ilac-MRA ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17025 TESTING LABORATORY Certificate Number: AT-3951

# FCC SAR Compliance Test Report

## For

**ITEL MOBILE LIMITED**

**FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET**

**FOTAN NT HONGKONG**

**Model: P10003L**

| | |
|---|---|
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| Report Number: | WSCT-ANAB-R&E240900047A-SAR |
| Report Date: | 17 October 2024 |
| FCC ID: | 2AJMN-P10003L |
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Modified History

| REV. | Modification Description | Issued Date | Remark |
|---|---|---|---|
| REV.1.0 | Initial Test Report Relesse | 17 October 2024 | Li Huaibi |
| | | | |

# 1 General information

## 1.1 Notes

The test results of this test report relate exclusively to the test item specified in this test report. Shenzhen Timeway Testing Laboratories does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report is not to be reproduced or published in full without the prior written permission.

## 1.2 Application details

Date of receipt of test item: 2024-09-20
Start of test: 2024-09-21
End of test: 2024-10-15

## 1.3 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for P10003L is as below:

| Band | Position Test Points | MAX Reported $SAR_{1g}$ (W/kg) |
|---|---|---|
| GSM850 | Body & Hotspot 0mm | 0.323 |
| GSM1900 | Body & Hotspot 0mm | 0.050 |
| UMTS Band 2 | Body & Hotspot 0mm | 0.378 |
| UMTS Band 4 | Body & Hotspot 0mm | 0.467 |
| UMTS Band 5 | Body & Hotspot 0mm | 0.413 |
| LTE Band 2 | Body & Hotspot 0mm | 0.395 |
| LTE Band 4 | Body & Hotspot 0mm | 0.370 |
| LTE Band 5 | Body & Hotspot 0mm | 0.401 |
| LTE Band 7 | Body & Hotspot 0mm | 0.210 |
| LTE Band 38 | Body & Hotspot 0mm | 0.076 |
| LTE Band 41 | Body & Hotspot 0mm | 0.081 |
| Wi-Fi 2.4G | Body & Hotspot 0mm | 0.828 |
| WIFI5G Band1 | Body & Hotspot 0mm | 0.772 |
| WIFI5G Band2 | Body & Hotspot 0mm | 0.724 |
| WIFI5G Band3 | Body & Hotspot 0mm | 0.737 |
| WIFI5G Band4 | Body & Hotspot 0mm | 0.747 |
| BT | Body & Hotspot 0mm | 0.009 |
| Maximum Max. SAR Level(s) Measured: (Limit: 1.6W/Kg): | UMTS Band 4 | 0.467W/kg1gBodyTissue |
| | Wi-Fi 2.4G | 0.828W/kg1gBodyTissue |
| The highest simultaneous SAR : | 1.295W/kg1gBodyTissue | |

The device is in compliance with Specific Absorption Rate （SAR）for general population/uncontraolled exposure limits of 1.6 W/Kg as averaged over any 1g tissue according to the FCC rule the ANSI/IEEE C95.1:2005, the NCRP Report Number 86 for uncontrolled environment, according to the Industry Canada Radio Standards Specification RSS-102 for General Population/Uncontrolled exposure, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

## 1.4 EUT Information

| | |
|---|---|
| **Device Information:** | |
| **Product Type:** | Tablet |
| **Model:** | P10003L |
| **Trade Name:** | itel |
| **Device Type:** | Portable device |
| **Exposure Category:** | uncontrolled environment / general population |
| **Production Unit or Identical Prototype:** | Production Unit |
| **Antenna Type :** | BT/WIFI: FPC Antenna |
| **Device Operating Configurations:** | |
| **Supporting Mode(s) :** | GSM850,PCS1900,<br>UMTS Band 2, UMTS Band 4 ,UMTS Band 5,<br>LTE Band 2/ LTE Band4/LTE Band5/ LTE Band7<br>LTE Band38/ LTE Band41, Wi-Fi , BT |
| **Modulation:** | GFSK, π/4-DQPSK, 8-DPSK<br>QPSK(WCDMA)<br>QPSK/16QAM (LTE)<br>DSSS/ OFDM(WIFI) |
| **Device Class :** | Class B, No DTM Mode |

| | | | |
|---|---|---|---|
| **Operating Frequency Range(s)** | Band | TX(MHz) | RX(MHz) |
| | GSM850 | 824~849 | 869~894 |
| | GSM1900 | 1850~1910 | 1930~1990 |
| | UMTS Band 2 | 1850~1910 | 1930~1990 |
| | UMTS Band 4 | 1710~1755 | 2110~2155 |
| | UMTS Band 5 | 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 |
| | LTE Band38 | 2570-2620 | 2570-2620 |
| | LTE Band 41 | 2496-2690 | 2496-2690 |
| | Wi-Fi (2.4G) | 2412-2462 | |
| | Wi-Fi (5G) | 5180-5240 | 5180-5240 |
| | | 5260-5320 | 5260-5320 |
| | | 5500-5700 | 5500-5700 |
| | | 5745-5825 | 5745-5825 |
| | BT | 2402~2480 | |
| **Antenna gain:** | GSM 850,/WCDMA B5,/LTE B5:0.67dbi<br>PCS 1900/WCDMA B2/LTE B2: 1.17dbi<br>WCDMA B4/LTE B4: 1.05dbi<br>LTE B7/B38/B41:1.36dbi<br>2.4GWIFI:1.21dbi<br>5GWIFI:1.32dbi | | |
| **Power Source:** | Rechargeable Li-ion Polymer Battery: P10003L<br>Rated Voltage: 3.8V<br>Rated Capacity: 7000mAh/26.60Wh<br>Typical Capacity: 7030mAh/26.71Wh<br>Limited Charge Voltage: 4.35V | | |

Note:1:The test results of this test report relate exclusively to the test item specified in this test report. World Standardization Certification & Testing Group (Shenzhen) Co.,Ltd does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report is not to be reproduced or published in full without the prior written permission.

2: For NFC evaluation, it is not necessary to test NFC because its power is very low

## 2 Testing laboratory

| | |
|---|---|
| Test Site | World Standardization Certification & Testing Group (Shenzhen) Co., Ltd. |
| Test Location | Building A-B, Baoli'an Industrial Park, No. 58 Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen, Guangdong, China |
| Telephone | +86-755-26996192 |
| Fax | +86-755-86376605 |

## 3 ACCREDITATIONS

**ANAB - Certificate Number: AT-3951**

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (ANAB).Certification Number: AT-3951

## 4 Test Environment

| | Required | Actual |
|---|---|---|
| Ambient temperature: | 18 – 25 °C | 22 ± 2 °C |
| Tissue Simulating liquid: | 22 ± 2 °C | 22 ± 2 °C |
| Relative humidity content: | 30 – 70 % | 30 – 70 % |

## 5 Applicant and Manufacturer

| | |
|---|---|
| Applicant/Client Name: | ITEL MOBILE LIMITED |
| Applicant Address: | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG |
| Manufacturer Name: | ITEL MOBILE LIMITED |
| Manufacturer Address: | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG |

## 6 Test standard/s:

| No. | Identity | Document Title |
|---|---|---|
| 1 | 47 CFR Part 2.1093 | Radiofrequency radiation exposure evaluation: portable devices |
| 2 | IEC/IEEE 62209-1528 | Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate in the Human Head from Wireless Communications Devices: Measurement Techniques |
| 3 | KDB447498 D01 | General RF Exposure Guidance v06 |
| 4 | KDB447498 D04 | Interim General RF Exposure Guidance v01 |
| 5 | KDB865664 D01 | SAR measurement 100MHz to 6GHz v01r04 |
| 6 | KDB865664 D02 | RF Exposure Reporting v01r02 |
| 7 | KDB941225 D01 | 3G SAR Procedures v03r01 |
| 8 | KDB941225 D05 | SAR for LTE Devices v02r05 |
| 9 | KDB248227 D01 | 802.11 Wi-Fi SAR v02r02 |
| 10 | KDB941225 D06 | Hotspot Mode v02r01 |
| 11 | KDB648474 D04 | Handset SAR v01r03 |
| 12 | KDB690783 D01 | SAR Listings on Grant v01r03 |

## 6.1 RF exposure limits

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

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.

## 6.2 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dW) absorbed by(dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ).

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

SAR is expressed in units of watts per kilogram (W/kg). SAR can be related to the electric field at a point by

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

where:

σ = conductivity of the tissue (S/m)

ρ = mass density of the tissue (kg/m$^3$)

E = rms electric field strength (V/m)

# 7 SAR Measurement System

## 7.1 The Measurement System

Comosar is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The Comosar system consists of the following items:

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Device holder
- Head simulating tissue

The following figure shows the system.

The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 10g mass.

## 7.2 Robot

The COMOSAR system uses the high precision robots KR 6 R900 sixx type out of the newer series from Satimo SA (France).For the 6-axis controller COMOSAR system, the KUKA robot controller version from Satimo is used. The KR 6 R900 sixx robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- 6-axis controller

## 7.3 Probe

For the measurements the Specific Dosimetric E-Field Probe SSE 5 with following specifications is used

Figure 1 – MVG COMOSAR Dosimetric E field Dipole

- Dynamic range: 0.01-100 W/kg

| | |
|---|---|
| Probe Length | 330 mm |
| Length of Individual Dipoles | 4.5 mm |
| Maximum external diameter | 8 mm |
| Probe Tip External Diameter | 5 mm |
| Distance between dipoles / probe | 2.7 mm |

- Calibration range: 300MHz to 3GHz for head & body simulating liquid.

Angle between probe axis (evaluation axis) and suface normal line:less than 30°

Figure 2 – MVG COMOSAR Dosimetric E field Dipole

Dynamic range: 0.01-100 W/kg

| | |
|---|---|
| Probe Length | 330 mm |
| Length of Individual Dipoles | 2 mm |
| Maximum external diameter | 8 mm |
| Probe Tip External Diameter | 2.5 mm |
| Distance between dipoles / probe | 1 mm |

- Calibration range: 5GHz to 6GHz for head & body simulating liquid.

Angle between probe axis (evaluation axis) and suface normal line:less than 30°

## 7.4 Measurement procedure

The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator.The connection between the mobile and the base station simulator is established via air interface.
- Measurement of the local E-field value at a fixed location.This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom.Since the sensors can not directly measure at the inner phantom surface,the values between the sensors and the inner phantom surface are extrapolated.With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point,a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8 * 4 or 5 mm.With these data,the peak spatial-average SAR value can be calculated.

Spatial Peak SAR Evaluation

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

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

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

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

SAR Averaged Methods
In SATIMO, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

## 7.5 Description of interpolation/extrapolation scheme

- The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body.The probe tip must not be in contact with the phantom surface in order to minimise measurements errors,but the highest local SAR will occur at the surface of the phantom.

- An extrapolation is using to determinate this highest local SAR values.
  The extrapolation is based on afourth-order least-square polynomial fit of measured data.The local SAR value is then extrapolated from the liquid surface with a 1 mm step.

- The measurements have to be performed over a limited time(due to the duration of the battery) so the step of measurement is high.It could vary between 5 and 8 mm.To obtain an accurate assessment of the maximum SAR average over 10 grams and 1gram requires a very fine resolution in the three dimensional scanned data array.

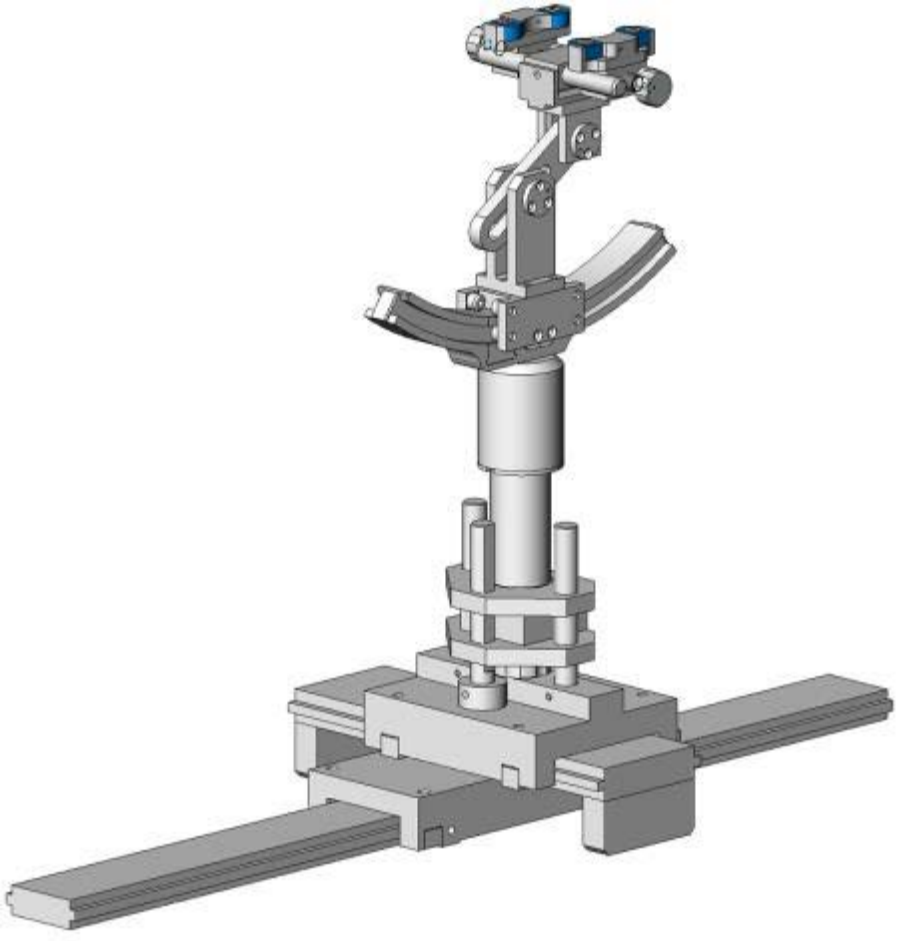
## 7.6 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

| System Material | Permittivity | Loss Tangent |
|---|---|---|
| Delrin | 3.7 | 0.005 |

## 7.7 Device Holder

The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1°.



Device holder

| System Material | Permittivity | Loss Tangent |
|---|---|---|
| Delrin | 3.7 | 0.005 |

## 7.8 Video Positioning System

- The video positioning system is used in OpenSAR to check the probe. Which is composed of a camera, LED, mirror and mechanical parts. The camera is piloted by the main computer with firewire link.

- During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

- The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

## 7.9 Tissue simulating liquids: dielectric properties

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. 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.

(Liquids used for tests are marked with☒):

| Ingredients(% of weight) | Frequency (MHz) | | | | | |
|---|---|---|---|---|---|---|
| frequency band | ☒ 750 | ☒ 835 | ☒ 1800 | ☒ 1900 | ☒ 2450 | ☒ 2600 |
| Tissue Type | Head | Head | Head | Head | Head | Head |
| 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 | 36.8 | 0.0 |
| DGBE | 0.0 | 0.0 | 47.0 | 44.542 | 0.0 | 44.452 |
| Ingredients(% of weight) | Frequency (MHz) | | | | | |
| frequency band | ☒ 750 | ☒ 835 | ☒ 1800 | ☒ 1900 | ☒ 2450 | ☒ 2600 |
| Tissue Type | Body | Body | Body | Body | Body | Body |
| Water | 50.30 | 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 |

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

## 7.10 Tissue simulating liquids: parameters

| Tissue Type | Measured Frequency (MHz) | Target Tissue | | | | Measured Tissue | | Liquid Temp. | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| | | Target Permittivity $\varepsilon_r$ | Range of ±5% | Target Conductivity σ (S/m) | Range of ±5% | $\varepsilon_r$ | σ (S/m) | | |
| 835MHz Head | 825 | 41.60 | 39.52~43.68 | 0.90 | 0.86~0.95 | 40.34 | 0.91 | 21.6°C | 2024-09-21 |
| | 835 | 41.50 | 39.43~43.58 | 0.90 | 0.86~0.95 | 40.33 | 0.92 | | |
| | 850 | 41.50 | 39.43~43.58 | 0.92 | 0.87~0.97 | 40.11 | 0.94 | | |
| 835MHz Body | 825 | 55.20 | 52.44~57.96 | 0.97 | 0.92~1.02 | 54.04 | 0.98 | | |
| | 835 | 55.20 | 52.44~57.96 | 0.97 | 0.92~1.02 | 53.93 | 0.99 | | |
| | 850 | 55.20 | 52.44~57.96 | 0.99 | 0.94~1.04 | 53.69 | 1.01 | | |
| 1800MHz Head | 1710 | 40.10 | 38.10~42.10 | 1.35 | 1.28~1.42 | 39.95 | 1.34 | 21.6°C | 2024-09-23- |
| | 1730 | 40.10 | 38.10~42.10 | 1.35 | 1.29~1.43 | 39.87 | 1.36 | | |
| | 1750 | 40.10 | 38.10~42.10 | 1.37 | 1.30~1.44 | 39.69 | 1.39 | | |
| | 1800 | 40.00 | 38.00~42.00 | 1.40 | 1.33~1.47 | 39.48 | 1.44 | | |
| 1800MHz Body | 1710 | 53.50 | 50.83~56.18 | 1.46 | 1.39~1.53 | 53.24 | 1.45 | | |
| | 1730 | 53.50 | 50.83~56.18 | 1.48 | 1.41~1.55 | 53.39 | 1.47 | | |
| | 1750 | 53.40 | 50.73~56.07 | 1.49 | 1.42~1.56 | 53.19 | 1.49 | | |
| | 1800 | 53.30 | 50.64~55.97 | 1.52 | 1.44~1.60 | 52.97 | 1.54 | | |
| 1900MHz Head | 1850 | 40.00 | 38.00~42.00 | 1.40 | 1.33~1.47 | 39.93 | 1.37 | 21.6°C | 2024-09-25 |
| | 1880 | 40.00 | 38.00~42.00 | 1.40 | 1.33~1.47 | 39.91 | 1.40 | | |
| | 1900 | 40.00 | 38.00~42.00 | 1.40 | 1.33~1.47 | 39.98 | 1.41 | | |
| | 1910 | 40.00 | 38.00~42.00 | 1.40 | 1.33~1.47 | 39.97 | 1.42 | | |
| 1900MHz Body | 1850 | 53.30 | 50.64~55.97 | 1.52 | 1.44~1.60 | 53.23 | 1.49 | | |
| | 1880 | 53.30 | 50.64~55.97 | 1.52 | 1.44~1.60 | 53.36 | 1.53 | | |
| | 1900 | 53.30 | 50.64~55.97 | 1.52 | 1.44~1.60 | 53.37 | 1.56 | | |
| | 1910 | 53.30 | 50.64~55.97 | 1.52 | 1.44~1.60 | 53.37 | 1.57 | | |

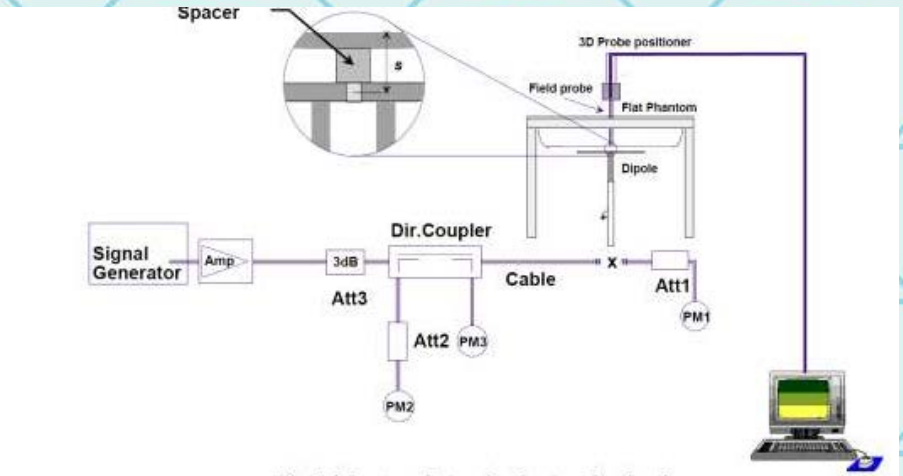
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2450MHz Head | 2410 | 39.30 | 37.34~41.26 | 1.76 | 1.67~1.85 | 39.22 | 1.78 | 21.6°C | 2024-09-27 |
| | 2435 | 39.20 | 37.24~41.16 | 1.79 | 1.70~1.88 | 39.25 | 1.77 | | |
| | 2450 | 39.20 | 37.24~41.16 | 1.80 | 1.71~1.89 | 39.24 | 1.76 | | |
| | 2460 | 39.20 | 37.24~41.16 | 1.81 | 1.72~1.90 | 39.20 | 1.76 | | |
| 2450MHz Body | 2410 | 52.80 | 50.16~55.44 | 1.91 | 1.81~2.00 | 52.72 | 1.92 | | |
| | 2435 | 52.70 | 50.07~55.34 | 1.94 | 1.84~2.04 | 52.75 | 1.92 | | |
| | 2450 | 52.70 | 50.07~55.34 | 1.95 | 1.85~2.05 | 52.74 | 1.91 | | |
| | 2460 | 52.70 | 50.07~55.34 | 1.96 | 1.86~2.06 | 52.70 | 1.91 | | |
| 2600MHz Head | 2510 | 39.00 | 37.05~40.95 | 1.96 | 1.86~2.06 | 38.87 | 1.93 | 21.6°C | 2024-09-29 |
| | 2535 | 39.00 | 37.05~40.95 | 1.96 | 1.86~2.06 | 38.58 | 1.93 | | |
| | 2560 | 39.00 | 37.05~40.95 | 1.96 | 1.86~2.06 | 38.98 | 2.02 | | |
| | 2600 | 39.00 | 37.05~40.95 | 1.96 | 1.86~2.06 | 52.50 | 2.02 | | |
| 2600MHz Body | 2510 | 52.50 | 49.90~55.11 | 2.16 | 2.05~2.27 | 52.21 | 2.05 | | |
| | 2535 | 52.50 | 49.90~55.11 | 2.16 | 2.05~2.27 | 51.92 | 2.06 | | |
| | 2560 | 52.50 | 49.90~55.11 | 2.16 | 2.05~2.27 | 52.01 | 2.09 | | |
| | 2600 | 52.50 | 49.90~55.11 | 2.16 | 2.05~2.27 | 38.87 | 1.93 | | |
| $\varepsilon_r$= Relative permittivity, σ= Conductivity | | | | | | | | | |

# 8 System Check

## 8.1 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 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 SMA. It is fed with a power of 100 mW. 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 validation 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.



## 8.2 System check results

The system Check is performed for verifying the accuracy of the complete measurement system and performance of the software.The following table shows System check results for all frequency bands and tissue liquids used during the tests (plot(s) see annex A).

| System Check | Target SAR (1W) (+/-10%) | | | | Measured SAR (Normalized to 1W) | | Liquid Temp. | Test Date |
|---|---|---|---|---|---|---|---|---|
| | 1-g (W/g) | Range of ±10% 1-g (W/g) | 10-g (W/g) | Range of ±10% 10-g (W/g) | 1-g (W/g) | 10-g (W/g) | | |
| D835V2 Head | 9.82 | 8.84~10.80 | 6.35 | 5.72~6.99 | 9.700 | 6.150 | 21.6°C | 2024-09-21 |
| D1800V2 Head | 37.09 | 33.38~40.80 | 19.77 | 17.93~21.75 | 39.980 | 20.600 | 21.6°C | 2024-09-23 |
| D1900V2 Head | 38.93 | 35.04~42.82 | 20.27 | 18.45~22.55 | 39.980 | 21.070 | 21.6°C | 2024-09-25 |
| D2450V2 Head | 53.41 | 48.07~58.75 | 23.95 | 21.56~26.35 | 53.930 | 24.530 | 21.6°C | 2024-09-27 |
| D2600V2 Head | 56.88 | 51.20~62.56 | 24.92 | 22.43~27.41 | 53.180 | 23.430 | 21.6°C | 2024-09-29 |
| D835V2 Body | 9.41 | 8.47~10.35 | 6.22 | 5.99~6.84 | 10.150 | 6.450 | 21.6°C | 2024-09-21 |
| D1800V2 Body | 38.03 | 34.23~41.83 | 20.69 | 18.62~22.76 | 41.560 | 21.720 | 21.6°C | 2024-09-23 |
| D1900V2 Body | 38.73 | 34.86~42.60 | 20.48 | 18.43~22.53 | 39.330 | 20.940 | 21.6°C | 2024-09-25 |
| D2450V2 Body | 51.39 | 46.25~56.53 | 23.63 | 21.27~25.99 | 54.330 | 23.330 | 21.6°C | 2024-09-27 |
| D2600V2 Body | 54.54 | 49.09~59.99 | 24.37 | 21.94~26.80 | 57.860 | 25.600 | 21.6°C | 2024-09-29 |
| Note: All SAR values are normalized to 1W forward power. | | | | | | | | |

Note: 5G band system check USES standard waveguide, so the test results are standard en62209-2 table B2

# 9 SAR Test Test Configuration

## 9.1 GSM Test Configurations

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link. Using CMU200 the power lever is set to “5”and “0” in SAR of GSM850 and GSM1900. The tests in the band of GSM 850 and GSM 1900 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.

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.

## 9.2 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 Headset 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. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

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 Headset 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 βc andβd gain factors for DPCCH and DPDCH were set according to the values in the below table, □hs for HS-DPCCH is set automatically to the correct value when ΔACK, ΔNACK, ΔCQI = 8. The variation of the βc /βd 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

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 |

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 D01v03, 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.

## 9.3 LTE Test Configuration

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

1) Spectrum Plots for RB configurations

A properly configured base station simulator was used for LTE output power measurements and SAR testing.Therefore, spectrum plots for RB configurations were not required to be included in this report.

2) MPR

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

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

**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3**

| Modulation | Channel bandwidth / Transmission bandwidth (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 Signalling Value of “NS_01”on the base station simulator.

4) LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test requirements

i) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 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.

iii) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in i) and ii) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

iv) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > 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.

5) TDD LTE test configuration

According to KDB 941225 D05 SAR for LTE Devices v02r04, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

## 9.4 Wi-Fi Test Configuration

For the 802.11b/g SAR tests, a communication link is set up with the test mode software for Wi-Fi mode test. The Absolute Radio Frequency Channel Number(ARFCN) is allocated to 1 ,6 and 11 respectively in the case of 2450 MHz.During the test,at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate. 802.11b/g operating modes are tested independently according to the service requirements in each frquency band. 802.11b/g modes are tested on channel 1, 6, 11; however,if output power reduction is necessary for channels 1 and/or 11 to meet restricted band requirements the highest output channel closest to each of these channels must be tested instead.

SAR is not required for 802.11g/n channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.

| Mode | Band | GHz | Channel | "Default Test Channels" | |
|---|---|---|---|---|---|
| | | | | 802.11b | 802.11g |
| 802.11b/g | 2.4 GHz | 2412 | 1# | √ | △ |
| | | 2437 | 6 | √ | △ |
| | | 2462 | 11# | √ | △ |

Notes:

√ = "default test channels"

△= possible 802.11g channels with maximum average output ¼ dB the "default test channels"

# = when output power is reduced for channel 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested.

802.11 Test Channels per FCC Requirements

## 9.5 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 KDB 248227D01v02) 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 KDB 248227D01v02r01). 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.

C) SAR Test Requirements for OFDM configurations

When SAR measurement is required for 802.11 g/n OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

# 10 Detailed Test Results

## 10.1 Conducted Power measurements

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

### 10.1.1 Conducted Power of GSM

| Mode: GSM850 | | Maximum Tune-up(dBm) | Burst Average Power (dBm) | | | Division Factors | Frame-Average Power (dBm) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | CH128 | CH190 | CH251 | | CH128 | CH190 | CH251 |
| | | | 824.2MHz | 836.6MHz | 848.8MHz | | 824.2MHz | 836.6MHz | 848.8MHz |
| GSM(CS) | | 33.50 | 32.63 | 32.33 | **33.10** | -9.03 | 31.15 | 30.85 | 31.62 |
| GPRS (GMSK) | 1Tx slot | 30.00 | 29.91 | 29.28 | 29.89 | -9.03 | 28.43 | 27.80 | 28.41 |
| | 2Tx slots | 30.50 | 29.18 | 29.71 | 30.00 | -9.03 | 27.70 | 28.23 | 28.52 |
| | 3Tx slots | 30.00 | 28.97 | 29.84 | 29.67 | -6.02 | 27.49 | 28.36 | 28.19 |
| | 4Tx slots | 29.50 | 29.35 | 28.72 | 29.48 | -4.26 | 27.87 | 27.24 | 28.00 |
| EGPRS (8PSK) | 1Tx slot | 26.00 | 25.55 | 25.54 | 25.54 | -3.01 | 24.07 | 24.06 | 24.06 |
| | 2Tx slots | 26.00 | 25.18 | 25.38 | 25.66 | -9.03 | 23.70 | 23.90 | 24.18 |
| | 3Tx slots | 26.00 | 25.32 | 25.42 | 25.81 | -6.02 | 23.84 | 23.94 | **24.33** |
| | 4Tx slots | 26.00 | 25.18 | 25.77 | 24.59 | -4.26 | 23.70 | 24.29 | 23.11 |
| Mode: GSM1900 | | Maximum Tune-up(dBm) | Burst Average Power (dBm) | | | Division Factors | Frame-Average Power (dBm) | | |
| | | | CH512 | CH661 | CH810 | | CH512 | CH661 | CH810 |
| | | | 1850.2MHz | 1880.0MHz | 1909.8MHz | | 1850.2MHz | 1880.0MHz | 1909.8MHz |
| GSM(CS) | | **30.00** | 29.39 | **29.84** | 29.56 | -9.03 | 30.56 | 31.01 | 30.73 |
| GPRS (GMSK) | 1Tx slot | 28.00 | 26.29 | 27.55 | 26.52 | -9.03 | 27.46 | 28.72 | 27.69 |
| | 2Tx slots | 28.00 | 27.47 | 26.67 | 27.54 | -9.03 | 28.64 | 27.84 | 28.71 |
| | 3Tx slots | 28.00 | 27.09 | 27.84 | 26.86 | -6.02 | 28.26 | 29.01 | 28.03 |
| | 4Tx slots | 27.50 | 27.3 | 27.48 | 26.98 | -4.26 | 28.47 | 28.65 | 28.15 |
| EGPRS (8PSK) | 1Tx slot | 26.00 | 25.84 | 24.78 | 24.71 | -3.01 | 27.01 | 25.95 | 25.88 |
| | 2Tx slots | 26.00 | 24.68 | 25.98 | 24.93 | -9.03 | 25.85 | 27.15 | 26.1 |
| | 3Tx slots | 25.50 | 24.62 | 24.51 | 25.00 | -6.02 | 25.79 | 25.68 | 26.17 |
| | 4Tx slots | 25.50 | 25.51 | 24.92 | 25.43 | -4.26 | 26.68 | 26.09 | 26.6 |

Note:

Division Factors

To average the power, the division factor is as follows:

1Tx-slots = 1 transmit time slots out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2Tx-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3Tx-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4Tx-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

### 10.1.2Conducted Power of WCDMA

| Mode | | Maximum Tune-up(dBm) | WCDMA Band 2 | | |
|---|---|---|---|---|---|
| | | | Conducted Power (dBm) | | |
| | | | CH9262 | CH9400 | CH9538 |
| | | | 1852.4 | 1880.0 | 1907.6 |
| RMC 12.2K | | 22.50 | 21.02 | 22.07 | 22.31 |
| HSDPA | Subtest-1 | 22.00 | 21.99 | 21.95 | 21.65 |
| | Subtest-2 | 22.50 | 22.23 | 21.35 | 22.12 |
| | Subtest-3 | 22.00 | 21.86 | 21.95 | 21.97 |
| | Subtest-4 | 22.50 | 20.91 | 21.01 | 22.15 |
| HSUPA | Subtest-1 | 22.50 | 21.13 | 21.67 | 22.33 |
| | Subtest-2 | 22.50 | 21.35 | 21.15 | 22.15 |
| | Subtest-3 | 22.50 | 22.20 | 21.95 | 21.20 |
| | Subtest-4 | 22.50 | 22.12 | 22.24 | 22.13 |
| | Subtest-5 | 22.50 | 21.77 | 21.53 | **22.43** |
| Mode | | Maximum Tune-up(dBm) | WCDMA Band 4 | | |
| | | | Conducted Power (dBm) | | |
| | | | CH1312 | CH1413 | CH1513 |
| | | | 1712.4 | 1732.6 | 1752.6 |
| RMC 12.2K | | 23.00 | 21.74 | 22.64 | 22.25 |
| HSDPA | Subtest-1 | 22.50 | 21.37 | 22.22 | 22.45 |
| | Subtest-2 | 22.50 | 22.20 | 22.42 | 22.34 |
| | Subtest-3 | 22.50 | 22.16 | 21.57 | 21.84 |
| | Subtest-4 | 22.50 | 22.32 | 21.68 | 21.80 |
| HSUPA | Subtest-1 | 22.00 | 21.97 | 21.8 | 21.65 |
| | Subtest-2 | 22.50 | 21.90 | 21.35 | 22.40 |
| | Subtest-3 | 23.00 | **22.70** | 21.68 | 21.79 |
| | Subtest-4 | 22.00 | 21.75 | 21.81 | 21.89 |
| | Subtest-5 | 22.50 | 21.97 | 21.56 | 22.15 |
| Mode | | Maximum Tune-up(dBm) | WCDMA Band 5 | | |
| | | | Conducted Power (dBm) | | |
| | | | CH4132 | CH4183 | CH4233 |
| | | | 826.4 | 836.6 | 846.6 |
| RMC 12.2K | | 23.00 | **22.94** | 21.44 | 22.72 |
| HSDPA | Subtest-1 | 23.00 | 22.58 | 22.16 | 22.12 |
| | Subtest-2 | 23.00 | 22.54 | 21.51 | 20.98 |
| | Subtest-3 | 23.00 | 22.38 | 22.6 | 21.89 |
| | Subtest-4 | 23.00 | 22.86 | 21.63 | 22.27 |
| HSUPA | Subtest-1 | 23.00 | 22.18 | 22.83 | 21.52 |
| | Subtest-2 | 22.50 | 22.07 | 22.11 | 21.60 |
| | Subtest-3 | 23.00 | 21.18 | 21.98 | 22.76 |
| | Subtest-4 | 22.50 | 21.97 | 22.13 | 21.49 |
| | Subtest-5 | 22.50 | 22.00 | 21.63 | 21.79 |

Per KDB 941225 D01, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤1/2dB higher than the primary mode (RMC12.2kbps) 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.

### 10.1.3Conducted Power of LTE Band 2

| LTE-FDD Band 2 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 18607 | 18900 | 19193 |
| | | | | | 1850.7MHz | 1880.0MHz | 1909.3MHz |
| 1.4MHz | QPSK | 1 | 0 | 23.50 | 23.32 | 23.16 | 23.09 |
| | | | 2 | 23.50 | 23.40 | 23.08 | 23.17 |
| | | | 5 | 23.50 | 23.40 | 23.16 | 23.16 |
| | | 3 | 0 | 23.50 | 23.29 | 23.20 | 23.14 |
| | | | 2 | 23.50 | 23.20 | 23.24 | 23.17 |
| | | | 3 | 23.50 | 23.20 | 23.18 | 23.17 |
| | | 6 | 0 | 22.00 | 21.78 | 21.60 | 21.64 |
| | 16QAM | 1 | 0 | 23.50 | 23.36 | 21.66 | 22.19 |
| | | | 2 | 23.50 | 23.40 | 21.68 | 22.20 |
| | | | 5 | 23.50 | 23.27 | 21.69 | 22.20 |
| | | 3 | 0 | 23.00 | 22.52 | 22.14 | 22.14 |
| | | | 2 | 23.00 | 22.53 | 22.16 | 22.12 |
| | | | 3 | 23.00 | 22.52 | 22.12 | 22.22 |
| | | 6 | 0 | 21.50 | 21.42 | 21.45 | 21.27 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 18615 | 18900 | 19185 |
| | | | | | 1851.5MHz | 1880.0MHz | 1908.5MHz |
| 3MHz | QPSK | 1 | 0 | 23.50 | 23.17 | 23.15 | 23.19 |
| | | | 7 | 23.50 | 23.19 | 23.11 | 23.22 |
| | | | 14 | 23.50 | 23.14 | 23.08 | 23.18 |
| | | 8 | 0 | 22.00 | 21.75 | 21.73 | 21.52 |
| | | | 4 | 22.00 | 21.85 | 21.8 | 21.63 |
| | | | 7 | 22.00 | 21.73 | 21.65 | 21.69 |
| | | 15 | 0 | 22.00 | 21.64 | 21.63 | 21.62 |
| | 16QAM | 1 | 0 | 23.50 | 23.45 | 21.69 | 22.19 |
| | | | 7 | 23.50 | 23.42 | 21.67 | 22.12 |
| | | | 14 | 23.50 | 23.46 | 21.65 | 22.21 |
| | | 8 | 0 | 21.50 | 21.17 | 21.27 | 21.18 |
| | | | 4 | 21.50 | 21.23 | 21.34 | 21.14 |
| | | | 7 | 21.50 | 21.27 | 21.22 | 21.21 |
| | | 15 | 0 | 21.50 | 21.48 | 21.25 | 21.36 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 18625 | 18900 | 19175 |
| | | | | | 1852.5MHz | 1880.0MHz | 1907.5MHz |
| 5MHz | QPSK | 1 | 0 | 23.50 | 23.13 | 23.31 | 22.88 |
| | | | 13 | 23.50 | 23.18 | 23.21 | 22.87 |
| | | | 24 | 23.50 | 23.12 | 23.27 | 22.85 |
| | | 12 | 0 | 22.00 | 21.76 | 21.67 | 21.61 |
| | | | 6 | 22.00 | 21.66 | 21.62 | 21.59 |
| | | | 13 | 22.00 | 21.63 | 21.76 | 21.62 |
| | | 25 | 0 | 22.00 | 21.63 | 21.73 | 21.64 |
| | 16QAM | 1 | 0 | 23.00 | 22.53 | 22.34 | 22.82 |
| | | | 13 | 23.00 | 22.52 | 22.32 | 22.79 |
| | | | 24 | 23.00 | 22.47 | 22.30 | 22.80 |
| | | 12 | 0 | 21.50 | 21.30 | 21.08 | 21.19 |
| | | | 6 | 21.50 | 21.27 | 21.15 | 21.20 |
| | | | 13 | 21.50 | 21.25 | 21.06 | 21.24 |
| | | 25 | 0 | 21.50 | 21.38 | 21.33 | 21.36 |

| LTE-FDD Band 2 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 18650 | 18900 | 19150 |
| | | | | | 1855.0MHz | 1880.0MHz | 1905.0MHz |
| 10MHz | QPSK | 1 | 0 | 23.50 | 23.28 | 23.10 | 23.15 |
| | | | 25 | 23.50 | 23.16 | 23.10 | 23.17 |
| | | | 49 | 23.50 | 23.17 | 23.12 | 23.22 |
| | | 25 | 0 | 22.00 | 21.70 | 21.74 | 21.55 |
| | | | 13 | 22.00 | 21.74 | 21.64 | 21.61 |
| | | | 25 | 22.00 | 21.78 | 21.68 | 21.54 |
| | | 50 | 0 | 22.00 | 21.74 | 21.67 | 21.58 |
| | 16QAM | 1 | 0 | 24.00 | 23.54 | 23.08 | 22.46 |
| | | | 25 | 23.50 | 23.46 | 22.99 | 22.47 |
| | | | 49 | 23.50 | 23.43 | 22.93 | 22.48 |
| | | 25 | 0 | 21.50 | 21.28 | 21.41 | 21.23 |
| | | | 13 | 21.50 | 21.30 | 21.36 | 21.29 |
| | | | 25 | 21.50 | 21.27 | 21.34 | 21.33 |
| | | 50 | 0 | 21.50 | 21.31 | 21.30 | 21.15 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 18675 | 18900 | 19125 |
| | | | | | 1857.5MHz | 1880.0MHz | 1902.5MHz |
| 15MHz | QPSK | 1 | 0 | 23.50 | 23.39 | 23.24 | 23.13 |
| | | | 38 | 23.50 | 23.27 | 23.23 | 23.00 |
| | | | 74 | 23.50 | 23.24 | 23.12 | 23.08 |
| | | 36 | 0 | 22.00 | 21.78 | 21.67 | 21.65 |
| | | | 18 | 22.00 | 21.69 | 21.72 | 21.68 |
| | | | 39 | 22.00 | 21.77 | 21.61 | 21.67 |
| | | 75 | 0 | 22.00 | 21.65 | 21.60 | 21.56 |
| | 16QAM | 1 | 0 | 24.00 | 23.53 | 23.10 | 23.07 |
| | | | 38 | 23.50 | 23.44 | 23.02 | 23.02 |
| | | | 74 | 23.50 | 23.41 | 22.93 | 23.01 |
| | | 36 | 0 | 22.00 | 21.34 | 21.55 | 21.15 |
| | | | 18 | 21.50 | 21.35 | 21.44 | 21.13 |
| | | | 39 | 21.50 | 21.33 | 21.46 | 21.18 |
| | | 75 | 0 | 21.50 | 21.39 | 21.28 | 21.15 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 18700 | 18900 | 19100 |
| | | | | | 1860.0MHz | 1880.0MHz | 1900.0MHz |
| 20MHz | QPSK | 1 | 0 | 24.00 | 23.55 | 23.59 | 23.31 |
| | | | 50 | 24.00 | 23.34 | 23.58 | 23.20 |
| | | | 99 | 24.00 | 23.36 | **23.54** | 23.28 |
| | | 50 | 0 | 22.00 | 21.80 | 21.80 | 21.64 |
| | | | 25 | 22.00 | 21.77 | 21.73 | 21.64 |
| | | | 50 | 22.00 | 21.68 | 21.73 | 21.60 |
| | | 100 | 0 | 22.00 | 21.72 | 21.62 | 21.66 |
| | 16QAM | 1 | 0 | 23.00 | 22.49 | 21.91 | 22.57 |
| | | | 50 | 22.50 | 22.41 | 21.85 | 22.46 |
| | | | 99 | 22.50 | 22.39 | 21.88 | 22.47 |
| | | 50 | 0 | 21.50 | 21.49 | 21.35 | 21.24 |
| | | | 25 | 21.50 | 21.46 | 21.29 | 21.29 |
| | | | 50 | 21.50 | 21.38 | 21.28 | 21.19 |
| | | 100 | 0 | 21.50 | 21.37 | 21.29 | 21.14 |

### 10.1.4Conducted Power of LTE Band 4

| LTE-FDD Band 4 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 19957 | 20175 | 20393 |
| | | | | | 1710.7MHz | 1732.5MHz | 1754.3MHz |
| 1.4MHz | QPSK | 1 | 0 | 23.50 | 23.3 | 23.15 | 23.4 |
| | | | 2 | 23.50 | 23.25 | 23.20 | 23.37 |
| | | | 5 | 23.50 | 23.28 | 23.15 | 23.33 |
| | | 3 | 0 | 23.50 | 23.04 | 23.12 | 23.26 |
| | | | 2 | 23.50 | 23.09 | 23.05 | 23.31 |
| | | | 3 | 23.50 | 23.05 | 23.09 | 23.27 |
| | | 6 | 0 | 22.50 | 22.23 | 22.07 | 22.22 |
| | 16QAM | 1 | 0 | 24.00 | 23.71 | 22.74 | 22.42 |
| | | | 2 | 24.00 | 23.71 | 22.72 | 22.39 |
| | | | 5 | 24.00 | 23.73 | 22.73 | 22.31 |
| | | 3 | 0 | 22.50 | 22.43 | 22.12 | 22.24 |
| | | | 2 | 22.50 | 22.48 | 22.13 | 22.19 |
| | | | 3 | 22.50 | 22.45 | 22.15 | 22.17 |
| | | 6 | 0 | 22.00 | 21.52 | 21.42 | 21.32 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 19965 | 20175 | 20385 |
| | | | | | 1711.5MHz | 1732.5MHz | 1753.5MHz |
| 3MHz | QPSK | 1 | 0 | 23.50 | 23.15 | 23.2 | 23.41 |
| | | | 7 | 23.50 | 23.13 | 23.18 | 23.36 |
| | | | 14 | 23.50 | 22.99 | 23.13 | 23.35 |
| | | 8 | 0 | 22.50 | 22.22 | 22.20 | 22.25 |
| | | | 4 | 22.50 | 22.24 | 22.16 | 22.26 |
| | | | 7 | 22.50 | 22.15 | 22.09 | 22.25 |
| | | 15 | 0 | 22.50 | 22.19 | 22.11 | 22.16 |
| | 16QAM | 1 | 0 | 24.00 | 23.83 | 22.78 | 22.37 |
| | | | 7 | 24.00 | 23.86 | 22.71 | 22.37 |
| | | | 14 | 24.00 | 23.74 | 22.72 | 22.34 |
| | | 8 | 0 | 21.50 | 21.29 | 21.36 | 21.42 |
| | | | 4 | 21.50 | 21.31 | 21.32 | 21.37 |
| | | | 7 | 21.50 | 21.06 | 21.35 | 21.37 |
| | | 15 | 0 | 21.50 | 21.33 | 21.23 | 21.25 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 19975 | 20175 | 20375 |
| | | | | | 1712.5MHz | 1732.5MHz | 1752.5MHz |
| 5MHz | QPSK | 1 | 0 | 23.50 | 23.13 | 23.26 | 22.99 |
| | | | 13 | 23.50 | 23.02 | 23.23 | 22.90 |
| | | | 24 | 23.50 | 23.01 | 23.25 | 22.89 |
| | | 12 | 0 | 22.50 | 22.24 | 22.26 | 22.20 |
| | | | 6 | 22.50 | 22.17 | 22.17 | 22.24 |
| | | | 13 | 22.50 | 22.09 | 22.06 | 22.19 |
| | | 25 | 0 | 22.50 | 22.14 | 22.06 | 22.15 |
| | 16QAM | 1 | 0 | 23.50 | 22.70 | 22.82 | 23.17 |
| | | | 13 | 23.50 | 22.58 | 22.72 | 23.16 |
| | | | 24 | 23.50 | 22.60 | 22.8 | 23.14 |
| | | 12 | 0 | 21.50 | 21.25 | 21.11 | 21.29 |
| | | | 6 | 21.50 | 21.07 | 21.01 | 21.31 |
| | | | 13 | 21.50 | 21.10 | 21.09 | 21.26 |
| | | 25 | 0 | 21.50 | 21.32 | 21.22 | 21.44 |

| LTE-FDD Band 4 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 20000 | 20175 | 20350 |
| | | | | | 1715.0MHz | 1732.5MHz | 1750.0MHz |
| 10MHz | QPSK | 1 | 0 | 23.50 | 23.15 | 23.14 | 23.34 |
| | | | 25 | 23.50 | 23.03 | 23.03 | 23.3 |
| | | | 49 | 23.50 | 23.04 | 23.1 | 23.28 |
| | | 25 | 0 | 22.50 | 22.07 | 22.16 | 22.27 |
| | | | 13 | 22.50 | 22.18 | 22.06 | 22.15 |
| | | | 25 | 22.50 | 22.04 | 22.09 | 22.24 |
| | | 50 | 0 | 22.50 | 22.15 | 22.24 | 22.22 |
| | 16QAM | 1 | 0 | 24.00 | 23.86 | 23.43 | 23.34 |
| | | | 25 | 24.00 | 23.75 | 23.32 | 23.32 |
| | | | 49 | 24.00 | 23.82 | 23.3 | 23.33 |
| | | 25 | 0 | 21.50 | 21.25 | 21.33 | 21.37 |
| | | | 13 | 21.50 | 21.28 | 21.31 | 21.38 |
| | | | 25 | 21.50 | 21.23 | 21.33 | 21.35 |
| | | 50 | 0 | 21.50 | 21.3 | 21.32 | 21.29 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20025 | 20175 | 20325 |
| | | | | | 1717.5MHz | 1732.5MHz | 1747.5MHz |
| 15MHz | QPSK | 1 | 0 | 23.50 | 23.14 | 23.11 | 23.21 |
| | | | 38 | 23.50 | 23.01 | 23.04 | 23.16 |
| | | | 74 | 23.50 | 23.03 | 22.95 | 23.14 |
| | | 36 | 0 | 22.50 | 22.12 | 22.21 | 22.29 |
| | | | 18 | 22.50 | 22.12 | 22.13 | 22.19 |
| | | | 39 | 22.50 | 22.14 | 22.14 | 22.23 |
| | | 75 | 0 | 22.50 | 22.07 | 22.15 | 22.08 |
| | 16QAM | 1 | 0 | 24.00 | 23.84 | 23.43 | 23.7 |
| | | | 38 | 24.00 | 23.74 | 23.28 | 23.56 |
| | | | 74 | 24.00 | 23.81 | 23.18 | 23.6 |
| | | 36 | 0 | 21.50 | 21.28 | 21.32 | 21.22 |
| | | | 18 | 21.50 | 21.22 | 21.33 | 21.17 |
| | | | 39 | 21.50 | 21.17 | 21.36 | 21.19 |
| | | 75 | 0 | 21.50 | 21.17 | 21.22 | 21.3 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20050 | 20175 | 20300 |
| | | | | | 1720.0MHz | 1732.5MHz | 1745.0MHz |
| 20MHz | QPSK | 1 | 0 | 23.50 | 23.46 | 23.38 | 23.26 |
| | | | 50 | 23.50 | 23.26 | 23.38 | 23.2 |
| | | | 99 | 23.50 | 23.25 | 23.28 | 23.23 |
| | | 50 | 0 | 22.50 | 22.15 | 22.14 | 22.21 |
| | | | 25 | 22.50 | 22.19 | 22.11 | 22.16 |
| | | | 50 | 22.50 | 22.12 | 22.06 | 22.15 |
| | | 100 | 0 | 22.50 | 22.08 | 22.24 | 22.2 |
| | 16QAM | 1 | 0 | 23.50 | 22.91 | 22.85 | 23.25 |
| | | | 50 | 23.50 | 22.7 | 22.78 | 23.18 |
| | | | 99 | 23.50 | 22.72 | 22.7 | 23.13 |
| | | 50 | 0 | 21.50 | 21.36 | 21.26 | 21.41 |
| | | | 25 | 21.50 | 21.29 | 21.29 | 21.42 |
| | | | 50 | 21.50 | 21.25 | 21.22 | 21.35 |
| | | 100 | 0 | 21.50 | 21.25 | 21.3 | 21.38 |

### 10.1.5Conducted Power of LTE Band 5

| LTE-FDD Band 5 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 20407 | 20525 | 20643 |
| | | | | | 824.7MHz | 836.5MHz | 848.3MHz |
| 1.4MHz | QPSK | 1 | 0 | 23.50 | 23.45 | 23.31 | 23.43 |
| | | | 2 | 23.50 | 23.43 | 23.34 | 23.37 |
| | | | 5 | 23.50 | 23.39 | 23.33 | 23.37 |
| | | 3 | 0 | 23.50 | 23.33 | 23.34 | 23.28 |
| | | | 2 | 23.50 | 23.39 | 23.28 | 23.29 |
| | | | 3 | 23.50 | 23.36 | 23.34 | 23.38 |
| | | 6 | 0 | 22.50 | 22.47 | 22.34 | 22.36 |
| | 16QAM | 1 | 0 | 24.00 | 23.86 | 22.85 | 22.87 |
| | | | 2 | 24.00 | 23.86 | 22.85 | 22.94 |
| | | | 5 | 24.00 | 23.88 | 22.88 | 22.96 |
| | | 3 | 0 | 23.00 | 22.65 | 22.29 | 22.2 |
| | | | 2 | 23.00 | 22.69 | 22.35 | 22.22 |
| | | | 3 | 23.00 | 22.67 | 22.32 | 22.23 |
| | | 6 | 0 | 22.00 | 21.61 | 21.43 | 21.35 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20415 | 20525 | 20635 |
| | | | | | 825.5MHz | 836.5MHz | 847.5MHz |
| 3MHz | QPSK | 1 | 0 | 23.50 | 23.32 | 23.37 | 23.4 |
| | | | 7 | 23.50 | 23.32 | 23.35 | 23.36 |
| | | | 14 | 23.50 | 23.28 | 23.38 | 23.43 |
| | | 8 | 0 | 22.50 | 22.39 | 22.29 | 22.25 |
| | | | 4 | 22.50 | 22.46 | 22.36 | 22.24 |
| | | | 7 | 22.50 | 22.37 | 22.33 | 22.34 |
| | | 15 | 0 | 22.50 | 22.44 | 22.33 | 22.2 |
| | 16QAM | 1 | 0 | 24.00 | 23.88 | 22.84 | 22.91 |
| | | | 7 | 24.00 | 23.86 | 22.88 | 22.8 |
| | | | 14 | 24.00 | 23.74 | 22.85 | 22.91 |
| | | 8 | 0 | 21.50 | 21.36 | 21.33 | 21.31 |
| | | | 4 | 21.50 | 21.39 | 21.36 | 21.3 |
| | | | 7 | 21.50 | 21.26 | 21.33 | 21.4 |
| | | 15 | 0 | 22.00 | 21.54 | 21.28 | 21.33 |

| LTE-FDD Band 5 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 20425 | 20525 | 20625 |
| | | | | | 826.5MHz | 836.5MHz | 846.5MHz |
| 5MHz | QPSK | 1 | 0 | 23.50 | 23.36 | 23.45 | 23.05 |
| | | | 13 | 23.50 | 23.26 | 23.37 | 23.09 |
| | | | 24 | 23.50 | 23.29 | 23.36 | 23.14 |
| | | 12 | 0 | 23.00 | 22.52 | 22.3 | 22.32 |
| | | | 6 | 22.50 | 22.33 | 22.37 | 22.35 |
| | | | 13 | 22.50 | 22.48 | 22.38 | 22.33 |
| | | 25 | 0 | 22.50 | 22.44 | 22.39 | 22.23 |
| | 16QAM | 1 | 0 | 23.50 | 22.98 | 22.9 | 23.42 |
| | | | 13 | 23.50 | 22.9 | 22.89 | 23.25 |
| | | | 24 | 23.50 | 23 | 22.79 | 23.39 |
| | | 12 | 0 | 21.50 | 21.42 | 21.18 | 21.31 |
| | | | 6 | 21.50 | 21.33 | 21.18 | 21.26 |
| | | | 13 | 21.50 | 21.25 | 21.2 | 21.25 |
| | | 25 | 0 | 21.50 | 21.49 | 21.39 | 21.46 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20450 | 20525 | 20600 |
| | | | | | 829.0MHz | 836.5MHz | 844.0MHz |
| 10MHz | QPSK | 1 | 0 | 23.50 | 23.41 | 23.28 | 23.3 |
| | | | 25 | 23.50 | 23.26 | 23.29 | 23.35 |
| | | | 49 | 23.50 | 23.3 | 23.33 | 23.34 |
| | | 25 | 0 | 23.00 | 22.51 | 22.31 | 22.29 |
| | | | 13 | 22.50 | 22.36 | 22.37 | 22.33 |
| | | | 25 | 22.50 | 22.45 | 22.35 | 22.23 |
| | | 50 | 0 | 22.50 | 22.35 | 22.49 | 22.39 |
| | 16QAM | 1 | 0 | 24.00 | 23.88 | 23.44 | 22.97 |
| | | | 25 | 24.00 | 23.87 | 23.43 | 23.02 |
| | | | 49 | 24.00 | 23.85 | 23.44 | 23.07 |
| | | 25 | 0 | 21.50 | 21.42 | 21.35 | 21.42 |
| | | | 13 | 21.50 | 21.36 | 21.4 | 21.35 |
| | | | 25 | 21.50 | 21.36 | 21.32 | 21.43 |
| | | 50 | 0 | 21.50 | 21.35 | 21.39 | 21.27 |

### 10.1.6Conducted Power of LTE Band 7

| LTE-FDD Band 7 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 20775 | 21100 | 21425 |
| | | | | | 2502.5MHz | 2535.0MHz | 2567.5MHz |
| 5MHz | QPSK | 1 | 0 | 22.50 | 22.06 | 22.27 | 22.49 |
| | | | 13 | 22.50 | 21.94 | 22.24 | 22.5 |
| | | | 24 | 22.50 | 22.01 | 22.16 | 22.27 |
| | | 12 | 0 | 21.00 | 20.8 | 20.79 | 20.86 |
| | | | 6 | 21.00 | 20.68 | 20.73 | 20.84 |
| | | | 13 | 21.00 | 20.66 | 20.68 | 20.83 |
| | | 25 | 0 | 21.00 | 20.73 | 20.68 | 20.85 |
| | 16QAM | 1 | 0 | 22.50 | 22.33 | 21.92 | 22.04 |
| | | | 13 | 22.50 | 22.37 | 21.93 | 21.98 |
| | | | 24 | 22.50 | 22.28 | 21.89 | 22.09 |
| | | 12 | 0 | 20.50 | 20.38 | 20.29 | 20.37 |
| | | | 6 | 20.50 | 20.27 | 20.22 | 20.29 |
| | | | 13 | 20.50 | 20.3 | 20.24 | 20.29 |
| | | 25 | 0 | 21.00 | 20.5 | 20.57 | 20.56 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20800 | 21100 | 21400 |
| | | | | | 2505.0MHz | 2535.0MHz | 2565.0MHz |
| 10MHz | QPSK | 1 | 0 | 22.50 | 22.2 | 22.27 | 22.37 |
| | | | 25 | 22.50 | 22.17 | 22.21 | 22.43 |
| | | | 49 | 22.50 | 22.16 | 22.21 | 22.47 |
| | | 25 | 0 | 21.00 | 20.69 | 20.78 | 20.9 |
| | | | 13 | 21.00 | 20.67 | 20.84 | 20.88 |
| | | | 25 | 21.00 | 20.74 | 20.71 | 20.94 |
| | | 50 | 0 | 21.00 | 20.71 | 20.85 | 20.84 |
| | 16QAM | 1 | 0 | 23.00 | 22.59 | 22.65 | 22.38 |
| | | | 25 | 23.00 | 22.68 | 22.58 | 22.29 |
| | | | 49 | 23.00 | 22.82 | 22.58 | 22.2 |
| | | 25 | 0 | 21.00 | 20.22 | 20.46 | 20.6 |
| | | | 13 | 21.00 | 20.19 | 20.41 | 20.6 |
| | | | 25 | 21.00 | 20.16 | 20.47 | 20.54 |
| | | 50 | 0 | 20.50 | 20.28 | 20.44 | 20.47 |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20825 | 21100 | 21375 |
|---|---|---|---|---|---|---|---|
| | | | | | 2057.5MHz | 2535.0MHz | 2562.5MHz |
| 15MHz | QPSK | 1 | 0 | 22.50 | 22.14 | 22.25 | 22.23 |
| | | | 38 | 22.50 | 22.05 | 22.16 | 22.24 |
| | | | 74 | 22.50 | 22.03 | 22.12 | 22.27 |
| | | 36 | 0 | 21.00 | 20.71 | 20.69 | 20.87 |
| | | | 18 | 21.00 | 20.75 | 20.75 | 20.89 |
| | | | 39 | 21.00 | 20.69 | 20.73 | 20.82 |
| | | 75 | 0 | 21.00 | 20.74 | 20.77 | 20.78 |
| | 16QAM | 1 | 0 | 23.00 | 22.73 | 22.6 | 22.57 |
| | | | 38 | 23.00 | 22.56 | 22.56 | 22.79 |
| | | | 74 | 23.00 | 22.71 | 22.58 | 22.51 |
| | | 36 | 0 | 21.00 | 20.44 | 20.51 | 20.36 |
| | | | 18 | 21.00 | 20.36 | 20.5 | 20.43 |
| | | | 39 | 20.50 | 20.45 | 20.48 | 20.45 |
| | | 75 | 0 | 21.00 | 20.3 | 20.51 | 20.6 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 21350 | 21100 | 21350 |
| | | | | | 2560.0MHz | 2535.0MHz | 2560.0MHz |
| 20MHz | QPSK | 1 | 0 | 23.00 | 22.33 | 22.71 | 22.36 |
| | | | 50 | 23.00 | 22.17 | 22.69 | 22.42 |
| | | | 99 | 23.00 | 22.15 | 22.7 | 22.44 |
| | | 50 | 0 | 21.00 | 20.65 | 20.73 | 20.78 |
| | | | 25 | 21.00 | 20.57 | 20.78 | 20.82 |
| | | | 50 | 21.00 | 20.65 | 20.77 | 20.81 |
| | | 100 | 0 | 21.00 | 20.75 | 20.81 | 20.87 |
| | 16QAM | 1 | 0 | 22.50 | 22.1 | 21.95 | 22.3 |
| | | | 50 | 22.50 | 21.96 | 21.91 | 22.34 |
| | | | 99 | 22.50 | 21.99 | 21.86 | 22.31 |
| | | 50 | 0 | 20.50 | 20.37 | 20.42 | 20.43 |
| | | | 25 | 21.00 | 20.41 | 20.42 | 20.53 |
| | | | 50 | 20.50 | 20.44 | 20.44 | 20.48 |
| | | 100 | 0 | 20.50 | 20.36 | 20.41 | 20.45 |

### 10.1.7Conducted Power of LTE Band 38

| LTE-TDD Band 38 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB allocation | RB offset | | 37775 | 38000 | 38225 |
| | | | | | 2572.5MHz | 2595.0MHz | 2617.5MHz |
| 5MHz | QPSK | 1 | 0 | 21.50 | 21.17 | 21.09 | 21.03 |
| | | | 13 | 21.50 | 21.09 | 21.05 | 21.03 |
| | | | 24 | 21.50 | 21.02 | 21.12 | 20.94 |
| | | 12 | 0 | 20.00 | 19.75 | 19.84 | 19.75 |
| | | | 6 | 20.00 | 19.74 | 19.76 | 19.65 |
| | | | 13 | 20.00 | 19.76 | 19.76 | 19.6 |
| | | 25 | 0 | 20.00 | 19.83 | 19.81 | 19.67 |
| | 16QAM | 1 | 0 | 21.50 | 20.82 | 20.94 | 21.15 |
| | | | 13 | 21.50 | 20.81 | 20.84 | 21.22 |
| | | | 24 | 21.50 | 20.65 | 20.82 | 21.17 |
| | | 12 | 0 | 19.50 | 19.43 | 19.3 | 19.26 |
| | | | 6 | 19.50 | 19.37 | 19.19 | 19.27 |
| | | | 13 | 19.50 | 19.36 | 19.23 | 19.2 |
| | | 25 | 0 | 20.00 | 19.48 | 19.66 | 19.58 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 37800 | 38000 | 38200 |
| | | | | | 2575.0MHz | 2595.0MHz | 2615.0MHz |
| 10MHz | QPSK | 1 | 0 | 22.00 | 21.56 | 21.52 | 21.13 |
| | | | 25 | 21.50 | 21.49 | 21.49 | 21.09 |
| | | | 49 | 22.00 | 21.56 | 21.56 | 21.15 |
| | | 25 | 0 | 20.00 | 19.83 | 19.74 | 19.76 |
| | | | 13 | 20.00 | 19.97 | 19.74 | 19.74 |
| | | | 25 | 20.00 | 19.87 | 19.87 | 19.77 |
| | | 50 | 0 | 20.50 | 20.05 | 19.97 | 19.77 |
| | 16QAM | 1 | 0 | 21.50 | 21.49 | 21.34 | 21.26 |
| | | | 25 | 22.00 | 21.96 | 21.05 | 21.24 |
| | | | 49 | 22.00 | 21.89 | 21.16 | 21.18 |
| | | 25 | 0 | 20.00 | 19.55 | 19.6 | 19.45 |
| | | | 13 | 20.00 | 19.44 | 19.55 | 19.41 |
| | | | 25 | 20.00 | 19.53 | 19.52 | 19.45 |
| | | 50 | 0 | 20.00 | 19.77 | 19.63 | 19.42 |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 37825 | 38000 | 38175 |
|---|---|---|---|---|---|---|---|
| | | | | | 2577.5MHz | 2595.0MHz | 2612.5MHz |
| 15MHz | QPSK | 1 | 0 | 22.00 | 21.66 | 21.61 | 21.24 |
| | | | 38 | 22.00 | 21.55 | 21.44 | 21.16 |
| | | | 74 | 22.00 | 21.52 | 21.47 | 21.1 |
| | | 36 | 0 | 20.00 | 19.89 | 19.82 | 19.82 |
| | | | 18 | 20.00 | 19.92 | 19.81 | 19.62 |
| | | | 39 | 20.00 | 19.91 | 19.79 | 19.66 |
| | | 75 | 0 | 20.00 | 19.94 | 19.89 | 19.86 |
| | 16QAM | 1 | 0 | 22.00 | 21.61 | 21.37 | 21.03 |
| | | | 38 | 22.00 | 21.77 | 21.13 | 20.96 |
| | | | 74 | 22.00 | 21.6 | 21.17 | 20.88 |
| | | 36 | 0 | 20.00 | 19.52 | 19.5 | 19.34 |
| | | | 18 | 19.50 | 19.47 | 19.37 | 19.27 |
| | | | 39 | 20.00 | 19.55 | 19.32 | 19.35 |
| | | 75 | 0 | 20.00 | 19.58 | 19.55 | 19.59 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 38750 | 38000 | 38150 |
| | | | | | 2580.0MHz | 2595.0MHz | 2610.0MHz |
| 20MHz | QPSK | 1 | 0 | 21.50 | 21.42 | 21.12 | 21.28 |
| | | | 50 | 21.50 | 21.33 | 21.06 | 21.13 |
| | | | 99 | 21.50 | 21.32 | 20.97 | 21.16 |
| | | 50 | 0 | 20.00 | 19.89 | 19.81 | 19.77 |
| | | | 25 | 20.00 | 19.91 | 19.74 | 19.67 |
| | | | 50 | 20.00 | 19.91 | 19.74 | 19.63 |
| | | 100 | 0 | 20.00 | 19.95 | 19.88 | 19.87 |
| | 16QAM | 1 | 0 | 21.50 | 21.11 | 21.15 | 20.52 |
| | | | 50 | 21.50 | 21.03 | 21.06 | 20.38 |
| | | | 99 | 21.50 | 20.98 | 21.28 | 20.24 |
| | | 50 | 0 | 20.00 | 19.75 | 19.41 | 19.43 |
| | | | 25 | 20.00 | 19.79 | 19.32 | 19.43 |
| | | | 50 | 20.00 | 19.78 | 19.29 | 19.33 |
| | | 100 | 0 | 20.00 | 19.61 | 19.42 | 19.37 |

### 10.1.8Conducted Power of LTE Band 41

| LTE-TDD Band 41 | | | | Maximum Tune-up(dBm) | Conducted Power(dBm) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 39675 | 40160 | 40620 | 41080 | 41565 |
| Bandwidth | Modulation | RB allocation | RB offset | | 2498.5MHz | 2552.0MHz | 2593 MHz | 2639.5 MHz | 2687.5 MHz |
| 5MHz | QPSK | 1 | 0 | 21.50 | 21.12 | 21.14 | 21.31 | 21.10 | 20.9 |
| | | | 13 | 21.50 | 21.06 | 21.02 | 21.34 | 20.94 | 20.85 |
| | | | 24 | 21.50 | 20.99 | 20.85 | 21.36 | 20.92 | 20.86 |
| | | 12 | 0 | 20.00 | 19.7 | 19.65 | 19.88 | 19.63 | 19.55 |
| | | | 6 | 20.00 | 19.63 | 19.72 | 19.85 | 19.51 | 19.46 |
| | | | 13 | 20.00 | 19.65 | 19.58 | 19.81 | 19.62 | 19.43 |
| | | 25 | 0 | 20.00 | 19.64 | 19.71 | 19.87 | 19.74 | 19.64 |
| | 16QAM | 1 | 0 | 21.50 | 20.67 | 20.58 | 20.67 | 20.84 | 21.12 |
| | | | 13 | 21.50 | 20.6 | 20.61 | 20.63 | 20.85 | 21.08 |
| | | | 24 | 21.50 | 20.59 | 20.47 | 20.69 | 20.27 | 21.1 |
| | | 12 | 0 | 19.50 | 19.28 | 19.21 | 19.36 | 19.24 | 19.15 |
| | | | 6 | 19.50 | 19.27 | 19.31 | 19.32 | 19.25 | 19.1 |
| | | | 13 | 19.50 | 19.25 | 19.28 | 19.29 | 19.14 | 19.16 |
| | | 25 | 0 | 20.00 | 19.48 | 19.52 | 19.69 | 19.45 | 19.37 |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 39700 | 40135 | 40620 | 41055 | 41540 |
| | | | | | 2501.0MHz | 2549.5MHz | 2593 MHz | 2637.0 MHz | 2685.0MHz |
| 10MHz | QPSK | 1 | 0 | 22.00 | 21.43 | 21.47 | 21.5 | 20.79 | 20.99 |
| | | | 25 | 21.50 | 21.35 | 21.42 | 21.45 | 20.85 | 20.95 |
| | | | 49 | 21.50 | 21.33 | 21.35 | 21.37 | 20.93 | 21.02 |
| | | 25 | 0 | 20.00 | 19.88 | 19.76 | 19.79 | 19.24 | 19.58 |
| | | | 13 | 20.00 | 19.68 | 19.84 | 19.83 | 19.41 | 19.58 |
| | | | 25 | 20.00 | 19.7 | 19.76 | 19.78 | 19.47 | 19.64 |
| | | 50 | 0 | 20.00 | 19.88 | 19.82 | 19.88 | 19.34 | 19.6 |
| | 16QAM | 1 | 0 | 21.50 | 21.42 | 20.96 | 20.75 | 21.01 | 21.1 |
| | | | 25 | 21.50 | 21.5 | 21.25 | 20.68 | 20.94 | 21.08 |
| | | | 49 | 21.50 | 21.38 | 21.10 | 20.72 | 19.89 | 21.1 |
| | | 25 | 0 | 20.00 | 19.43 | 19.40 | 19.51 | 19.17 | 19.31 |
| | | | 13 | 20.00 | 19.42 | 19.14 | 19.54 | 19.21 | 19.31 |
| | | | 25 | 19.50 | 19.31 | 19.19 | 19.47 | 19.01 | 19.23 |
| | | 50 | 0 | 20.00 | 19.54 | 19.24 | 19.64 | 19.22 | 19.32 |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 39725 | 40160 | 40620 | 41030 | 41515 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2503.5MHz | 2547.0MHz | 2593.0MHz | 2634.0MHz | 2682.5MHz |
| 15MHz | QPSK | 1 | 0 | 22.00 | 21.32 | 21.40 | 21.53 | 21.01 | 21.12 |
| | | | 38 | 21.50 | 21.36 | 21.14 | 21.37 | 20.98 | 21.01 |
| | | | 74 | 21.50 | 21.46 | 21.13 | 21.29 | 20.87 | 21.14 |
| | | 36 | 0 | 20.00 | 19.85 | 19.74 | 19.83 | 19.41 | 19.66 |
| | | | 18 | 20.00 | 19.77 | 19.65 | 19.75 | 19.52 | 19.58 |
| | | | 39 | 20.00 | 19.85 | 19.82 | 19.84 | 19.31 | 19.49 |
| | | 75 | 0 | 20.00 | 19.94 | 19.84 | 19.92 | 19.42 | 19.56 |
| | 16QAM | 1 | 0 | 21.00 | 21.58 | 20.95 | 20.8 | 20.65 | 20.77 |
| | | | 38 | 21.00 | 21.41 | 21.14 | 20.83 | 20.74 | 20.89 |
| | | | 74 | 21.00 | 21.39 | 20.96 | 20.7 | 20.82 | 20.86 |
| | | 36 | 0 | 20.00 | 19.41 | 19.58 | 19.59 | 19.17 | 19.23 |
| | | | 18 | 20.00 | 19.37 | 19.41 | 19.52 | 19.14 | 19.15 |
| | | | 39 | 19.50 | 19.48 | 19.42 | 19.45 | 19.16 | 19.19 |
| | | 75 | 0 | 20.00 | 19.49 | 19.52 | 19.6 | 19.25 | 19.32 |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 39750 | 40185 | 40620 | 41055 | 41490 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2506 MHz | 2549.5MHz | 2593 MHz | 2636.5MHz | 2680 MHz |
| 20MHz | QPSK | 1 | 0 | 21.50 | 21.3 | 21.36 | 21.42 | 21.06 | 21.16 |
| | | | 50 | 21.50 | 21.31 | 21.32 | 21.37 | 21.20 | 21.19 |
| | | | 99 | 21.50 | 21.34 | 21.16 | 21.2 | 21.15 | 21.11 |
| | | 50 | 0 | 20.00 | 19.73 | 19.85 | 19.96 | 19.40 | 19.57 |
| | | | 25 | 20.00 | 19.77 | 19.82 | 19.81 | 19.64 | 19.48 |
| | | | 50 | 20.00 | 19.69 | 19.71 | 19.76 | 19.53 | 19.46 |
| | | 100 | 0 | 20.00 | 19.88 | 19.84 | 19.86 | 19.92 | 19.71 |
| | 16QAM | 1 | 0 | 21.00 | 20.71 | 20.76 | 20.83 | 20.65 | 20.51 |
| | | | 50 | 21.00 | 20.64 | 20.74 | 20.69 | 20.41 | 20.02 |
| | | | 99 | 21.00 | 20.61 | 20.81 | 20.9 | 19.89 | 19.83 |
| | | 50 | 0 | 19.50 | 19.64 | 19.48 | 19.42 | 19.39 | 19.42 |
| | | | 25 | 19.50 | 19.6 | 19.51 | 19.45 | 19.38 | 19.32 |
| | | | 50 | 19.50 | 19.57 | 19.46 | 19.37 | 19.29 | 19.31 |
| | | 100 | 0 | 20.00 | 19.6 | 19.62 | 19.69 | 19.14 | 19.31 |

### 10.1.9Conducted Power of Wi-Fi 2.4G

| Mode | 802.11b | | |
|---|---|---|---|
| Channel/Frequency(MHz) | 1(2412) | 6(2437) | 11(2462) |
| Average Power(dBm) | 18.55 | 17.48 | 18.32 |
| Mode | 802.11g | | |
| Channel/Frequency(MHz) | 1(2412) | 6(2437) | 11(2462) |
| Average Power(dBm) | 23.60 | 22.37 | 23.46 |
| Mode | 802.11n(HT20) | | |
| Channel/Frequency(MHz) | 1(2412) | 6(2437) | 11(2462) |
| Average Power(dBm) | **23.61** | 22.40 | 23.35 |
| Mode | 802.11n(HT40) | | |
| Channel/Frequency(MHz) | 7(2422) | 6(2437) | 9(2452) |
| Average Power(dBm) | 22.50 | 22.16 | 22.76 |

## 10.1.10Conducted Power of Wi-Fi 5G

| Band | Mode | Frequency (MHz) | Tune-up | Average Power (dBm) | SAR Test (Yes/No) |
|---|---|---|---|---|---|
| U-NII-1 (5150-5250) | 802.11a | 5180 | 16.50±1.0dbm | **16.19** | Yes |
| | | 5240 | 16.00±1.0dbm | 15.98 | No |
| | 802.11n-HT20 | 5180 | 16.50±1.0dbm | 16.03 | No |
| | | 5240 | 16.50±1.0dbm | 16.16 | No |
| | 802.11n-HT40 | 5190 | 16.50±1.0dbm | 16.07 | No |
| | | 5230 | 16.50±1.0dbm | 16.05 | No |
| | 802.11ac-VHT20 | 5180 | 15.50±1.0dbm | 15.16 | No |
| | | 5240 | 15.50±1.0dbm | 15.14 | No |
| | 802.11ac-VHT40 | 5190 | 15.50±1.0dbm | 15.03 | No |
| | | 5230 | 15.50±1.0dbm | 15.11 | No |
| | 802.11ac-VHT80 | 5210 | 15.00±1.0dbm | 14.79 | No |
| Band | Mode | Frequency (MHz) | Tune-up | Average Power (dBm) | SAR Test (Yes/No) |
| U-NII-2a (5250-5350) | 802.11a | 5260 | 16.00±1.0dbm | 15.72 | No |
| | | 5320 | 16.00±1.0dbm | 15.90 | No |
| | 802.11n-HT20 | 5260 | 16.50 ±1.0dbm | 16.14 | No |
| | | 5320 | 16.50±1.0dbm | **16.30** | Yes |
| | 802.11n-HT40 | 5270 | 16.50±1.0dbm | 16.08 | No |
| | | 5310 | 16.50±1.0dbm | 16.02 | No |
| | 802.11ac-VHT20 | 5260 | 15.50±1.0dbm | 15.09 | No |
| | | 5320 | 15.50±1.0dbm | 15.39 | No |
| | 802.11ac-VHT40 | 5270 | 15.50±1.0dbm | 15.05 | No |
| | | 5310 | 15.50±1.0dbm | 15.15 | No |
| | 802.11ac-VHT80 | 5290 | 15.00±1.0dbm | 14.86 | No |
| Band | Mode | Frequency (MHz) | Tune-up | Average Power (dBm) | SAR Test (Yes/No) |
| U-NII-2c (5470-5725) | 802.11a | 5500 | 16.00±1.0dbm | 15.50 | No |
| | | 5700 | 16.00±1.0dbm | 15.50 | No |
| | 802.11n-HT20 | 5500 | 15.50±1.0dbm | 15.48 | No |
| | | 5700 | 16.00±1.0dbm | **15.91** | Yes |
| | 802.11n-HT40 | 5510 | 15.00±1.0dbm | 14.96 | No |
| | | 5670 | 15.50±1.0dbm | 15.17 | No |
| | 802.11ac-VHT20 | 5500 | 15.00±1.0dbm | 14.66 | No |
| | | 5700 | 15.50±1.0dbm | 15.00 | No |
| | 802.11ac-VHT40 | 5510 | 14.50±1.0dbm | 14.12 | No |
| | | 5670 | 14.50±1.0dbm | 14.41 | No |
| | 802.11ac-VHT80 | 5530 | 14.50±1.0dbm | 14.44 | No |
| | | 5610 | 15.00±1.0dbm | 14.69 | No |
| Band | Mode | Frequency (MHz) | Tune-up | Average Power (dBm) | SAR Test (Yes/No) |
| U-NII-3 (5725-5825) | 802.11a | 5745 | 16.00±1.0dbm | 15.72 | No |
| | | 5825 | 16.00±1.0dbm | 15.93 | No |
| | 802.11n-HT20 | 5745 | 16.50±1.0dbm | 16.08 | No |
| | | 5825 | 16.50±1.0dbm | **16.29** | Yes |
| | 802.11n-HT40 | 5755 | 16.00±1.0dbm | 15.86 | No |
| | | 5795 | 16.50±1.0dbm | 16.01 | No |
| | 802.11ac-VHT20 | 5745 | 15.50±1.0dbm | 15.27 | No |
| | | 5825 | 15.50±1.0dbm | 15.44 | No |
| | 802.11ac-VHT40 | 5755 | 15.00±1.0dbm | 14.89 | No |
| | | 5795 | 15.50 ±1.0dbm | 15.09 | No |
| | 802.11ac-VHT80 | 5775 | 15.00±1.0dbm | 14.91 | No |

## 10.1.11Conducted Power of BT

| EDR | Mode | Maximum Tune-up(dBm) | Average Conducted Output Power (dBm) | | |
|---|---|---|---|---|---|
| | | | 0 | 39 | 78 |
| | | | 2402MHz | 2441MHz | 2480MHz |
| | GFSK | 7.50 | 7.40 | 7.31 | 6.46 |
| | π/4DQPSK | 8.50 | 7.47 | **8.02** | 6.64 |
| | 8DPSK | 8.50 | 7.52 | 8.01 | 6.66 |
| BLE | Mode | Maximum Tune-up(dBm) | Average Conducted Output Power (dBm) | | |
| | | | 0 | 20 | 39 |
| | | | 2402MHz | 2440MHz | 2480MHz |
| | 1Mbps | -1.0 | -3.84 | **-1.10** | -1.31 |
| | 2Mbps | -1.5 | -2.46 | -1.86 | -1.86 |

| Channel | Frequency (GHz) | Max. Tune-up Power (dBm) | Max. Power (mW) | Test distance (mm) | Exclusion thresholds for 1-g SAR(mW) | RF exposure evaluation required |
|---|---|---|---|---|---|---|
| 39 | 2.441 | 8.50 | 8.02 | 0 | 3 | Yes |
| 20 | 2.440 | -1.0 | -1.10 | 0 | 3 | Yes |

Note

1. Per KDB 447498 D04 Interim General RF Exposure Guidance v01, the 1-g SAR test exclusion thresholds for 300 MHz to 6 GHz at *test separation distances* ≤ 40 cm are determined by:

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases} \quad \text{(B.1)}$$

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\,\text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,\text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \quad \text{(B.2)}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\text{cm}}\sqrt{f}}\right)$$

and $f$ is in GHz, $d$ is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1).

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

2. Per KDB 248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.

3 . The output power of all data rate were prescan, just the worst case (the lowest data rate) of all mode were shown in report.

### 10.1.12Tune-up power tolerance

| Band | Tune-up power tolerance(dBm) | | |
|---|---|---|---|
| GSM850 | GSM/GPRS (GMSK) | GSM | Max output power =33.50±1.0dBm |
| | | 1TXslots | Max output power =30.00 ±1.0dBm |
| | | 2TXslots | Max output power =30.50 ±1.0dBm |
| | | 3TXslots | Max output power =30.00 ±1.0dBm |
| | | 4TXslots | Max output power =30.00 ±1.0dBm |
| | EGPRS (8-PSK) | 1TXslots | Max output power =26.00 ±1.0dBm |
| | | 2TXslots | Max output power =26.00 ±1.0dBm |
| | | 3TXslots | Max output power =26.00 ±1.0dBm |
| | | 4TXslots | Max output power =26.00 ±1.0dBm |
| GSM1900 | GSM/GPRS (GMSK) | GSM | Max output power =30.00±1.0dBm |
| | | 1TXslots | Max output power =28.00 ±1.0dBm |
| | | 2TXslots | Max output power =28.00 ±1.0dBm |
| | | 3TXslots | Max output power =28.00 ±1.0dBm |
| | | 4TXslots | Max output power =27.50 ±1.0dBm |
| | EGPRS (8-PSK) | 1TXslots | Max output power =26.00 ±1.0dBm |
| | | 2TXslots | Max output power =26.00 ±1.0dBm |
| | | 3TXslots | Max output power =25.50 ±1.0dBm |
| | | 4TXslots | Max output power =25.50 ±1.0dBm |
| WCDMA 2 | Max output power =22.50±1.0dBm | | |
| WCDMA 4 | Max output power =23.00±1.0dBm | | |
| WCDMA 5 | Max output power =23.00±1.0dBm | | |
| LTE B2 | Max output power =24.00±1.0dBm | | |
| LTE B4 | Max output power =23.50±1.0dBm | | |
| LTE B5 | Max output power =23.50±1.0dBm | | |
| LTE B7 | Max output power =23.00±1.0dBm | | |
| LTE B38 | Max output power =22.00±1.0dBm | | |
| LTE B41 | Max output power =22.00±1.0dBm | | |
| WIFI | 2.4GWIFI | 802.11b | Max output power =19.00±1.0dBm |
| | | 802.11g | Max output power =24.00±1.0dBm |
| | | 802.11n (HT20) | Max output power =24.00±1.0dBm |
| | | 802.11n (HT40) | Max output power =23.00±1.0dBm |
| | U-NII-1(5150-5250) | 802.11a | Max output power =16.50±1.0dBm |
| | U-NII-2a(5250-5350) | 802.11n (HT20) | Max output power =16.50±1.0dBm |
| | U-NII-2c(5470-5725) | 802.11n (HT20) | Max output power =16.00±1.0dBm |
| | U-NII-3(5725-5825) | 802.11n (HT20) | Max output power =16.50±1.0dBm |
| BT | GFSK | | Max output power =7.50±1.0dBm |
| | π/4DQPSK | | Max output power =8.50±1.0dBm |
| | 8DPSK | | Max output power =8.50±1.0dBm |
| BLE | 1Mbps | | Max output power =-1.00±1.0dBm |
| | 2Mbps | | Max output power =-1.50±1.0dBm |

## 10.2 SAR test results

Notes:

1) Per KDB447498 D01v05 r02,the SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the scaled SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

2) Per KDB447498 D01v05r02, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is: ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz. 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 KDB447498 D01v05r02, All measurement SAR result is scaled-up to account for tune-up tolerance is compliant.

4) Per KDB648474 D04v01r02, body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn with headset SAR.

5)Per KDB248227 D01v01r02, the procedures required to establish specific device operating configurations for testing the SAR of 802.11 a/b/g transmitters.

(1) For Headsets operating next to ear, hotspot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is <= 0.4 W/kg, SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is <= 0.8 W/kg or all test positions are measured.

(2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is <= 0.8 W/kg, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel. For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is <= 1.2 W/kg.

(3) For WLAN 5 GHz, the initial test configuration was selected according to the transmission mode with the highest maximum output power. When the reported SAR of initial test configuration is > 0.8 W/kg, SAR is required for the subsequent highest measured output power channel until the reported SAR result is <= 1.2 W/kg or all required channels are measured. For other transmission modes, SAR is not required when the highest reported SAR for initial test configuration is adjusted by the ratio of subsequent test configuration to initial test configuration specified maximum output power and it is <= 1.2 W/kg.

6) Per KDB865664 D01v01r04,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.

7) Per KDB865664 D02v01r01, 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).

8) Per KDB941225 D06v01r01, 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.

9) Per KDB 941225 D01, 3G SAR Measurement 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≤ 1/4 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.

10)Per KDB 941225 D05, SAR Evaluation Considerations for LTE Devices

(1)QPSK with 1 RB and 50% RB allocation

Start with the largest channel bandwidth and measure SAR, using the RB offset and required test channel combination with the highest maximum output power among 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; 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.

(2)QPSK with 100% RB allocation

SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

(3)Higher order modulations

SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > 1/2 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is >1.45 W/kg.

(4)Other channel bandwidth

SAR is required when the highest maximum output power of the smaller channel bandwidth is > 1/2 dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

## 10.3 Test Result

### 10.3.1 Results overview of GSM

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GPRS 850+4slots | Front | 190 | 836.6 | -2.160 | 0.295 | 100 | 1.00 | 33.10 | 33.50 | 1.096 | 0.323 |
| | Back | 190 | 836.6 | -2.550 | 0.056 | 100 | 1.00 | 33.10 | 33.50 | 1.096 | 0.061 |
| | Left | 190 | 836.6 | -0.690 | 0.002 | 100 | 1.00 | 33.10 | 33.50 | 1.096 | 0.002 |
| | Right | 190 | 836.6 | 1.280 | 0.005 | 100 | 1.00 | 33.10 | 33.50 | 1.096 | 0.005 |
| | Top | 190 | 836.6 | -1.650 | 0.003 | 100 | 1.00 | 33.10 | 33.50 | 1.096 | 0.003 |
| | Bottom | 190 | 836.6 | -0.630 | 0.020 | 100 | 1.00 | 33.10 | 33.50 | 1.096 | 0.022 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GPRS 1900+4slots | Front | 661 | 1880.0 | -1.230 | 0.048 | 100 | 1.00 | 29.84 | 30.00 | 1.038 | 0.050 |
| | Back | 661 | 1880.0 | -0.490 | 0.007 | 100 | 1.00 | 29.84 | 30.00 | 1.038 | 0.007 |
| | Left | 661 | 1880.0 | -3.410 | 0.002 | 100 | 1.00 | 29.84 | 30.00 | 1.038 | 0.002 |
| | Right | 661 | 1880.0 | -0.290 | 0.003 | 100 | 1.00 | 29.84 | 30.00 | 1.038 | 0.003 |
| | Top | 661 | 1880.0 | -2.490 | 0.002 | 100 | 1.00 | 29.84 | 30.00 | 1.038 | 0.002 |
| | Bottom | 661 | 1880.0 | -1.370 | 0.010 | 100 | 1.00 | 29.84 | 30.00 | 1.038 | 0.010 |

### 10.3.2Results overview of WCDMA

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WCDMA Band 2 (RMC*) | Front | 9400 | 1880.0 | -1.870 | 0.372 | 100 | 1.00 | 22.43 | 22.50 | 1.016 | 0.378 |
| | Back | 9400 | 1880.0 | 2.310 | 0.151 | 100 | 1.00 | 22.43 | 22.50 | 1.016 | 0.153 |
| | Left | 9400 | 1880.0 | -0.680 | 0.004 | 100 | 1.00 | 22.43 | 22.50 | 1.016 | 0.004 |
| | Right | 9400 | 1880.0 | -1.740 | 0.007 | 100 | 1.00 | 22.43 | 22.50 | 1.016 | 0.007 |
| | Top | 9400 | 1880.0 | -3.850 | 0.002 | 100 | 1.00 | 22.43 | 22.50 | 1.016 | 0.002 |
| | Bottom | 9400 | 1880.0 | -0.920 | 0.018 | 100 | 1.00 | 22.43 | 22.50 | 1.016 | 0.018 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WCDMA Band 4 (RMC*) | Front | 1413 | 1732.5 | -0.920 | 0.436 | 100 | 1.00 | 22.70 | 23.00 | 1.072 | 0.467 |
| | Back | 1413 | 1732.5 | -0.050 | 0.189 | 100 | 1.00 | 22.70 | 23.00 | 1.072 | 0.203 |
| | Left | 1413 | 1732.5 | -2.670 | 0.005 | 100 | 1.00 | 22.70 | 23.00 | 1.072 | 0.005 |
| | Right | 1413 | 1732.5 | -3.910 | 0.009 | 100 | 1.00 | 22.70 | 23.00 | 1.072 | 0.010 |
| | Top | 1413 | 1732.5 | -0.570 | 0.004 | 100 | 1.00 | 22.70 | 23.00 | 1.072 | 0.004 |
| | Bottom | 1413 | 1732.5 | -1.690 | 0.024 | 100 | 1.00 | 22.70 | 23.00 | 1.072 | 0.026 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WCDMA Band 5 (RMC*) | Front | 4182 | 836.4 | -2.710 | 0.407 | 100 | 1.00 | 22.94 | 23.00 | 1.014 | 0.413 |
| | Back | 4182 | 836.4 | -0.830 | 0.168 | 100 | 1.00 | 22.94 | 23.00 | 1.014 | 0.170 |
| | Left | 4182 | 836.4 | -0.310 | 0.006 | 100 | 1.00 | 22.94 | 23.00 | 1.014 | 0.006 |
| | Right | 4182 | 836.4 | -3.820 | 0.008 | 100 | 1.00 | 22.94 | 23.00 | 1.014 | 0.008 |
| | Top | 4182 | 836.4 | -4.090 | 0.003 | 100 | 1.00 | 22.94 | 23.00 | 1.014 | 0.003 |
| | Bottom | 4182 | 836.4 | -1.660 | 0.021 | 100 | 1.00 | 22.94 | 23.00 | 1.014 | 0.021 |

### 10.3.3Results overview of LTE

| Mode | Channel Type | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Band 2 (BW: 20MHz) | 1RB | Front | 18900 | 1880.0 | 1.470 | 0.359 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.395 |
| | | Back | 18900 | 1880.0 | -2.510 | 0.145 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.159 |
| | | Left | 18900 | 1880.0 | -0.160 | 0.003 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.003 |
| | | Right | 18900 | 1880.0 | -2.730 | 0.005 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.005 |
| | | Top | 18900 | 1880.0 | -3.440 | 0.002 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.002 |
| | | Bottom | 18900 | 1880.0 | -4.150 | 0.015 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.016 |
| | 50%RB | Front | 18900 | 1880.0 | 3.600 | 0.337 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.370 |
| | | Back | 18900 | 1880.0 | 1.740 | 0.118 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.130 |
| | | Left | 18900 | 1880.0 | 2.770 | 0.005 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.005 |
| | | Right | 18900 | 1880.0 | 2.440 | 0.006 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.007 |
| | | Top | 18900 | 1880.0 | -1.540 | 0.030 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.033 |
| | | Bottom | 18900 | 1880.0 | 1.730 | 0.012 | 100 | 1.00 | 23.59 | 24.00 | 1.099 | 0.013 |

| Mode | Channel Type | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Band 4 (BW: 20MHz) | 1RB | Front | 20175 | 1732.5 | -1.880 | 0.367 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.370 |
| | | Back | 20175 | 1732.5 | -0.210 | 0.147 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.148 |
| | | Left | 20175 | 1732.5 | -2.910 | 0.004 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.004 |
| | | Right | 20175 | 1732.5 | -0.560 | 0.005 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.005 |
| | | Top | 20175 | 1732.5 | -0.460 | 0.002 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.002 |
| | | Bottom | 20175 | 1732.5 | -4.380 | 0.016 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.016 |
| | 50%RB | Front | 20175 | 1732.5 | 0.970 | 0.349 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.352 |
| | | Back | 20175 | 1732.5 | 4.180 | 0.127 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.128 |
| | | Left | 20175 | 1732.5 | 3.210 | 0.003 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.003 |
| | | Right | 20175 | 1732.5 | 4.990 | 0.005 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.005 |
| | | Top | 20175 | 1732.5 | -4.870 | 0.002 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.002 |
| | | Bottom | 20175 | 1732.5 | 0.970 | 0.013 | 100 | 1.00 | 23.46 | 23.50 | 1.009 | 0.013 |

| Mode | Channel Type | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Band 5 (BW: 10MHz) | 1RB | Front | 20525 | 836.5 | -0.370 | 0.396 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.401 |
| | | Back | 20525 | 836.5 | -1.560 | 0.163 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.165 |
| | | Left | 20525 | 836.5 | 0.640 | 0.005 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.005 |
| | | Right | 20525 | 836.5 | -4.270 | 0.008 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.008 |
| | | Top | 20525 | 836.5 | -3.090 | 0.003 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.003 |
| | | Bottom | 20525 | 836.5 | -2.180 | 0.020 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.020 |
| | 50%RB | Front | 20525 | 836.5 | -2.790 | 0.386 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.390 |
| | | Back | 20525 | 836.5 | -1.130 | 0.152 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.154 |
| | | Left | 20525 | 836.5 | -2.020 | 0.006 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.006 |
| | | Right | 20525 | 836.5 | -0.020 | 0.007 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.007 |
| | | Top | 20525 | 836.5 | -2.460 | 0.003 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.003 |
| | | Bottom | 20525 | 836.5 | -3.870 | 0.015 | 100 | 1.00 | 23.45 | 23.50 | 1.012 | 0.015 |

| Mode | Channel Type | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Band 7 (BW: 20MHz) | 1RB | Front | 20800 | 2505.0 | -0.440 | 0.196 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.210 |
| | | Back | 20800 | 2505.0 | 4.640 | 0.074 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.079 |
| | | Left | 20800 | 2505.0 | -4.370 | 0.005 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.005 |
| | | Right | 20800 | 2505.0 | -0.250 | 0.004 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.004 |
| | | Top | 20800 | 2505.0 | -0.920 | 0.003 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.003 |
| | | Bottom | 20800 | 2505.0 | -3.310 | 0.012 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.013 |
| | 50%RB | Front | 20800 | 2505.0 | -0.770 | 0.178 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.190 |
| | | Back | 20800 | 2505.0 | -4.540 | 0.065 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.069 |
| | | Left | 20800 | 2505.0 | 0.530 | 0.004 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.004 |
| | | Right | 20800 | 2505.0 | 3.120 | 0.003 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.003 |
| | | Top | 20800 | 2505.0 | -4.340 | 0.002 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.002 |
| | | Bottom | 20800 | 2505.0 | 0.430 | 0.008 | 100 | 1.00 | 22.71 | 23.00 | 1.069 | 0.009 |

| Mode | Channel Type | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Band 38 (BW: 20MHz) | 1RB | Front | 37800 | 2575.0 | -2.270 | 0.070 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.076 |
| | | Back | 37800 | 2575.0 | -2.410 | 0.009 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.010 |
| | | Left | 37800 | 2575.0 | -0.340 | 0.002 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.002 |
| | | Right | 37800 | 2575.0 | 2.160 | 0.003 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.003 |
| | | Top | 37800 | 2575.0 | -1.390 | 0.002 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.002 |
| | | Bottom | 37800 | 2575.0 | -2.050 | 0.006 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.006 |
| | 50%RB | Front | 37800 | 2575.0 | 0.350 | 0.061 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.066 |
| | | Back | 37800 | 2575.0 | 3.230 | 0.007 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.008 |
| | | Left | 37800 | 2575.0 | -3.810 | 0.004 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.004 |
| | | Right | 37800 | 2575.0 | -4.280 | 0.003 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.003 |
| | | Top | 37800 | 2575.0 | 1.690 | 0.002 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.002 |
| | | Bottom | 37800 | 2575.0 | 2.060 | 0.005 | 100 | 1.00 | 21.66 | 22.00 | 1.081 | 0.005 |

| Mode | Channel Type | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Band 41 (BW: 20MHz) | 1RB | Front | 40620 | 2593.0 | 3.110 | 0.073 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.081 |
| | | Back | 40620 | 2593.0 | -1.640 | 0.009 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.010 |
| | | Left | 40620 | 2593.0 | 0.290 | 0.003 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.003 |
| | | Right | 40620 | 2593.0 | -3.250 | 0.003 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.003 |
| | | Top | 40620 | 2593.0 | -4.710 | 0.002 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.002 |
| | | Bottom | 40620 | 2593.0 | 3.590 | 0.007 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.008 |
| | | Front | 39750 | 2506.0 | 2.660 | 0.020 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.022 |
| | | Front | 41490 | 2680.0 | 1.190 | 0.006 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.007 |
| | | Front | 40185 | 2549.0 | 1.190 | 0.018 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.020 |
| | | Front | 41055 | 2635.5 | -2.550 | 0.005 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.006 |
| | 50%RB | Front | 40620 | 2593.0 | -3.600 | 0.062 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.069 |
| | | Back | 40620 | 2593.0 | -3.950 | 0.006 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.007 |
| | | Left | 40620 | 2593.0 | 2.340 | 0.004 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.004 |
| | | Right | 40620 | 2593.0 | 3.860 | 0.003 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.003 |
| | | Top | 40620 | 2593.0 | 2.980 | 0.002 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.002 |
| | | Bottom | 40620 | 2593.0 | 0.250 | 0.005 | 100 | 1.00 | 21.53 | 22.00 | 1.114 | 0.006 |

### 10.3.4Results overview of Wifi

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.4g (2.4~2.4835) 802.11b | Front | 11 | 2462 | -1.280 | 0.757 | 100 | 1.00 | 23.61 | 24.00 | 1.094 | 0.828 |
| | Back | 11 | 2462 | -4.480 | 0.572 | 100 | 1.00 | 23.61 | 24.00 | 1.094 | 0.626 |
| | Left | 11 | 2462 | -0.610 | 0.005 | 100 | 1.00 | 23.61 | 24.00 | 1.094 | 0.005 |
| | Right | 11 | 2462 | -3.040 | 0.020 | 100 | 1.00 | 23.61 | 24.00 | 1.094 | 0.022 |
| | Top | 11 | 2462 | -2.250 | 0.015 | 100 | 1.00 | 23.61 | 24.00 | 1.094 | 0.016 |
| | Bottom | 11 | 2462 | 0.760 | 0.007 | 100 | 1.00 | 23.61 | 24.00 | 1.094 | 0.008 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5g Band1 5180-5240 | Front | 36 | 5180 | 1.450 | 0.719 | 100 | 1.00 | 16.19 | 16.50 | 1.074 | 0.772 |
| | Back | 36 | 5180 | 1.660 | 0.531 | 100 | 1.00 | 16.19 | 16.50 | 1.074 | 0.570 |
| | Left | 36 | 5180 | 3.180 | 0.004 | 100 | 1.00 | 16.19 | 16.50 | 1.074 | 0.004 |
| | Right | 36 | 5180 | 1.520 | 0.012 | 100 | 1.00 | 16.19 | 16.50 | 1.074 | 0.013 |
| | Top | 36 | 5180 | 1.530 | 0.010 | 100 | 1.00 | 16.19 | 16.50 | 1.074 | 0.011 |
| | Bottom | 36 | 5180 | 0.590 | 0.005 | 100 | 1.00 | 16.19 | 16.50 | 1.074 | 0.005 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5g Band2 5260-5320 | Front | 64 | 5320 | 2.140 | 0.691 | 100 | 1.00 | 16.30 | 16.50 | 1.047 | 0.724 |
| | Back | 64 | 5320 | -0.420 | 0.505 | 100 | 1.00 | 16.30 | 16.50 | 1.047 | 0.529 |
| | Left | 64 | 5320 | 1.340 | 0.015 | 100 | 1.00 | 16.30 | 16.50 | 1.047 | 0.016 |
| | Right | 64 | 5320 | -4.710 | 0.019 | 100 | 1.00 | 16.30 | 16.50 | 1.047 | 0.020 |
| | Top | 64 | 5320 | 3.060 | 0.014 | 100 | 1.00 | 16.30 | 16.50 | 1.047 | 0.015 |
| | Bottom | 64 | 5320 | 1.250 | 0.009 | 100 | 1.00 | 16.30 | 16.50 | 1.047 | 0.009 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5g Band3 5500-5700 | Front | 140 | 5700 | 1.730 | 0.722 | 100 | 1.00 | 15.91 | 16.00 | 1.021 | 0.737 |
| | Back | 140 | 5700 | 1.360 | 0.534 | 100 | 1.00 | 15.91 | 16.00 | 1.021 | 0.545 |
| | Left | 140 | 5700 | -0.910 | 0.005 | 100 | 1.00 | 15.91 | 16.00 | 1.021 | 0.005 |
| | Right | 140 | 5700 | 1.580 | 0.012 | 100 | 1.00 | 15.91 | 16.00 | 1.021 | 0.012 |
| | Top | 140 | 5700 | 4.320 | 0.009 | 100 | 1.00 | 15.91 | 16.00 | 1.021 | 0.009 |
| | Bottom | 140 | 5700 | -2.040 | 0.005 | 100 | 1.00 | 15.91 | 16.00 | 1.021 | 0.005 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5g Band4 5745-5825 | Front | 165 | 5825 | -4.900 | 0.712 | 100 | 1.00 | 16.29 | 16.50 | 1.050 | 0.747 |
| | Back | 165 | 5825 | -3.250 | 0.528 | 100 | 1.00 | 16.29 | 16.50 | 1.050 | 0.554 |
| | Left | 165 | 5825 | 0.510 | 0.003 | 100 | 1.00 | 16.29 | 16.50 | 1.050 | 0.003 |
| | Right | 165 | 5825 | -2.200 | 0.011 | 100 | 1.00 | 16.29 | 16.50 | 1.050 | 0.012 |
| | Top | 165 | 5825 | 3.400 | 0.008 | 100 | 1.00 | 16.29 | 16.50 | 1.050 | 0.008 |
| | Bottom | 165 | 5825 | -4.320 | 0.004 | 100 | 1.00 | 16.29 | 16.50 | 1.050 | 0.004 |

| Mode | Position | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bluetooth | Front | 0 | 2402 | -2.250 | 0.008 | 100 | 1.00 | 8.02 | 8.50 | 1.117 | 0.009 |
| | Back | 0 | 2402 | 3.610 | 0.006 | 100 | 1.00 | 8.02 | 8.50 | 1.117 | 0.007 |
| | Left | 0 | 2402 | -1.760 | 0.004 | 100 | 1.00 | 8.02 | 8.50 | 1.117 | 0.004 |
| | Right | 0 | 2402 | 4.190 | 0.007 | 100 | 1.00 | 8.02 | 8.50 | 1.117 | 0.008 |
| | Top | 0 | 2402 | -2.600 | 0.002 | 100 | 1.00 | 8.02 | 8.50 | 1.117 | 0.002 |
| | Bottom | 0 | 2402 | 2.590 | 0.003 | 100 | 1.00 | 8.02 | 8.50 | 1.117 | 0.003 |

Note:

1.The maximum SAR Value of each test band is marked bold.

2.SAR plot is provided only for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.

3.Per KDB 447498 D01 v06, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.

4.Per KDB 447498 D01 v06, head/body-worn use is evaluated with the device positioned at 0mm/10 mm from a head/flat phantom respectively filled with head tissue-equivalent medium.

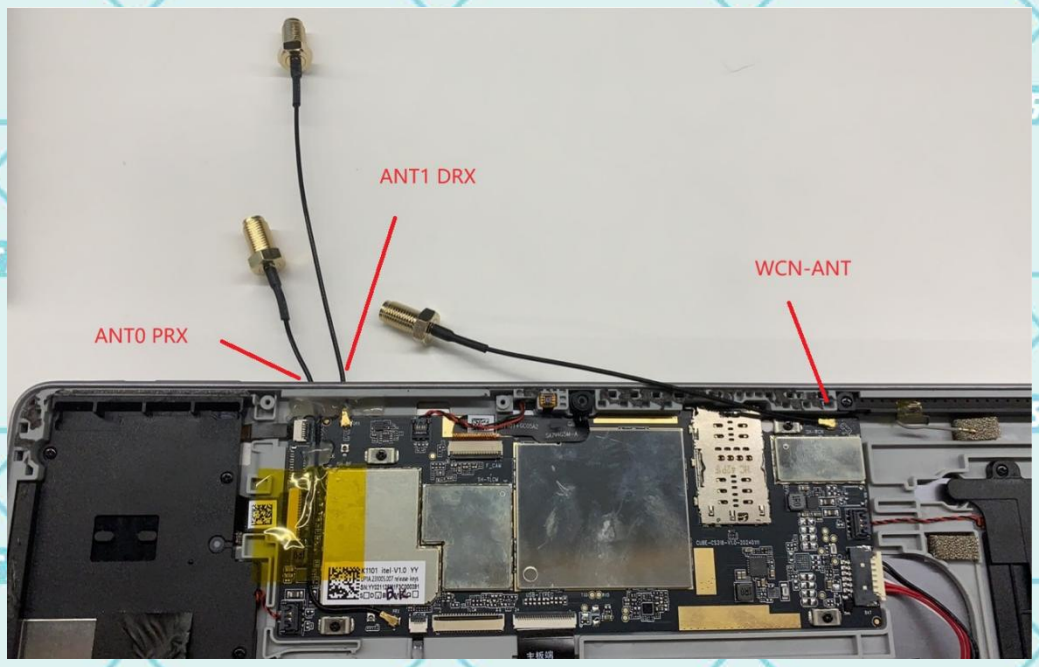
5.Per KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

6.Per KDB 447498 D01 v06, the report SAR is measured SAR value adjusted for maximum tune-up tolerance. Scaling Factor=10^[(tune-up limit power(dBm) - Ave.power power (dBm))/10], where tune-up limit is the maximum rated power among all production units.

7.Reported SAR(W/kg)=Measured SAR (W/kg)*Scaling Factor.

## 11 Multiple Transmitter Information

The SAR measurement positions of each side are as below:




< Rear Side >

| Mode | Front side | Rear side | Left side | Right side | Top side | Bottom side |
|---|---|---|---|---|---|---|
| 2G/3G/4G Antenna | Yes | Yes | Yes | Yes | Yes | Yes |
| Wi-Fi/BT Antenna | Yes | Yes | Yes | Yes | Yes | Yes |

Per KDB941225 D06v01r01, 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.

## 11.1 Simultaneous Transmission Possibilities

The Simultaneous Transmission Possibilities are as below:

| Simultaneous Transmission Possibilities | | | |
|---|---|---|---|
| Simultaneous Tx Combination | Configuration | Body | Hotspot |
| 1 | GSM/GPRS/UMTS/LTE +Wi-Fi | YES | YES |
| 2 | GSM/GPRS/UMTS/LTE +BT | NO | NO |

Note: The device does not support simultaneous BT and Wi-Fi ,because the BT and Wi-Fi share the same antenna and can't transmit simultaneously.

## 11.2 SAR Summation Scenario

Hotspot(body-worn0mm)

| Band | Test Position | Scaled SAR | | | BT SAR 1g(W/kg) | Σ SAR (W/kg) | Llimit (W/kg) |
|---|---|---|---|---|---|---|---|
| | | WWAN SAR 1g(W/kg) | WIFI2.4G SAR 1g(W/kg) | Wi-Fi 5G(Band 4) 1g(W/kg) | | | |
| GSM850 (GPRS 4slots) | Front | 0.323 | 0.828 | 0.772 | 0.009 | 1.151 | 1.6 |
| | Back | 0.061 | 0.626 | 0.570 | 0.007 | 0.687 | |
| | Left | 0.002 | 0.005 | 0.004 | 0.004 | 0.007 | |
| | Right | 0.005 | 0.022 | 0.013 | 0.008 | 0.027 | |
| | Top | 0.003 | 0.016 | 0.011 | 0.002 | 0.019 | |
| | Bottom | 0.022 | 0.008 | 0.005 | 0.003 | 0.030 | |
| GSM1900 (GPRS 4slots) | Front | 0.050 | 0.828 | 0.772 | 0.009 | 0.878 | |
| | Back | 0.007 | 0.626 | 0.570 | 0.007 | 0.633 | |
| | Left | 0.002 | 0.005 | 0.004 | 0.004 | 0.007 | |
| | Right | 0.003 | 0.022 | 0.013 | 0.008 | 0.025 | |
| | Top | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | 0.010 | 0.008 | 0.005 | 0.003 | 0.018 | |
| WCDMA Band 2 | Front | 0.378 | 0.828 | 0.772 | 0.009 | 1.206 | |
| | Back | 0.153 | 0.626 | 0.570 | 0.007 | 0.779 | |
| | Left | 0.004 | 0.005 | 0.004 | 0.004 | 0.009 | |
| | Right | 0.007 | 0.022 | 0.013 | 0.008 | 0.029 | |
| | Top | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | 0.018 | 0.008 | 0.005 | 0.003 | 0.026 | |
| WCDMA Band 4 | Front | 0.467 | 0.828 | 0.772 | 0.009 | 1.295 | |
| | Back | 0.203 | 0.626 | 0.570 | 0.007 | 0.829 | |
| | Left | 0.005 | 0.005 | 0.004 | 0.004 | 0.010 | |
| | Right | 0.010 | 0.022 | 0.013 | 0.008 | 0.032 | |
| | Top | 0.004 | 0.016 | 0.011 | 0.002 | 0.020 | |
| | Bottom | 0.026 | 0.008 | 0.005 | 0.003 | 0.034 | |
| WCDMA Band 5 | Front | 0.413 | 0.828 | 0.772 | 0.009 | 1.241 | |
| | Back | 0.170 | 0.626 | 0.570 | 0.007 | 0.796 | |
| | Left | 0.006 | 0.005 | 0.004 | 0.004 | 0.011 | |
| | Right | 0.008 | 0.022 | 0.013 | 0.008 | 0.030 | |
| | Top | 0.003 | 0.016 | 0.011 | 0.002 | 0.019 | |
| | Bottom | 0.021 | 0.008 | 0.005 | 0.003 | 0.029 | |

| Band | Test Position | RB allocation | Scaled SAR | | | BT SAR 1g(W/kg) | Σ SAR (W/kg) | Llimit (W/kg) |
|---|---|---|---|---|---|---|---|---|
| | | | WWAN SAR 1g(W/kg) | WIFI2.4G SAR 1g(W/kg) | Wi-Fi 5G(Band 1) 1g(W/kg) | | | |
| LTE Band 2 | Front | 1RB | 0.395 | 0.828 | 0.772 | 0.009 | 1.223 | 1.6 |
| | Back | | 0.159 | 0.626 | 0.570 | 0.007 | 0.785 | |
| | Left | | 0.003 | 0.005 | 0.004 | 0.004 | 0.008 | |
| | Right | | 0.005 | 0.022 | 0.013 | 0.008 | 0.027 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.016 | 0.008 | 0.005 | 0.003 | 0.024 | |
| | Front | 50%RB | 0.370 | 0.828 | 0.772 | 0.009 | 1.198 | |
| | Back | | 0.130 | 0.626 | 0.570 | 0.007 | 0.756 | |
| | Left | | 0.005 | 0.005 | 0.004 | 0.004 | 0.010 | |
| | Right | | 0.007 | 0.022 | 0.013 | 0.008 | 0.029 | |
| | Top | | 0.033 | 0.016 | 0.011 | 0.002 | 0.049 | |
| | Bottom | | 0.013 | 0.008 | 0.005 | 0.003 | 0.021 | |
| LTE Band 4 | Front | 1RB | 0.370 | 0.828 | 0.772 | 0.009 | 1.198 | |
| | Back | | 0.148 | 0.626 | 0.570 | 0.007 | 0.774 | |
| | Left | | 0.004 | 0.005 | 0.004 | 0.004 | 0.009 | |
| | Right | | 0.005 | 0.022 | 0.013 | 0.008 | 0.027 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.016 | 0.008 | 0.005 | 0.003 | 0.024 | |
| | Front | 50%RB | 0.352 | 0.828 | 0.772 | 0.009 | 1.180 | |
| | Back | | 0.128 | 0.626 | 0.570 | 0.007 | 0.754 | |
| | Left | | 0.003 | 0.005 | 0.004 | 0.004 | 0.008 | |
| | Right | | 0.005 | 0.022 | 0.013 | 0.008 | 0.027 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.013 | 0.008 | 0.005 | 0.003 | 0.021 | |
| LTE Band 5 | Front | 1RB | 0.401 | 0.828 | 0.772 | 0.009 | 1.229 | |
| | Back | | 0.165 | 0.626 | 0.570 | 0.007 | 0.791 | |
| | Left | | 0.005 | 0.005 | 0.004 | 0.004 | 0.010 | |
| | Right | | 0.008 | 0.022 | 0.013 | 0.008 | 0.030 | |
| | Top | | 0.003 | 0.016 | 0.011 | 0.002 | 0.019 | |
| | Bottom | | 0.020 | 0.008 | 0.005 | 0.003 | 0.028 | |
| | Front | 50%RB | 0.390 | 0.828 | 0.772 | 0.009 | 1.218 | |
| | Back | | 0.154 | 0.626 | 0.570 | 0.007 | 0.780 | |
| | Left | | 0.006 | 0.005 | 0.004 | 0.004 | 0.011 | |
| | Right | | 0.007 | 0.022 | 0.013 | 0.008 | 0.029 | |
| | Top | | 0.003 | 0.016 | 0.011 | 0.002 | 0.019 | |
| | Bottom | | 0.015 | 0.008 | 0.005 | 0.003 | 0.023 | |
| LTE Band 7 | Front | 1RB | 0.210 | 0.828 | 0.772 | 0.009 | 1.038 | |
| | Back | | 0.079 | 0.626 | 0.570 | 0.007 | 0.705 | |
| | Left | | 0.005 | 0.005 | 0.004 | 0.004 | 0.010 | |
| | Right | | 0.004 | 0.022 | 0.013 | 0.008 | 0.026 | |
| | Top | | 0.003 | 0.016 | 0.011 | 0.002 | 0.019 | |
| | Bottom | | 0.013 | 0.008 | 0.005 | 0.003 | 0.021 | |
| | Front | 50%RB | 0.190 | 0.828 | 0.772 | 0.009 | 1.018 | |
| | Back | | 0.069 | 0.626 | 0.570 | 0.007 | 0.695 | |
| | Left | | 0.004 | 0.005 | 0.004 | 0.004 | 0.009 | |
| | Right | | 0.003 | 0.022 | 0.013 | 0.008 | 0.025 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.009 | 0.008 | 0.005 | 0.003 | 0.017 | |

| Band | Test Position | RB allocation | Scaled SAR | | | BT SAR 1g(W/kg) | Σ SAR (W/kg) | Llimit (W/kg) |
|---|---|---|---|---|---|---|---|---|
| | | | WWAN SAR 1g(W/kg) | WIFI2.4G SAR 1g(W/kg) | Wi-Fi 5G(Band 1) 1g(W/kg) | | | |
| LTE Band 38 | Front | 1RB | 0.076 | 0.828 | 0.772 | 0.009 | 0.904 | 1.6 |
| | Back | | 0.010 | 0.626 | 0.570 | 0.007 | 0.636 | |
| | Left | | 0.002 | 0.005 | 0.004 | 0.004 | 0.007 | |
| | Right | | 0.003 | 0.022 | 0.013 | 0.008 | 0.025 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.006 | 0.008 | 0.005 | 0.003 | 0.014 | |
| | Front | 50%RB | 0.066 | 0.828 | 0.772 | 0.009 | 0.894 | |
| | Back | | 0.008 | 0.626 | 0.570 | 0.007 | 0.634 | |
| | Left | | 0.004 | 0.005 | 0.004 | 0.004 | 0.009 | |
| | Right | | 0.003 | 0.022 | 0.013 | 0.008 | 0.025 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.005 | 0.008 | 0.005 | 0.003 | 0.013 | |
| LTE Band 41 | Front | 1RB | 0.081 | 0.828 | 0.772 | 0.009 | 0.909 | |
| | Back | | 0.010 | 0.626 | 0.570 | 0.007 | 0.636 | |
| | Left | | 0.003 | 0.005 | 0.004 | 0.004 | 0.008 | |
| | Right | | 0.003 | 0.022 | 0.013 | 0.008 | 0.025 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.008 | 0.008 | 0.005 | 0.003 | 0.016 | |
| | Front | | 0.022 | 0.828 | 0.772 | 0.009 | 0.850 | |
| | Front | | 0.007 | 0.828 | 0.772 | 0.009 | 0.835 | |
| | Front | | 0.020 | 0.828 | 0.772 | 0.009 | 0.848 | |
| | Front | | 0.006 | 0.828 | 0.772 | 0.009 | 0.834 | |
| | Front | 50%RB | 0.069 | 0.828 | 0.772 | 0.009 | 0.897 | |
| | Back | | 0.007 | 0.626 | 0.570 | 0.007 | 0.633 | |
| | Left | | 0.004 | 0.005 | 0.004 | 0.004 | 0.009 | |
| | Right | | 0.003 | 0.022 | 0.013 | 0.008 | 0.025 | |
| | Top | | 0.002 | 0.016 | 0.011 | 0.002 | 0.018 | |
| | Bottom | | 0.006 | 0.008 | 0.005 | 0.003 | 0.014 | |

# 12 Measurement uncertainty evaluation

## 12.1 Measurement uncertainty evaluation for SAR test

The following table includes the uncertainty table of the IEEE 1528. The values are determined by Satimo.The breakdown of the individual uncertainties is as follows:

| Measurement Uncertainty evaluation for SAR test | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Uncertainty Component | Tol. (±%) | Prob. Dist. | Div. | $C_i$ (1g) | $C_i$ (10g) | 1g $U_i$ (±%) | 10g $U_i$ (±%) | $V_i$ |
| measurement system | | | | | | | | |
| Probe Calibration | 5.8 | N | 1 | 1 | 1 | 5.8 | 5.8 | ∞ |
| Axial Isotropy | 3.5 | R | $\sqrt{3}$ | $(1\text{-}C_p)^{1/2}$ | $(1\text{-}C_p)^{1/2}$ | 1.43 | 1.43 | ∞ |
| Hemispherical Isotropy | 5.9 | R | $\sqrt{3}$ | $\sqrt{C_p}$ | $\sqrt{C_p}$ | 2.41 | 2.41 | ∞ |
| Boundary Effect | 1 | R | $\sqrt{3}$ | 1 | 1 | 0.58 | 0.58 | ∞ |
| Linearity | 4.7 | R | $\sqrt{3}$ | 1 | 1 | 2.71 | 2.71 | ∞ |
| system Detection Limits | 1 | R | $\sqrt{3}$ | 1 | 1 | 0.58 | 0.58 | ∞ |
| Modulation response | 3 | N | 1 | 1 | 1 | 3.00 | 3.00 | ∞ |
| Readout Electronics | 0.5 | N | 1 | 1 | 1 | 0.50 | 0.50 | ∞ |
| Response Time | 0 | R | $\sqrt{3}$ | 1 | 1 | 0.00 | 0.00 | ∞ |
| Integration Time | 1.4 | R | $\sqrt{3}$ | 1 | 1 | 0.81 | 0.81 | ∞ |
| RF Ambient Conditions-Noise | 3 | R | $\sqrt{3}$ | 1 | 1 | 1.73 | 1.73 | ∞ |
| RF Ambient Conditions-Reflections | 3 | R | $\sqrt{3}$ | 1 | 1 | 1.73 | 1.73 | ∞ |
| Probe Positioner Mechanical Tolerance | 1.4 | R | $\sqrt{3}$ | 1 | 1 | 0.81 | 0.81 | ∞ |
| Probe positioning with respect to Phantom Shell | 1.4 | R | $\sqrt{3}$ | 1 | 1 | 0.81 | 0.81 | ∞ |
| Extrapolation, interpolation and Integration Algorithms for Max.SAR Evaluation | 2.3 | R | $\sqrt{3}$ | 1 | 1 | 1.33 | 1.33 | ∞ |
| Test sample Related | | | | | | | | |
| Test Sample Positioning | 2.6 | N | 1 | 1 | 1 | 2.60 | 2.60 | 11 |
| Device Holder Uncertainty | 3 | N | 1 | 1 | 1 | 3.00 | 3.00 | 7 |
| Output Power Variation-SAR drift measurement | 5 | R | $\sqrt{3}$ | 1 | 1 | 2.89 | 2.89 | ∞ |
| SAR scaling | 2 | R | $\sqrt{3}$ | 1 | 1 | 1.15 | 1.15 | ∞ |

| Phantom and Tissue Parameters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Phantom Uncertainty (shape and thickness tolerances) | 4 | R | $\sqrt{3}$ | 1 | 1 | 2.31 | 2.31 | ∞ |
| Uncertainty in SAR correction for deviation (in permittivity and conductivity) | 2 | N | 1 | 1 | 0.84 | 2.00 | 1.68 | ∞ |
| Liquid conductivity（meas.） | 2.5 | N | 1 | 0.64 | 0.43 | 1.60 | 1.08 | 5 |
| Liquid conductivity (target.) | 5 | R | $\sqrt{3}$ | 0.64 | 0.43 | 1.85 | 1.24 | 5 |
| Liquid Permittivity（meas.） | 2.5 | N | 1 | 0.60 | 0.49 | 1.50 | 1.23 | ∞ |
| Liquid Permittivity (target.) | 5 | R | $\sqrt{3}$ | 0.60 | 0.49 | 1.73 | 1.42 | ∞ |
| Combined Standard Uncertainly | | Rss | | | | 10.63 | 10.54 | |
| Expanded Uncertainty{95% CONFIDENCE INTERRVAL} | | k | | | | 21.26 | 21.08 | |

## 12.2 Measurement uncertainty evaluation for system check

The following table includes the uncertainty table of the IEEE 1528. The values are determined by Satimo.The breakdown of the individual uncertainties is as follows:

| Uncertainty For System Performance Check | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Uncertainty Component | Tol. (±%) | Prob. Dist. | Div. | $C_i$ 1g | $C_i$ 10g | 1g $U_i$(±%) | 10g $U_i$ (±%) | $V_i$ |
| measurement system | | | | | | | | |
| Probe Calibration | 5.8 | N | 1 | 1 | 1 | 5.80 | 5.80 | ∞ |
| Axial Isotropy | 3.5 | R | $\sqrt{3}$ | $(1\text{-}C_p)^{1/2}$ | $(1\text{-}C_p)^{1/2}$ | 1.43 | 1.43 | ∞ |
| Hemispherical Isotropy | 5.9 | R | $\sqrt{3}$ | $\sqrt{C_p}$ | $\sqrt{C_p}$ | 2.41 | 2.41 | ∞ |
| Boundary Effect | 1 | R | $\sqrt{3}$ | 1 | 1 | 0.58 | 0.58 | ∞ |
| Linearity | 4.7 | R | $\sqrt{3}$ | 1 | 1 | 2.71 | 2.71 | ∞ |
| system detection Limits | 1 | R | $\sqrt{3}$ | 1 | 1 | 0.58 | 0.58 | ∞ |
| Modulation response | 0 | N | 1 | 1 | 1 | 0.00 | 0.00 | ∞ |
| Readout Electronics | 0.5 | N | 1 | 1 | 1 | 0.50 | 0.50 | ∞ |
| Response Time | 0 | R | $\sqrt{3}$ | 1 | 1 | 0.00 | 0.00 | ∞ |
| Integration Time | 1.4 | R | $\sqrt{3}$ | 1 | 1 | 0.81 | 0.81 | ∞ |
| RF ambient Conditions - Noise | 3 | R | $\sqrt{3}$ | 1 | 1 | 1.73 | 1.73 | ∞ |
| RF ambient Conditions – Reflections | 3 | R | $\sqrt{3}$ | 1 | 1 | 1.73 | 1.73 | ∞ |
| Probe positioned Mechanical Tolerance | 1.4 | R | $\sqrt{3}$ | 1 | 1 | 0.81 | 0.81 | ∞ |
| Probe positioning with respect to Phantom Shell | 1.4 | R | $\sqrt{3}$ | 1 | 1 | 0.81 | 0.81 | ∞ |
| Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation | 2.3 | R | $\sqrt{3}$ | 1 | 1 | 1.33 | 1.33 | ∞ |
| Dipole | | | | | | | | |
| Deviation of experimental source from numerical source | 4 | N | 1 | 1 | 1 | 4.00 | 4.00 | ∞ |
| Input power and SAR drift measurement | 5 | R | $\sqrt{3}$ | 1 | 1 | 2.89 | 2.89 | ∞ |
| Dipole axis to liquid Distance | 2 | R | $\sqrt{3}$ | 1 | 1 | 1.16 | 1.16 | ∞ |
| Phantom and Tissue Parameters | | | | | | | | |
| Phantom Uncertainty (shape and thickness tolerances) | 4 | R | $\sqrt{3}$ | 1 | 1 | 2.31 | 2.31 | ∞ |
| Uncertainty in SAR correction for deviation (in permittivity and conductivity) | 2 | N | 1 | 1 | 0.84 | 2.00 | 1.68 | ∞ |
| Liquid conductivity（meas.） | 2.5 | N | 1 | 0.64 | 0.43 | 1.60 | 1.08 | 5 |
| Liquid conductivity (target.) | 5 | R | $\sqrt{3}$ | 0.64 | 0.43 | 1.85 | 1.24 | 5 |
| Liquid Permittivity（meas.） | 2.5 | N | 1 | 0.60 | 0.49 | 1.50 | 1.23 | ∞ |
| Liquid Permittivity (target.) | 5 | R | $\sqrt{3}$ | 0.60 | 0.49 | 1.73 | 1.41 | ∞ |
| Combined Standard Uncertainty | | Rss | | | | 10.28 | 9.98 | |
| Expanded Uncertainty (95% Confidence interval) | | k | | | | 20.57 | 19.95 | |

## 13 Test equipment and ancillaries used for tests

To simplify the identification of the test equipment and/or ancillaries which were used, the reporting of the relevant test cases only refer to the test item number as specified in the table below.

| | Manufacturer | Device Type | Type(Model) | Serial number | calibration | |
|---|---|---|---|---|---|---|
| | | | | | Last Cal. | Due Date |
| ☒ | SATIMO | COMOSAR DOSIMETRIC E FIELD PROBE | SSE2 | 3523-EPGO-428 | 2024-06-18 | 2025-06-17 |
| ☒ | SATIMO | COMOSAR 750 MHz REFERENCE DIPOLE | SID750 | SN 48/16 DIP0G750-444 | 2023-11-09 | 2026-11-08 |
| ☒ | SATIMO | COMOSAR 835 MHz REFERENCE DIPOLE | SID835 | SN 14/13 DIP0G835-235 | 2023-11-09 | 2026-11-08 |
| ☒ | SATIMO | COMOSAR 900 MHz REFERENCE DIPOLE | SID900 | SN 14/13 DIP0G900-231 | 2023-11-09 | 2026-11-08 |
| ☒ | SATIMO | COMOSAR 1800 MHz REFERENCE DIPOLE | SID1800 | SN 14/13 DIP1G800-232 | 2023-11-09 | 2026-11-08 |
| ☐ | SATIMO | COMOSAR 1900 MHz REFERENCE DIPOLE | SID1900 | SN 14/13 DIP1G900-236 | 2023-11-09 | 2026-11-08 |
| ☒ | SATIMO | COMOSAR 2000 MHz REFERENCE DIPOLE | SID2000 | SN 14/13 DIP2G000-237 | 2023-11-09 | 2026-11-08 |
| ☒ | SATIMO | COMOSAR 2450 MHz REFERENCE DIPOLE | SID2450 | SN 14/13 DIP2G450-238 | 2023-11-09 | 2026-11-08 |
| ☒ | SATIMO | COMOSAR 2600 MHz REFERENCE DIPOLE | SID2600 | SN 28/14 DIP2G600-327 | 2023-11-09 | 2026-11-08 |
| ☒ | SATIMO | Software | OPENSAR | N/A | N/A | N/A |
| ☒ | SATIMO | Phantom | COMOSAR IEEE SAM PHANTOM | SN 14/13 SAM99 | N/A | N/A |
| ☒ | R & S | Universal Radio Communication Tester | CMU 200 | 119733 | 2023-11-02 | 2024-11-01 |
| ☒ | R & S | Universal Radio Communication Tester | CMW500 | 144459 | 2023-11-02 | 2024-11-01 |
| ☒ | R & S | UXM5G Wireless Test Platform | E7515B | MY60192341 | 2023-11-02 | 2024-11-01 |
| ☒ | HP | Network Analyser | 8753D | 3410A08889 | 2023-11-02 | 2024-11-01 |
| ☒ | HP | Signal Generator | E4421B | GB39340770 | 2023-11-02 | 2024-11-01 |
| ☒ | Keithley | Multimeter | Keithley 2000 | 4014539 | 2023-11-02 | 2024-11-01 |
| ☒ | SATIMO | Amplifier | Power Amplifier | MODU-023-A-0004 | 2023-11-02 | 2024-11-01 |
| ☒ | Agilent | Power Meter | E4418B | GB43312909 | 2023-11-02 | 2024-11-01 |
| ☒ | Agilent | Power Meter Sensor | E4412A | MY41500046 | 2023-11-02 | 2024-11-01 |

## Annex A:System performance verification

**(Please See the SAR Measurement Plots of annex A.)**

## Annex B:Measurement results

**(Please See the SAR Measurement Plots of annex B.)**

## Annex C:Calibration reports

**(Please See the Calibration reports of annex C.)**

# Annex A: System Check

# Tested Model : P10003L

# Report Number:

# WSCT-ANAB-R&E240900047A-SAR

## I. RESULTS

| TYPE | BAND | PARAMETERS |
|---|---|---|
| **Validation** | **CW835** | Measurement 1: Validation Plane with Dipole device position on Middle Channel in CW mode |
| **Validation** | **CW1800** | Measurement 2: Validation Plane with Dipole device position on Middle Channel in CW mode |
| **Validation** | **CW1900** | Measurement 3: Validation Plane with Dipole device position on Middle Channel in CW mode |
| **Validation** | **CW2450** | Measurement 4: Validation Plane with Dipole device position on Middle Channel in CW mode |
| **Validation** | **CW260** | Measurement 5: Validation Plane with Dipole device position on Middle Channel in CW mode |

# MEASUREMENT 1

BODY

Type: Validation measurement (Complete)

Date of measurement: 21/09/2024

Measurement duration: 11 minutes 54 seconds

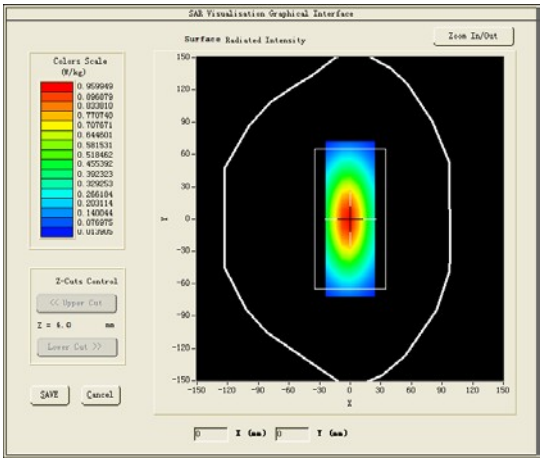
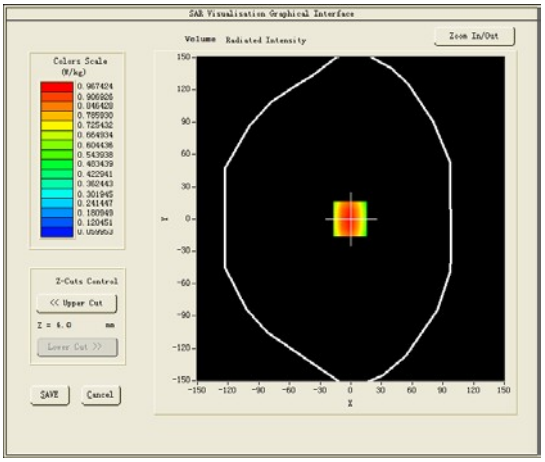
## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW835 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |

## B. SAR Measurement Results

Middle Band SAR (Channel -1):

| | |
|---|---|
| **Frequency (MHz)** | 835.000000 |
| **Relative permittivity (real part)** | 53.927799 |
| **Relative permittivity (imaginary part)** | 21.281300 |
| **Conductivity (S/m)** | 0.987216 |
| **Variation (%)** | 0.120000 |

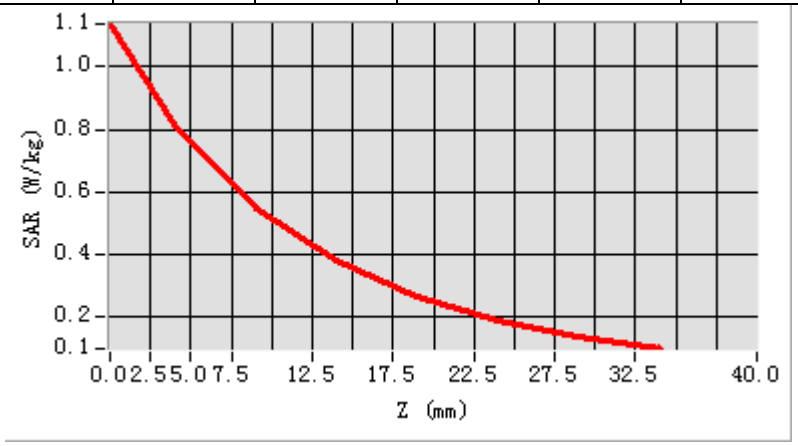
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

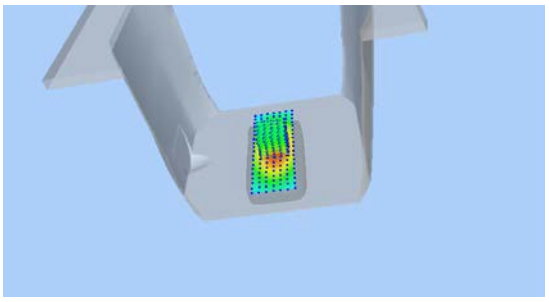
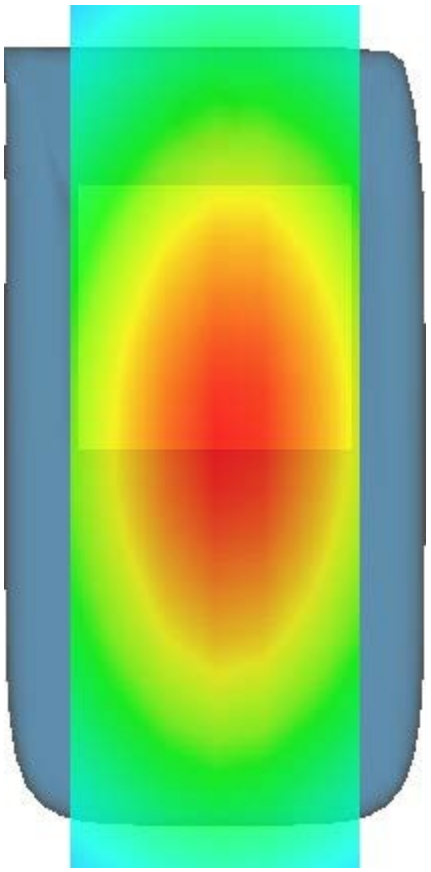
**Maximum location: X=-1.00, Y=0.00**

**SAR Peak: 1.44 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.644746 |
| **SAR 1g (W/Kg)** | 1.014583 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 1.1418 | 0.9674 | 0.6426 | 0.4358 | 0.2947 | 0.1989 | 0.1326 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 2

BODY

Type: Validation measurement (Complete)

Date of measurement: 23/09/2024

Measurement duration: 11 minutes 22 seconds

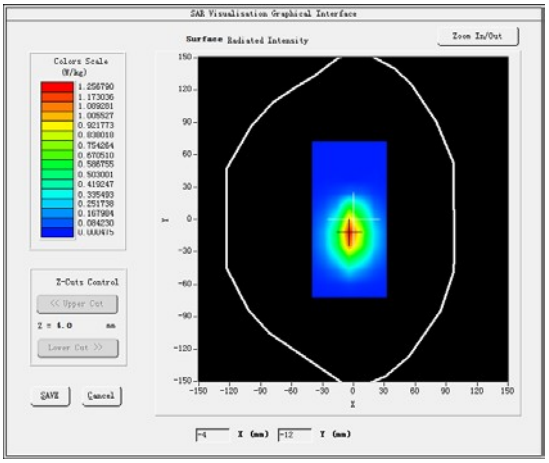
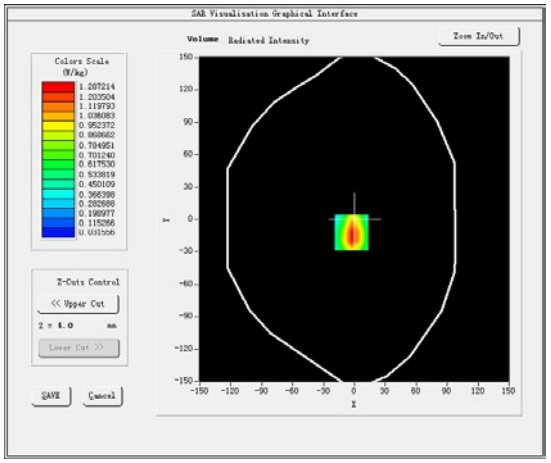
## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1800 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |

## B. SAR Measurement Results

Middle Band SAR (Channel -1):

| | |
|---|---|
| **Frequency (MHz)** | 1800.000000 |
| **Relative permittivity (real part)** | 53.112099 |
| **Relative permittivity (imaginary part)** | 15.286700 |
| **Conductivity (S/m)** | 1.528670 |
| **Variation (%)** | -0.410000 |

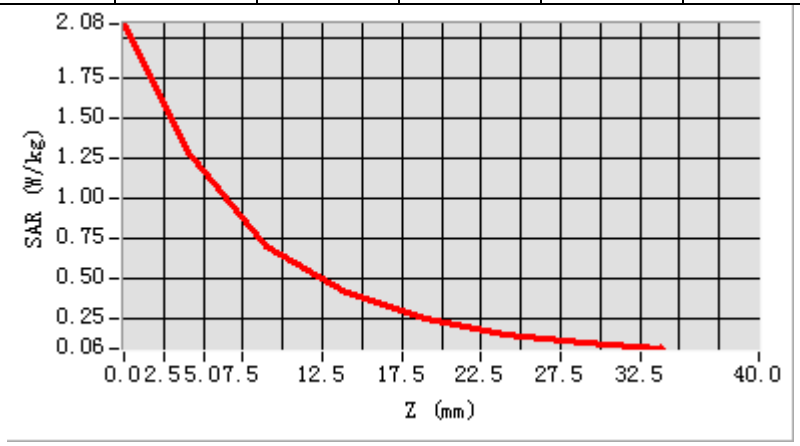
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

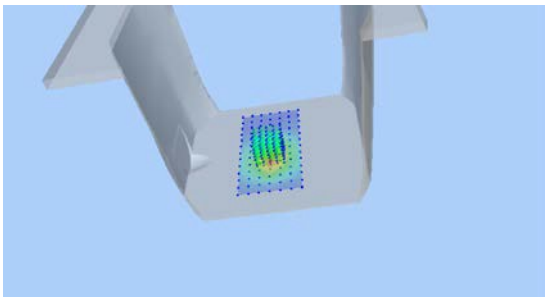
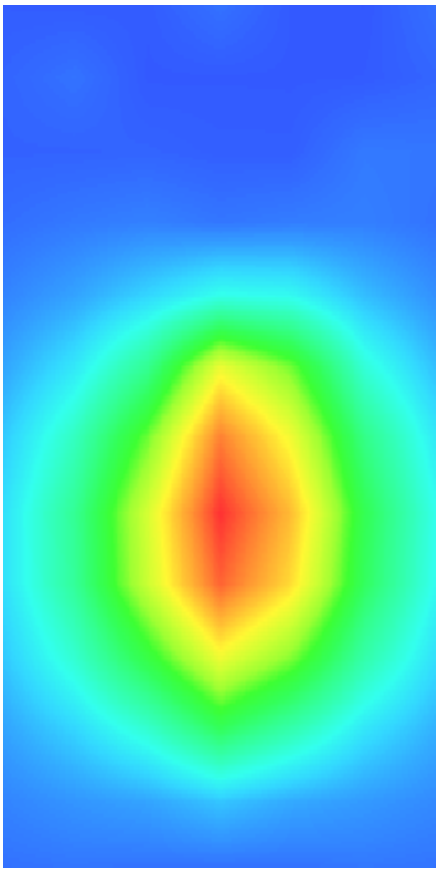
**Maximum location: X=-0.00, Y=-0.00**

**SAR Peak: 7.72 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 2.171888 |
| **SAR 1g (W/Kg)** | 4.156173 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 7.7941 | 4.9087 | 2.6873 | 1.5154 | 0.8724 | 0.5075 | 0.2958 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 3

BODY

Type: Validation measurement (Complete)

Date of measurement: 25/09/2024

Measurement duration: 14 minutes 21 seconds

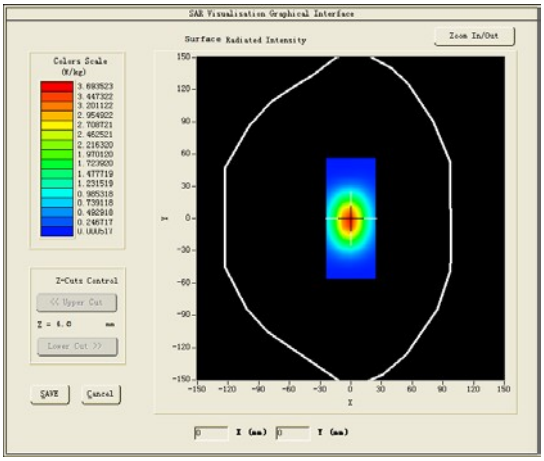
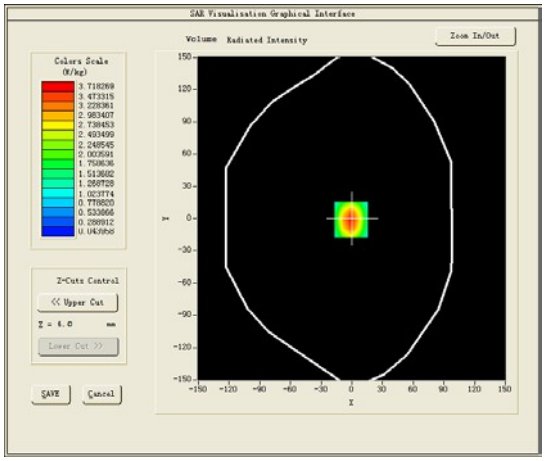
## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1900 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |

## B. SAR Measurement Results

Middle Band SAR (Channel -1):

| | |
|---|---|
| **Frequency (MHz)** | 1900.000000 |
| **Relative permittivity (real part)** | 53.365299 |
| **Relative permittivity (imaginary part)** | 14.757600 |
| **Conductivity (S/m)** | 1.557747 |
| **Variation (%)** | -0.450000 |

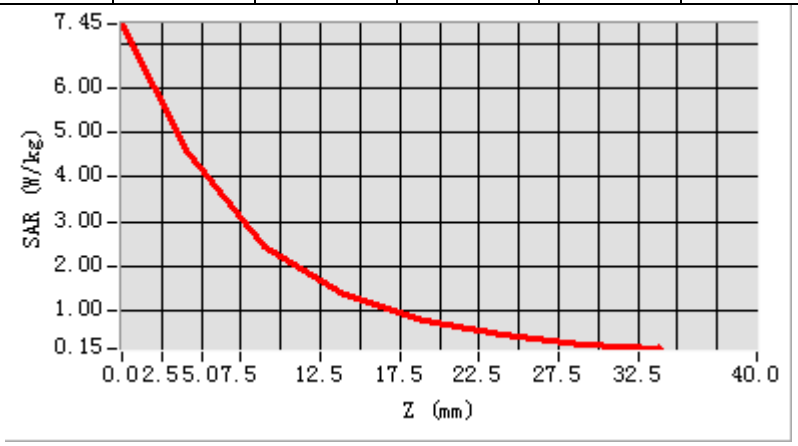
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

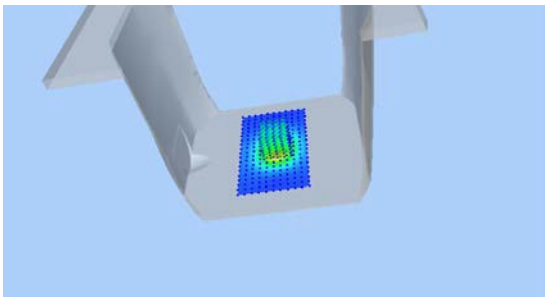
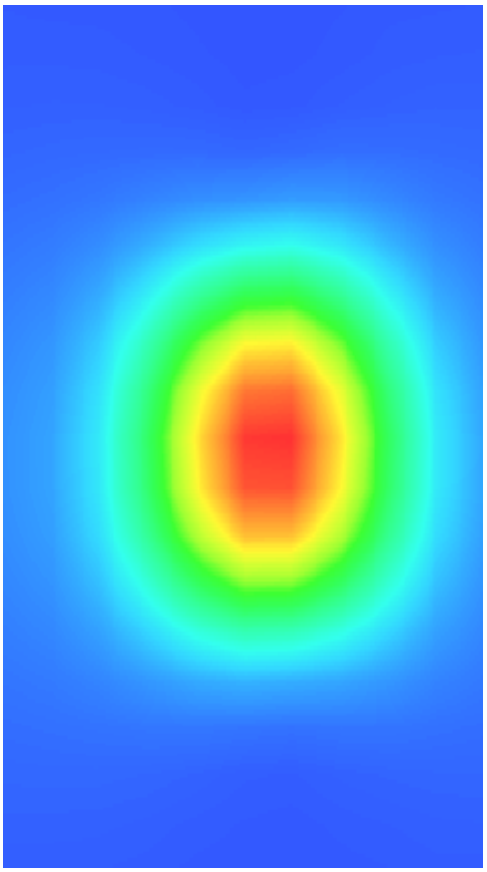
**Maximum location: X=1.00, Y=-1.00**

**SAR Peak: 7.40 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 2.093533 |
| **SAR 1g (W/Kg)** | 3.932904 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 5.7034 | 3.7183 | 2.1347 | 1.2560 | 0.7338 | 0.4260 | 0.2429 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 4

## BODY

Type: Validation measurement (Complete)

Date of measurement: 27/09/2024

Measurement duration: 13 minutes 46 seconds

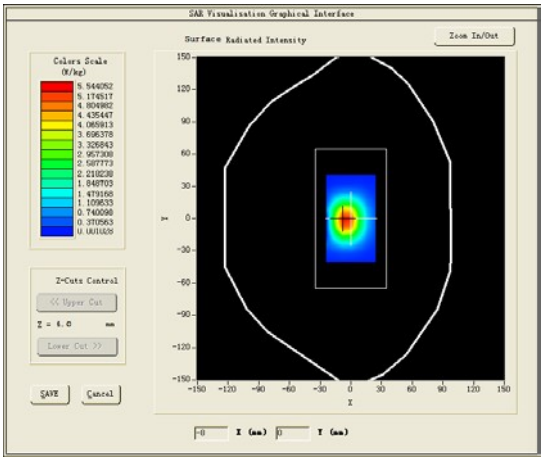
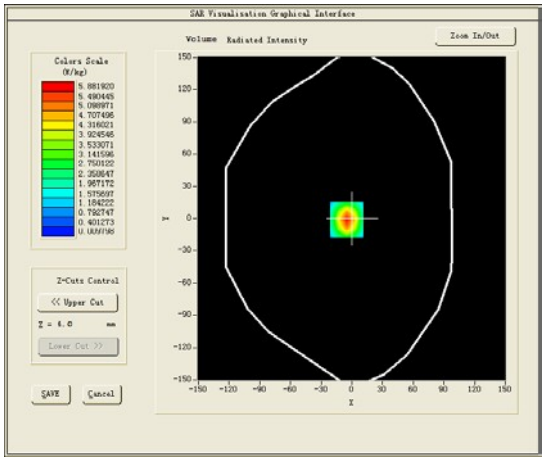
## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2450 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |

## B. SAR Measurement Results

Middle Band SAR (Channel -1):

| | |
|---|---|
| **Frequency (MHz)** | 2450.000000 |
| **Relative permittivity (real part)** | 52.735699 |
| **Relative permittivity (imaginary part)** | 14.017300 |
| **Conductivity (S/m)** | 1.907910 |
| **Variation (%)** | 0.390000 |

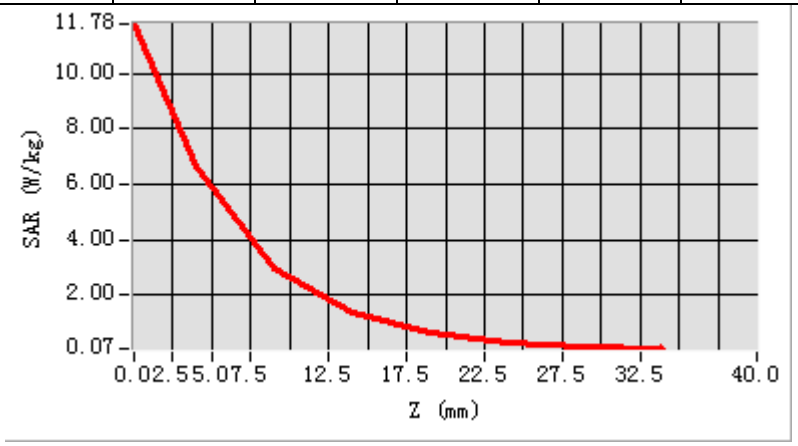
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

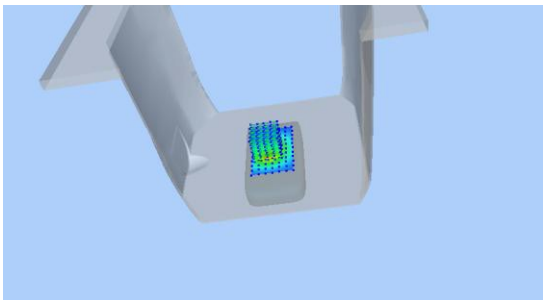
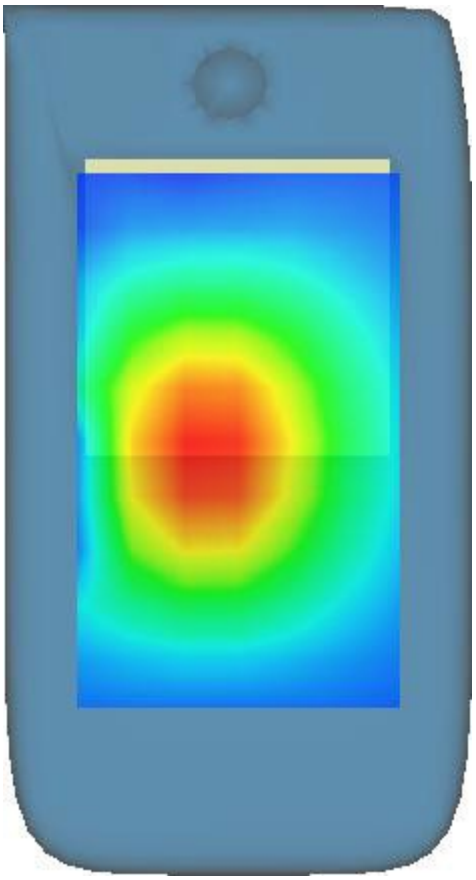
**Maximum location: X=5.00, Y=-1.00**

**SAR Peak: 10.96 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 2.333453 |
| **SAR 1g (W/Kg)** | 5.433343 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 10.2188 | 5.8819 | 2.7478 | 1.3151 | 0.6266 | 0.2969 | 0.1341 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 5

BODY

Type: Validation measurement (Complete)

Date of measurement: 29/09/2024

Measurement duration: 29 minutes 30 seconds

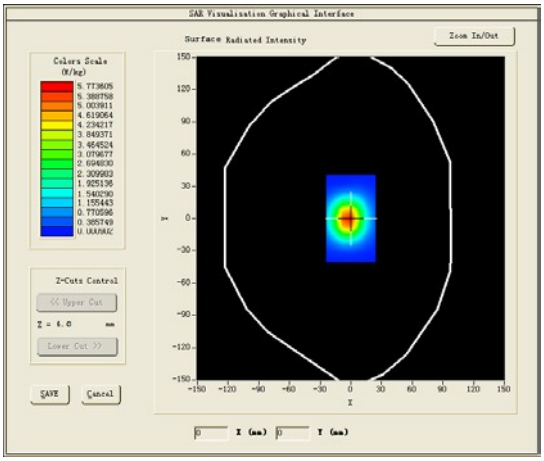
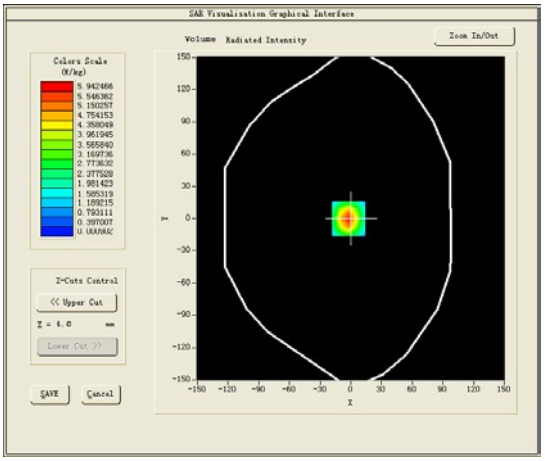
## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **ZoomScan** | 8x8x7,dx=4mm dy=4mm dz=2mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2600 |
| **Channels** | Middle |
| **Signal** | CW (Duty cycle:1.0) |

## B. SAR Measurement Results

Middle Band SAR (Channel -1):

| | |
|---|---|
| **Frequency (MHz)** | 2600.000000 |
| **Relative permittivity (real part)** | 52.007900 |
| **Relative permittivity (imaginary part)** | 14.458500 |
| **Conductivity (S/m)** | 2.088450 |
| **Variation (%)** | -0.220000 |

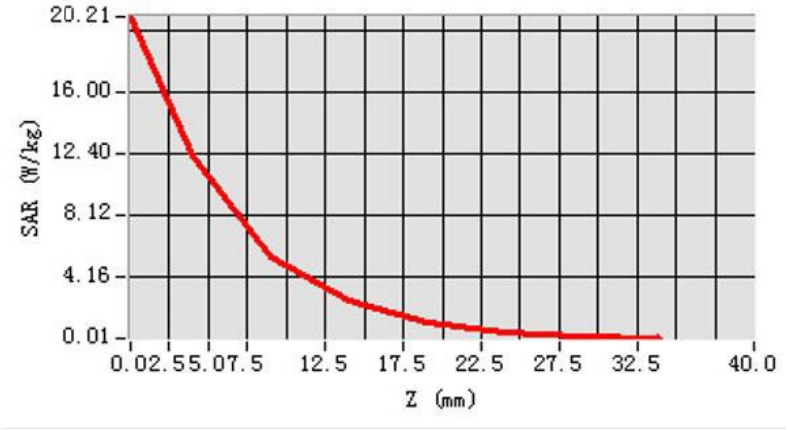
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

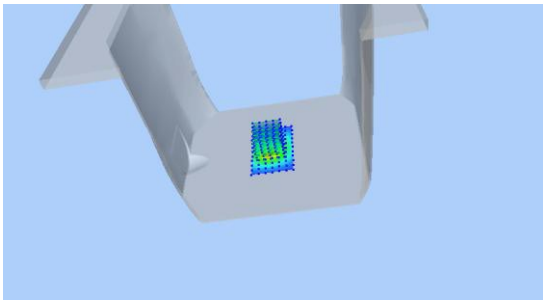
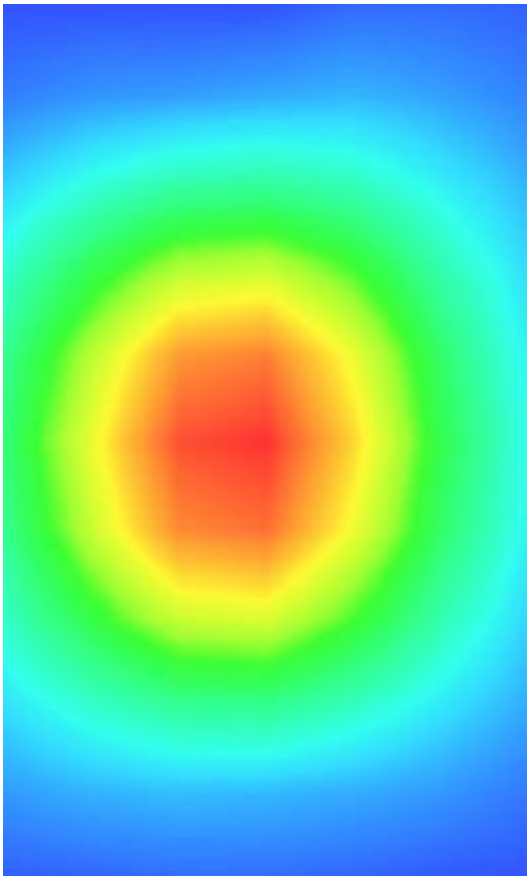
**Maximum location: X=-2.00,Y=0.00**

**SAR Peak: 10.74 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 2.559674 |
| **SAR 1g (W/Kg)** | 5.786435 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 10.4745 | 5.9425 | 2.6827 | 1.2126 | 0.5266 | 0.2069 | 0.0714 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

SATIMO 225, rue Pierre Rivoalon 29200 Brest - France
Tel:+33 (0)2 98 05 13 34; Fax: +33 (0)2 98 05 53 87; www.satimo.com

# Annex B: Measurement Results

## Tested Model : P10003L

## Report Number:

## WSCT-ANAB-R&E240900047A-SAR

# MEASUREMENT 1

## Front-side-middle

Type: Phone measurement (Complete)

Date of measurement:25/9/2024

Measurement duration: 6 minutes 55 seconds

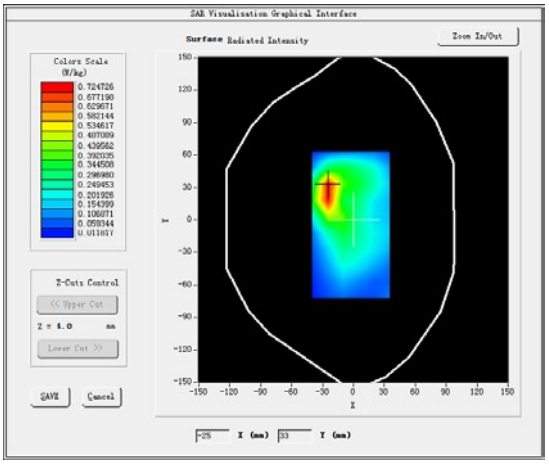
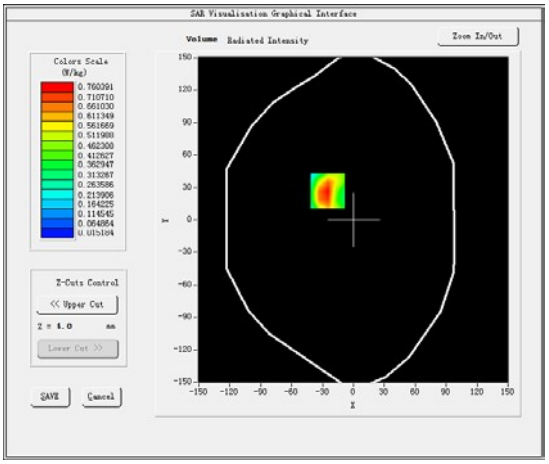
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 7x7x7,dx=5mm dy=5mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | Band2_UMTS |
| **Channels** | Middle |
| **Signal** | WCDMA (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middle Band SAR (Channel 9400):

| | |
|---|---|
| **Frequency (MHz)** | 1880.000000 |
| **Relative permittivity (real part)** | 40.000000 |
| **Relative permittivity (imaginary part)** | 12.930000 |
| **Conductivity (S/m)** | 1.400750 |
| **Variation (%)** | -1.870000 |

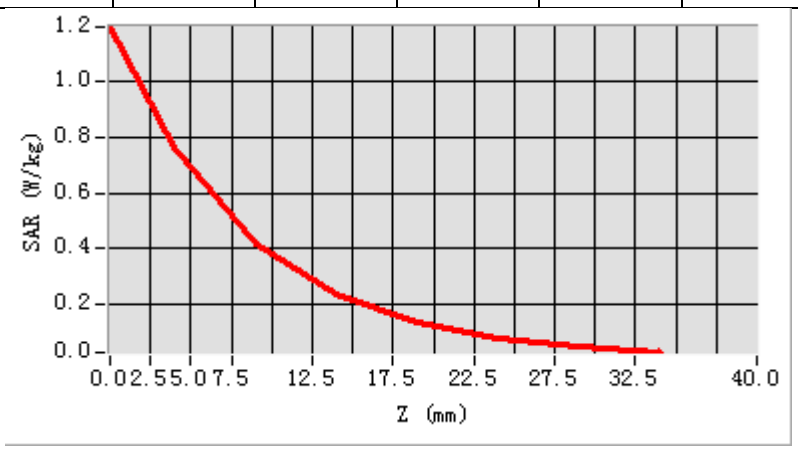
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

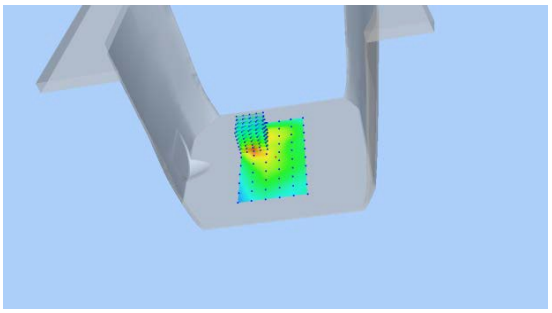
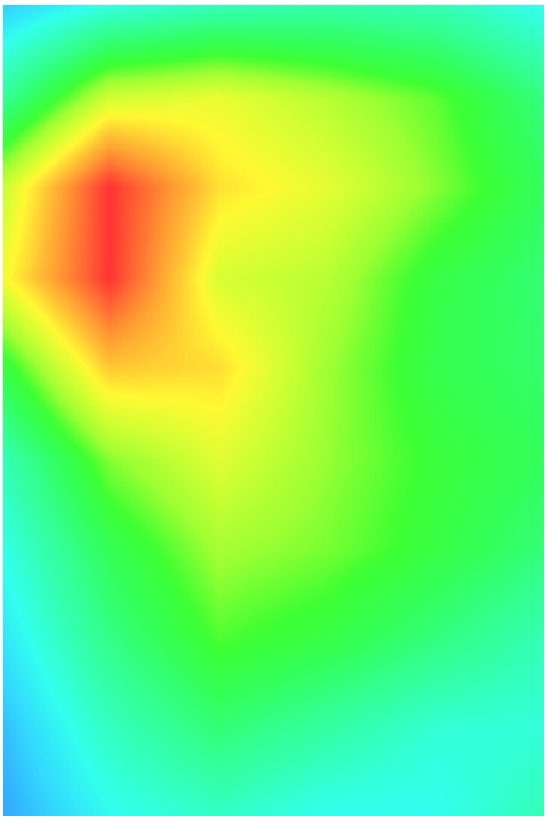
**Maximum location: X=-25.00, Y=27.00**

**SAR Peak: 0.39 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.161316 |
| **SAR1g (W/Kg)** | 0.372165 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 1.1960 | 0.7604 | 0.4196 | 0.2366 | 0.1341 | 0.0763 | 0.0450 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 2

## Front-side-middle

Type: Phone measurement (Complete)

Date of measurement:23/9/2024

Measurement duration: 6 minutes 55 seconds

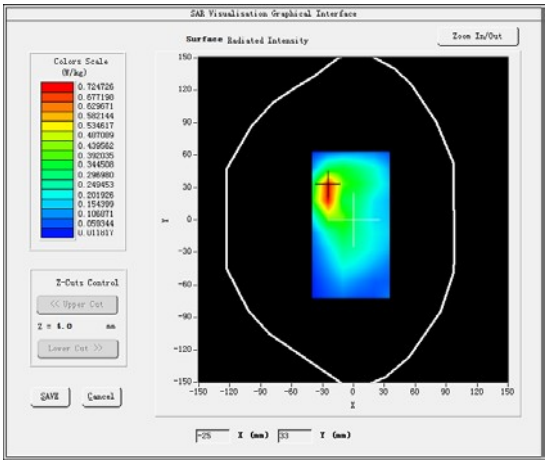
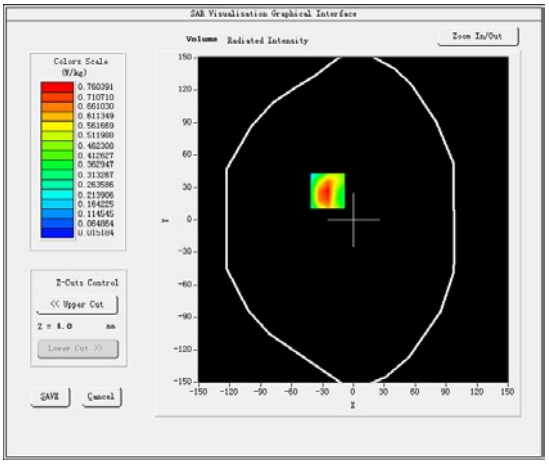
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 7x7x7,dx=5mm dy=5mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | Band4_UMTS |
| **Channels** | Middle |
| **Signal** | WCDMA (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middle Band SAR (Channel 1412):

| | |
|---|---|
| **Frequency (MHz)** | 1732.600000 |
| **Relative permittivity (real part)** | 40.000000 |
| **Relative permittivity (imaginary part)** | 12.930000 |
| **Conductivity (S/m)** | 1.400750 |
| **Variation (%)** | -0.920000 |

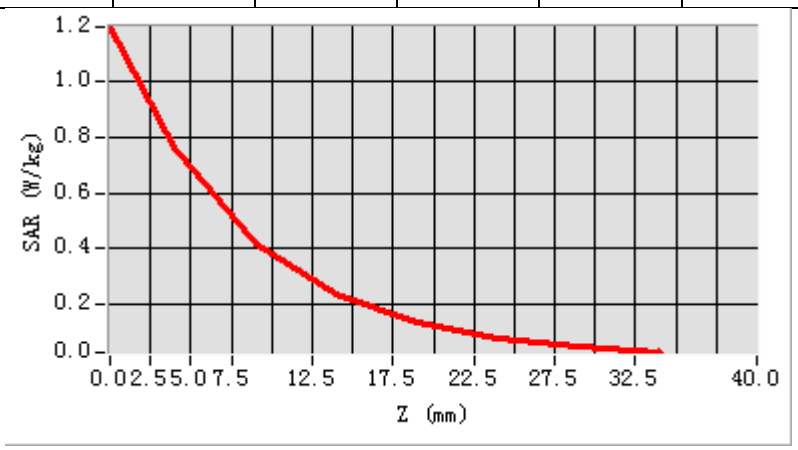
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

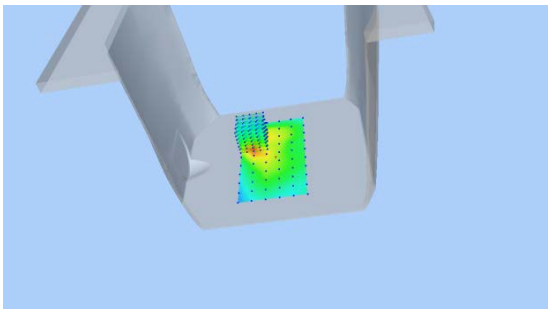
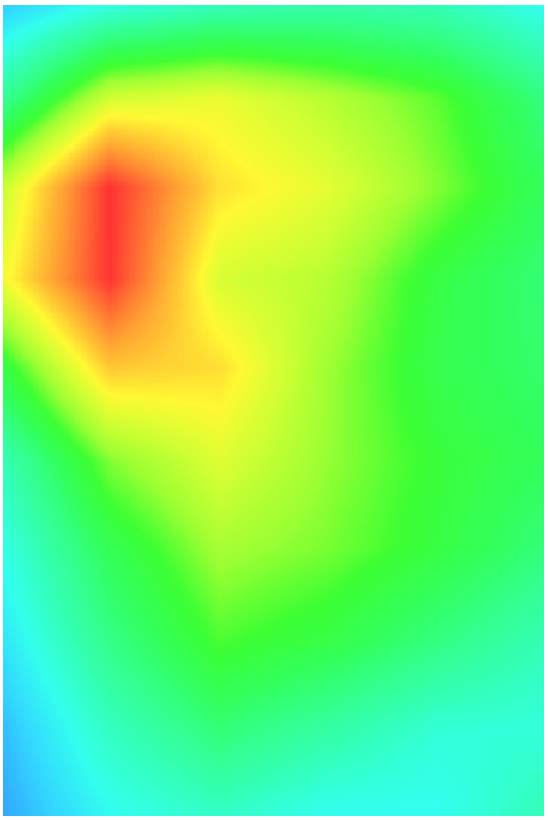
**Maximum location: X=-25.00, Y=27.00**

**SAR Peak: 0.25 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.187512 |
| **SAR1g (W/Kg)** | 0.435615 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 1.1960 | 0.7604 | 0.4196 | 0.2366 | 0.1341 | 0.0763 | 0.0450 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 3

## Front-side-middle

Type: Phone measurement (Complete)

Date of measurement:21/9/2024

Measurement duration: 16 minutes 27 seconds

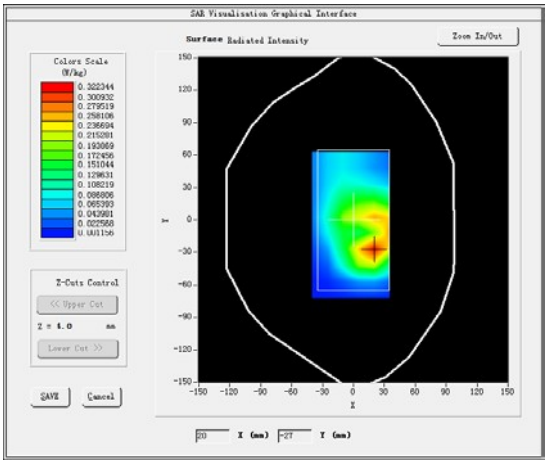
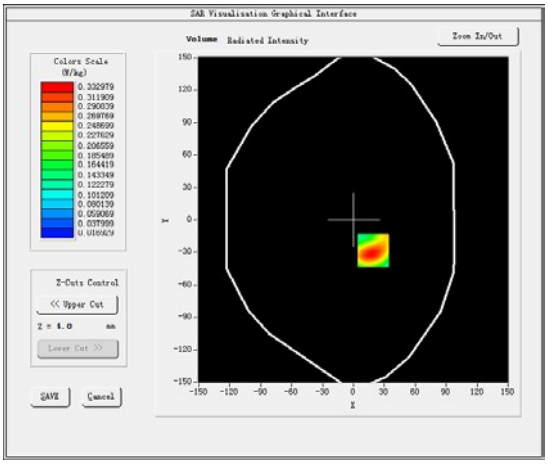
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 7x7x7,dx=5mm dy=5mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | Band5_WCDMA900 |
| **Channels** | Middle |
| **Signal** | WCDMA (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middle Band SAR (Channel 4182):

| | |
|---|---|
| **Frequency (MHz)** | 836.400000 |
| **Relative permittivity (real part)** | 44.488998 |
| **Relative permittivity (imaginary part)** | 18.550301 |
| **Conductivity (S/m)** | 0.924423 |
| **Variation (%)** | -2.710000 |

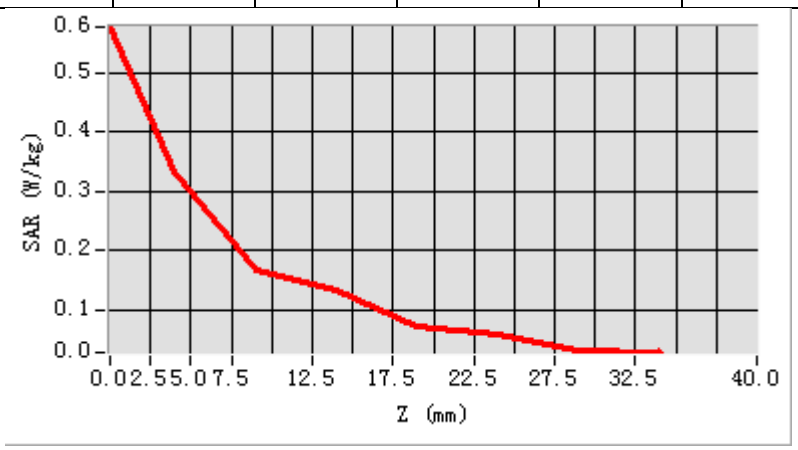
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

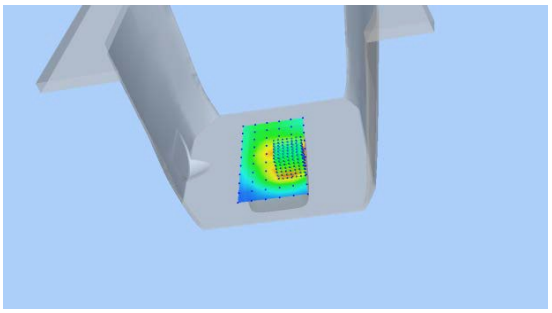
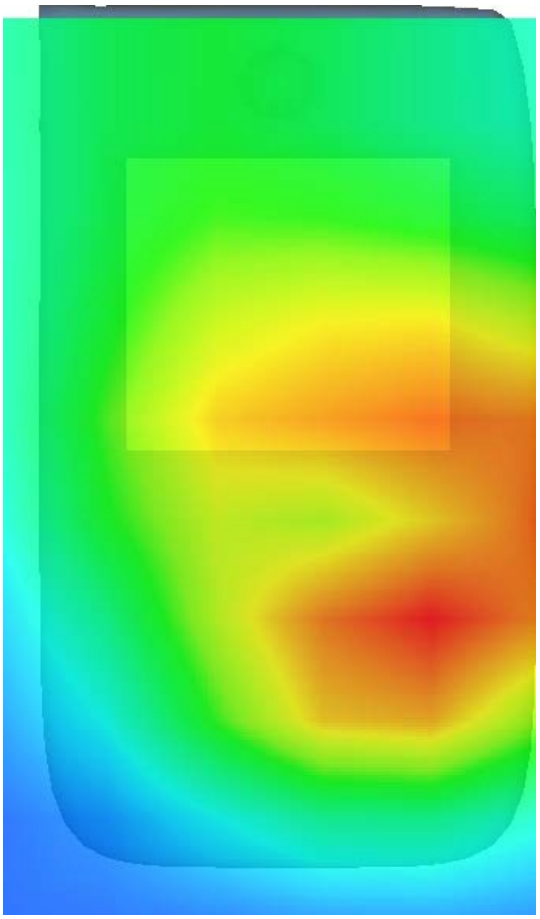
**Maximum location: X=19.00, Y=-28.00**

**SAR Peak: 0.24 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.209865 |
| **SAR1g (W/Kg)** | 0.406519 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.5781 | 0.3330 | 0.1661 | 0.1339 | 0.0710 | 0.0594 | 0.0313 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 4

## Front-side-20M-1RB#99-Middle

Type: Phone measurement (Complete)

Date of measurement:25/9/2024

Measurement duration: 8 minutes 0 seconds

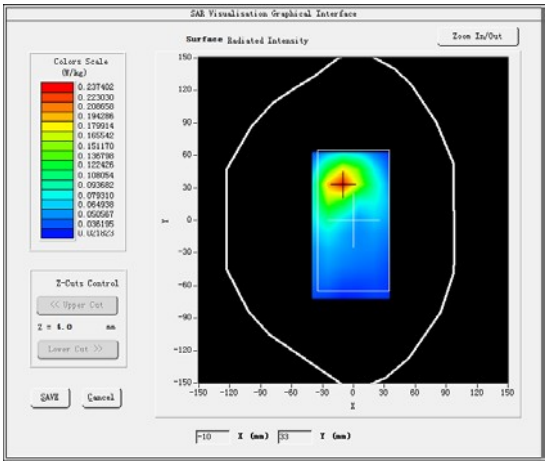
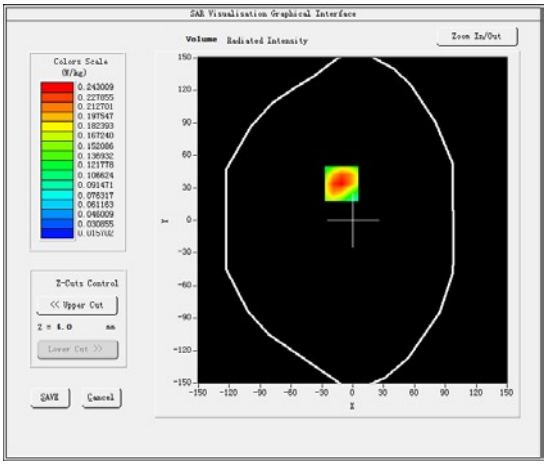
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 2 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middleer Band SAR (Channel 18900):

| | |
|---|---|
| **Frequency (MHz)** | 1880.000000 |
| **Relative permittivity (real part)** | 53.143749 |
| **Relative permittivity (imaginary part)** | 14.735750 |
| **Conductivity (S/m)** | 1.559124 |
| **Variation (%)** | 1.470000 |

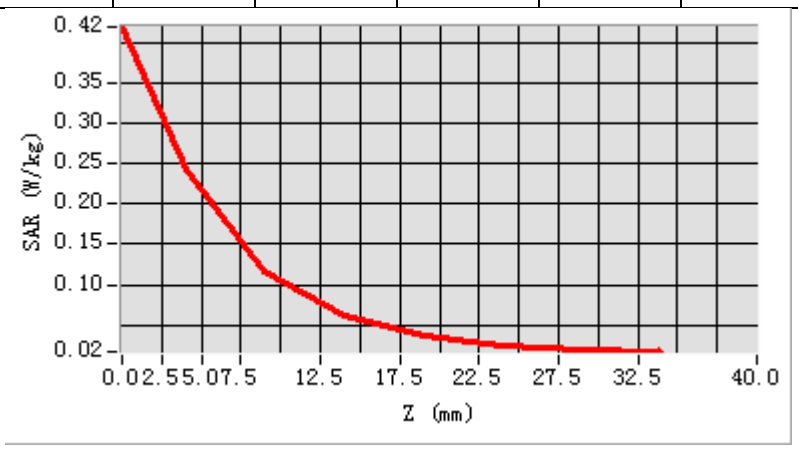
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

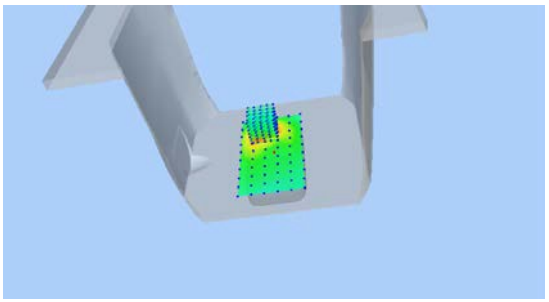
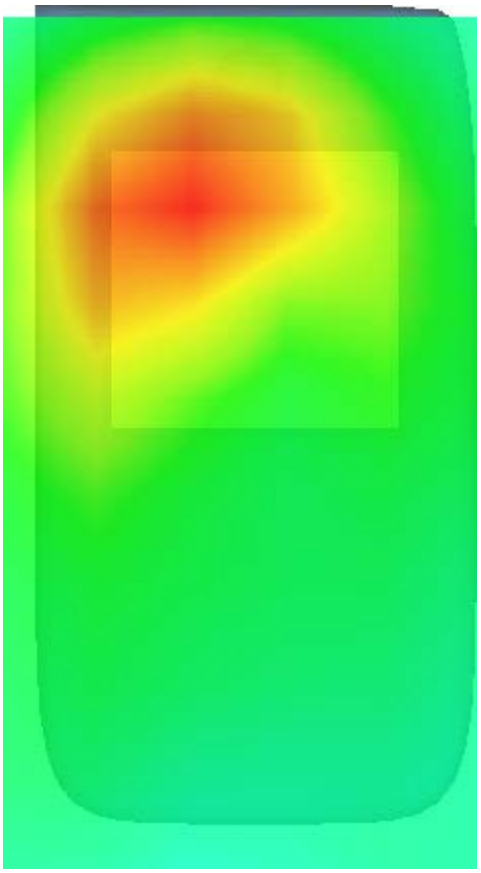
**Maximum location: X=-11.00, Y=34.00**

**SAR Peak: 0.41 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.150436 |
| **SAR1g (W/Kg)** | 0.359217 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.4194 | 0.2430 | 0.1171 | 0.0614 | 0.0359 | 0.0245 | 0.0194 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 5

## Front-side-20M-1RB#99-middle

Type: Phone measurement (Complete)

Date of measurement: 23/9/2024

Measurement duration: 6 minutes 53 seconds

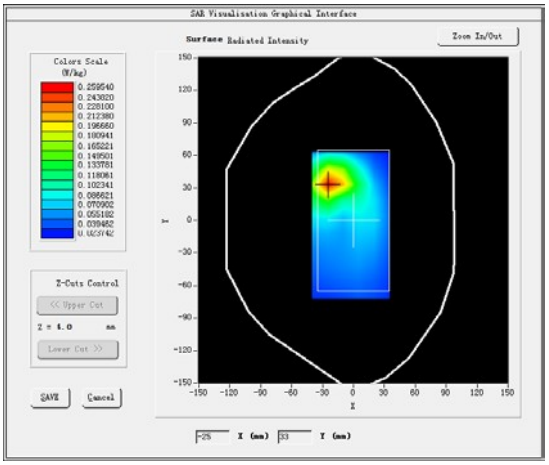
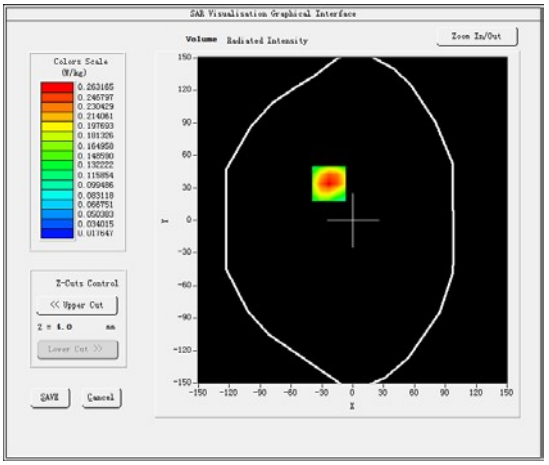
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 4 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middle Band SAR (Channel 20175):

| | |
|---|---|
| **Frequency (MHz)** | 1732.500000 |
| **Relative permittivity (real part)** | 54.198448 |
| **Relative permittivity (imaginary part)** | 15.770850 |
| **Conductivity (S/m)** | 1.517944 |
| **Variation (%)** | -1.880000 |

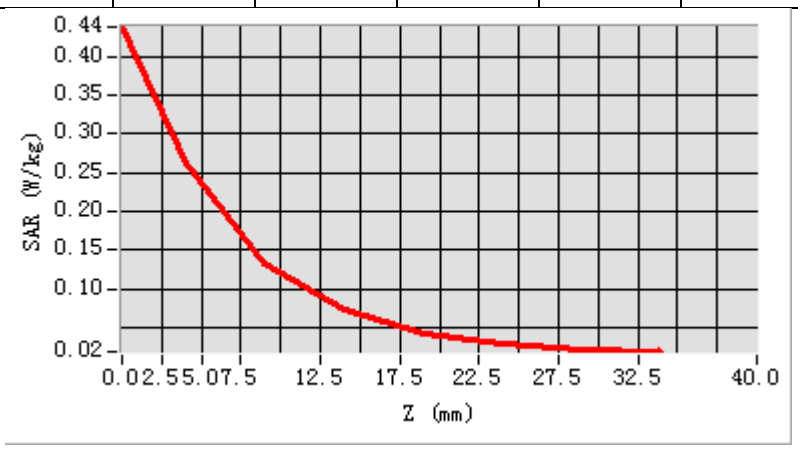
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

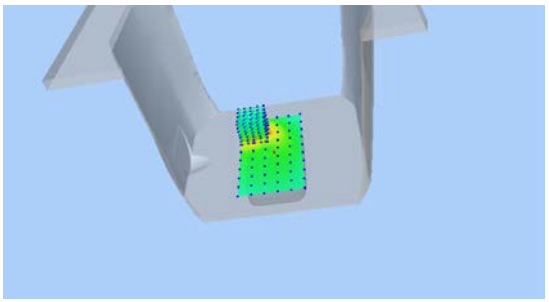
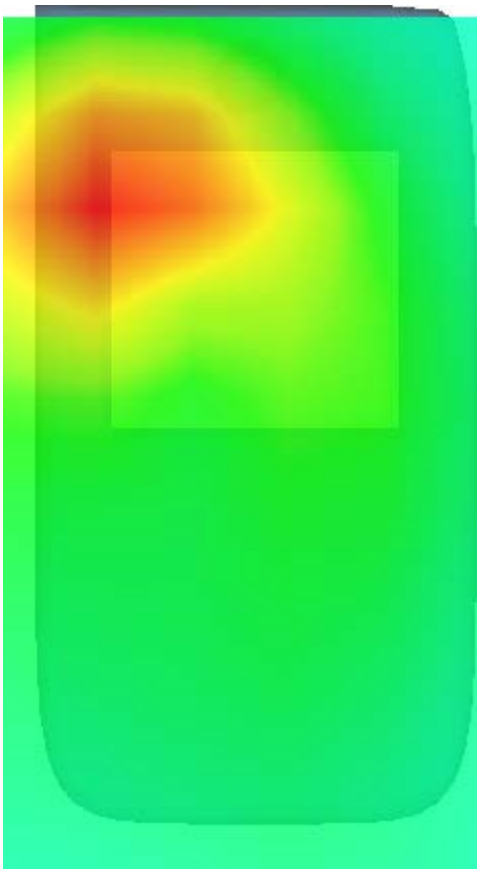
**Maximum location: X=-23.00, Y=34.00**

**SAR Peak: 0.17 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.159324 |
| **SAR1g (W/Kg)** | 0.367145 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.4383 | 0.2632 | 0.1342 | 0.0730 | 0.0433 | 0.0293 | 0.0228 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 6

## Front-side-20M-1RB#99 -Middle

Type: Phone measurement (Complete)

Date of measurement: 21/9/2024

Measurement duration: 8 minutes 16 seconds

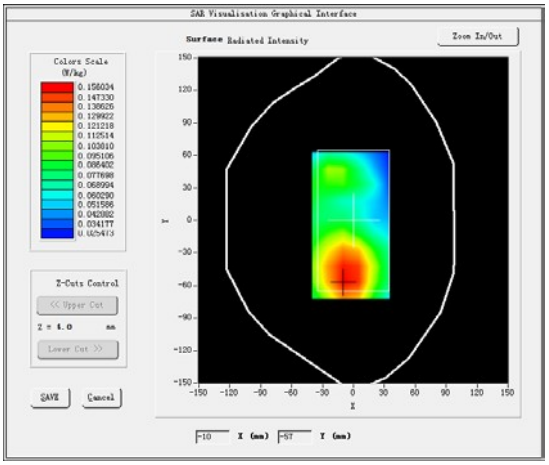
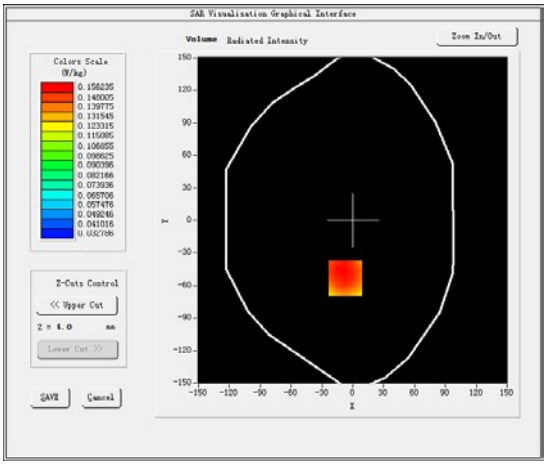
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 5 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middleer Band SAR (Channel 20525):

| | |
|---|---|
| **Frequency (MHz)** | 836.500000 |
| **Relative permittivity (real part)** | 53.594849 |
| **Relative permittivity (imaginary part)** | 20.783649 |
| **Conductivity (S/m)** | 0.973945 |
| **Variation (%)** | -0.370000 |

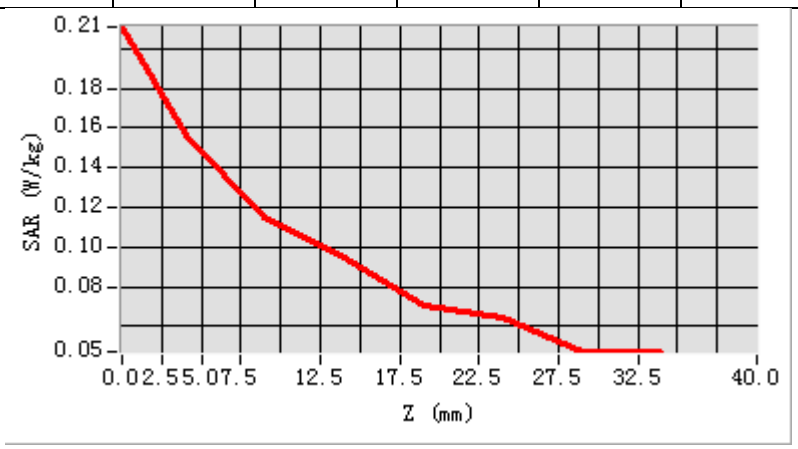
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

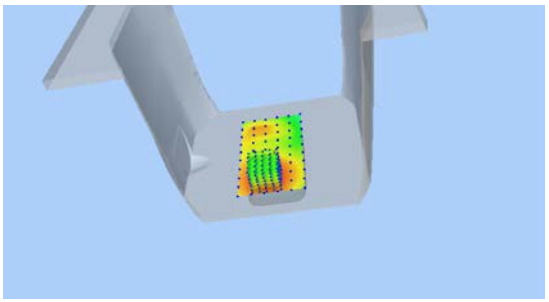
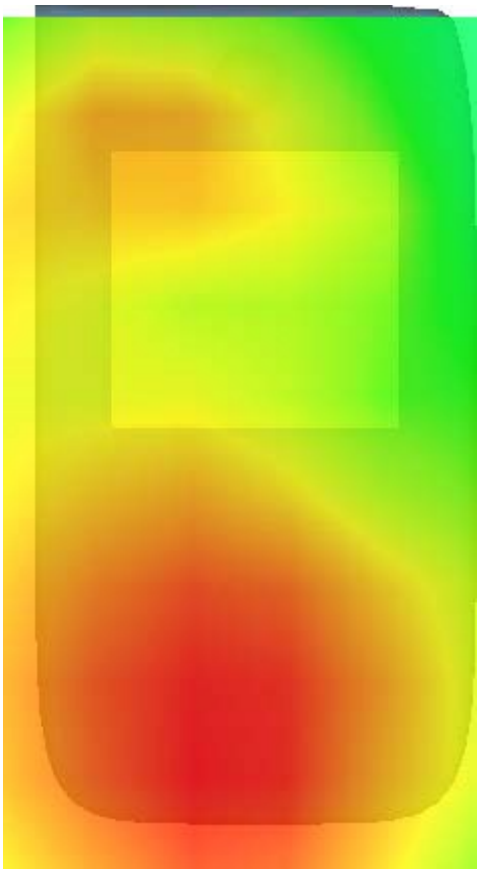
**Maximum location: X=-7.00, Y=-53.00**

**SAR Peak: 0.31 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.203681 |
| **SAR1g (W/Kg)** | 0.395724 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.2108 | 0.1562 | 0.1148 | 0.0951 | 0.0709 | 0.0643 | 0.0474 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 7

## Front-side-20M-1RB#99-middle-Low

Type: Phone measurement (Complete)

Date of measurement:29/9/2024

Measurement duration: 8 minutes 0 seconds

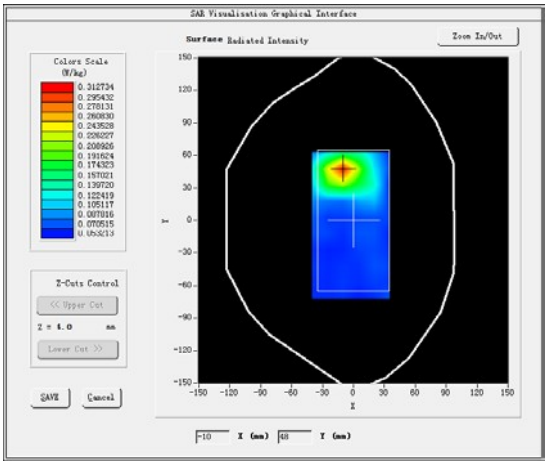
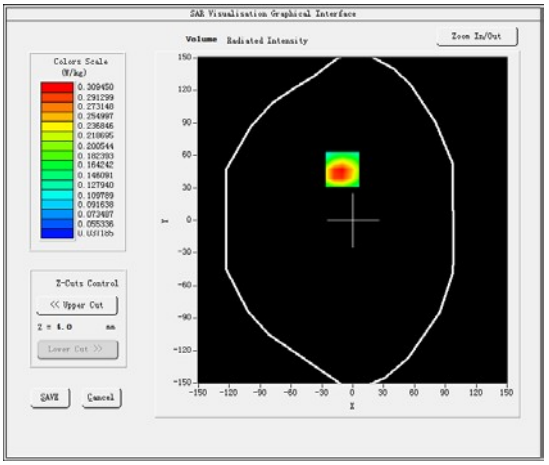
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 7 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middle Band SAR (Channel 21100):

| | |
|---|---|
| **Frequency (MHz)** | 2535.000000 |
| **Relative permittivity (real part)** | 52.697201 |
| **Relative permittivity (imaginary part)** | 15.070500 |
| **Conductivity (S/m)** | 2.101497 |
| **Variation (%)** | -0.440000 |

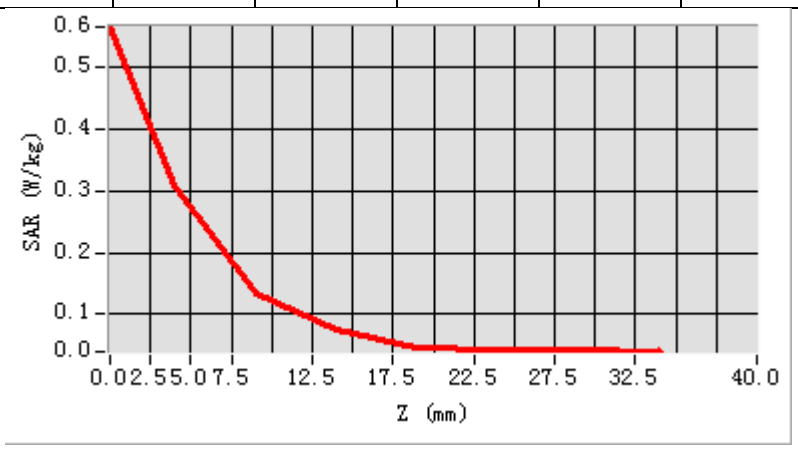
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

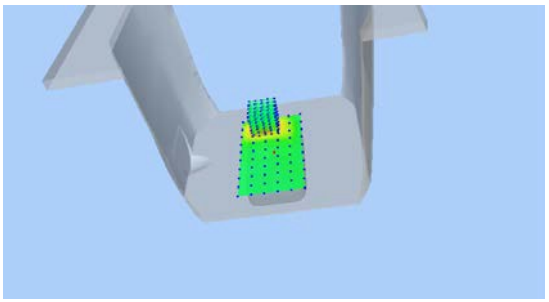
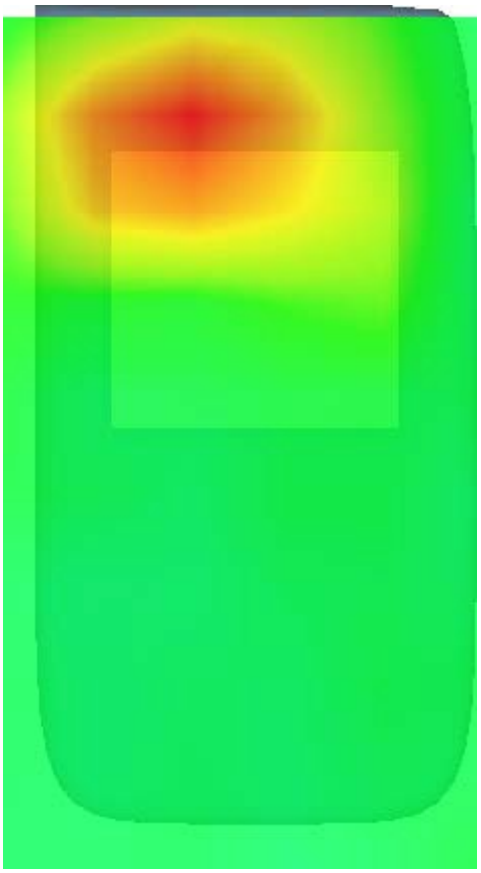
**Maximum location: X=-10.00, Y=47.00**

**SAR Peak: 0.17 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.079214 |
| **SAR1g (W/Kg)** | 0.196327 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.5665 | 0.3095 | 0.1338 | 0.0742 | 0.0451 | 0.0424 | 0.0412 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 8

## Front-side-20M-1RB#99-middle

Type: Phone measurement (Complete)

Date of measurement:29/9/2024

Measurement duration: 10 minutes 45 seconds

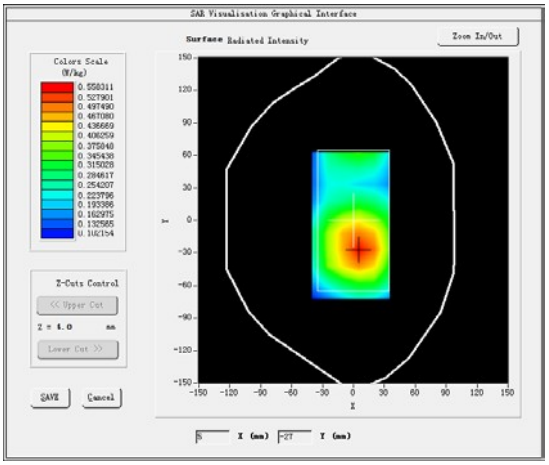
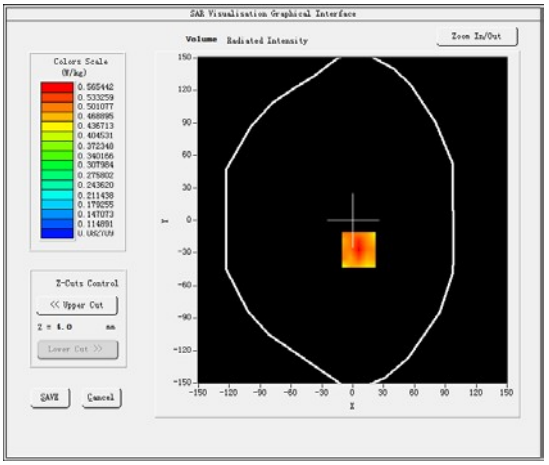
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 38 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1:1.58) |

## B. SAR MeasurementResults

Middle Band SAR (Channel 38000):

| | |
|---|---|
| **Frequency (MHz)** | 2595.000000 |
| **Relative permittivity (real part)** | 39.920200 |
| **Relative permittivity (imaginary part)** | 13.553000 |
| **Conductivity (S/m)** | 1.953891 |
| **Variation (%)** | -2.270000 |

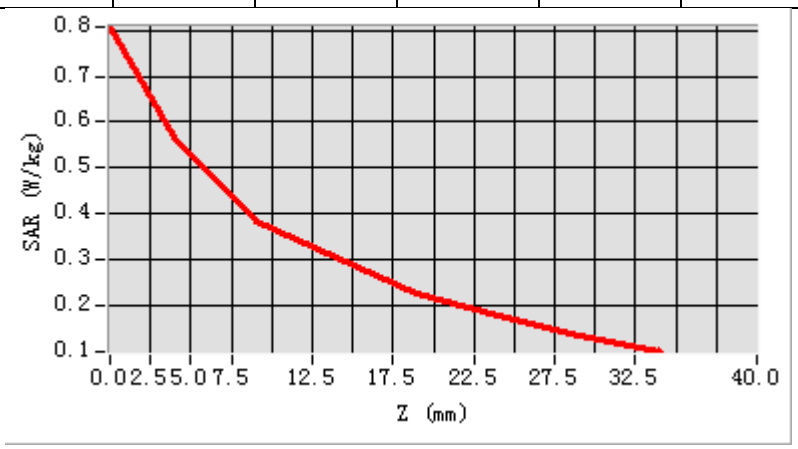
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

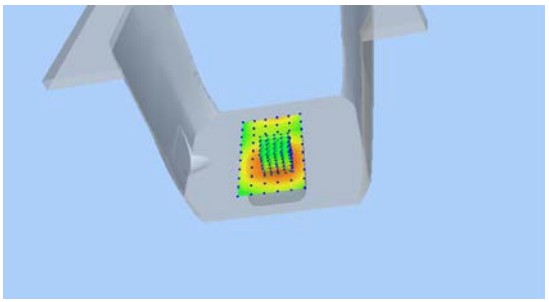
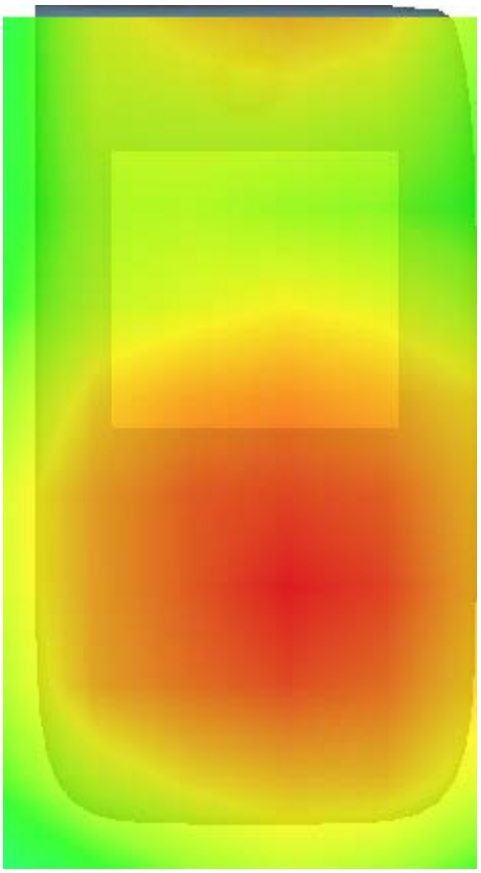
**Maximum location: X=6.00, Y=-27.00**

**SAR Peak: 0.28 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.028653 |
| **SAR1g (W/Kg)** | 0.070314 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.8077 | 0.5654 | 0.3809 | 0.3025 | 0.2263 | 0.1773 | 0.1341 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 9

## Front-side-20M-1RB#99-middle-Low

Type: Phone measurement (Complete)

Date of measurement:29/9/2024

Measurement duration: 7 minutes 31 seconds

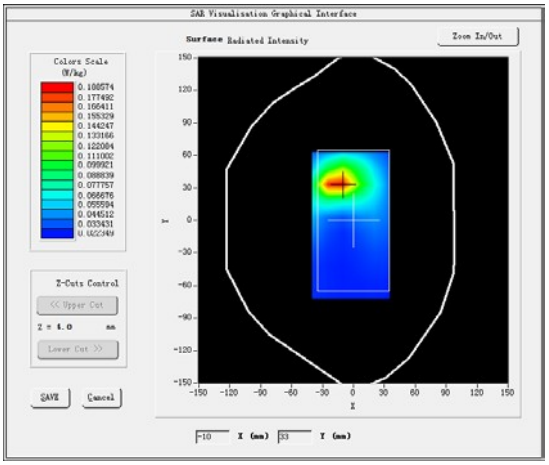
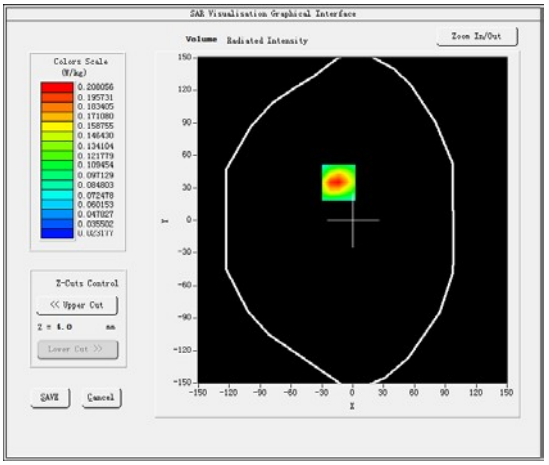
## A. Experimentalconditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mmdz=5mm,Complete |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 41 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1.0) |

## B. SAR MeasurementResults

Middle Band SAR (Channel 40620):

| | |
|---|---|
| **Frequency (MHz)** | 2593.000000 |
| **Relative permittivity (real part)** | 52.628727 |
| **Relative permittivity (imaginary part)** | 14.538727 |
| **Conductivity (S/m)** | 2.024114 |
| **Variation (%)** | 3.110000 |

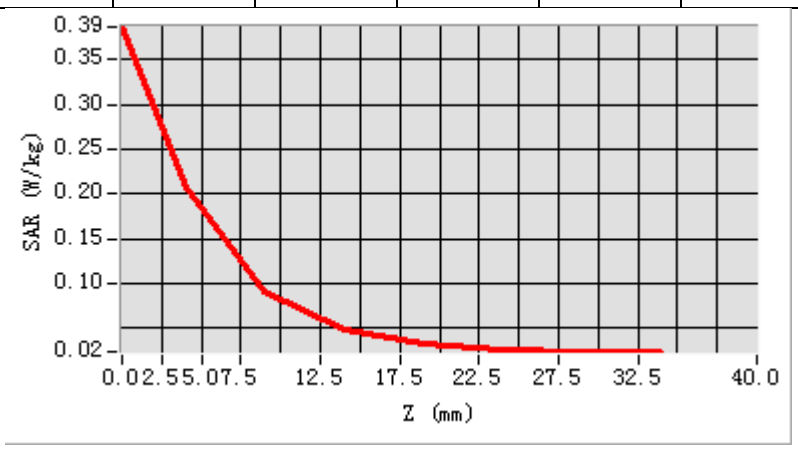
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

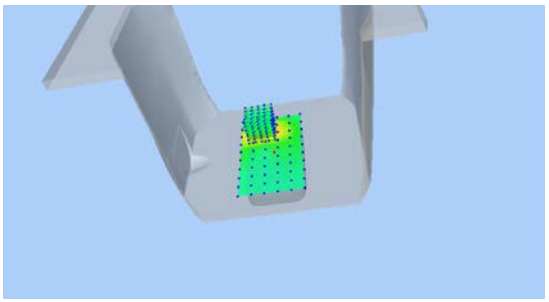
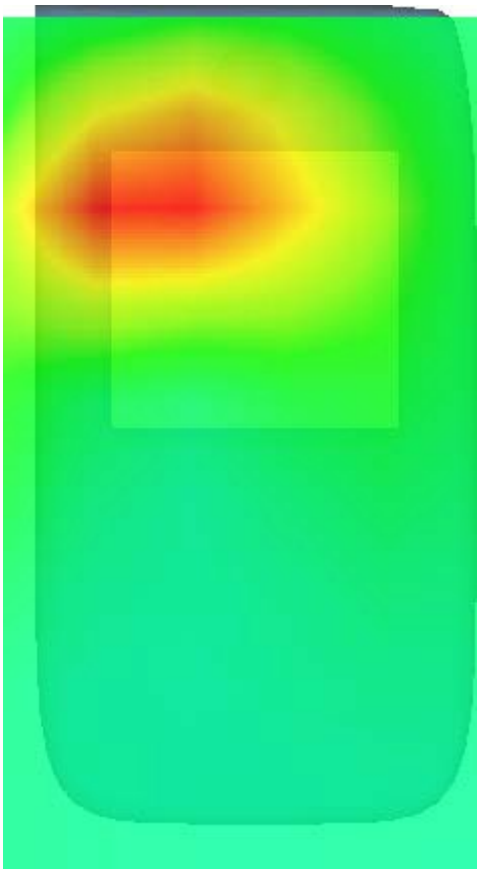
**Maximum location: X=-14.00, Y=35.00**

**SAR Peak: 0.28 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.029143 |
| **SAR1g (W/Kg)** | 0.072835 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.3869 | 0.2081 | 0.0900 | 0.0482 | 0.0324 | 0.0262 | 0.0243 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |