SAR TEST REPORT

Product Name: Smart phone

Model Name: TANK 2 Pro

FCC ID: 2BAVY-TANK2PRO

Issued For	:	Shenzhen OBLUE Communication Technology Co.,Ltd. Room 702, Hepingdayou industrial and trade industrial park, No. 41, Yonghe Road, Heping Community, Fuhai Street, Baoan District, Shenzhen City,China
Issued By	:	Shenzhen LGT Test Service Co., Ltd. Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China

Report Number:	LGT25A034HA01
Sample Received Date:	Jan. 07, 2025
Date of Test:	Jan. 10, 2025 ~ Jan. 11, 2025
Date of Issue:	Jan. 22, 2025
Max. SAR (1g):	Head:0.492 W/kg Body:0.808 W/kg

Table of Contents

Revision History

Rev.	Report Number	Issue Date	Contents
00	LGT24D077HA01	May. 07, 2024	Initial Issue
01	LGT25A034HA01	Jan. 22, 2025	Add optional batteries and chargers, Updated worst side SAR test.

TEST REPORT CERTIFICATION

Applicant	Shenzhen OBLUE Communication Technology Co.,Ltd.
Address	Room 702, Hepingdayou industrial and trade industrial park, No. 41, Yonghe Road, Heping Community, Fuhai Street, Baoan District, Shenzhen City,China
Manufacture	Shenzhen OBLUE Communication Technology Co.,Ltd.
Address	Room 702, Hepingdayou industrial and trade industrial park, No. 41, Yonghe Road, Heping Community, Fuhai Street, Baoan District, Shenzhen City,China
Product Name	Smart phone
Trademark	8849,Unihertz
Model Name	TANK 2 Pro
Sample number	LGT2501045-1

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
ANSI/IEEE Std. C95.1-1992 FCC 47 CFR Part 2 (2.1093) IEEE 1528: 2013	PASS

Prepared by:

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Engineer

Approved by:

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Manager

1. General Information

Environmental evaluation measurements of specific absorption rate (SAR) distributions in emulated human head and body tissues exposed to radio frequency (RF) radiation from wireless portable devices for compliance with the rules and regulations of the U.S. Federal Communications Commission (FCC).

1.1 EUT Description

Product Name	Smart phone
Trademark	8849,Unihertz
Model Name	TANK 2 Pro
Series Model	N/A
Model Difference	N/A
Device Category	Portable
Product stage	Production unit
RF Exposure Environment	General Population / Uncontrolled
Hardware Version	G92_V1.0
Software Version	TANK2_PRO_20240416
Frequency Range	GSM 850: 824 ~ 849 MHz PCS 1900: 1850 ~ 1910 MHz WCDMA Band II: 1850 ~ 1910 MHz WCDMA Band IV:1710 ~ 1755 MHz WCDMA Band V: 824 ~ 849 MHz CDMA&EVDO: BC0: 824.70 MHz~ 848.31 MHz BC1: 1851.25 MHz~ 1908.75 MHz LTE Band 2:1850 ~1910MHz LTE Band 4:1710 ~1755MHz LTE Band 5:824 ~ 849MHz LTE Band 7:2500 ~ 2570MHz LTE Band 12:699~716MHz LTE Band 13:777~787MHz LTE Band 17:704 ~ 716MHz LTE Band 25:1850~1915MHz LTE Band 26:824-849MHz LTE Band 38:2570~2620MHz LTE Band 40:2305~2315MHz/2350-2360MHz LTE Band 41:2555~2655MHz LTE Band 66:1710~1780MHz WLAN 802.11b/g/n20: 2412 MHz ~ 2462 MHz WLAN 802.11n40: 2422 MHz ~ 2452 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5150 ~ 5250 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5250 ~ 5350 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5470 ~ 5725 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5725 ~ 5850 MHz Bluetooth: 2402 ~ 2480 MHz NFC: 13.56MHz

Max. Reported SAR(1g): (Limit:1.6W/kg) Test distance: Head:0mm	Mode	Head (W/kg)	Body Worn and Hotspot (W/ kg)
	WCDMA Band IV	/	0.808
	LTE Band 5	0.198	/
	5.2G WLAN	0.492	/

Body:10mm	5.8G WLAN	/	0.490
1-g Sum SAR		0.690	1.298
Battery 1	Model: PBA91238 Trademark: 8849 Rated Capacity: 10500mAh Rated Voltage: 7.74V		
Battery 2	Model: PBA91238A Trademark: 8849 Capacity: 10500mAh Rated Voltage: 7.74V		
Description test modes	SIM 1 and SIM 2 is a chipset unit and tested as single chipset, SIM 1 is used to tested		
Operating Mode:	GSM: GSM Voice; GPRS Class 12 WCDMA: RMC, HSDPA, HSUPA Release 6 LTE: QPSK, 16QAM 2.4G WLAN: 802.11b(DSSS): CCK, DQPSK, DBPSK 802.11g(OFDM): BPSK, QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK, QPSK,16-QAM,64-QAM 5G WLAN: 802.11a(OFDM): BPSK, QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK, QPSK,16-QAM,64-QAM 802.11ac (OFDM): BPSK, QPSK,16-QAM,64-QAM,256-QAM Bluetooth: GFSK +π/4DQPSK+8DPSK BLE: GFSK NFC:ASK		
Antenna Specification	GSM/WCDMA/LTE: PIFA Antenna Bluetooth: PIFA Antenna WLAN: PIFA Antenna NFC: Coil Antenna		
Operating Mode	Maximum continuous output		
SIM Card	Support dual-SIM, dual standby, the multiple SIM card with two lines cannot trans mitting at the same time		
Hotspot Mode	Support		
DTM Mode	Not Support		
Note: 1. The BT and NFC value was Estimated.			

1.2 Test Environment

Ambient conditions in the SAR laboratory:

Items	Required
Temperature (℃)	18-25
Humidity (%RH)	30-70

1.3 Test Factory

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate	FCC Registration No.: 746540
	A2LA Certificate No.: 6727.01
	IC Registration No.: CN0136

2. Test Standards and Limits

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	ANSI/IEEE Std. C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D01 v06	Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies
5	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
6	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
7	FCC KDB 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
8	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
9	FCC KDB 941225 D06 v02r01	Hotspot Mode SAR
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices

(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.

Population/Uncontrolled Environments:
Are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

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).

NOTE
GENERAL POPULATION/UNCONTROLLED EXPOSURE
PARTIAL BODY LIMIT
1.6 W/kg

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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

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

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

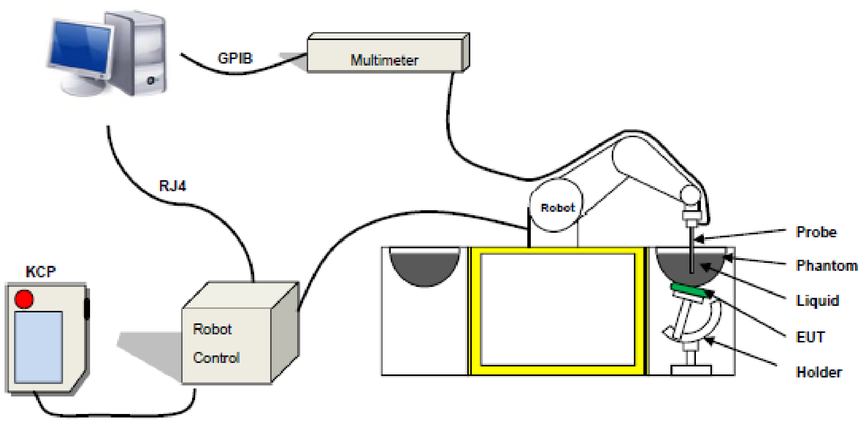
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

3.2 SAR System

MVG SAR System Diagram:



COMOSAR is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The COMOSAR system consists of the following items:
- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

The following figure shows the system.

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

3.2.1 Probe

For the measurements the Specific Dosimetric E-Field Probe SN 04/22 EPGO364 with following specifications is used

- Probe Length: 330 mm
- Length of Individual Dipoles: 2mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 600 MHz to 6 GHz for head & body simulating liquid.

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

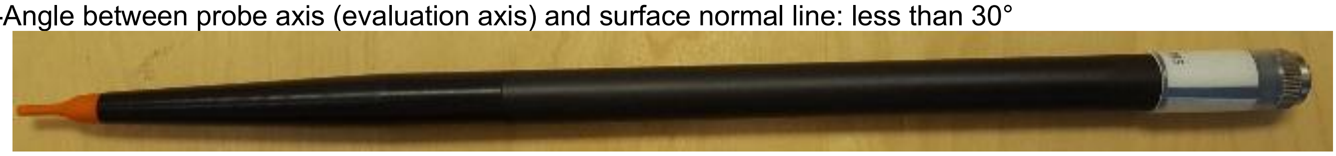


Figure 1-MVG COMOSAR Dosimetric E field Probe

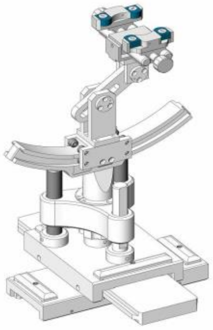
3.2.2 Phantom

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

Figure-SN 06/22 SAM 148

Figure-SN 06/22 ELLI 51

3.2.3 Device Holder



The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm would produce a SAR uncertainty of ± 20 %. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

4. Tissue Simulating Liquids

4.1 Simulating Liquids Parameter Check

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectric parameters are within the tolerances of the specified target values

The uncertainty due to the liquid conductivity and permittivity arises from two different sources. The first source of error is the deviation of the liquid conductivity from its target value (max _ 5 %) and the second source of error arises from the measurement procedures used to assess conductivity. The uncertainty shall be assessed using a rectangular probability For 1 g averaging, the maximum weighting coefficient for SAR is 0,5.

IEEE SCC-34/SC-2 RECOMMENDED TISSUE DIELECTRIC PARAMETERS
The head and body tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 have been incorporated in the following table.

Frequency	εr	σ 10g S/m
300	45.3	0.87
450	43.5	0.87
750	41.9	0.89
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1800 to 2000	40.0	1.40
2100	39.8	1.49
2450	39.2	1.80
2600	39.0	1.96
3000	38.5	2.40
3500	37.9	2.91
4000	37.4	3.43
4500	36.8	3.94
5000	36.2	4.45
5200	36.0	4.66
5400	35.8	4.86
5600	35.5	5.07
5800	35.3	5.27

LIQUID MEASUREMENT RESULTS

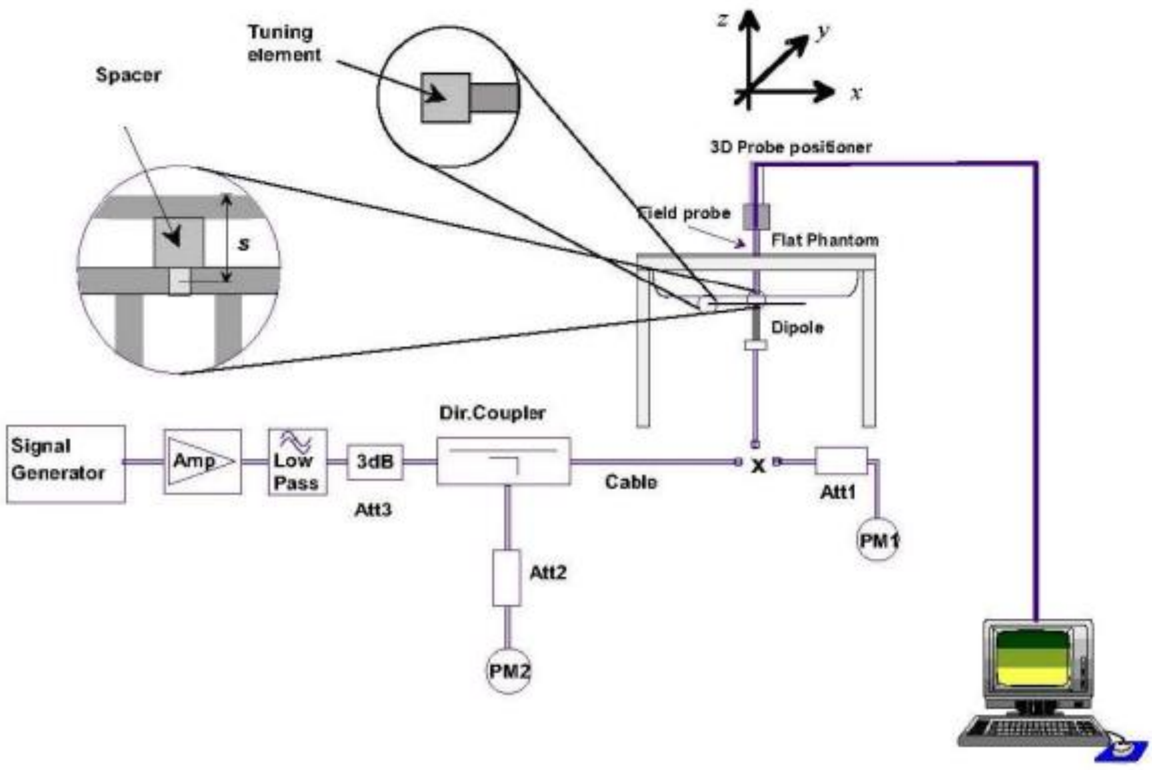
Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity %	Frequency (MHz)	Temp. [°C]					
2025-01-10	18.8	59	835	18.5	Permittivity	41.50	42.01	1.23	±5
					Conductivity	0.90	0.88	-2.22	±5
2025-01-10	21.6	46	1800	21.3	Permittivity	40.00	41.25	3.13	±5
					Conductivity	1.40	1.37	-2.14	±5
2025-01-11	19.2	53	5200	18.9	Permittivity	36.00	35.60	-1.11	±5
					Conductivity	4.66	4.72	1.29	±5
2025-01-11	19.2	53	5800	18.9	Permittivity	35.30	35.83	1.50	±5
					Conductivity	5.27	5.31	0.76	±5

5. SAR System Validation

5.1 Validation System

Each MVG system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the MVG software, enable the user to conduct the system performance check and system validation. System kit includes a dipole, and dipole device holder.

The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system validation setup is shown as below.



5.2 Validation Result

Comparing to the original SAR value provided by MVG, the validation data should be within its specification of ±10 %.

Date	Freq.	Power	Tested Value	Normalized SAR	Target SAR	Tolerance	Limit
	(MHz)	(mW)	(W/Kg)	(W/kg)	1g(W/kg)	(%)	(%)
2025-01-10	835	100	0.942	9.42	9.63	-2.18	10
2025-01-10	1800	100	3.835	38.35	39.06	-1.82	10
2025-01-11	5200	100	7.776	77.76	77.64	0.15	10
2025-01-11	5800	100	7.501	75.01	74.92	0.12	10

Note:

1. The tolerance limit of System validation ±10%.
2. The dipole input power (forward power) was 100 mW.
3. The results are normalized to 1 W input power.

6. SAR Evaluation Procedures

The procedure for assessing the average SAR value consists of the following steps:

The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface

- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.

- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 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.

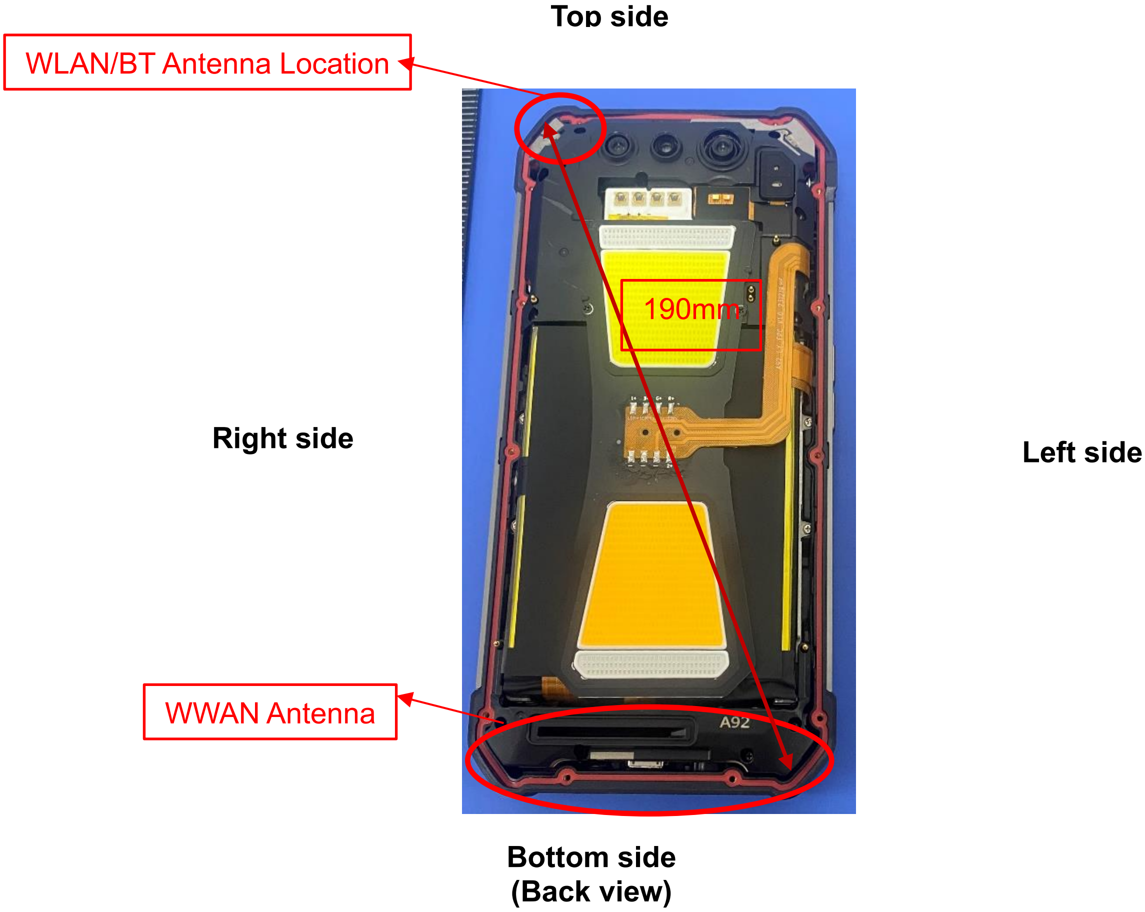
➢ Area Scan& Zoom Scan

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01 quoted below.

When the 1-g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

7. EUT Antenna Location Sketch

It is a Smart phone, support GSM/WCDMA/LTE/WLAN/BT mode.



Antenna Separation Distance(mm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN/BT	5	5	69	5	5	155
WWAN	5	5	8	13	160	5

Note 1: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.

7.1 SAR test exclusion consider table

The WWAN/WLAN/BT SAR evaluation of Maximum power (dBm) summing tolerance.

Exposure Position	Wireless Interface	WCDMA IV	LTE Band 5
	Calculated Frequency (MHz)	1740	844
	Maximum Turn-up power (dBm)	23.5	24.5
	Maximum rated power(mW)	223.87	281.84
Back Side	Separation distance (mm)	5	5
	exclusion threshold(mW)	11.37	16.33
	Testing required?	YES	YES
Front Side	Separation distance (mm)	5	5
	exclusion threshold(mW)	11.37	16.33
	Testing required?	YES	YES
Left Edge	Separation distance (mm)	8	8
	exclusion threshold(mW)	18.19	26.12
	Testing required?	YES	YES
Right Edge	Separation distance (mm)	13	13
	exclusion threshold(mW)	29.57	42.45
	Testing required?	YES	YES
Top Edge	Separation distance (mm)	160	160
	exclusion threshold(mW)	1213.71	782.21
	Testing required?	NO	NO
Bottom Edge	Separation distance (mm)	5	5
	exclusion threshold(mW)	11.37	16.33
	Testing required?	YES	YES

Exposure Position	Wireless Interface	5.2G WLAN	5.8G WLAN
	Calculated Frequency (MHz)	5200	5825
	Maximum Turn-up power (dBm)	17	17.5
	Maximum rated power(mW)	50.12	56.23
Back Side	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.58	6.22
	Testing required?	YES	YES
Front Side	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.58	6.22
	Testing required?	YES	YES
Left Edge	Separation distance (mm)	69	69
	exclusion threshold(mW)	255.78	252.15
	Testing required?	NO	NO
Right Edge	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.58	6.22
	Testing required?	YES	YES
Top Edge	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.58	6.22
	Testing required?	YES	YES
Bottom Edge	Separation distance (mm)	155	155
	exclusion threshold(mW)	1115.78	1112.15
	Testing required?	NO	NO

Note：

1. maximum power is the source-based time-average power and represents the maximum RF output power among production units.
2. per KDB 447498 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. per KDB 447498 D01, standalone SAR test exclusion threshold is applied; if the distance of the antenna to the user is <25mm,25mm is user to determine SAR exclusion threshold
4. per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distance ≤50mm are determined by:

   [(max.power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]*[√f(GHz))≤3.0 for 1-g SAR and≤7.5 for10-g extremity SAR ,f(GHz) is the RF channel transmit frequency in GHz. Power and distance are rounded to the nearest mW and mm before calculation.

The result is rounded to one decimal place for comparison

For <50mm distance, we just calculate mW of the exclusion threshold value(3.0)to do compare

5. per KDB 447498 D01, at 100 MHz to 6GHz and for test separation distances >50mm, the SAR test exclusion threshold is determined according to the following

   a)[threshold at 50mm in step 1]+(test separation distance -50mm)*(f (MHz)/150)]mW, at 100 MHz to 1500 MHz

   b) [threshold at 50mm in step1]+(test separation distance -50mm) *10]mW at＞1500MHz and≤6GHz

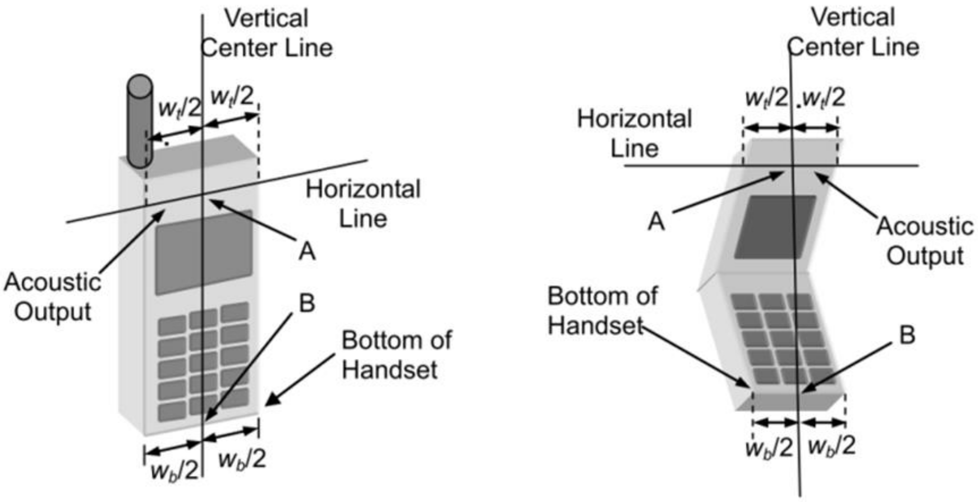
6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion 8.for each frequency band ,testing at higher data rates and higher order modulations is not required when the maximum average output power for each of each of these configurations is less than 1/4db higher than those measured at the lower data rate than 11b mode ,thus the SAR can be excluded.

8. EUT Test Position

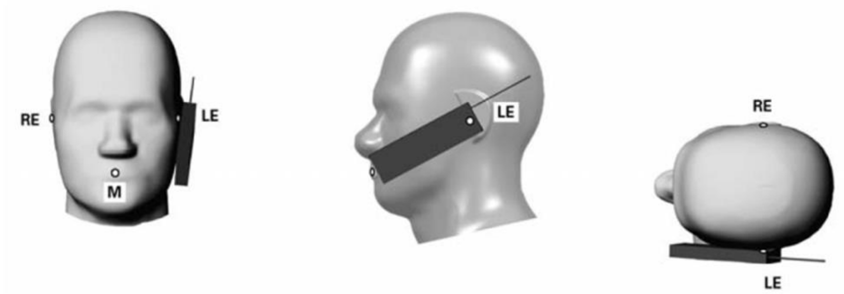
This EUT was tested in Right Cheek, Right Titled, Left Cheek, Left Titled, Front Face and Rear Face.

8.1 Define Two Imaginary Lines on the Handset

(1) The vertical centerline passes through two points on the front side of the handset the midpoint of the width wt of the handset at the level of the acoustic output, and the midpoint of the width wb of the handset.
(2) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
(3) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



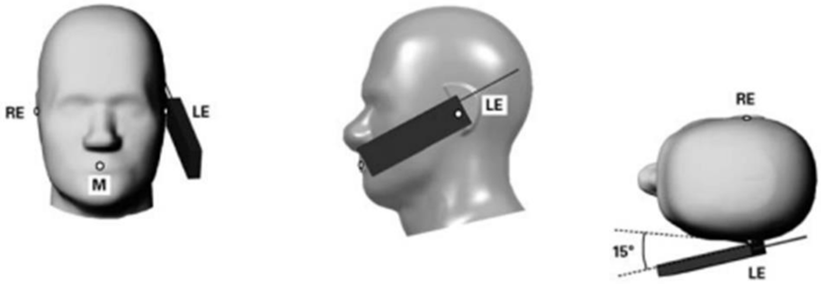
Cheek Position
1) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
2) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost



Title Position

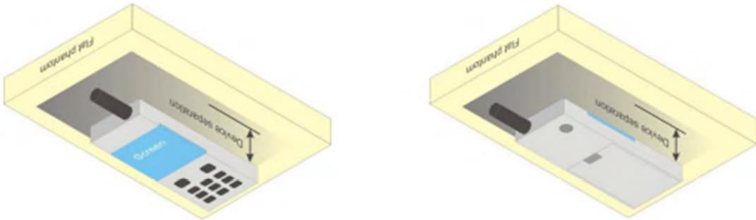
(1) To position the device in the "cheek" position described above.

(2) While maintaining the device in the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until with the ear is lost.



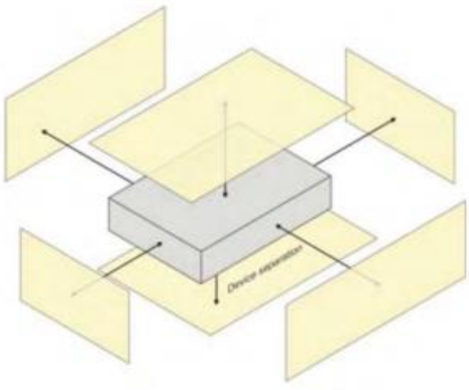
Body-worn Position Conditions:

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative *test separation distance* configuration may be used to support both SAR conditions. When the *reported* SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest *reported* SAR configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.



8.2 Hotspot mode exposure position condition

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing function, the relevant hand and body exposure condition are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surface and edges with a transmitting antenna located within 25 mm form that surface or edge. When form factor of a handset is smaller than 9cm x 5cm, a test separation distance of 5mm (instead of 10mm) is required for testing hotspot mode. When the separate distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



9. Uncertainty

9.1 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in IEEE 1528: 2013.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Symbol	Uncertainty Component	Prob. Dist.	Unc. $a(x_i)$	Div. q_i	$u(x_i) = a(x_i)/q_i$	C_i	$u(y) = C_i * u(x_i)$	v_i
Measurement system errors								
CF	Probe calibration	N (k = 2)	5.8	2	2.90	1	2.90	∞
CF_{drift}	Probe calibration drift	R	0.12	√3	0.07	1	0.07	∞
LIN	Probe linearity and detection limit	R	1.91	√3	1.10	1	1.10	∞
BBS	Broadband signal	R	0.15	√3	0.09	1	0.09	∞
ISO	Probe isotropy	R	0.18	√3	0.10	1	0.10	∞
DAE	Other probe and data acquisition errors	N	2.7	1	2.70	1	2.70	∞
AMB	RF ambient and noise	N	1.73	1	1.73	1	1.73	∞
Δ_{xyz}	Probe positioning errors	N	0.81	1	0.81	2/δ	0.81	
DAT	Data processing errors	N	2.5	1	2.50	1	2.50	∞
Phantom and device (DUT or validation antenna) errors								
LIQ(σ)	Measurement of phantom conductivity(σ)	N	4.4	1	4.4	cε, cσ	4.40	∞
$LIQ(T_c)$	Temperature effects (medium)	R	2.9	√3	1.67	cε, cσ	1.67	∞
EPS	Shell permittivity	R	3.4	√3	1.96	See 8.4.2.3	0.49	∞
DIS	Distance between the radiating element of the DUT and the phantom medium	N	0.8	1	0.8	2	1.60	∞
D_{xyz}	Repeatability of positioning the DUT or source against the phantom	N	1.5	1	1.5	1	1.50	5
H	Device holder effects	N	3	1	3	1	3.00	
MOD	Effect of operating mode on probe sensitivity	R	3.59	√3	2.07	1	2.07	∞
TAS	Time-average SAR	R	1.73	√3	1.00	1	1.00	∞
RF_{drift}	Variation in SAR due to drift in output of DUT	N	2.89	1	2.89	1	2.89	
VAL	Validation antenna uncertainty (validation measurement only)	N	1.45	1	1.45	1	1.45	
P_{in}	Uncertainty in accepted power (validation measurement only)	N	2.5	1	2.5	1	2.50	
Corrections to the SAR result (if applied)								
C(ε′,σ)	Phantom deviation from target (ε′,σ))	N	2.31	1	2.31	1	2.31	
C(R)	SAR scaling	R	1.15	√3	0.66	1	0.66	
u(ΔSAR)	Combined uncertainty						9.53	
U	Expanded uncertainty and effective degrees of freedom					U =	19.06	

10. Conducted Power Measurement

10.1 Test Result:

WCDMA

Band	WCDMA Band 5		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2Kbps	22.87	22.92	23.22
HSDPA Subtest-1	21.88	21.96	22.28
HSDPA Subtest-2	21.62	21.46	21.75
HSDPA Subtest-3	20.29	20.45	20.43
HSDPA Subtest-4	20.56	20.48	20.76
HSUPA Subtest-1	20.43	21.78	22.11
HSUPA Subtest-2	21.87	21.88	22.15
HSUPA Subtest-3	20.05	20.71	20.87
HSUPA Subtest-4	21.92	21.95	22.27
HSUPA Subtest-5	20.56	21.26	21.51

According to 3GPP 25.101 sub-clause 6.2.2, the maximum output power is allowed to be reduced by following the table.

Table 6.1A: UE maximum output power with HS-DPCCH and E-DCH

UE Transmit Channel Configuration	CM (db)	MPR (db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	0⩽ CM⩽3.5	MAX(CM-1,0)
Note: CM=1 for βc/βd=12/15, βhs/ βc=24/15.For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensation for the power back-off by increasing the gain of TX_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.

WLAN (5.2Gband)

5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	36	5180	16.43	43.95
	40	5200	16.88	48.75
	48	5240	16.83	48.19
802.11 n-HT20	36	5180	14.58	28.71
	40	5200	14.80	30.20
	48	5240	14.83	30.41
802.11 n-HT40	38	5190	14.70	29.51
	46	5230	14.79	30.13
802.11ac-VHT20	36	5180	12.55	17.99
	40	5200	12.61	18.24
	48	5240	12.71	18.66
802.11ac-VHT40	38	5190	12.46	17.62
	46	5230	12.64	18.37
802.11ac-VHT80	42	5210	11.80	15.14

WLAN (5.8G band)

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	149	5745	17.27	53.33
	157	5785	17.19	52.36
	165	5825	17.36	54.45
802.11 n-HT20	149	5745	15.18	32.96
	157	5785	15.22	33.27
	165	5825	15.29	33.81
802.11 n-HT40	151	5755	15.09	32.28
	159	5795	15.29	33.81
802.11ac-VHT20	149	5745	13.07	20.28
	157	5785	12.99	19.91
	165	5825	13.20	20.89
802.11ac-VHT40	151	5755	12.58	18.11
	159	5795	13.18	20.80
802.11ac-VHT80	155	5775	12.89	19.45

LTE Conducted Power

General Note:

1. Anritsu CMW500 base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05, Smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05, smaller bandwidth SAR testing is not required.

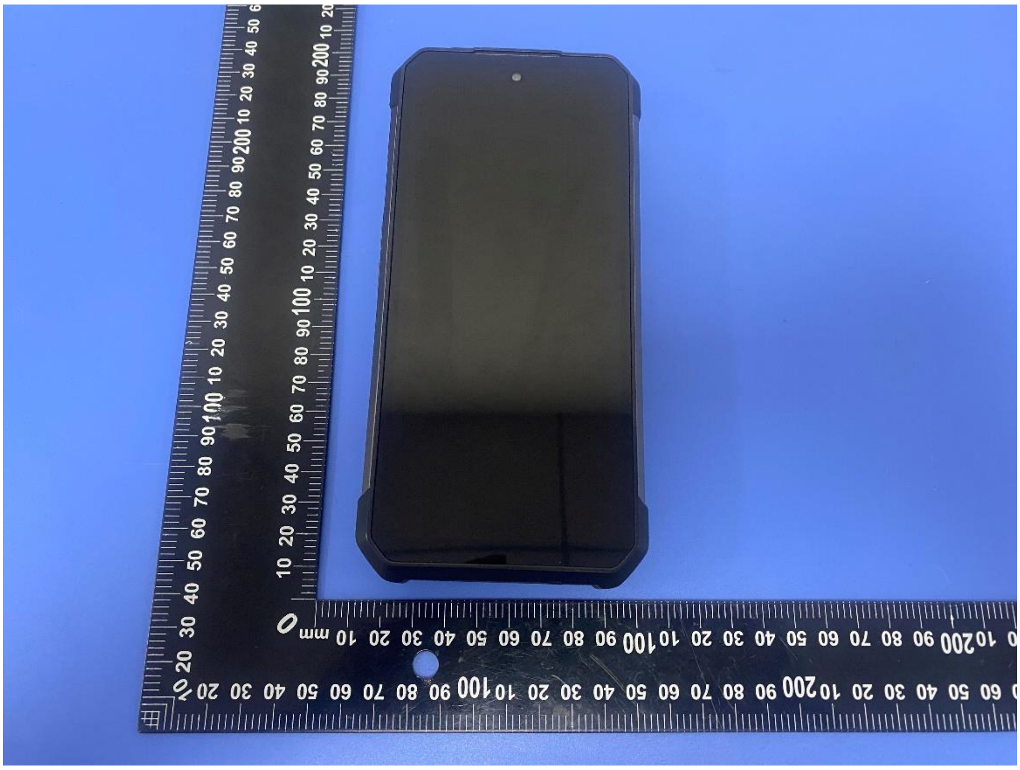
LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.54	23.61	23.76
1.4	1	2		23.63	23.7	23.86
1.4	1	5		23.49	23.66	23.79
1.4	3	0		23.63	23.57	23.86
1.4	3	1		23.64	23.58	23.9
1.4	3	2		23.58	23.61	23.87
1.4	6	0		22.67	22.66	22.9
1.4	1	0	16-QAM	22.45	22.68	22.97
1.4	1	2		22.49	22.79	23.03
1.4	1	5		22.4	22.71	23.03
1.4	3	0		22.76	22.78	23.09
1.4	3	1		22.82	22.84	23.19
1.4	3	2		22.73	22.77	23.1
1.4	6	0		21.9	21.87	22.16
3	1	0	QPSK	23.36	23.34	23.66
3	1	7		23.42	23.45	23.83
3	1	14		23.3	23.39	23.78
3	8	0		22.52	22.46	22.85
3	8	4		22.59	22.62	22.9
3	8	7		22.59	22.59	22.9
3	15	0		22.54	22.55	22.87
3	1	0	16-QAM	22.81	22.52	22.54
3	1	7		22.88	22.65	22.65
3	1	14		22.76	22.58	22.58
3	8	0		21.59	21.54	21.87
3	8	4		21.67	21.65	21.95
3	8	7		21.61	21.63	21.93
3	15	0		21.68	21.57	21.98

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.64	23.54	23.81
5	1	12		23.66	23.67	23.99
5	1	24		23.59	23.63	23.94
5	12	0		22.5	22.6	22.85
5	12	6		22.66	22.64	22.97
5	12	11		22.63	22.71	22.9
5	25	0		22.57	22.68	22.93
5	1	0	16-QAM	23.02	22.9	23.34
5	1	12		22.99	23.05	23.56
5	1	24		22.91	22.99	23.51
5	12	0		21.54	21.61	21.96
5	12	6		21.63	21.72	22.06
5	12	11		21.68	21.78	21.96
5	25	0		21.67	21.71	21.96
10	1	0	QPSK	23.7	23.67	23.73
10	1	24		23.64	23.8	23.9
10	1	49		23.66	23.92	24.02
10	25	0		22.47	22.66	22.55
10	25	12		22.59	22.65	22.89
10	25	24		22.35	22.9	22.84
10	50	0		22.43	22.79	22.76
10	1	0	16-QAM	22.85	22.49	23.21
10	1	24		22.81	22.63	23.3
10	1	49		22.85	22.76	23.48
10	25	0		21.46	21.73	21.74
10	25	12		21.64	21.77	21.94
10	25	24		21.45	21.93	21.9
10	50	0		21.51	21.85	21.75

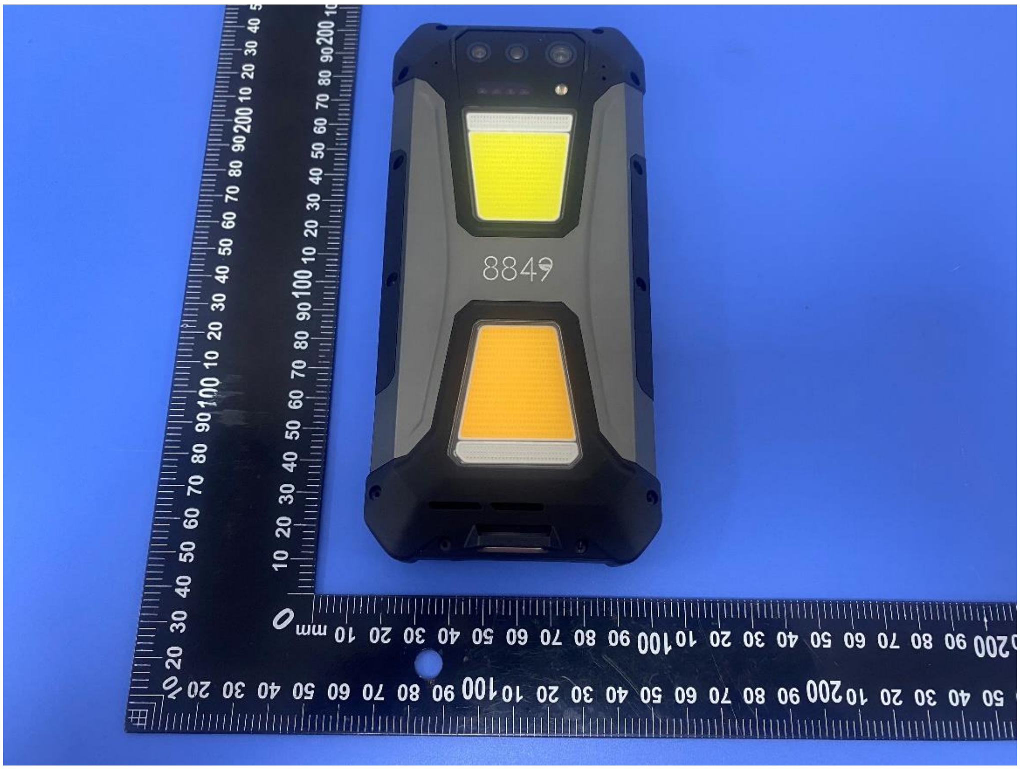
11. EUT and Test Setup Photo

11.1 EUT Photos

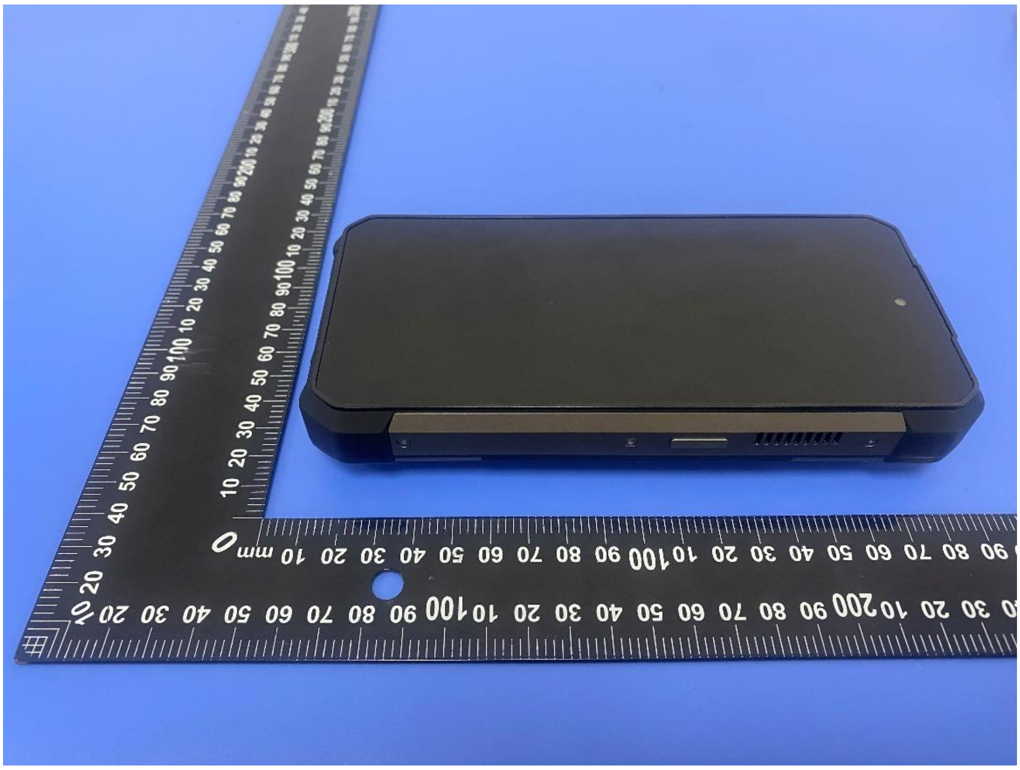
Front side



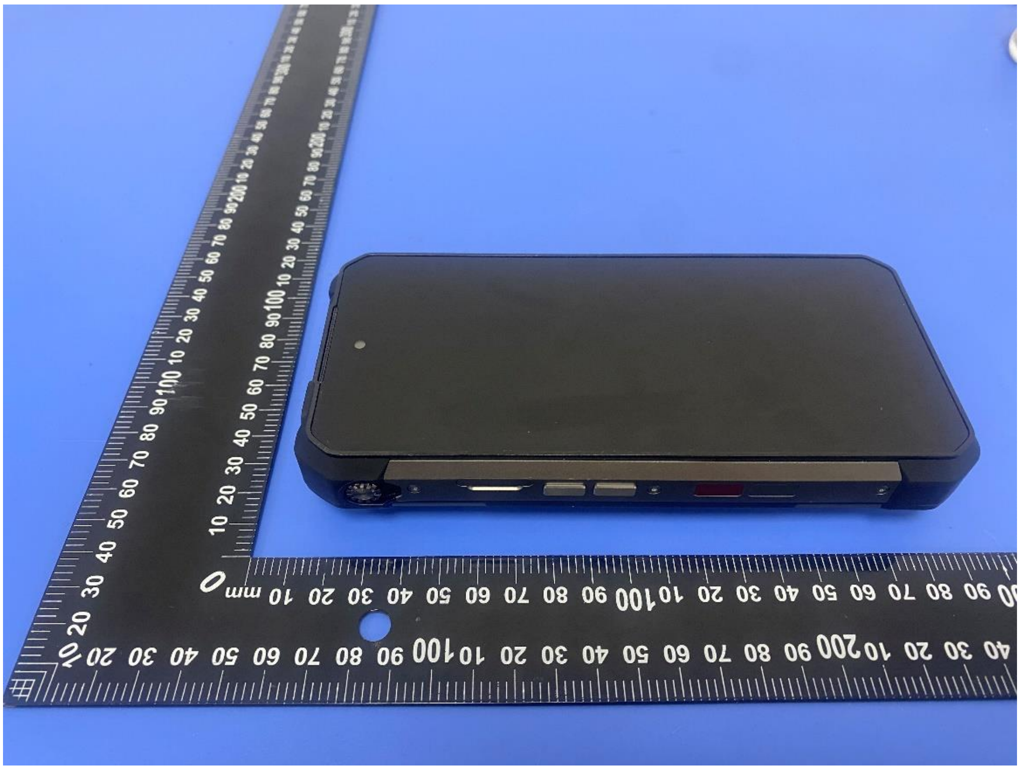
Back side



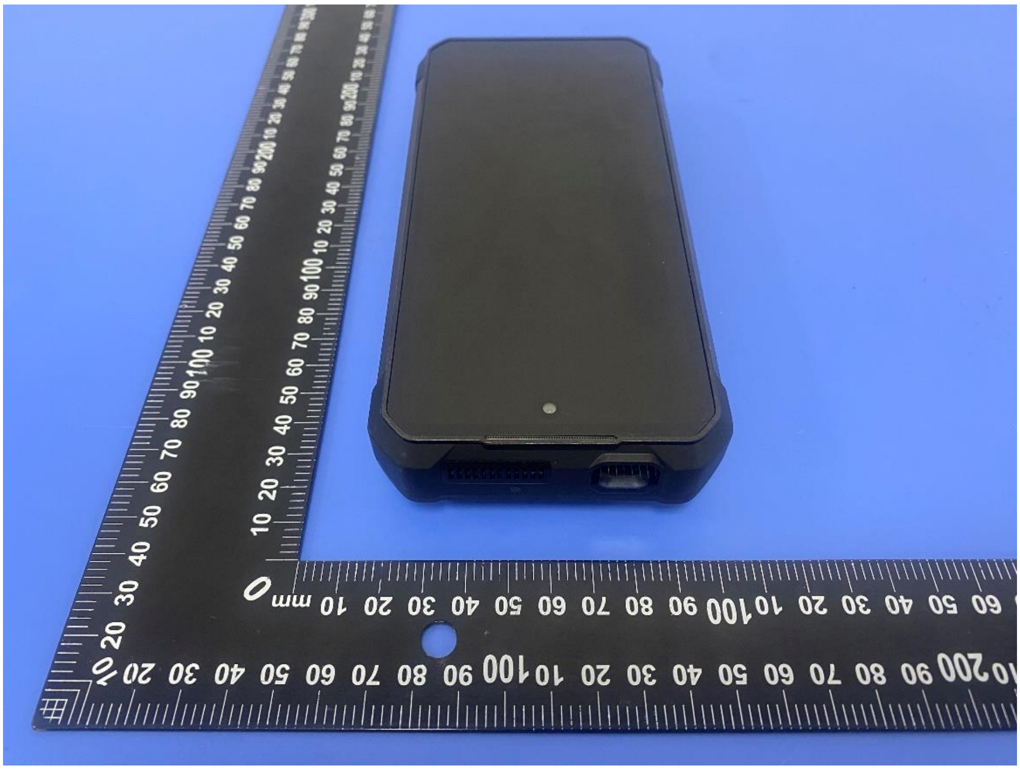
Right Edge



Left Edge



Top Edge

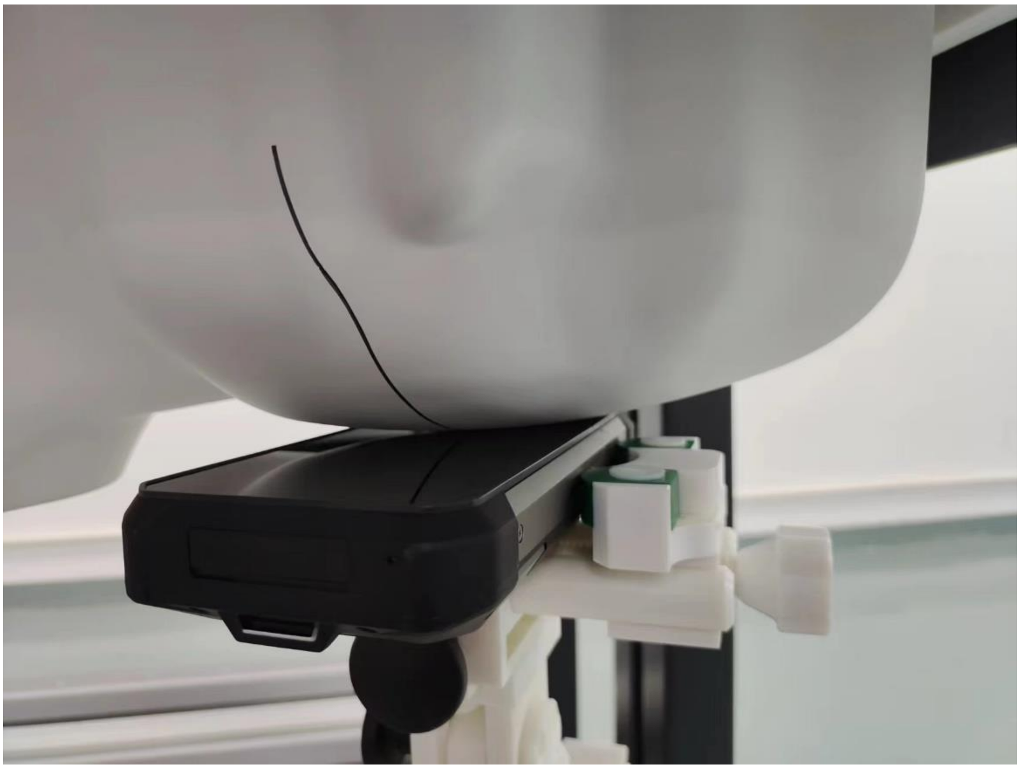


Bottom Edge

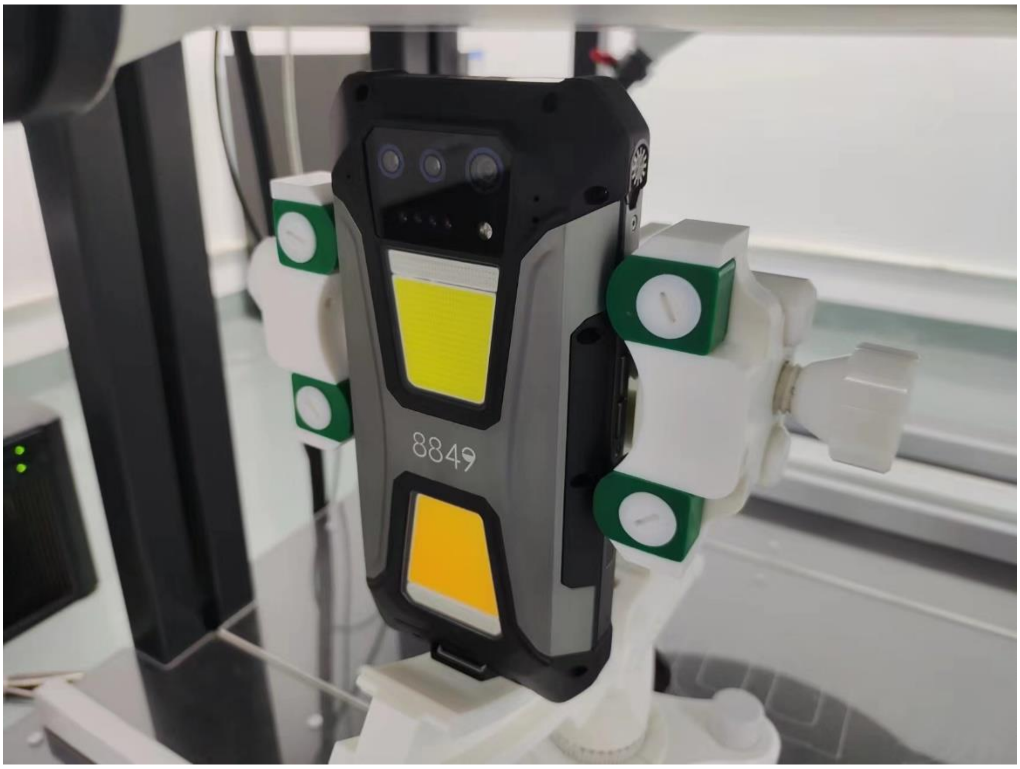
11.2 Setup Photos

Right Tilt

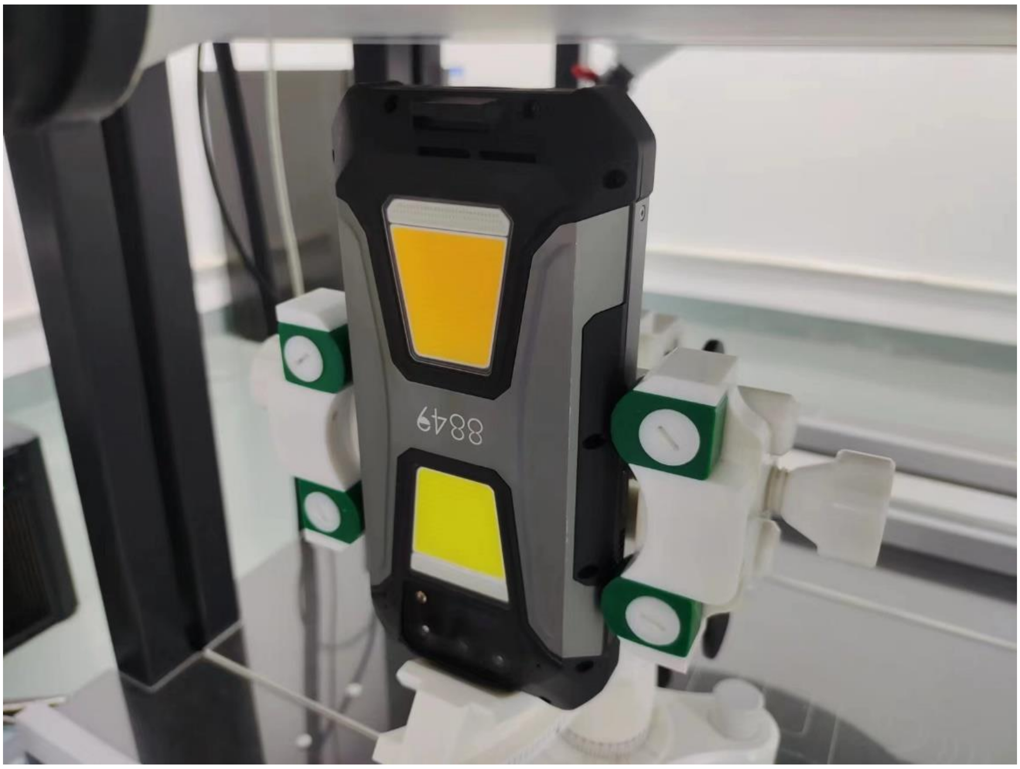
Left Touch



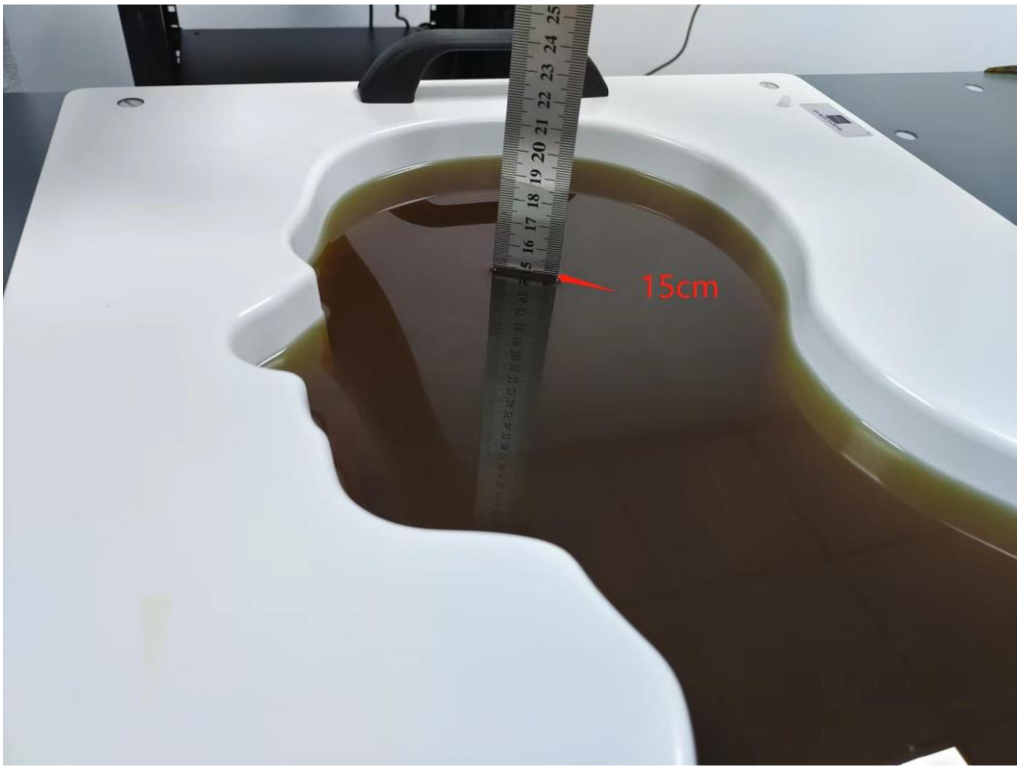
Body Top side (separation distance is 10mm)



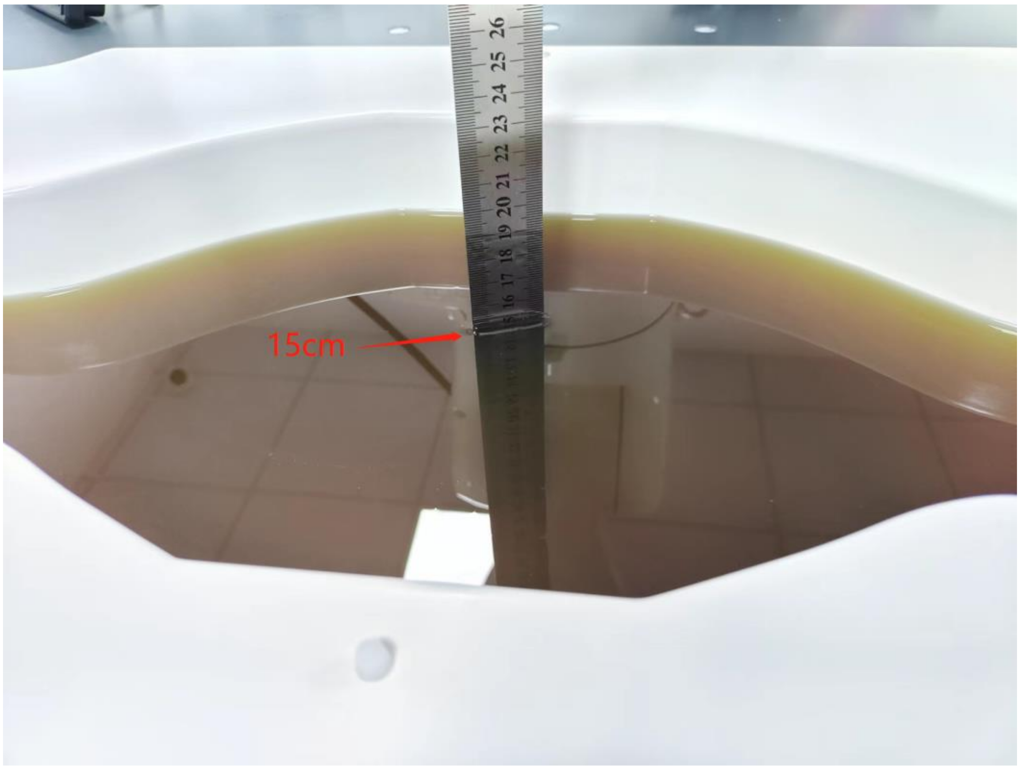
Body Bottom side (separation distance is 10mm)



Liquid depth (15 cm)



Liquid depth (15 cm)



12. SAR Result Summary

12.1 Head SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
5.2G WLAN	802.11a	Right Tilt	5200	0.479	0.13	17.00	16.88	**0.492**	**1**

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
LTE Band 5	10M	QPSK	1	0	Left Cheek	844	0.177	-0.45	24.50	24.02	**0.198**	**2**

Note:
1. Per KDB 447498 D01, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
b. Scaled SAR(W/kg) = Measured SAR(W/kg) *Tune-up Scaling Factor
2. Per KDB 865664 D01, Repeated measurement is not required when the original highest measured SAR is <0.80 W/kg.

12.2 Body-worn and Hotspot SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
WCDMA Band IV	RMC	Bottom Side	1740	0.745	-1.07	23.50	23.15	**0.808**	**3**
5.8GHz WLAN	802.11a	Top Side	5825	0.474	-2.60	17.50	17.36	**0.490**	**4**

Note:

1. The test separation of all above table is 10mm.
2. Per KDB 447498 D01, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. Scaled SAR(W/kg) = Measured SAR(W/kg) *Tune-up Scaling Factor
3. When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The “Portable Hotspot” feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

12.3 Repeated SAR

Band	Mode	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR(W/Kg)	Meas. No.
WCDMA Band IV	RMC	Bottom Side	1740	0.771	-2.49	23.50	23.15	0.835	-

12.4 Repeated SAR measurement

Band	Mode	Test Position	Freq.	Original Measured SAR 1g(W/kg)	1 st Repeated SAR 1g	Ratio
WCDMA Band IV	RMC	Bottom Side	1740	0.745	0.771	0.966

Note:

1. Per KDB 865664 D01,for each frequency band ,repeated SAR measurement is required only when the measured SAR is⩾0.8W/Kg.
2. Per KDB 865664 D01,if the ratio of largest to smallest SAR for the original and first repeated measurement is⩽1.2 and the measured SAR＜1.45W/Kg, only one repeated measurement is required.
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 ⩾1.45W/Kg.
4. The ratio is the difference in percentage between original and repeated measured SAR.

12.5 Simultaneous Multi-band Transmission Evaluation

Application Simultaneous Transmission information:

Position	Simultaneous State
Head	1. LTE+ 5G WLAN
Body	1. WCDMA+5G WLAN

NOTE:
1. For simultaneous transmission at head and body exposure position, 2 transmitters simultaneous transmission was the worst state.
2. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
3. KDB 447498 / 4.3.2 (2) when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
a) (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f (GHz) /x] W/kg for test separation distances≤ 50 mm;
Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.
b) 0.4W/Kg for 1-g SAR and 1.0W/Kg for 10-g SAR, when the separation distance is >50mm.

Simultaneous Mode	Position	Mode	Max. 1-g SAR	1-g Sum SAR
			(W/kg)	(W/kg)
WCDMA + 5G WLAN+NFC	Head	WCDMA	0.808	1.298
		5G WLAN	0.490	
LTE + 5G WLAN	Head	LTE	0.198	0.690
		5G WLAN	0.492	

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna.

When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR-1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR-1g 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
835MHz Dipole	MVG	DIP0G835	SN 06/22 DIP0G835-639	2022.02.11	2025.02.10
1800MHz Dipole	MVG	DIP1G800	SN 06/22 DIP1G800-640	2022.02.11	2025.02.10
5000MHz Dipole	MVG	DIP5G000	SN 06/22 DIP5G000-653	2022.02.11	2025.02.10
E-Field Probe	MVG	EPGO364	SN 04/22 EPGO364	2024.02.07	2025.02.06
Liquid Calibration Kit	MVG	OCPG 87	SN 06/22 OCPG87	2024.02.07	2025.02.06
Antenna	MVG	ANTA 73	SN 06/22 ANTA 73	N/A	N/A
Ellipsoid Phantom	MVG	ELLI 51	SN 06/22 ELLI 51	N/A	N/A
Phantom	MVG	SAM 148	SN 06/22 SAM148	N/A	N/A
Phone holder	MVG	MSH 117	SN 06/22 MSH 117	N/A	N/A
Laptop positioner	MVG	LSH 36	SN 06/22 LSH 38	N/A	N/A
Directional coupler	SHW	SHWDCP	202203280013	N/A	N/A
Network Analyzer	ZVL	R&S	116184-HC	2024.03.25	2025.03.24
Multi Meter	DMM6500	Keithley	4527252	2024.03.15	2025.03.14
Signal Generator	Keysight	N5182B	MY59100717	2024.03.09	2025.03.08
Wireless Communication Test Set	R&S	CMW500	137737	2024.03.09	2025.03.08
Power Sensor	R&S	Z11	116184	2024.02.23	2025.02.22
Electronic Temperature hygrometer	N/A	ST-W2318	N/A	2024.03.11	2025.03.10
Temperature hygrometer	N/A	TP101	N/A	2024.03.11	2025.03.10

Appendix A. System Validation Plots

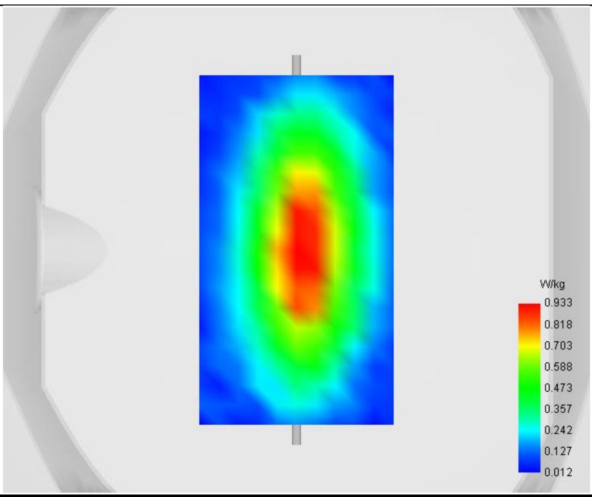
System Performance Check Data (835MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2025-01-10

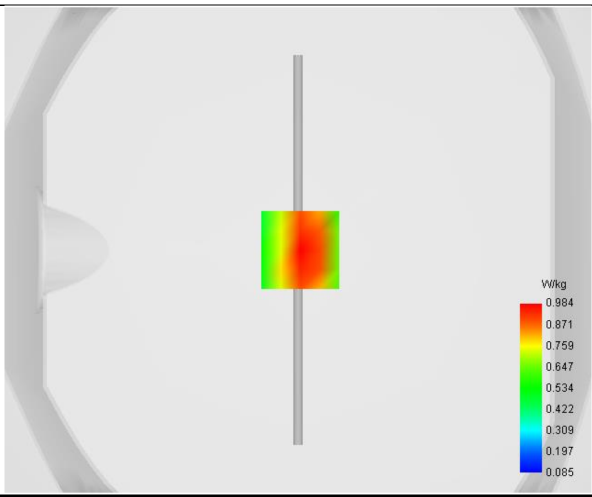
Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW
Frequency (MHz)	835.000
Relative permittivity	42.01
Conductivity (S/m)	0.88
Probe	SN 04/22 EPGO364
ConvF	1.70
Crest factor:	1:1

SURFACE SAR



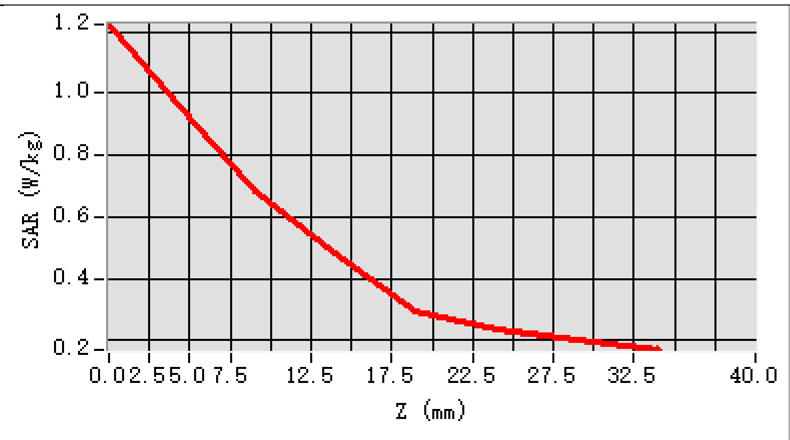
VOLUME SAR



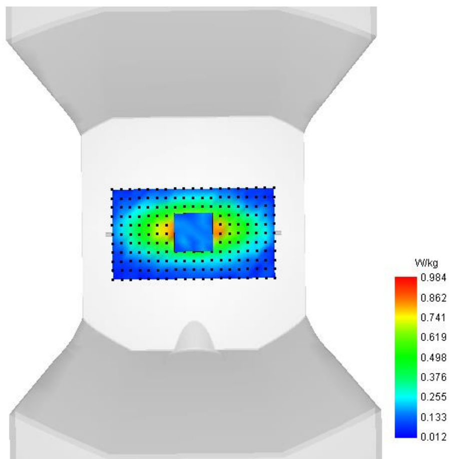
Maximum location: X=1.00, Y=0.00 ; SAR Peak: 1.33 W/kg

SAR 10g (W/Kg)	0.588
SAR 1g (W/Kg)	0.942

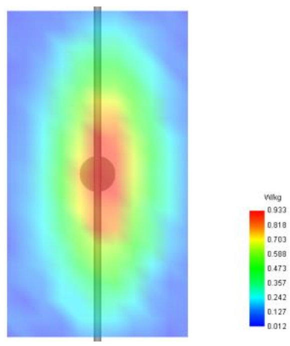
Z Axis Scan



SAR (W/kg)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.5
5.0
7.5
12.5
17.5
22.5
27.5
32.5
40.0
Z (mm)



W/kg
0.984
0.862
0.741
0.619
0.498
0.376
0.255
0.133
0.012



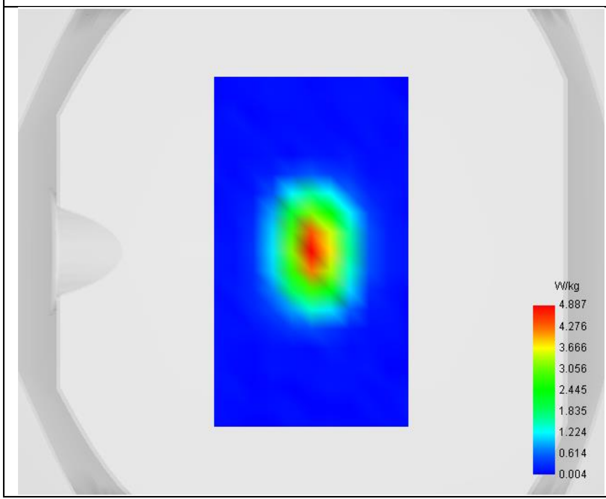
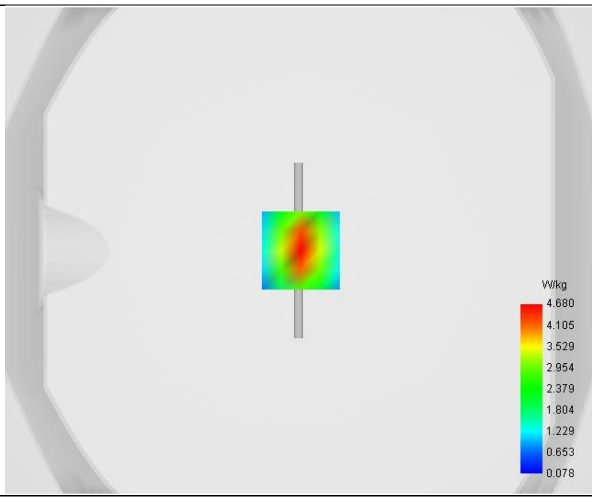
W/kg
0.933
0.818
0.703
0.588
0.473
0.357
0.242
0.127
0.012

System Performance Check Data (1800MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2025-01-10

Experimental conditions.

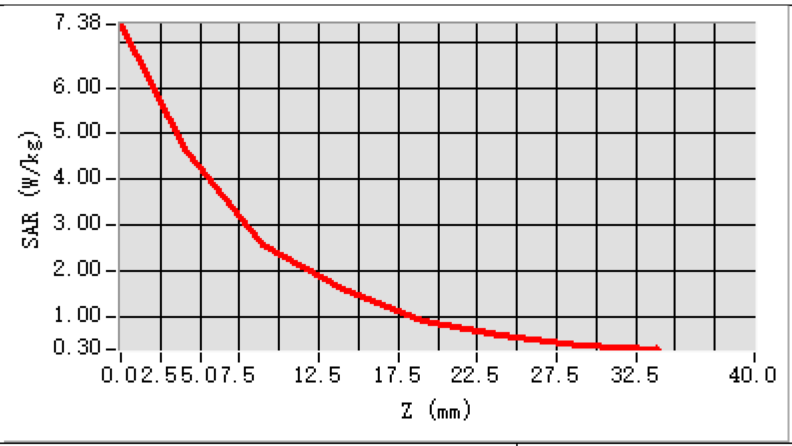
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW
Frequency (MHz)	1800.000
Relative permittivity	41.25
Conductivity (S/m)	1.37
Probe	SN 04/22 EPGO364
ConvF	1.91
Crest factor:	1:1

SURFACE	VOLUME SAR
	

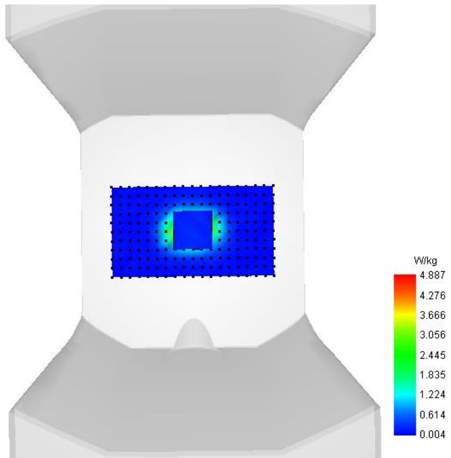
Maximum location: X=1.00, Y=0.00 ; SAR Peak: 7.32 W/kg

SAR 10g (W/Kg)	2.083
SAR 1g (W/Kg)	3.835

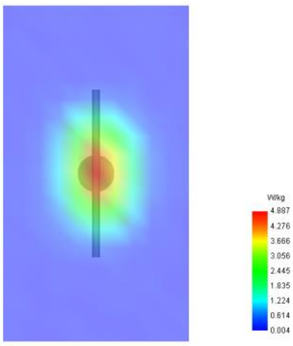
Z Axis Scan



7.38
6.00
5.00
4.00
3.00
2.00
1.00
0.30
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



W/kg
4.887
4.276
3.666
3.056
2.445
1.835
1.224
0.614
0.004

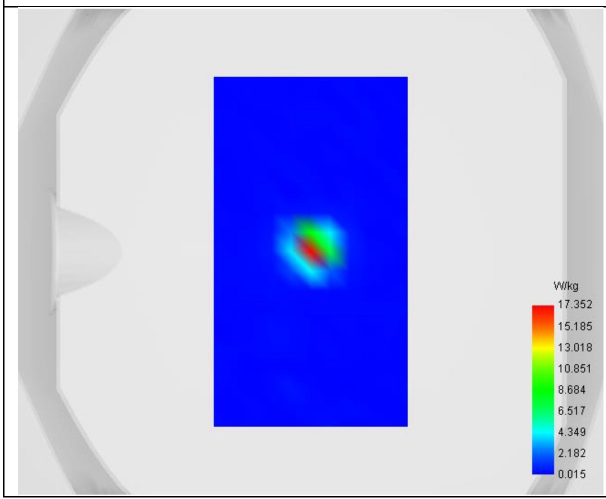
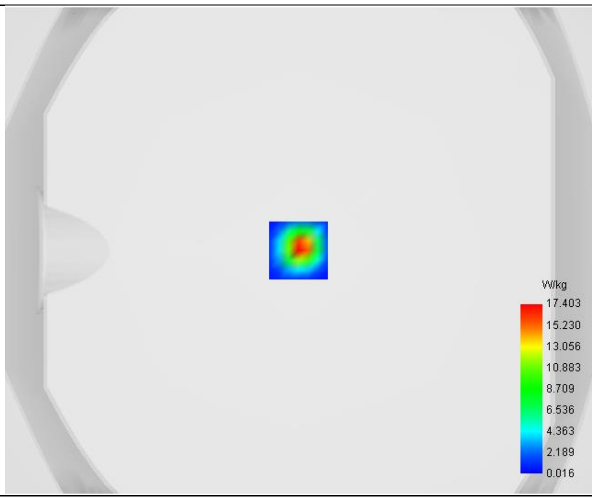


System Performance Check Data (5200MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=4mm, dy=4mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2025-01-11

Experimental conditions.

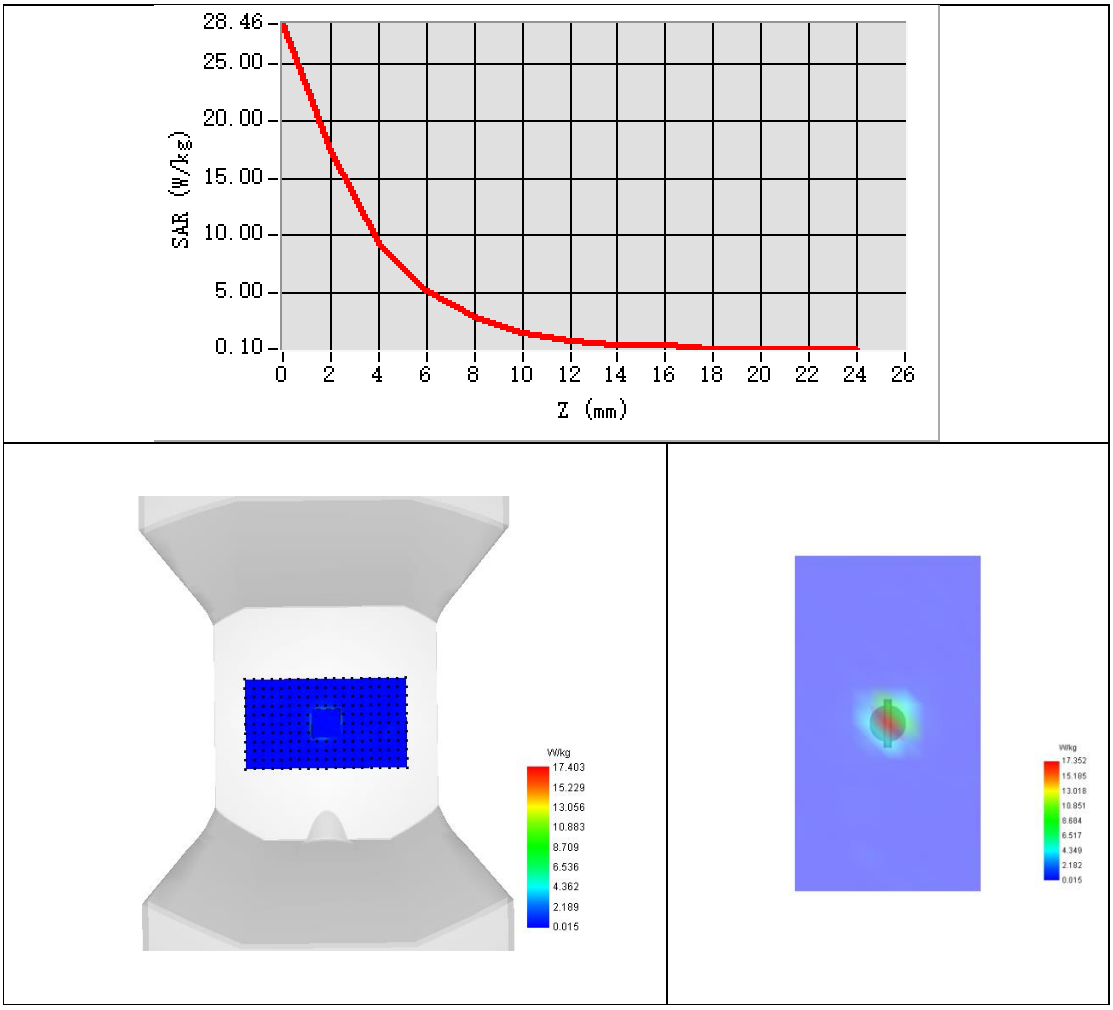
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW
Frequency (MHz)	5200.000
Relative permittivity	35.60
Conductivity (S/m)	4.72
Probe	SN 04/22 EPGO364
ConvF	1.98
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00 ; SAR Peak: 30.90 W/kg

SAR 10g (W/Kg)	2.203
SAR 1g (W/Kg)	7.776

Z Axis Scan



28.46
25.00
20.00
15.00
10.00
5.00
0.10
SAR (W/kg)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
Z (mm)
W/kg
17.403
15.229
13.056
10.883
8.709
6.536
4.362
2.189
0.015
W/kg
17.352
15.185
13.018
10.851
8.684
6.517
4.349
2.182
0.015

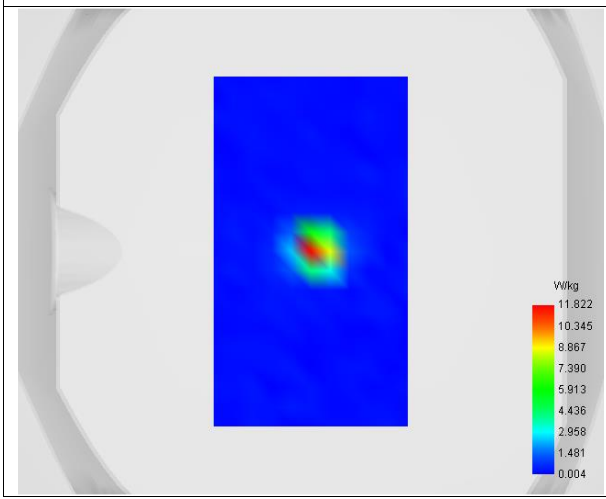
System Performance Check Data (5800MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=4mm, dy=4mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2025-01-11

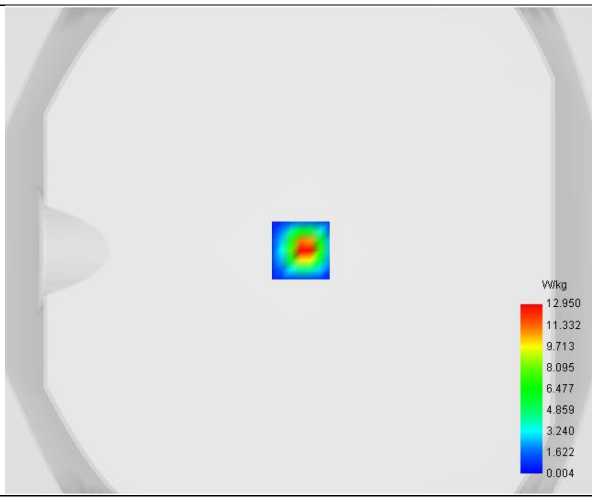
Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW
Frequency (MHz)	5800.000
Relative permittivity	35.83
Conductivity (S/m)	5.31
Probe	SN 04/22 EPGO364
ConvF	1.71
Crest factor:	1:1

SURFACE



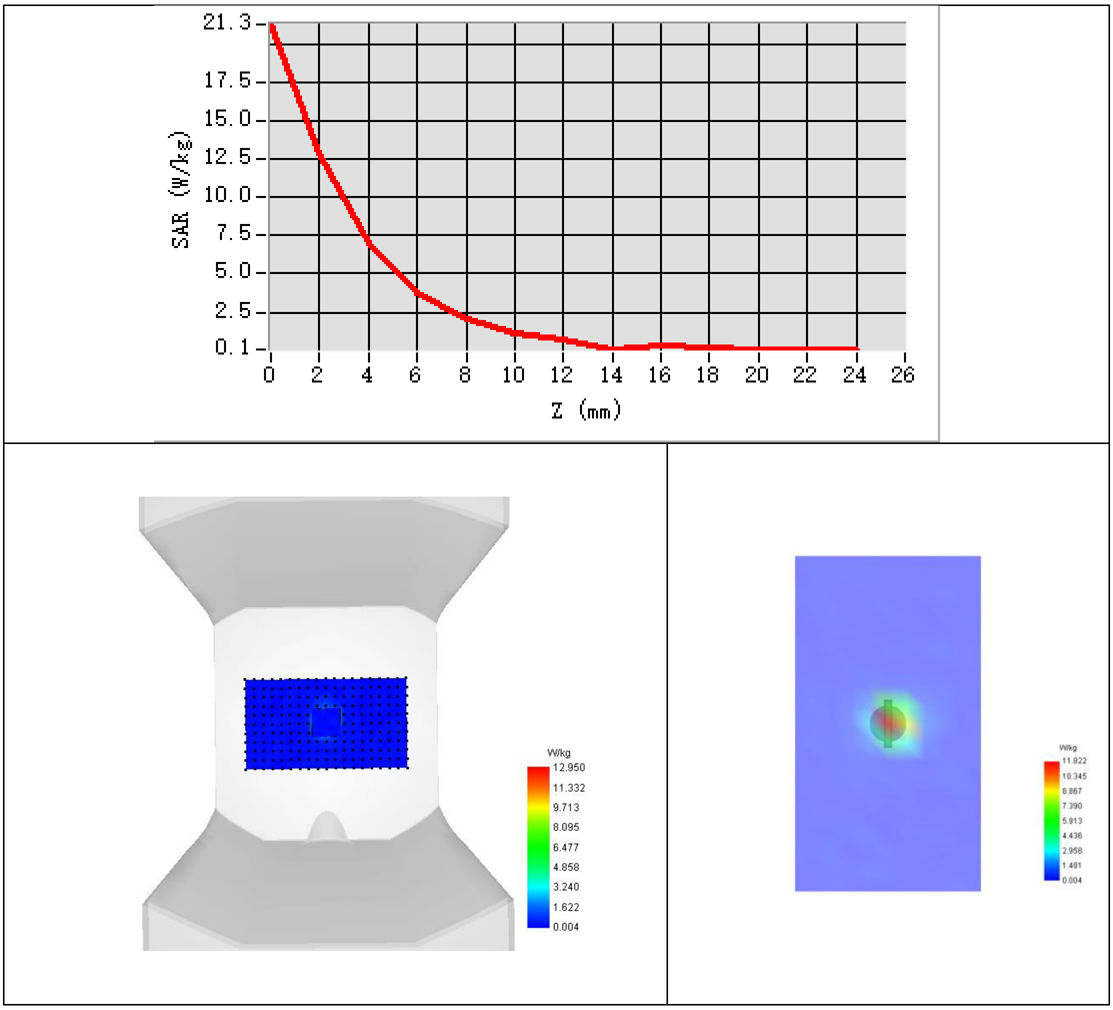
VOLUME SAR



Maximum location: X=1.00, Y=0.00 ; SAR Peak: 23.76 W/kg

SAR 10g (W/Kg)	2.115
SAR 1g (W/Kg)	7.501

Z Axis Scan


SAR (W/kg)
21.3
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.1
0
2
4
6
8
10
12
14
16
18
20
22
24
26
Z (mm)
W/kg
12.950
11.332
9.713
8.095
6.477
4.858
3.240
1.622
0.004
W/kg
11.822
10.345
8.867
7.390
5.913
4.436
2.958
1.481
0.004

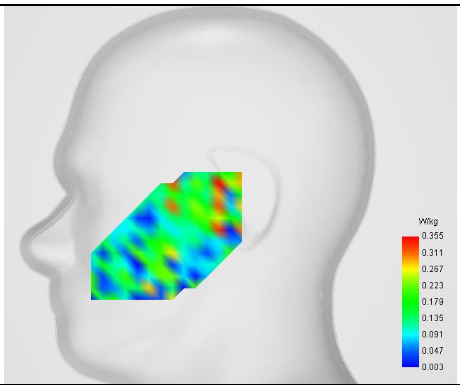
Appendix B. SAR Test Plots

Plot 1:

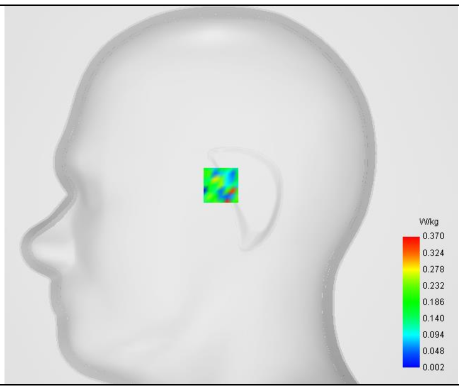
Test Date	2025-01-11
Area Scan	dx=4mm dy=4mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	U-NII-1
Signal	IEEE 802.11a
Frequency	5200
SAR 10g (W/Kg)	0.130
SAR 1g (W/Kg)	0.479
ConvF	1.98
Relative permittivity	35.60
Conductivity (S/m)	4.72

Maximum location: X=-7.00, Y=7.00 ; SAR Peak: 1.74 W/kg

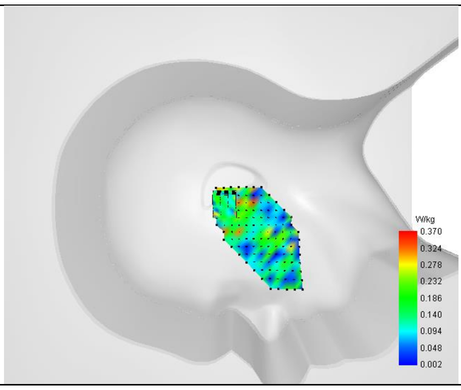
SURFACE SAR



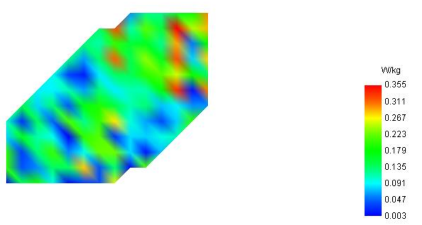
VOLUME SAR

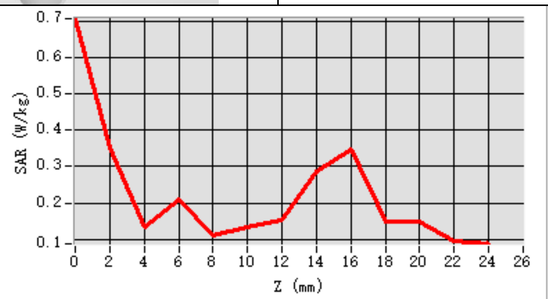


3D screen shot



Hot spot position



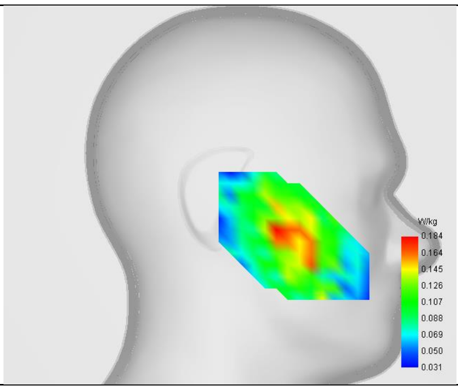


Plot 2:

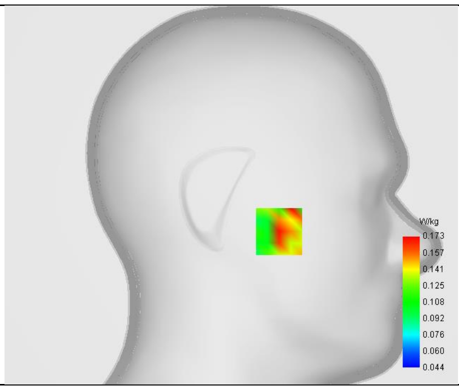
Test Date	2025-01-10
Area Scan	dx=8mm dy=8mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 5
Signal	LTE FDD
Frequency	844
SAR 10g (W/Kg)	0.111
SAR 1g (W/Kg)	0.177
ConvF	1.70
Relative permittivity	42.01
Conductivity (S/m)	0.88

Maximum location: X=-33.00, Y=-25.00 ; SAR Peak: 0.32 W/kg

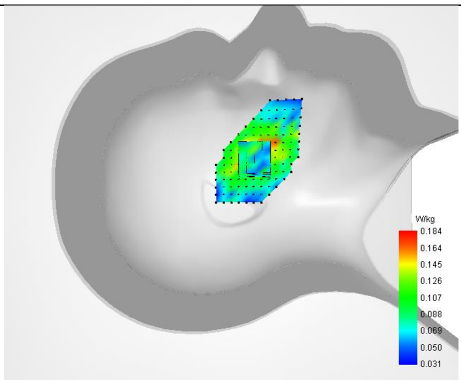
SURFACE SAR



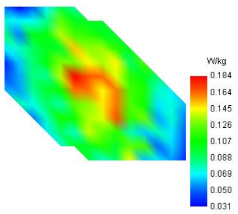
VOLUME SAR

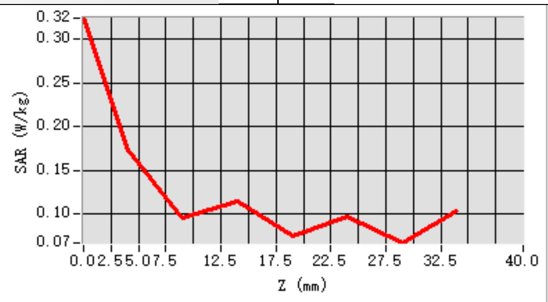


3D screen shot



Hot spot position



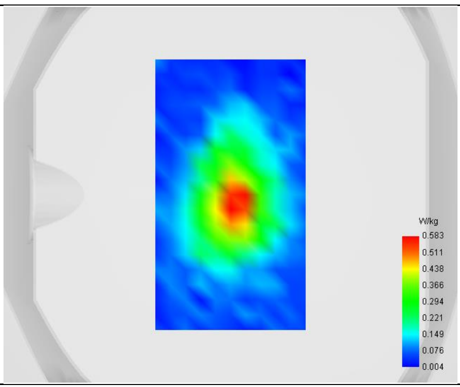


Plot 3:

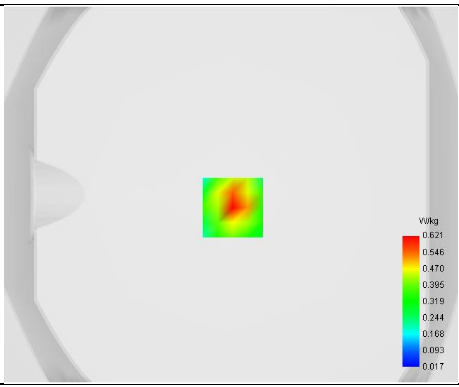
Test Date	2025-01-10
Area Scan	dx=8mm dy=8mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Bottom Side
Band	Band 4 (1700)
Signal	HSDPA
Frequency	1740
SAR 10g (W/Kg)	0.347
SAR 1g (W/Kg)	0.745
ConvF	1.91
Relative permittivity	41.25
Conductivity (S/m)	1.37

Maximum location: X=1.00, Y=-7.00 ; SAR Peak: 1.00 W/kg

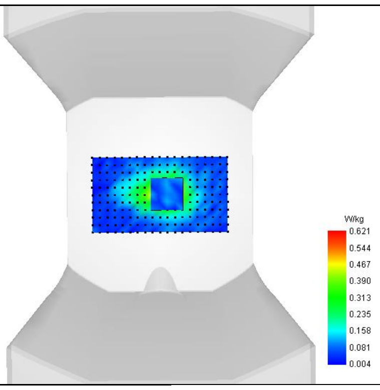
SURFACE SAR



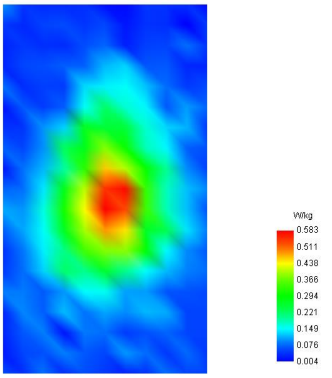
VOLUME SAR

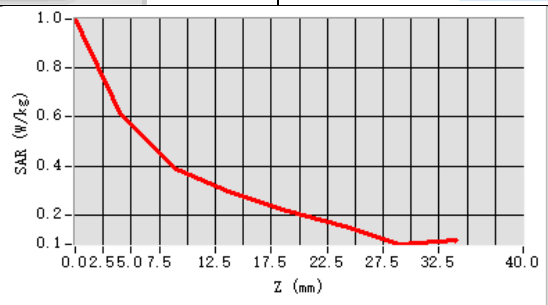


3D screen shot



Hot spot position



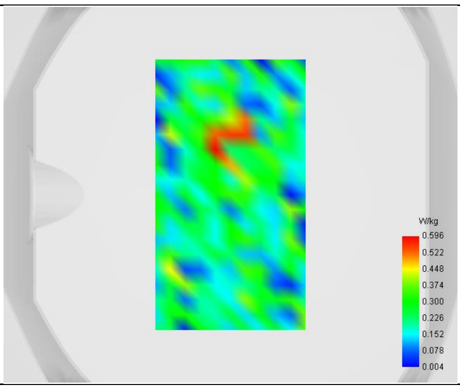


Plot 4:

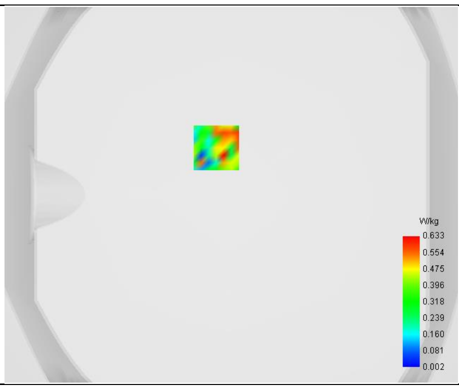
Test Date	2025-01-11
Area Scan	dx=4mm dy=4mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-4
Signal	IEEE 802.11a
Frequency	5825
SAR 10g (W/Kg)	0.215
SAR 1g (W/Kg)	0.474
ConvF	1.71
Relative permittivity	35.83
Conductivity (S/m)	5.31

Maximum location: X=-8.00, Y=25.00 ; SAR Peak: 1.95 W/kg

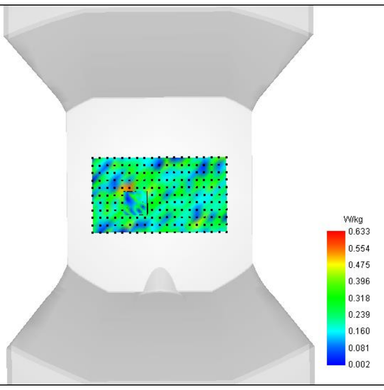
SURFACE SAR



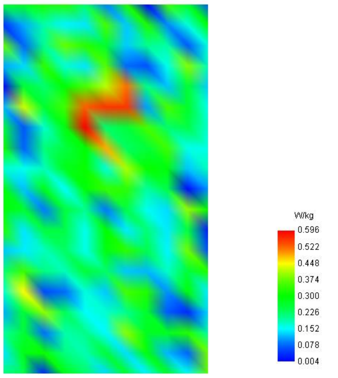
VOLUME SAR

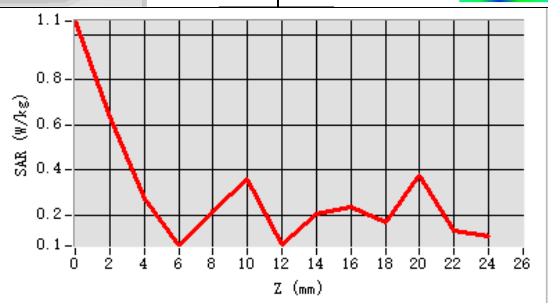


3D screen shot



Hot spot position





Appendix C. Probe Calibration and Dipole Calibration Report

Refer the appendix Calibration Report.

※※※※※END OF THE REPORT※※※※※