# FCC SAR EVALUATION REPORT

**In accordance with the requirements of**
**FCC 47 CFR Part 2(2.1093), ANSI/IEEE C95.1-1992 and**
**IEEE Std 1528-2013**

| | |
|---|---|
| **Product Name :** | 4G MIFI |
| **Trademark :** | FIRSTNUM/Stoneoim/VPLUS |
| **Model Name :** | FIRSTNUM-M4 |
| **Family Model :** | M4021,FIRSTNUM-G1, FIRSTNUM-G2,FIRSTNUM-G3, FIRSTNUM-G4,FIRSTNUM-G5, FIRSTNUM-G6,FIRSTNUM-G7, FIRSTNUM-G8,FIRSTNUM-G9, FIRSTNUM-G10,FIRSTNUM-G11, FIRSTNUM-G12,FIRSTNUM-G13, FIRSTNUM-G14,FIRSTNUM-G15, FIRSTNUM-G16,FIRSTNUM-G17, FIRSTNUM-G18,FIRSTNUM-G19, FIRSTNUM-G20 |
| **FCC ID :** | 2A954-M4021 |
| **Report No. :** | S24111904902004 |

**Prepared for**

Shenzhen Firstnum E-commerce Co.,Ltd

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**Prepared by**

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# TEST RESULT CERTIFICATION

| | |
|---|---|
| **Applicant's name** | Shenzhen Firstnum E-commerce Co.,Ltd |
| Address | 611 BUILDING 11,PHASE II, NANSHANYUNGU CHUANGYUAN PARK, NO.2 PINGSHANYIROAD, PINGSHANCOMMUNITY, TAOYUAN STREET, NANSHAN DISTRICT, SHENZHEN,China |
| **Manufacturer's Name** | Shenzhen Firstnum E-commerce Co.,Ltd |
| Address | 611 BUILDING 11,PHASE II, NANSHANYUNGU CHUANGYUAN PARK, NO.2 PINGSHANYIROAD, PINGSHANCOMMUNITY, TAOYUAN STREET, NANSHAN DISTRICT, SHENZHEN,China |

**Product description**

| | |
|---|---|
| Product name | 4G MIFI |
| Trademark | FIRSTNUM/Stoneoim/VPLUS |
| Model Name | FIRSTNUM-M4 |
| Family Model | M4021, FIRSTNUM-G1, FIRSTNUM-G2, FIRSTNUM-G3, FIRSTNUM-G4, FIRSTNUM-G5, FIRSTNUM-G6, FIRSTNUM-G7, FIRSTNUM-G8, FIRSTNUM-G9, FIRSTNUM-G10, FIRSTNUM-G11, FIRSTNUM-G12, FIRSTNUM-G13, FIRSTNUM-G14, FIRSTNUM-G15, FIRSTNUM-G16, FIRSTNUM-G17, FIRSTNUM-G18, FIRSTNUM-G19, FIRSTNUM-G20 |
| **Standards** | FCC 47 CFR Part 2(2.1093);<br>ANSI/IEEE C95.1-1992<br>IEEE Std 1528-2013;<br>Published RF exposure KDB procedures |

This device described above has been tested by Shenzhen NTEK. In accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 and KDB 865664 D01. Testing has shown that this device is capable of compliance with localized specific absorption rate (SAR) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992. The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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Test Sample Number ..... S241119049003

**Date of Test**

Date (s) of performance of tests ..... : Nov. 02, 2024 ~Dec. 09, 2024

Date of Issue ..... : Dec.24, 2024

Test Result ..... : **Pass**

| | | |
|---|---|---|
| Prepared By : | Reviewed By : | Approved By : |
| Owen Xiao | Aaron Cheng | Alex Li |
| Owen Xiao<br>(Project Engineer) | Aaron Cheng<br>(Supervisor) | Alex Li<br>(Manager) |

## ※ ※ Revision History ※ ※

| REV. | DESCRIPTION | ISSUED DATE | REMARK |
|---|---|---|---|
| Rev.1.0 | Initial Test Report Release | Dec.24, 2024 | Owen Xiao |
| | | | |
| | | | |
| | | | |

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# 1. General Information

## 1.1. RF exposure limits

(A).Limits for Occupational/Controlled Exposure (W/kg)

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

(B).Limits for General Population/Uncontrolled Exposure (W/kg)

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

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

**Occupational/Controlled Environments:**

Are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

**General Population/Uncontrolled Environments:**

Are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

| NOTE<br>TRUNK LIMIT<br>1.6 W/kg<br>APPLIED TO THIS EUT |
|---|

## 1.2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for FIRSTNUM-M4 are as follows.

| RF Exposure Conditions | | Equipment Class -Highest Reported SAR (W/kg) | | | |
|---|---|---|---|---|---|
| | | PCE | DTS | NII | DSS |
| 1-g Body-Worn (Separation distance of 10mm) | | 0.960 | 0.111 | 0.168 | N/A |
| 1-g Hotspot (Separation distance of 10mm) | | 0.960 | 0.120 | 0.168 | N/A |
| Max Simultaneous Tx | Body-Worn | 1.128 | 1.032 | 1.128 | N/A |
| | Hotspot | 1.128 | 1.032 | 1.128 | N/A |

Note: The Max Simultaneous Tx is calculated based on the same configuration and test position.
This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 & KDB 865664 D01.

## 1.3. EUT Description

| Device Information | |
|---|---|
| Product Name | 4G MIFI |
| Trade Name | FIRSTNUM/Stoneoim/VPLUS |
| Model Name | FIRSTNUM-M4 |
| Family Model | M4021, FIRSTNUM-G1, FIRSTNUM-G2, FIRSTNUM-G3, FIRSTNUM-G4, FIRSTNUM-G5, FIRSTNUM-G6, FIRSTNUM-G7, FIRSTNUM-G8, FIRSTNUM-G9, FIRSTNUM-G10, FIRSTNUM-G11, FIRSTNUM-G12, FIRSTNUM-G13, FIRSTNUM-G14, FIRSTNUM-G15, FIRSTNUM-G16, FIRSTNUM-G17, FIRSTNUM-G18, FIRSTNUM-G19, FIRSTNUM-G20 |
| Model Difference | All models are the same circuit and RF module, except for model names. |
| FCC ID | 2A954-M4021 |
| Device Phase | Identical Prototype |
| Exposure Category | General population / Uncontrolled environment |
| Antenna | FPC Antenna |
| Battery | DC 3.7V, 3000mAh, 11.1Wh |
| Hardware version | CSM91_MB_V1.0 |
| Software version | 1.04ME/FN |
| Device Operating Configurations | |
| Supporting Mode(s) | GSM 850/1900, WCDMA Band 2/5, LTE Band 2/4/5/7/12/41, WLAN 2.4G/5G |

| | | | |
|---|---|---|---|
| Test Modulation | GSM(GMSK/8PSK), WCDMA(QPSK), LTE(QPSK/16QAM), WLAN(DSSS/OFDM) | | |
| Device Class | B | | |
| Operating Frequency Range(s) | Band | Tx (MHz) | Rx (MHz) |
| | GSM 850 | 824-849 | 869-894 |
| | GSM 1900 | 1850-1910 | 1930-1990 |
| | WCDMA Band 2 | 1850-1910 | 1930-1990 |
| | WCDMA Band 4 | 1710-1755 | 2110-2155 |
| | WCDMA 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 Band 12 | 699-716 | 729-746 |
| | LTE Band 17 | 704-716 | 734-746 |
| | LTE Band 41 | 2555-2655 | |
| | LTE Band 66 | 1710-1780 | 2110-2200 |
| | WLAN 2.4G | 2412-2462 | |
| | WLAN 5.2G | 5180-5240 | |
| GPRS Multislot Class(12) | Max Number of Timeslots in Uplink | 4 | |
| | Max Number of Timeslots in Downlink | 4 | |
| | Max Total Timeslot | 5 | |
| EGPRS Multislot Class(12) | Max Number of Timeslots in Uplink | 4 | |
| | Max Number of Timeslots in Downlink | 4 | |
| | Max Total Timeslot | 5 | |
| Power Class | 4, tested with power level 5(GSM 850) | | |
| | 1, tested with power level 0(GSM 1900) | | |
| | 3, tested with power control “all 1”(WCDMA Band 2) | | |
| | 3, tested with power control “all 1”(WCDMA Band 4) | | |
| | 3, tested with power control “all 1”(WCDMA Band 5) | | |
| | 3, tested with power control all Max.(LTE Band 2) | | |
| | 3, tested with power control all Max.(LTE Band 4) | | |
| | 3, tested with power control all Max.(LTE Band 5) | | |
| | 3, tested with power control all Max.(LTE Band 7) | | |
| | 3, tested with power control all Max.(LTE Band 12) | | |
| | 3, tested with power control all Max.(LTE Band 17) | | |
| | 3, tested with power control all Max.(LTE Band 41) | | |
| | 3, tested with power control all Max.(LTE Band 66) | | |

### 1.4. Test specification(s)

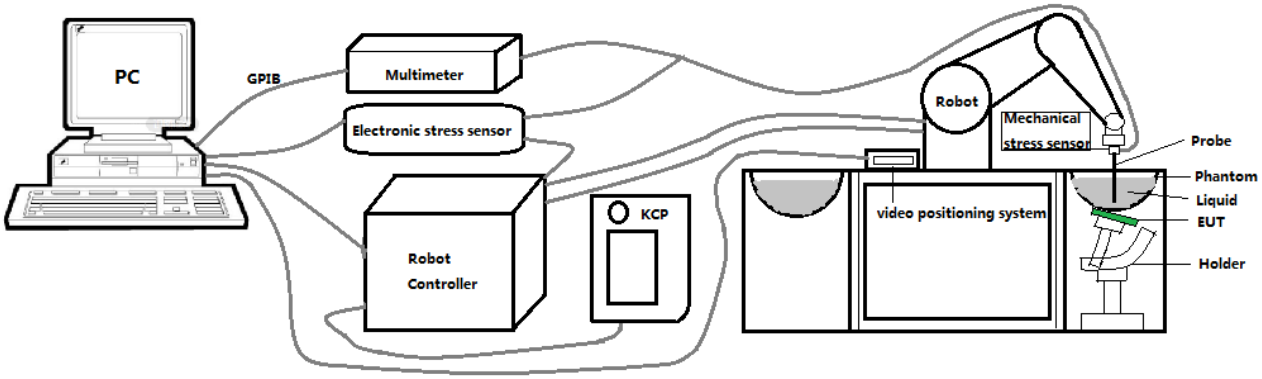
| |
|---|
| FCC 47 CFR Part 2(2.1093) |
| ANSI/IEEE C95.1-1992 |
| IEEE Std 1528-2013 |
| KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04; |
| KDB 865664 D02 RF Exposure Reporting v01r02; |
| KDB 447498 D01 General RF Exposure Guidance v06; |
| KDB 248227 D01 802.11 Wi-Fi SAR v02r02; |
| KDB 941225 D01 3G SAR Procedures v02r01; |
| KDB 941225 D05 SAR for LTE Devices v01r02; |
| KDB 941225 D06 Hotspot SAR v02r01 |

### 1.5. Ambient Condition

| | |
|---|---|
| Ambient temperature | 20°C – 24°C |
| Relative Humidity | 30% – 70% |

# 2. SAR Measurement System

## 2.1. SATIMO SAR Measurement Set-up Diagram




These measurements were performed with the automated near-field scanning system OPENSAR from SATIMO. The system is based on a high precision robot (working range: 901 mm), which positions the probes with a positional repeatability of better than ±0.03 mm. The SAR measurements were conducted with dosimetric probe (manufactured by SATIMO), designed in the classical triangular configuration and optimized for dosimetric evaluation.

The first step of the field measurement is the evaluation of the voltages induced on the probe by the device under test. Probe diode detectors are nonlinear. Below the diode compression point, the output voltage is proportional to the square of the applied E-field; above the diode compression point, it is linear to the applied E-field. The compression point depends on the diode, and a calibration procedure is necessary for each sensor of the probe.

The Keithley multimeter reads the voltage of each sensor and send these three values to the PC. The corresponding E field value is calculated using the probe calibration factors, which are stored in the working directory. This evaluation includes linearization of the diode characteristics. The field calculation is done separately for each sensor. Each component of the E field is displayed on the "Dipole Area Scan Interface" and the total E field is displayed on the "3D Interface"

## 2.2. Robot

The SATIMO SAR system uses the high precision robots from KUKA. For the 6-axis controller system, the robot controller version (KUKA) from KUKA is used. The KUKA robot series have many features that are important for our application:


- High precision (repeatability ±0.03 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

### 2.3. E-Field Probe

This E-field detection probe is composed of three orthogonal dipoles linked to special Schottky diodes with low detection thresholds. The probe allows the measurement of electric fields in liquids such as the one defined in the IEEE and CENELEC standards.

For the measurements the Specific Dosimetric E-Field Probe SN 08/16 EPGO287 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 2.5 mm
- Distance between probe tip and sensor center: 1 mm
- Distance between sensor center and the inner phantom surface: 2 mm (repeatability better than ±1 mm).
- Probe linearity: ±0.08 dB
- Axial isotropy: ±0.01 dB
- Hemispherical Isotropy: ±0.01 dB
- Calibration range: 650MHz to 5900MHz for head & body simulating liquid.
- Lower detection limit: 8mW/kg

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

#### 2.3.1. E-Field Probe Calibration

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than ±10%. The spherical isotropy shall be evaluated and within ±0.25dB. The sensitivity parameters (Norm X, Norm Y, and Norm Z), the diode compression parameter (DCP) and the conversion factor (Conv F) of the probe are tested. The calibration data can be referred to appendix D of this report.

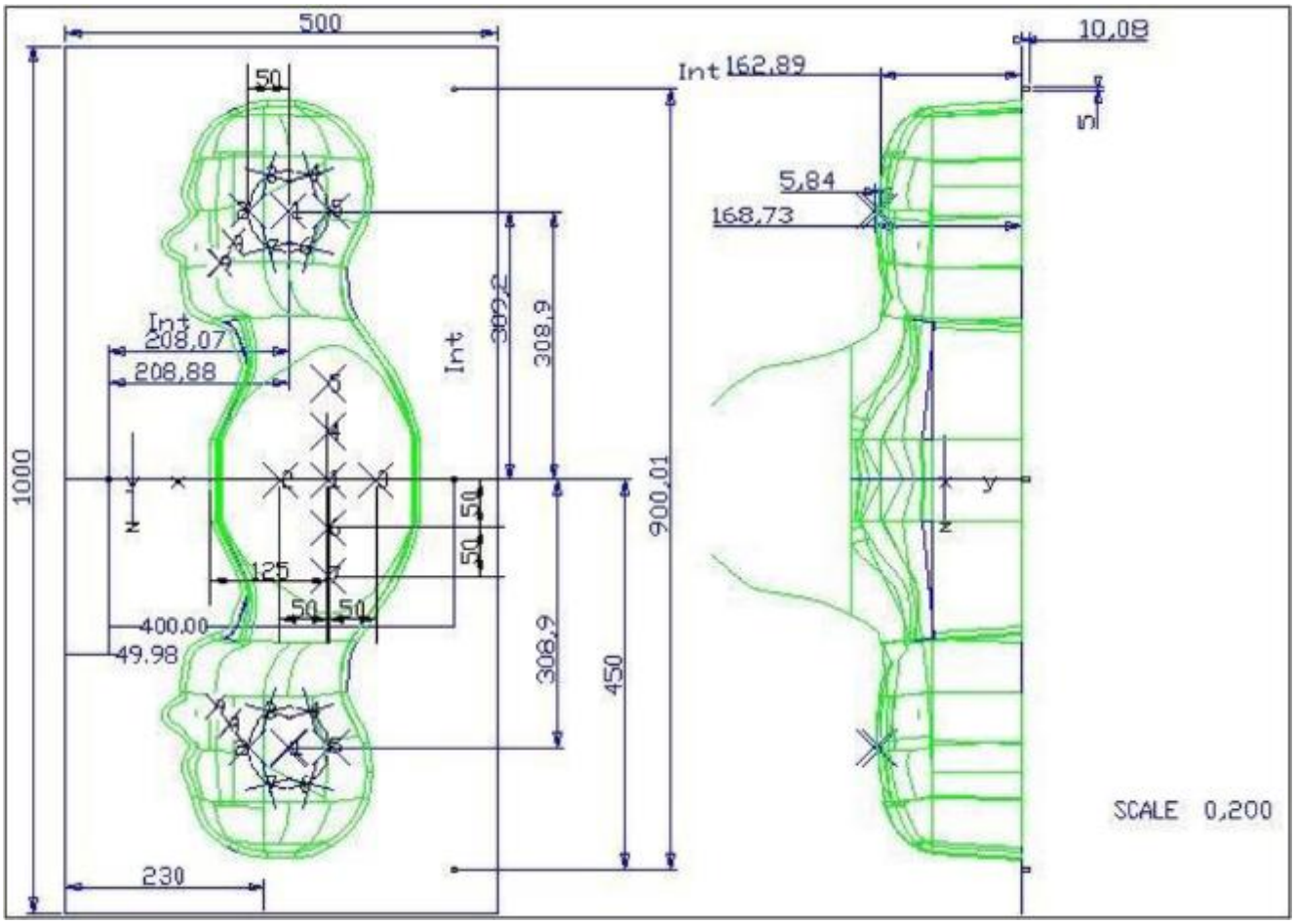
## 2.4. SAM phantoms

Photo of SAM phantom SN 16/15 SAM119

The SAM phantom is used to measure the SAR relative to people exposed to electro-magnetic field radiated by mobile phones.

### 2.4.1. Technical Data

| Serial Number | Shell thickness | Filling volume | Dimensions | Positionner Material | Permittivity | Loss Tangent |
|---|---|---|---|---|---|---|
| SN 16/15 SAM119 | 2 mm ±0.2 mm | 27 liters | Length:1000 mm<br>Width:500 mm<br>Height:200 mm | Gelcoat with fiberglass | 3.4 | 0.02 |

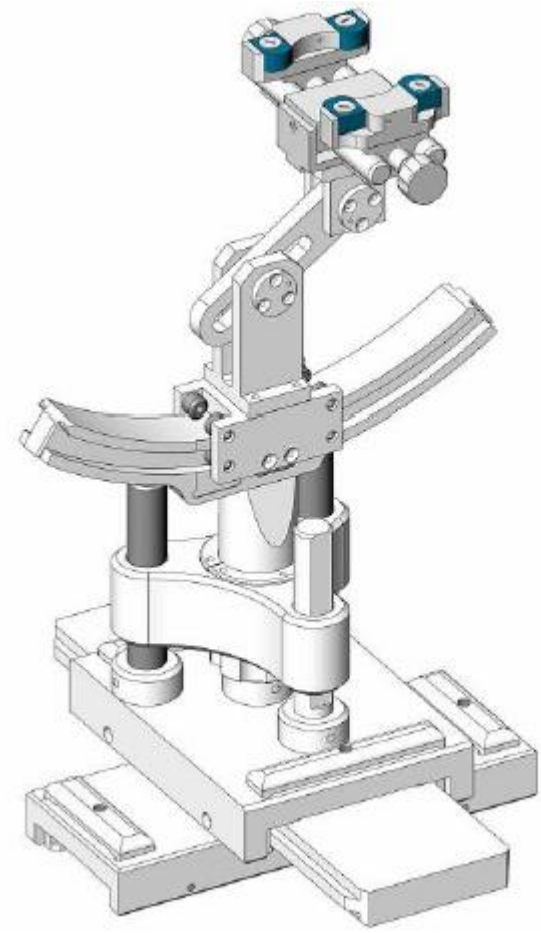



| Serial Number | Left Head(mm) | | Right Head(mm) | | Flat Part(mm) | |
|---|---|---|---|---|---|---|
| SN 16/15 SAM119 | 2 | 2.02 | 2 | 2.08 | 1 | 2.09 |
| | 3 | 2.05 | 3 | 2.06 | 2 | 2.06 |
| | 4 | 2.07 | 4 | 2.07 | 3 | 2.08 |
| | 5 | 2.08 | 5 | 2.08 | 4 | 2.10 |
| | 6 | 2.05 | 6 | 2.07 | 5 | 2.10 |
| | 7 | 2.05 | 7 | 2.05 | 6 | 2.07 |
| | 8 | 2.07 | 8 | 2.06 | 7 | 2.07 |
| | 9 | 2.08 | 9 | 2.06 | - | - |

The test, based on ultrasonic system, allows measuring the thickness with an accuracy of 10 µm.

## 2.5. 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 degree.



| Serial Number | Holder Material | Permittivity | Loss Tangent |
|---|---|---|---|
| SN 16/15 MSH100 | Delrin | 3.7 | 0.005 |

## 2.6. Test Equipment List

This table gives a complete overview of the SAR measurement equipment.

Devices used during the test described are marked ☒

| | Manufacturer | Name of Equipment | Type/Model | Serial Number | Calibration | |
|---|---|---|---|---|---|---|
| | | | | | Last Cal. | Due Date |
| ☒ | MVG | E FIELD PROBE | SSE2 | 4024-EPGO-442 | Oct.4.2024 | Oct.3.2025 |
| ☒ | MVG | 750 MHz Dipole | SID750 | SN 03/15 DIP 0G750-355 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☒ | MVG | 835 MHz Dipole | SID835 | SN 03/15 DIP 0G835-347 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☐ | MVG | 900 MHz Dipole | SID900 | SN 03/15 DIP 0G900-348 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☒ | MVG | 1800 MHz Dipole | SID1800 | SN 03/15 DIP 1G800-349 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☒ | MVG | 1900 MHz Dipole | SID1900 | SN 03/15 DIP 1G900-350 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☐ | MVG | 2000 MHz Dipole | SID2000 | SN 03/15 DIP 2G000-351 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☒ | MVG | 2450 MHz Dipole | SID2450 | SN 03/15 DIP 2G450-352 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☒ | MVG | 2600 MHz Dipole | SID2600 | SN 03/15 DIP 2G600-356 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☐ | MVG | 5000 MHz Dipole | SWG5500 | SN 13/14 WGA 33 | Feb. 21, 2024 | Feb. 20, 2027 |
| ☒ | MVG | Liquid measurement Kit | SCLMP | SN 21/15 OCPG 72 | NCR | NCR |
| ☒ | MVG | Power Amplifier | N.A | AMPLISAR_28/14_003 | NCR | NCR |
| ☒ | KEITHLEY | Millivoltmeter | 2000 | 4072790 | NCR | NCR |
| ☒ | R&S | Universal radio communication tester | CMU200 | 105747 | Apr. 26, 2024 | Apr. 25, 2025 |
| ☒ | R&S | Wideband radio communication tester | CMW500 | 103917 | Apr. 26, 2024 | Apr. 25, 2025 |
| ☒ | HP | Network Analyzer | E5071C | LPS-461 | Oct. 15, 2024 | Oct. 14, 2025 |

| | | | | | | |
|---|---|---|---|---|---|---|
| ☒ | Agilent | MXG Vector Signal Generator | N5182A | MY47070317 | Apr. 25, 2024 | Apr. 24, 2025 |
| ☒ | Agilent | Power meter | E4419B | MY45102538 | Apr. 25, 2024 | Apr. 24, 2025 |
| ☒ | Agilent | Power sensor | E9301A | MY41495644 | May. 30, 2024 | May. 29, 2025 |
| ☒ | Agilent | Power sensor | E9301A | US39212148 | Apr. 25, 2024 | Apr. 24, 2025 |
| ☒ | MCLI/USA | Directional Coupler | CB11-20 | 0D2L51502 | Apr. 26, 2024 | Apr. 25, 2027 |
| ☒ | N/A | Thermometer | N/A | LES-085 | Mar. 27, 2023 | Mar. 26, 2026 |
| ☒ | MVG | SAM Phantom | SSM2 | SN 16/15 SAM119 | NCR | NCR |
| ☒ | MVG | Device Holder | SMPPD | SN 16/15 MSH100 | NCR | NCR |

Measurement Software

| Manufacturer | Software Name | Software Version |
|---|---|---|
| SATIMO | OpenSAR | V4_02_31 |

# 3. SAR Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.

(b) Read the WWAN RF power level from the base station simulator.

(c) For WLAN/Bluetooth power measurement, use engineering software to configure EUT WLAN/Bluetooth continuously transmission, at maximum RF power in each supported wireless interface and frequency band.

(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/Bluetooth output power.

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/Bluetooth continuously transmission, at maximum RF power, in the highest power channel.

(b) Place the EUT in the positions as Appendix A demonstrates.

(c) Set scan area, grid size and other setting on the OPENSAR software.

(d) Measure SAR results for the highest power channel on each testing position.

(e) Find out the largest SAR result on these testing positions of each band.

(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg.

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

(a) Power reference measurement

(b) Area scan

(c) Zoom scan

(d) Power drift measurement

## 3.1. Power Reference

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

## 3.2. Area scan & Zoom scan

The area scan is a 2D scan to find the hot spot location on the DUT. The zoom scan is a 3D scan above the hot spot to calculate the 1g and 10g SAR value.

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 cannot 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.

From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g., 1 W/kg for 1,6 W/kg 1 g limit, or 1,26 W/kg for 2 W/kg, 10 g limit).

Area scan & Zoom scan scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: $\Delta x_{Area}$, $\Delta y_{Area}$</td><td>≤ 2 GHz: ≤ 15 mm<br>2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm<br>4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: $\Delta x_{Zoom}$, $\Delta y_{Zoom}$</td><td>≤ 2 GHz: ≤ 8 mm<br>2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*<br>4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm<br>4 – 5 GHz: ≤ 3 mm<br>5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm<br>4 – 5 GHz: ≤ 2.5 mm<br>5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">≤ 1.5·$\Delta z_{Zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm<br>4 – 5 GHz: ≥ 25 mm<br>5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.<br>* When zoom scan is required and the <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

### 3.3. 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 a fourth-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 averaged over 10 grams and 1 gram requires a very fine resolution in the three dimensional scanned data array.

### 3.4. Volumetric Scan

The volumetric scan consists to a full 3D scan over a specific area. This 3D scan is useful form multi Tx SAR measurement. Indeed, it is possible with OpenSAR to add, point by point, several volumetric scan to calculate the SAR value of the combined measurement as it is define in the standard IEEE1528 and IEC62209.

### 3.5. Power Drift

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

# 4. System Verification Procedure

## 4.1. Tissue Verification

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

| **Ingredients** (% of weight) | Head Tissue | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Frequency Band (MHz) | 750 | 835 | 900 | 1800 | 1900 | 2000 | 2450 | 2600 | 5000 |
| Water | 34.40 | 34.40 | 34.40 | 55.36 | 55.36 | 71.88 | 71.88 | 71.88 | 65.53 |
| NaCl | 0.79 | 0.79 | 0.79 | 0.35 | 0.35 | 0.16 | 0.16 | 0.16 | 0.00 |
| 1,2-Propanediol | 64.81 | 64.81 | 64.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Triton X-100 | 0.00 | 0.00 | 0.00 | 30.45 | 30.45 | 19.97 | 19.97 | 19.97 | 17.24 |
| DGBE | 0.00 | 0.00 | 0.00 | 13.84 | 13.84 | 7.99 | 7.99 | 7.99 | 0.00 |

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 depth from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm.

| Photo of Liquid depth for Head Position | Photo of Liquid depth for Body Position |
|---|---|
|  |  |

### 4.1.1. Tissue Dielectric Parameter Check Results

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

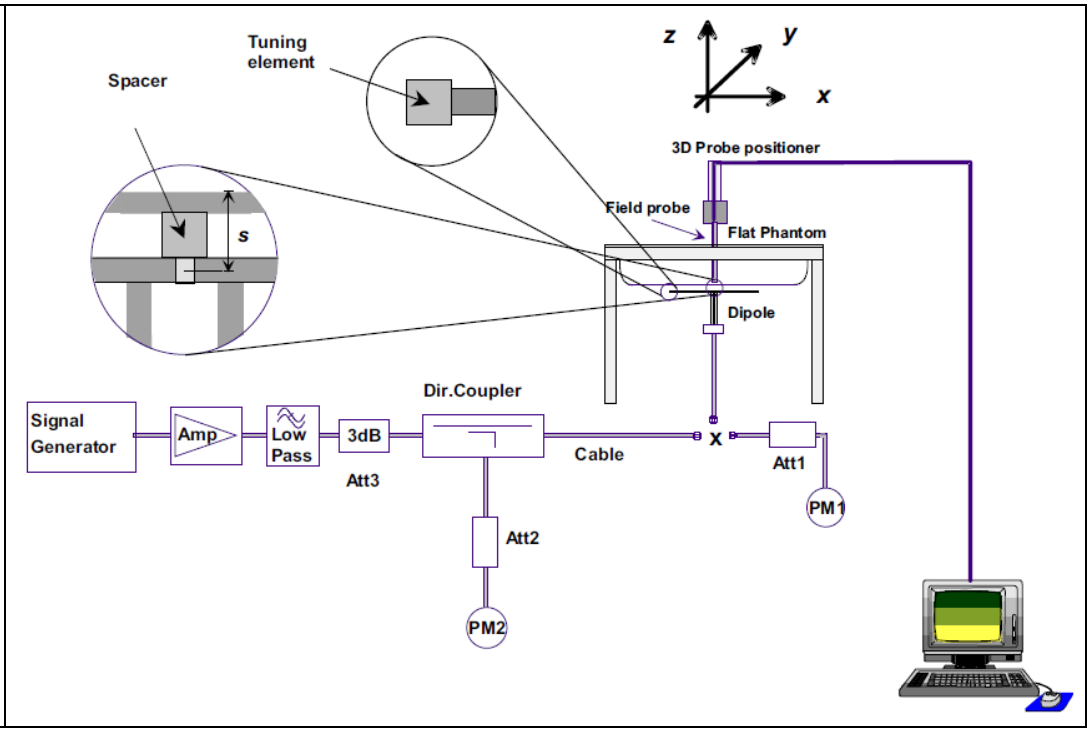
| Tissue Type | Measured Frequency (MHz) | Target Tissue | | Measured Tissue | | Liquid Temp. | Test Date |
|---|---|---|---|---|---|---|---|
| | | εr (±5%) | σ (S/m) (±5%) | εr | σ (S/m) | | |
| Head 750 | 750 | 41.96 (39.86~44.06) | 0.89 (0.85~0.93 ) | 40.87 | 0.90 | 21.0 °C | Nov. 27, 2024 |
| Head 850 | 835 | 41.50 (39.43~43.58) | 0.90 (0.86~0.95) | 41.93 | 0.91 | 21.5 °C | Nov. 26, 2024 |
| Head 1800 | 1800 | 40.00 (38.00~42.00) | 1.40 (1.33~1.47) | 38.97 | 1.37 | 21.5 °C | Dec. 06, 2024 |
| Head 1900 | 1900 | 40.00 (38.00~42.00) | 1.40 (1.33~1.47) | 38.33 | 1.44 | 21.7 °C | Nov. 24, 2024 |
| Head 1900 | 1900 | 40.00 (38.00~42.00) | 1.40 (1.33~1.47) | 38.46 | 1.46 | 21.6 °C | Dec. 09, 2024 |
| Head 2450 | 2450 | 39.20 (37.24~41.16) | 1.80 (1.71~1.89) | 37.96 | 1.80 | 21.2 °C | Nov. 18, 2024 |
| Head 2600 | 2600 | 39.01 (37.06~40.96) | 1.96 (1.86~2.06) | 39.03 | 2.00 | 21.5 °C | Nov. 02, 2024 |
| Head 5200 | 5200 | 36.00 (34.20~37.80) | 4.66 (4.43~4.89) | 34.61 | 4.53 | 21.9 °C | Nov. 19, 2024 |
| Head 5800 | 5800 | 35.30 (33.54~37.07) | 5.27 (5.01~5.53) | 34.03 | 5.17 | 21.4 °C | Nov. 30, 2024 |

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

## 4.2. System Verification Procedure

The system verification is performed for verifying the accuracy of the complete measurement system and performance of the software. 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. To adjust this power a power meter is used. The power sensor is connected to the cable before the system verification to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system verification 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).

The system verification is shown as below picture:



### 4.2.1. System Verification Results

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

| System Verification | Target SAR (1W) (±10%) | | Measured SAR | | | Measured SAR (Normalized to 1W) | | Liquid Temp. | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| | 1-g (W/Kg) | 10-g (W/Kg) | Input Power | 1-g (W/Kg) | 10-g (W/Kg) | 1-g (W/Kg) | 10-g (W/Kg) | | |
| 750MHz | 8.60 (7.74~9.46) | 5.78 (5.20~6.36) | 18dBm | 0.543 | 0.367 | 8.61 | 5.82 | 21.0 °C | Nov. 27, 2024 |
| 835MHz | 9.40 (8.46~10.34) | 6.28 (5.65~6.91) | 18dBm | 0.574 | 0.376 | 9.10 | 5.96 | 21.5 °C | Nov. 26, 2024 |
| 1800MHz | 37.06 (33.35~40.77) | 20.01 (18.01~22.01) | 18dBm | 2.273 | 1.176 | 36.02 | 18.64 | 21.5 °C | Dec. 06, 2024 |
| 1900MHz | 39.69 (35.72~43.66) | 20.92 (18.83~23.01) | 18dBm | 2.510 | 1.231 | 39.78 | 19.51 | 21.7 °C | Nov. 24, 2024 |
| 1900MHz | 39.69 (35.72~43.66) | 20.92 (18.83~23.01) | 18dBm | 2.396 | 1.181 | 37.97 | 18.72 | 21.6 °C | Dec. 09, 2024 |
| 2450MHz | 50.05 (45.05~55.06) | 23.80 (21.42~26.18) | 18dBm | 3.347 | 1.404 | 53.04 | 22.25 | 21.2 °C | Nov. 18, 2024 |
| 2600MHz | 54.16 (48.74~59.58) | 24.85 (22.37~27.34) | 18dBm | 3.386 | 1.538 | 53.66 | 24.37 | 21.5 °C | Nov. 02, 2024 |
| 5200MHz | 162.59 (146.33~178.85) | 56.21 (50.59~61.83) | 18dBm | 9.747 | 3.356 | 154.47 | 53.19 | 21.9 °C | Nov. 19, 2024 |
| 5800MHz | 182.20 (163.98~200.42) | 61.32 (55.19~67.45) | 20dBm | 19.246 | 6.543 | 192.46 | 65.43 | 21.4 °C | Nov. 30, 2024 |

# 5. SAR Measurement variability and uncertainty

## 5.1. SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are

repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

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

## 5.2. SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

# 6. RF Exposure Positions

## 6.1. Tablet host platform exposure conditions

Refer to KDB616217 D04, when the modular approach is used, transmitters and modules must be initially tested for standalone operations in generic host conditions according to the following minimum test separation distance and antenna installation requirements for incorporation in the tablet platform. The separation distance required for incorporation in qualified hosts is described in KDB 447498; item 5) of section 4.1 and item 1) of section 5.2.2 etc.

- ≤ 5 mm between the antenna and user for both back surface and edge exposure conditions
- the antennas used by the host must have been tested for equipment approval or qualify for SAR test exclusion
- the antenna polarization, physical orientation, rotation and installation configurations used by the host must have been tested for compliance or qualify for test exclusion
- when the *SAR Test Exclusion Threshold* in KDB 447498 applies, a *test separation distance* of 5 mm is required to determine test exclusion for the tablet platform

The antennas embedded in tablets are typically ≤ 5mm from the outer housing. The required antenna to user test separation distance is a “not to exceed test” distance required to apply the modular approach. Instead of the typical zero gap tablet edge test requirement between the edge of a tablet and the user, when an antenna has been tested at ≤ 5 mm according to the modular approach it can be incorporated into tablets with at least twice the tested distance from the outer housing of the tablet edge; otherwise, the tablet edge zero gap test requirement applies. When the dedicated host approach is applied, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom.

# 7. RF Output Power

## 7.1. GSM Conducted Power

| Band GSM850 | Burst-Averaged output Power (dBm) | | | | Frame-Averaged output Power (dBm) | | | |
|---|---|---|---|---|---|---|---|---|
| Tx Channel | Tune-up (dBm) | 128 | 189 | 251 | Tune-up (dBm) | 128 | 189 | 251 |
| Frequency (MHz) | | 824.2 | 836.4 | 848.8 | | 824.2 | 836.4 | 848.8 |
| GPRS(GMSK, 1 TS) | 32.00 | 31.66 | 31.48 | 31.54 | 22.97 | 22.63 | 22.45 | 22.51 |
| GPRS(GMSK, 2 TS) | 30.00 | 29.68 | 29.53 | 29.57 | 23.98 | 23.66 | 23.51 | 23.55 |
| GPRS(GMSK, 3 TS) | 28.00 | 27.77 | 27.63 | 27.67 | 23.74 | 23.51 | 23.37 | 23.41 |
| GPRS(GMSK, 4 TS) | 26.00 | 25.88 | 25.77 | 25.78 | 22.99 | 22.87 | 22.76 | 22.77 |
| EGPRS(8PSK, 1 TS) | 25.00 | 24.74 | 24.63 | 24.34 | 15.97 | 15.71 | 15.60 | 15.31 |
| EGPRS(8PSK, 2 TS) | 25.00 | 24.07 | 24.13 | 24.60 | 18.98 | 18.05 | 18.11 | 18.58 |
| EGPRS(8PSK, 3 TS) | 23.50 | 22.98 | 23.46 | 23.01 | 19.24 | 18.72 | 19.20 | 18.75 |
| EGPRS(8PSK, 4 TS) | 21.50 | 21.04 | 20.99 | 20.98 | 18.49 | 18.03 | 17.98 | 17.97 |
| Band GSM1900 | Burst-Averaged output Power (dBm) | | | | Frame-Averaged output Power (dBm) | | | |
| Tx Channel | Tune-up (dBm) | 512 | 661 | 810 | Tune-up (dBm) | 512 | 661 | 810 |
| Frequency (MHz) | | 1850.2 | 1880 | 1909.8 | | 1850.2 | 1880 | 1909.8 |
| GPRS(GMSK, 1 TS) | 30.50 | 30.16 | 30.19 | 30.01 | 21.47 | 21.13 | 21.16 | 20.98 |
| GPRS(GMSK, 2 TS) | 28.50 | 27.94 | 28.07 | 28.08 | 22.48 | 21.92 | 22.05 | 22.06 |
| GPRS(GMSK, 3 TS) | 26.50 | 26.32 | 26.45 | 26.48 | 22.24 | 22.06 | 22.19 | 22.22 |
| GPRS(GMSK, 4 TS) | 24.50 | 24.32 | 24.47 | 24.45 | 21.49 | 21.31 | 21.46 | 21.44 |
| EGPRS(8PSK, 1 TS) | 25.00 | 24.89 | 24.68 | 24.14 | 15.97 | 15.86 | 15.65 | 15.11 |
| EGPRS(8PSK, 2 TS) | 25.50 | 25.20 | 24.89 | 24.20 | 19.48 | 19.18 | 18.87 | 18.18 |
| EGPRS(8PSK, 3 TS) | 24.00 | 23.56 | 22.93 | 22.99 | 19.74 | 19.30 | 18.67 | 18.73 |
| EGPRS(8PSK, 4 TS) | 21.50 | 21.02 | 20.79 | 19.90 | 18.49 | 18.01 | 17.78 | 16.89 |

Note: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots. The calculated method are shown as below:

Frame-averaged power = Maximum burst averaged power (1 Tx Slot) - 9.03 dB

Frame-averaged power = Maximum burst averaged power (2 Tx Slots) - 6.02 dB

Frame-averaged power = Maximum burst averaged power (3 Tx Slots) - 4.26 dB

Frame-averaged power = Maximum burst averaged power (4 Tx Slots) - 3.01 dB

## 7.2. WCDMA Conducted Power

| WCDMA Band 2 | Burst-Averaged output Power (dBm) | | | |
|---|---|---|---|---|
| Tx Channel | Tune-up | 9262 | 9400 | 9538 |
| Frequency (MHz) | (dBm) | 1852.4 | 1880 | 1907.6 |
| RMC12.2K | 23.50 | 23.01 | 22.88 | 22.75 |
| HSDPA Sub 1 | 23.00 | 22.57 | 22.19 | 22.09 |
| HSDPA Sub 2 | 22.50 | 22.19 | 21.97 | 21.71 |
| HSDPA Sub 3 | 22.00 | 21.80 | 21.69 | 21.57 |
| HSDPA Sub 4 | 22.00 | 21.70 | 21.16 | 21.36 |
| HSUPA Sub 1 | 22.50 | 22.30 | 22.04 | 21.97 |
| HSUPA Sub 2 | 22.50 | 22.36 | 22.05 | 21.98 |
| HSUPA Sub 3 | 22.00 | 21.87 | 21.77 | 21.44 |
| HSUPA Sub 4 | 22.50 | 22.25 | 22.04 | 21.89 |
| HSUPA Sub 5 | 22.00 | 21.93 | 21.93 | 21.63 |
| WCDMA Band 4 | Burst-Averaged output Power (dBm) | | | |
| Tx Channel | Tune-up | 1312 | 1413 | 1513 |
| Frequency (MHz) | (dBm) | 1712.4 | 1732.6 | 1752.6 |
| RMC12.2K | 23.00 | 22.54 | 22.65 | 22.81 |
| HSDPA Sub 1 | 22.50 | 21.97 | 21.59 | 22.13 |
| HSDPA Sub 2 | 22.00 | 21.62 | 21.28 | 21.93 |
| HSDPA Sub 3 | 22.00 | 21.32 | 21.03 | 21.55 |
| HSDPA Sub 4 | 22.00 | 21.22 | 20.94 | 21.55 |
| HSUPA Sub 1 | 22.50 | 21.90 | 21.73 | 22.14 |
| HSUPA Sub 2 | 22.50 | 21.90 | 21.61 | 22.13 |
| HSUPA Sub 3 | 22.50 | 21.47 | 21.24 | 22.03 |
| HSUPA Sub 4 | 22.50 | 21.87 | 21.61 | 22.13 |
| HSUPA Sub 5 | 22.00 | 21.65 | 21.38 | 21.88 |
| WCDMA Band 5 | Burst-Averaged output Power (dBm) | | | |
| Tx Channel | Tune-up | 4132 | 4182 | 4233 |
| Frequency (MHz) | (dBm) | 826.4 | 836.4 | 846.6 |
| RMC12.2K | 23.00 | 22.53 | 22.42 | 22.54 |
| HSDPA Sub 1 | 22.50 | 22.26 | 22.11 | 22.09 |
| HSDPA Sub 2 | 22.00 | 21.95 | 21.86 | 21.76 |
| HSDPA Sub 3 | 22.00 | 21.37 | 21.53 | 21.03 |
| HSDPA Sub 4 | 22.00 | 21.55 | 21.41 | 21.14 |
| HSUPA Sub 1 | 22.50 | 22.16 | 22.13 | 21.85 |

| | | | | |
|---|---|---|---|---|
| HSUPA Sub 2 | 22.50 | 22.18 | 22.05 | 22.18 |
| HSUPA Sub 3 | 22.00 | 21.73 | 21.67 | 21.57 |
| HSUPA Sub 4 | 22.50 | 22.21 | 22.09 | 22.12 |
| HSUPA Sub 5 | 22.50 | 22.06 | 21.76 | 21.77 |

### 7.3. LTE Conducted Power

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 18607/1850.7 | 18900/1880 | 19193/1909.3 |
| LTE Band 2 | 1.4MHz | QPSK | 1 | 0 | 24.00 | 23.21 | 23.37 | 23.14 |
| | | | 1 | 2 | 24.00 | -18.58 | 23.46 | 23.29 |
| | | | 1 | 5 | 24.00 | -52.76 | 23.60 | 23.09 |
| | | | 3 | 0 | 23.50 | 23.18 | 23.10 | 22.85 |
| | | | 3 | 1 | 23.50 | 22.79 | 23.23 | 22.76 |
| | | | 3 | 2 | 23.50 | 23.26 | 23.20 | 22.74 |
| | | | 6 | 0 | 22.50 | 22.40 | 22.31 | 22.02 |
| | | 16QAM | 1 | 0 | 23.00 | 22.71 | 22.85 | 22.08 |
| | | | 1 | 2 | 23.00 | 22.61 | 22.92 | 22.76 |
| | | | 1 | 5 | 23.00 | 22.68 | 22.87 | 22.69 |
| | | | 3 | 0 | 23.00 | 22.91 | 22.72 | 22.42 |
| | | | 3 | 1 | 23.00 | 22.95 | 22.65 | 22.35 |
| | | | 3 | 2 | 23.00 | 22.87 | 22.72 | 22.32 |
| | | | 6 | 0 | 22.00 | 21.57 | 21.44 | 21.06 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 18615/1851.5 | 18900/1880 | 19185/1908.5 |
| LTE Band 2 | 3MHz | QPSK | 1 | 0 | 24.00 | 23.61 | 23.37 | 22.96 |
| | | | 1 | 7 | 24.00 | 23.53 | 23.56 | 22.96 |
| | | | 1 | 14 | 24.00 | 23.79 | 23.76 | 22.88 |
| | | | 8 | 0 | 23.00 | 22.43 | 22.38 | 22.06 |
| | | | 8 | 4 | 23.00 | 22.50 | 22.39 | 22.02 |
| | | | 8 | 7 | 23.00 | 22.49 | 22.37 | 22.03 |
| | | | 15 | 0 | 22.50 | 22.48 | 22.33 | 22.07 |
| | | 16QAM | 1 | 0 | 23.00 | 22.59 | 22.27 | 22.87 |
| | | | 1 | 7 | 23.00 | 22.65 | 22.22 | 22.83 |
| | | | 1 | 14 | 23.00 | 22.64 | 22.39 | 22.63 |
| | | | 8 | 0 | 22.00 | 21.90 | 21.65 | 21.53 |
| | | | 8 | 4 | 22.00 | 21.93 | 21.68 | 21.50 |
| | | | 8 | 7 | 22.00 | 21.91 | 21.74 | 21.49 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 15 | 0 | 22.00 | 21.85 | 21.65 | 21.40 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 18625/1852.5 | 18900/1880 | 19175/1907.5 |
| LTE Band 2 | 5MHz | QPSK | 1 | 0 | 24.00 | 23.52 | 23.53 | 23.23 |
| | | | 1 | 12 | 24.00 | 23.84 | 23.54 | 23.12 |
| | | | 1 | 24 | 24.00 | 23.94 | 23.54 | 22.76 |
| | | | 12 | 0 | 22.50 | 22.48 | 22.38 | 22.09 |
| | | | 12 | 6 | 22.50 | 22.40 | 22.30 | 22.08 |
| | | | 12 | 11 | 22.50 | 22.45 | 22.34 | 22.07 |
| | | | 25 | 0 | 22.50 | 22.43 | 22.33 | 21.99 |
| | | 16QAM | 1 | 0 | 23.00 | 22.60 | 22.53 | 22.19 |
| | | | 1 | 12 | 23.00 | 22.73 | 22.66 | 22.18 |
| | | | 1 | 24 | 23.00 | 22.66 | 22.54 | 22.08 |
| | | | 12 | 0 | 22.00 | 21.85 | 21.72 | 21.45 |
| | | | 12 | 6 | 22.00 | 21.83 | 21.72 | 21.39 |
| | | | 12 | 11 | 22.00 | 21.83 | 21.69 | 21.43 |
| | | | 25 | 0 | 22.00 | 21.97 | 21.88 | 21.40 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 18650/1855 | 18900/1880 | 19150/1905 |
| LTE Band 2 | 10MHz | QPSK | 1 | 0 | 23.50 | 23.36 | 23.26 | 23.21 |
| | | | 1 | 24 | 23.50 | 23.38 | 23.33 | 23.26 |
| | | | 1 | 49 | 23.50 | 23.39 | 23.40 | 23.10 |
| | | | 25 | 0 | 23.00 | 22.47 | 22.35 | 22.12 |
| | | | 25 | 12 | 23.00 | 22.50 | 22.33 | 22.16 |
| | | | 25 | 24 | 23.00 | 22.44 | 22.34 | 22.09 |
| | | | 50 | 0 | 22.50 | 22.49 | 22.31 | 22.14 |
| | | 16QAM | 1 | 0 | 23.50 | 23.31 | 22.58 | 23.16 |
| | | | 1 | 24 | 23.50 | 23.44 | 22.60 | 23.00 |
| | | | 1 | 49 | 23.50 | 23.32 | 22.70 | 22.82 |
| | | | 25 | 0 | 22.00 | 21.74 | 21.87 | 21.44 |
| | | | 25 | 12 | 22.00 | 21.73 | 21.93 | 21.39 |
| | | | 25 | 24 | 22.00 | 21.73 | 21.96 | 21.34 |
| | | | 50 | 0 | 22.00 | 21.73 | 21.71 | 21.46 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 18675/1857.5 | 18900/1880 | 19125/1902.5 |
| LTE | 15MHz | QPSK | 1 | 0 | 24.00 | 23.34 | 23.31 | 23.31 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Band 2 | | | 1 | 37 | 24.00 | 23.63 | 23.38 | 23.41 |
| | | | 1 | 74 | 24.00 | 23.65 | 23.44 | 23.03 |
| | | | 36 | 0 | 22.50 | 22.48 | 22.37 | 22.33 |
| | | | 36 | 18 | 22.50 | 22.49 | 22.44 | 22.12 |
| | | | 36 | 37 | 22.50 | 22.49 | 22.43 | 22.10 |
| | | | 75 | 0 | 22.50 | 22.40 | 22.33 | 22.25 |
| | | 16QAM | 1 | 0 | 23.50 | 23.37 | 22.67 | 23.36 |
| | | | 1 | 37 | 23.50 | 23.39 | 22.59 | 23.05 |
| | | | 1 | 74 | 23.50 | 23.31 | 22.79 | 22.73 |
| | | | 36 | 0 | 22.00 | 21.84 | 21.71 | 21.64 |
| | | | 36 | 18 | 22.00 | 21.69 | 21.79 | 21.48 |
| | | | 36 | 37 | 22.00 | 21.79 | 21.76 | 21.41 |
| | | | 75 | 0 | 22.00 | 21.82 | 21.67 | 21.55 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 18700/1860 | 18900/1880 | 19100/1900 |
| LTE Band 2 | 20MHz | QPSK | 1 | 0 | 24.00 | 23.61 | 23.60 | 23.76 |
| | | | 1 | 49 | 24.00 | 23.64 | 23.59 | 23.49 |
| | | | 1 | 99 | 24.00 | 23.90 | 23.72 | 23.20 |
| | | | 50 | 0 | 23.00 | 22.58 | 22.28 | 22.47 |
| | | | 50 | 24 | 23.00 | 22.48 | 22.36 | 22.27 |
| | | | 50 | 49 | 23.00 | 22.43 | 22.47 | 22.18 |
| | | | 100 | 0 | 22.50 | 22.49 | 22.45 | 22.40 |
| | | 16QAM | 1 | 0 | 23.00 | 22.67 | 22.19 | 22.52 |
| | | | 1 | 49 | 23.00 | 22.77 | 22.33 | 22.24 |
| | | | 1 | 99 | 23.00 | 22.59 | 22.42 | 21.96 |
| | | | 50 | 0 | 22.00 | 21.82 | 21.69 | 21.78 |
| | | | 50 | 24 | 22.00 | 21.78 | 21.71 | 21.61 |
| | | | 50 | 49 | 22.00 | 21.76 | 21.73 | 21.50 |
| | | | 100 | 0 | 22.00 | 21.82 | 21.73 | 21.73 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 19957/1710.7 | 20175/1732.5 | 20393/1754.3 |
| LTE Band 4 | 1.4MHz | QPSK | 1 | 0 | 24.00 | 23.03 | 23.61 | 23.32 |
| | | | 1 | 2 | 24.00 | 23.08 | 23.85 | 23.48 |
| | | | 1 | 5 | 24.00 | 23.04 | 23.87 | 23.43 |
| | | | 3 | 0 | 23.50 | 23.20 | 23.37 | 23.24 |
| | | | 3 | 1 | 23.50 | 23.24 | 23.44 | 23.10 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 3 | 2 | 23.50 | 23.24 | 23.37 | 23.08 |
| | | | 6 | 0 | 23.00 | 22.34 | 22.51 | 22.31 |
| | | 16QAM | 1 | 0 | 24.00 | 22.65 | 23.67 | 22.82 |
| | | | 1 | 2 | 24.00 | 22.57 | 23.76 | 22.86 |
| | | | 1 | 5 | 24.00 | 22.59 | 23.57 | 22.93 |
| | | | 3 | 0 | 23.50 | 22.86 | 23.08 | 23.06 |
| | | | 3 | 1 | 23.50 | 22.74 | 23.04 | 23.08 |
| | | | 3 | 2 | 23.50 | 22.70 | 22.99 | 23.10 |
| | | | 6 | 0 | 22.00 | 21.51 | 21.66 | 21.55 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 19965/1711.5 | 20175/1732.5 | 20385/1753.5 |
| LTE Band 4 | 3MHz | QPSK | 1 | 0 | 24.00 | 23.31 | 23.35 | 23.23 |
| | | | 1 | 7 | 24.00 | 23.34 | 23.41 | 23.45 |
| | | | 1 | 14 | 24.00 | 23.48 | 23.59 | 23.50 |
| | | | 8 | 0 | 23.00 | 22.32 | 22.60 | 22.41 |
| | | | 8 | 4 | 23.00 | 22.31 | 22.62 | 22.38 |
| | | | 8 | 7 | 23.00 | 22.29 | 22.56 | 22.39 |
| | | | 15 | 0 | 23.00 | 22.28 | 22.58 | 22.31 |
| | | 16QAM | 1 | 0 | 24.00 | 23.38 | 23.57 | 23.36 |
| | | | 1 | 7 | 24.00 | 23.34 | 23.70 | 23.53 |
| | | | 1 | 14 | 24.00 | 23.35 | 23.71 | 23.30 |
| | | | 8 | 0 | 22.50 | 21.70 | 21.99 | 21.83 |
| | | | 8 | 4 | 22.50 | 21.64 | 22.01 | 21.74 |
| | | | 8 | 7 | 22.50 | 21.71 | 22.05 | 21.84 |
| | | | 15 | 0 | 22.00 | 21.65 | 22.00 | 21.88 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 19975/1712.5 | 20175/1732.5 | 20375/1752.5 |
| LTE Band 4 | 5MHz | QPSK | 1 | 0 | 24.00 | 23.57 | 23.73 | 23.54 |
| | | | 1 | 12 | 24.00 | 23.54 | 23.86 | 23.79 |
| | | | 1 | 24 | 24.00 | 23.55 | 23.90 | 23.77 |
| | | | 12 | 0 | 23.00 | 22.27 | 22.61 | 22.37 |
| | | | 12 | 6 | 23.00 | 22.31 | 22.57 | 22.37 |
| | | | 12 | 11 | 23.00 | 22.27 | 22.65 | 22.37 |
| | | | 25 | 0 | 23.00 | 22.27 | 22.55 | 22.37 |
| | | 16QAM | 1 | 0 | 23.00 | 22.56 | 22.84 | 22.68 |
| | | | 1 | 12 | 23.00 | 22.52 | 22.82 | 22.59 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 24 | 23.00 | 22.49 | 22.81 | 22.63 |
| | | | 12 | 0 | 22.00 | 21.66 | 21.93 | 21.75 |
| | | | 12 | 6 | 22.00 | 21.61 | 21.92 | 21.78 |
| | | | 12 | 11 | 22.00 | 21.61 | 21.97 | 21.67 |
| | | | 25 | 0 | 22.00 | 21.84 | 21.85 | 21.86 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 20000/1715 | 20175/1732.5 | 20350/1750 |
| LTE Band 4 | 10MHz | QPSK | 1 | 0 | 24.00 | 23.28 | 23.38 | 23.38 |
| | | | 1 | 24 | 24.00 | 23.55 | 23.77 | 23.43 |
| | | | 1 | 49 | 24.00 | 23.55 | 23.89 | 23.58 |
| | | | 25 | 0 | 23.00 | 22.25 | 22.52 | 22.44 |
| | | | 25 | 12 | 23.00 | 22.23 | 22.55 | 22.40 |
| | | | 25 | 24 | 23.00 | 22.21 | 22.62 | 22.42 |
| | | | 50 | 0 | 23.00 | 22.25 | 22.53 | 22.43 |
| | | 16QAM | 1 | 0 | 24.00 | 22.61 | 23.43 | 23.30 |
| | | | 1 | 24 | 24.00 | 22.50 | 23.62 | 23.37 |
| | | | 1 | 49 | 24.00 | 22.62 | 23.71 | 23.34 |
| | | | 25 | 0 | 22.00 | 21.76 | 21.81 | 21.69 |
| | | | 25 | 12 | 22.00 | 21.79 | 21.90 | 21.66 |
| | | | 25 | 24 | 22.00 | 21.75 | 21.85 | 21.66 |
| | | | 50 | 0 | 22.00 | 21.55 | 21.87 | 21.79 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 20025/1717.5 | 20175/1732.5 | 20325/1747.5 |
| LTE Band 4 | 15MHz | QPSK | 1 | 0 | 24.00 | 23.56 | 23.35 | 23.45 |
| | | | 1 | 37 | 24.00 | 23.54 | 23.53 | 23.33 |
| | | | 1 | 74 | 24.00 | 23.84 | 23.99 | 23.23 |
| | | | 36 | 0 | 23.00 | 22.31 | 22.46 | 22.49 |
| | | | 36 | 18 | 23.00 | 22.22 | 22.58 | 22.41 |
| | | | 36 | 37 | 23.00 | 22.27 | 22.64 | 22.41 |
| | | | 75 | 0 | 23.00 | 22.24 | 22.55 | 22.47 |
| | | 16QAM | 1 | 0 | 24.00 | 22.49 | 23.37 | 23.64 |
| | | | 1 | 37 | 24.00 | 22.69 | 23.58 | 23.54 |
| | | | 1 | 74 | 24.00 | 22.81 | 23.76 | 23.41 |
| | | | 36 | 0 | 22.00 | 21.64 | 21.79 | 21.71 |
| | | | 36 | 18 | 22.00 | 21.65 | 21.85 | 21.69 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 36 | 37 | 22.00 | 21.66 | 21.91 | 21.65 |
| | | | 75 | 0 | 22.00 | 21.53 | 21.98 | 21.90 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 20050/1720 | 20175/1732.5 | 20300/1745 |
| LTE Band 4 | 20MHz | QPSK | 1 | 0 | 24.00 | 23.57 | 23.40 | 23.50 |
| | | | 1 | 49 | 24.00 | 23.53 | 23.58 | 23.64 |
| | | | 1 | 99 | 24.00 | 23.81 | 23.73 | 23.52 |
| | | | 50 | 0 | 23.00 | 22.27 | 22.44 | 22.56 |
| | | | 50 | 24 | 23.00 | 22.24 | 22.60 | 22.52 |
| | | | 50 | 49 | 23.00 | 22.42 | 22.58 | 22.46 |
| | | | 100 | 0 | 23.00 | 22.29 | 22.46 | 22.50 |
| | | 16QAM | 1 | 0 | 24.00 | 23.31 | 22.67 | 22.65 |
| | | | 1 | 49 | 24.00 | 23.30 | 22.94 | 22.89 |
| | | | 1 | 99 | 24.00 | 23.65 | 23.09 | 22.99 |
| | | | 50 | 0 | 22.00 | 21.48 | 21.83 | 21.94 |
| | | | 50 | 24 | 22.00 | 21.63 | 21.89 | 21.80 |
| | | | 50 | 49 | 22.00 | 21.66 | 21.98 | 21.74 |
| | | | 100 | 0 | 22.00 | 21.63 | 21.94 | 21.86 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 20407/824.7 | 20525/836.5 | 20643/848.3 |
| LTE Band 5 | 1.4MHz | QPSK | 1 | 0 | 24.00 | 23.16 | 23.58 | 23.57 |
| | | | 1 | 2 | 24.00 | 23.12 | 23.64 | 23.55 |
| | | | 1 | 5 | 24.00 | 23.17 | 23.78 | 23.57 |
| | | | 3 | 0 | 23.50 | 23.25 | 23.35 | 23.32 |
| | | | 3 | 1 | 23.50 | 23.31 | 23.35 | 23.25 |
| | | | 3 | 2 | 23.50 | 23.29 | 23.33 | 23.24 |
| | | | 6 | 0 | 22.50 | 22.26 | 22.38 | 22.29 |
| | | 16QAM | 1 | 0 | 23.00 | 22.50 | 22.37 | 22.03 |
| | | | 1 | 2 | 23.00 | 22.34 | 22.50 | 22.05 |
| | | | 1 | 5 | 23.00 | 22.46 | 22.35 | 22.07 |
| | | | 3 | 0 | 23.00 | 22.60 | 22.88 | 22.26 |
| | | | 3 | 1 | 23.00 | 22.62 | 22.79 | 22.32 |
| | | | 3 | 2 | 23.00 | 22.54 | 22.88 | 22.23 |
| | | | 6 | 0 | 21.50 | 21.11 | 21.37 | 21.33 |
| Band | Band | Modulation | RB Configuration | | Tune-up | Channel/Frequency(MHz) | | |

| | Width | | RB Size | RB Offset | (dBm) | 20415/825.5 | 20525/836.5 | 20635/847.5 |
|---|---|---|---|---|---|---|---|---|
| LTE Band 5 | 3MHz | QPSK | 1 | 0 | 24.00 | 23.19 | 23.30 | 23.59 |
| | | | 1 | 7 | 24.00 | 23.22 | 23.51 | 23.62 |
| | | | 1 | 14 | 24.00 | 23.40 | 23.57 | 23.63 |
| | | | 8 | 0 | 22.50 | 22.28 | 22.47 | 22.35 |
| | | | 8 | 4 | 22.50 | 22.25 | 22.49 | 22.36 |
| | | | 8 | 7 | 22.50 | 22.36 | 22.38 | 22.42 |
| | | | 15 | 0 | 22.50 | 22.33 | 22.48 | 22.28 |
| | | 16QAM | 1 | 0 | 23.50 | 22.88 | 23.25 | 22.14 |
| | | | 1 | 7 | 23.50 | 22.88 | 23.18 | 22.18 |
| | | | 1 | 14 | 23.50 | 22.87 | 23.12 | 22.09 |
| | | | 8 | 0 | 22.00 | 21.60 | 21.66 | 21.47 |
| | | | 8 | 4 | 22.00 | 21.58 | 21.68 | 21.45 |
| | | | 8 | 7 | 22.00 | 21.56 | 21.63 | 21.52 |
| | | | 15 | 0 | 22.00 | 21.54 | 21.62 | 21.45 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 20425/826.5 | 20525/836.5 | 20625/846.5 |
| LTE Band 5 | 5MHz | QPSK | 1 | 0 | 24.00 | 23.54 | 23.64 | 23.60 |
| | | | 1 | 12 | 24.00 | 23.60 | 23.69 | 23.58 |
| | | | 1 | 24 | 24.00 | 23.94 | 23.85 | 23.57 |
| | | | 12 | 0 | 22.50 | 22.36 | 22.38 | 22.29 |
| | | | 12 | 6 | 22.50 | 22.42 | 22.38 | 22.40 |
| | | | 12 | 11 | 22.50 | 22.38 | 22.33 | 22.37 |
| | | | 25 | 0 | 22.50 | 22.25 | 22.38 | 22.29 |
| | | 16QAM | 1 | 0 | 23.00 | 22.33 | 22.48 | 22.50 |
| | | | 1 | 12 | 23.00 | 22.46 | 22.56 | 22.46 |
| | | | 1 | 24 | 23.00 | 22.38 | 22.62 | 22.42 |
| | | | 12 | 0 | 22.00 | 21.52 | 21.69 | 21.54 |
| | | | 12 | 6 | 22.00 | 21.61 | 21.62 | 21.47 |
| | | | 12 | 11 | 22.00 | 21.46 | 21.65 | 21.65 |
| | | | 25 | 0 | 22.00 | 21.74 | 21.81 | 21.70 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 20450/829 | 20525/836.5 | 20600/844 |
| LTE Band 5 | 10MHz | QPSK | 1 | 0 | 24.00 | 23.49 | 23.39 | 23.36 |
| | | | 1 | 24 | 24.00 | 23.61 | 23.33 | 23.53 |
| | | | 1 | 49 | 24.00 | 23.89 | 23.37 | 23.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 25 | 0 | 22.50 | 22.32 | 22.45 | 22.33 |
| | | | 25 | 12 | 22.50 | 22.46 | 22.39 | 22.27 |
| | | | 25 | 24 | 22.50 | 22.41 | 22.40 | 22.30 |
| | | | 50 | 0 | 22.50 | 22.31 | 22.35 | 22.41 |
| | | 16QAM | 1 | 0 | 23.50 | 22.42 | 23.19 | 23.11 |
| | | | 1 | 24 | 23.50 | 22.54 | 23.19 | 23.10 |
| | | | 1 | 49 | 23.50 | 22.45 | 23.03 | 23.10 |
| | | | 25 | 0 | 22.00 | 21.66 | 21.57 | 21.54 |
| | | | 25 | 12 | 22.00 | 21.71 | 21.55 | 21.45 |
| | | | 25 | 24 | 22.00 | 21.70 | 21.47 | 21.48 |
| | | | 50 | 0 | 22.00 | 21.56 | 21.65 | 21.59 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 20775/2502.5 | 21100/2535 | 21425/2567.5 |
| LTE Band 7 | 5MHz | QPSK | 1 | 0 | 24.00 | 23.60 | 23.42 | 23.35 |
| | | | 1 | 12 | 24.00 | 23.47 | 23.48 | 23.43 |
| | | | 1 | 24 | 24.00 | 23.46 | 23.56 | 23.47 |
| | | | 12 | 0 | 23.00 | 22.57 | 22.52 | 22.39 |
| | | | 12 | 6 | 23.00 | 22.53 | 22.50 | 22.48 |
| | | | 12 | 11 | 23.00 | 22.53 | 22.52 | 22.53 |
| | | | 25 | 0 | 23.00 | 22.54 | 22.51 | 22.44 |
| | | 16QAM | 1 | 0 | 23.00 | 22.64 | 22.67 | 22.59 |
| | | | 1 | 12 | 23.00 | 22.60 | 22.73 | 22.59 |
| | | | 1 | 24 | 23.00 | 22.71 | 22.71 | 22.59 |
| | | | 12 | 0 | 22.00 | 21.56 | 21.54 | 21.42 |
| | | | 12 | 6 | 22.00 | 21.52 | 21.47 | 21.46 |
| | | | 12 | 11 | 22.00 | 21.55 | 21.51 | 21.49 |
| | | | 25 | 0 | 22.00 | 21.53 | 21.52 | 21.47 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 20800/2505 | 21100/2535 | 21400/2565 |
| LTE Band 7 | 10MHz | QPSK | 1 | 0 | 24.00 | 23.45 | 23.33 | 23.26 |
| | | | 1 | 24 | 24.00 | 23.36 | 23.36 | 23.32 |
| | | | 1 | 49 | 24.00 | 23.39 | 23.54 | 23.51 |
| | | | 25 | 0 | 23.00 | 22.52 | 22.42 | 22.33 |
| | | | 25 | 12 | 23.00 | 22.47 | 22.49 | 22.33 |
| | | | 25 | 24 | 23.00 | 22.46 | 22.58 | 22.44 |
| | | | 50 | 0 | 23.00 | 22.48 | 22.53 | 22.42 |
| | | 16QAM | 1 | 0 | 23.00 | 22.70 | 22.66 | 22.60 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 24 | 23.00 | 22.73 | 22.60 | 22.46 |
| | | | 1 | 49 | 23.00 | 22.63 | 22.88 | 22.65 |
| | | | 25 | 0 | 22.00 | 21.57 | 21.45 | 21.34 |
| | | | 25 | 12 | 22.00 | 21.50 | 21.49 | 21.35 |
| | | | 25 | 24 | 22.00 | 21.43 | 21.61 | 21.49 |
| | | | 50 | 0 | 22.00 | 21.49 | 21.55 | 21.41 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 20825/2507.5 | 21100/2535 | 21375/2562.5 |
| LTE Band 7 | 15MHz | QPSK | 1 | 0 | 24.00 | 23.49 | 23.40 | 23.30 |
| | | | 1 | 37 | 24.00 | 23.45 | 23.56 | 23.35 |
| | | | 1 | 74 | 24.00 | 23.37 | 23.58 | 23.42 |
| | | | 36 | 0 | 23.00 | 22.61 | 22.47 | 22.40 |
| | | | 36 | 18 | 23.00 | 22.57 | 22.58 | 22.41 |
| | | | 36 | 37 | 23.00 | 22.46 | 22.66 | 22.49 |
| | | | 75 | 0 | 23.00 | 22.54 | 22.56 | 22.46 |
| | | 16QAM | 1 | 0 | 23.00 | 22.72 | 22.65 | 22.51 |
| | | | 1 | 37 | 23.00 | 22.71 | 22.88 | 22.56 |
| | | | 1 | 74 | 23.00 | 22.70 | 22.83 | 22.65 |
| | | | 36 | 0 | 22.00 | 21.61 | 21.49 | 21.37 |
| | | | 36 | 18 | 22.00 | 21.51 | 21.57 | 21.38 |
| | | | 36 | 37 | 22.00 | 21.45 | 21.67 | 21.48 |
| | | | 75 | 0 | 22.00 | 21.56 | 21.56 | 21.46 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 20850/2510 | 21100/2535 | 21350/2560 |
| LTE Band 7 | 20MHz | QPSK | 1 | 0 | 24.00 | 23.41 | 23.30 | 23.45 |
| | | | 1 | 49 | 24.00 | 23.43 | 23.58 | 23.29 |
| | | | 1 | 99 | 24.00 | 23.21 | 23.46 | 23.47 |
| | | | 50 | 0 | 23.00 | 22.60 | 22.46 | 22.50 |
| | | | 50 | 24 | 23.00 | 22.57 | 22.65 | 22.45 |
| | | | 50 | 49 | 23.00 | 22.43 | 22.70 | 22.49 |
| | | | 100 | 0 | 23.00 | 22.52 | 22.55 | 22.51 |
| | | 16QAM | 1 | 0 | 23.00 | 22.81 | 22.59 | 22.69 |
| | | | 1 | 49 | 23.00 | 22.63 | 22.81 | 22.75 |
| | | | 1 | 99 | 23.00 | 22.57 | 22.80 | 22.68 |
| | | | 50 | 0 | 22.00 | 21.62 | 21.43 | 21.51 |
| | | | 50 | 24 | 22.00 | 21.55 | 21.65 | 21.45 |
| | | | 50 | 49 | 22.00 | 21.46 | 21.69 | 21.51 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 100 | 0 | 22.00 | 21.56 | 21.57 | 21.52 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 23017/699.7 | 23095/707.5 | 23173/715.3 |
| LTE Band 12 | 1.4MHz | QPSK | 1 | 0 | 22.50 | 21.98 | 22.08 | 21.93 |
| | | | 1 | 2 | 22.50 | 22.02 | 22.08 | 22.02 |
| | | | 1 | 5 | 22.50 | 22.00 | 22.08 | 21.95 |
| | | | 3 | 0 | 22.50 | 22.11 | 21.98 | 22.09 |
| | | | 3 | 1 | 22.50 | 22.12 | 21.92 | 22.15 |
| | | | 3 | 2 | 22.50 | 22.08 | 22.03 | 22.04 |
| | | | 6 | 0 | 21.50 | 21.07 | 20.94 | 21.13 |
| | | 16QAM | 1 | 0 | 22.00 | 21.70 | 21.13 | 21.63 |
| | | | 1 | 2 | 22.00 | 21.80 | 21.14 | 21.87 |
| | | | 1 | 5 | 22.00 | 21.71 | 21.25 | 21.76 |
| | | | 3 | 0 | 22.00 | 21.34 | 21.27 | 21.43 |
| | | | 3 | 1 | 22.00 | 21.36 | 21.42 | 21.34 |
| | | | 3 | 2 | 22.00 | 21.34 | 21.28 | 21.50 |
| | | | 6 | 0 | 20.50 | 19.85 | 20.08 | 20.03 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 23025/700.5 | 23095/707.5 | 23165/714.5 |
| LTE Band 12 | 3MHz | QPSK | 1 | 0 | 22.50 | 22.24 | 22.14 | 21.97 |
| | | | 1 | 7 | 22.50 | 22.13 | 22.20 | 22.12 |
| | | | 1 | 14 | 22.50 | 22.15 | 22.21 | 22.17 |
| | | | 8 | 0 | 21.50 | 21.25 | 21.17 | 21.19 |
| | | | 8 | 4 | 21.50 | 21.19 | 21.13 | 21.06 |
| | | | 8 | 7 | 21.50 | 21.19 | 21.13 | 21.21 |
| | | | 15 | 0 | 21.50 | 21.28 | 21.07 | 21.13 |
| | | 16QAM | 1 | 0 | 22.00 | 21.81 | 21.76 | 21.68 |
| | | | 1 | 7 | 22.00 | 21.75 | 21.67 | 21.71 |
| | | | 1 | 14 | 22.00 | 21.68 | 21.61 | 21.77 |
| | | | 8 | 0 | 20.50 | 20.36 | 20.37 | 20.39 |
| | | | 8 | 4 | 20.50 | 20.36 | 20.34 | 20.37 |
| | | | 8 | 7 | 20.50 | 20.35 | 20.35 | 20.37 |
| | | | 15 | 0 | 20.50 | 20.42 | 20.44 | 20.37 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 23035/701.5 | 23095/707.5 | 23155/713.5 |
| LTE | 5MHz | QPSK | 1 | 0 | 23.00 | 22.49 | 22.10 | 22.10 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Band 12 | | | 1 | 12 | 23.00 | 22.55 | 22.19 | 22.12 |
| | | | 1 | 24 | 23.00 | 22.48 | 22.32 | 22.33 |
| | | | 12 | 0 | 21.50 | 21.16 | 21.04 | 21.06 |
| | | | 12 | 6 | 21.50 | 21.15 | 21.08 | 21.15 |
| | | | 12 | 11 | 21.50 | 21.24 | 21.04 | 21.20 |
| | | | 25 | 0 | 21.50 | 21.26 | 21.18 | 21.12 |
| | | 16QAM | 1 | 0 | 22.00 | 21.33 | 21.71 | 21.80 |
| | | | 1 | 12 | 22.00 | 21.21 | 21.79 | 21.76 |
| | | | 1 | 24 | 22.00 | 21.12 | 21.66 | 21.69 |
| | | | 12 | 0 | 20.50 | 20.41 | 20.26 | 20.30 |
| | | | 12 | 6 | 20.50 | 20.41 | 20.23 | 20.31 |
| | | | 12 | 11 | 20.50 | 20.36 | 20.16 | 20.34 |
| | | | 25 | 0 | 21.00 | 20.53 | 20.26 | 20.21 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 23060/704 | 23095/707.5 | 23130/711 |
| LTE Band 12 | 10MHz | QPSK | 1 | 0 | 22.50 | 22.21 | 22.36 | 22.36 |
| | | | 1 | 24 | 22.50 | 22.10 | 22.31 | 22.38 |
| | | | 1 | 49 | 22.50 | 22.04 | 22.25 | 22.46 |
| | | | 25 | 0 | 21.50 | 21.14 | 21.25 | 21.24 |
| | | | 25 | 12 | 21.50 | 21.11 | 21.13 | 21.16 |
| | | | 25 | 24 | 21.50 | 21.19 | 21.22 | 21.24 |
| | | | 50 | 0 | 21.50 | 21.18 | 21.09 | 21.12 |
| | | 16QAM | 1 | 0 | 22.00 | 21.93 | 21.10 | 21.07 |
| | | | 1 | 24 | 22.00 | 21.66 | 21.14 | 21.14 |
| | | | 1 | 49 | 22.00 | 21.76 | 20.99 | 21.18 |
| | | | 25 | 0 | 21.00 | 20.36 | 20.50 | 20.45 |
| | | | 25 | 12 | 21.00 | 20.31 | 20.41 | 20.44 |
| | | | 25 | 24 | 21.00 | 20.22 | 20.46 | 20.53 |
| | | | 50 | 0 | 20.50 | 20.26 | 20.30 | 20.32 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 23755/706.5 | 23790/710 | 23825/713.5 |
| LTE Band 17 | 5MHz | QPSK | 1 | 0 | 23.50 | 23.40 | 23.29 | 23.11 |
| | | | 1 | 12 | 23.50 | 23.20 | 23.14 | 23.26 |
| | | | 1 | 24 | 23.50 | 23.26 | 23.15 | 23.24 |
| | | | 12 | 0 | 22.50 | 22.38 | 22.28 | 22.18 |
| | | | 12 | 6 | 22.50 | 22.27 | 22.18 | 22.27 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 12 | 11 | 22.50 | 22.27 | 22.16 | 22.21 |
| | | | 25 | 0 | 22.50 | 22.37 | 22.23 | 22.21 |
| | | 16QAM | 1 | 0 | 23.00 | 22.72 | 22.67 | 22.39 |
| | | | 1 | 12 | 23.00 | 22.50 | 22.32 | 22.43 |
| | | | 1 | 24 | 23.00 | 22.51 | 22.41 | 22.40 |
| | | | 12 | 0 | 21.50 | 21.39 | 21.29 | 21.19 |
| | | | 12 | 6 | 21.50 | 21.27 | 21.21 | 21.22 |
| | | | 12 | 11 | 21.50 | 21.28 | 21.18 | 21.19 |
| | | | 25 | 0 | 21.50 | 21.34 | 21.24 | 21.21 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 23780/709 | 23790/710 | 23800/711 |
| LTE Band 17 | 10MHz | QPSK | 1 | 0 | 23.50 | 23.36 | 23.35 | 23.21 |
| | | | 1 | 24 | 23.50 | 23.26 | 23.21 | 23.10 |
| | | | 1 | 49 | 23.50 | 23.28 | 23.22 | 23.22 |
| | | | 25 | 0 | 22.50 | 22.38 | 22.34 | 22.27 |
| | | | 25 | 12 | 22.50 | 22.24 | 22.23 | 22.22 |
| | | | 25 | 24 | 22.50 | 22.27 | 22.28 | 22.25 |
| | | | 50 | 0 | 22.50 | 22.30 | 22.32 | 22.23 |
| | | 16QAM | 1 | 0 | 23.00 | 22.59 | 22.58 | 22.57 |
| | | | 1 | 24 | 23.00 | 22.64 | 22.56 | 22.43 |
| | | | 1 | 49 | 23.00 | 22.59 | 22.48 | 22.38 |
| | | | 25 | 0 | 21.50 | 21.36 | 21.34 | 21.25 |
| | | | 25 | 12 | 21.50 | 21.26 | 21.24 | 21.23 |
| | | | 25 | 24 | 21.50 | 21.25 | 21.24 | 21.22 |
| | | | 50 | 0 | 21.50 | 21.31 | 21.30 | 21.23 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 39675/ 2498.5 | 40148/ 2546 | 40620/2 593 | 41093/ 2640 | 41565/ 2687.5 |
| LTE Band 41 | 5MHz | QPSK | 1 | 0 | 24.50 | 24.35 | 22.85 | 24.48 | 23.63 | 23.27 |
| | | | 1 | 12 | 24.50 | 24.25 | 23.79 | 24.28 | 23.94 | 22.88 |
| | | | 1 | 24 | 24.50 | 24.28 | 24.15 | 24.29 | 22.79 | 22.76 |
| | | | 12 | 0 | 24.50 | 24.35 | 23.88 | 24.40 | 23.49 | 23.07 |
| | | | 12 | 6 | 24.50 | 24.31 | 24.30 | 24.31 | 23.20 | 22.88 |
| | | | 12 | 11 | 24.50 | 24.30 | 23.34 | 24.29 | 23.60 | 22.78 |
| | | | 25 | 0 | 24.50 | 24.33 | 23.50 | 24.37 | 23.81 | 22.97 |
| | | 16QAM | 1 | 0 | 25.00 | 24.35 | 23.82 | 24.54 | 24.10 | 23.38 |
| | | | 1 | 12 | 25.00 | 24.27 | 24.26 | 24.37 | 23.75 | 23.03 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 24 | 25.00 | 24.30 | 23.46 | 24.37 | 23.86 | 22.9 |
| | | | 12 | 0 | 24.00 | 23.55 | 23.68 | 23.66 | 23.15 | 23.08 |
| | | | 12 | 6 | 24.00 | 23.60 | 23.09 | 23.68 | 22.90 | 22.9 |
| | | | 12 | 11 | 24.00 | 23.69 | 23.30 | 23.67 | 23.00 | 22.81 |
| | | | 25 | 0 | 24.00 | 23.70 | 23.50 | 23.66 | 23.48 | 22.97 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | | | |
| | | | RB Size | RB Offset | | 39700/ 2501 | 40160/ 2547 | 40620/ 2593 | 41080/ 2639 | 41540/ 2685 |
| LTE Band 41 | 10MHz | QPSK | 1 | 0 | 24.50 | 24.13 | 23.65 | 24.19 | 23.83 | 23.23 |
| | | | 1 | 24 | 24.50 | 24.26 | 22.76 | 24.24 | 22.81 | 22.97 |
| | | | 1 | 49 | 24.50 | 24.27 | 23.81 | 24.24 | 22.75 | 22.71 |
| | | | 25 | 0 | 24.50 | 24.28 | 24.18 | 24.25 | 23.16 | 23.11 |
| | | | 25 | 12 | 24.50 | 24.32 | 23.49 | 24.28 | 23.56 | 22.99 |
| | | | 25 | 24 | 24.50 | 24.33 | 23.85 | 24.30 | 23.32 | 22.87 |
| | | | 50 | 0 | 24.50 | 24.34 | 23.96 | 24.30 | 23.59 | 23.00 |
| | | 16QAM | 1 | 0 | 24.50 | 24.18 | 23.23 | 24.29 | 22.95 | 23.36 |
| | | | 1 | 24 | 24.50 | 24.30 | 23.20 | 24.34 | 23.63 | 23.12 |
| | | | 1 | 49 | 24.50 | 24.33 | 23.79 | 24.36 | 24.15 | 22.87 |
| | | | 25 | 0 | 24.00 | 23.60 | 23.58 | 23.61 | 23.32 | 23.10 |
| | | | 25 | 12 | 24.00 | 23.59 | 23.57 | 23.66 | 23.61 | 22.98 |
| | | | 25 | 24 | 24.00 | 23.66 | 22.94 | 23.63 | 23.29 | 22.87 |
| | | | 50 | 0 | 24.00 | 23.64 | 23.18 | 23.63 | 23.36 | 23.01 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | | | |
| | | | RB Size | RB Offset | | 39725/ 2503.5 | 40173/ 2548 | 40620/ 2593 | 41068/ 2638 | 41515/ 2682.5 |
| LTE Band 41 | 15MHz | QPSK | 1 | 0 | 25.00 | 24.29 | 23.18 | 24.37 | 24.22 | 23.59 |
| | | | 1 | 37 | 25.00 | 24.53 | 23.89 | 24.42 | 23.55 | 23.23 |
| | | | 1 | 74 | 25.00 | 24.44 | 22.93 | 24.39 | 23.55 | 22.79 |
| | | | 36 | 0 | 25.00 | 24.49 | 23.40 | 24.45 | 24.34 | 23.44 |
| | | | 36 | 18 | 25.00 | 24.60 | 23.48 | 24.46 | 23.22 | 23.23 |
| | | | 36 | 37 | 25.00 | 24.59 | 23.63 | 24.44 | 23.19 | 22.98 |
| | | | 75 | 0 | 25.00 | 24.51 | 23.94 | 24.43 | 23.83 | 23.21 |
| | | 16QAM | 1 | 0 | 25.00 | 24.32 | 23.70 | 24.47 | 23.73 | 23.68 |
| | | | 1 | 37 | 25.00 | 24.54 | 23.27 | 24.51 | 23.93 | 23.36 |
| | | | 1 | 74 | 25.00 | 24.47 | 23.35 | 24.48 | 23.45 | 22.92 |
| | | | 36 | 0 | 24.00 | 23.62 | 23.40 | 23.64 | 23.43 | 23.36 |
| | | | 36 | 18 | 24.00 | 23.69 | 23.55 | 23.67 | 23.35 | 23.17 |
| | | | 36 | 37 | 24.00 | 23.65 | 23.35 | 23.65 | 23.18 | 22.93 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 75 | 0 | 24.00 | 23.67 | 23.55 | 23.69 | 23.53 | 23.2 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | | | |
| | | | RB Size | RB Offset | | 39750/ 2506 | 40185/ 2549.5 | 40620/ 2593 | 39650/ 2636.5 | 41490/ 2680 |
| LTE Band 41 | 20MHz | QPSK | 1 | 0 | 24.50 | 24.16 | 23.09 | 24.03 | 23.54 | 23.27 |
| | | | 1 | 49 | 24.50 | 24.43 | 23.99 | 24.3 | 23.69 | 23.22 |
| | | | 1 | 99 | 24.50 | 24.09 | 24.26 | 24.2 | 22.89 | 22.52 |
| | | | 50 | 0 | 24.50 | 24.37 | 23.90 | 24.24 | 23.75 | 23.33 |
| | | | 50 | 24 | 24.50 | 24.48 | 23.47 | 24.34 | 23.78 | 23.21 |
| | | | 50 | 49 | 24.50 | 24.42 | 23.76 | 24.34 | 23.90 | 22.89 |
| | | | 100 | 0 | 24.50 | 24.38 | 23.56 | 24.28 | 24.21 | 23.11 |
| | | 16QAM | 1 | 0 | 24.50 | 24.19 | 24.01 | 24.14 | 23.54 | 23.41 |
| | | | 1 | 49 | 24.50 | 24.47 | 24.15 | 24.4 | 24.38 | 23.36 |
| | | | 1 | 99 | 24.50 | 24.15 | 24.01 | 24.32 | 22.85 | 22.69 |
| | | | 50 | 0 | 24.00 | 23.68 | 23.60 | 23.72 | 23.72 | 23.31 |
| | | | 50 | 24 | 24.00 | 23.76 | 23.48 | 23.74 | 23.29 | 23.2 |
| | | | 50 | 49 | 24.00 | 23.69 | 23.18 | 23.76 | 23.53 | 22.9 |
| | | | 100 | 0 | 24.00 | 23.64 | 23.70 | 23.71 | 23.48 | 23.12 |

| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 131979/1710.7 | 132322/1745 | 132665/1779.3 |
| LTE Band 66 | 1.4MHz | QPSK | 1 | 0 | 24.00 | 23.59 | 23.53 | 23.50 |
| | | | 1 | 2 | 24.00 | 23.47 | 23.58 | 23.48 |
| | | | 1 | 5 | 24.00 | 23.57 | 23.50 | 23.55 |
| | | | 3 | 0 | 24.00 | 23.53 | 23.52 | 23.52 |
| | | | 3 | 1 | 24.00 | 23.52 | 23.50 | 23.49 |
| | | | 3 | 2 | 24.00 | 23.53 | 23.48 | 23.49 |
| | | | 6 | 0 | 23.00 | 22.51 | 22.53 | 22.53 |
| | | 16QAM | 1 | 0 | 23.00 | 22.71 | 22.82 | 22.79 |
| | | | 1 | 2 | 23.00 | 22.80 | 22.86 | 22.71 |
| | | | 1 | 5 | 23.00 | 22.81 | 22.74 | 22.86 |
| | | | 3 | 0 | 23.00 | 22.54 | 22.51 | 22.48 |
| | | | 3 | 1 | 23.00 | 22.53 | 22.54 | 22.53 |
| | | | 3 | 2 | 23.00 | 22.47 | 22.50 | 22.44 |
| | | | 6 | 0 | 22.00 | 21.65 | 21.63 | 21.64 |
| Band | Band | Modulation | RB | | Tune-up | Channel/Frequency(MHz) | | |

| | Width | | Configuration | | (dBm) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | RB Size | RB Offset | | 131987/1711.5 | 132322/1745 | 132657/1778.5 |
| LTE Band 66 | 3MHz | QPSK | 1 | 0 | 24.00 | 23.45 | 23.51 | 23.50 |
| | | | 1 | 7 | 24.00 | 23.57 | 23.46 | 23.52 |
| | | | 1 | 14 | 24.00 | 23.61 | 23.51 | 23.48 |
| | | | 8 | 0 | 23.00 | 22.51 | 22.55 | 22.54 |
| | | | 8 | 4 | 23.00 | 22.57 | 22.53 | 22.51 |
| | | | 8 | 7 | 23.00 | 22.59 | 22.54 | 22.52 |
| | | | 15 | 0 | 23.00 | 22.56 | 22.57 | 22.55 |
| | | 16QAM | 1 | 0 | 23.00 | 22.89 | 22.68 | 22.65 |
| | | | 1 | 7 | 23.00 | 22.93 | 22.70 | 22.83 |
| | | | 1 | 14 | 23.00 | 22.82 | 22.87 | 22.83 |
| | | | 8 | 0 | 22.00 | 21.59 | 21.61 | 21.59 |
| | | | 8 | 4 | 22.00 | 21.61 | 21.58 | 21.55 |
| | | | 8 | 7 | 22.00 | 21.64 | 21.60 | 21.59 |
| | | | 15 | 0 | 22.00 | 21.55 | 21.58 | 21.53 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 131997/1712.5 | 132322/1745 | 132647/1777.5 |
| LTE Band 66 | 5MHz | QPSK | 1 | 0 | 24.00 | 23.58 | 23.54 | 23.53 |
| | | | 1 | 12 | 24.00 | 23.54 | 23.52 | 23.49 |
| | | | 1 | 24 | 24.00 | 23.62 | 23.54 | 23.53 |
| | | | 12 | 0 | 23.00 | 22.59 | 22.61 | 22.53 |
| | | | 12 | 6 | 23.00 | 22.65 | 22.58 | 22.55 |
| | | | 12 | 11 | 23.00 | 22.64 | 22.56 | 22.56 |
| | | | 25 | 0 | 23.00 | 22.66 | 22.57 | 22.59 |
| | | 16QAM | 1 | 0 | 23.00 | 22.83 | 22.79 | 22.73 |
| | | | 1 | 12 | 23.00 | 22.89 | 22.80 | 22.84 |
| | | | 1 | 24 | 23.00 | 22.90 | 22.85 | 22.96 |
| | | | 12 | 0 | 22.00 | 21.62 | 21.62 | 21.54 |
| | | | 12 | 6 | 22.00 | 21.67 | 21.56 | 21.59 |
| | | | 12 | 11 | 22.00 | 21.63 | 21.58 | 21.61 |
| | | | 25 | 0 | 22.00 | 21.64 | 21.62 | 21.58 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 132022/1715 | 132322/1745 | 132622/1775 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LTE Band 66 | 10MHz | QPSK | 1 | 0 | 24.00 | 23.55 | 23.63 | 23.35 |
| | | | 1 | 24 | 24.00 | 23.62 | 23.48 | 23.36 |
| | | | 1 | 49 | 24.00 | 23.66 | 23.58 | 23.56 |
| | | | 25 | 0 | 23.00 | 22.58 | 22.57 | 22.45 |
| | | | 25 | 12 | 23.00 | 22.63 | 22.55 | 22.45 |
| | | | 25 | 24 | 23.00 | 22.64 | 22.51 | 22.51 |
| | | | 50 | 0 | 23.00 | 22.64 | 22.55 | 22.49 |
| | | 16QAM | 1 | 0 | 23.00 | 22.87 | 22.95 | 22.73 |
| | | | 1 | 24 | 23.00 | 22.76 | 22.77 | 22.73 |
| | | | 1 | 49 | 23.00 | 22.95 | 22.76 | 22.93 |
| | | | 25 | 0 | 22.00 | 21.58 | 21.57 | 21.45 |
| | | | 25 | 12 | 22.00 | 21.64 | 21.52 | 21.46 |
| | | | 25 | 24 | 22.00 | 21.65 | 21.49 | 21.51 |
| | | | 50 | 0 | 22.00 | 21.64 | 21.54 | 21.50 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 132047/1717.5 | 132322/1745 | 132597/1772.5 |
| LTE Band 66 | 15MHz | QPSK | 1 | 0 | 24.00 | 23.52 | 23.59 | 23.16 |
| | | | 1 | 37 | 24.00 | 23.62 | 23.57 | 23.36 |
| | | | 1 | 74 | 24.00 | 23.61 | 23.47 | 23.55 |
| | | | 36 | 0 | 23.00 | 22.64 | 22.58 | 22.27 |
| | | | 36 | 18 | 23.00 | 22.66 | 22.55 | 22.32 |
| | | | 36 | 37 | 23.00 | 22.64 | 22.53 | 22.41 |
| | | | 75 | 0 | 23.00 | 22.63 | 22.56 | 22.35 |
| | | 16QAM | 1 | 0 | 23.00 | 22.91 | 22.69 | 22.55 |
| | | | 1 | 37 | 23.00 | 22.94 | 22.84 | 22.55 |
| | | | 1 | 74 | 23.00 | 22.97 | 22.93 | 22.65 |
| | | | 36 | 0 | 22.00 | 21.61 | 21.59 | 21.23 |
| | | | 36 | 18 | 22.00 | 21.64 | 21.55 | 21.32 |
| | | | 36 | 37 | 22.00 | 21.63 | 21.52 | 21.37 |
| | | | 75 | 0 | 22.00 | 21.62 | 21.58 | 21.36 |
| Band | Band Width | Modulation | RB Configuration | | Tune-up (dBm) | Channel/Frequency(MHz) | | |
| | | | RB Size | RB Offset | | 132072/1720 | 132322/1745 | 132572/1770 |
| LTE Band 66 | 20MHz | QPSK | 1 | 0 | 24.00 | 23.53 | 23.56 | 23.23 |
| | | | 1 | 49 | 24.00 | 23.68 | 23.57 | 23.32 |
| | | | 1 | 99 | 24.00 | 23.59 | 23.45 | 23.49 |
| | | | 50 | 0 | 23.00 | 22.65 | 22.63 | 22.26 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 50 | 24 | 23.00 | 22.67 | 22.60 | 22.35 |
| | | | 50 | 49 | 23.00 | 22.65 | 22.52 | 22.39 |
| | | | 100 | 0 | 23.00 | 22.63 | 22.59 | 22.30 |
| | | 16QAM | 1 | 0 | 23.00 | 22.91 | 22.86 | 22.65 |
| | | | 1 | 49 | 23.00 | 22.94 | 22.87 | 22.60 |
| | | | 1 | 99 | 23.00 | 22.84 | 22.85 | 22.72 |
| | | | 50 | 0 | 22.00 | 21.66 | 21.61 | 21.23 |
| | | | 50 | 24 | 22.00 | 21.69 | 21.60 | 21.34 |
| | | | 50 | 49 | 22.00 | 21.62 | 21.54 | 21.38 |
| | | | 100 | 0 | 22.00 | 21.65 | 21.59 | 21.31 |

## 7.4. WLAN & Bluetooth Output Power

### 7.4.1. Output Power Results Of WLAN

| Mode | Channel | Frequency (MHz) | Tune-up (dBm) | Output Power (dBm) |
|---|---|---|---|---|
| 802.11b | 1 | 2412 | 16.00 | 15.77 |
| | 6 | 2437 | 16.00 | 15.56 |
| | 11 | 2462 | 16.00 | 15.81 |
| 802.11g | 1 | 2412 | 14.00 | 13.71 |
| | 6 | 2437 | 14.00 | 13.56 |
| | 11 | 2462 | 14.00 | 13.41 |
| 802.11n HT20 | 1 | 2412 | 12.00 | 11.80 |
| | 6 | 2437 | 12.00 | 11.53 |
| | 11 | 2462 | 12.00 | 11.40 |
| 802.11n HT40 | 3 | 2422 | 12.00 | 11.40 |
| | 6 | 2437 | 12.00 | 11.50 |
| | 9 | 2452 | 12.00 | 11.65 |
| 802.11ax HT20 | 1 | 2412 | 12.00 | 11.67 |
| | 6 | 2437 | 12.00 | 11.49 |
| | 11 | 2462 | 12.00 | 11.45 |
| 802.11ax HT40 | 3 | 2422 | 12.00 | 11.61 |
| | 6 | 2437 | 12.00 | 11.56 |
| | 9 | 2452 | 12.00 | 11.47 |

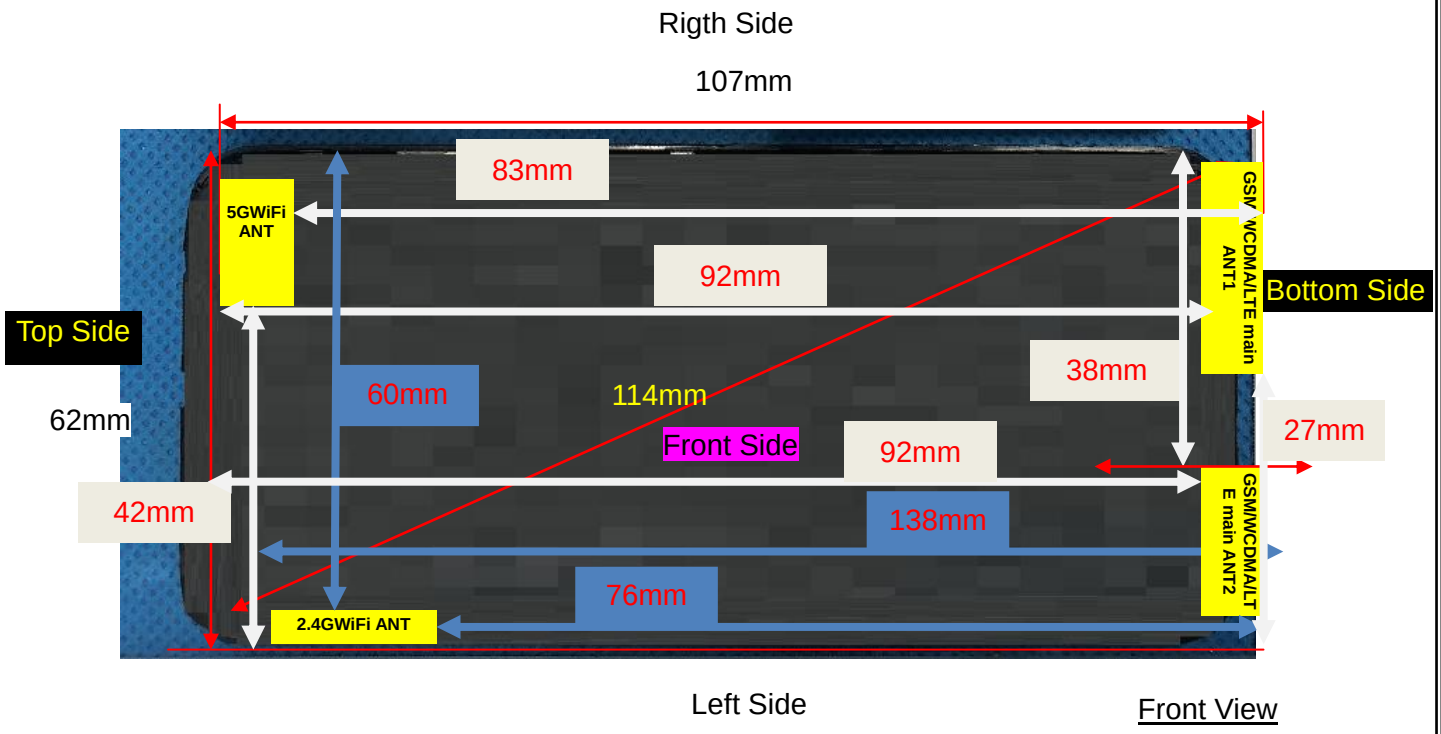
NOTE: Power measurement results of WLAN 2.4G.

| Mode | Channel | Frequency (MHz) | Tune-up (dBm) | Output Power (dBm) |
|---|---|---|---|---|
| 802.11a | 36 | 5180 | 11.50 | 11.23 |
| | 40 | 5200 | 11.50 | 10.93 |

| | | | | |
|---|---|---|---|---|
| | 48 | 5240 | 11.50 | 9.94 |
| 802.11n HT20 | 36 | 5180 | 10.50 | 10.46 |
| | 40 | 5200 | 10.50 | 10.24 |
| | 48 | 5240 | 10.50 | 9.87 |
| 802.11n HT40 | 38 | 5190 | 11.00 | 10.28 |
| | 46 | 5230 | 11.00 | 10.55 |
| 802.11ac VHT20 | 36 | 5180 | 11.00 | 10.57 |
| | 40 | 5200 | 11.00 | 10.14 |
| | 48 | 5240 | 11.00 | 9.85 |
| 802.11ac VHT40 | 38 | 5190 | 10.50 | 10.24 |
| | 46 | 5230 | 10.50 | 10.1 |
| 802.11ac VHT80 | 42 | 5210 | 10.50 | 10.19 |

NOTE: Power measurement results of WLAN 5.2G.

# 8. Antenna Location




# 9. SAR Results

## 9.1. SAR measurement results

### 9.1.1. SAR measurement Result of GSM850

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1g | 10g | | | | | | |
| Front Side | 189/836.4 | GPRS(GMSK 2TS) | 0.486 | 0.344 | 0.58 | 29.53 | 30.00 | 0.542 | 2024/11/26 | |
| Back Side | 189/836.4 | GPRS(GMSK 2TS) | 0.523 | 0.382 | -3.65 | 29.53 | 30.00 | 0.583 | 2024/11/26 | #1 |

NOTE: Body-Worn SAR test results of GSM850

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front Side | 189/836.4 | GPRS(GMSK 2TS) | 0.486 | 0.344 | 0.58 | 29.53 | 30.00 | 0.542 | 2024/11/26 | |
| Back | 189/836.4 | GPRS(GMSK | 0.523 | 0.382 | -3.65 | 29.53 | 30.00 | 0.583 | 2024/11/26 | #1 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Side | | 2TS) | | | | | | | | |
| Left Side | 189/836.4 | GPRS(GMSK 2TS) | 0.224 | 0.159 | -0.98 | 29.53 | 30.00 | 0.250 | 2024/11/26 | |
| Right Side | 189/836.4 | GPRS(GMSK 2TS) | 0.308 | 0.216 | 2.52 | 29.53 | 30.00 | 0.343 | 2024/11/26 | |
| Bottom Side | 189/836.4 | GPRS(GMSK 2TS) | 0.054 | 0.039 | -1.87 | 29.53 | 30.00 | 0.060 | 2024/11/26 | |

NOTE: Hotspot SAR test results of GSM850

### 9.1.2. SAR measurement Result of GSM1900

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1g | 10g | | | | | | |
| Front Side | 661/1880 | GPRS(GMSK 2TS) | 0.214 | 0.123 | 3.51 | 28.07 | 28.50 | 0.236 | 2024/11/24 | |
| Back Side | 661/1880 | GPRS(GMSK 2TS) | 0.670 | 0.385 | 1.13 | 28.07 | 28.50 | 0.740 | 2024/11/24 | #2 |

NOTE: Body-Worn SAR test results of GSM1900

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front Side | 661/1880 | GPRS(GMSK 2TS) | 0.214 | 0.123 | 3.51 | 28.07 | 28.50 | 0.236 | 2024/11/24 | |
| Back Side | 661/1880 | GPRS(GMSK 2TS) | 0.670 | 0.385 | 1.13 | 28.07 | 28.50 | 0.740 | 2024/11/24 | #2 |
| Left Side | 661/1880 | GPRS(GMSK 2TS) | 0.054 | 0.031 | -2.74 | 28.07 | 28.50 | 0.060 | 2024/11/24 | |
| Right Side | 661/1880 | GPRS(GMSK 2TS) | 0.187 | 0.105 | 1.20 | 28.07 | 28.50 | 0.206 | 2024/11/24 | |
| Bottom Side | 661/1880 | GPRS(GMSK 2TS) | 0.049 | 0.027 | 1.04 | 28.07 | 28.50 | 0.054 | 2024/11/24 | |

NOTE: Hotspot SAR test results of GSM1900

### 9.1.3. SAR measurement Result of WCDMA Band 2

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1g | 10g | | | | | | |
| Front Side | 9400/1880 | RMC12.2K | 0.179 | 0.107 | 0.15 | 22.88 | 23.50 | 0.206 | 2024/11/24 | |
| Back Side | 9400/1880 | RMC12.2K | 0.542 | 0.325 | -1.23 | 22.88 | 23.50 | 0.625 | 2024/11/24 | #3 |

NOTE: Body-Worn SAR test results of WCDMA Band 2

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front Side | 9400/1880 | RMC12.2K | 0.179 | 0.107 | 0.15 | 22.88 | 23.50 | 0.206 | 2024/11/24 | |
| Back Side | 9400/1880 | RMC12.2K | 0.542 | 0.325 | -1.23 | 22.88 | 23.50 | 0.625 | 2024/11/24 | #3 |
| Left Side | 9400/1880 | RMC12.2K | 0.045 | 0.026 | 2.19 | 22.88 | 23.50 | 0.052 | 2024/11/24 | |
| Right Side | 9400/1880 | RMC12.2K | 0.148 | 0.085 | -3.69 | 22.88 | 23.50 | 0.171 | 2024/11/24 | |
| Bottom Side | 9400/1880 | RMC12.2K | 0.040 | 0.024 | 0.45 | 22.88 | 23.50 | 0.046 | 2024/11/24 | |

NOTE: Hotspot SAR test results of WCDMA Band 2

### 9.1.4. SAR measurement Result of WCDMA Band 4

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1g | 10g | | | | | | |
| Front Side | 1413/1732.6 | RMC12.2K | 0.192 | 0.109 | 0.58 | 22.65 | 23.00 | 0.208 | 2024/11/21 | |
| Back Side | 1413/1732.6 | RMC12.2K | 0.571 | 0.341 | -1.02 | 22.65 | 23.00 | 0.619 | 2024/11/21 | #4 |

NOTE: Body-Worn SAR test results of WCDMA Band 4

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front | 1413/1732.6 | RMC12.2K | 0.192 | 0.109 | 0.58 | 22.65 | 23.00 | 0.208 | 2024/11/21 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Side | | | | | | | | | | |
| Back Side | 1413/1732.6 | RMC12.2K | 0.571 | 0.341 | -1.02 | 22.65 | 23.00 | 0.619 | 2024/11/21 | #4 |
| Left Side | 1413/1732.6 | RMC12.2K | 0.049 | 0.029 | -1.58 | 22.65 | 23.00 | 0.053 | 2024/11/21 | |
| Right Side | 1413/1732.6 | RMC12.2K | 0.151 | 0.087 | -1.57 | 22.65 | 23.00 | 0.164 | 2024/11/21 | |
| Bottom Side | 1413/1732.6 | RMC12.2K | 0.041 | 0.023 | -0.71 | 22.65 | 23.00 | 0.044 | 2024/11/21 | |

NOTE: Hotspot SAR test results of WCDMA Band 4

### 9.1.5. SAR measurement Result of WCDMA Band 5

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1g | 10g | | | | | | |
| Front Side | 4182/836.4 | RMC12.2K | 0.612 | 0.433 | 0.87 | 22.42 | 23.00 | 0.699 | 2024/11/26 | |
| Back Side | 4182/836.4 | RMC12.2K | 0.677 | 0.504 | 1.17 | 22.42 | 23.00 | 0.774 | 2024/11/26 | #5 |

NOTE: Body-Worn SAR test results of WCDMA Band 5

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front Side | 4182/836.4 | RMC12.2K | 0.612 | 0.433 | 0.87 | 22.42 | 23.00 | 0.699 | 2024/11/26 | |
| Back Side | 4182/836.4 | RMC12.2K | 0.677 | 0.504 | 1.17 | 22.42 | 23.00 | 0.774 | 2024/11/26 | #5 |
| Left Side | 4182/836.4 | RMC12.2K | 0.272 | 0.198 | 0.20 | 22.42 | 23.00 | 0.311 | 2024/11/26 | |
| Right Side | 4182/836.4 | RMC12.2K | 0.374 | 0.265 | 0.10 | 22.42 | 23.00 | 0.427 | 2024/11/26 | |
| Bottom Side | 4182/836.4 | RMC12.2K | 0.070 | 0.050 | 1.37 | 22.42 | 23.00 | 0.080 | 2024/11/26 | |

NOTE: Hotspot SAR test results of WCDMA Band 5

### 9.1.6. SAR measurement Result of LTE Band 2

| Test Position of Body-Worn | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| with 10mm | | | | | | | | (W/Kg) | | |
| 1RB | | | | | | | | | | |
| Front Side | 18900/1880 | 20M QPSK(1,99) | 0.144 | 0.084 | -2.88 | 23.72 | 24.00 | 0.154 | 2024/11/24 | |
| Back Side | 18900/1880 | 20M QPSK(1,99) | 0.447 | 0.265 | -0.03 | 23.72 | 24.00 | 0.477 | 2024/11/24 | #8 |
| 50%RB | | | | | | | | | | |
| Front Side | 18900/1880 | 20M QPSK(50,49) | 0.074 | 0.05 | 2.11 | 22.47 | 23.00 | 0.084 | 2024/11/24 | |
| Back Side | 18900/1880 | 20M QPSK(50,49) | 0.23 | 0.145 | 0.45 | 22.47 | 23.00 | 0.260 | 2024/11/24 | |

NOTE: Body-Worn SAR test results of LTE Band 2

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 18900/1880 | 20M QPSK(1,99) | 0.144 | 0.084 | -2.88 | 23.72 | 24.00 | 0.154 | 2024/11/24 | |
| Back Side | 18900/1880 | 20M QPSK(1,99) | 0.447 | 0.265 | -0.03 | 23.72 | 24.00 | 0.477 | 2024/11/24 | #8 |
| Left Side | 18900/1880 | 20M QPSK(1,99) | 0.038 | 0.022 | 0.44 | 23.72 | 24.00 | 0.041 | 2024/11/24 | |
| Right Side | 18900/1880 | 20M QPSK(1,99) | 0.125 | 0.073 | 0.38 | 23.72 | 24.00 | 0.133 | 2024/11/24 | |
| Bottom Side | 18900/1880 | 20M QPSK(1,99) | 0.034 | 0.020 | -3.04 | 23.72 | 24.00 | 0.036 | 2024/11/24 | |
| 50%RB | | | | | | | | | | |
| Front Side | 18900/1880 | 20M QPSK(50,49) | 0.074 | 0.05 | 2.11 | 22.47 | 23.00 | 0.084 | 2024/11/24 | |
| Back Side | 18900/1880 | 20M QPSK(50,49) | 0.23 | 0.145 | 0.45 | 22.47 | 23.00 | 0.260 | 2024/11/24 | |
| Left Side | 18900/1880 | 20M QPSK(50,49) | 0.02 | 0.011 | 0.73 | 22.47 | 23.00 | 0.023 | 2024/11/24 | |
| Right Side | 18900/1880 | 20M QPSK(50,49) | 0.067 | 0.039 | 3.91 | 22.47 | 23.00 | 0.076 | 2024/11/24 | |
| Bottom Side | 18900/1880 | 20M QPSK(50,49) | 0.02 | 0.01 | 2.98 | 22.47 | 23.00 | 0.023 | 2024/11/24 | |

NOTE: Hotspot SAR test results of LTE Band 2

### 9.1.7. SAR measurement Result of LTE Band 4

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 20175/1732.5 | 20M QPSK(1,99) | 0.195 | 0.119 | 3.38 | 23.73 | 24.00 | 0.208 | 2024/11/21 | |
| Back Side | 20175/1732.5 | 20M QPSK(1,99) | 0.574 | 0.349 | 2.02 | 23.73 | 24.00 | 0.611 | 2024/11/21 | #9 |
| 50%RB | | | | | | | | | | |
| Front Side | 20175/1732.5 | 20M QPSK(50,24) | 0.098 | 0.068 | -0.66 | 22.60 | 23.00 | 0.107 | 2024/11/21 | |
| Back Side | 20175/1732.5 | 20M QPSK(50,24) | 0.287 | 0.209 | 2.01 | 22.60 | 23.00 | 0.315 | 2024/11/21 | |

NOTE: Body-Worn SAR test results of LTE Band 4

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 20175/1732.5 | 20M QPSK(1,99) | 0.195 | 0.119 | 3.38 | 23.73 | 24.00 | 0.208 | 2024/11/21 | |
| Back Side | 20175/1732.5 | 20M QPSK(1,99) | 0.574 | 0.349 | 2.02 | 23.73 | 24.00 | 0.611 | 2024/11/21 | #9 |
| Left Side | 20175/1732.5 | 20M QPSK(1,99) | 0.048 | 0.029 | 1.71 | 23.73 | 24.00 | 0.051 | 2024/11/21 | |
| Right Side | 20175/1732.5 | 20M QPSK(1,99) | 0.156 | 0.092 | 1.71 | 23.73 | 24.00 | 0.166 | 2024/11/21 | |
| Bottom Side | 20175/1732.5 | 20M QPSK(1,99) | 0.042 | 0.024 | 2.32 | 23.73 | 24.00 | 0.045 | 2024/11/21 | |
| 50%RB | | | | | | | | | | |
| Front | 20175/1732.5 | 20M | 0.098 | 0.068 | -0.66 | 22.60 | 23.00 | 0.107 | 2024/11/21 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Side | | QPSK(50,24) | | | | | | | | |
| Back Side | 20175/1732.5 | 20M QPSK(50,24) | 0.287 | 0.209 | 2.01 | 22.60 | 23.00 | 0.315 | 2024/11/21 | |
| Left Side | 20175/1732.5 | 20M QPSK(50,24) | 0.027 | 0.016 | 2.74 | 22.60 | 23.00 | 0.030 | 2024/11/21 | |
| Right Side | 20175/1732.5 | 20M QPSK(50,24) | 0.085 | 0.049 | -4.46 | 22.60 | 23.00 | 0.093 | 2024/11/21 | |
| Bottom Side | 20175/1732.5 | 20M QPSK(50,24) | 0.023 | 0.014 | 2.93 | 22.60 | 23.00 | 0.025 | 2024/11/21 | |

NOTE: Hotspot SAR test results of LTE Band 4

### 9.1.8. SAR measurement Result of LTE Band 5

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.755 | 0.586 | 1.19 | 23.39 | 24.00 | 0.869 | 2024/11/26 | |
| Back Side | 20525/836.5 | 10M QPSK(1,0) | 0.818 | 0.602 | -1.14 | 23.39 | 24.00 | 0.941 | 2024/11/26 | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.797 | 0.596 | 2.62 | 23.49 | 24.00 | 0.896 | 2024/11/26 | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.772 | 0.578 | -3.68 | 23.36 | 24.00 | 0.895 | 2024/11/26 | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.797 | 0.596 | 2.62 | 23.49 | 24.00 | 0.896 | 2024/11/26 | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.772 | 0.578 | -3.68 | 23.36 | 24.00 | 0.895 | 2024/11/26 | |
| Back Side | 20450/829 | 10M QPSK(1,0) | 0.854 | 0.629 | -0.79 | 23.49 | 24.00 | 0.960 | 2024/11/26 | #10 |
| Back Side | | | | | | | | | | |
| BackSide Repeated | 20525/836.5 | 10M QPSK(1,0) | 0.841 | 0.617 | -1.66 | 23.49 | 24.00 | 0.946 | 2024/11/26 | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.797 | 0.596 | 2.62 | 23.49 | 24.00 | 0.896 | 2024/11/26 | |

NOTE: Body-Worn SAR test results of LTE Band 5

| Test Position of | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Hotspot with 10mm | | | | | | | | (W/Kg) | | |
| 1RB | | | | | | | | | | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.755 | 0.586 | 1.19 | 23.39 | 24.00 | 0.869 | 2024/11/26 | |
| Back Side | 20525/836.5 | 10M QPSK(1,0) | 0.818 | 0.602 | -1.14 | 23.39 | 24.00 | 0.941 | 2024/11/26 | |
| Left Side | 20525/836.5 | 10M QPSK(1,0) | 0.341 | 0.251 | -1.10 | 23.39 | 24.00 | 0.392 | 2024/11/26 | |
| Right Side | 20525/836.5 | 10M QPSK(1,0) | 0.425 | 0.313 | 0.52 | 23.39 | 24.00 | 0.489 | 2024/11/26 | |
| Bottom Side | 20525/836.5 | 10M QPSK(1,0) | 0.075 | 0.054 | 3.74 | 23.39 | 24.00 | 0.086 | 2024/11/26 | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.797 | 0.596 | 2.62 | 23.49 | 24.00 | 0.896 | 2024/11/26 | |
| Front Side | 20525/836.5 | 10M QPSK(1,0) | 0.772 | 0.578 | -3.68 | 23.36 | 24.00 | 0.895 | 2024/11/26 | |
| Back Side | 20450/829 | 10M QPSK(1,0) | 0.854 | 0.629 | -0.79 | 23.49 | 24.00 | 0.960 | 2024/11/26 | #10 |
| Back Side | 20600/844 | 10M QPSK(1,0) | 0.812 | 0.610 | -0.98 | 23.36 | 24.00 | 0.941 | 2024/11/26 | |
| BackSide Repeated | 20525/836.5 | 10M QPSK(1,0) | 0.841 | 0.617 | -1.66 | 23.49 | 24.00 | 0.946 | 2024/11/26 | |
| 50%RB | | | | | | | | | | |
| Front Side | 20525/836.5 | 10M QPSK(25,0) | 0.401 | 0.344 | -0.41 | 22.45 | 22.50 | 0.406 | 2024/11/26 | |
| Back Side | 20525/836.5 | 10M QPSK(25,0) | 0.518 | 0.377 | 0.59 | 22.45 | 22.50 | 0.524 | 2024/11/26 | |
| Left Side | 20525/836.5 | 10M QPSK(25,0) | 0.185 | 0.128 | 0.12 | 22.45 | 22.50 | 0.187 | 2024/11/26 | |
| Right Side | 20525/836.5 | 10M QPSK(25,0) | 0.244 | 0.158 | -3.38 | 22.45 | 22.50 | 0.247 | 2024/11/26 | |
| Bottom Side | 20525/836.5 | 10M QPSK(25,0) | 0.045 | 0.030 | -1.30 | 22.45 | 22.50 | 0.046 | 2024/11/26 | |
| 100%RB | | | | | | | | | | |
| Back Side | 20525/836.5 | 20M QPSK(100,0) | 0.483 | 0.367 | -1.56 | 23.49 | 24.00 | 0.543 | 2024/11/26 | |

NOTE: Hotspot SAR test results of LTE Band 5

### 9.1.9. SAR measurement Result of LTE Band 7

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 21100/2535 | 20M QPSK(1,49) | 0.152 | 0.074 | -2.31 | 23.58 | 24.00 | 0.167 | 2024/11/25 | |
| Back Side | 21100/2535 | 20M QPSK(1,49) | 0.360 | 0.175 | -4.37 | 23.58 | 24.00 | 0.397 | 2024/11/25 | #11 |
| 50%RB | | | | | | | | | | |
| Front Side | 21100/2535 | 20M QPSK(50,49) | 0.087 | 0.044 | -0.78 | 22.70 | 23.00 | 0.093 | 2024/11/25 | |
| Back Side | 21100/2535 | 20M QPSK(50,49) | 0.206 | 0.104 | 4.95 | 22.70 | 23.00 | 0.221 | 2024/11/25 | |

NOTE: Body-Worn SAR test results of LTE Band 7

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 21100/2535 | 20M QPSK(1,49) | 0.152 | 0.074 | -2.31 | 23.58 | 24.00 | 0.167 | 2024/11/25 | |
| Back Side | 21100/2535 | 20M QPSK(1,49) | 0.360 | 0.175 | -4.37 | 23.58 | 24.00 | 0.397 | 2024/11/25 | #11 |
| Left Side | 21100/2535 | 20M QPSK(1,49) | 0.207 | 0.096 | -0.85 | 23.58 | 24.00 | 0.228 | 2024/11/25 | |
| Right Side | 21100/2535 | 20M QPSK(1,49) | 0.031 | 0.014 | 1.06 | 23.58 | 24.00 | 0.034 | 2024/11/25 | |
| Top Side | 21100/2535 | 20M QPSK(1,49) | 0.011 | 0.009 | -2.59 | 23.58 | 24.00 | 0.012 | 2024/11/25 | |
| 50%RB | | | | | | | | | | |
| Front Side | 21100/2535 | 20M QPSK(50,49) | 0.087 | 0.044 | -0.78 | 22.70 | 23.00 | 0.093 | 2024/11/25 | |
| Back Side | 21100/2535 | 20M QPSK(50,49) | 0.206 | 0.104 | 4.95 | 22.70 | 23.00 | 0.221 | 2024/11/25 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Left Side | 21100/2535 | 20M QPSK(50,49) | 0.107 | 0.054 | -2.52 | 22.70 | 23.00 | 0.115 | 2024/11/25 | |
| Right Side | 21100/2535 | 20M QPSK(50,49) | 0.017 | 0.008 | -2.35 | 22.70 | 23.00 | 0.018 | 2024/11/25 | |
| Bottom Side | 21100/2535 | 20M QPSK(50,49) | 0.006 | 0.005 | -3.35 | 22.70 | 23.00 | 0.006 | 2024/11/25 | |

NOTE: Hotspot SAR test results of LTE Band 7

### 9.1.10. SAR measurement Result of LTE Band 12

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 23095/707.5 | 10M QPSK(1,0) | 0.074 | 0.053 | 2.33 | 22.36 | 22.50 | 0.076 | 2024/11/27 | |
| Back Side | 23095/707.5 | 10M QPSK(1,0) | 0.084 | 0.063 | 0.09 | 22.36 | 22.50 | 0.087 | 2024/11/27 | #12 |
| 50%RB | | | | | | | | | | |
| Front Side | 23095/707.5 | 10M QPSK(25,0) | 0.04 | 0.031 | -4.27 | 21.25 | 21.50 | 0.042 | 2024/11/27 | |
| Back Side | 23095/707.5 | 10M QPSK(25,0) | 0.048 | 0.035 | -0.97 | 21.25 | 21.50 | 0.051 | 2024/11/27 | |

NOTE: Body-Worn SAR test results of LTE Band 12

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 23095/707.5 | 10M QPSK(1,0) | 0.074 | 0.053 | 2.33 | 22.36 | 22.50 | 0.076 | 2024/11/27 | |
| Back Side | 23095/707.5 | 10M QPSK(1,0) | 0.084 | 0.063 | 0.09 | 22.36 | 22.50 | 0.087 | 2024/11/27 | #12 |
| Left Side | 23095/707.5 | 10M QPSK(1,0) | 0.037 | 0.027 | 2.27 | 22.36 | 22.50 | 0.038 | 2024/11/27 | |
| Right Side | 23095/707.5 | 10M QPSK(1,0) | 0.054 | 0.041 | 0.37 | 22.36 | 22.50 | 0.056 | 2024/11/27 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Bottom Side | 23095/707.5 | 10M QPSK(1,0) | 0.009 | 0.007 | 0.17 | 22.36 | 22.50 | 0.009 | 2024/11/27 | |
| 50%RB | | | | | | | | | | |
| Front Side | 23095/707.5 | 10M QPSK(25,0) | 0.04 | 0.031 | -4.27 | 21.25 | 21.50 | 0.042 | 2024/11/27 | |
| Back Side | 23095/707.5 | 10M QPSK(25,0) | 0.048 | 0.035 | -0.97 | 21.25 | 21.50 | 0.051 | 2024/11/27 | |
| Left Side | 23095/707.5 | 10M QPSK(25,0) | 0.02 | 0.014 | 3.93 | 21.25 | 21.50 | 0.021 | 2024/11/27 | |
| Right Side | 23095/707.5 | 10M QPSK(25,0) | 0.028 | 0.024 | 3.1 | 21.25 | 21.50 | 0.030 | 2024/11/27 | |
| Bottom Side | 23095/707.5 | 10M QPSK(25,0) | 0.005 | 0.004 | 4.39 | 21.25 | 21.50 | 0.005 | 2024/11/27 | |

NOTE: Hotspot SAR test results of LTE Band 12

### 9.1.11. SAR measurement Result of LTE Band 17

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 23790/710 | 10M QPSK(1,0) | 0.057 | 0.039 | 0.67 | 23.35 | 23.50 | 0.059 | 2024/11/27 | |
| Back Side | 23790/710 | 10M QPSK(1,0) | 0.064 | 0.046 | 2.01 | 23.35 | 23.50 | 0.066 | 2024/11/27 | #13 |
| 50%RB | | | | | | | | | | |
| Front Side | 23790/710 | 10M QPSK(25,0) | 0.03 | 0.021 | 1.79 | 22.34 | 22.50 | 0.031 | 2024/11/27 | |
| Back Side | 23790/710 | 10M QPSK(25,0) | 0.032 | 0.026 | 0.36 | 22.34 | 22.50 | 0.033 | 2024/11/27 | |

NOTE: Body-Worn SAR test results of LTE Band 17

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front | 23790/710 | 10M | 0.057 | 0.039 | 0.67 | 23.35 | 23.50 | 0.059 | 2024/11/27 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Side | | QPSK(1,0) | | | | | | | | |
| Back Side | 23790/710 | 10M QPSK(1,0) | 0.064 | 0.046 | 2.01 | 23.35 | 23.50 | 0.066 | 2024/11/27 | #13 |
| Left Side | 23790/710 | 10M QPSK(1,0) | 0.030 | 0.020 | 1.95 | 23.35 | 23.50 | 0.031 | 2024/11/27 | |
| Right Side | 23790/710 | 10M QPSK(1,0) | 0.036 | 0.025 | 1.12 | 23.35 | 23.50 | 0.037 | 2024/11/27 | |
| Bottom Side | 23790/710 | 10M QPSK(1,0) | 0.008 | 0.006 | 0.16 | 23.35 | 23.50 | 0.008 | 2024/11/27 | |
| 50%RB | | | | | | | | | | |
| Front Side | 23790/710 | 10M QPSK(25,0) | 0.03 | 0.021 | 1.79 | 22.34 | 22.50 | 0.031 | 2024/11/27 | |
| Back Side | 23790/710 | 10M QPSK(25,0) | 0.032 | 0.026 | 0.36 | 22.34 | 22.50 | 0.033 | 2024/11/27 | |
| Left Side | 23790/710 | 10M QPSK(25,0) | 0.017 | 0.012 | -4.39 | 22.34 | 22.50 | 0.018 | 2024/11/27 | |
| Right Side | 23790/710 | 10M QPSK(25,0) | 0.021 | 0.013 | -2.8 | 22.34 | 22.50 | 0.022 | 2024/11/27 | |
| Bottom Side | 23790/710 | 10M QPSK(25,0) | 0.005 | 0.003 | 0.29 | 22.34 | 22.50 | 0.005 | 2024/11/27 | |

NOTE: Hotspot SAR test results of LTE Band 17

### 9.1.12. SAR measurement Result of LTE Band 41

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 40620/2593 | 20M QPSK(1,49) | 0.244 | 0.112 | -0.38 | 24.30 | 24.50 | 0.255 | 2024/11/25 | |
| Back Side | 40620/2593 | 20M QPSK(1,49) | 0.583 | 0.276 | -1.05 | 24.30 | 24.50 | 0.610 | 2024/11/25 | #14 |
| 50%RB | | | | | | | | | | |
| Front Side | 40620/2593 | 20M QPSK(50,0) | 0.130 | 0.059 | -4.44 | 0.00 | 0.00 | 0.130 | 2024/11/25 | |
| Back Side | 40620/2593 | 20M QPSK(50,0) | 0.299 | 0.157 | 4.33 | 0.00 | 0.00 | 0.299 | 2024/11/25 | |

NOTE: Body-Worn SAR test results of LTE Band 41

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 40620/2593 | 20M QPSK(1,49) | 0.244 | 0.112 | -0.38 | 24.30 | 24.50 | 0.255 | 2024/11/25 | |
| Back Side | 40620/2593 | 20M QPSK(1,49) | 0.583 | 0.276 | -1.05 | 24.30 | 24.50 | 0.610 | 2024/11/25 | #14 |
| Left Side | 40620/2593 | 20M QPSK(1,49) | 0.334 | 0.157 | 2.88 | 24.30 | 24.50 | 0.350 | 2024/11/25 | |
| Right Side | 40620/2593 | 20M QPSK(1,49) | 0.048 | 0.022 | -0.26 | 24.30 | 24.50 | 0.050 | 2024/11/25 | |
| Bottom Side | 40620/2593 | 20M QPSK(1,49) | 0.018 | 0.016 | -0.94 | 24.30 | 24.50 | 0.019 | 2024/11/25 | |
| 50%RB | | | | | | | | | | |
| Front Side | 40620/2593 | 20M QPSK(50,0) | 0.130 | 0.059 | -4.44 | 0.00 | 0.00 | 0.130 | 2024/11/25 | |
| Back Side | 40620/2593 | 20M QPSK(50,0) | 0.299 | 0.157 | 4.33 | 0.00 | 0.00 | 0.299 | 2024/11/25 | |
| Left Side | 40620/2593 | 20M QPSK(50,0) | 0.171 | 0.086 | -1.35 | 0.00 | 0.00 | 0.171 | 2024/11/25 | |
| Right Side | 40620/2593 | 20M QPSK(50,0) | 0.028 | 0.011 | 1.23 | 0.00 | 0.00 | 0.028 | 2024/11/25 | |
| Bottom Side | 40620/2593 | 20M QPSK(50,0) | 0.010 | 0.009 | 3.70 | 0.00 | 0.00 | 0.010 | 2024/11/25 | |

NOTE: Hotspot SAR test results of LTE Band 41

### 9.1.13. SAR measurement Result of LTE Band 66

| Test Position of Body-Worn with 10mm | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 132322/1745 | 20M QPSK(1,49) | 0.189 | 0.111 | 1.85 | 23.57 | 24.00 | 0.209 | 2024/11/21 | |
| Back Side | 132322/1745 | 20M QPSK(1,49) | 0.545 | 0.337 | 0.01 | 23.57 | 24.00 | 0.602 | 2024/11/21 | #15 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 50%RB | | | | | | | | | | |
| Front Side | 132322/1745 | 20M QPSK(50,0) | 0.098 | 0.058 | -3.83 | 22.63 | 23.00 | 0.107 | 2024/11/21 | |
| Back Side | 132322/1745 | 20M QPSK(50,0) | 0.323 | 0.175 | -3.65 | 22.63 | 23.00 | 0.352 | 2024/11/21 | |

NOTE: Body-Worn SAR test results of LTE Band 66

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| 1RB | | | | | | | | | | |
| Front Side | 132322/1745 | 20M QPSK(1,49) | 0.189 | 0.111 | 1.85 | 23.57 | 24.00 | 0.209 | 2024/11/21 | |
| Back Side | 132322/1745 | 20M QPSK(1,49) | 0.545 | 0.337 | 0.01 | 23.57 | 24.00 | 0.602 | 2024/11/21 | #15 |
| Left Side | 132322/1745 | 20M QPSK(1,49) | 0.045 | 0.027 | 2.14 | 23.57 | 24.00 | 0.050 | 2024/11/21 | |
| Right Side | 132322/1745 | 20M QPSK(1,49) | 0.143 | 0.087 | 3.40 | 23.57 | 24.00 | 0.158 | 2024/11/21 | |
| Bottom Side | 132322/1745 | 20M QPSK(1,49) | 0.041 | 0.025 | 3.55 | 23.57 | 24.00 | 0.045 | 2024/11/21 | |
| 50%RB | | | | | | | | | | |
| Front Side | 132322/1745 | 20M QPSK(50,0) | 0.098 | 0.058 | -3.83 | 22.63 | 23.00 | 0.107 | 2024/11/21 | |
| Back Side | 132322/1745 | 20M QPSK(50,0) | 0.323 | 0.175 | -3.65 | 22.63 | 23.00 | 0.352 | 2024/11/21 | |
| Left Side | 132322/1745 | 20M QPSK(50,0) | 0.024 | 0.014 | 1.78 | 22.63 | 23.00 | 0.026 | 2024/11/21 | |
| Right Side | 132322/1745 | 20M QPSK(50,0) | 0.077 | 0.052 | -0.40 | 22.63 | 23.00 | 0.084 | 2024/11/21 | |
| Bottom Side | 132322/1745 | 20M QPSK(50,0) | 0.023 | 0.015 | -4.58 | 22.63 | 23.00 | 0.025 | 2024/11/21 | |

NOTE: Hotspot SAR test results of LTE Band 66

### 9.1.14. SAR measurement Result of WLAN 2.4G

| Test Position of Body-Worn | Test channel /Freq. | Test Mode | SAR Value (W/kg) | | Power Drift (±5%) | Conducted power (dBm) | Tune-up power (dBm) | Scaled SAR 1g | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| with 10mm | | | | | | | | (W/Kg) | | |
| Front Side | 11/2462 | 802.11b | 0.106 | 0.058 | -3.07 | 15.81 | 16.00 | 0.111 | 2024/12/12 | |
| Back Side | 11/2462 | 802.11b | 0.069 | 0.037 | 2.89 | 15.81 | 16.00 | 0.072 | 2024/12/12 | |

NOTE: Body-Worn SAR test results of WLAN 2.4G

| Test Position of Hotspot with 10mm | Test channel /Freq. | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front Side | 11/2462 | 802.11b | 0.106 | 0.058 | -3.07 | 15.81 | 16.00 | 0.111 | 2024/12/12 | |
| Back Side | 11/2462 | 802.11b | 0.069 | 0.037 | 2.89 | 15.81 | 16.00 | 0.072 | 2024/12/12 | |
| Left Side | 11/2462 | 802.11b | 0.115 | 0.065 | 2.35 | 15.81 | 16.00 | 0.120 | 2024/12/12 | #7 |
| Top Side | 11/2462 | 802.11b | 0.024 | 0.013 | 0.69 | 15.81 | 16.00 | 0.025 | 2024/12/12 | |

NOTE: Hotspot SAR test results of WLAN 2.4G

### 9.1.15. SAR measurement Result of WLAN 5.2G

| Test Position of Body-Worn with 10mm | Test channel /Freq | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front Side | 46/5230 | 802.11ax VHT40 | 0.126 | 0.069 | 1.24 | 11.85 | 12.00 | 0.130 | 2024/12/11 | |
| Back Side | 46/5230 | 802.11ax VHT40 | 0.162 | 0.094 | 2.10 | 11.85 | 12.00 | 0.168 | 2024/12/11 | #6 |

NOTE: Body-Worn SAR test results of WLAN 5.2G

| Test Position of Hotspot with 10mm | Test channel /Freq | Mode | SAR Value (W/kg) | | Power Drift(%) | Conducted Power (dBm) | Tune-up Power (dBm) | Scaled SAR 1-g (W/Kg) | Date | Plot |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-g | 10-g | | | | | | |
| Front Side | 46/5230 | 802.11ax VHT40 | 0.126 | 0.069 | 1.24 | 11.85 | 12.00 | 0.130 | 2024/12/11 | |
| Back Side | 46/5230 | 802.11ax VHT40 | 0.162 | 0.094 | 2.10 | 11.85 | 12.00 | 0.168 | 2024/12/11 | #6 |
| Right Side | 46/5230 | 802.11ax VHT40 | 0.102 | 0.057 | 0.78 | 11.85 | 12.00 | 0.106 | 2024/12/11 | |
| Top Side | 46/5230 | 802.11ax | 0.108 | 0.060 | 2.72 | 11.85 | 12.00 | 0.112 | 2024/12/11 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | VHT40 | | | | | | | | |

NOTE: Hotspot SAR test results of WLAN 5.2G

### 9.2. SAR Summation Scenario

Per KDB 447498 D01, simultaneous transmission SAR is compliant if,

1) Scalar SAR summation < 1.6W/kg.

2) SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (min. separation distance, mm), and the peak separation distance is determined from the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where $(x_1, y_1, z_1)$ and $(x_2, y_2, z_2)$ are the coordinates of the extrapolated peak SAR locations in the zoom scan. If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.

| Test Position | | Scaled $SAR_{MAX}$ | | ∑1-g SAR (W/Kg) | SPLSR | Remark |
|---|---|---|---|---|---|---|
| | | WWAN | DTS | | | |
| Hotspot | Front Side | 0.895 | 0.111 | 1.006 | N/A | N/A |
| | Back Side | 0.96 | 0.072 | 1.032 | N/A | N/A |
| Body | Front Side | 0.895 | 0.111 | 1.006 | N/A | N/A |
| | Back Side | 0.96 | 0.072 | 1.032 | N/A | N/A |
| | Left Side | 0.392 | N/A | 0.392 | N/A | N/A |
| | Right Side | 0.489 | N/A | 0.489 | N/A | N/A |
| | Top Side | N/A | 0.025 | 0.025 | N/A | N/A |
| | Bottom Side | 0.086 | N/A | 0.086 | N/A | N/A |

| Test Position | | Scaled $SAR_{MAX}$ | | ∑1-g SAR (W/Kg) | SPLSR | Remark |
|---|---|---|---|---|---|---|
| | | WWAN | NII | | | |
| Hotspot | Front Side | 0.895 | 0.130 | 1.025 | N/A | N/A |
| | Back Side | 0.96 | 0.168 | 1.128 | N/A | N/A |
| Body | Front Side | 0.895 | 0.130 | 1.025 | N/A | N/A |
| | Back Side | 0.96 | 0.168 | 1.128 | N/A | N/A |
| | Left Side | 0.392 | N/A | 0.392 | N/A | N/A |
| | Right Side | 0.489 | 0.106 | 0.595 | N/A | N/A |
| | Top Side | N/A | 0.112 | 0.112 | N/A | N/A |
| | Bottom Side | 0.086 | N/A | 0.086 | N/A | N/A |

## 10. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

# 11. Appendix B. System Check Plots

| Table of contents |
|---|
| MEASUREMENT 1 System Performance Check - 750MHz |
| MEASUREMENT 2 System Performance Check - 835MHz |
| MEASUREMENT 3 System Performance Check - 1800MHz |
| MEASUREMENT 4 System Performance Check - 1900MHz |
| MEASUREMENT 5 System Performance Check - 2450MHz |
| MEASUREMENT 6 System Performance Check - 2600MHz |
| MEASUREMENT 7 System Performance Check - 5200MHz |

# MEASUREMENT 1

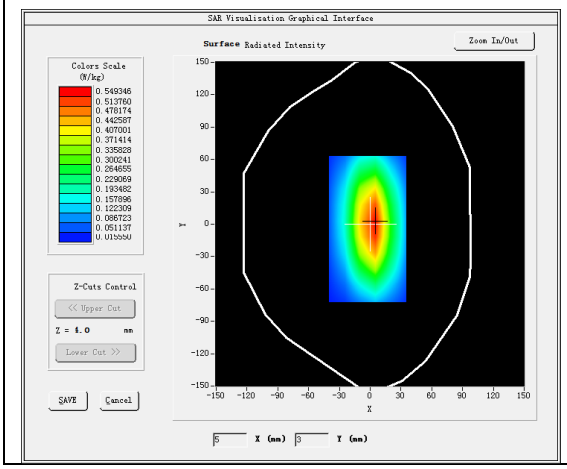
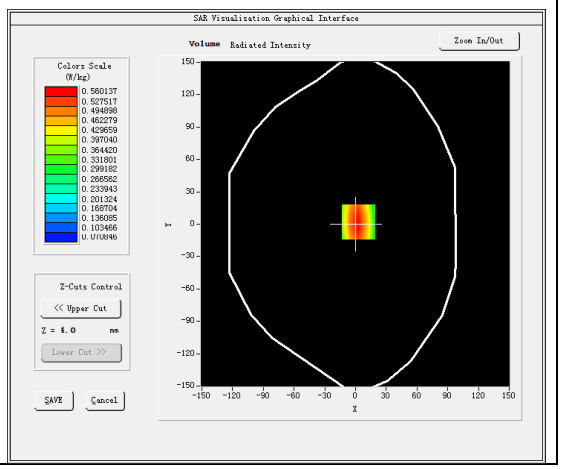
Date of measurement: 27/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW750 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |
| **ConvF** | 2.42 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 750.000000 |
| **Relative permittivity (real part)** | 40.869524 |
| **Relative permittivity (imaginary part)** | 21.646004 |
| **Conductivity (S/m)** | 0.901917 |
| **Variation (%)** | 0.310000 |

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

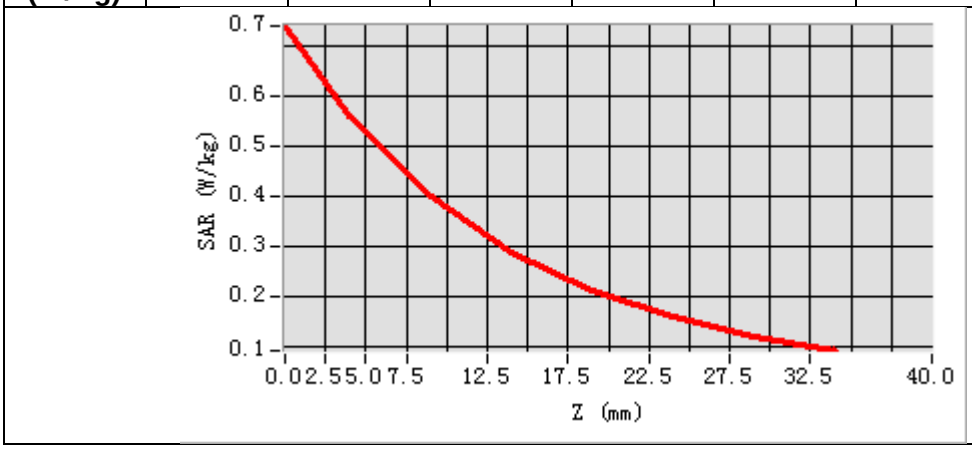


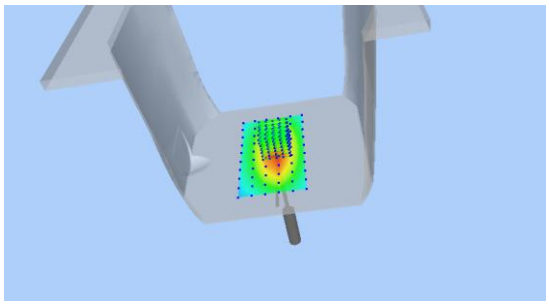
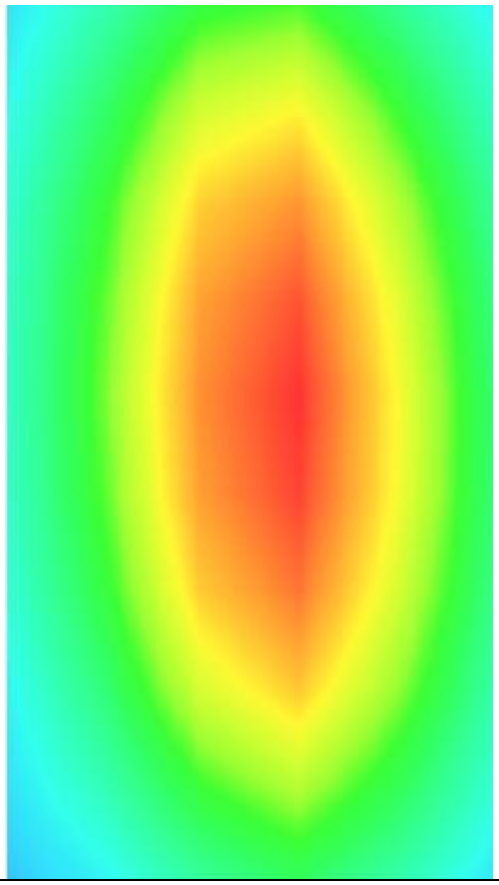


**Maximum location: X=3.00, Y=2.00**
**SAR Peak: 0.74 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.366575 |
| **SAR 1g (W/Kg)** | 0.543400 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.7392 | 0.5601 | 0.3985 | 0.2878 | 0.2114 | 0.1573 | 0.1189 |




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

# MEASUREMENT 2

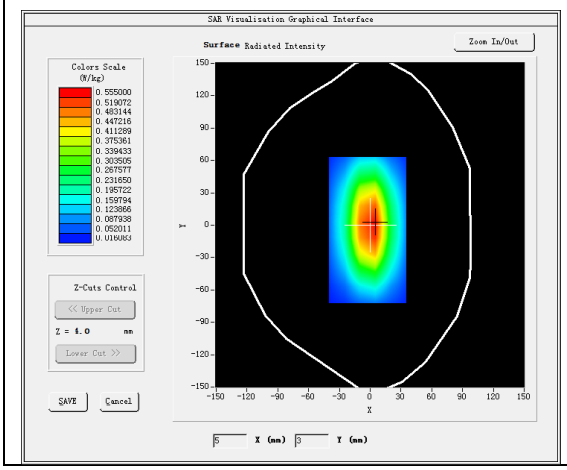
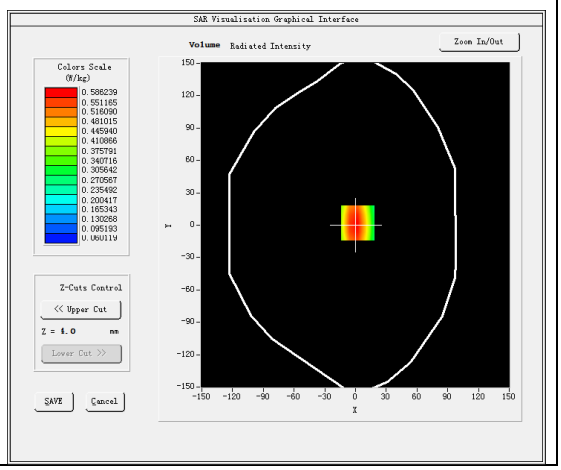
Date of measurement: 26/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW835 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |
| **ConvF** | 2.34 |

## B. SAR Measurement Results

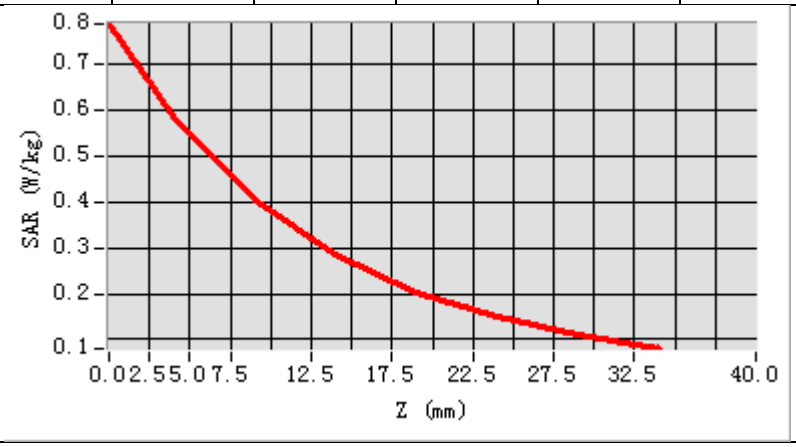
| | |
|---|---|
| **Frequency (MHz)** | 835.000000 |
| **Relative permittivity (real part)** | 41.934568 |
| **Relative permittivity (imaginary part)** | 19.710231 |
| **Conductivity (S/m)** | 0.914336 |
| **Variation (%)** | -0.150000 |

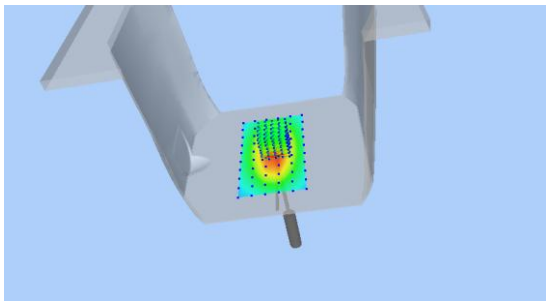
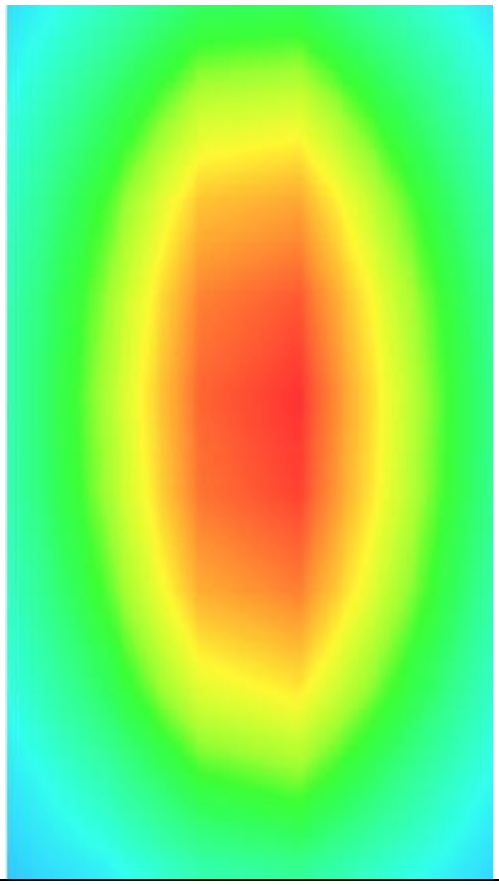
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=2.00, Y=2.00**
**SAR Peak: 0.80 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.375675 |
| **SAR 1g (W/Kg)** | 0.574430 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.7893 | 0.5862 | 0.4057 | 0.2841 | 0.2034 | 0.1486 | 0.1088 |




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

# MEASUREMENT 3

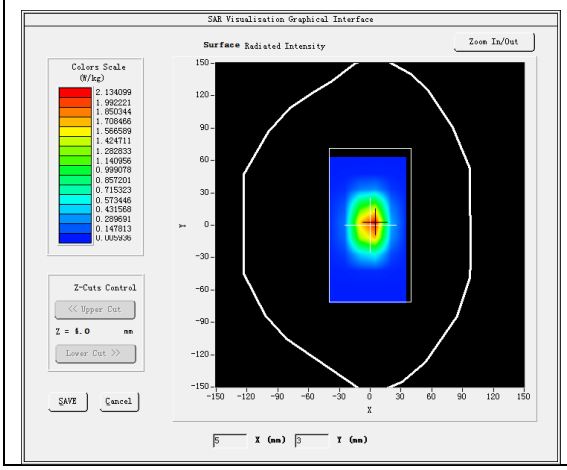
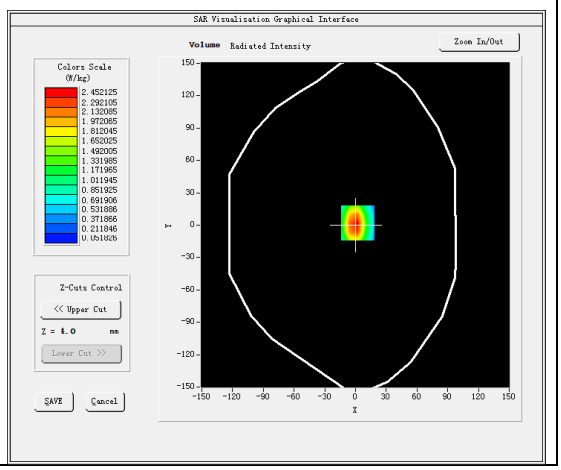
Date of measurement: 21/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1800 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |
| **ConvF** | 2.51 |

## B. SAR Measurement Results

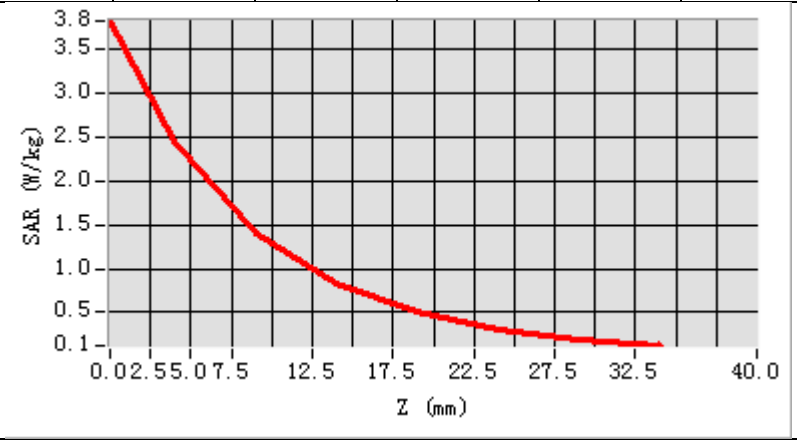
| | |
|---|---|
| **Frequency (MHz)** | 1800.000000 |
| **Relative permittivity (real part)** | 39.077704 |
| **Relative permittivity (imaginary part)** | 13.865005 |
| **Conductivity (S/m)** | 1.386501 |
| **Variation (%)** | -0.110000 |

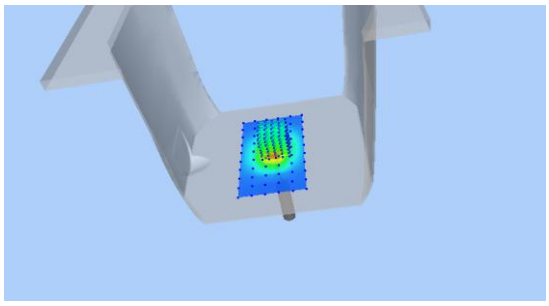
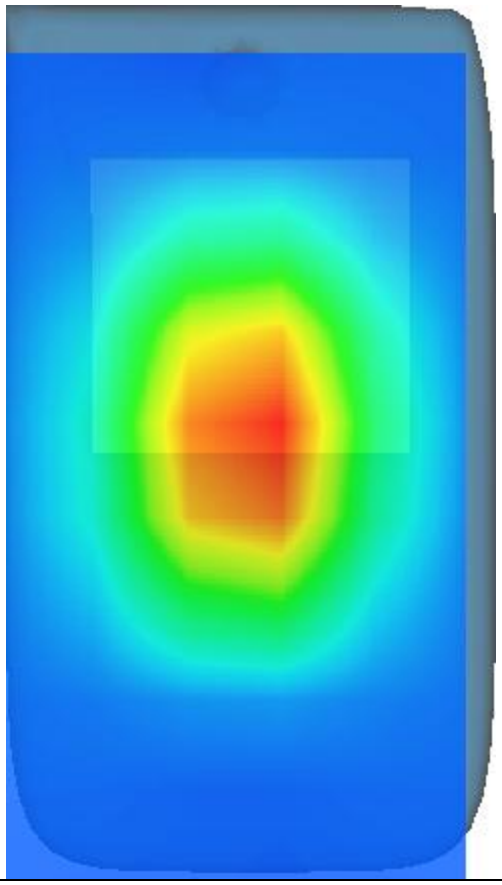
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=2.00, Y=2.00**
**SAR Peak: 3.95 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 1.231630 |
| **SAR 1g (W/Kg)** | 2.380187 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 3.8116 | 2.4521 | 1.3933 | 0.8199 | 0.5001 | 0.3083 | 0.1960 |




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

# MEASUREMENT 4

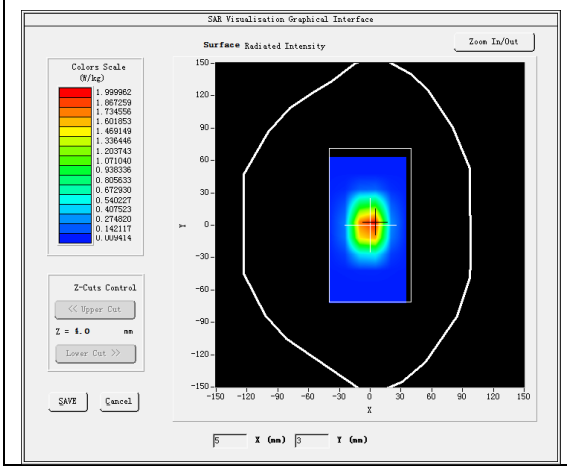
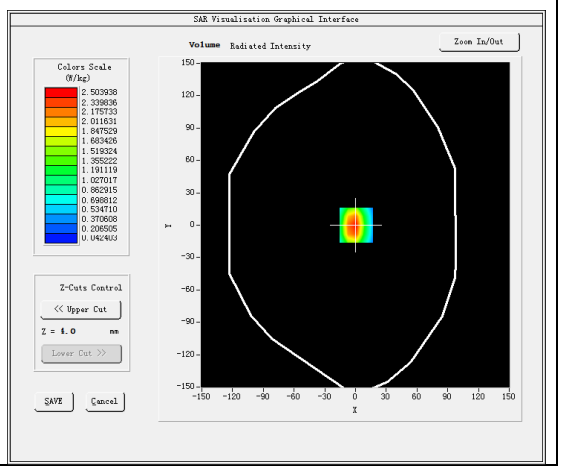
Date of measurement: 24/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1900 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |
| **ConvF** | 2.57 |

## B. SAR Measurement Results

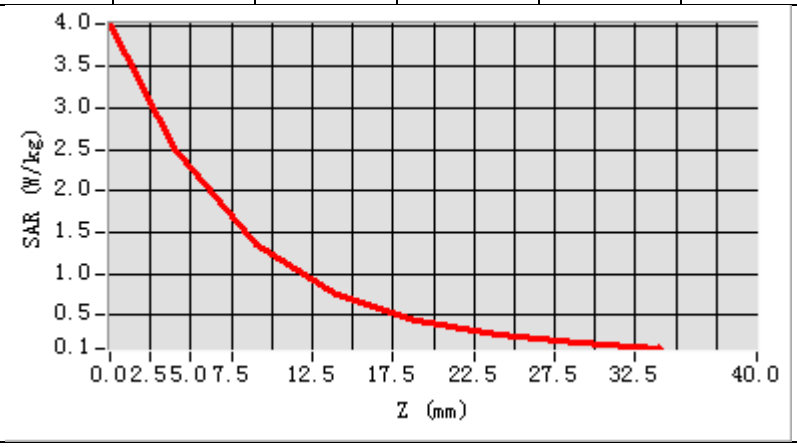
| | |
|---|---|
| **Frequency (MHz)** | 1900.000000 |
| **Relative permittivity (real part)** | 38.328712 |
| **Relative permittivity (imaginary part)** | 13.679631 |
| **Conductivity (S/m)** | 1.443961 |
| **Variation (%)** | -0.190000 |

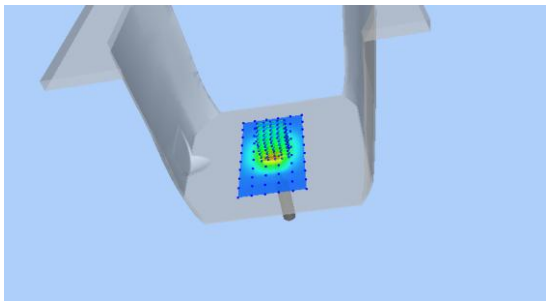
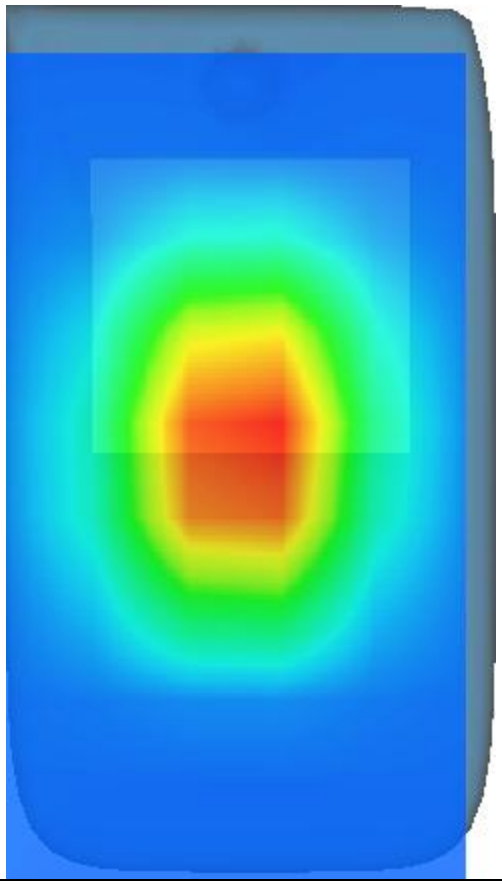
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=1.00, Y=0.00**
**SAR Peak: 4.16 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 1.230521 |
| **SAR 1g (W/Kg)** | 2.509710 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 4.0162 | 2.5039 | 1.3545 | 0.7613 | 0.4450 | 0.2630 | 0.1603 |




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

# MEASUREMENT 5

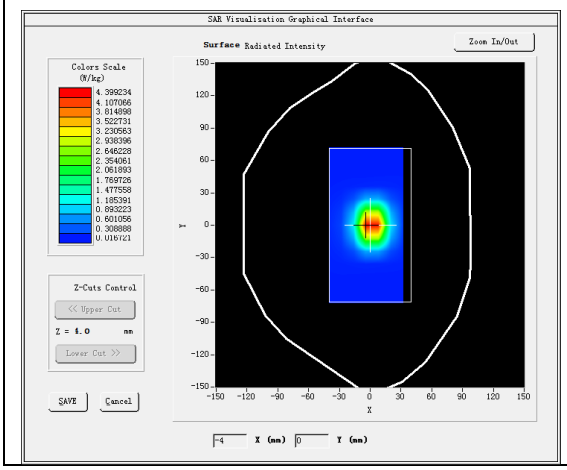
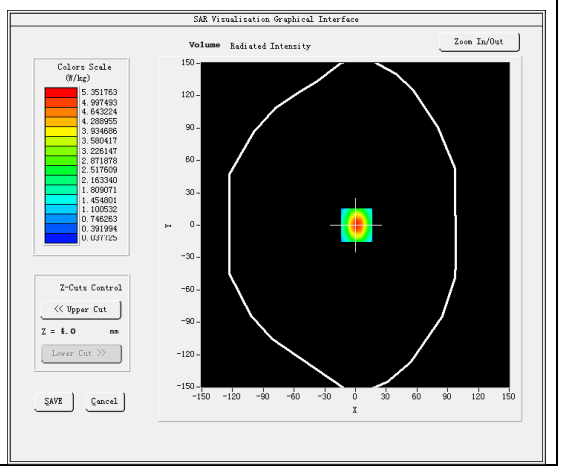
Date of measurement: 12/12/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=12mm dy=12mm, h= 5.00 mm |
| **ZoomScan** | 7x7x7,dx=5mm dy=5mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2450 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |
| **ConvF** | 2.74 |

## B. SAR Measurement Results

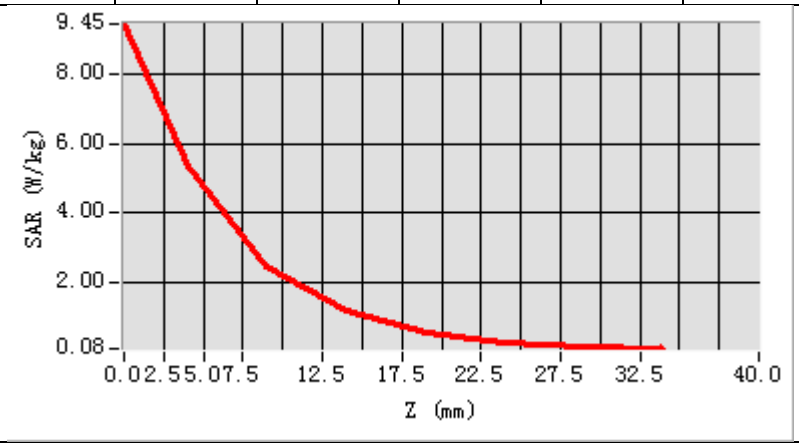
| | |
|---|---|
| **Frequency (MHz)** | 2450.000000 |
| **Relative permittivity (real part)** | 37.814490 |
| **Relative permittivity (imaginary part)** | 13.088029 |
| **Conductivity (S/m)** | 1.781426 |
| **Variation (%)** | -0.120000 |

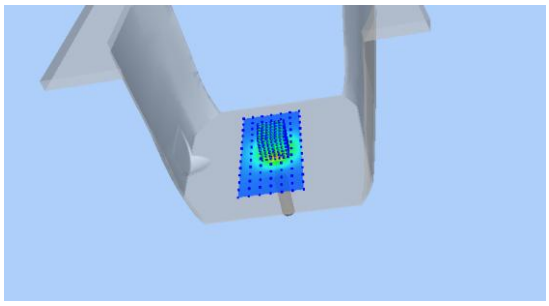
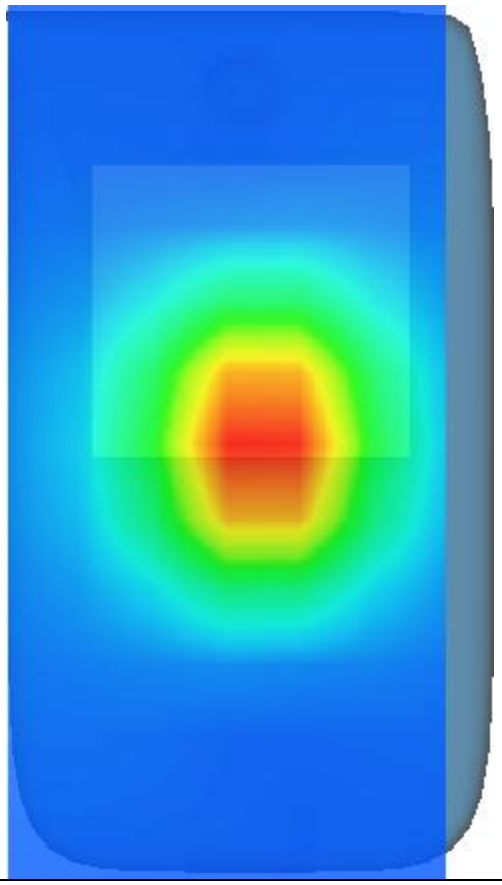
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=1.00, Y=0.00**
**SAR Peak: 9.35 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 2.216730 |
| **SAR 1g (W/Kg)** | 4.962190 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 9.4489 | 5.3518 | 2.4364 | 1.1509 | 0.5548 | 0.2722 | 0.1404 |




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

# MEASUREMENT 6

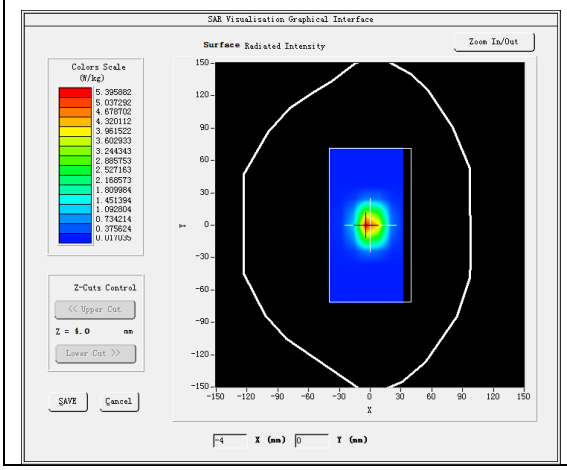
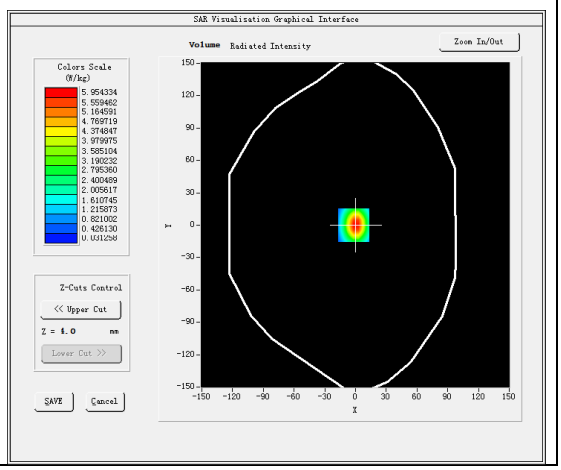
Date of measurement: 25/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=12mm dy=12mm, h= 5.00 mm |
| **ZoomScan** | 7x7x7,dx=5mm dy=5mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2600 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |
| **ConvF** | 2.51 |

## B. SAR Measurement Results

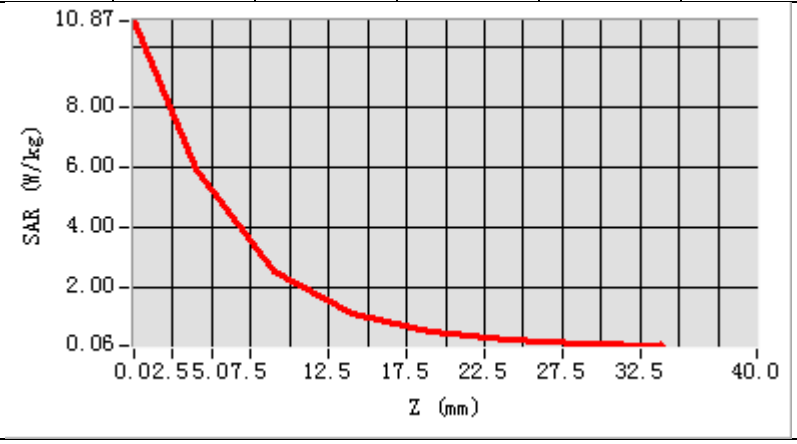
| | |
|---|---|
| **Frequency (MHz)** | 2600.000000 |
| **Relative permittivity (real part)** | 38.878441 |
| **Relative permittivity (imaginary part)** | 13.731472 |
| **Conductivity (S/m)** | 1.983435 |
| **Variation (%)** | -0.680000 |

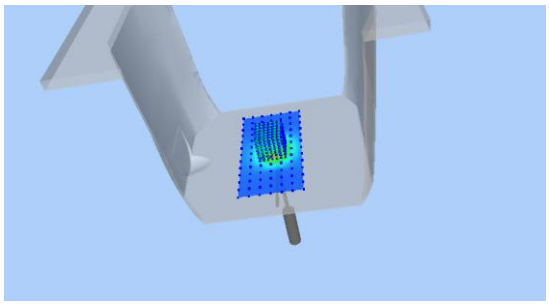
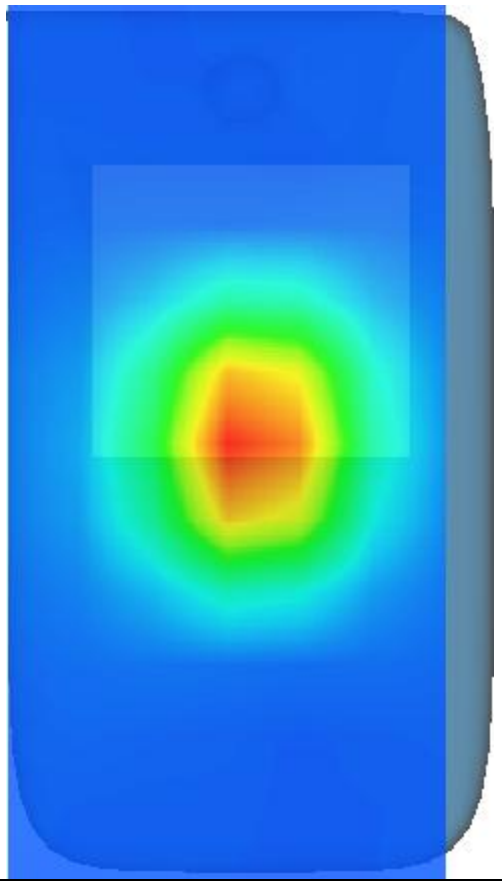
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=-2.00, Y=0.00**
**SAR Peak: 11.17 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 2.367676 |
| **SAR 1g (W/Kg)** | 5.709248 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 10.8743 | 5.9543 | 2.5349 | 1.1069 | 0.4993 | 0.2309 | 0.1155 |




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

# MEASUREMENT 7

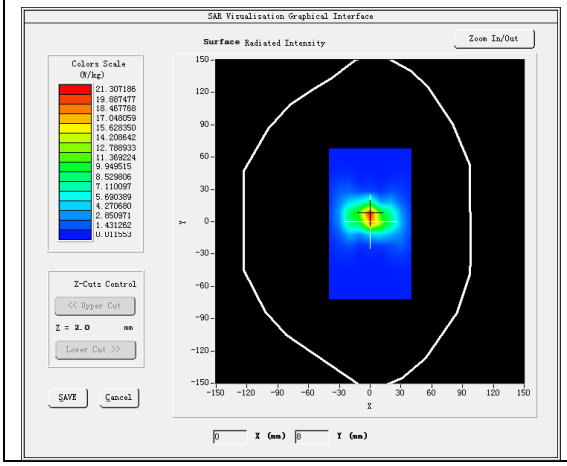
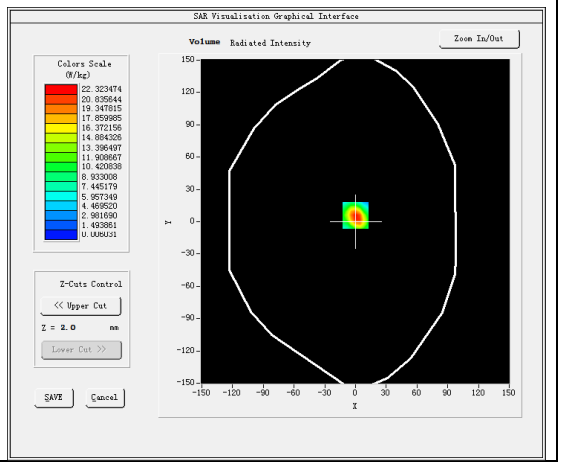
Date of measurement: 11/12/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=10mm dy=10mm, h= 2.00 mm |
| **ZoomScan** | 7x7x12,dx=4mm dy=4mm dz=2mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW5200 |
| **Channels** | Middle |
| **Signal** | CW (Crest factor: 1.0) |
| **ConvF** | 1.89 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 5200.000000 |
| **Relative permittivity (real part)** | 34.652485 |
| **Relative permittivity (imaginary part)** | 15.561054 |
| **Conductivity (S/m)** | 4.4954156 |
| **Variation (%)** | 1.590000 |

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

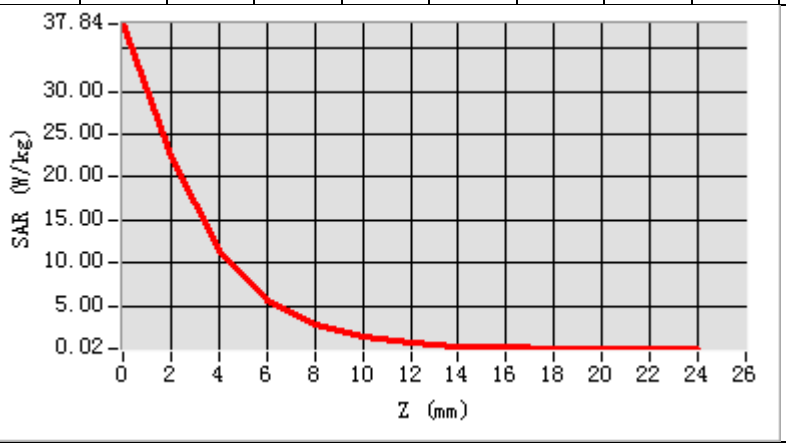


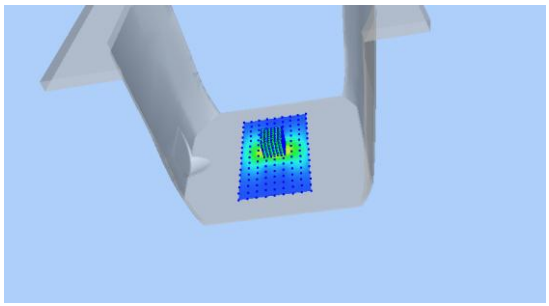
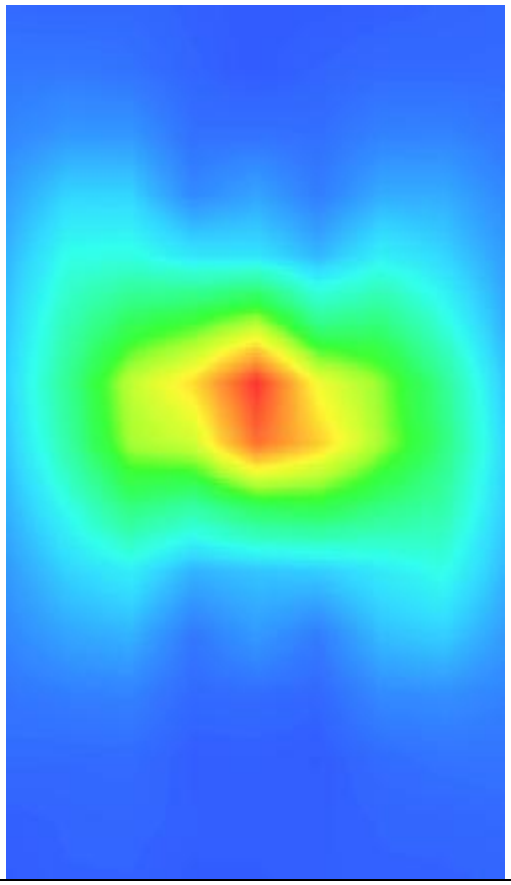


**Maximum location: X=0.00, Y=6.00**
**SAR Peak: 40.06 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 5.450374 |
| **SAR 1g (W/Kg)** | 15.653564 |

| Z (mm) | 0.00 | 2.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 | 14.00 | 16.00 | 18.00 | 20.00 | 22.00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 37.8356 | 22.3278 | 11.3730 | 5.6618 | 2.8255 | 1.4093 | 0.7124 | 0.3660 | 0.1808 | 0.1012 | 0.0513 | 0.0323 |




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

# 12. Appendix C. Plots of High SAR Measurement

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| MEASUREMENT 5 WCDMA Band 5 Body |
| MEASUREMENT 6 WLAN 5.2G Body |
| MEASUREMENT 7 WLAN 2.4G Body |
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| MEASUREMENT 13 LTE Band 17 Body |
| MEASUREMENT 14 LTE Band 41 Body |
| MEASUREMENT 15 LTE Band 66 Body |

# MEASUREMENT 1

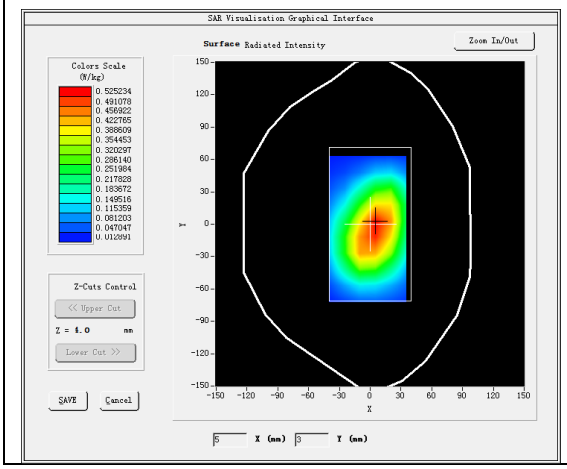
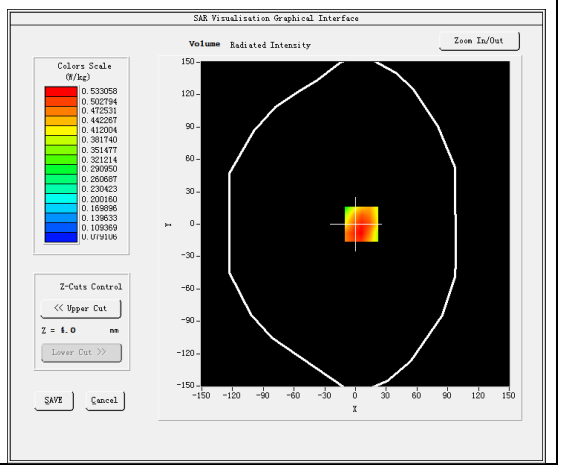
Date of measurement: 26/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | GSM850 |
| **Channels** | Middle |
| **Signal** | TDMA (Crest factor: 8.0) |
| **ConvF** | 2.34 |

## B. SAR Measurement Results

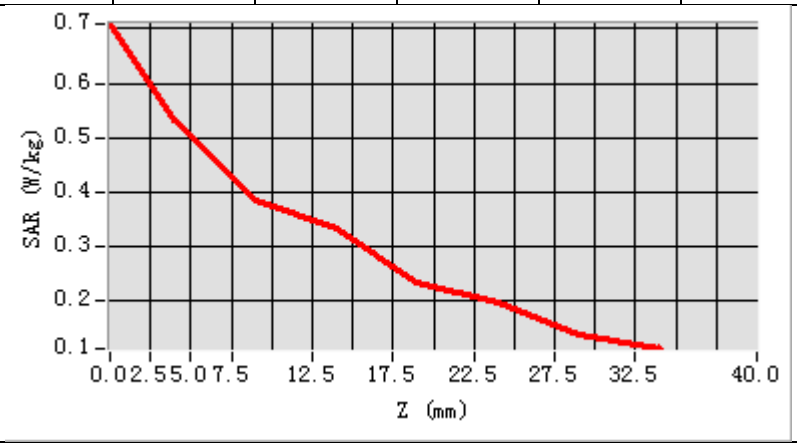
| | |
|---|---|
| **Frequency (MHz)** | 836.400000 |
| **Relative permittivity (real part)** | 41.850227 |
| **Relative permittivity (imaginary part)** | 19.736071 |
| **Conductivity (S/m)** | 0.917069 |
| **Variation (%)** | -3.650000 |

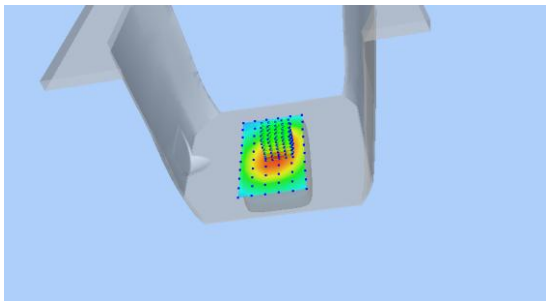
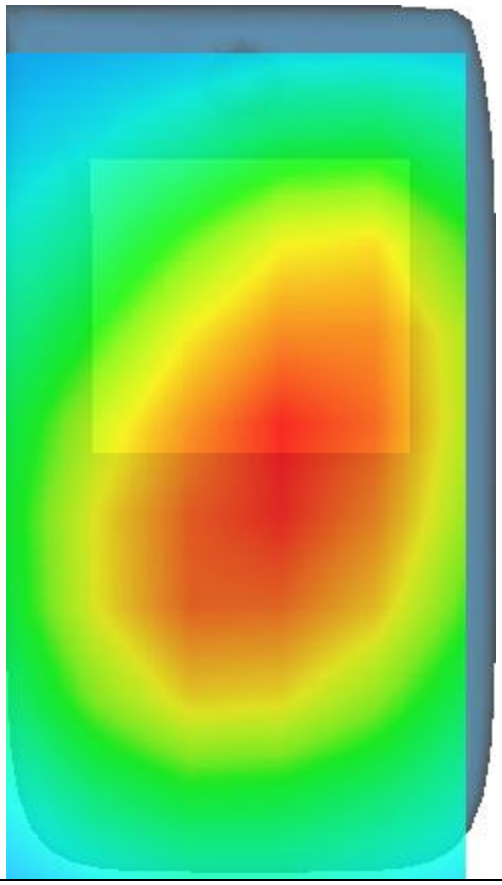
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=6.00, Y=0.00**
**SAR Peak: 0.67 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.382093 |
| **SAR 1g (W/Kg)** | 0.522778 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.7088 | 0.5331 | 0.3859 | 0.3323 | 0.2346 | 0.1951 | 0.1396 |




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

# MEASUREMENT 2

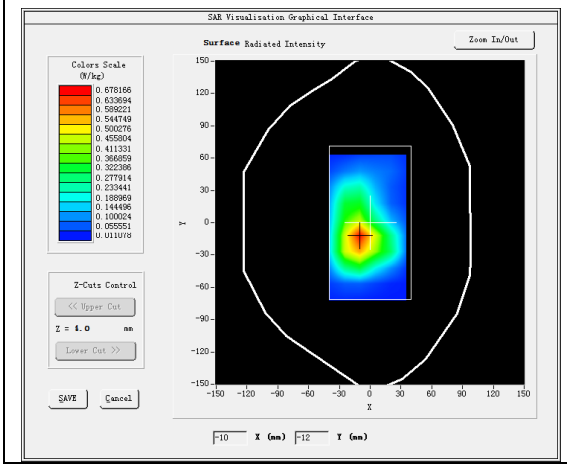
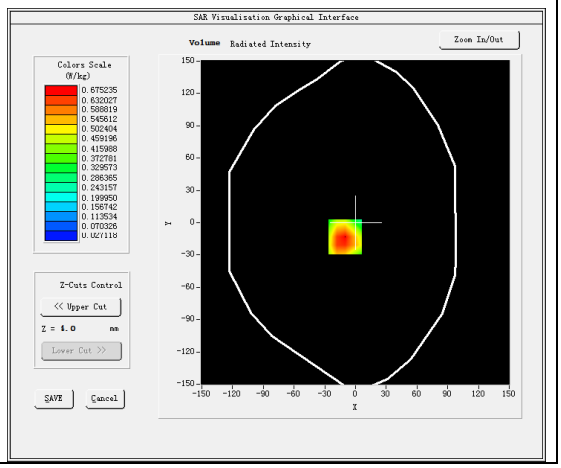
Date of measurement: 24/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | GSM1900 |
| **Channels** | Middle |
| **Signal** | TDMA (Crest factor: 8.0) |
| **ConvF** | 2.57 |

## B. SAR Measurement Results

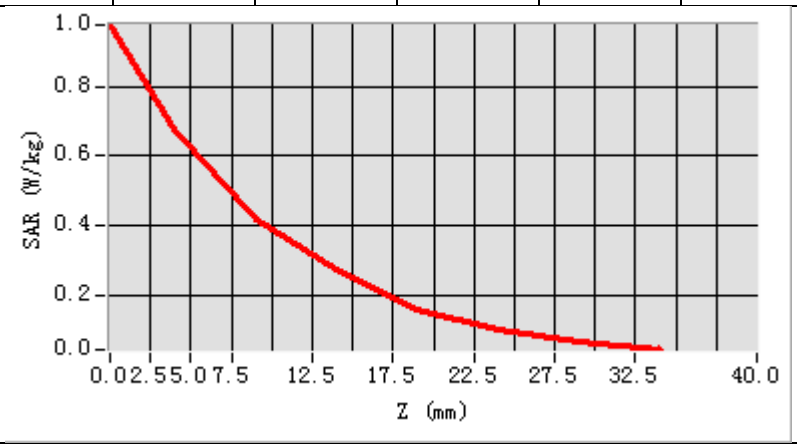
| | |
|---|---|
| **Frequency (MHz)** | 1880.000000 |
| **Relative permittivity (real part)** | 38.415112 |
| **Relative permittivity (imaginary part)** | 13.697431 |
| **Conductivity (S/m)** | 1.430621 |
| **Variation (%)** | 1.130000 |

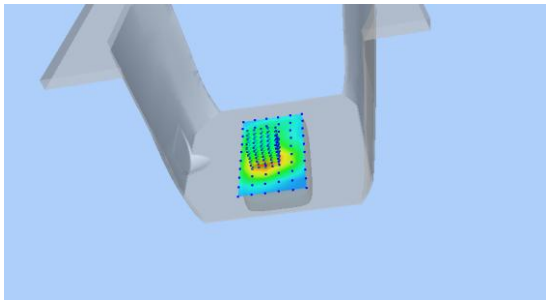
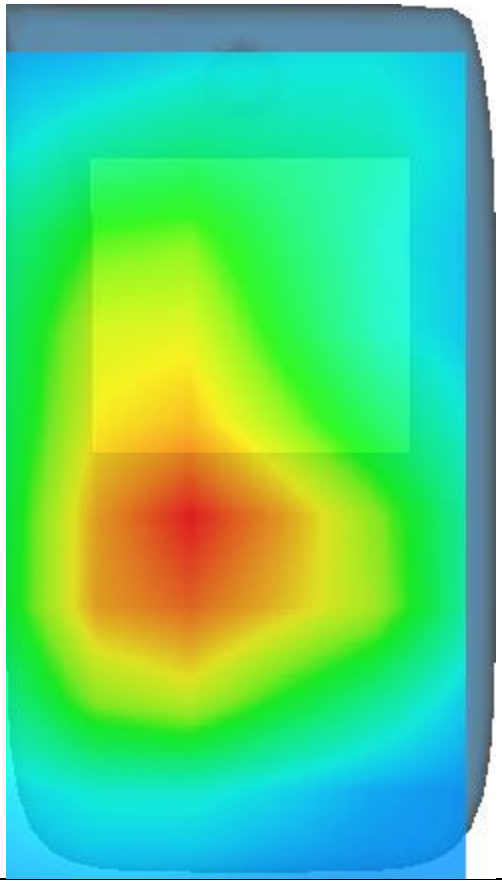
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

**Maximum location: X=-10.00, Y=-13.00**
**SAR Peak: 1.02 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.384883 |
| **SAR 1g (W/Kg)** | 0.670105 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.9764 | 0.6752 | 0.4161 | 0.2726 | 0.1615 | 0.1052 | 0.0676 |




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

# MEASUREMENT 3

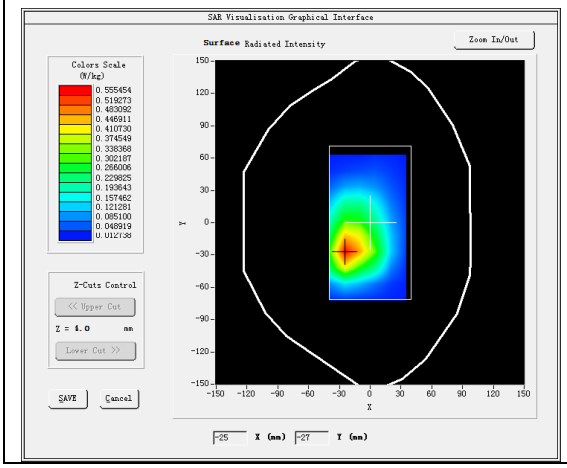
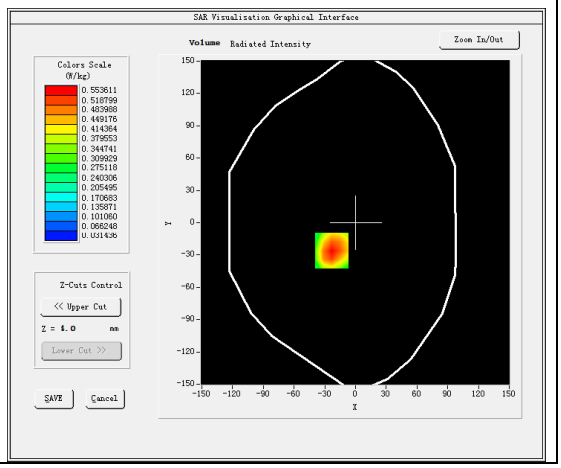
Date of measurement: 24/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | Band2_WCDMA1900 |
| **Channels** | Middle |
| **Signal** | WCDMA (Crest factor: 1.0) |
| **ConvF** | 2.57 |

## B. SAR Measurement Results

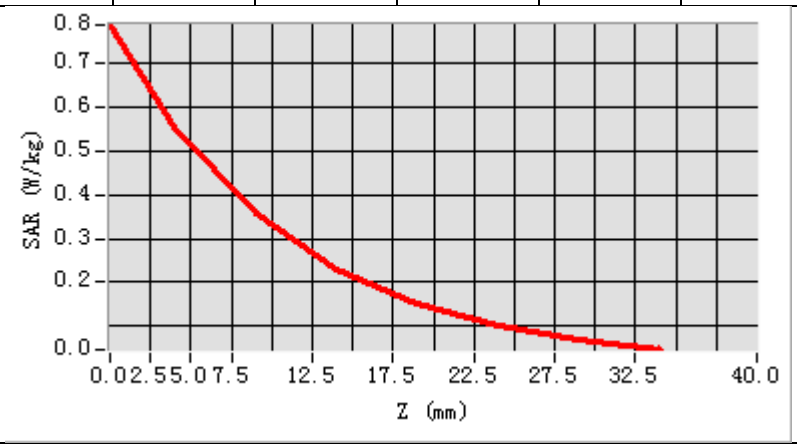
| | |
|---|---|
| **Frequency (MHz)** | 1880.000000 |
| **Relative permittivity (real part)** | 38.415112 |
| **Relative permittivity (imaginary part)** | 13.697431 |
| **Conductivity (S/m)** | 1.430621 |
| **Variation (%)** | -1.230000 |

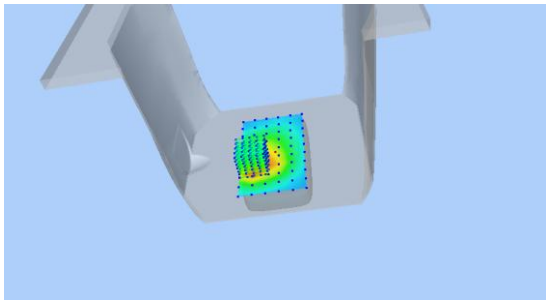
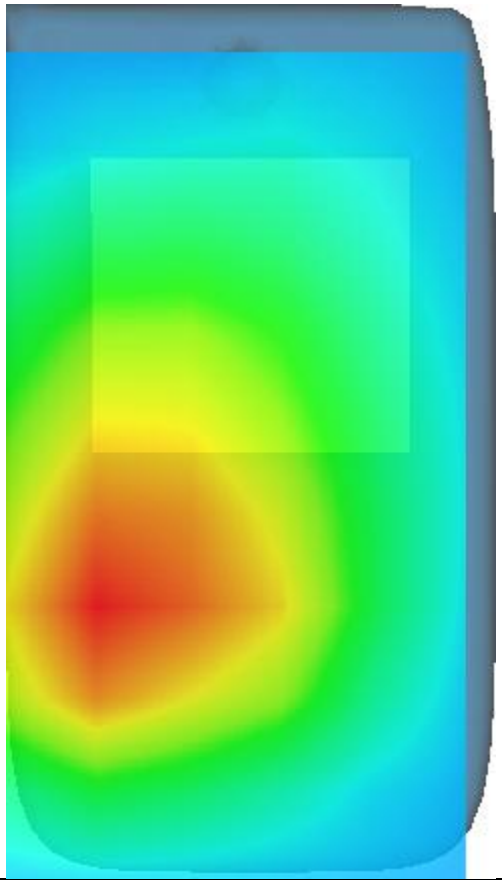
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=-23.00, Y=-26.00**
**SAR Peak: 0.80 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.325150 |
| **SAR 1g (W/Kg)** | 0.541667 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.7864 | 0.5536 | 0.3552 | 0.2309 | 0.1525 | 0.1019 | 0.0691 |




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

# MEASUREMENT 4

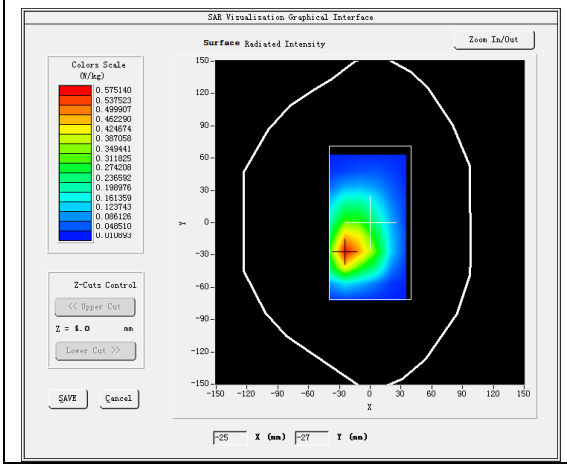
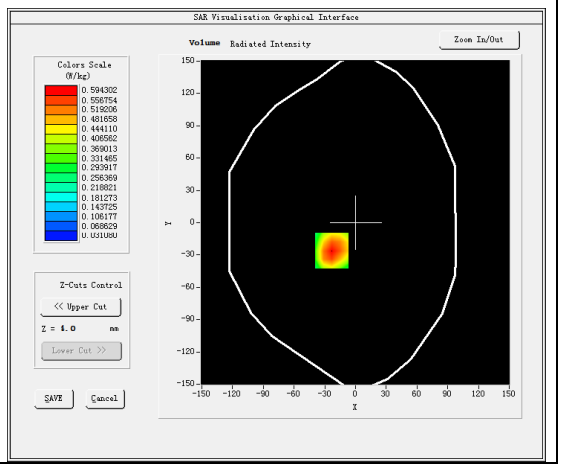
Date of measurement: 21/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | Band4_WCDMA1700 |
| **Channels** | Middle |
| **Signal** | WCDMA (Crest factor: 1.0) |
| **ConvF** | 2.51 |

## B. SAR Measurement Results

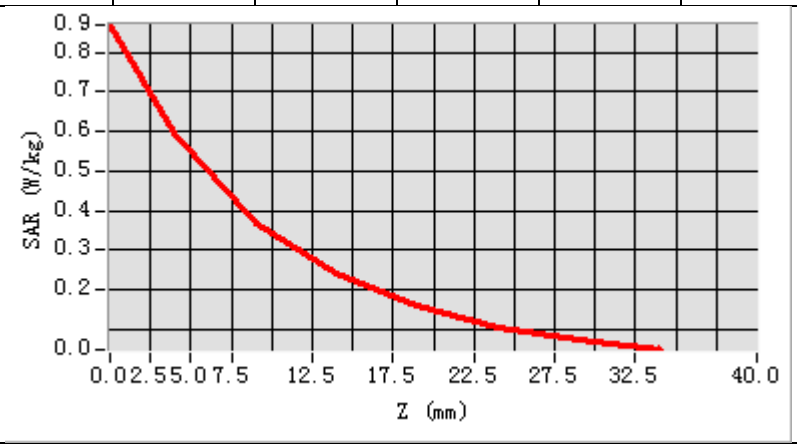
| | |
|---|---|
| **Frequency (MHz)** | 1732.600000 |
| **Relative permittivity (real part)** | 39.537403 |
| **Relative permittivity (imaginary part)** | 13.817305 |
| **Conductivity (S/m)** | 1.329532 |
| **Variation (%)** | -1.020000 |

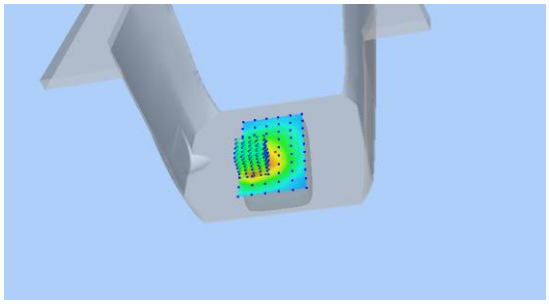
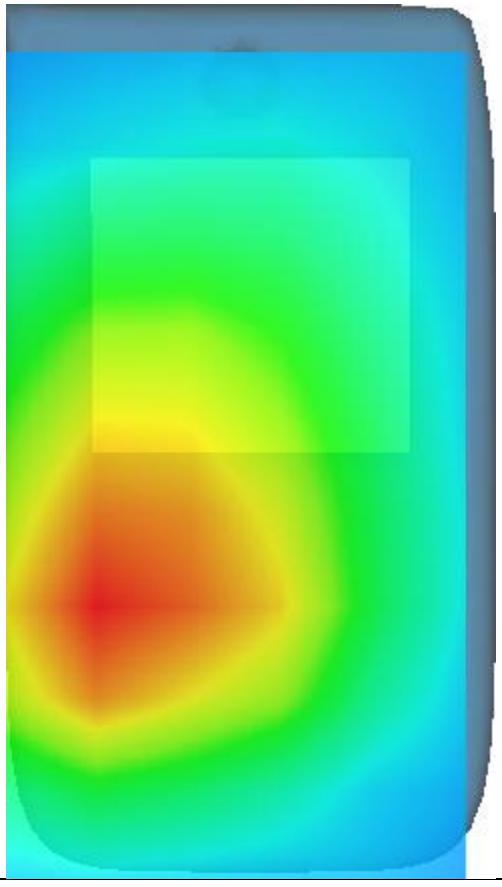
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=-23.00, Y=-26.00**
**SAR Peak: 0.88 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.340673 |
| **SAR 1g (W/Kg)** | 0.571224 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.8696 | 0.5943 | 0.3687 | 0.2409 | 0.1591 | 0.1040 | 0.0737 |




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

# MEASUREMENT 5

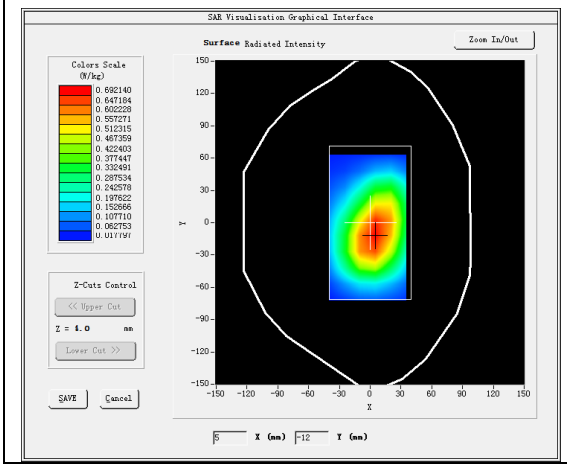
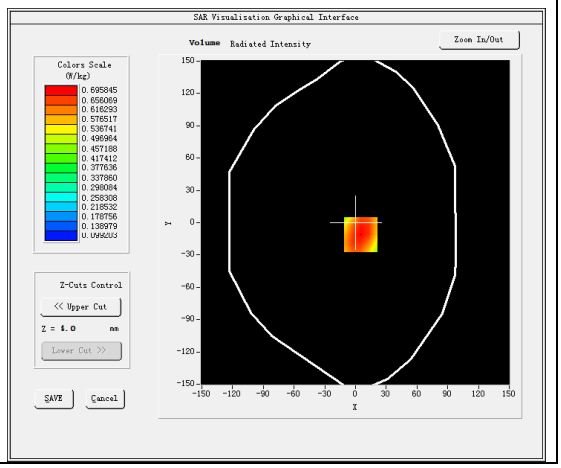
Date of measurement: 26/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | Band5_WCDMA850 |
| **Channels** | Middle |
| **Signal** | WCDMA (Crest factor: 1.0) |
| **ConvF** | 2.34 |

## B. SAR Measurement Results

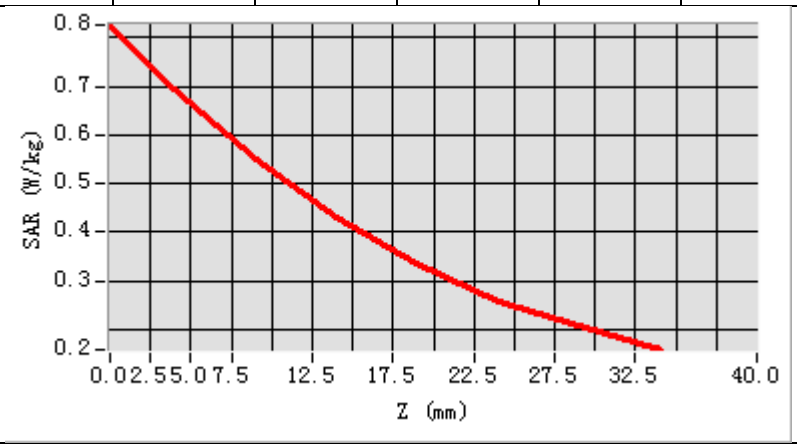
| | |
|---|---|
| **Frequency (MHz)** | 836.400000 |
| **Relative permittivity (real part)** | 41.850227 |
| **Relative permittivity (imaginary part)** | 19.736071 |
| **Conductivity (S/m)** | 0.917069 |
| **Variation (%)** | 1.170000 |

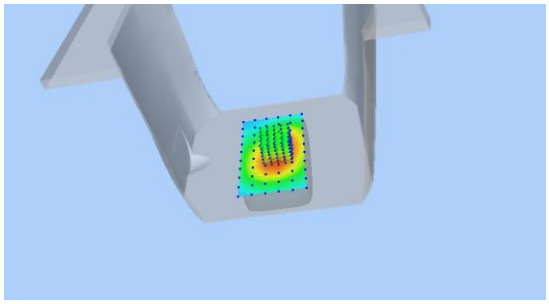
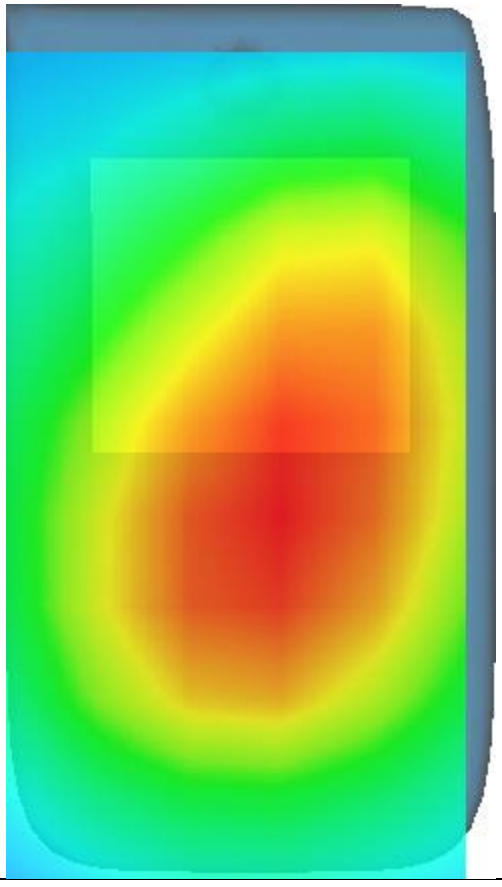
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=5.00, Y=-11.00**
**SAR Peak: 0.84 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.504076 |
| **SAR 1g (W/Kg)** | 0.677246 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.8265 | 0.6958 | 0.5511 | 0.4318 | 0.3369 | 0.2589 | 0.2059 |




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

# MEASUREMENT 6

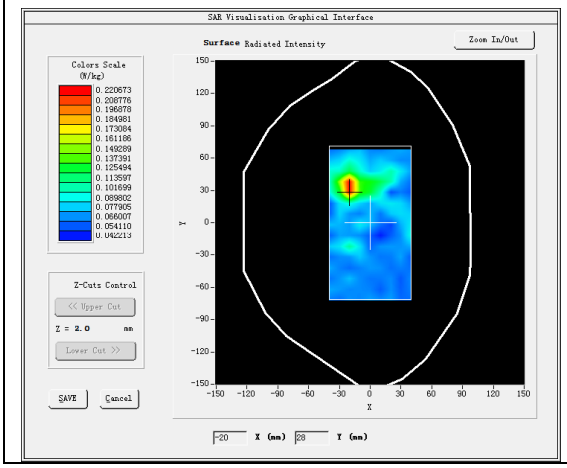
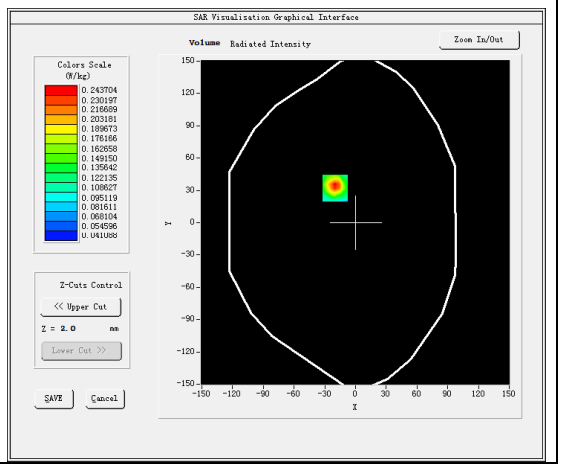
Date of measurement: 11/12/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=10mm dy=10mm, h= 2.00 mm |
| **ZoomScan** | 7x7x12,dx=4mm dy=4mm dz=2mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | IEEE 802.11ax U-NII |
| **Channels** | Middle |
| **Signal** | IEEE802.11ax (Crest factor: 1.0) |
| **ConvF** | 1.89 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 5230.000000 |
| **Relative permittivity (real part)** | 34.652485 |
| **Relative permittivity (imaginary part)** | 15.561054 |
| **Conductivity (S/m)** | 4.495416 |
| **Variation (%)** | 2.100000 |

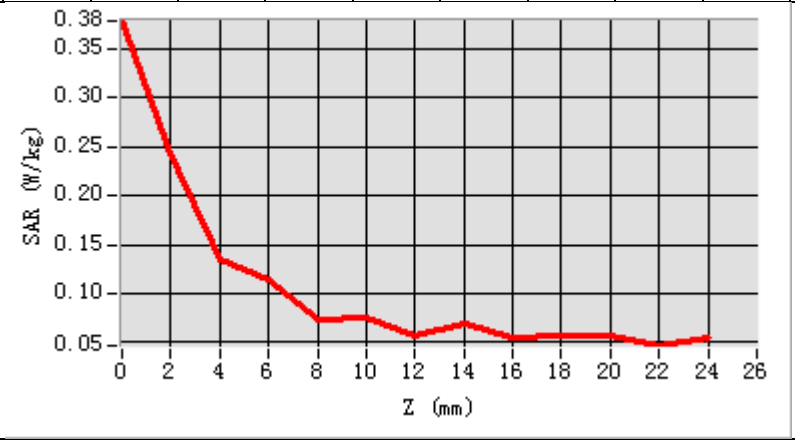
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

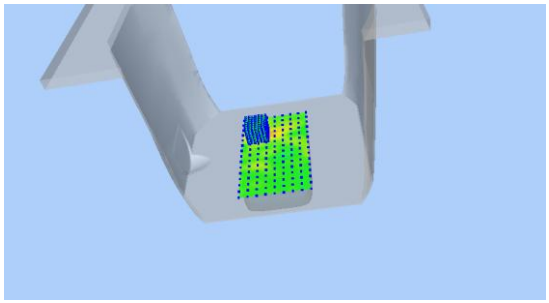
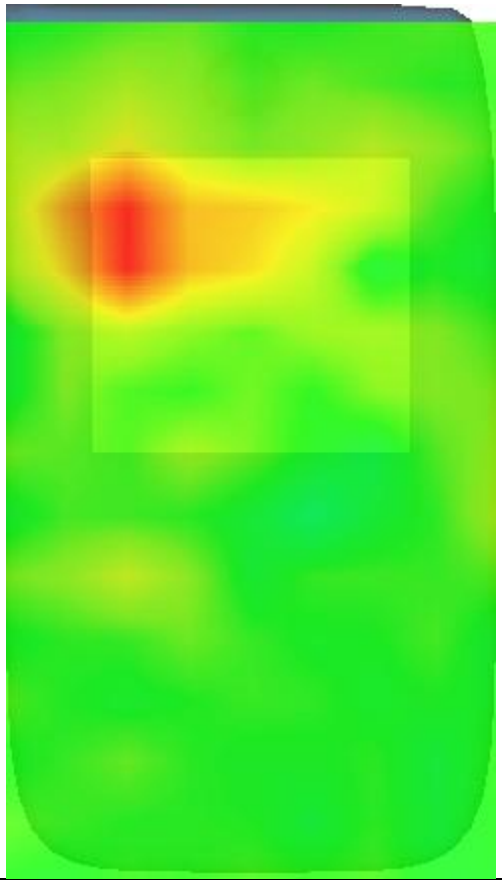


**Maximum location: X=-20.00, Y=32.00**
**SAR Peak: 0.38 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.094090 |
| **SAR 1g (W/Kg)** | 0.162448 |

| Z (mm) | 0.00 | 2.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 | 14.00 | 16.00 | 18.00 | 20.00 | 22.00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.3782 | 0.2437 | 0.1352 | 0.1140 | 0.0736 | 0.0756 | 0.0566 | 0.0689 | 0.0553 | 0.0574 | 0.0569 | 0.0466 |




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

# MEASUREMENT 7

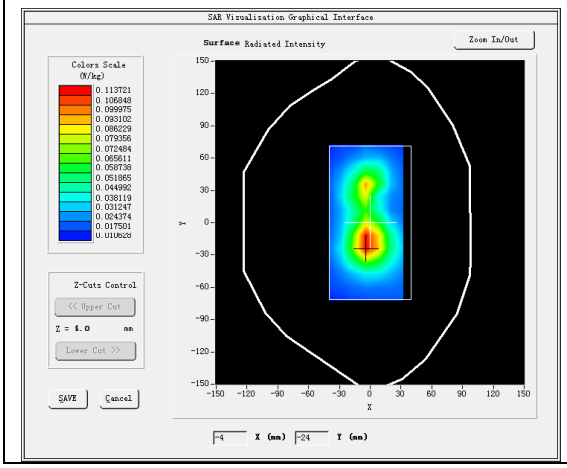
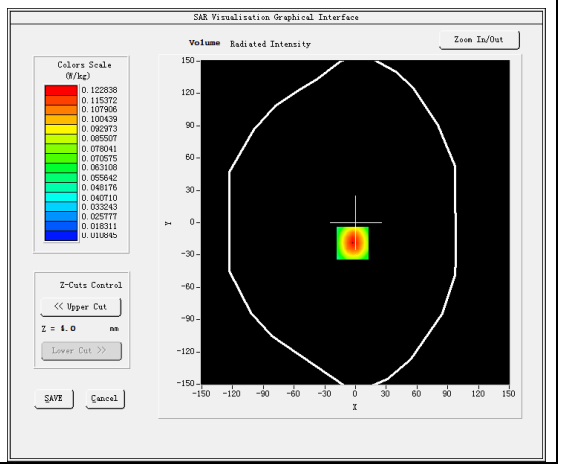
Date of measurement: 12/12/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=12mm dy=12mm, h= 5.00 mm |
| **ZoomScan** | 7x7x7,dx=5mm dy=5mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | IEEE 802.11b ISM |
| **Channels** | High |
| **Signal** | IEEE802.11b (Crest factor: 1.0) |
| **ConvF** | 2.74 |

## B. SAR Measurement Results

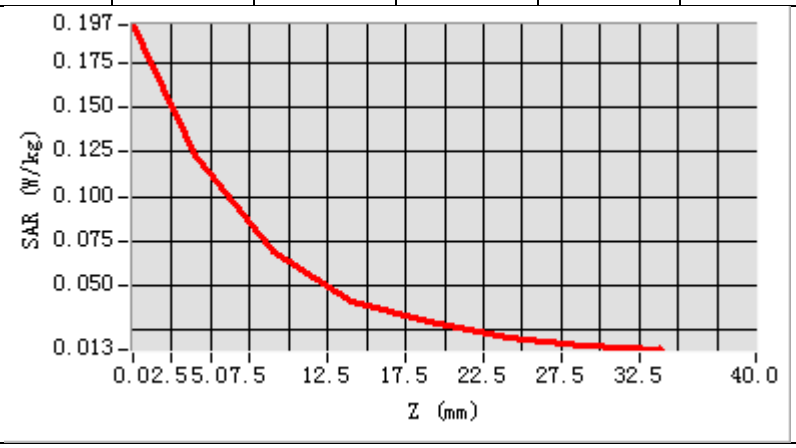
| | |
|---|---|
| **Frequency (MHz)** | 2462.000000 |
| **Relative permittivity (real part)** | 37.866589 |
| **Relative permittivity (imaginary part)** | 13.006529 |
| **Conductivity (S/m)** | 1.760940 |
| **Variation (%)** | 2.350000 |

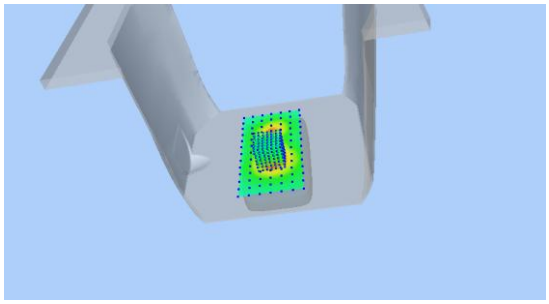
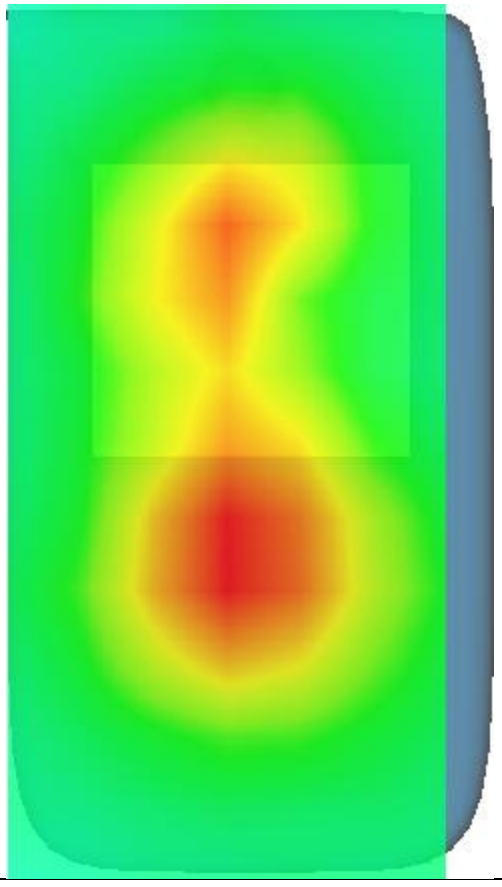
| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=-3.00, Y=-19.00**
**SAR Peak: 0.19 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.064831 |
| **SAR 1g (W/Kg)** | 0.114749 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.1970 | 0.1228 | 0.0691 | 0.0405 | 0.0288 | 0.0198 | 0.0152 |




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

# MEASUREMENT 8

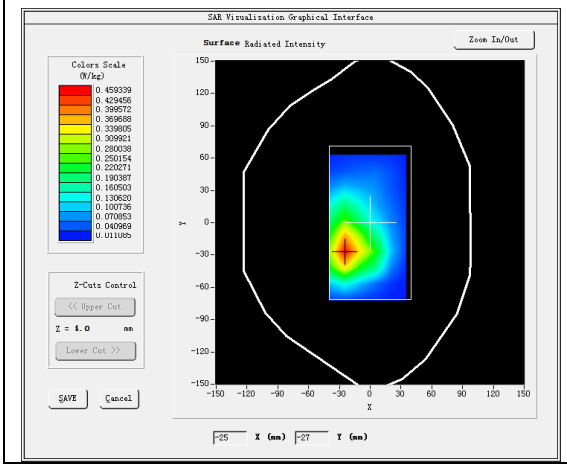
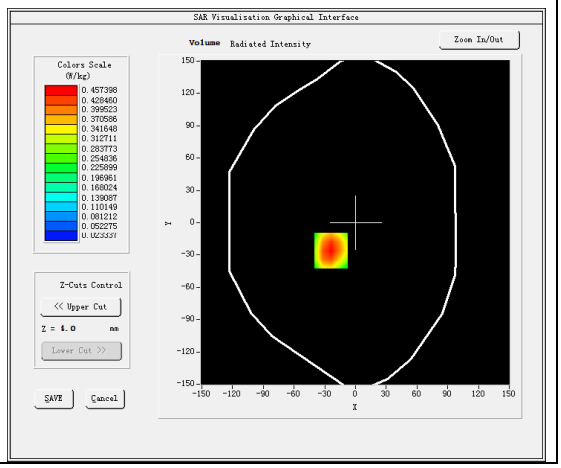
Date of measurement: 24/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 2 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1.0) |
| **ConvF** | 2.57 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1880.000000 |
| **Relative permittivity (real part)** | 38.415112 |
| **Relative permittivity (imaginary part)** | 13.697431 |
| **Conductivity (S/m)** | 1.430621 |
| **Variation (%)** | -0.030000 |

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

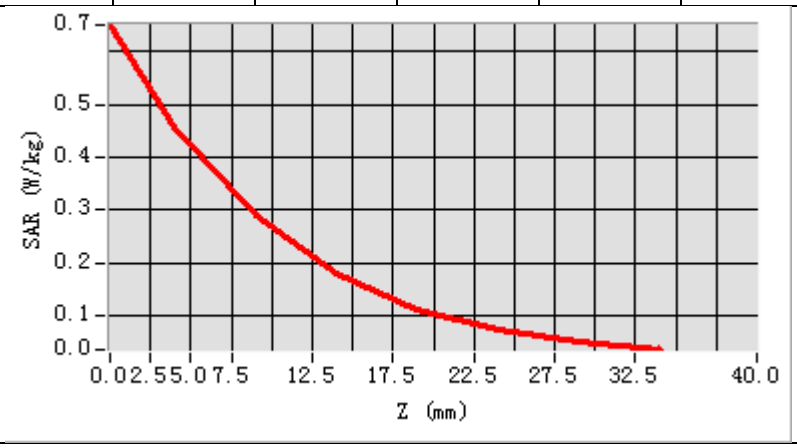


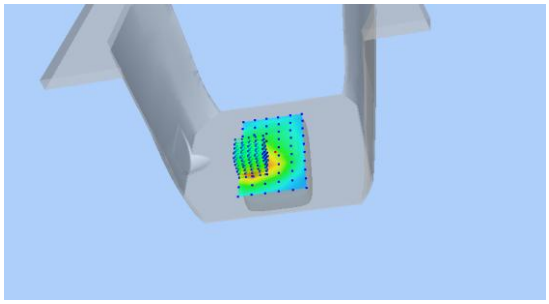
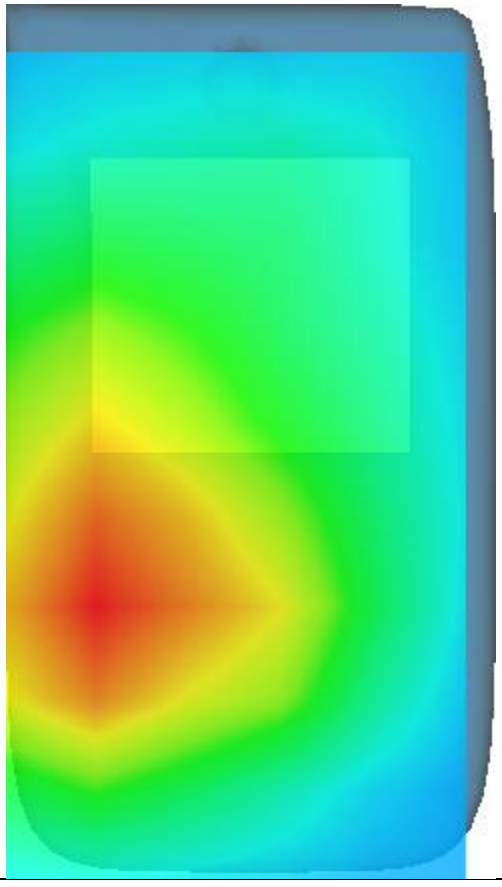


**Maximum location: X=-24.00, Y=-26.00**
**SAR Peak: 0.66 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.264855 |
| **SAR 1g (W/Kg)** | 0.446676 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.6507 | 0.4574 | 0.2885 | 0.1782 | 0.1122 | 0.0734 | 0.0498 |




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

# MEASUREMENT 9

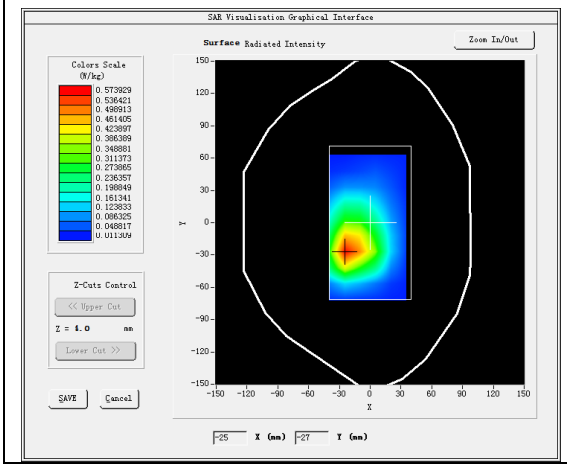
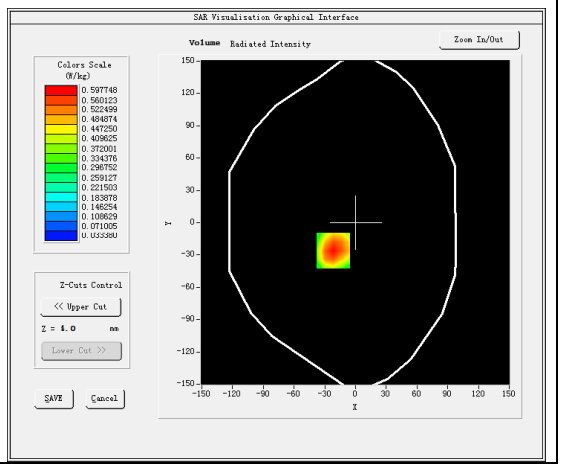
Date of measurement: 21/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 4 |
| **Channels** | Middle |
| **Signal** | LTE (Crest factor: 1.0) |
| **ConvF** | 2.51 |

## B. SAR Measurement Results

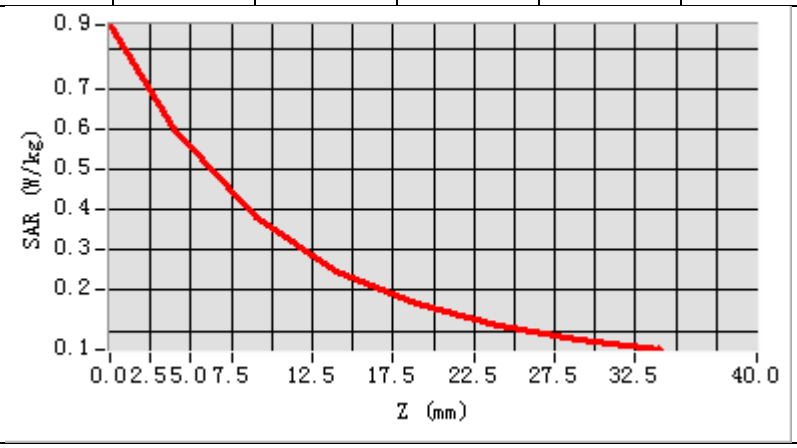
| | |
|---|---|
| **Frequency (MHz)** | 1732.500000 |
| **Relative permittivity (real part)** | 39.545303 |
| **Relative permittivity (imaginary part)** | 13.802155 |
| **Conductivity (S/m)** | 1.328457 |
| **Variation (%)** | 2.020000 |

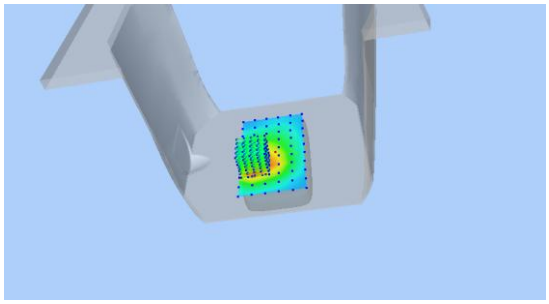
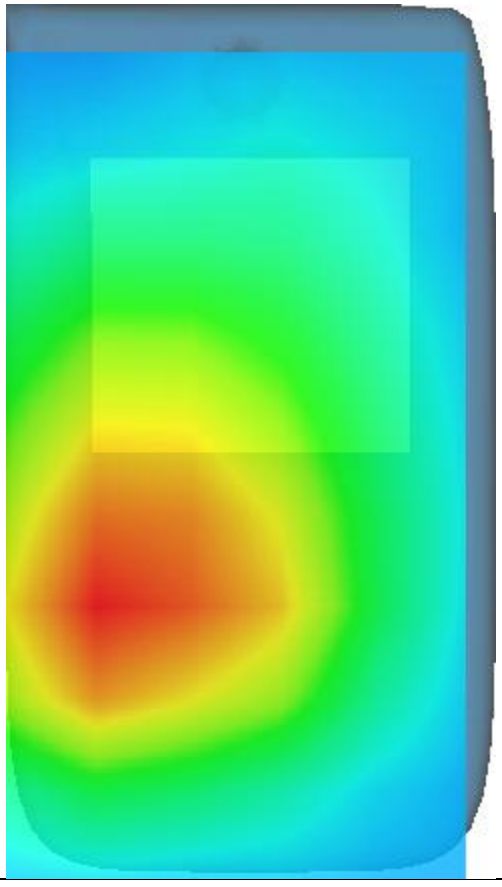
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

**Maximum location: X=-22.00, Y=-26.00**
**SAR Peak: 0.87 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.348908 |
| **SAR 1g (W/Kg)** | 0.573592 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.8574 | 0.5977 | 0.3810 | 0.2487 | 0.1656 | 0.1132 | 0.0772 |




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

# MEASUREMENT 10

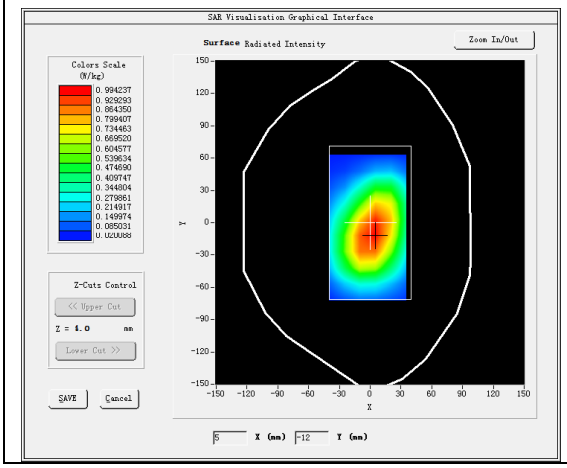
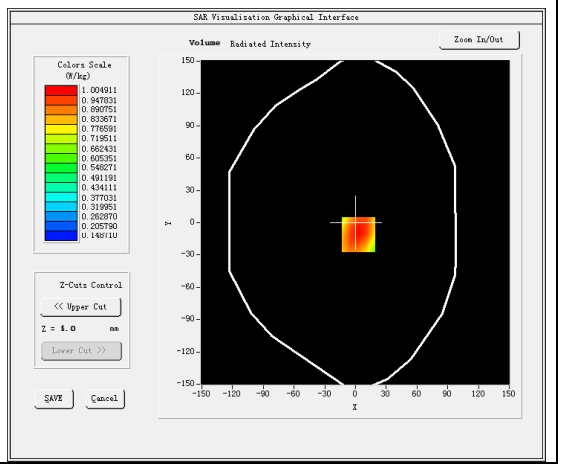
Date of measurement: 26/11/2024

## A. Experimental conditions.

| | |
|---|---|
| **Area Scan** | dx=15mm dy=15mm, h= 5.00 mm |
| **ZoomScan** | 5x5x7,dx=8mm dy=8mm dz=5mm |
| **Phantom** | Validation plane |
| **Device Position** | Body |
| **Band** | LTE band 5 |
| **Channels** | Low |
| **Signal** | LTE (Crest factor: 1.0) |
| **ConvF** | 2.34 |

## B. SAR Measurement Results

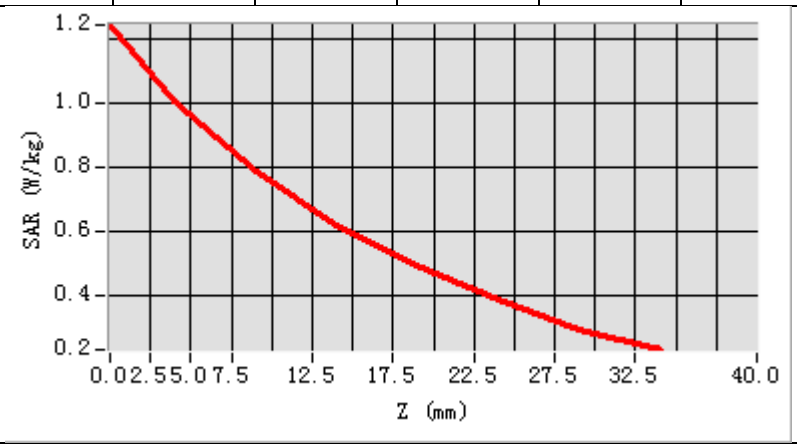
| | |
|---|---|
| **Frequency (MHz)** | 829.000000 |
| **Relative permittivity (real part)** | 41.952168 |
| **Relative permittivity (imaginary part)** | 19.725831 |
| **Conductivity (S/m)** | 0.908484 |
| **Variation (%)** | -0.790000 |

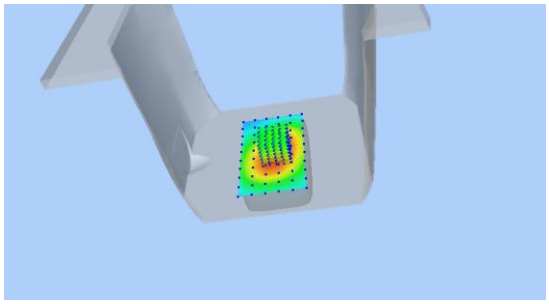
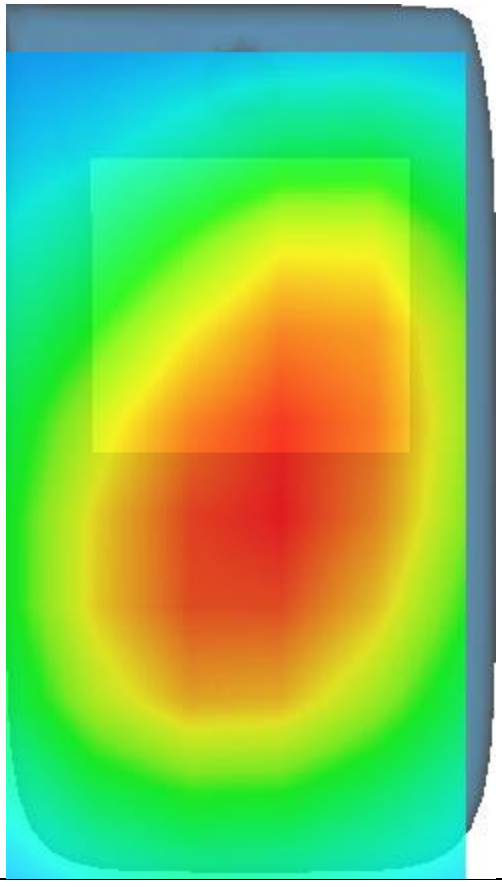
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

**Maximum location: X=3.00, Y=-11.00**
**SAR Peak: 1.25 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 0.629193 |
| **SAR 1g (W/Kg)** | 0.854413 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 1.2448 | 1.0049 | 0.7898 | 0.6240 | 0.4994 | 0.3883 | 0.2948 |




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