Battery 2# | Yes |
| Right cheek | 21350/2560 | 20M QPSK 50%RB#0 | 0.317 | 0.120 | -0.10 | 15.76 | 16.90 | 0.412 | Battery 3# | / |
| Right cheek | 21350/2560 | 20M QPSK 50%RB#0 | 0.329 | 0.125 | 0.13 | 15.76 | 16.90 | 0.428 | With SIM2 | / |
| Main Antenna | | | | | | | | | | |
| Left cheek | 21100/2535 | 20M QPSK 1RB#0 | 0.175 | 0.092 | 0.10 | 23.11 | 24.00 | 0.215 | Battery 1# | / |
| Left tilt | 21100/2535 | 20M QPSK 1RB#0 | 0.056 | 0.028 | 0.15 | 23.11 | 24.00 | 0.068 | Battery 1# | / |
| Right cheek | 21100/2535 | 20M QPSK 1RB#0 | 0.120 | 0.066 | 0.17 | 23.11 | 24.00 | 0.147 | Battery 1# | / |
| Right tilt | 21100/2535 | 20M QPSK 1RB#0 | 0.095 | 0.047 | 0.12 | 23.11 | 24.00 | 0.116 | Battery 1# | |
| Left cheek | 21100/2535 | 20M QPSK 50%RB#0 | 0.184 | 0.097 | -0.01 | 22.15 | 23.10 | 0.229 | Battery 1# | / |
| Left tilt | 21100/2535 | 20M QPSK 50%RB#0 | 0.057 | 0.028 | 0.05 | 22.15 | 23.10 | 0.071 | Battery 1# | / |
| Right cheek | 21100/2535 | 20M QPSK 50%RB#0 | 0.109 | 0.057 | 0.09 | 22.15 | 23.10 | 0.136 | Battery 1# | / |
| Right tilt | 21100/2535 | 20M QPSK 50%RB#0 | 0.098 | 0.048 | 0.01 | 22.15 | 23.10 | 0.121 | Battery 1# | / |
| Left cheek | 21100/2535 | 20M QPSK 50%RB#0 | **0.192** | 0.101 | 0.19 | 22.15 | 23.10 | **0.239** | Battery 2# | Yes |
| Left cheek | 21100/2535 | 20M QPSK 50%RB#0 | 0.185 | 0.092 | 0.12 | 22.15 | 23.10 | 0.230 | Battery 3# | / |
| Left cheek | 21100/2535 | 20M QPSK 50%RB#0 | 0.183 | 0.091 | 0.12 | 22.15 | 23.10 | 0.228 | With SIM2 | / |

Table 94: Head SAR test results of LTE Band 7

| Test Position of Body-Worn | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 15mm | 20850/2510 | 20M QPSK 1RB#50 | 0.146 | 0.079 | -0.13 | 23.18 | 24.00 | 0.176 | Battery 1# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 1RB#50 | **0.231** | 0.126 | -0.15 | 23.18 | 24.00 | **0.279** | Battery 1# | Yes |
| Front Side | 15mm | 21350/2560 | 20M QPSK 50%RB#50 | 0.160 | 0.085 | -0.18 | 22.22 | 23.40 | 0.210 | Battery 1# | / |
| Back Side | 15mm | 21350/2560 | 20M QPSK 50%RB#50 | 0.207 | 0.113 | -0.13 | 22.22 | 23.40 | 0.272 | Battery 1# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 1RB#50 | 0.177 | 0.096 | -0.13 | 23.18 | 24.00 | 0.214 | Battery 2# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 1RB#50 | 0.191 | 0.103 | -0.18 | 23.18 | 24.00 | 0.231 | Battery 3# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 1RB#50 | 0.198 | 0.107 | -0.18 | 23.18 | 24.00 | 0.239 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 15mm | 20850/2510 | 20M QPSK 1RB#0 | 0.136 | 0.077 | -0.02 | 21.81 | 22.90 | 0.175 | Battery 1# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 1RB#0 | 0.137 | 0.074 | -0.15 | 21.81 | 22.90 | 0.176 | Battery 1# | / |
| Front Side | 15mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.138 | 0.079 | -0.05 | 21.84 | 22.90 | 0.176 | Battery 1# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 50%RB#0 | **0.191** | 0.104 | -0.13 | 21.84 | 22.90 | **0.244** | Battery 1# | Yes |
| Back Side | 15mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.135 | 0.073 | 0.08 | 21.84 | 22.90 | 0.172 | Battery 2# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.141 | 0.077 | -0.19 | 21.84 | 22.90 | 0.180 | Battery 3# | / |
| Back Side | 15mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.150 | 0.080 | 0.00 | 21.84 | 22.90 | 0.191 | With SIM2 | / |

Table 95: Body Worn SAR test results of LTE Band 7

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | |
| Second Antenna | | | | | | | | | | | |
| Front Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.170 | 0.090 | -0.12 | 21.16 | 22.40 | 0.226 | Battery 1# | / |
| Back Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.216 | 0.116 | -0.19 | 21.16 | 22.40 | 0.287 | Battery 1# | / |
| Left Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.389 | 0.159 | -0.13 | 21.16 | 22.40 | 0.518 | Battery 1# | / |
| Top Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.146 | 0.079 | -0.04 | 21.16 | 22.40 | 0.194 | Battery 1# | / |
| Front Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.177 | 0.094 | -0.12 | 21.19 | 22.40 | 0.234 | Battery 1# | / |
| Back Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.220 | 0.118 | -0.12 | 21.19 | 22.40 | 0.291 | Battery 1# | / |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | **0.422** | 0.171 | -0.04 | 21.19 | 22.40 | **0.558** | Battery 1# | Yes |
| Top Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.143 | 0.072 | -0.14 | 21.19 | 22.40 | 0.189 | Battery 1# | / |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.396 | 0.161 | -0.10 | 21.19 | 22.40 | 0.523 | Battery 2# | / |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.369 | 0.154 | -0.02 | 21.19 | 22.40 | 0.488 | Battery 3# | / |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.394 | 0.164 | -0.04 | 21.19 | 22.40 | 0.521 | With SIM2 | / |
| Main Antenna | | | | | | | | | | | |
| Front Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.152 | 0.084 | -0.12 | 19.84 | 20.80 | 0.190 | Battery 1# | / |
| Back Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.168 | 0.093 | -0.19 | 19.84 | 20.80 | 0.210 | Battery 1# | / |
| Left Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.056 | 0.030 | 0.02 | 19.84 | 20.80 | 0.070 | Battery 1# | / |
| Right Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.036 | 0.020 | -0.09 | 19.84 | 20.80 | 0.045 | Battery 1# | / |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.271 | 0.137 | -0.10 | 19.84 | 20.80 | 0.338 | Battery 1# | / |
| Front Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.160 | 0.088 | -0.19 | 19.90 | 20.80 | 0.197 | Battery 1# | / |
| Back Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.177 | 0.096 | 0.01 | 19.90 | 20.80 | 0.218 | Battery 1# | / |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.060 | 0.032 | -0.08 | 19.90 | 20.80 | 0.073 | Battery 1# | / |
| Right Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.044 | 0.023 | -0.08 | 19.90 | 20.80 | 0.054 | Battery 1# | / |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | **0.280** | 0.141 | 0.01 | 19.90 | 20.80 | **0.344** | Battery 1# | Yes |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.238 | 0.123 | -0.08 | 19.90 | 20.80 | 0.293 | Battery 2# | / |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.276 | 0.140 | -0.10 | 19.90 | 20.80 | 0.340 | Battery 3# | / |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.246 | 0.126 | 0.09 | 19.90 | 20.80 | 0.303 | With SIM2 | / |

Table 96: Hotspot SAR test results of LTE Band 7

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Measured SAR(W/kg) | | Power Drift (dB) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | |
| Second Antenna | | | | | | | | | | |
| Front Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.170 | 0.090 | -0.12 | 21.16 | 24.00 | 0.327 | Yes |
| Back Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.216 | 0.116 | -0.19 | 21.16 | 24.00 | 0.415 | Yes |
| Left Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.389 | 0.159 | -0.13 | 21.16 | 24.00 | 0.748 | Yes |
| Top Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.146 | 0.079 | -0.04 | 21.16 | 24.00 | 0.281 | Yes |
| Front Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.177 | 0.094 | -0.12 | 21.19 | 23.40 | 0.294 | Yes |
| Back Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.220 | 0.118 | -0.12 | 21.19 | 23.40 | 0.366 | Yes |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | **0.422** | 0.171 | -0.04 | 21.19 | 23.40 | 0.702 | Yes |
| Top Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.143 | 0.072 | -0.14 | 21.19 | 23.40 | 0.238 | Yes |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.396 | 0.161 | -0.10 | 21.19 | 23.40 | 0.659 | Yes |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.369 | 0.154 | -0.02 | 21.19 | 23.40 | 0.614 | Yes |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#0 | 0.394 | 0.164 | -0.04 | 21.19 | 23.40 | 0.655 | Yes |
| Main Antenna | | | | | | | | | | |
| Front Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.152 | 0.084 | -0.12 | 19.84 | 24.00 | 0.396 | Yes |
| Back Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.168 | 0.093 | -0.19 | 19.84 | 24.00 | 0.438 | Yes |
| Left Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.056 | 0.030 | 0.02 | 19.84 | 24.00 | 0.146 | Yes |
| Right Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.036 | 0.020 | -0.09 | 19.84 | 24.00 | 0.095 | Yes |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 1RB#0 | 0.271 | 0.137 | -0.10 | 19.84 | 24.00 | 0.706 | Yes |
| Front Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.160 | 0.088 | -0.19 | 19.90 | 23.10 | 0.334 | Yes |
| Back Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.177 | 0.096 | 0.01 | 19.90 | 23.10 | 0.370 | Yes |
| Left Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.060 | 0.032 | -0.08 | 19.90 | 23.10 | 0.125 | Yes |
| Right Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.044 | 0.023 | -0.08 | 19.90 | 23.10 | 0.091 | Yes |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | **0.280** | 0.141 | 0.01 | 19.90 | 23.10 | 0.585 | Yes |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.238 | 0.123 | -0.08 | 19.90 | 23.10 | 0.497 | Yes |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.276 | 0.140 | -0.10 | 19.90 | 23.10 | 0.577 | Yes |
| Bottom Side | 10mm | 20850/2510 | 20M QPSK 50%RB#50 | 0.246 | 0.126 | 0.09 | 19.90 | 23.10 | 0.514 | Yes |

Table 97: Product Specific 10-g SAR test reduction evaluation of LTE Band 7

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

### 7.2.10 SAR measurement Results of WiFi 2.4G

| Test Position of Head | Test Channel /Freq.(MHz) | Test Mode | Area Scan 1-g SAR (W/kg) | Measured SAR(W/kg) | | Power Drift (dB) | Actual duty cycle | Scaled 1-g SAR (W/kg) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1-g | 10-g | | | | | | | | |
| Ant1 | | | | | | | | | | | | | |
| Left cheek | 6/2437 | 802.11b | 0.107 | 0.126 | 0.055 | 0.14 | 99% | 0.127 | 10.50 | 12.00 | 0.180 | Battery 1# | / |
| Left tilt | 6/2437 | 802.11b | 0.057 | 0.057 | 0.029 | 0.14 | 99% | 0.058 | 10.50 | 12.00 | 0.082 | Battery 1# | / |
| Right cheek | 6/2437 | 802.11b | 0.027 | 0.027 | 0.015 | 0.10 | 99% | 0.027 | 10.50 | 12.00 | 0.039 | Battery 1# | / |
| Right tilt | 6/2437 | 802.11b | 0.027 | 0.027 | 0.014 | 0.12 | 99% | 0.027 | 10.50 | 12.00 | 0.038 | Battery 1# | / |
| Left cheek | 6/2437 | 802.11b | 0.111 | **0.128** | 0.054 | 0.15 | 99% | 0.129 | 10.50 | 12.00 | **0.183** | Battery 2# | Yes |
| Left cheek | 6/2437 | 802.11b | 0.103 | 0.118 | 0.050 | -0.19 | 99% | 0.119 | 10.50 | 12.00 | 0.168 | Battery 3# | / |

Table 98: Head SAR test results of WiFi 2.4G

| Mode | Tune-up (dBm) | Tune-up (mW) | Hightest Reported SAR(W/kg) | Adjusted SAR (W/kg) | SAR test |
|---|---|---|---|---|---|
| 802.11b | 12.00 | 15.85 | 0.183 | / | Yes |
| 802.11g | 12.00 | 15.85 | / | 0.183 | No |
| 802.11n 20M | 12.00 | 15.85 | / | 0.183 | No |
| 802.11n 40M | 12.00 | 15.85 | / | 0.183 | No |

Note: Per KDB248227D01, for Head SAR test of WiFi 2.4G, SAR is measured for 2.4 GHz 802.11b DSSS using the initial test position procedure. The highest reported SAR for DSSS is adjusted by the ratio of OFDM 802.11g/n to DSSS specified maximum output power and the adjusted SAR is < 1.2 W/kg, so SAR for 802.11g/n is not required.

| Test Position of Body-Worn | Dist. | Test Channel /Freq.(MHz) | Test Mode | Area Scan 1-g SAR (W/kg) | Measured SAR(W/kg) | | Power Drift (dB) | Actual duty cycle | Scaled 1-g SAR (W/kg) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | | | |
| Ant1 | | | | | | | | | | | | | | |
| Front Side | 15mm | 11/2462 | 802.11b | 0.034 | 0.036 | 0.019 | -0.10 | 99% | 0.036 | 17.24 | 19.00 | 0.055 | Battery 1# | / |
| Back Side | 15mm | 11/2462 | 802.11b | 0.043 | 0.043 | 0.024 | -0.02 | 99% | 0.043 | 17.24 | 19.00 | 0.065 | Battery 1# | / |
| Back Side | 15mm | 11/2462 | 802.11b | 0.048 | **0.049** | 0.027 | 0.07 | 99% | 0.049 | 17.24 | 19.00 | **0.073** | Battery 2# | Yes |
| Back Side | 15mm | 11/2462 | 802.11b | 0.044 | 0.045 | 0.025 | 0.10 | 99% | 0.045 | 17.24 | 19.00 | 0.068 | Battery 3# | / |

Table 99: Body Worn SAR test results of WiFi 2.4G

| Mode | Tune-up (dBm) | Tune-up (mW) | Hightest Reported SAR(W/kg) | Adjusted SAR (W/kg) | SAR test |
|---|---|---|---|---|---|
| 802.11b | 19.00 | 79.43 | 0.073 | / | Yes |
| 802.11g | 19.00 | 79.43 | / | 0.073 | No |
| 802.11n 20M | 19.00 | 79.43 | / | 0.073 | No |
| 802.11n 40M | 15.00 | 31.62 | / | 0.029 | No |

Note: Per KDB248227D01, for Body-worn SAR test of WiFi 2.4G, SAR is measured for 2.4 GHz 802.11b DSSS using the initial test position procedure. The highest reported SAR for DSSS is adjusted by the ratio of OFDM 802.11g/n to DSSS specified maximum output power and the adjusted SAR is < 1.2 W/kg, so SAR for 802.11g/n is not required.

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Area Scan 1-g SAR (W/kg) | Measured SAR(W/kg) | | Power Drift (dB) | Actual duty cycle | Scaled 1-g SAR (W/kg) | Conducted Power (dBm) | Tune-up Power (dBm) | Reported 1-g SAR (W/kg) | Accessory Information | SAR Plot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | | | |
| Ant1 | | | | | | | | | | | | | | |
| Front Side | 10mm | 11/2462 | 802.11b | 0.082 | 0.088 | 0.045 | 0.00 | 99% | 0.088 | 17.24 | 19.00 | 0.133 | Battery 1# | / |
| Back Side | 10mm | 11/2462 | 802.11b | 0.083 | 0.092 | 0.047 | 0.08 | 99% | 0.093 | 17.24 | 19.00 | 0.139 | Battery 1# | / |
| Right Side | 10mm | 11/2462 | 802.11b | 0.139 | 0.154 | 0.067 | -0.10 | 99% | 0.156 | 17.24 | 19.00 | 0.233 | Battery 1# | / |
| Top Side | 10mm | 11/2462 | 802.11b | 0.043 | / | / | / | 99% | / | 17.24 | 19.00 | / | Battery 1# | / |
| Right Side | 10mm | 11/2462 | 802.11b | 0.165 | 0.185 | 0.082 | 0.15 | 99% | 0.187 | 17.24 | 19.00 | 0.280 | Battery 2# | / |
| Right Side | 10mm | 11/2462 | 802.11b | 0.176 | **0.190** | 0.084 | 0.15 | 99% | 0.192 | 17.24 | 19.00 | **0.288** | Battery 3# | Yes |

Table 100: Hotspot SAR test results of WiFi 2.4G

| Mode | Tune-up (dBm) | Tune-up (mW) | Hightest Reported SAR(W/kg) | Adjusted SAR (W/kg) | SAR test |
|---|---|---|---|---|---|
| 802.11b | 19.00 | 79.43 | 0.288 | / | Yes |
| 802.11g | 19.00 | 79.43 | / | 0.288 | No |
| 802.11n 20M | 19.00 | 79.43 | / | 0.288 | No |
| 802.11n 40M | 15.00 | 31.62 | / | 0.115 | No |

Note:

1) Per KDB248227D01, for Hotspot SAR test of WiFi 2.4G, SAR is measured for 2.4 GHz 802.11b DSSS using the initial test position procedure. The highest reported SAR for DSSS is adjusted by the ratio of OFDM 802.11g/n to DSSS specified maximum output power and the adjusted SAR is < 1.2 W/kg, so SAR for 802.11g/n is not required.

Per KDB648474 D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test Position of Hotspot | Dist. | Test Channel /Freq.(MHz) | Test Mode | Area Scan 1-g SAR (W/kg) | Measured SAR(W/kg) | | Power Drift (dB) | Actual duty cycle | Scaled 1-g SAR (W/kg) | Conducted Power (dBm) | Max Power Without Reduction | Scaled-up 1-g SAR (W/kg) | Product Specific 10-g SAR Exclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1-g | 10-g | | | | | | | |
| Ant1 | | | | | | | | | | | | | |
| Front Side | 10mm | 11/2462 | 802.11b | 0.082 | 0.088 | 0.045 | 0.00 | 99% | 0.088 | 17.24 | 19.00 | 0.131 | Yes |
| Back Side | 10mm | 11/2462 | 802.11b | 0.083 | 0.092 | 0.047 | 0.08 | 99% | 0.093 | 17.24 | 19.00 | 0.138 | Yes |
| Right Side | 10mm | 11/2462 | 802.11b | 0.139 | 0.154 | 0.067 | -0.10 | 99% | 0.156 | 17.24 | 19.00 | 0.231 | Yes |
| Top Side | 10mm | 11/2462 | 802.11b | 0.043 | / | / | / | 99% | / | 17.24 | 19.00 | / | Yes |
| Right Side | 10mm | 11/2462 | 802.11b | 0.165 | 0.185 | 0.082 | 0.15 | 99% | 0.187 | 17.24 | 19.00 | 0.277 | Yes |
| Right Side | 10mm | 11/2462 | 802.11b | 0.176 | **0.190** | 0.084 | 0.15 | 99% | 0.192 | 17.24 | 19.00 | 0.285 | Yes |

Table 101: Product Specific 10-g SAR test reduction evaluation of WiFi 2.4G

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

## 7.3 Multiple Transmitter Evaluation

The detailed location of the Tx antennas inside the device refers to Appendix E.

The list information of following tables which is relevant for the decision if a simultaneous transmit evaluation is necessary according to FCC KDB 447498 D01 General RF Exposure Guidance.

| Mode | Exposure Condition | Front Side | Back Side | Left Side | Right Side | Top Side | Bottom Side |
|---|---|---|---|---|---|---|---|
| Main Antenna | Hotspot/ Product specific 10g SAR | Yes | Yes | Yes | Yes | No | Yes |
| Second Antenna | Hotspot/ Product specific 10g SAR | Yes | Yes | Yes | No | Yes | No |
| WiFi/BT Antenna | Hotspot/ Product specific 10g SAR | Yes | Yes | No | Yes | Yes | No |

Table 102: Sides for Hotspot/ Product specific 10g SAR testing

Note:

1) Per KDB 648474 D04, because the diagonal distance of this device is ≥160mm, so it is a phablet.

2) Per KDB 941225 D06 and KDB 648474 D04, particular DUT edges were not required to be evaluated for Hotspot SAR if the antenna-to-edge distance is greater than 2.5cm;

### 7.3.1 Stand-alone SAR test exclusion

Per FCC KDB 447498 D01, the 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where:

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

| Mode | Position | $P_{max}$ (dBm)* | $P_{max}$ (mW) | Distance (mm) | f (GHz) | Calculation Result | SAR Exclusion threshold | SAR test exclusion |
|---|---|---|---|---|---|---|---|---|
| BT | Head | 9.70 | 9.33 | 5 | 2.480 | 2.94 | 3.00 | Yes |
| BT | Body-Worn | 9.70 | 9.33 | 15 | 2.480 | 0.98 | 3.00 | Yes |
| BT | Product specific 10g SAR | 9.70 | 9.33 | 5 | 2.480 | 2.94 | 7.50 | Yes |

Table 103: Standalone SAR test exclusion for BT

Note:

1)* - maximum possible output power declared by manufacturer

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] •

[ √f(GHz)/x] W/kg for test separation distances ≤ 50 mm,where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

| Mode | Position | $P_{max}$ (dBm)* | $P_{max}$ (mW) | Distance (mm) | f (GHz) | X | Estimated SAR (W/kg)* |
|---|---|---|---|---|---|---|---|
| BT | Head | 9.70 | 9.33 | 5 | 2.480 | 7.50 | 0.392 |
| BT | Body-worn | 9.70 | 9.33 | 15 | 2.480 | 7.50 | 0.131 |
| BT | Product specific 10g SAR | 9.70 | 9.33 | 5 | 2.480 | 18.75 | 0.157 |

Table 104: Estimated SAR calculation for BT

Note:

1) * - maximum possible output power declared by manufacturer

### 7.3.2 Simultaneous Transmission Possibilities

The Simultaneous Transmission Possibilities of this device are as below:

| NO. | Simultaneous TX Combination | Head | Body-worn | Hotspot (10mm) | Product Specific 10-g (0mm) |
|---|---|---|---|---|---|
| 1 | GSM Voice(Ant 1) + BT | Yes | Yes | NA | Yes |
| 2 | GSM DATA(Ant 1) + BT | N/A | Yes | NA | Yes |
| 3 | GSM Voice(Ant 2) + BT | Yes | Yes | NA | Yes |
| 4 | GSM DATA (Ant 2)+ BT | N/A | Yes | NA | Yes |
| 5 | GSM Voice(Ant 1) + WiFi2.4G | Yes | Yes | NA | Yes |
| 6 | GSM DATA(Ant 1) + WiFi2.4G | N/A | Yes | Yes | Yes |
| 7 | GSM Voice(Ant 2) + WiFi2.4G | Yes | Yes | NA | Yes |
| 8 | GSM DATA(Ant 2) + WiFi2.4G | N/A | Yes | Yes | Yes |
| 9 | UMTS (Ant 1) + BT | Yes | Yes | NA | Yes |
| 10 | UMTS (Ant 2) + BT | Yes | Yes | NA | Yes |
| 11 | UMTS (Ant 1) + WiFi2.4G | Yes | Yes | Yes | Yes |
| 12 | UMTS (Ant 2) + WiFi2.4G | Yes | Yes | Yes | Yes |
| 13 | LTE (Ant 1) + WiFi2.4G | Yes* | Yes* | Yes | Yes* |
| 14 | LTE (Ant 1) + BT | Yes | Yes* | NA | Yes* |
| 15 | LTE (Ant 2) + WiFi2.4G | Yes* | Yes* | Yes* | Yes* |
| 16 | LTE (Ant 2) + BT | Yes | Yes* | NA | Yes* |

Table 105: Simultaneous Transmission Possibilities

Note:

1) WiFi 2.4G and Bluetooth share the same Tx antenna and can't transmit simultaneously.

2) The device does not support DTM function.

3) * VoLTE or pre-installed VOIP applications are considered.

4) The Main Antenna (Ant1) and Second Antenna (Ant 2) can't transmit simultaneously.

5) The device supports VoWiFi function.

### 7.3.3 SAR Summation Scenario

| Test Position | | Second Antenna | | | | | | | | | WiFi/BT Antenna SARMax | | ΣSAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | GSM850 | GSM1900 | UMTS Band II | UMTS Band IV | UMTS Band V | LTE B2 | LTE B4 | LTE B5 | LTE B7 | WiFi 2.4G | BT | |
| Head | Left cheek | 0.256 | 0.201 | 0.189 | 0.197 | 0.243 | 0.226 | 0.184 | 0.269 | 0.351 | 0.183 | 0.392 | 0.743 |
| | Left tilt | 0.139 | 0.115 | 0.130 | 0.271 | 0.164 | 0.172 | 0.231 | 0.181 | 0.283 | 0.082 | 0.392 | 0.675 |
| | Right cheek | 0.620 | 0.520 | 0.627 | 0.488 | 0.580 | 0.781 | 0.449 | 0.592 | 0.576 | 0.039 | 0.392 | **1.173** |
| | Right tilt | 0.273 | 0.268 | 0.266 | 0.266 | 0.272 | 0.346 | 0.233 | 0.351 | 0.250 | 0.038 | 0.392 | 0.743 |
| Body Worn | Front side | 0.205 | 0.051 | 0.308 | 0.238 | 0.245 | 0.256 | 0.247 | 0.291 | 0.210 | 0.055 | 0.131 | 0.439 |
| | Back side | 0.281 | 0.175 | 0.243 | 0.269 | 0.307 | 0.385 | 0.271 | 0.336 | 0.279 | 0.073 | 0.131 | 0.516 |
| Hotspot | Front side | 0.365 | 0.192 | 0.160 | 0.126 | 0.440 | 0.271 | 0.125 | 0.509 | 0.234 | 0.133 | / | 0.642 |
| | Back side | 0.440 | 0.242 | 0.198 | 0.144 | 0.596 | 0.237 | 0.143 | 0.544 | 0.291 | 0.139 | / | 0.735 |
| | Left side | 0.600 | 0.535 | 0.443 | 0.055 | 0.778 | 0.573 | 0.059 | 0.694 | 0.558 | / | / | **0.778** |
| | Right side | / | / | / | / | / | / | / | / | / | 0.233 | / | 0.233 |
| | Top side | 0.118 | 0.113 | 0.098 | 0.163 | 0.157 | 0.177 | 0.203 | 0.192 | 0.194 | 0.288 | / | 0.491 |
| | Bottom side | / | / | / | / | / | / | / | / | / | / | / | / |
| Product Specific 10-g | Front side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Back side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Left side | / | / | 1.730 | / | / | 1.858 | / | / | / | / | 0.157 | **2.015** |
| | Right side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Top side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Bottom side | / | / | / | / | / | / | / | / | / | / | / | / |

Table 106: SAR Simultaneous Tx Combination of Second antenna and WiFi/BT antenna.

| Test Position | | Main Antenna | | | | | | | | | WiFi/BT Antenna SARMax | | ΣSAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | GSM850 | GSM1900 | UMTS Band II | UMTS Band IV | UMTS Band V | LTE B2 | LTE B4 | LTE B5 | LTE B7 | WiFi 2.4G | BT | |
| Head | Left cheek | 0.031 | 0.089 | 0.107 | 0.167 | 0.040 | 0.123 | 0.179 | 0.051 | 0.239 | 0.183 | 0.392 | 0.631 |
| | Left tilt | 0.014 | 0.053 | 0.057 | 0.074 | 0.018 | 0.066 | 0.074 | 0.017 | 0.071 | 0.082 | 0.392 | 0.466 |
| | Right cheek | 0.036 | 0.069 | 0.092 | 0.126 | 0.044 | 0.092 | 0.143 | 0.035 | 0.147 | 0.039 | 0.392 | 0.539 |
| | Right tilt | 0.014 | 0.050 | 0.046 | 0.082 | 0.018 | 0.050 | 0.099 | 0.017 | 0.121 | 0.038 | 0.392 | 0.513 |
| Body Worn | Front side | 0.144 | 0.142 | 0.159 | 0.163 | 0.228 | 0.180 | 0.158 | 0.238 | 0.176 | 0.055 | 0.131 | 0.369 |
| | Back side | 0.201 | 0.198 | 0.224 | 0.222 | 0.256 | 0.246 | 0.228 | 0.252 | 0.244 | 0.073 | 0.131 | 0.387 |
| Hotspot | Front side | 0.230 | 0.163 | 0.176 | 0.148 | 0.378 | 0.161 | 0.159 | 0.377 | 0.197 | 0.133 | / | 0.511 |
| | Back side | 0.281 | 0.222 | 0.240 | 0.216 | 0.511 | 0.218 | 0.243 | 0.424 | 0.218 | 0.139 | / | 0.650 |
| | Left side | 0.145 | 0.089 | 0.083 | 0.099 | 0.219 | 0.076 | 0.124 | 0.226 | 0.073 | / | / | 0.226 |
| | Right side | 0.067 | 0.071 | 0.058 | 0.070 | 0.105 | 0.049 | 0.081 | 0.100 | 0.054 | 0.288 | / | 0.393 |
| | Top side | / | / | / | / | / | / | / | / | / | 0.288 | / | 0.288 |
| | Bottom side | 0.157 | 0.321 | 0.350 | 0.316 | 0.378 | 0.373 | 0.373 | 0.345 | 0.344 | / | / | 0.378 |
| Product Specific 10-g | Front side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Back side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Left side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Right side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Top side | / | / | / | / | / | / | / | / | / | / | / | / |
| | Bottom side | / | / | / | / | / | / | / | / | / | / | / | / |

Table 107: SAR Simultaneous Tx Combination of Main antenna and WiFi/BT antenna.

### 7.3.4 Simultaneous Transmission Conclusion

The above numeral summed SAR results is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore simultaneous transmission SAR with Volume Scans is not required per KDB 447498 D01.

**Appendix A. System Check Plots**
**(Please See Appendix No.: SYBH (Z-SAR) 20190309001001-2A, total: 19 pages)**

**Appendix B. SAR Measurement Plots**
**(Please See Appendix No.: SYBH (Z-SAR) 20190309001001-2B, total: 60 pages)**

**Appendix C. Calibration Certificate**
**(Please See Appendix No.: SYBH (Z-SAR) 20190309001001-2C, total: 181 pages)**

**Appendix D. Photo documentation**
**(Please See Appendix No.: SYBH (Z-SAR) 20190309001001-2D, total: 7 pages)**

**Appendix E. Antenna Location**
**(Please See Appendix No.: SYBH (Z-SAR) 20190309001001-2E, total: 1 page)**

**End**