SAR TEST REPORT

Product Name: Smart phone

Model Name: UW505, GEMINI; GENESIS

FCC ID: 2AVYL-UW505

Issued For	:	SHENZHEN ETERNITY TECHNOLOGY CO.,LTD A2, Yingzhan Industrial Park, Longtian, Pingshan,Shenzhen,China
Issued By	:	Shenzhen LGT Test Service Co., Ltd. Room 205, Building 13, Zone B, Chen Hsong Industrial Park, No.177 Renmin West Road, Jinsha Community, Kengzi Street, Pingshan New District, Shenzhen, China

Report Number:	LGT23C062HA01
Sample Received Date:	Mar. 23, 2023
Date of Test:	Mar. 29, 2023~Apr. 08, 2023
Date of Issue:	Apr. 12, 2023
Max. SAR (1g):	Head: 0.977 W/kg Body: 0.774 W/kg

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Revision History

Rev.	Issue Date	Contents
00	Apr. 12, 2023	Initial Issue

TEST REPORT CERTIFICATION

Applicant	SHENZHEN ETERNITY TECHNOLOGY CO.,LTD
Address	A2, Yingzhan Industrial Park, Longtian, Pingshan, Shenzhen, China
Manufacture	SHENZHEN ETERNITY TECHNOLOGY CO.,LTD
Address	A2, Yingzhan Industrial Park, Longtian, Pingshan, Shenzhen, China
Product Name	smart phone
Trademark	KOOLMAAX
Model Name	UW505, GEMINI, GENESIS
Sample number	LGT2303053

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

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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	KOOLMAAX
Model Name	UW505
Series Model	GEMINI; GENESIS
Model Difference	Only the model is different.
Device Category	Portable
Product stage	Production unit
RF Exposure Environment	General Population / Uncontrolled
Hardware Version	8149TQ_MMI_V01
Software Version	N/A
Frequency Range	GSM 850: 824 MHz ~ 849 MHz PCS 1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV:1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2:1850 MHz ~1910MHz LTE Band 4:1710 MHz ~1755MHz LTE Band 5:824 MHz ~ 849MHz LTE Band 12:699 MHz ~716MHz LTE Band 17:704 MHz ~ 716MHz LTE Band 66:1710 MHz ~1780MHz LTE Band 71:663 MHz ~ 698MHz 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 MHz ~ 5250 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5250 MHz ~ 5350 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5470 MHz ~ 5725 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5725 MHz ~ 5850 MHz Bluetooth: 2402 MHz ~ 2480 MHz

Max. Reported SAR(1g): (Limit:1.6W/kg) Test distance: Head:0mm Body:10mm	Mode	Head (W/ kg)	Body Worn and Hotspot (W/ kg)
	GSM 850	0.143	0.774
	PCS 1900	0.149	0.582
	WCDMA Band II	0.233	0.332
	WCDMA Band IV	0.175	0.263
	WCDMA Band V	0.136	0.187
	LTE Band 2	0.131	0.263
	LTE Band 4	0.095	0.246
	LTE Band 5	0.139	0.157
	LTE Band 12	0.140	0.288
	LTE Band 17	0.151	0.326
	LTE Band 66	0.117	0.229
	LTE Band 71	0.104	0.263
	2.4G WLAN	0.278	0.135
	5.2G WLAN	0.498	0.241
	5.3G WLAN	0.584	0.154
	5.6G WLAN	0.921	0.366
	5.8G WLAN	0.977	0.369
	Bluetooth	0.051	0.039
1-g Sum SAR		1.210	1.143
Battery	Rated Voltage:3.8V Capacity: 2500mAh		
Description test modes	Only support single SIM Card.		
Operating Mode:	GSM: GSM Voice; GPRS/EGPRS 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
Antenna Specification	GSM/WCDMA/LTE: PIFA Antenna Bluetooth: PIFA Antenna WLAN: PIFA Antenna
Operating Mode	Maximum continuous output
Hotspot Mode	Support
DTM Mode	Not Support

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, Chen Hsong Industrial Park, No.177 Renmin West Road, Jinsha Community, Kengzi Street, Pingshan New District, Shenzhen, 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 D04 v01	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
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:

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

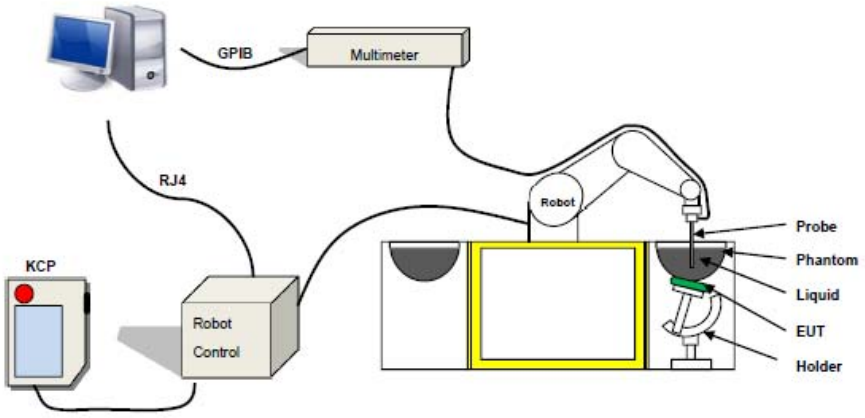
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

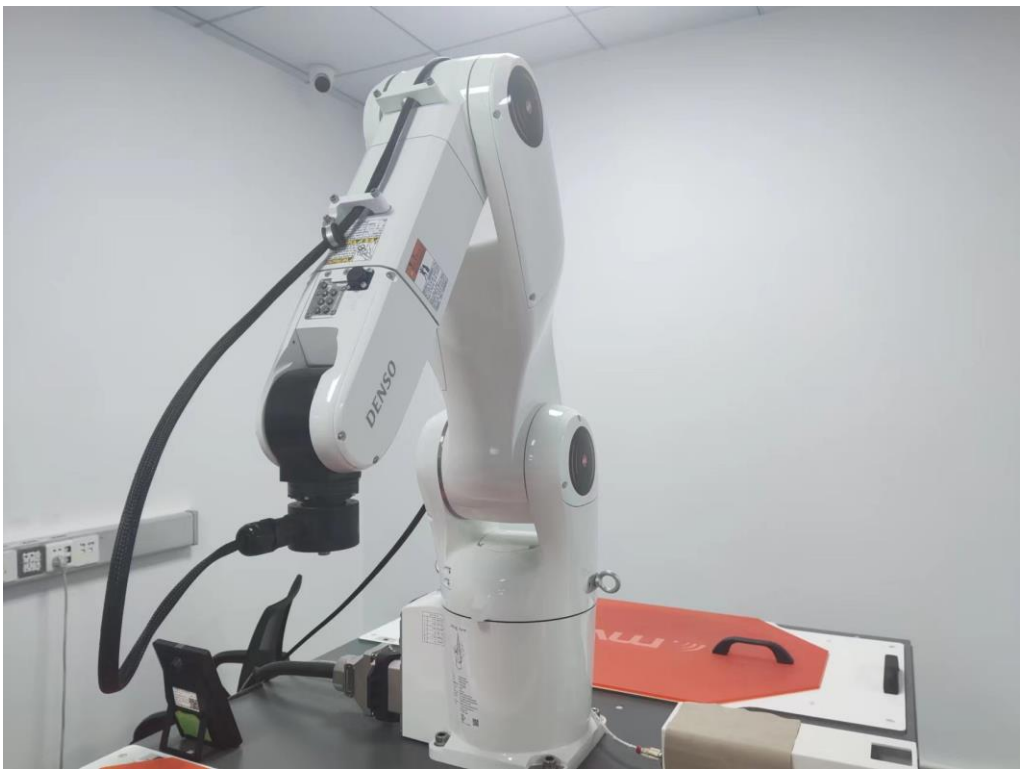
3.2 SAR System

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°

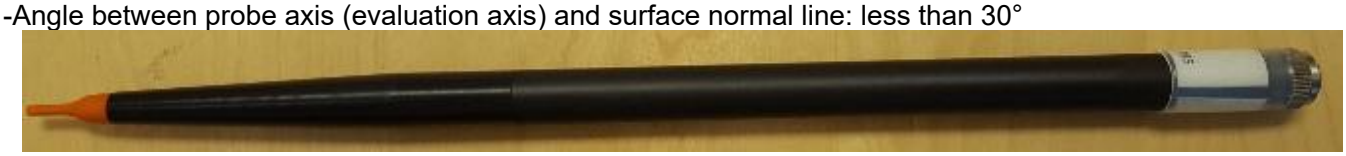


Figure 1-MVG COMOSAR Dosimetric E field Probe

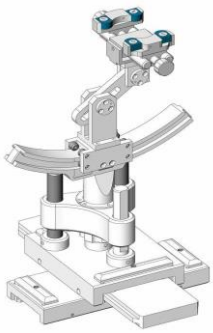
3.2.2 Phantom

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 1g S/m	
	Head	Body	Head	Body
300	45.3	45.3	0.87	0.87
450	43.5	43.5	0.87	0.87
900	41.5	41.5	0.97	0.97
1450	40.5	40.5	1.20	1.20
1800	40.0	40.0	1.40	1.40
2450	39.2	39.2	1.80	1.80
3000	38.5	38.5	2.40	2.40
5200	36.0	36.0	4.70	4.70

LIQUID MEASUREMENT RESULTS

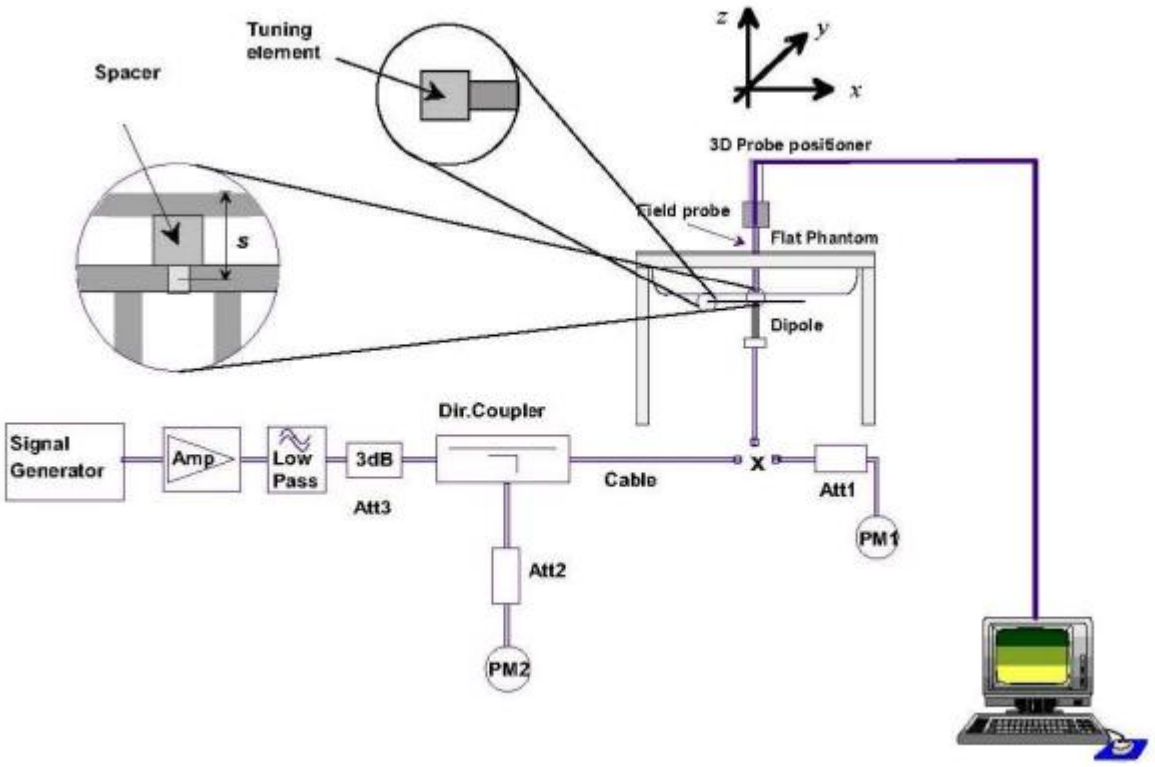
Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity %	Frequency (MHz)	Temp. [°C]					
2023-03-29	22.4	54	750	22.1	Permittivity	41.90	42.48	1.38	±5
					Conductivity	0.89	0.90	1.12	±5
2023-03-30	23.2	58	835	22.9	Permittivity	41.50	41.05	-1.08	±5
					Conductivity	0.90	0.86	-4.44	±5
2023-04-01	20.7	55	1800	20.4	Permittivity	40.00	40.60	1.50	±5
					Conductivity	1.40	1.45	3.57	±5
2023-04-03	24.0	57	1900	23.7	Permittivity	40.00	41.04	2.60	±5
					Conductivity	1.40	1.39	-0.71	±5
2023-04-06	21.9	42	2450	21.6	Permittivity	39.20	40.03	2.12	±5
					Conductivity	1.80	1.83	1.67	±5
2023-04-06	21.9	42	5200	21.5	Permittivity	36.00	36.82	2.28	±5
					Conductivity	4.66	4.64	-0.43	±5
2023-04-07	20.9	44	5400	20.5	Permittivity	35.80	36.84	2.91	±5
					Conductivity	4.86	4.90	0.82	±5
2023-04-07	20.9	44	5400	20.6	Permittivity	35.80	37.19	3.88	±5
					Conductivity	4.86	4.91	1.03	±5
2023-04-08	22.2	40	5800	21.9	Permittivity	35.30	36.32	2.89	±5
					Conductivity	5.27	5.21	-1.14	±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	Power drift	Tested Value	Normalized SAR	Target SAR	Tolerance
	(MHz)	(mW)	(%)	(W/Kg)	(W/kg)	1g(W/kg)	(%)
2023-03-29	750	100	0.871	8.71	8.27	5.32	10
2023-03-30	835	100	0.935	9.35	9.75	-4.10	10
2023-04-01	1800	100	3.968	39.68	39.06	1.59	10
2023-04-03	1900	100	4.196	41.96	40.85	2.72	10
2023-04-06	2450	100	4.909	49.09	54.28	-9.56	10
2023-04-06	5200	100	8.071	80.71	77.64	3.95	10
2023-04-07	5300	100	8.820	88.20	80.27	9.88	10
2023-04-07	5600	100	8.566	85.66	78.35	9.33	10
2023-04-08	5800	100	8.165	81.65	74.92	8.98	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.

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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.

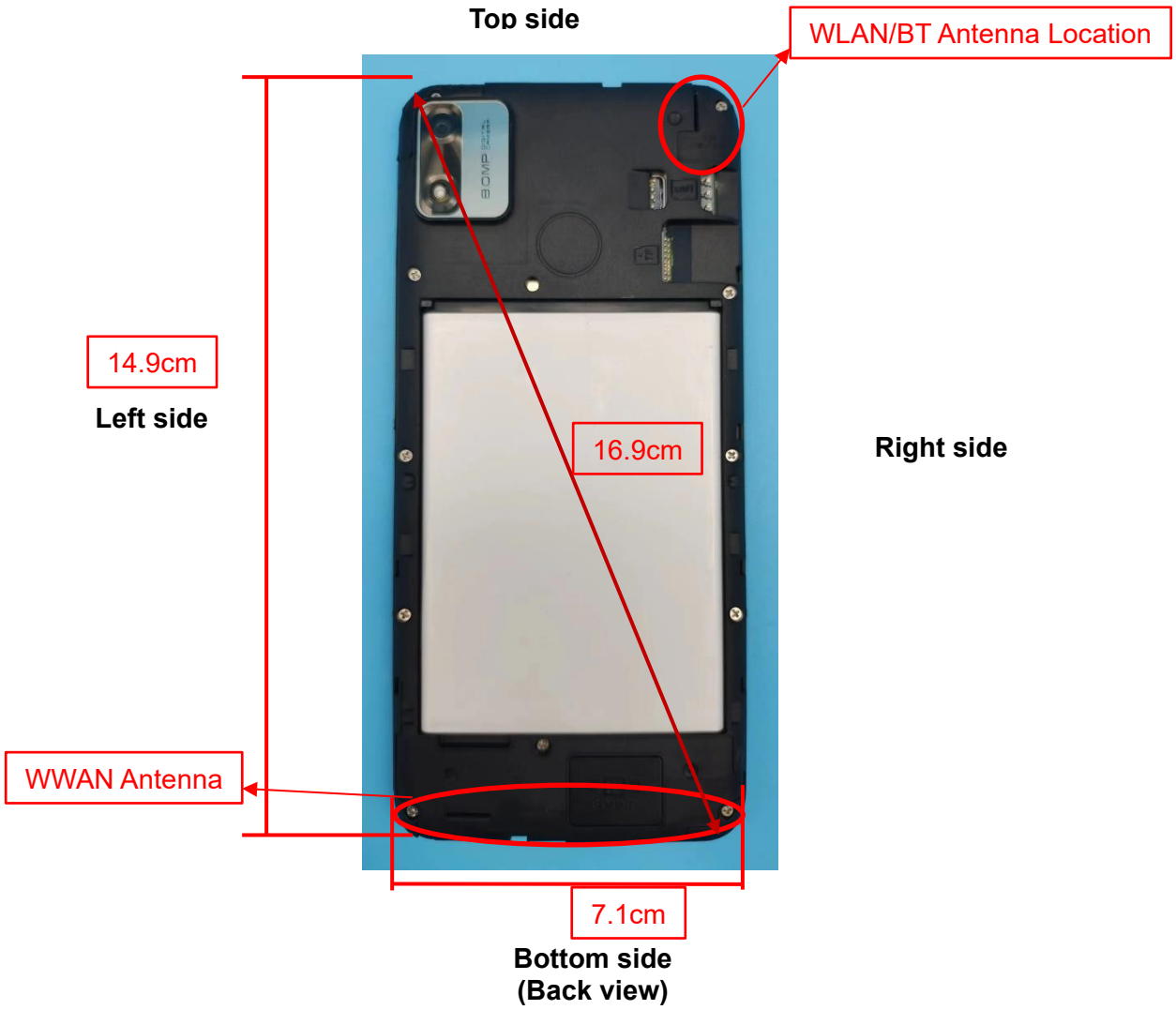
➢ Area Scan& Zoom Scan

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(cm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN/BT	≤0.5	≤0.5	5.6	≤0.5	≤0.5	13.2
WWAN	≤0.5	≤0.5	≤0.5	≤0.5	12.8	≤0.5

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	GSM850	PCS1900	WCDMA II	WCDMA IV	WCDMA V
	Calculated Frequency (GHz)	0.8366	1.9098	1.9076	1.7524	0.8264
	Maximum Turn-up power (dBm)	33.5	30	24	23.5	24
	Maximum rated power(mW)	2238.72	1000.00	251.19	223.87	251.19
Back Side	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	9.22	3.35	3.35	3.59	9.38
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	9.22	3.35	3.35	3.59	9.38
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	9.22	3.35	3.35	3.59	9.38
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	9.22	3.35	3.35	3.59	9.38
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (cm)	12.8	12.8	12.8	12.8	12.8
	exclusion threshold(mW)	907.49	1341.31	1341.46	1352.54	899.63
	Testing required?	YES	NO	NO	NO	NO
Bottom Edge	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	9.22	3.35	3.35	3.59	9.38
	Testing required?	YES	YES	YES	YES	YES

Exposure Position	Wireless Interface	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 12	LTE Band 17
	Calculated Frequency (GHz)	1.86	1.72	0.829	0.704	0.71
	Maximum Turn-up power (dBm)	23	22.5	23	23	23
	Maximum rated power(mW)	199.53	177.83	199.53	199.53	199.53
Back Side	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.42	3.64	9.34	11.75	11.61
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.42	3.64	9.34	11.75	11.61
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.42	3.64	9.34	11.75	11.61
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.42	3.64	9.34	11.75	11.61
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (cm)	12.8	12.8	12.8	12.8	12.8
	exclusion threshold(mW)	1344.75	1354.99	901.64	802.95	807.79
	Testing required?	NO	NO	NO	NO	NO
Bottom Edge	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.42	3.64	9.34	11.75	11.61
	Testing required?	YES	YES	YES	YES	YES

Exposure Position	Wireless Interface	LTE Band 66	LTE Band 71	BT	2.4G WLAN
	Calculated Frequency (GHz)	1.72	0.688	2.402	2.412
	Maximum Turn-up power (dBm)	23	23	8	17.5
	Maximum rated power(mW)	199.53	199.53	6.31	56.23
Back Side	Separation distance (cm)	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.64	7.59	2.79	2.78
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.64	7.59	2.79	2.78
	Testing required?	YES	YES	YES	YES
Left Edge	Separation distance (cm)	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	3.64	7.59	2.79	2.78
	Testing required?	YES	YES	YES	YES
Right Edge	Separation distance (cm)	0.5	0.5	5.6	5.6
	exclusion threshold(mW)	3.64	7.59	273.22	272.90
	Testing required?	YES	YES	NO	NO
Top Edge	Separation distance (cm)	12.8	12.8	0.5	0.5
	exclusion threshold(mW)	1354.99	1480.81	2.79	2.78
	Testing required?	NO	NO	YES	YES
Bottom Edge	Separation distance (cm)	0.5	0.5	13.2	13.2
	exclusion threshold(mW)	3.64	7.59	1390.73	1390.21
	Testing required?	YES	YES	NO	NO

Exposure Position	Wireless Interface	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
	Calculated Frequency (GHz)	5.18	5.26	5.7	5.785
	Maximum Turn-up power (dBm)	13.5	11.5	13	13
	Maximum rated power(mW)	22.39	14.13	19.95	19.95
Back Side	Separation distance (cm)	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	1.51	1.49	1.40	1.38
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	1.51	1.49	1.40	1.38
	Testing required?	YES	YES	YES	YES
Left Edge	Separation distance (cm)	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	1.51	1.49	1.40	1.38
	Testing required?	YES	YES	YES	YES
Right Edge	Separation distance (cm)	5.6	5.6	5.6	5.6
	exclusion threshold(mW)	220.93	219.99	215.16	214.28
	Testing required?	NO	NO	NO	NO
Top Edge	Separation distance (cm)	0.5	0.5	0.5	0.5
	exclusion threshold(mW)	1.51	1.49	1.40	1.38
	Testing required?	YES	YES	YES	YES
Bottom Edge	Separation distance (cm)	13.2	13.2	13.2	13.2
	exclusion threshold(mW)	1297.56	1295.77	1286.41	1284.69
	Testing required?	NO	NO	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 D04, 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 D04, if the maximum time-averaged power available does not exceed 1 mW. This stand-alone SAR exemption test.

4. Per KDB 447498 D04, the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold Pth (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by:

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

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ cm}\sqrt{f}}\right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\ cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

d = the separation distance (cm);

5. Per KDB 447498 D04, An alternative to the SAR-based exemption is using below table and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in below table to apply, R must be at least λ/2π, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of λ/4 or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R^2.
1.34-30	3,450 R^2/f^2.
30-300	3.83 R^2.
300-1,500	0.0128 R^2f.
1,500-100,000	19.2R^2.

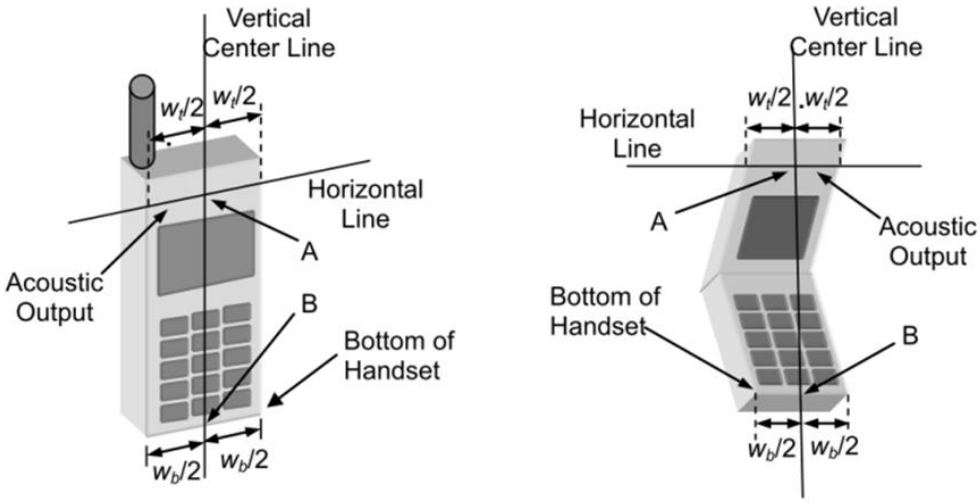
6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion 8.for each frequency band ,testing at higher data rates and higher order modulations is not required when the maximum average output power for each of each of these configurations is less than 1/4db higher than those measured at the lower data rate than 11b mode ,thus the SAR can be excluded.
7. Per KDB 616217 D04, SAR evaluation for the front surface of tablet display screens are generally not necessary.
8. Per KDB 248227, as maximum rated power for U-NII-2A＞U-NII-1, U-NII-2A was chosen for SAR evaluation. Based on the measurements obtained, SAR measurements on U-NII-1 are not required as highest reported SAR from U-NII-2A band is≤1.2W/Kg.

8. EUT Test Position

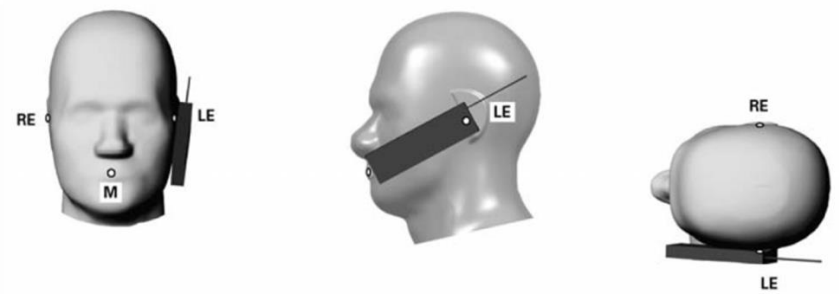
This EUT was tested in Right Cheek, Right Titled, Left Cheek, Left Titled, Front Face and Rear Face.

8.1 Define Two Imaginary Lines on the Handset

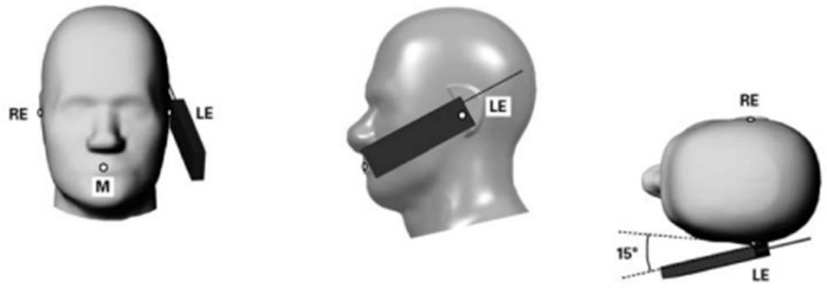
(1) The vertical centerline passes through two points on the front side of the handset the midpoint of the width wt of the handset at the level of the acoustic output, and the midpoint of the width wb of the handset.
(2) The horizontal line is perpendicular to the vertical centerline and passes through 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.



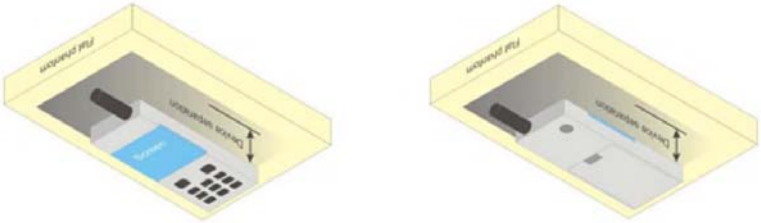
Cheek Position
1) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane 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.

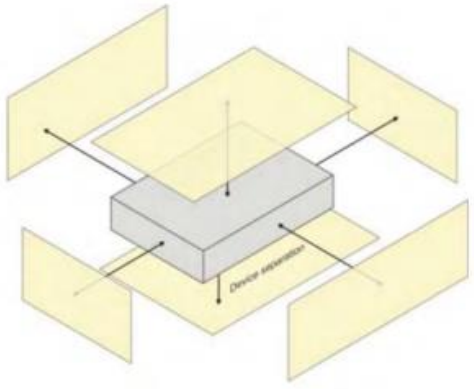


Body-worn Position Conditions:
Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset 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.

Uncertainty Component	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System								
Probe calibration	5.8	N	1	1	1	5.8	5.8	∞
Axial Isotropy	3.5	R	√3	√0.5	√0.5	1.43	1.43	∞
Hemispherical Isotropy	5.9	R	√3	√0.5	√0.5	2.41	2.41	∞
Boundary effect	1	R	√3	1	1	0.58	0.58	∞
Linearity	4.7	R	√3	1	1	2.71	2.71	∞
System detection limits	1	R	√3	1	1	0.58	0.58	∞
Modulation response	3	R	√3	1	1	1.73	1.73	∞
Readout Electronics	0.5	N	1	1	1	0.50	0.50	∞
Response Time	0	R	√3	1	1	0.00	0.00	∞
Integration Time	1.4	R	√3	1	1	1.81	1.81	∞
RF ambient conditions-Noise	3	R	√3	1	1	1.73	1.73	∞
RF ambient conditions-reflections	3	R	√3	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	1.4	R	√3	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	1.4	R	√3	1	1	0.81	0.81	∞
Extrapolation, Interpolation and Integration Algoritms for Max, SAR	2.3	R	√3	1	1	1.33	1.33	∞
Test sample Related								
Test sample positioning	2.6	N	1	1	1	2.60	2.60	11
Device holder uncertainty	3	N	1	1	1	3.00	3.00	7
Output Power Variation - SAR Drift Measurement	5	R	√3	1	1	2.89	2.89	∞
SAR scaling	2	R	√3	1	1	1.15	1.15	∞
Phantom and tissue parameters								
Phantom uncertainty (shape and thickness uncertainty)	4	R	√3	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	2	N	1	1	0.84	2.00	1.68	∞
Liquid Conductivity - Measurement Uncertainty)	4	N	1	0.78	0.71	3.12	2.84	5
Liquid Permittivity - Measurement Uncertainty	5	N	1	0.23	0.26	1.15	1.30	5
Liquid Conductivity (Temperature Uncertainty)	2.5	R	√3	0.78	0.71	1.13	1.02	∞
Liquid Permittivity (Temperature Uncertainty)	2.5	R	√3	0.23	0.26	0.33	0.38	∞
Combined Standard Uncertainty		RSS				10.47	10.34	
Expanded Uncertainty (95% Confidence interval)		K				20.95	20.69	

9.2 System validation uncertainty

Uncertainty Component	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System								
Probe calibration	5.8	N	1	1	1	5.8	5.8	∞
Axial Isotropy	3.5	R	$\sqrt{3}$	1	1	2.02	2.02	∞
Hemispherical Isotropy	5.9	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Boundary effect	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	4.7	R	$\sqrt{3}$	1	1	0.71	0.71	∞
System detection limits	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	0	N	$\sqrt{3}$	0	0	0.00	0.00	∞
Readout Electronics	0.5	N	1	1	1	0.50	0.50	∞
Response Time	0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Integration Time	1.4	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-Noise	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions-reflections	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Extrapolation, Interpolation and Integration Algoritms for Max, SAR	2.3	R	$\sqrt{3}$	1	1	1.33	1.33	∞
Dipole								
Deviation of Experimental Source from Numerical Source	5	N	1	1	1	5.00	5.00	∞
Input Power and SAR Drift Measurement	0.5	R	$\sqrt{3}$	1	1	0.29	0.29	∞
Dipole Axis to Liquid Distance	2	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Phantom and Tissue Parameters								
Phantom uncertainty (shape and thickness uncertainty)	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	2	N	1	1	0.84	2.00	1.68	∞
Liquid Conductivity - Measurement Uncertainty)	4	N	1	0.78	0.71	3.12	2.84	5
Liquid Permittivity - Measurement Uncertainty	5	N	1	0.23	0.26	1.15	1.30	5
Liquid Conductivity (Temperature Uncertainty)	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid Permittivity (Temperature Uncertainty)	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	∞
Combined Standard Uncertainty		RSS				10.16	10.03	
Expanded Uncertainty (95% Confidence interval)		K				20.32	20.06	

10. Conducted Power Measurement

10.1 Test Result:

Burst Average Power (dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM (GMSK, 1-Slot)	32.71	33.31	32.79	29.29	29.36	29.54
GPRS (GMSK, 1-Slot)	32.72	33.31	32.77	29.29	29.37	29.53
GPRS (GMSK, 2-Slot)	31.65	32.23	31.76	28.29	28.36	28.56
GPRS (GMSK, 3-Slot)	29.79	30.35	29.91	26.45	26.51	26.72
GPRS (GMSK, 4-Slot)	29.02	29.63	29.16	25.61	25.68	25.89
EGPRS (8PSK, 1-Slot)	27.27	27.59	27.34	24.49	24.92	24.54
EGPRS (8PSK, 2-Slot)	26.29	26.39	26.44	23.77	23.49	23.42
EGPRS (8PSK, 3-Slot)	24.36	24.56	24.67	21.59	21.41	21.39
EGPRS (8PSK, 4-Slot)	23.15	23.32	23.11	20.2	20.09	19.76
Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme. Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link						

Frame- Average Power(dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM (GMSK, 1-Slot)	23.68	24.28	23.76	20.26	20.33	20.51
GPRS (GMSK, 1-Slot)	23.69	24.28	23.74	20.26	20.34	20.50
GPRS (GMSK, 2-Slot)	25.63	26.21	25.74	22.27	22.34	22.54
GPRS (GMSK, 3-Slot)	25.53	26.09	25.65	22.19	22.25	22.46
GPRS (GMSK, 4-Slot)	26.01	26.62	26.15	22.60	22.67	22.88
EGPRS (8PSK, 1-Slot)	18.24	18.56	18.31	15.46	15.89	15.51
EGPRS (8PSK, 2-Slot)	20.27	20.37	20.42	17.75	17.47	17.40
EGPRS (8PSK, 3-Slot)	20.10	20.30	20.41	17.33	17.15	17.13
EGPRS (8PSK, 4-Slot)	20.14	20.31	20.10	17.19	17.08	16.75
Remark: 1. SAR testing was performed on the maximum frame-averaged power mode. 2. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum Burst - averaged power based on time slots. The calculated method is shown as below: Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB						

WCDMA

Band	WCDMA Band 2			WCDMA Band 4			WCDMA Band 5		
Channel	9262	9400	9538	9262	9400	9538	9262	9400	9538
Frequency (MHz)	1852.4	1880	1907.6	1852.4	1880	1907.6	1852.4	1880	1907.6
RMC 12.2Kbps	23.35	23.38	23.51	23.06	23.00	23.09	23.56	23.43	23.40
HSDPA Subtest-1	22.44	22.44	22.55	22.15	22.09	22.17	22.59	22.49	22.40
HSDPA Subtest-2	21.86	21.92	21.96	21.53	21.76	21.55	22.26	22.08	21.78
HSDPA Subtest-3	20.93	20.60	21.25	20.16	20.51	20.85	21.48	20.89	20.93
HSDPA Subtest-4	21.30	20.61	20.56	20.99	20.16	20.49	20.87	20.78	20.95
HSUPA Subtest-1	20.91	22.24	22.31	20.63	21.87	21.85	21.99	22.25	22.25
HSUPA Subtest-2	22.39	22.27	22.47	22.02	21.90	22.00	22.51	22.31	22.26
HSUPA Subtest-3	20.65	21.17	21.30	20.49	20.80	21.05	20.76	20.97	21.29
HSUPA Subtest-4	22.38	22.44	22.50	22.12	22.04	22.10	22.58	22.45	22.39
HSUPA Subtest-5	20.99	21.71	21.94	20.64	21.26	21.47	21.04	21.51	21.73

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.

2.4G WLAN

2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11b	1	2412	17.12	51.52
	6	2437	16.70	46.77
	11	2462	17.00	50.12
802.11g	1	2412	15.31	33.96
	6	2437	14.86	30.62
	11	2462	15.22	33.27
802.11 n-HT20	1	2412	13.48	22.28
	6	2437	12.94	19.68
	11	2462	13.27	21.23
802.11 n-HT40	3	2422	13.53	22.54
	6	2437	12.95	19.72
	9	2452	13.16	20.70

Bluetooth

BT				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	7.39	5.48
	39	2441	4.97	3.14
	78	2480	6.21	4.18
π/4-QPSK(2Mbps)	0	2402	6.74	4.72
	39	2441	4.45	2.79
	78	2480	5.59	3.62
8DPSK(3Mbps)	0	2402	6.80	4.79
	39	2441	4.57	2.86
	78	2480	5.74	3.75

BLE

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	7.66	5.83
	19	2440	5.25	3.35
	39	2480	6.52	4.49

WLAN (5.2Gband)

5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	36	5180	12.09	16.18
	40	5200	11.75	14.96
	48	5240	11.38	13.74
802.11 n-HT20	36	5180	12.37	17.26
	40	5200	11.96	15.70
	48	5240	11.51	14.16
802.11 n-HT40	38	5190	12.13	16.33
	46	5230	11.62	14.52
802.11ac-VHT20	36	5180	11.89	15.45
	40	5200	11.64	14.59
	48	5240	11.14	13.00
802.11ac-VHT40	38	5190	12.10	16.22
	46	5230	11.46	14.00

WLAN (5.3G band)5.3G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	52	5260	11.37	13.71
	60	5300	11.23	13.27
	64	5320	11.10	12.88
802.11 n-HT20	52	5260	11.35	13.65
	60	5300	11.31	13.52
	64	5320	10.10	10.23
802.11 n-HT40	54	5270	11.04	12.71
	62	5310	11.06	12.76
802.11ac-VHT20	52	5260	11.07	12.79
	60	5300	10.81	12.05
	64	5320	10.64	11.59
802.11ac-VHT40	54	5270	11.05	12.74
	62	5310	11.01	12.62

WLAN (5.6G band)

5.6G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	100	5500	10.25	10.59
	116	5580	10.55	11.35
	140	5700	10.75	11.89
802.11 n-HT20	100	5500	10.02	10.05
	116	5580	10.43	11.04
	140	5700	11.33	13.58
802.11 n-HT40	102	5510	10.07	10.16
	110	5550	10.38	10.91
	134	5670	11.29	13.46
802.11ac-VHT20	100	5500	9.98	9.95
	116	5580	10.52	11.27
	140	5700	11.30	13.49
802.11ac-VHT40	102	5510	10.08	10.19
	110	5550	10.29	10.69
	134	5670	11.21	13.21

WLAN (5.8G band)

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	149	5745	10.57	11.40
	157	5785	10.41	10.99
	165	5825	10.57	11.40
802.11 n-HT20	149	5745	10.65	11.61
	157	5785	10.75	11.89
	165	5825	10.64	11.59
802.11 n-HT40	151	5755	10.72	11.80
	159	5795	10.82	12.08
802.11ac-VHT20	149	5745	10.71	11.78
	157	5785	10.69	11.72
	165	5825	10.62	11.53
802.11ac-VHT40	151	5755	10.89	12.27
	159	5795	10.83	12.11

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 $\leqslant$ 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 $\leqslant$ 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 $\leqslant$ 1.45 W/kg; Per KDB 941225 D05, smaller bandwidth SAR testing is not required.

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.97	22.84	22.87
1.4	1	2		23.19	23.05	23.08
1.4	1	5		23.00	22.82	22.87
1.4	3	0		22.91	22.92	22.89
1.4	3	1		22.94	22.91	22.88
1.4	3	2		22.94	22.91	22.93
1.4	6	0		21.97	21.90	21.89
1.4	1	0	16-QAM	22.03	21.98	21.66
1.4	1	2		22.18	22.13	21.86
1.4	1	5		22.05	22.03	21.66
1.4	3	0		22.11	22.10	22.04
1.4	3	1		22.13	22.14	22.02
1.4	3	2		22.08	22.14	22.03
1.4	6	0		21.07	20.95	21.04
3	1	0	QPSK	22.90	22.69	22.36
3	1	7		23.25	23.01	22.65
3	1	14		22.81	22.49	22.40
3	8	0		21.88	21.69	21.34
3	8	4		21.87	21.72	21.35
3	8	7		21.87	21.62	21.29
3	15	0		21.78	21.51	21.32
3	1	0	16-QAM	22.28	21.48	21.18
3	1	7		22.48	21.75	21.44
3	1	14		22.22	21.47	21.19
3	8	0		20.88	20.33	20.34
3	8	4		20.85	20.52	20.32
3	8	7		20.83	20.43	20.29
3	15	0		20.80	20.23	20.38

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.29	22.27	22.20
5	1	12		22.67	22.70	22.64
5	1	24		22.24	22.32	22.21
5	12	0		21.33	21.29	21.33
5	12	6		21.37	21.36	21.38
5	12	11		21.28	21.34	21.18
5	25	0		21.37	21.37	21.30
5	1	0	16-QAM	21.79	21.53	21.49
5	1	12		22.14	21.88	21.89
5	1	24		21.75	21.60	21.55
5	12	0		20.35	20.31	20.33
5	12	6		20.40	20.33	20.37
5	12	11		20.33	20.33	20.21
5	25	0		20.27	20.36	20.28
10	1	0	QPSK	22.35	22.33	22.29
10	1	24		22.46	22.52	22.42
10	1	49		22.31	22.42	22.30
10	25	0		21.43	21.38	21.33
10	25	12		21.34	21.39	21.34
10	25	24		21.32	21.43	21.19
10	50	0		21.38	21.38	21.25
10	1	0	16-QAM	21.51	21.14	21.68
10	1	24		21.58	21.31	21.76
10	1	49		21.44	21.27	21.66
10	25	0		20.42	20.35	20.33
10	25	12		20.36	20.34	20.33
10	25	24		20.35	20.42	20.19
10	50	0		20.41	20.37	20.25

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.29	22.21	22.38
15	1	37		22.56	22.52	22.61
15	1	74		22.22	22.32	22.33
15	36	0		21.44	21.34	21.40
15	36	18		21.35	21.46	21.40
15	36	39		21.34	21.41	21.30
15	75	0		21.42	21.39	21.36
15	1	0	16-QAM	21.67	21.32	21.39
15	1	38		22.10	21.68	21.55
15	1	75		21.61	21.45	21.34
15	36	0		20.42	20.38	20.34
15	36	18		20.38	20.51	20.34
15	36	39		20.37	20.50	20.23
15	75	0		20.38	20.36	20.35
20	1	0	QPSK	22.17	22.04	22.26
20	1	49		22.40	22.45	22.59
20	1	99		22.13	22.15	22.26
20	50	0		21.37	21.25	21.43
20	50	24		21.33	21.41	21.42
20	50	49		21.37	21.32	21.24
20	100	0		21.34	21.32	21.32
20	1	0	16-QAM	21.35	21.37	21.44
20	1	49		21.61	21.77	21.69
20	1	99		21.33	21.50	21.37
20	50	0		20.42	20.26	20.45
20	50	24		20.41	20.46	20.40
20	50	49		20.39	20.35	20.23
20	100	0		20.38	20.25	20.35

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.20	22.07	22.10
1.4	1	2		22.31	22.23	22.26
1.4	1	5		22.12	22.01	22.11
1.4	3	0		22.09	22.11	22.12
1.4	3	1		22.07	22.16	22.11
1.4	3	2		22.07	22.11	22.12
1.4	6	0		21.10	21.08	21.10
1.4	1	0	16-QAM	21.24	21.22	20.95
1.4	1	2		21.39	21.37	21.09
1.4	1	5		21.26	21.22	20.94
1.4	3	0		21.23	21.36	21.28
1.4	3	1		21.32	21.35	21.27
1.4	3	2		21.33	21.37	21.32
1.4	6	0		20.24	20.22	20.28
3	1	0	QPSK	22.06	22.10	22.09
3	1	7		22.33	22.36	22.43
3	1	14		22.06	22.08	22.19
3	8	0		21.10	21.09	21.13
3	8	4		21.10	21.11	21.15
3	8	7		21.13	21.10	21.12
3	15	0		21.07	21.09	21.09
3	1	0	16-QAM	21.50	21.31	20.96
3	1	7		21.83	21.54	21.24
3	1	14		21.50	21.26	20.99
3	8	0		20.12	20.13	20.11
3	8	4		20.10	20.10	20.14
3	8	7		20.10	20.07	20.11
3	15	0		20.08	20.02	20.10

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.94	22.03	21.93
5	1	12		22.39	22.37	22.27
5	1	24		22.04	21.95	22.00
5	12	0		21.02	21.04	21.06
5	12	6		21.13	21.11	21.13
5	12	11		21.12	21.06	21.08
5	25	0		21.13	21.10	21.11
5	1	0	16-QAM	21.50	21.34	21.27
5	1	12		21.99	21.72	21.66
5	1	24		21.59	21.33	21.38
5	12	0		20.07	20.05	20.11
5	12	6		20.13	20.10	20.19
5	12	11		20.14	20.04	20.08
5	25	0		20.09	20.09	20.07
10	1	0	QPSK	22.06	22.13	22.01
10	1	24		22.21	22.20	22.18
10	1	49		22.15	22.02	22.15
10	25	0		21.13	21.17	21.04
10	25	12		21.12	21.10	21.04
10	25	24		21.21	21.11	21.07
10	50	0		21.16	21.21	21.01
10	1	0	16-QAM	21.45	21.29	20.83
10	1	24		21.70	21.37	20.99
10	1	49		21.60	21.18	20.97
10	25	0		20.15	20.12	20.02
10	25	12		20.17	20.12	20.03
10	25	24		20.23	20.14	20.08
10	50	0		20.15	20.13	19.99

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.00	22.09	21.91
15	1	37		22.38	22.23	22.23
15	1	74		22.09	21.96	22.01
15	36	0		21.14	21.10	21.00
15	36	18		21.16	21.10	21.09
15	36	39		21.20	21.09	21.05
15	75	0		21.19	21.26	21.09
15	1	0	16-QAM	21.22	21.17	21.32
15	1	38		21.63	21.34	21.71
15	1	75		21.23	21.03	21.46
15	36	0		20.19	20.06	20.04
15	36	18		20.24	20.11	20.08
15	36	39		20.29	20.04	20.11
15	75	0		20.16	20.09	20.02
20	1	0	QPSK	21.81	21.92	21.78
20	1	49		22.26	22.23	22.07
20	1	99		21.92	21.88	21.93
20	50	0		21.12	21.08	20.97
20	50	24		21.17	21.10	21.00
20	50	49		21.19	21.12	21.07
20	100	0		21.16	21.15	20.96
20	1	0	16-QAM	21.15	21.19	20.97
20	1	49		21.57	21.44	21.31
20	1	99		21.27	21.07	21.14
20	50	0		20.18	20.06	19.97
20	50	24		20.23	20.07	20.05
20	50	49		20.21	20.12	20.07
20	100	0		20.15	20.17	19.96

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.68	22.62	22.36
1.4	1	2		22.85	22.76	22.52
1.4	1	5		22.74	22.57	22.42
1.4	3	0		22.74	22.52	22.44
1.4	3	1		22.71	22.51	22.44
1.4	3	2		22.70	22.54	22.43
1.4	6	0		21.71	21.49	21.40
1.4	1	0	16-QAM	21.55	21.71	21.56
1.4	1	2		21.68	21.78	21.68
1.4	1	5		21.58	21.64	21.59
1.4	3	0		21.89	21.76	21.69
1.4	3	1		21.87	21.77	21.70
1.4	3	2		21.89	21.73	21.71
1.4	6	0		20.87	20.68	20.56
3	1	0	QPSK	22.72	22.54	22.46
3	1	7		23.01	22.82	22.65
3	1	14		22.71	22.55	22.51
3	8	0		21.66	21.50	21.45
3	8	4		21.69	21.51	21.44
3	8	7		21.68	21.51	21.38
3	15	0		21.65	21.51	21.40
3	1	0	16-QAM	22.15	21.74	21.34
3	1	7		22.40	22.09	21.63
3	1	14		22.12	21.68	21.36
3	8	0		20.68	20.54	20.44
3	8	4		20.73	20.55	20.44
3	8	7		20.72	20.50	20.39
3	15	0		20.66	20.47	20.46

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.60	22.51	22.29
5	1	12		22.81	22.77	22.75
5	1	24		22.65	22.37	22.32
5	12	0		21.62	21.52	21.42
5	12	6		21.72	21.56	21.47
5	12	11		21.65	21.56	21.33
5	25	0		21.64	21.61	21.43
5	1	0	16-QAM	22.13	21.84	21.65
5	1	12		22.50	22.14	22.13
5	1	24		22.21	21.70	21.70
5	12	0		20.57	20.54	20.51
5	12	6		20.73	20.53	20.55
5	12	11		20.68	20.52	20.36
5	25	0		20.60	20.61	20.40
10	1	0	QPSK	22.69	22.68	22.44
10	1	24		22.82	22.66	22.47
10	1	49		22.61	22.53	22.41
10	25	0		21.76	21.70	21.24
10	25	12		21.69	21.57	21.47
10	25	24		21.50	21.77	21.32
10	50	0		21.63	21.72	21.29
10	1	0	16-QAM	21.85	21.51	21.81
10	1	24		21.98	21.53	21.89
10	1	49		21.82	21.37	21.88
10	25	0		20.71	20.73	20.23
10	25	12		20.69	20.54	20.43
10	25	24		20.51	20.75	20.35
10	50	0		20.68	20.71	20.24

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.54	22.38	22.22
1.4	1	2		22.65	22.53	22.34
1.4	1	5		22.51	22.44	22.20
1.4	3	0		22.57	22.32	22.28
1.4	3	1		22.56	22.38	22.23
1.4	3	2		22.50	22.37	22.24
1.4	6	0		21.52	21.38	21.23
1.4	1	0	16-QAM	21.43	21.49	21.40
1.4	1	2		21.49	21.59	21.48
1.4	1	5		21.33	21.51	21.39
1.4	3	0		21.69	21.53	21.50
1.4	3	1		21.69	21.51	21.52
1.4	3	2		21.68	21.56	21.49
1.4	6	0		20.64	20.53	20.37
3	1	0	QPSK	22.55	22.33	22.32
3	1	7		22.79	22.69	22.50
3	1	14		22.47	22.33	22.36
3	8	0		21.43	21.37	21.28
3	8	4		21.50	21.39	21.32
3	8	7		21.53	21.32	21.24
3	15	0		21.44	21.33	21.23
3	1	0	16-QAM	21.92	21.54	21.18
3	1	7		22.12	21.80	21.45
3	1	14		21.86	21.51	21.14
3	8	0		20.48	20.36	20.23
3	8	4		20.55	20.35	20.26
3	8	7		20.53	20.31	20.24
3	15	0		20.48	20.26	20.30

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.41	22.24	22.14
5	1	12		22.81	22.62	22.52
5	1	24		22.39	22.27	22.17
5	12	0		21.23	21.48	21.15
5	12	6		21.48	21.41	21.29
5	12	11		21.59	21.26	21.21
5	25	0		21.54	21.38	21.29
5	1	0	16-QAM	21.72	21.52	21.76
5	1	12		21.97	22.02	22.14
5	1	24		21.64	21.64	21.72
5	12	0		20.20	20.46	20.14
5	12	6		20.47	20.40	20.31
5	12	11		20.53	20.28	20.24
5	25	0		20.47	20.37	20.21
10	1	0	QPSK	22.47	22.38	22.38
10	1	24		22.51	22.41	22.46
10	1	49		22.35	22.37	22.38
10	25	0		21.14	21.52	21.57
10	25	12		21.36	21.38	21.33
10	25	24		21.19	21.33	21.56
10	50	0		21.14	21.41	21.59
10	1	0	16-QAM	21.88	21.50	21.20
10	1	24		21.90	21.57	21.33
10	1	49		21.80	21.52	21.13
10	25	0		20.12	20.45	20.62
10	25	12		20.34	20.43	20.37
10	25	24		20.20	20.27	20.52
10	50	0		20.08	20.44	20.54

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.34	22.29	22.14
5	1	12		22.68	22.53	22.54
5	1	24		22.30	22.23	22.09
5	12	0		21.41	21.37	21.09
5	12	6		21.42	21.36	21.25
5	12	11		21.22	21.35	21.20
5	25	0		21.35	21.41	21.24
5	1	0	16-QAM	21.85	21.61	21.52
5	1	12		22.20	21.88	21.84
5	1	24		21.83	21.53	21.53
5	12	0		20.44	20.37	20.15
5	12	6		20.47	20.32	20.33
5	12	11		20.23	20.30	20.22
5	25	0		20.33	20.44	20.16
10	1	0	QPSK	22.33	22.37	22.30
10	1	24		22.42	22.48	22.37
10	1	49		22.28	22.33	22.25
10	25	0		21.64	21.67	21.56
10	25	12		21.39	21.36	21.35
10	25	24		21.45	21.55	21.54
10	50	0		21.58	21.60	21.57
10	1	0	16-QAM	21.51	21.18	21.70
10	1	24		21.58	21.31	21.79
10	1	49		21.40	21.15	21.69
10	25	0		20.58	20.69	20.57
10	25	12		20.34	20.35	20.37
10	25	24		20.46	20.50	20.57
10	50	0		20.58	20.55	20.57

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.25	21.93	21.91
1.4	1	2		22.39	22.09	22.09
1.4	1	5		22.24	21.95	21.95
1.4	3	0		22.16	22.01	21.98
1.4	3	1		22.18	21.98	21.94
1.4	3	2		22.27	21.99	21.92
1.4	6	0		21.16	20.96	20.92
1.4	1	0	16-QAM	21.35	21.12	20.80
1.4	1	2		21.44	21.24	20.91
1.4	1	5		21.36	21.14	20.76
1.4	3	0		21.42	21.23	21.12
1.4	3	1		21.41	21.24	21.08
1.4	3	2		21.40	21.26	21.16
1.4	6	0		20.34	20.13	20.07
3	1	0	QPSK	22.16	22.00	22.00
3	1	7		22.48	22.16	22.21
3	1	14		22.22	22.01	21.99
3	8	0		21.16	20.99	20.97
3	8	4		21.18	21.01	20.96
3	8	7		21.23	21.00	20.93
3	15	0		21.15	20.97	20.90
3	1	0	16-QAM	21.62	21.17	20.85
3	1	7		21.86	21.53	21.12
3	1	14		21.67	21.22	20.83
3	8	0		20.18	20.00	19.95
3	8	4		20.23	20.02	19.97
3	8	7		20.23	19.98	19.93
3	15	0		20.18	19.92	19.98

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.06	21.88	21.80
5	1	12		22.60	22.36	22.22
5	1	24		22.12	21.93	21.83
5	12	0		21.14	20.99	20.92
5	12	6		21.20	21.02	20.93
5	12	11		21.20	20.96	20.95
5	25	0		21.22	21.01	20.94
5	1	0	16-QAM	21.65	21.22	21.16
5	1	12		22.24	21.71	21.54
5	1	24		21.70	21.26	21.20
5	12	0		20.18	19.92	20.01
5	12	6		20.26	19.98	20.00
5	12	11		20.25	19.92	20.03
5	25	0		20.13	20.00	19.92
10	1	0	QPSK	22.20	22.00	22.00
10	1	24		22.41	22.18	22.06
10	1	49		22.29	22.06	21.97
10	25	0		21.28	21.01	21.12
10	25	12		21.27	21.02	20.99
10	25	24		21.36	21.01	21.05
10	50	0		21.28	21.01	21.06
10	1	0	16-QAM	21.32	20.88	21.46
10	1	24		21.55	21.03	21.51
10	1	49		21.43	20.90	21.39
10	25	0		20.24	19.97	20.11
10	25	12		20.30	19.99	20.01
10	25	24		20.30	19.99	20.05
10	50	0		20.32	19.97	20.05

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.11	21.98	21.98
15	1	37		22.57	22.30	22.16
15	1	74		22.20	22.01	21.87
15	36	0		21.22	20.98	21.09
15	36	18		21.30	21.01	21.06
15	36	39		21.28	20.98	21.01
15	75	0		21.28	21.02	21.07
15	1	0	16-QAM	21.30	21.03	21.45
15	1	38		21.60	21.43	21.74
15	1	75		21.36	21.09	21.29
15	36	0		20.26	19.94	20.11
15	36	18		20.34	19.99	20.09
15	36	39		20.34	19.97	20.06
15	75	0		20.23	20.00	20.07
20	1	0	QPSK	21.94	21.87	21.80
20	1	49		22.41	22.15	22.15
20	1	99		21.98	21.90	21.76
20	50	0		21.25	20.98	21.14
20	50	24		21.25	21.03	21.03
20	50	49		21.29	21.02	21.02
20	100	0		21.26	20.95	21.07
20	1	0	16-QAM	21.26	21.15	21.06
20	1	49		21.74	21.35	21.35
20	1	99		21.34	21.15	20.99
20	50	0		20.28	19.93	20.19
20	50	24		20.31	20.01	20.11
20	50	49		20.32	20.02	20.00
20	100	0		20.23	19.98	20.06

LTE Band 71 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.47	22.36	22.45
5	1	12		22.72	22.74	22.87
5	1	24		22.47	22.37	22.50
5	12	0		21.49	21.46	21.54
5	12	6		21.55	21.47	21.55
5	12	11		21.54	21.51	21.61
5	25	0		21.56	21.52	21.63
5	1	0	16-QAM	21.70	21.68	21.94
5	1	12		22.15	21.96	22.29
5	1	24		21.74	21.70	22.00
5	12	0		20.45	20.51	20.55
5	12	6		20.52	20.44	20.55
5	12	11		20.49	20.50	20.57
5	25	0		20.53	20.41	20.53
10	1	0	QPSK	22.48	22.43	22.48
10	1	24		22.62	22.57	22.73
10	1	49		22.47	22.53	22.65
10	25	0		21.50	21.59	21.72
10	25	12		21.51	21.53	21.55
10	25	24		21.67	21.68	21.62
10	50	0		21.57	21.62	21.66
10	1	0	16-QAM	21.87	21.56	21.29
10	1	24		21.97	21.71	21.52
10	1	49		21.83	21.62	21.45
10	25	0		20.54	20.55	20.71
10	25	12		20.53	20.43	20.53
10	25	24		20.68	20.65	20.59
10	50	0		20.52	20.57	20.61

LTE Band 71 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.42	22.37	22.41
15	1	37		22.75	22.77	22.81
15	1	74		22.41	22.49	22.58
15	36	0		21.44	21.57	21.49
15	36	18		21.48	21.51	21.57
15	36	39		21.45	21.66	21.58
15	75	0		21.48	21.63	21.59
15	1	0	16-QAM	21.78	21.50	21.44
15	1	38		22.17	21.93	21.78
15	1	75		21.78	21.58	21.63
15	36	0		20.46	20.61	20.47
15	36	18		20.52	20.55	20.57
15	36	39		20.47	20.69	20.51
15	75	0		20.46	20.53	20.52
20	1	0	QPSK	22.26	22.27	22.21
20	1	49		22.54	22.56	22.62
20	1	99		22.33	22.43	22.44
20	50	0		21.28	21.60	21.33
20	50	24		21.45	21.54	21.50
20	50	49		21.36	21.68	21.36
20	100	0		21.31	21.63	21.34
20	1	0	16-QAM	21.51	21.45	21.39
20	1	49		21.83	21.76	21.82
20	1	99		21.59	21.56	21.65
20	50	0		20.28	20.57	20.26
20	50	24		20.45	20.47	20.51
20	50	49		20.38	20.65	20.34
20	100	0		20.30	20.59	20.28

11. EUT and Test Setup Photo

11.1 EUT Photos

Front side

Back side

Right Edge

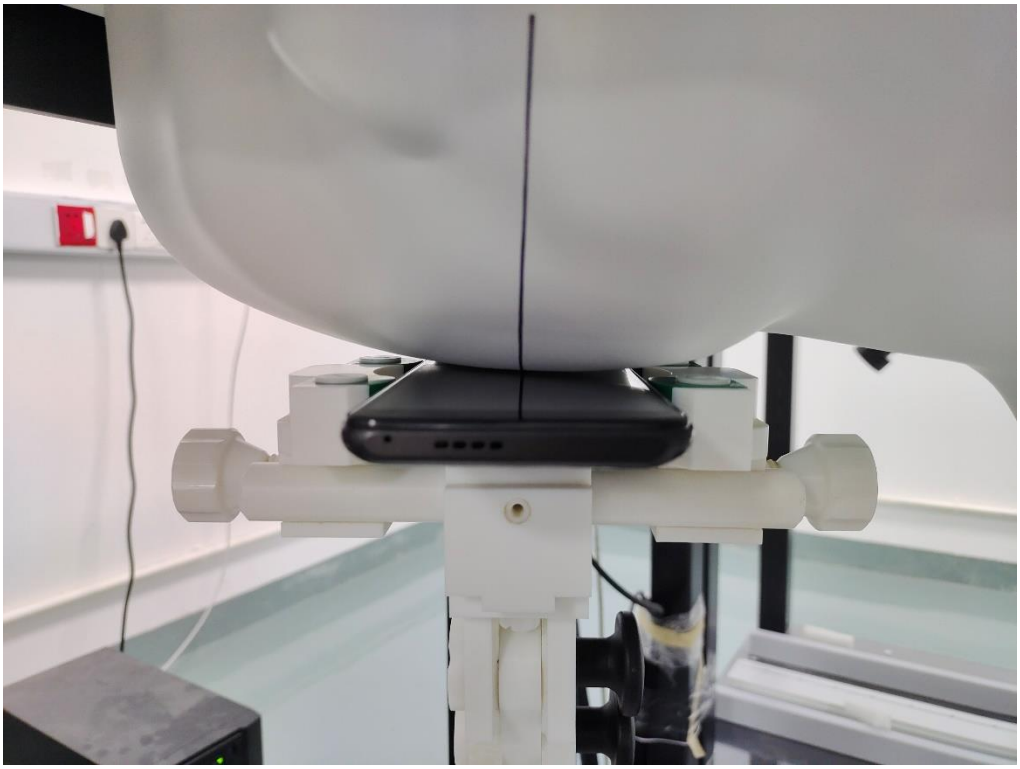
Left Edge

Top Edge

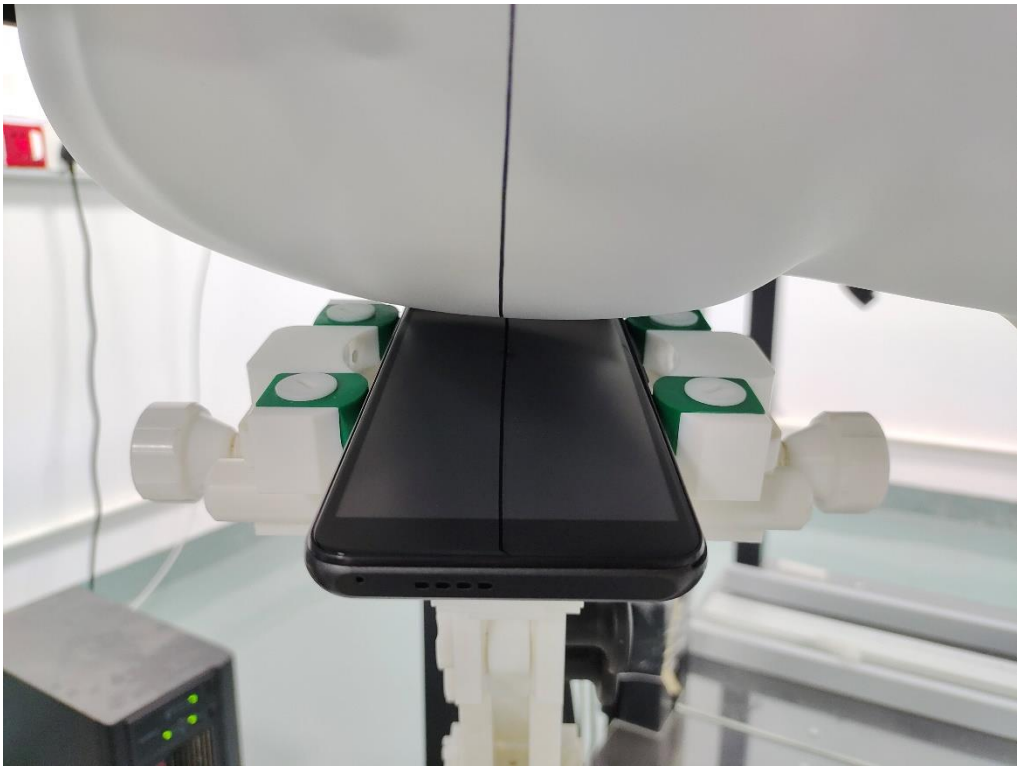
Bottom Edge

11.2 Setup Photos

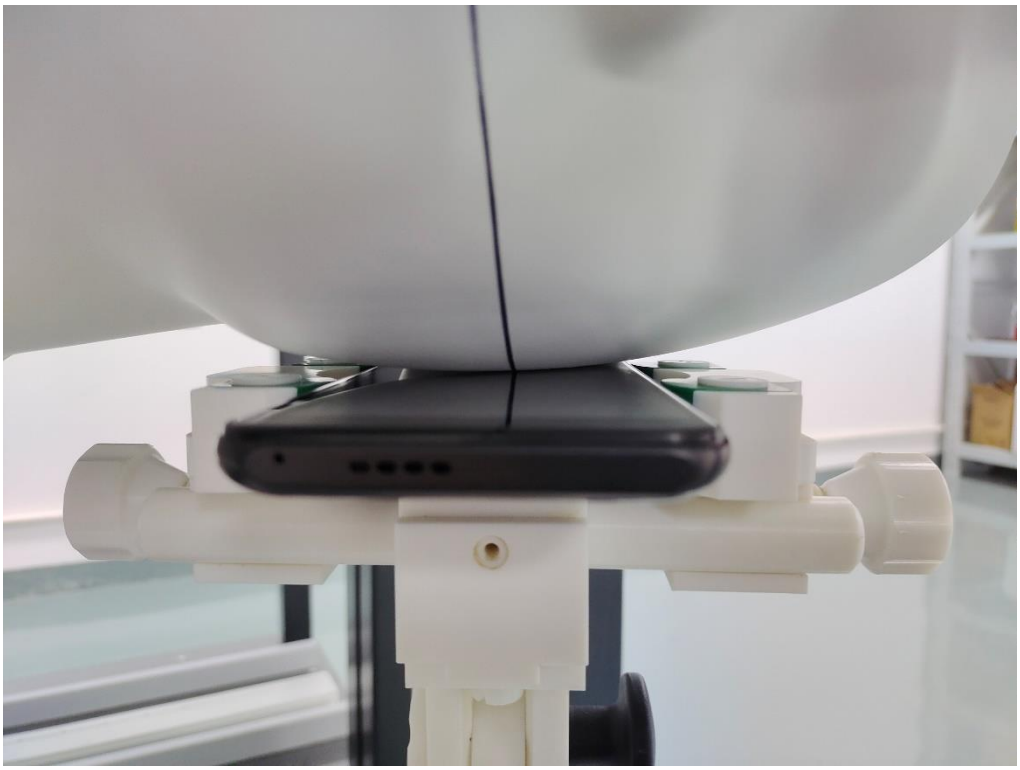
Right Touch



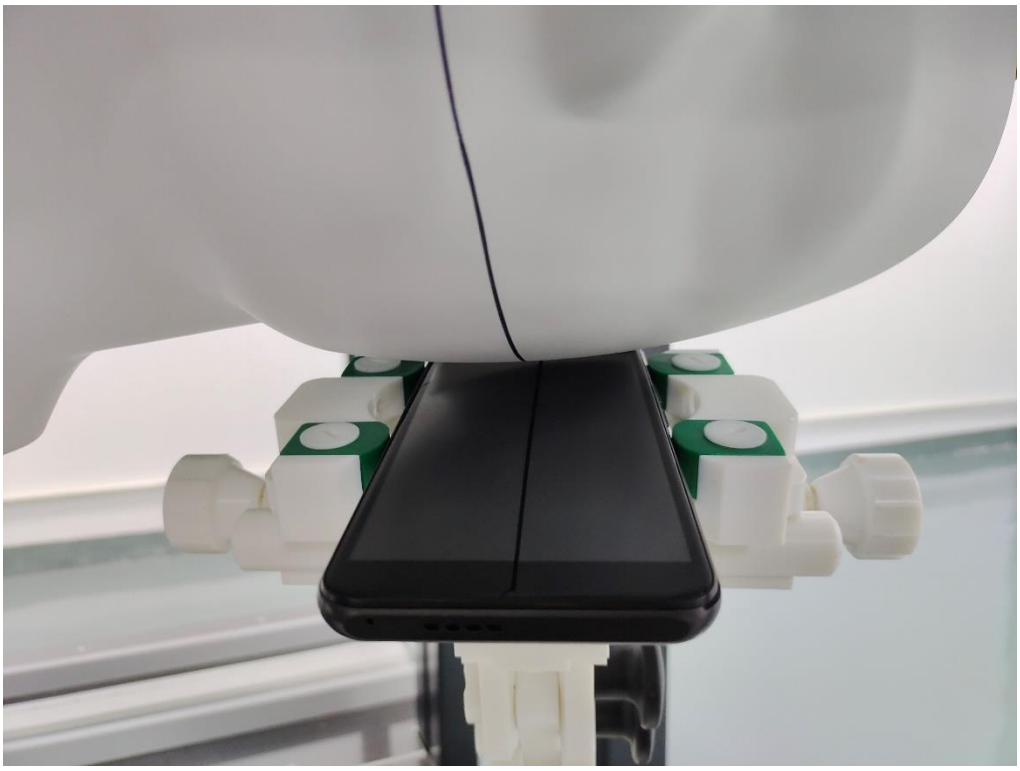
Right Tilt



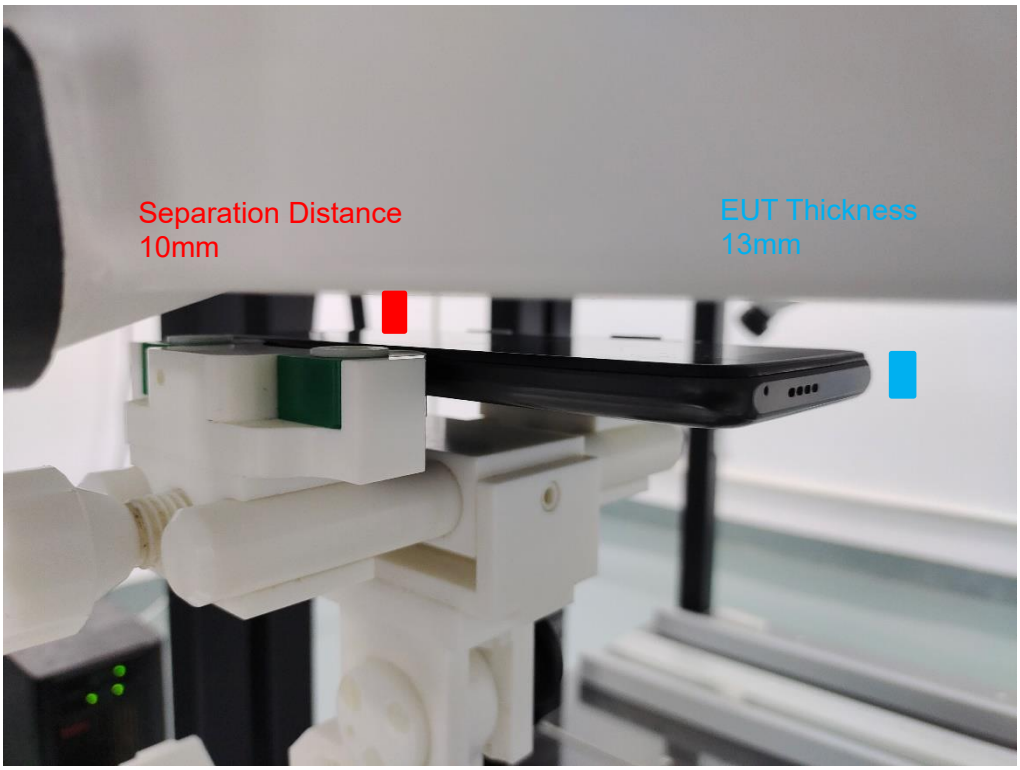
Left Touch



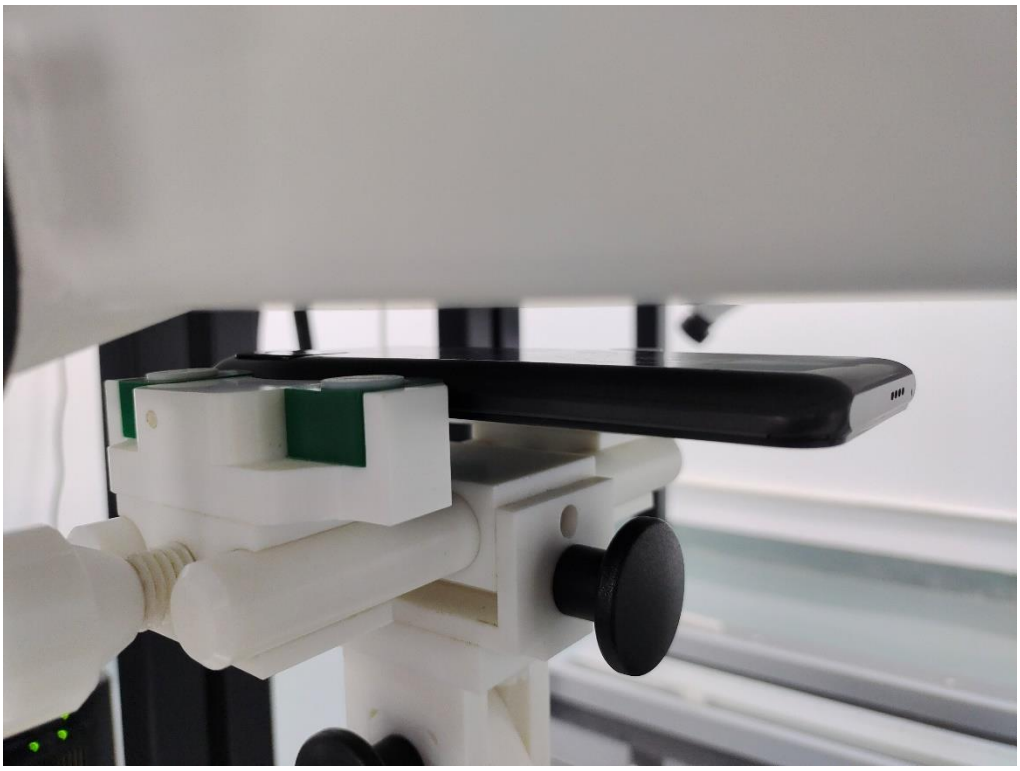
Left Tilt



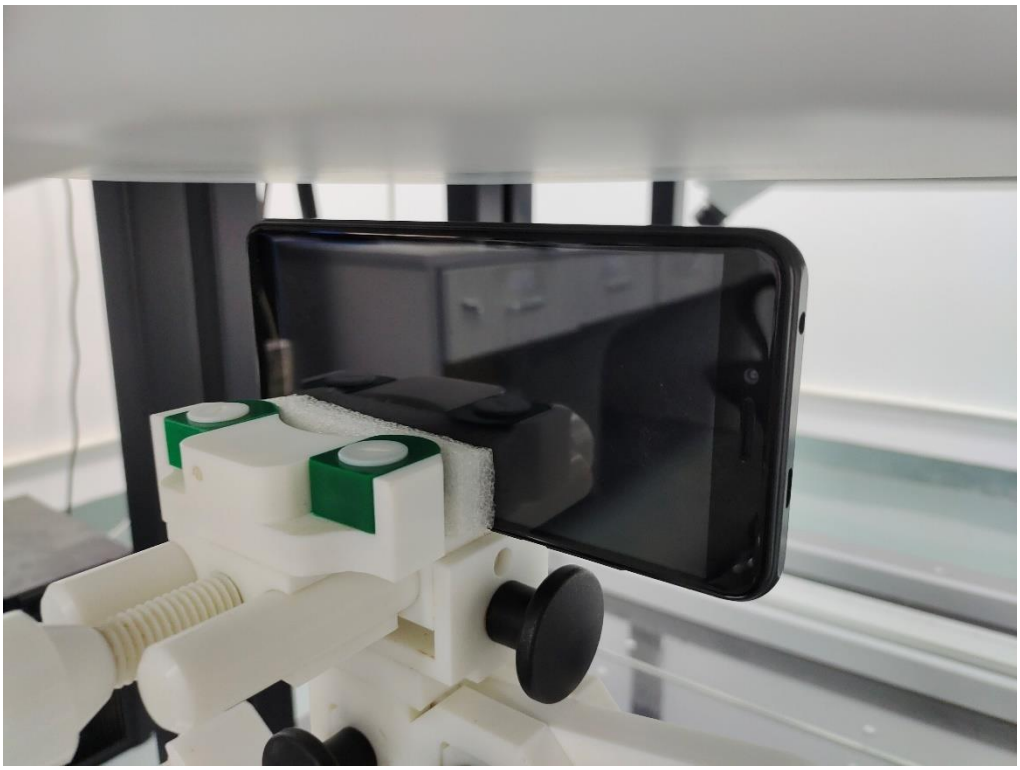
Body Front side (separation distance is 10mm)



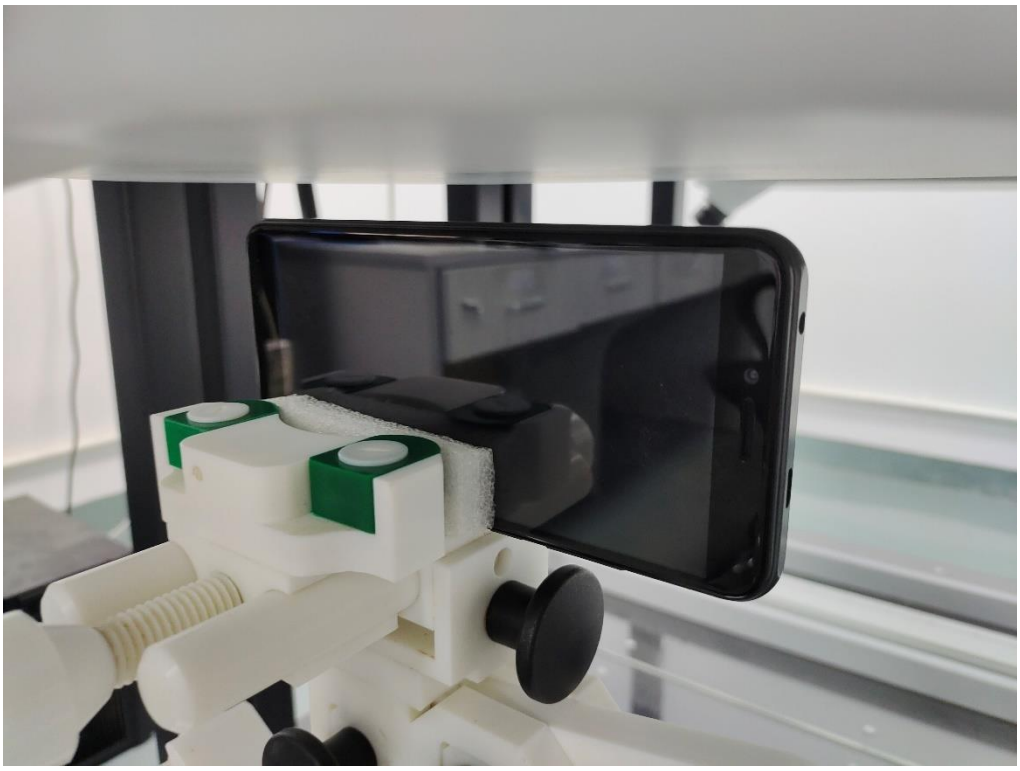
Body Back side (separation distance10mm)



Body Left side (separation distance is 10mm)

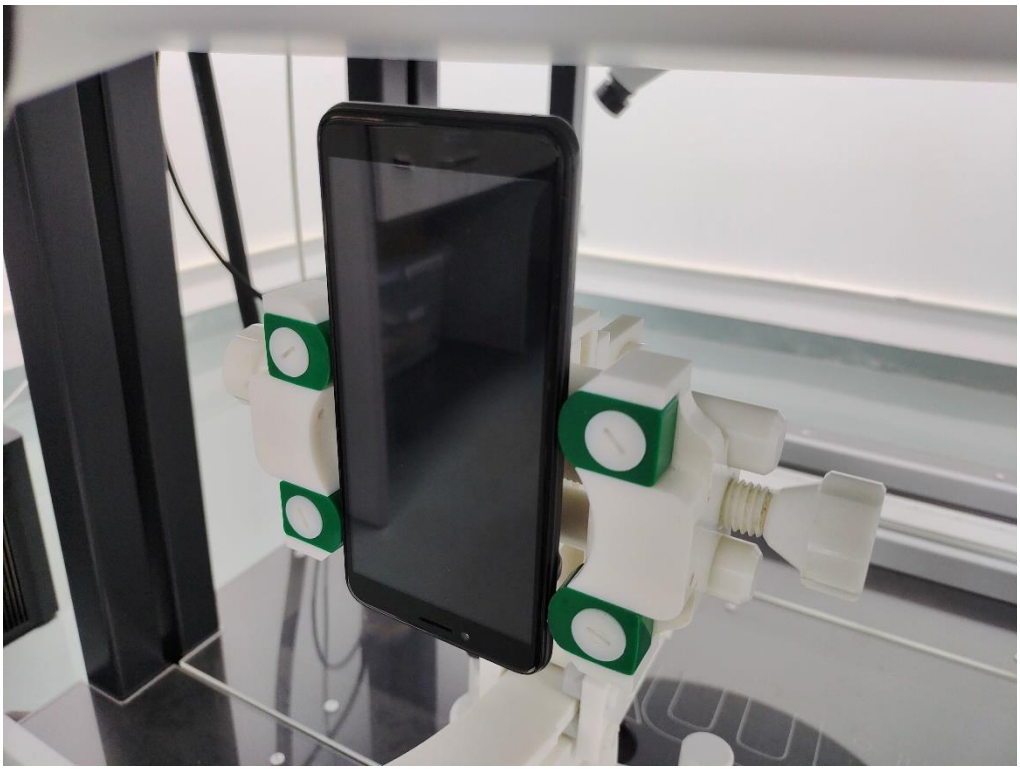


Body Right side (separation distance is 10mm)

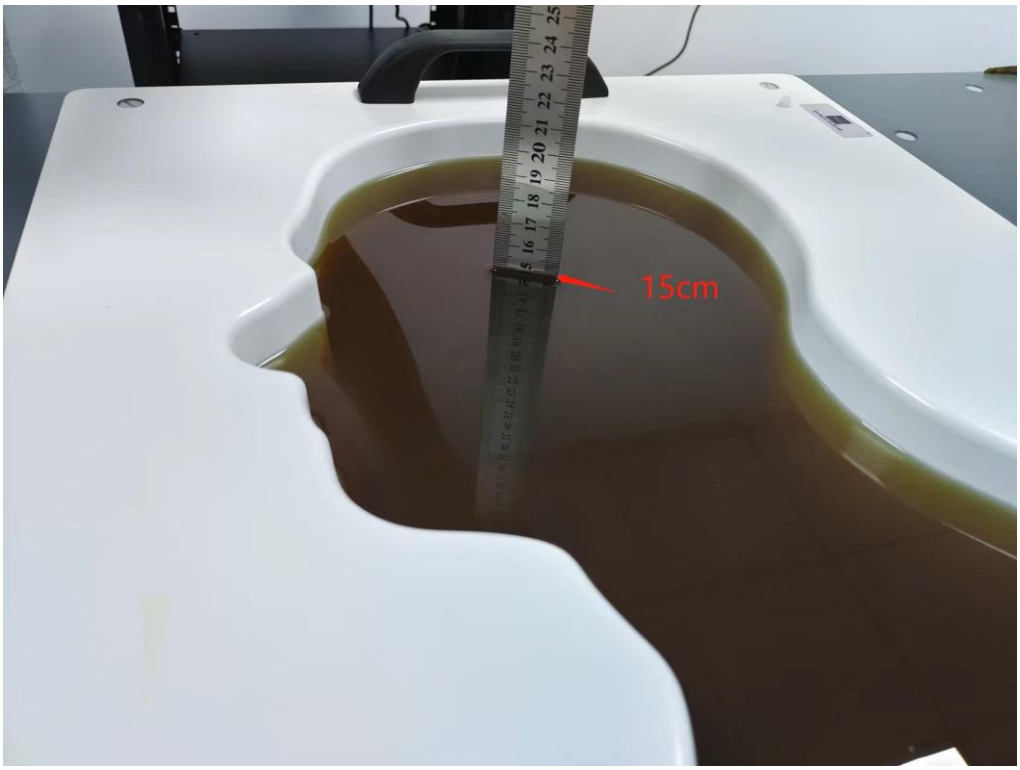


Body Top side (separation distance is 10mm)

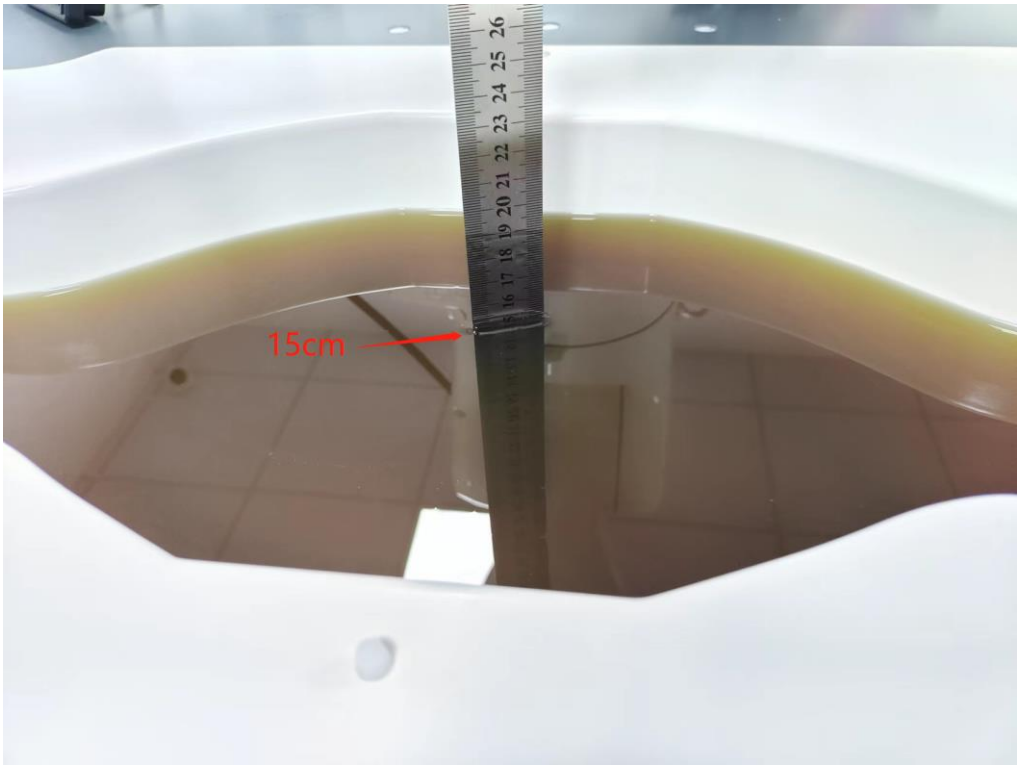
Body Bottom side (separation distance is 10mm)



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.
GSM850	GSM	Right Cheek	836.6	0.130	3.74	33.50	33.10	**0.143**	**1**
		Right Tilt	836.6	0.112	-3.50	33.50	33.10	0.123	/
		Left Cheek	836.6	0.123	-3.32	33.50	33.10	0.135	/
		Left Tilt	836.6	0.105	1.25	33.50	33.10	0.115	/
PCS 1900	GSM	Right Cheek	1909.8	0.131	-0.75	30.00	29.54	0.146	/
		Right Tilt	1909.8	0.119	-0.14	30.00	29.54	0.132	/
		Left Cheek	1909.8	0.134	1.75	30.00	29.54	**0.149**	**3**
		Left Tilt	1909.8	0.120	-1.34	30.00	29.54	0.133	/
WCDMA Band II	RMC	Right Cheek	1907.6	0.208	-3.59	24.00	23.51	**0.233**	**5**
		Right Tilt	1907.6	0.173	-0.09	24.00	23.51	0.194	/
		Left Cheek	1907.6	0.136	-2.75	24.00	23.51	0.152	/
		Left Tilt	1907.6	0.122	-1.38	24.00	23.51	0.137	/
WCDMA Band IV	RMC	Right Cheek	1752.4	0.159	2.95	23.50	23.09	**0.175**	**7**
		Right Tilt	1752.4	0.137	1.09	23.50	23.09	0.151	/
		Left Cheek	1752.4	0.078	-2.90	23.50	23.09	0.086	/
		Left Tilt	1752.4	0.066	-2.25	23.50	23.09	0.073	/
WCDMA Band V	RMC	Right Cheek	826.4	0.098	1.92	24.00	23.56	0.108	/
		Right Tilt	826.4	0.082	0.07	24.00	23.56	0.091	/
		Left Cheek	826.4	0.123	-3.38	24.00	23.56	**0.136**	**9**
		Left Tilt	826.4	0.109	-2.42	24.00	23.56	0.121	/

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
LTE Band 2	20M	QPSK	1	0	Right Cheek	1860	0.119	-1.92	23	22.59	**0.131**	**11**
			50	0	Right Cheek	1900	0.084	3.64	21.5	21.43	0.085	/
			1	0	Right Tilt	1860	0.105	1.36	23	22.59	0.115	/
			50	0	Right Tilt	1900	0.080	-2.12	21.5	21.43	0.081	/
			1	0	Left Cheek	1860	0.088	0.81	23	22.59	0.097	/
			50	0	Left Cheek	1900	0.068	0.96	21.5	21.43	0.069	/
			1	0	Left Tilt	1860	0.085	-3.91	23	22.59	0.093	/
			50	0	Left Tilt	1900	0.062	3.15	21.5	21.43	0.063	/
LTE Band 4	20M	QPSK	1	0	Right Cheek	1720	0.090	-2.75	22.5	22.26	**0.095**	**13**
			50	0	Right Cheek	1720	0.08	-2.17	21.5	21.19	0.086	/
			1	0	Right Tilt	1720	0.083	-0.27	22.5	22.26	0.088	/
			50	0	Right Tilt	1720	0.076	3.00	21.5	21.19	0.082	/
			1	0	Left Cheek	1720	0.065	0.92	22.5	22.26	0.069	/
			50	0	Left Cheek	1720	0.053	2.26	21.5	21.19	0.057	/
			1	0	Left Tilt	1720	0.061	1.71	22.5	22.26	0.064	/
			50	0	Left Tilt	1720	0.05	-0.71	21.5	21.19	0.054	/

LTE Band 5	10M	QPSK	1	0	Right Cheek	829	0.133	-3.18	23	22.82	**0.139**	**15**
			25	0	Right Cheek	836.5	0.108	1.91	22	21.77	0.114	/
			1	0	Right Tilt	829	0.116	2.68	23	22.82	0.121	/
			25	0	Right Tilt	836.5	0.103	-0.49	22	21.77	0.109	/
			1	0	Left Cheek	829	0.125	-1.02	23	22.82	0.130	/
			25	0	Left Cheek	836.5	0.105	-3.39	22	21.77	0.111	/
			1	0	Left Tilt	829	0.110	-0.08	23	22.82	0.115	/
			25	0	Left Tilt	836.5	0.098	3.97	22	21.77	0.103	/
LTE Band 12	10M	QPSK	1	0	Right Cheek	704	0.090	2.68	23	22.51	0.101	/
			25	0	Right Cheek	711	0.074	3.81	22	21.57	0.082	/
			1	0	Right Tilt	704	0.086	0.59	23	22.51	0.096	/
			25	0	Right Tilt	711	0.071	-2.98	22	21.57	0.078	/
			1	0	Left Cheek	704	0.125	-0.51	23	22.51	**0.140**	**17**
			25	0	Left Cheek	711	0.100	2.68	22	21.57	0.110	/
			1	0	Left Tilt	704	0.117	0.13	23	22.51	0.131	/
			25	0	Left Tilt	711	0.093	-0.96	22	21.57	0.103	/
LTE Band 17	10M	QPSK	1	0	Right Cheek	710	0.120	0.75	23	22.48	0.135	/
			25	0	Right Cheek	710	0.103	2.16	22	21.67	0.111	/
			1	0	Right Tilt	710	0.107	-1.73	23	22.48	0.121	/
			25	0	Right Tilt	710	0.093	-0.13	22	21.67	0.100	/
			1	0	Left Cheek	710	0.134	-3.79	23	22.48	**0.151**	**19**
			25	0	Left Cheek	710	0.110	-3.26	22	21.67	0.119	/
			1	0	Left Tilt	710	0.128	-2.75	23	22.48	0.144	/
			25	0	Left Tilt	710	0.104	1.75	22	21.67	0.112	/
LTE Band 66	20M	QPSK	1	0	Right Cheek	1720	0.102	-0.20	23	22.41	**0.117**	**21**
			50	0	Right Cheek	1720	0.088	2.19	21.5	21.29	0.092	/
			1	0	Right Tilt	1720	0.096	2.06	23	22.41	0.110	/
			50	0	Right Tilt	1720	0.082	-2.31	21.5	21.29	0.086	/
			1	0	Left Cheek	1720	0.091	3.73	23	22.41	0.104	/
			50	0	Left Cheek	1720	0.085	1.17	21.5	21.29	0.089	/
			1	0	Left Tilt	1720	0.087	0.51	23	22.41	0.100	/
			50	0	Left Tilt	1720	0.079	0.52	21.5	21.29	0.083	/
LTE Band 71	20M	QPSK	1	0	Right Cheek	688	0.093	2.77	23	22.62	0.102	/
			50	0	Right Cheek	680.5	0.078	2.83	22	21.68	0.084	/
			1	0	Right Tilt	688	0.084	-0.91	23	22.62	0.092	/
			50	0	Right Tilt	680.5	0.071	2.39	22	21.68	0.076	/
			1	0	Left Cheek	688	0.095	2.94	23	22.62	**0.104**	**23**
			50	0	Left Cheek	680.5	0.084	1.29	22	21.68	0.090	/
			1	0	Left Tilt	688	0.085	-3.38	23	22.62	0.093	/
			50	0	Left Tilt	680.5	0.080	-1.11	22	21.68	0.086	/

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.
2.4G WLAN	802.11b	Right Cheek	2412	0.227	-3.47	17.50	17.12	0.248	/
		Right Tilt	2412	0.255	-3.41	17.50	17.12	**0.278**	**25**
		Left Cheek	2412	0.183	3.56	17.50	17.12	0.200	/
		Left Tilt	2412	0.204	0.85	17.50	17.12	0.223	/
BLE	GFSK	Right Cheek	2402	0.042	-2.57	8.00	7.66	0.045	/
		Right Tilt	2402	0.047	1.90	8.00	7.66	**0.051**	**27**
		Left Cheek	2402	0.045	-0.83	8.00	7.66	0.049	/
		Left Tilt	2402	0.038	3.73	8.00	7.66	0.041	/
5.2G WLAN	802.11n-HT20	Right Cheek	5180	0.305	-3.04	13.50	12.37	0.396	/
		Right Tilt	5180	0.384	2.42	13.50	12.37	**0.498**	**29**
		Left Cheek	5180	0.176	3.28	13.50	12.37	0.228	/
		Left Tilt	5180	0.193	-3.09	13.50	12.37	0.250	/
5.3G WLAN	802.11a	Right Cheek	5260	0.499	3.93	11.50	11.37	0.514	/
		Right Tilt	5260	0.567	1.85	11.50	11.37	**0.584**	**31**
		Left Cheek	5260	0.513	3.48	11.50	11.37	0.529	/
		Left Tilt	5260	0.470	1.22	11.50	11.37	0.484	/
5.6G WLAN	802.11n-HT20	Right Cheek	5700	0.738	3.06	11.50	11.33	0.767	/
		Right Tilt	5500	0.529	3.67	11.50	10.02	0.744	/
		Right Tilt	5580	0.613	-0.15	11.50	10.43	0.784	/
		Right Tilt	5700	0.886	2.36	11.50	11.33	**0.921**	**33**
		Left Cheek	5700	0.354	-1.23	11.50	11.33	0.368	/
		Left Tilt	5700	0.397	3.34	11.50	11.33	0.413	/
5.8G WLAN	802.11ac-VHT40	Right Cheek	5755	0.821	-1.25	11.00	10.89	0.842	/
		Right Cheek	5795	0.719	2.33	11.00	10.83	0.748	/
		Right Tilt	5755	0.953	-3.71	11.00	10.89	**0.977**	**35**
		Right Tilt	5795	0.760	-2.72	11.00	10.83	0.790	/
		Left Cheek	5755	0.349	2.07	11.00	10.89	0.358	/
		Left Tilt	5755	0.484	1.99	11.00	10.89	0.496	/

Note:

1. Per KDB 447498 D04, 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.
GSM850	GPRS Data-4 Slot	Front Side	836.6	0.510	-1.94	30.00	29.63	0.555	/
		Back Side	824.2	0.519	-2.66	30.00	29.02	0.650	/
		Back Side	836.6	0.711	2.26	30.00	29.63	**0.774**	**2**
		Back Side	848.8	0.604	-0.31	30.00	29.16	0.733	/
		Left Side	836.6	0.282	2.96	30.00	29.63	0.307	/
		Right Side	836.6	0.175	-0.26	30.00	29.63	0.191	/
		Top Side	836.6	0.087	-1.69	30.00	29.63	0.095	/
		Bottom Side	836.6	0.346	-0.51	30.00	29.63	0.377	/
PCS 1900	GPRS Data-4 Slot	Front Side	1909.8	0.479	2.24	26.00	25.89	0.491	/
		Back Side	1909.8	0.567	2.79	26.00	25.89	**0.582**	**4**
		Left Side	1909.8	0.133	0.45	26.00	25.89	0.136	/
		Right Side	1909.8	0.247	1.30	26.00	25.89	0.253	/
		Bottom Side	1909.8	0.42	-0.55	26.00	25.89	0.431	/
WCDMA Band II	RMC	Front Side	1907.6	0.216	-3.27	24.00	23.51	0.242	/
		Back Side	1907.6	0.302	1.53	23.50	23.09	**0.332**	**6**
		Left Side	1907.6	0.058	3.88	24.00	23.51	0.065	/
		Right Side	1907.6	0.168	1.20	24.00	23.51	0.188	/
		Bottom Side	1907.6	0.196	-1.79	24.00	23.51	0.219	/
WCDMA Band IV	RMC	Front Side	1752.4	0.201	2.37	23.50	23.09	0.221	/
		Back Side	1752.4	0.239	-3.29	23.50	23.09	**0.263**	**8**
		Left Side	1752.4	0.062	2.86	23.50	23.09	0.068	/
		Right Side	1752.4	0.078	1.62	23.50	23.09	0.086	/
		Bottom Side	1752.4	0.090	-0.49	23.50	23.09	0.099	/
WCDMA Band V	RMC	Front Side	826.4	0.110	2.68	24.00	23.56	0.122	/
		Back Side	826.4	0.169	-2.43	24.00	23.56	**0.187**	**10**
		Left Side	826.4	0.148	2.21	24.00	23.56	0.164	/
		Right Side	826.4	0.064	2.37	24.00	23.56	0.071	/
		Bottom Side	826.4	0.084	-1.91	24.00	23.56	0.093	/

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
LTE Band 2	20M	QPSK	1	0	Front side	1860	0.196	-0.73	23	22.59	0.215	/
			50	0	Front side	1900	0.139	0.12	21.5	21.43	0.141	/
			1	0	Back Side	1860	0.239	-3.23	23	22.59	**0.263**	**12**
			50	0	Back Side	1900	0.188	0.86	21.5	21.43	0.191	/
			1	0	Left Side	1860	0.071	-3.49	23	22.59	0.078	/
			50	0	Left Side	1900	0.062	3.16	21.5	21.43	0.063	/
			1	0	Right Side	1860	0.094	3.60	23	22.59	0.103	/
			50	0	Right Side	1900	0.078	2.59	21.5	21.43	0.079	/
			1	0	Bottom Side	1860	0.123	0.02	23	22.59	0.135	/
			50	0	Bottom Side	1900	0.106	-0.43	21.5	21.43	0.108	/

LTE Band 4	20M	QPSK	1	0	Front side	1720	0.100	-2.71	22.5	22.26	0.106	/
			50	0	Front side	1720	0.082	-3.65	21.5	21.19	0.088	/
			1	0	Back Side	1720	0.233	-3.94	22.5	22.26	**0.246**	**14**
			50	0	Back Side	1720	0.197	0.86	21.5	21.19	0.212	/
			1	0	Left Side	1720	0.055	3.26	22.5	22.26	0.058	/
			50	0	Left Side	1720	0.046	-2.52	21.5	21.19	0.049	/
			1	0	Right Side	1720	0.080	2.49	22.5	22.26	0.085	/
			50	0	Right Side	1720	0.071	1.03	21.5	21.19	0.076	/
			1	0	Bottom Side	1720	0.098	-3.02	22.5	22.26	0.104	/
			50	0	Bottom Side	1720	0.076	1.98	21.5	21.19	0.082	/
LTE Band 5	10M	QPSK	1	0	Front side	829	0.151	2.71	23	22.82	**0.157**	**16**
			25	0	Front side	836.5	0.127	-2.80	22	21.77	0.134	/
			1	0	Back Side	829	0.146	1.06	23	22.82	0.152	/
			25	0	Back Side	836.5	0.122	-1.59	22	21.77	0.129	/
			1	0	Left Side	829	0.050	2.98	23	22.82	0.052	/
			25	0	Left Side	836.5	0.041	2.14	22	21.77	0.043	/
			1	0	Right Side	829	0.038	0.64	23	22.82	0.040	/
			25	0	Right Side	836.5	0.032	3.65	22	21.77	0.034	/
			1	0	Bottom Side	829	0.064	3.05	23	22.82	0.067	/
			25	0	Bottom Side	836.5	0.057	-0.41	22	21.77	0.060	/
LTE Band 12	10M	QPSK	1	0	Front side	704	0.137	-1.40	23	22.51	0.153	/
			25	0	Front side	711	0.116	1.13	22	21.57	0.128	/
			1	0	Back Side	704	0.257	-0.07	23	22.51	**0.288**	**18**
			25	0	Back Side	711	0.213	-3.15	22	21.57	0.235	/
			1	0	Left Side	704	0.100	-2.83	23	22.51	0.112	/
			25	0	Left Side	711	0.087	-3.91	22	21.57	0.096	/
			1	0	Right Side	704	0.073	2.10	23	22.51	0.082	/
			25	0	Right Side	711	0.065	0.06	22	21.57	0.072	/
			1	0	Bottom Side	704	0.069	3.93	23	22.51	0.077	/
			25	0	Bottom Side	711	0.061	-3.97	22	21.57	0.067	/
LTE Band 17	10M	QPSK	1	0	Front side	710	0.155	1.92	23	22.48	0.175	/
			25	0	Front side	710	0.134	1.08	22	21.67	0.145	/
			1	0	Back Side	710	0.289	2.01	23	22.48	**0.326**	**20**
			25	0	Back Side	710	0.257	-0.63	22	21.67	0.277	/
			1	0	Left Side	710	0.126	3.46	23	22.48	0.142	/
			25	0	Left Side	710	0.119	0.64	22	21.67	0.128	/
			1	0	Right Side	710	0.073	-0.36	23	22.48	0.082	/
			25	0	Right Side	710	0.069	-2.24	22	21.67	0.074	/
			1	0	Bottom Side	710	0.078	-1.16	23	22.48	0.088	/
			25	0	Bottom Side	710	0.070	1.00	22	21.67	0.076	/
LTE Band 66	20M	QPSK	1	0	Front side	1720	0.120	-2.70	23	22.41	0.137	/
			50	0	Front side	1720	0.099	-2.64	21.5	21.29	0.104	/
			1	0	Back Side	1720	0.200	-2.21	23	22.41	**0.229**	**22**
			50	0	Back Side	1720	0.184	0.35	21.5	21.29	0.193	/
			1	0	Left Side	1720	0.058	-3.95	23	22.41	0.066	/
			50	0	Left Side	1720	0.047	-0.79	21.5	21.29	0.049	/
			1	0	Right Side	1720	0.082	-2.39	23	22.41	0.094	/
			50	0	Right Side	1720	0.067	0.22	21.5	21.29	0.070	/
			1	0	Bottom Side	1720	0.070	3.53	23	22.41	0.080	/
			50	0	Bottom Side	1720	0.061	-2.86	21.5	21.29	0.064	/

LTE Band 66	20M	QPSK	1	0	Front side	688	0.117	-0.06	23	22.62	0.128	/
			50	0	Front side	680.5	0.091	-3.86	22	21.68	0.098	/
			1	0	Back Side	688	0.241	-2.78	23	22.62	**0.263**	**24**
			50	0	Back Side	680.5	0.208	-0.43	22	21.68	0.224	/
			1	0	Left Side	688	0.149	3.97	23	22.62	0.163	/
			50	0	Left Side	680.5	0.127	-1.90	22	21.68	0.137	/
			1	0	Right Side	688	0.095	1.97	23	22.62	0.104	/
			50	0	Right Side	680.5	0.087	2.22	22	21.68	0.094	/
			1	0	Bottom Side	688	0.052	-3.31	23	22.62	0.057	/
			50	0	Bottom Side	680.5	0.040	-3.42	22	21.68	0.043	/

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.
2.4GHz WLAN	802.11b	Front Side	2412	0.120	1.18	17.50	17.12	0.131	/
		Back Side	2412	0.083	0.00	17.50	17.12	0.091	/
		Left Side	2412	0.065	-2.58	17.50	17.12	0.071	/
		Top Side	2412	0.124	3.63	17.50	17.12	**0.135**	**26**
BT	GFSK	Front Side	2402	0.036	0.00	8.00	7.66	**0.039**	**28**
		Back Side	2402	0.035	2.96	8.00	7.66	0.038	/
		Left Side	2402	0.024	0.90	8.00	7.66	0.026	/
		Top Side	2402	0.021	-1.28	8.00	7.66	0.023	/
5.2GHz WLAN	802.11n-HT20	Front Side	5180	0.039	3.72	13.50	12.37	0.051	/
		Back Side	5180	0.150	2.25	13.50	12.37	0.195	/
		Left Side	5180	0.186	-2.56	13.50	12.37	**0.241**	**30**
		Top Side	5180	0.122	-0.95	13.50	12.37	0.158	/
5.3GHz WLAN	802.11a	Front Side	5260	0.058	-2.95	11.50	11.37	0.060	/
		Back Side	5260	0.149	0.87	11.50	11.37	**0.154**	**32**
		Left Side	5260	0.133	3.48	11.50	11.37	0.137	/
		Top Side	5260	0.094	3.40	11.50	11.37	0.097	/
5.6GHz WLAN	802.11n-HT20	Front Side	5700	0.090	3.14	11.50	11.33	0.094	/
		Back Side	5700	0.352	-3.74	11.50	11.33	**0.366**	**34**
		Left Side	5700	0.297	-3.02	11.50	11.33	0.309	/
		Top Side	5700	0.271	1.33	11.50	11.33	0.282	/
5.8GHz WLAN	802.11ac-VHT40	Front Side	5755	0.073	0.14	11.00	10.89	0.075	/
		Back Side	5755	0.331	1.28	11.00	10.89	0.339	/
		Left Side	5755	0.360	0.09	11.00	10.89	**0.369**	**36**
		Top Side	5755	0.313	-1.97	11.00	10.89	0.321	/

Note:

1. The test separation of all above table is 5mm.
2. Per KDB 447498 D04, 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.

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.
5.6G WLAN	802.11n-HT20	Right Tilt	5700	0.849	-0.19	11.50	11.33	0.882	-
5.8G WLAN	802.11ac-VHT40	Right Tilt	5755	0.819	3.25	11.00	10.89	0.840	
		Right Tilt	5755	0.939	-1.37	11.00	10.89	0.963	

Repeated SAR measurement

Band	Mode	Test Position	Freq.	Original Measured SAR 1g(W/kg)	1 st Repeated SAR 1g	Ratio
5.6G WLAN	802.11n-HT20	Right Tilt	5700	0.886	0.849	1.044
5.8G WLAN	802.11ac-VHT40	Right Tilt	5755	0.821	0.819	1.003
		Right Tilt	5755	0.953	0.939	1.015

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.

Simultaneous Multi-band Transmission Evaluation:
Application Simultaneous Transmission information:

Position	Simultaneous State
Head	1. GSM + 2.4GHz WLAN/5G WLAN
	2. GSM + Bluetooth
	3. WCDMA + 2.4GHz WLAN/5G WLAN
	4. WCDMA + Bluetooth
	5. LTE + 2.4GHz WLAN/5G WLAN
	6. LTE + Bluetooth
Body	1. GSM + 2.4GHz WLAN/5G WLAN
	2. GSM + Bluetooth
	3. WCDMA + 2.4GHz WLAN/5G WLAN
	4. WCDMA + Bluetooth
	5. LTE + 2.4GHz WLAN/5G WLAN
	6. LTE + Bluetooth

NOTE:
1. Bluetooth and WLAN can't simultaneous transmission at the same time.
2. For simultaneous transmission at head and body exposure position, 2 transmitters simultaneous transmission was the worst state.
3. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
4. KDB 447498 Appendix E, 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:
SARest =1.6 · Pant / Pth [W/kg].
Pant is maximum time-averaged power or effective radiated power (ERP), whichever is greater, and Pth is defined in Formula KDB 447498 (B.2). 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.

Simultaneous Mode	Position	Mode	Max. 1-g SAR (W/kg)	1-g Sum SAR (W/kg)
GSM + 2.4G WLAN	Head	GSM	0.149	0.427
		2.4G WLAN	0.278	
	Body	GSM	0.774	0.909
		2.4G WLAN	0.135	
GSM + Bluetooth	Head	GSM	0.149	0.200
		Bluetooth	0.051	
	Body	GSM	0.774	0.813
		Bluetooth	0.039	
GSM + 5G WLAN	Head	GSM	0.149	1.126
		5G WLAN	0.977	
	Body	GSM	0.774	1.143
		5G WLAN	0.369	
WCDMA + 2.4G WLAN	Head	WCDMA	0.233	0.511
		2.4G WLAN	0.278	
	Body	WCDMA	0.582	0.717
		2.4G WLAN	0.135	
WCDMA + Bluetooth	Head	WCDMA	0.233	0.284
		Bluetooth	0.051	
	Body	WCDMA	0.582	0.621
		Bluetooth	0.039	
WCDMA + 5G WLAN	Head	WCDMA	0.233	1.210
		5G WLAN	0.977	
	Body	WCDMA	0.582	0.951
		5G WLAN	0.369	
LTE + 2.4G WLAN	Head	LTE	0.151	0.429
		2.4G WLAN	0.278	
	Body	LTE	0.326	0.461
		2.4G WLAN	0.135	
LTE + Bluetooth	Head	LTE	0.151	0.202
		Bluetooth	0.051	
	Body	LTE	0.326	0.365
		Bluetooth	0.039	
LTE + 5G WLAN	Head	LTE	0.151	1.128
		5G WLAN	0.977	
	Body	LTE	0.326	0.695
		5G WLAN	0.369	

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
750MHz Dipole	MVG	DIP0G750	SN 06/22 DIP0G750-638	2022.02.11	2025.02.10
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
1900MHz Dipole	MVG	DIP1G900	SN 06/22 DIP1G900-641	2022.02.11	2025.02.10
2450MHz Dipole	MVG	DIP2G450	SN 06/22 DIP2G450-645	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	2023.02.10	2024.02.09
Liquid Calibration Kit	MVG	OCPG 87	SN 06/22 OCPG87	2023.02.10	2024.02.09
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 holder	MVG	LSH 36	SN 06/22 LSH 38	N/A	N/A
Directional coupler	SHW	SHWDCP	202203280013	N/A	N/A
Network Analyzer	Agilent	E5071C	MY46418070	2022.03.28	2023.03.27
Multi Meter	Keithley	DMM6500	DMM6500	2022.05.05	2023.05.04
Signal Generator	Keithley	N5182B	MY59100717	2022.04.29	2023.04.28
Wireless Communication Test Set	R&S	CMW500	137737	2022.04.29	2023.04.28
Power Sensor	R&S	Z11	116184	2022.03.28	2023.03.27
Temperature hygrometer	N/A	ST-W2318	N/A	2022.05.05	2023.05.04
Thermograph	N/A	TP101	N/A	2022.05.05	2023.05.04

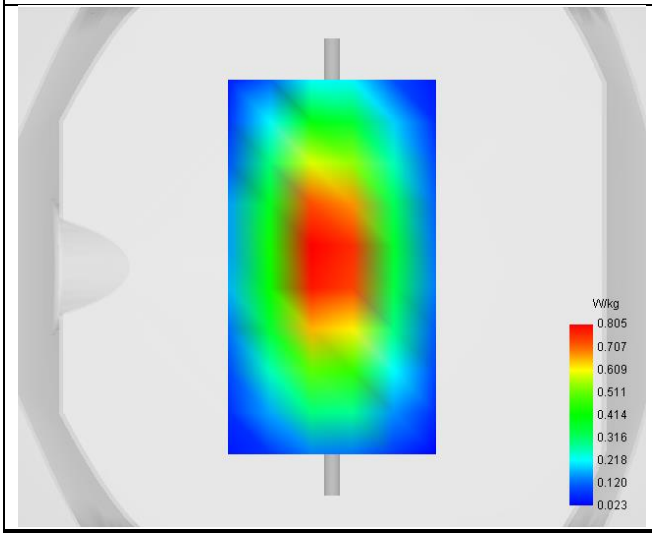
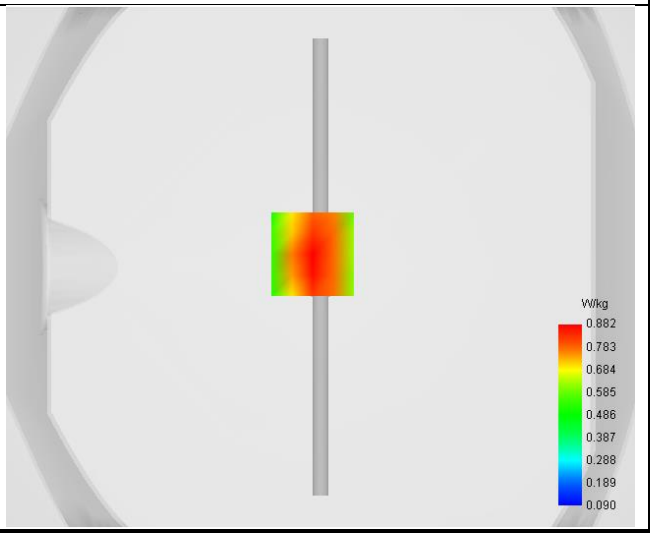
Appendix A. System Validation Plots

System Performance Check Data (750MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-03-29

Experimental conditions.

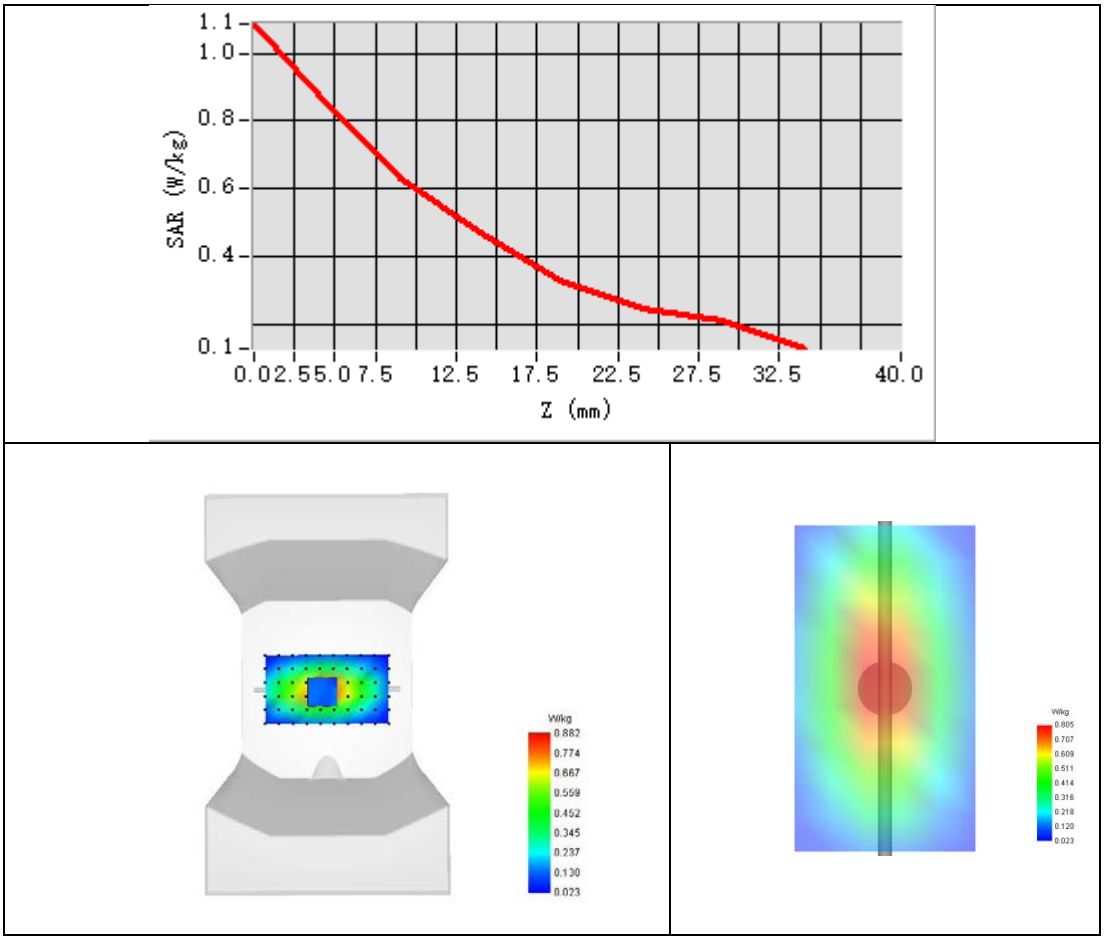
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW
Frequency (MHz)	750.000
Relative permittivity	42.48
Conductivity (S/m)	0.90
Probe	SN 04/22 EPGO364
ConvF	1.69
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=9.00 ; SAR Peak: 1.52 W/kg

SAR 10g (W/Kg)	0.588
SAR 1g (W/Kg)	0.871

Z Axis Scan

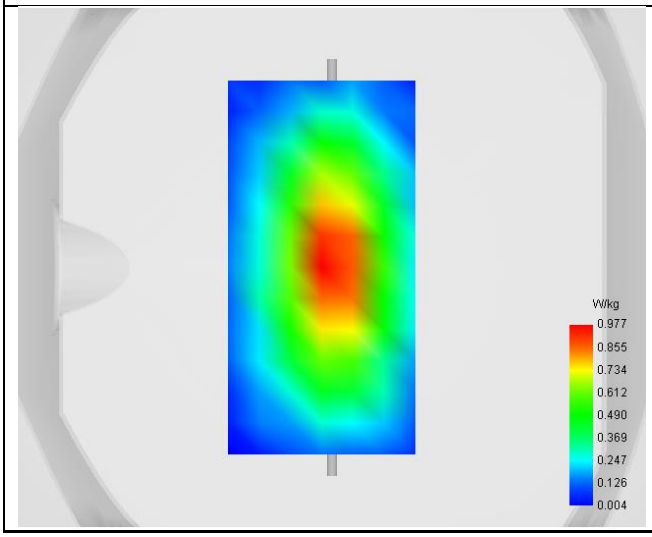
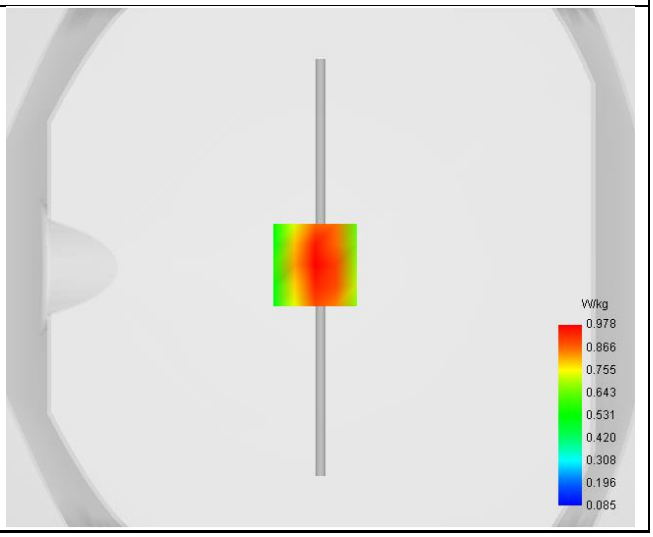

1.1
1.0
0.8
0.6
0.4
0.1
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
0.882
0.774
0.667
0.559
0.452
0.345
0.237
0.130
0.023

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: 2023-03-30

Experimental conditions.

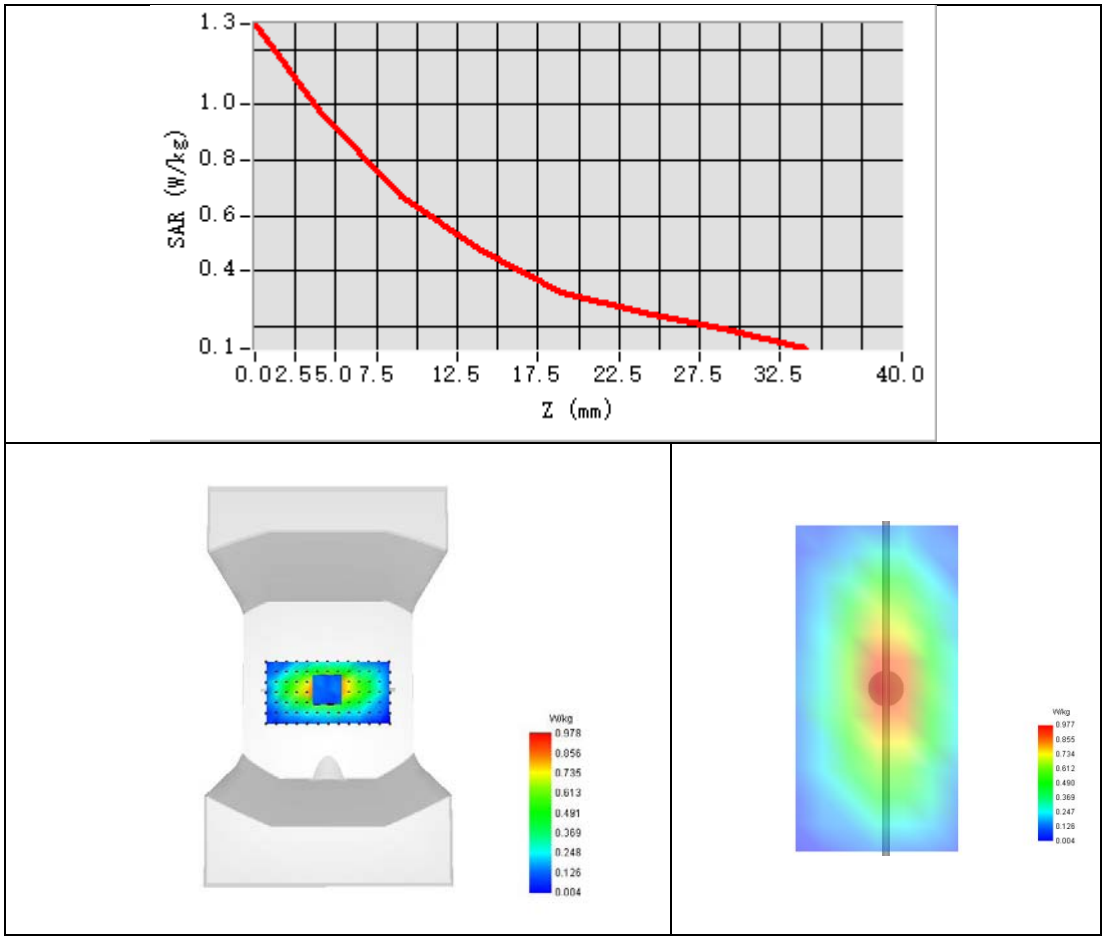
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW
Frequency (MHz)	835.000
Relative permittivity	41.05
Conductivity (S/m)	0.86
Probe	SN 04/22 EPGO364
ConvF	1.72
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=1.00 ; SAR Peak: 1.37 W/kg

SAR 10g (W/Kg)	0.613
SAR 1g (W/Kg)	0.935

Z Axis Scan

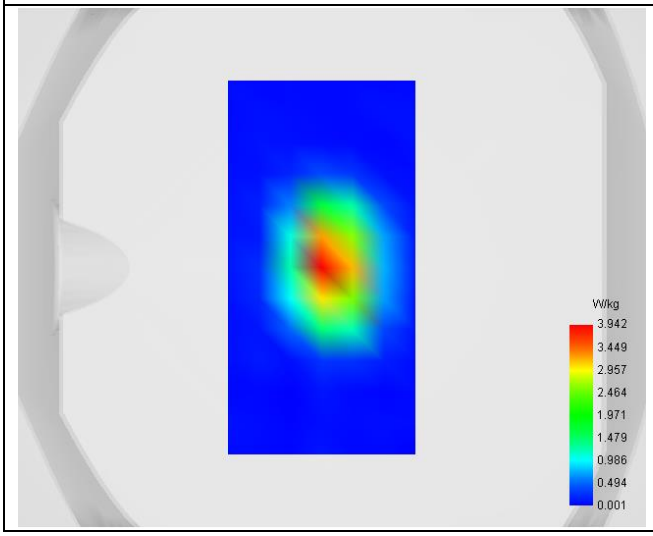
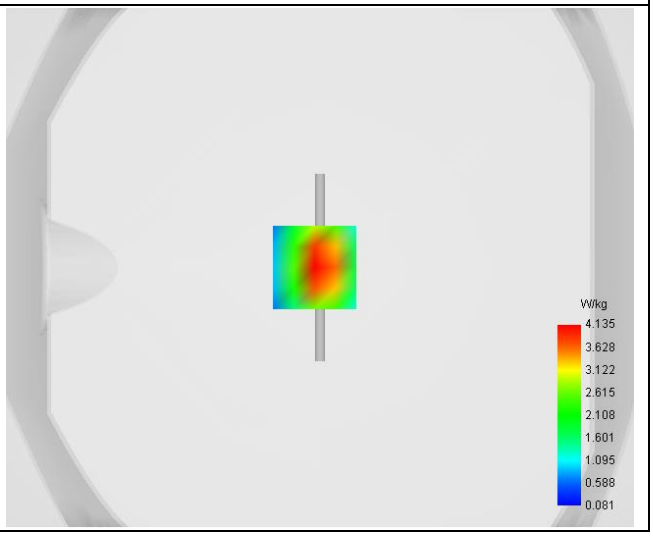

1.3
1.0
0.8
0.6
0.4
0.1
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
0.978
0.856
0.735
0.613
0.491
0.369
0.248
0.126
0.004

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: 2023-04-01

Experimental conditions.

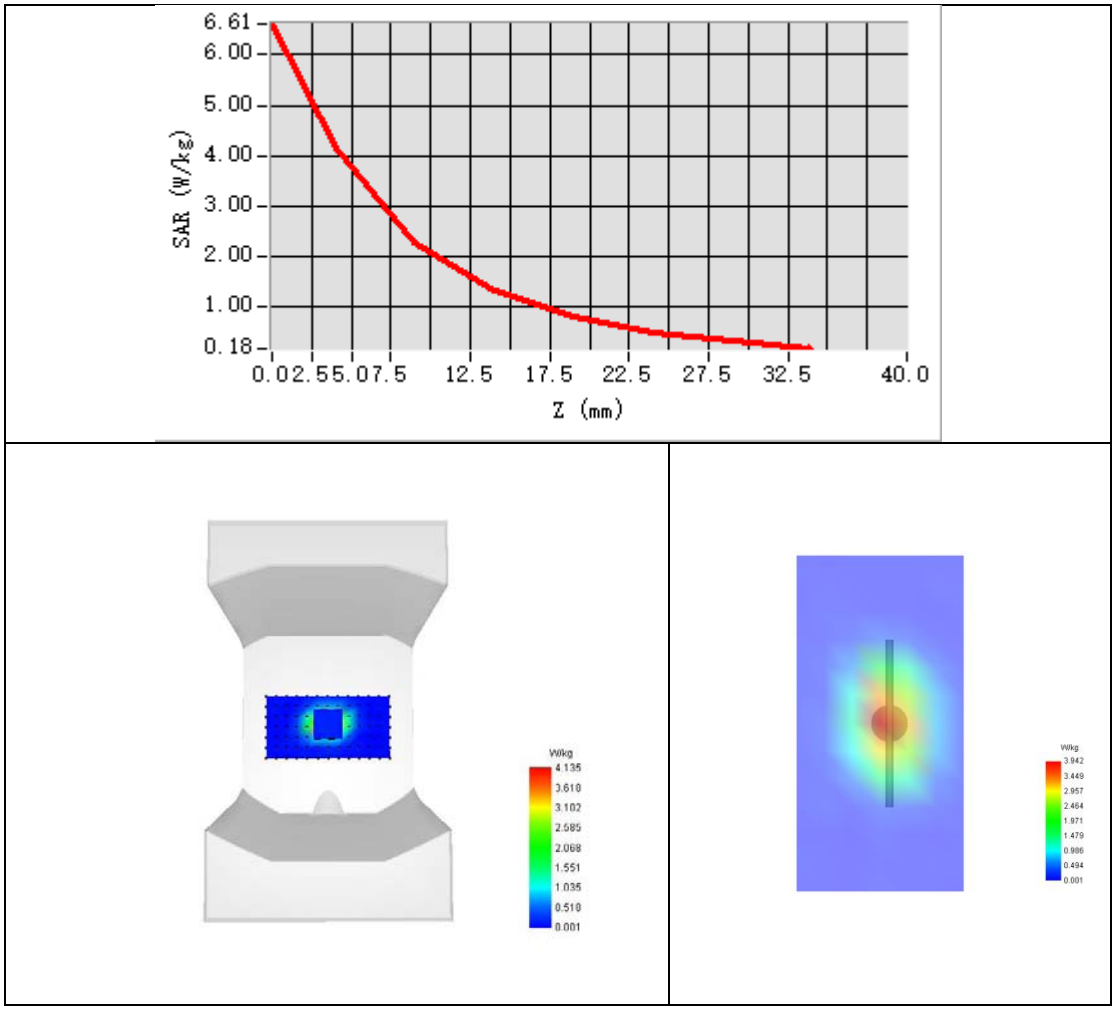
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW
Frequency (MHz)	1800.000
Relative permittivity	40.60
Conductivity (S/m)	1.45
Probe	SN 04/22 EPGO364
ConvF	1.95
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=-2.00, Y=0.00 ; SAR Peak: 6.70 W/kg

SAR 10g (W/Kg)	2.052
SAR 1g (W/Kg)	3.968

Z Axis Scan

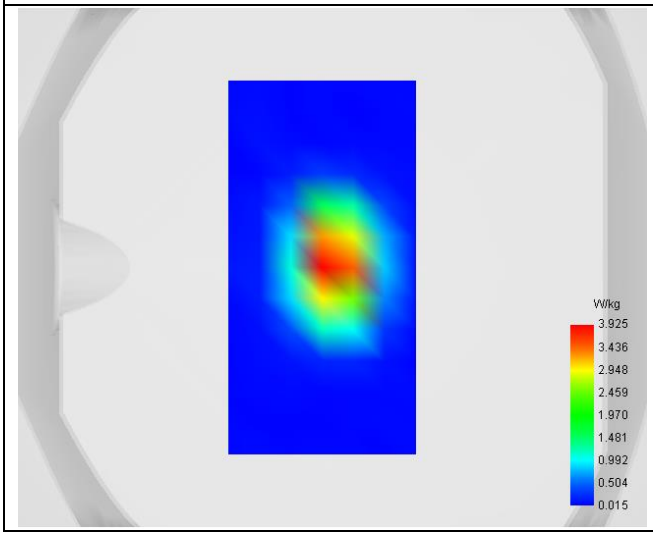
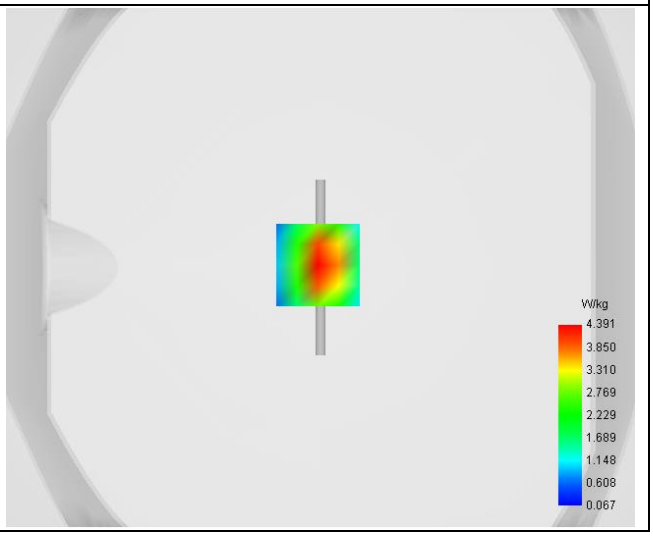

6.61
6.00
5.00
4.00
3.00
2.00
1.00
0.18
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
4.135
3.610
3.102
2.585
2.068
1.551
1.035
0.510
0.001
W/kg
3.942
3.449
2.957
2.464
1.971
1.479
0.986
0.494
0.001

System Performance Check Data (1900MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-04-03

Experimental conditions.

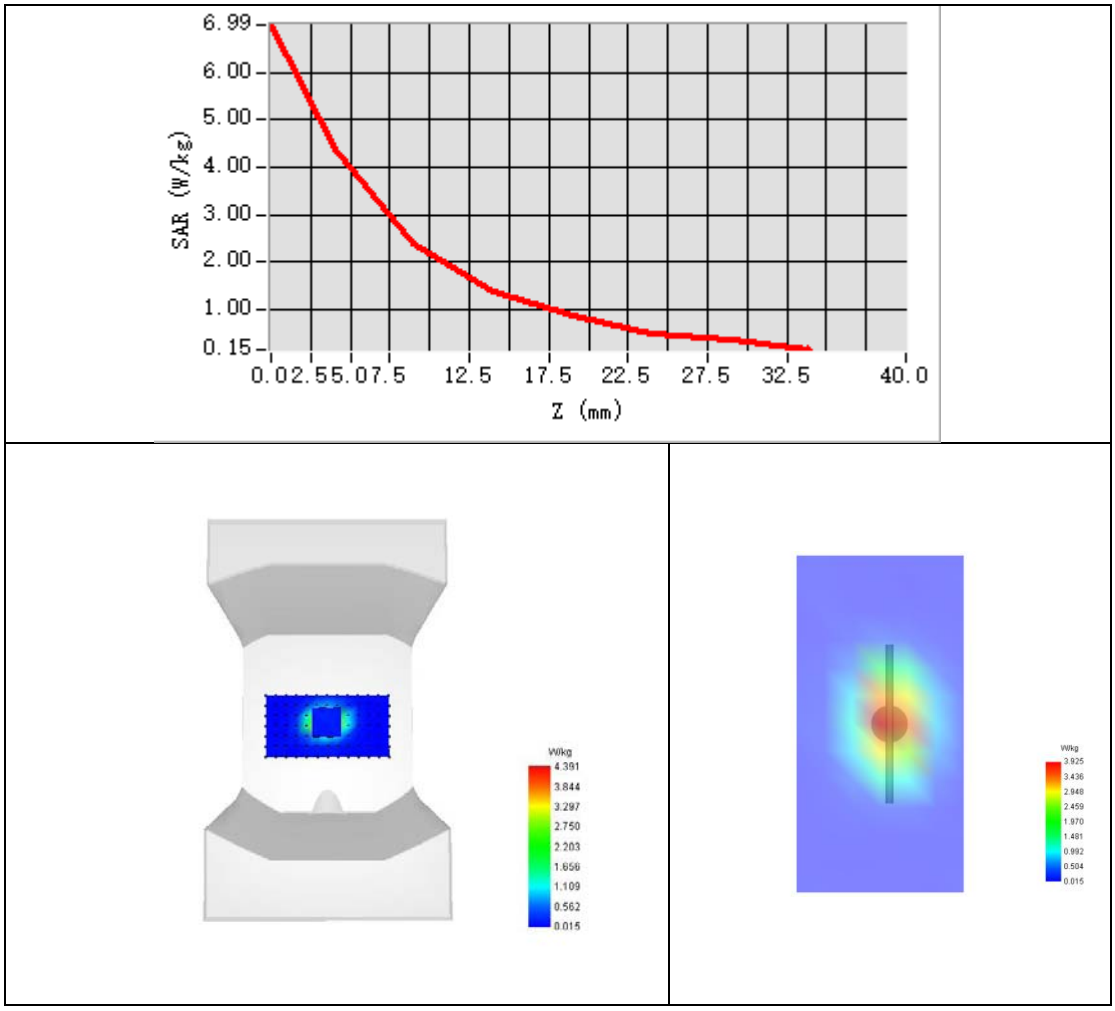
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW
Frequency (MHz)	1900.000
Relative permittivity	41.04
Conductivity (S/m)	1.39
Probe	SN 04/22 EPGO364
ConvF	2.25
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=-1.00, Y=1.00 ; SAR Peak: 7.14 W/kg

SAR 10g (W/Kg)	2.125
SAR 1g (W/Kg)	4.196

Z Axis Scan

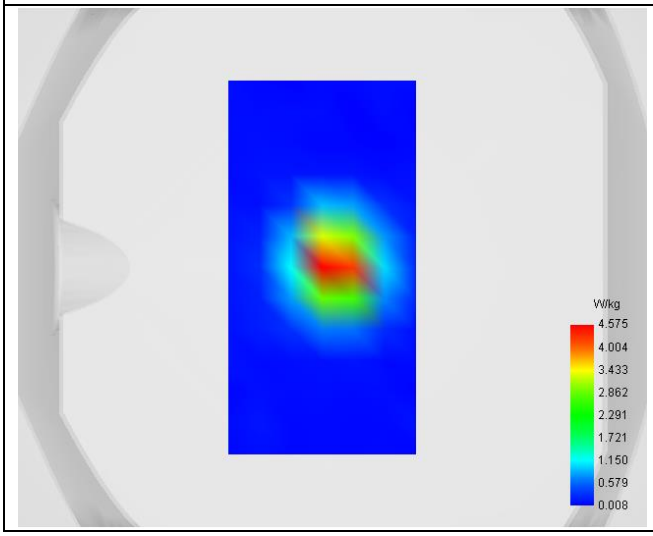
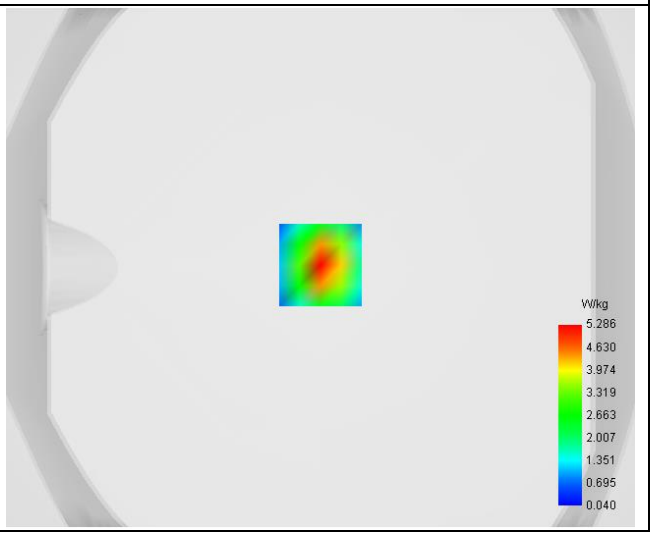

6.99
6.00
5.00
4.00
3.00
2.00
1.00
0.15
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
4.391
3.844
3.297
2.750
2.203
1.656
1.109
0.562
0.015
W/kg
3.925
3.436
2.948
2.459
1.970
1.481
0.992
0.504
0.015

System Performance Check Data (2450MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-04-06

Experimental conditions.

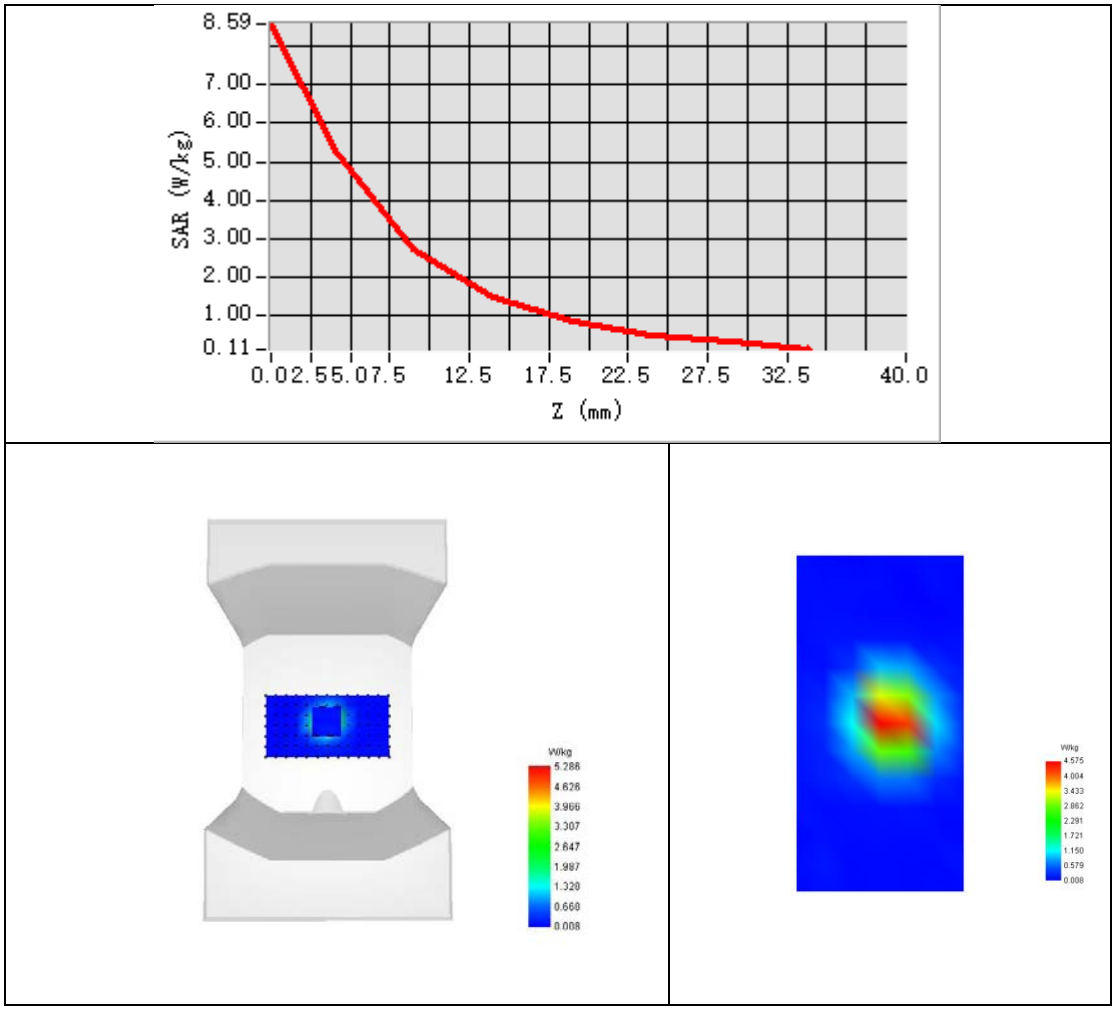
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW
Frequency (MHz)	2450.000
Relative permittivity	40.03
Conductivity (S/m)	1.83
Probe	SN 04/22 EPGO364
ConvF	2.33
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=0.00, Y=1.00 ; SAR Peak: 8.59 W/kg

SAR 10g (W/Kg)	2.310
SAR 1g (W/Kg)	4.909

Z Axis Scan

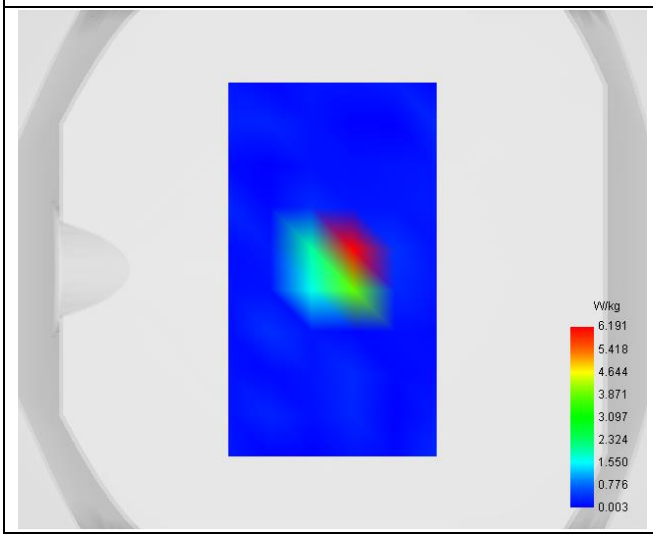
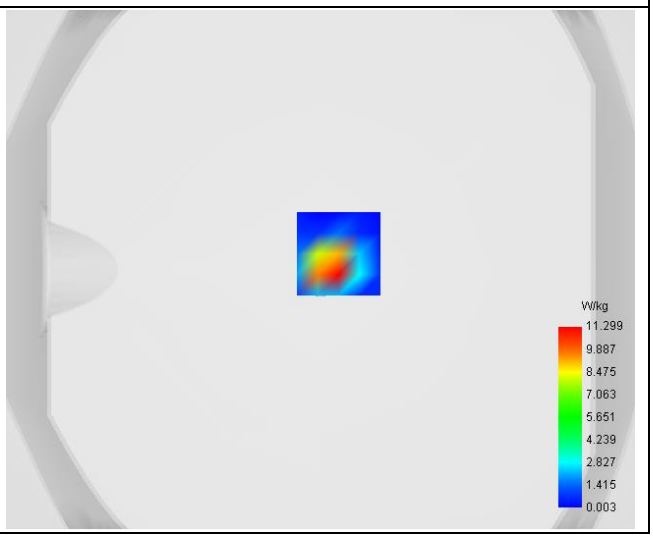

8.59
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.11
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
5.286
4.626
3.966
3.307
2.647
1.987
1.328
0.668
0.008
W/kg
4.575
4.004
3.433
2.862
2.291
1.721
1.150
0.579
0.008

System Performance Check Data (5200MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-04-06

Experimental conditions.

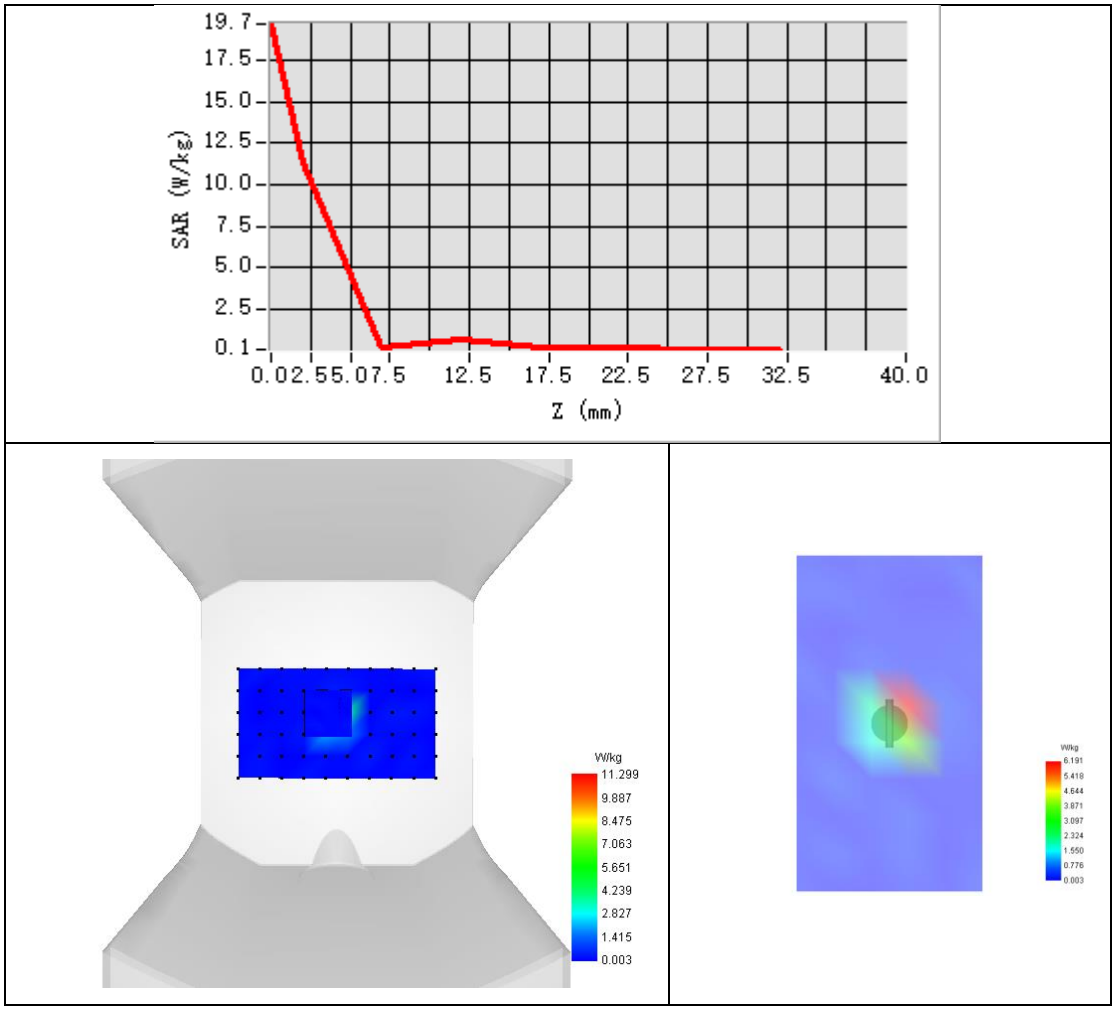
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW
Frequency (MHz)	5200.000
Relative permittivity	36.82
Conductivity (S/m)	4.64
Probe	SN 04/22 EPGO364
ConvF	1.95
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=7.00, Y=6.00 ; SAR Peak: 21.79 W/kg

SAR 10g (W/Kg)	2.135
SAR 1g (W/Kg)	8.071

Z Axis Scan

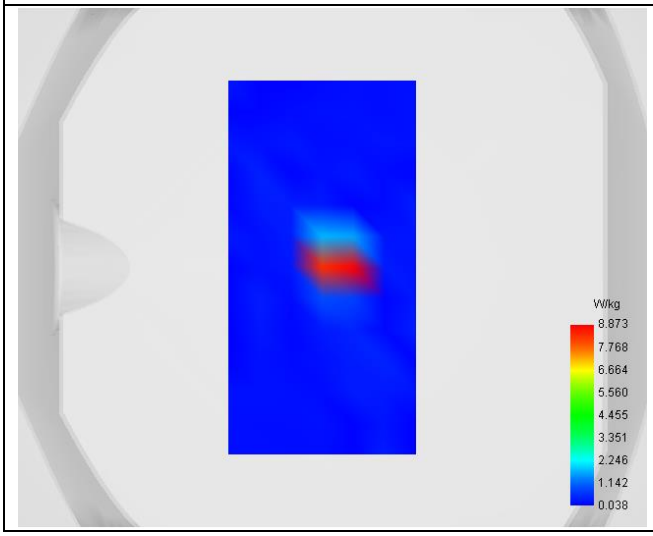
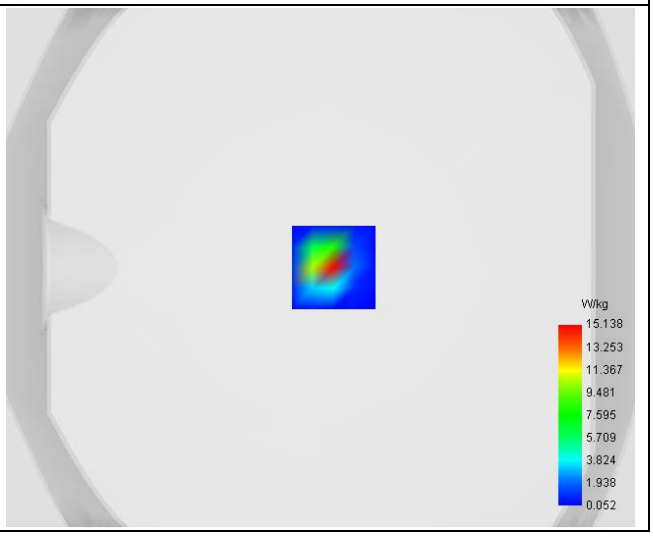

19.7
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.1
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
11.299
9.887
8.475
7.063
5.651
4.239
2.827
1.415
0.003

System Performance Check Data (5300MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-04-07

Experimental conditions.

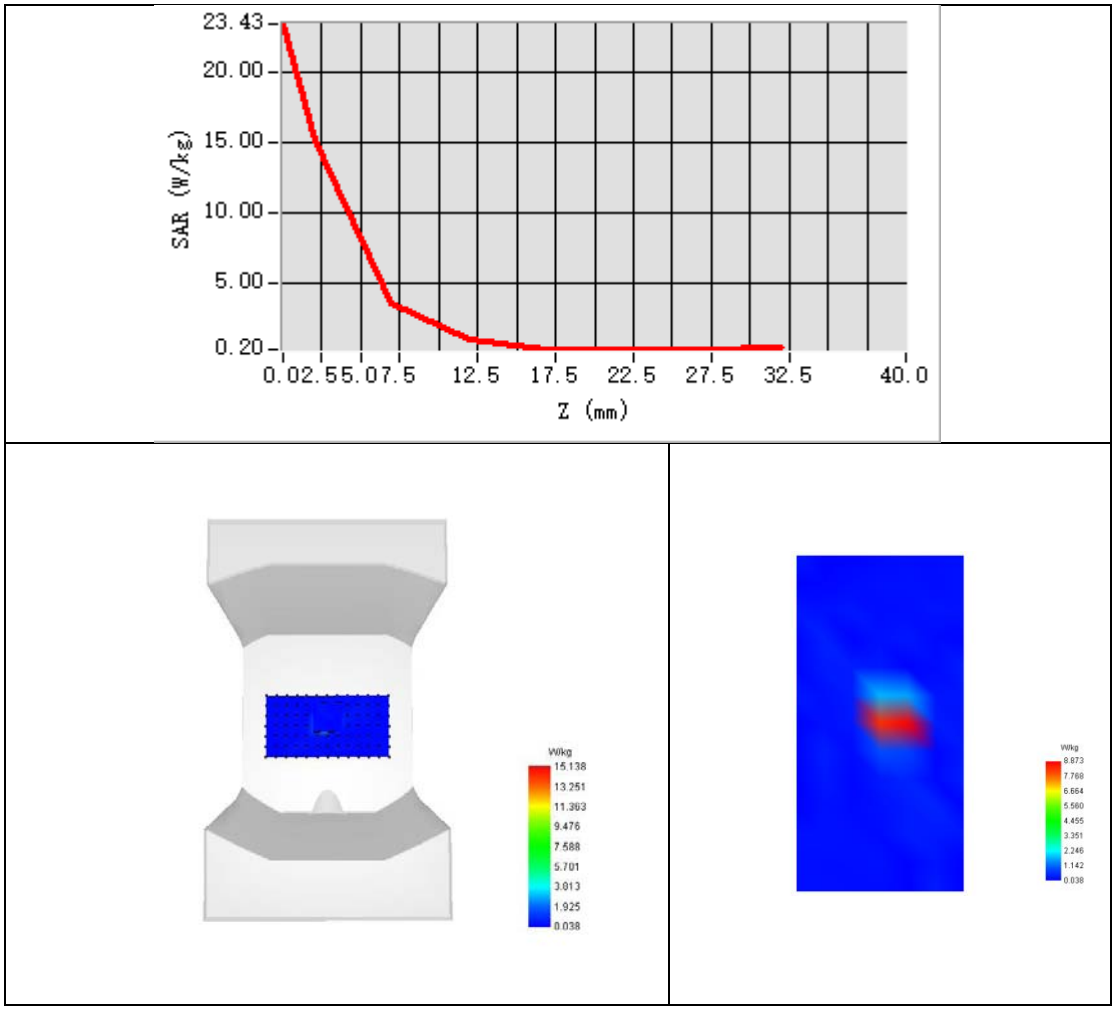
Phantom	Validation plane
Device Position	Dipole
Band	CW5300
Channels	Middle
Signal	CW
Frequency (MHz)	5300.000
Relative permittivity	36.84
Conductivity (S/m)	4.90
Probe	SN 04/22 EPGO364
ConvF	1.85
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=5.00, Y=0.00 ; SAR Peak: 25.96 W/kg

SAR 10g (W/Kg)	2.186
SAR 1g (W/Kg)	8.820

Z Axis Scan

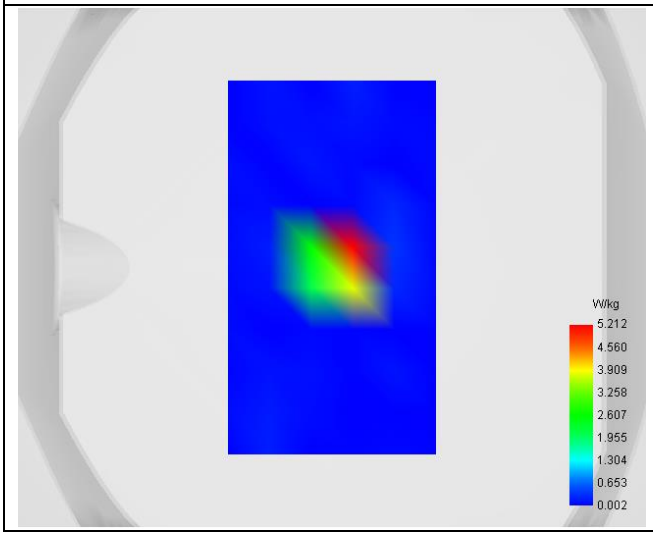
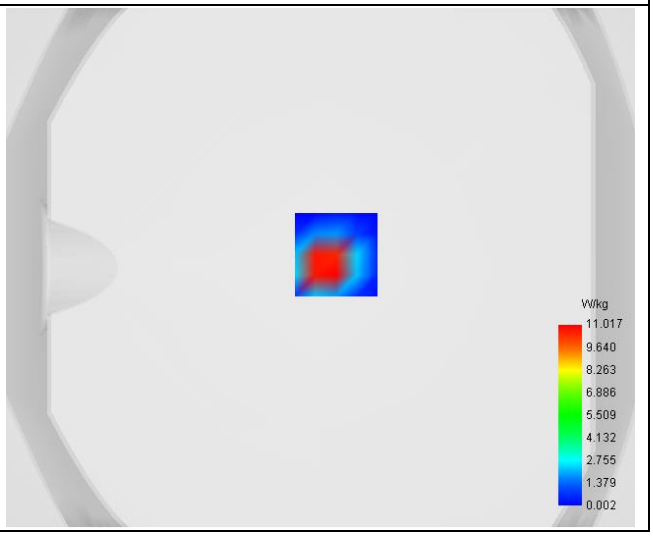

23.43
20.00
15.00
10.00
5.00
0.20
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
15.138
13.251
11.363
9.476
7.588
5.701
3.813
1.925
0.038
W/kg
8.873
7.768
6.664
5.560
4.455
3.351
2.246
1.142
0.038

System Performance Check Data (5600MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-04-07

Experimental conditions.

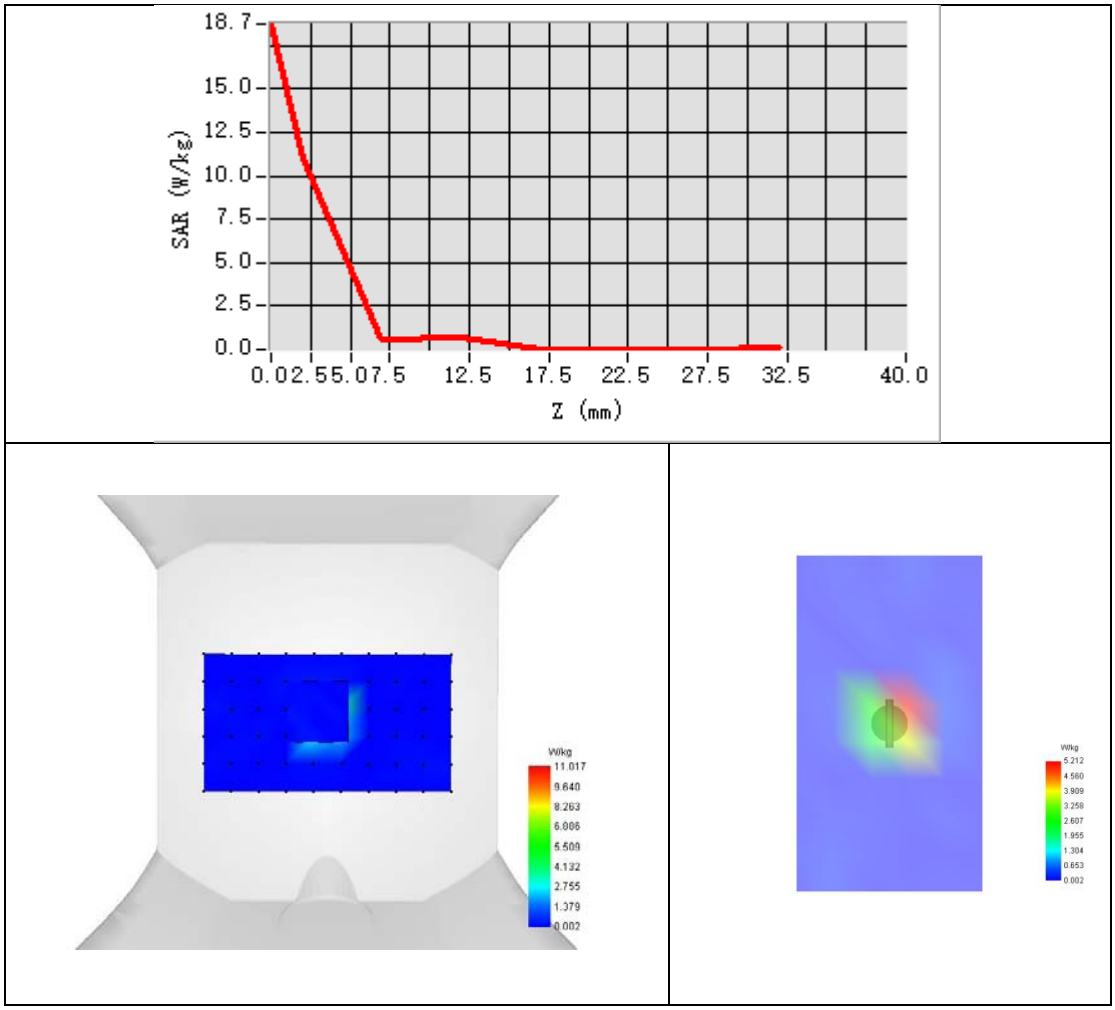
Phantom	Validation plane
Device Position	Dipole
Band	CW5600
Channels	Middle
Signal	CW
Frequency (MHz)	5600.000
Relative permittivity	37.19
Conductivity (S/m)	4.91
Probe	SN 04/22 EPGO364
ConvF	1.86
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=-5.00, Y=5.00 ; SAR Peak: 25.45 W/kg

SAR 10g (W/Kg)	2.233
SAR 1g (W/Kg)	8.566

Z Axis Scan

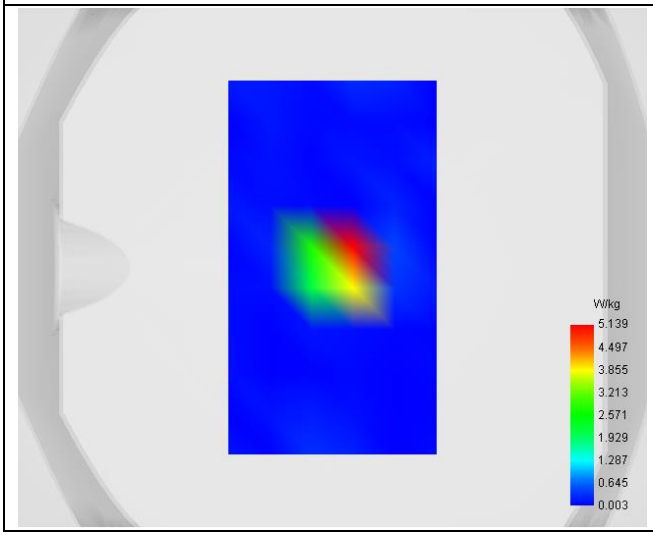
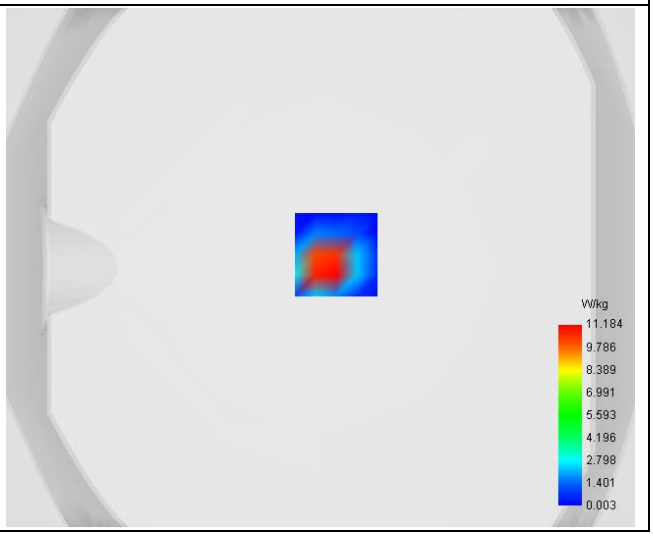

18.7
15.0
12.5
10.0
7.5
5.0
2.5
0.0
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
11.017
9.640
8.263
6.886
5.509
4.132
2.755
1.379
0.002
W/kg
5.212
4.560
3.909
3.258
2.607
1.955
1.304
0.653
0.002

System Performance Check Data (5800MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-04-08

Experimental conditions.

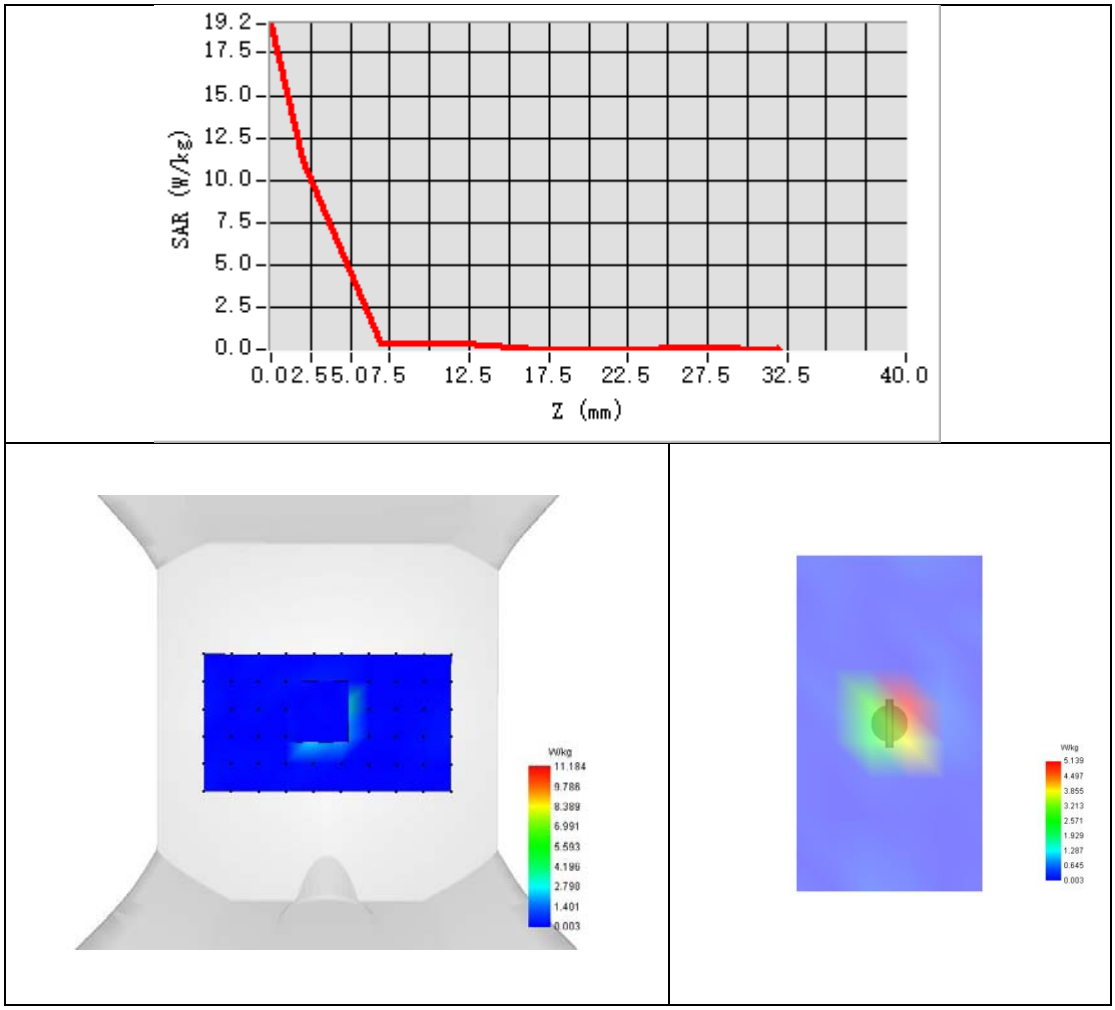
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW
Frequency (MHz)	5800.000
Relative permittivity	36.32
Conductivity (S/m)	5.21
Probe	SN 04/22 EPGO364
ConvF	1.73
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=6.00, Y=5.00 ; SAR Peak: 23.66 W/kg

SAR 10g (W/Kg)	2.153
SAR 1g (W/Kg)	8.165

Z Axis Scan

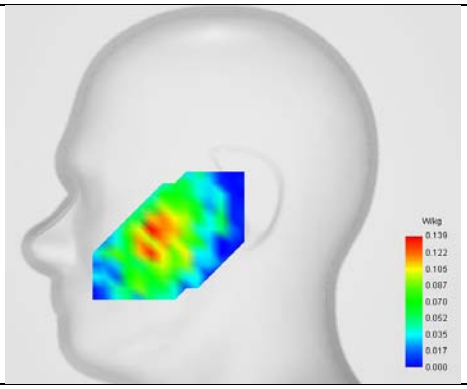
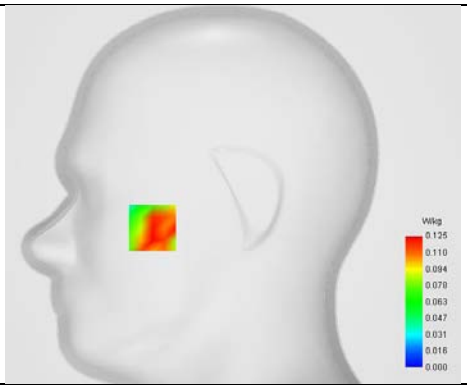
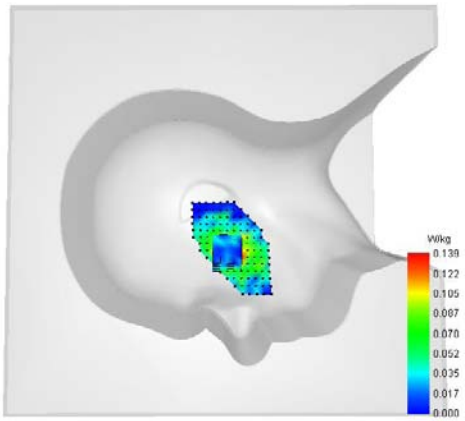
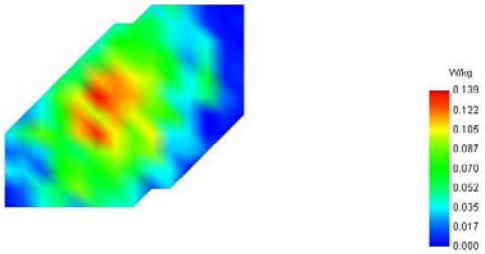
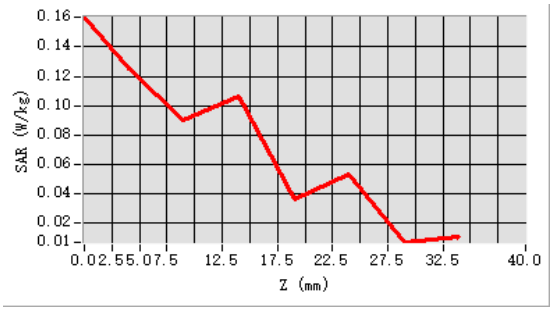

19.2
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
11.184
9.788
8.389
6.991
5.593
4.196
2.798
1.401
0.003
W/kg
5.139
4.497
3.855
3.213
2.571
1.929
1.287
0.645
0.003

Appendix B. SAR Test Plots

Plot 1:

Test Date	2023-03-30
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	GSM850
Signal	TDMA (GSM)
Frequency	836.6
SAR 10g (W/Kg)	0.084
SAR 1g (W/Kg)	0.130

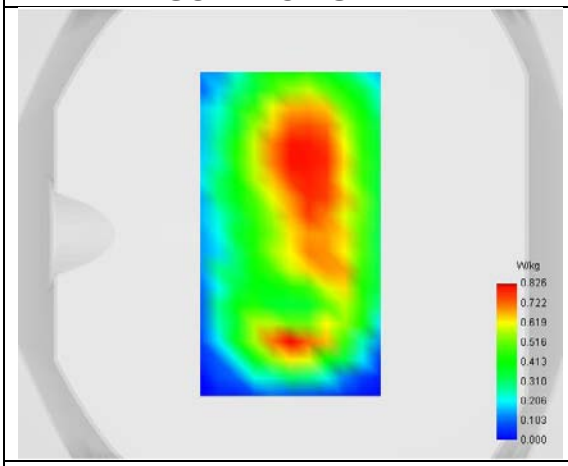
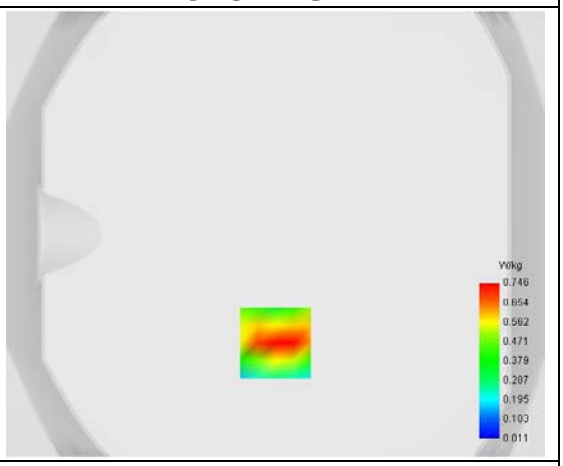
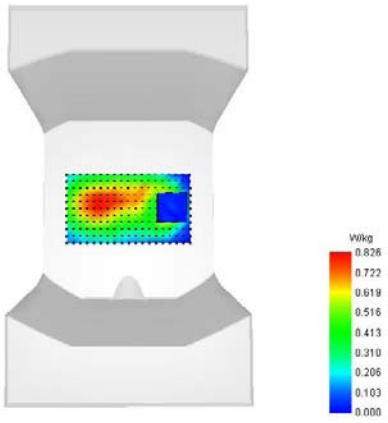
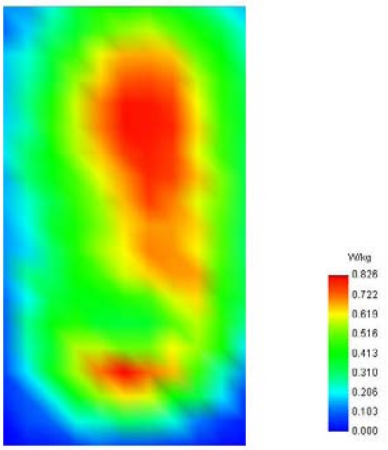
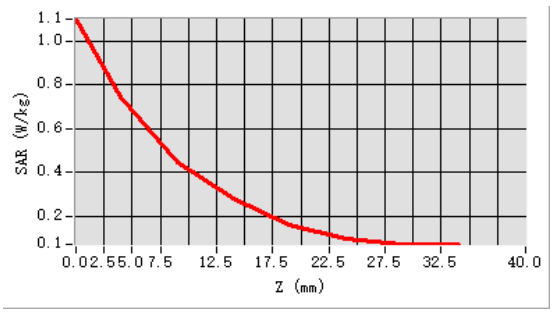
Maximum location: X=-55.00, Y=-23.00 ; SAR Peak: 0.23 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 2:

Test Date	2023-03-30
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	GPRS850
Signal	TDMA (GPRS)
Frequency	836.6
SAR 10g (W/Kg)	0.390
SAR 1g (W/Kg)	0.711

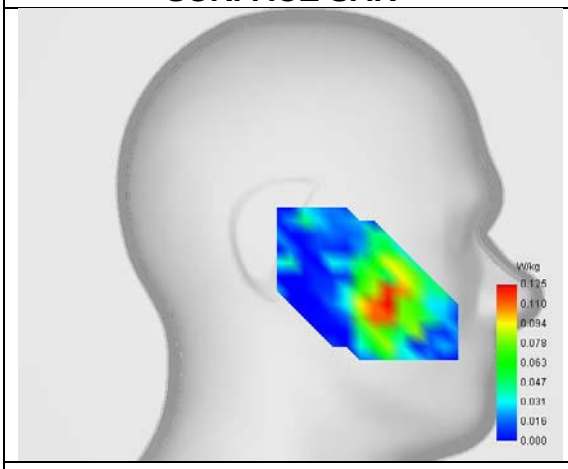
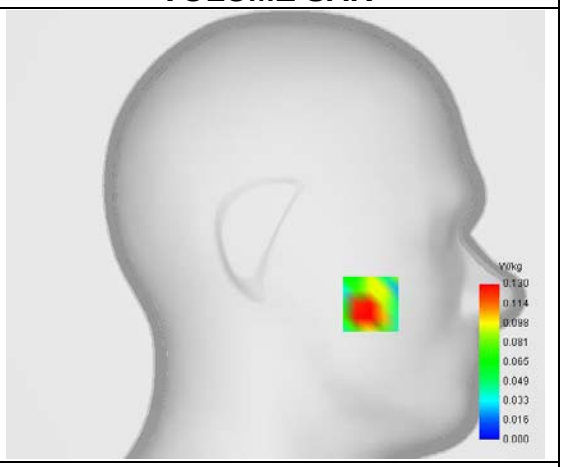
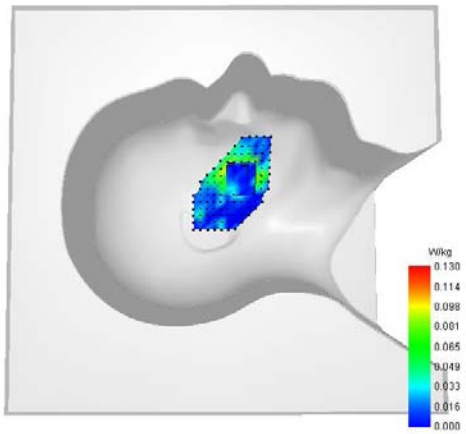
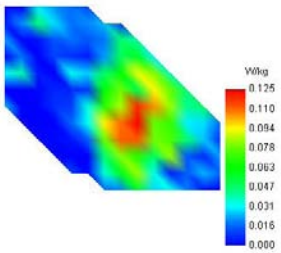
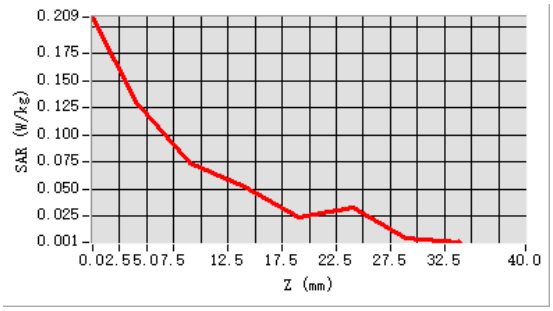
Maximum location: X=0.00, Y=-49.00 ; SAR Peak: 1.19 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 3:

Test Date	2023-04-03
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Signal	TDMA (GSM)
Frequency	1909.8
SAR 10g (W/Kg)	0.070

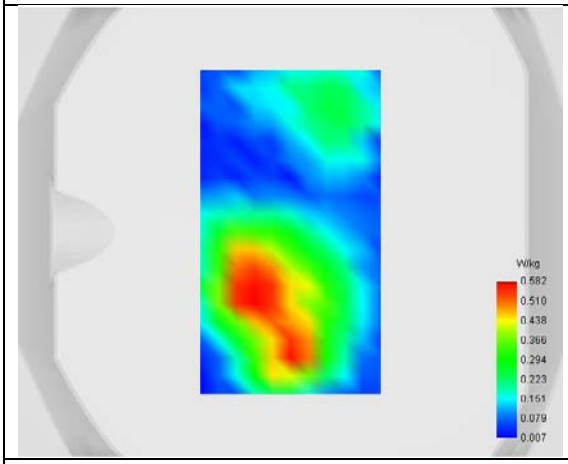
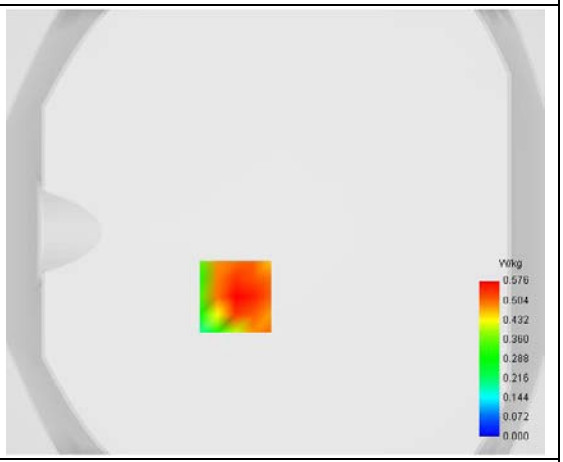
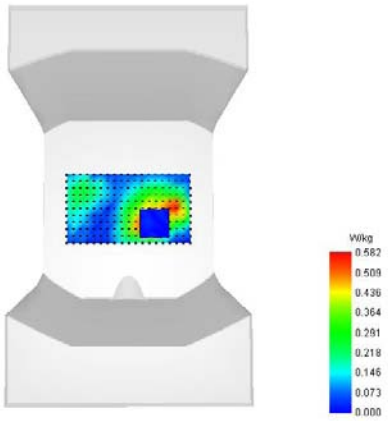
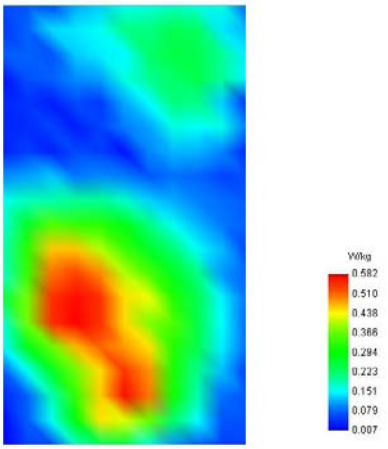
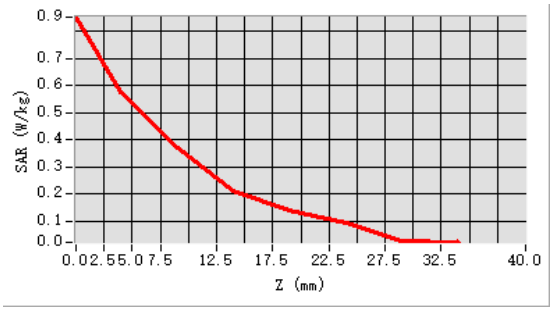
Maximum location: X=-55.00, Y=-40.00 ; SAR Peak: 0.25 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 4:

Test Date	2023-04-03
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	GPRS1900
Signal	TDMA (GPRS)
Frequency	1909.8
SAR 10g (W/Kg)	0.327
SAR 1g (W/Kg)	0.567

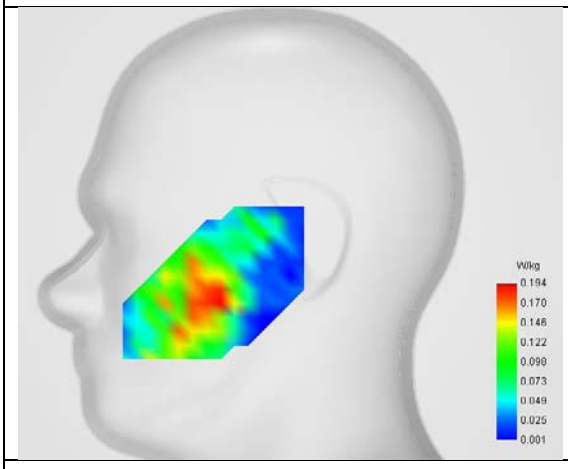
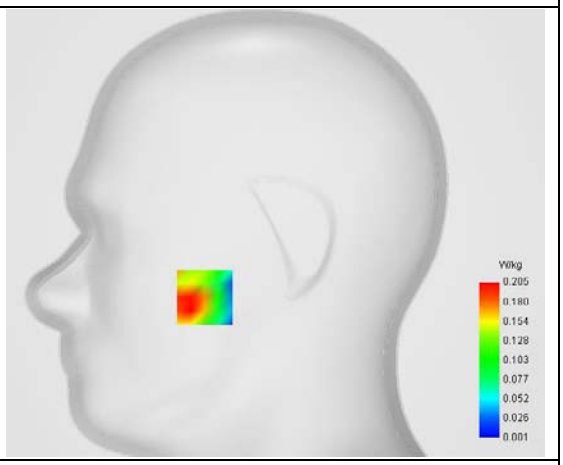
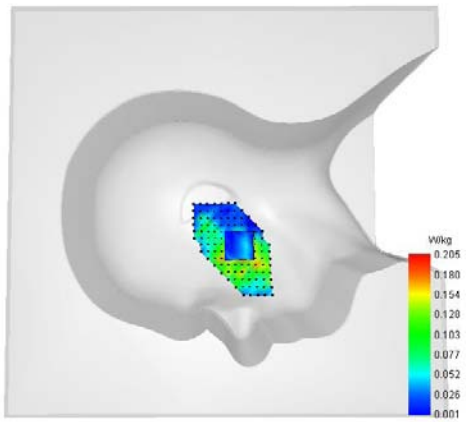
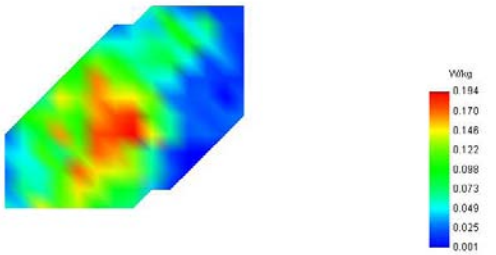
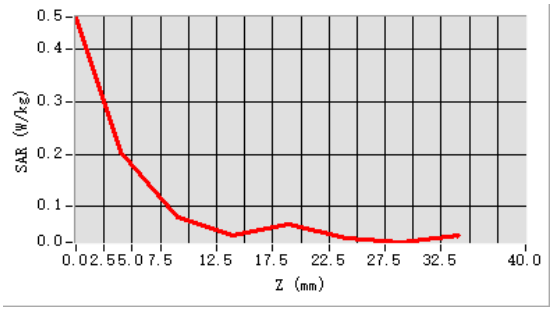
Maximum location: X=-18.00, Y=-29.00 ; SAR Peak: 0.96 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 5:

Test Date	2023-04-03
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	Band 2 (1900)
Signal	WCDMA
Frequency	1907.6
SAR 10g (W/Kg)	0.116
SAR 1g (W/Kg)	0.208

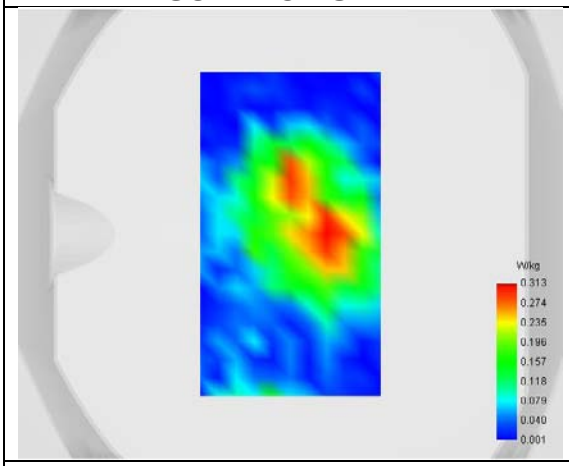
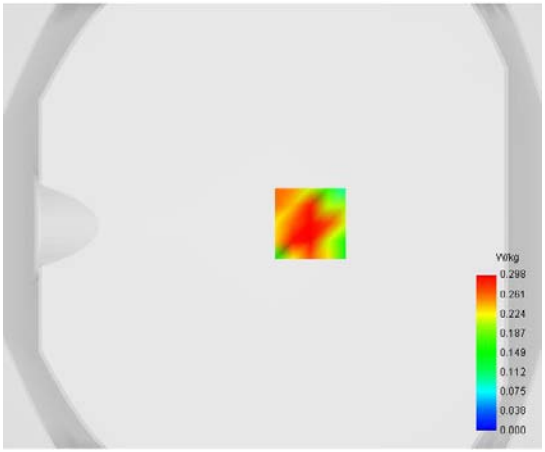
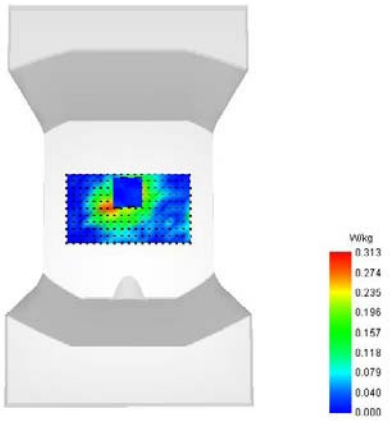
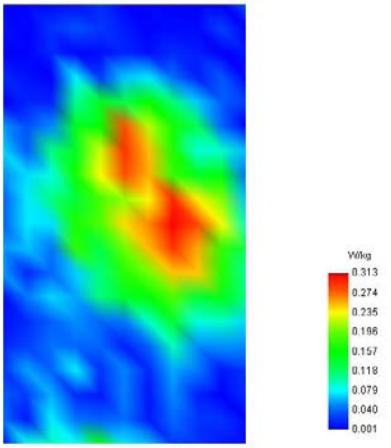
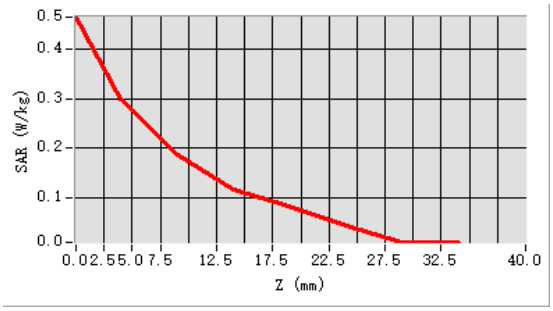
Maximum location: X=-41.00, Y=-37.00 ; SAR Peak: 0.37 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 6:

Test Date	2023-04-03
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	Band 2 (1900)
Signal	WCDMA
Frequency	1907.6
SAR 10g (W/Kg)	0.168
SAR 1g (W/Kg)	0.302

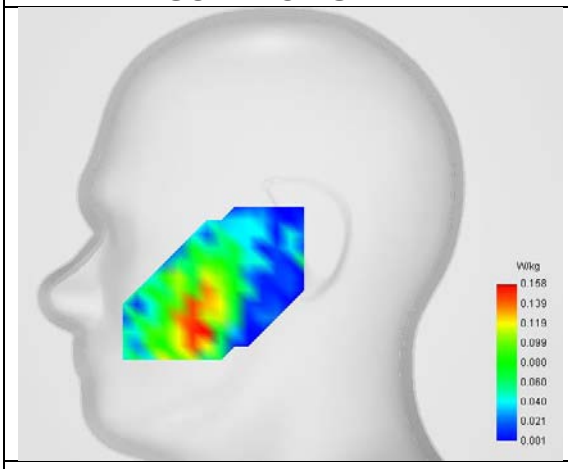
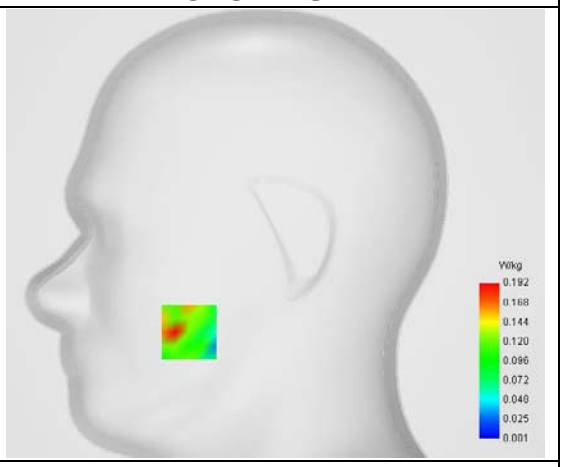
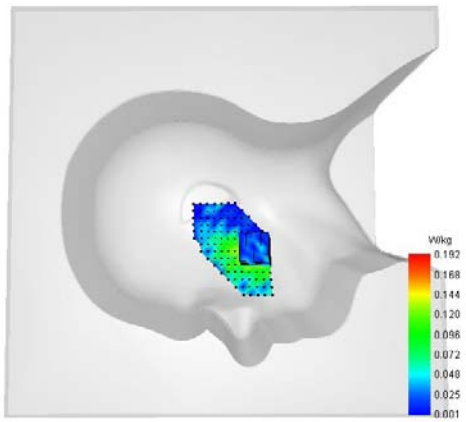
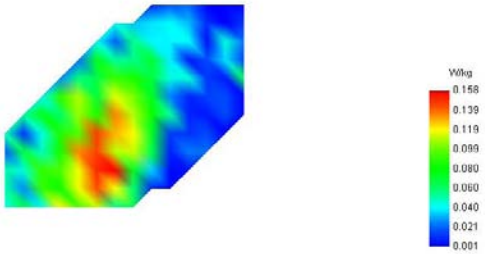
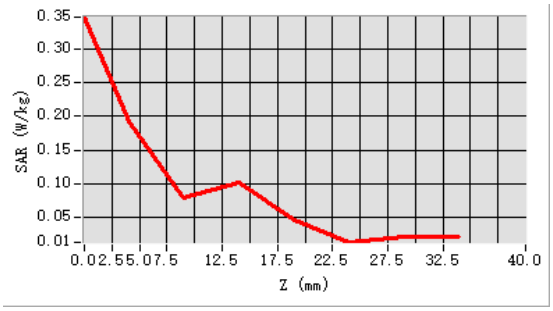
Maximum location: X=17.00, Y=1.00 ; SAR Peak: 0.54 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 7:

Test Date	2023-04-01
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	Band 4 (1700)
Signal	WCDMA
Frequency	1752.4
SAR 10g (W/Kg)	0.091
SAR 1g (W/Kg)	0.159

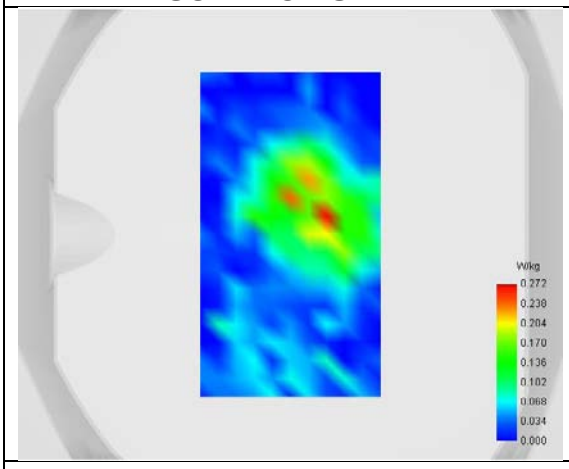
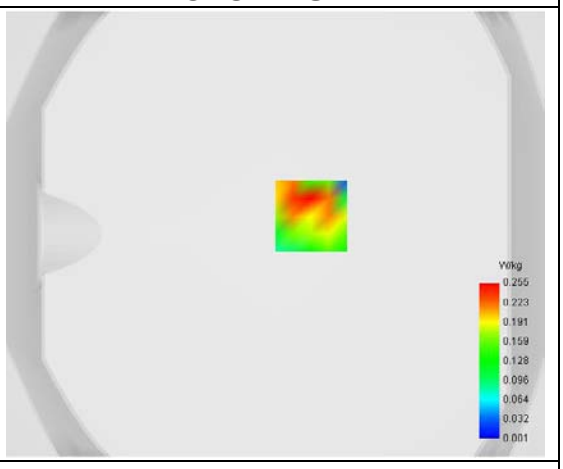
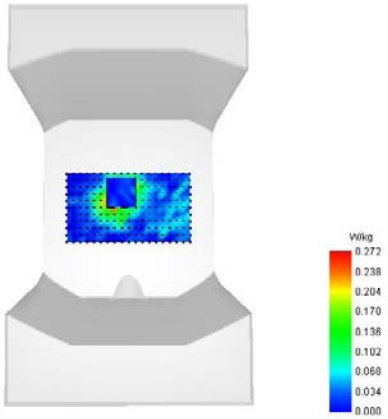
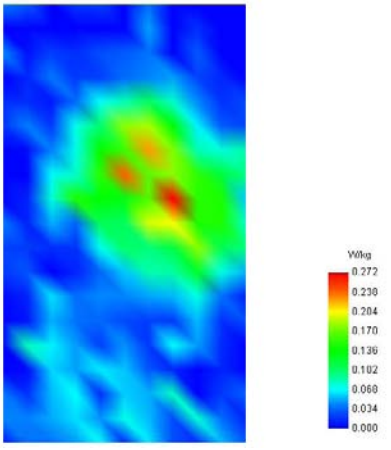
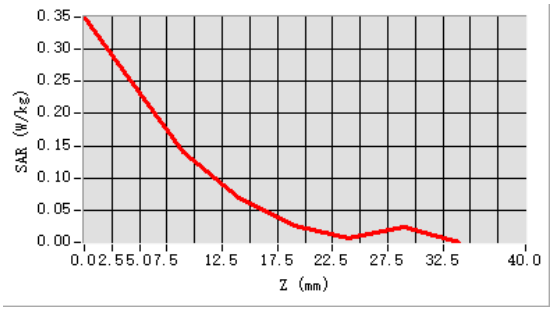
Maximum location: X=-50.00, Y=-57.00 ; SAR Peak: 0.25 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 8:

Test Date	2023-04-01
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	Band 4 (1700)
Signal	WCDMA
Frequency	1752.4
SAR 10g (W/Kg)	0.128
SAR 1g (W/Kg)	0.239

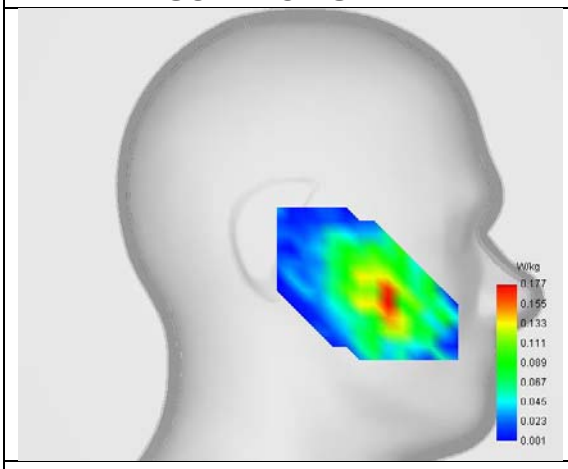
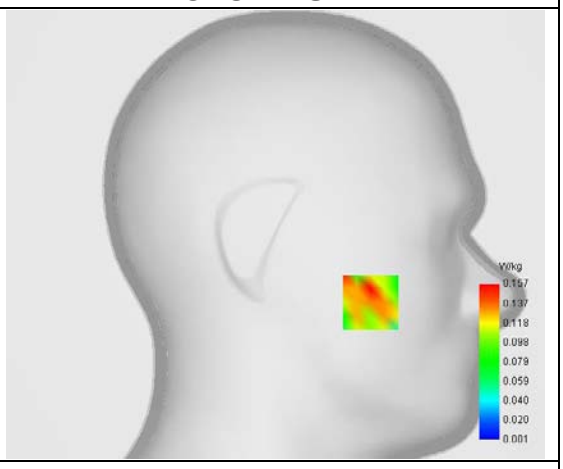
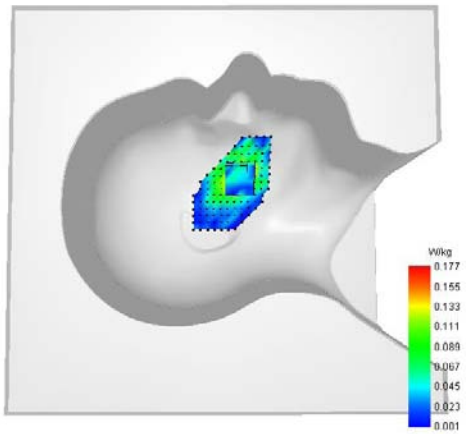
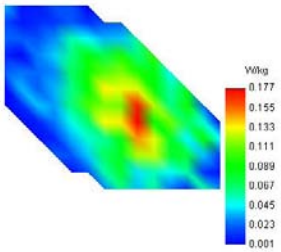
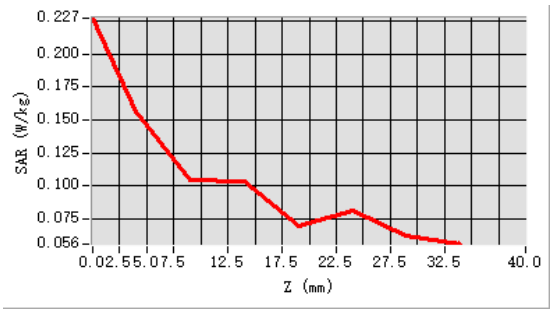
Maximum location: X=16.00, Y=8.00 ; SAR Peak: 0.44 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 9:

Test Date	2023-03-30
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	Band 5 (850)
Signal	WCDMA
Frequency	826.4
SAR 10g (W/Kg)	0.096
SAR 1g (W/Kg)	0.123

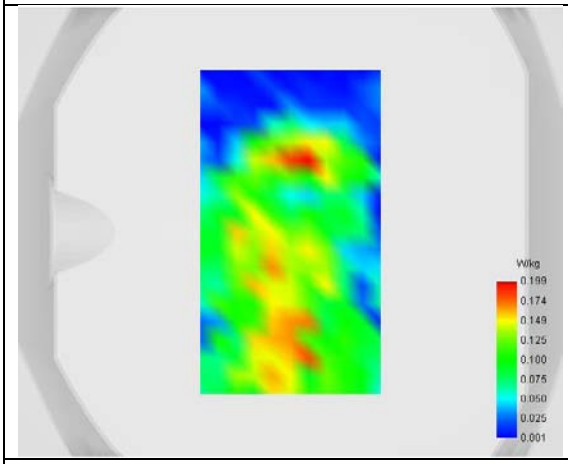
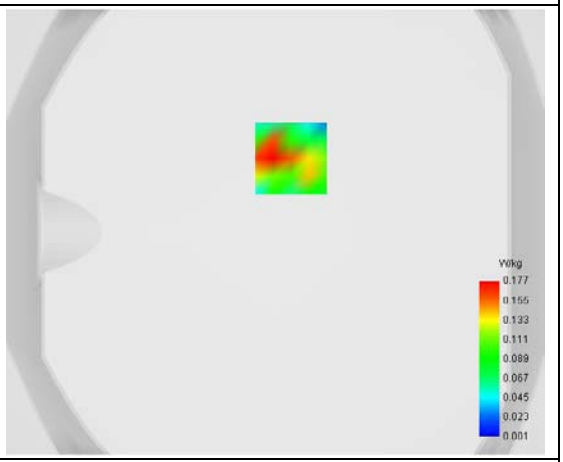
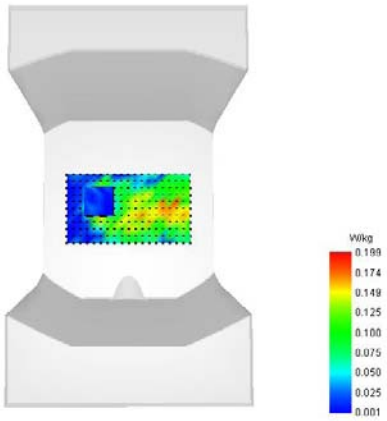
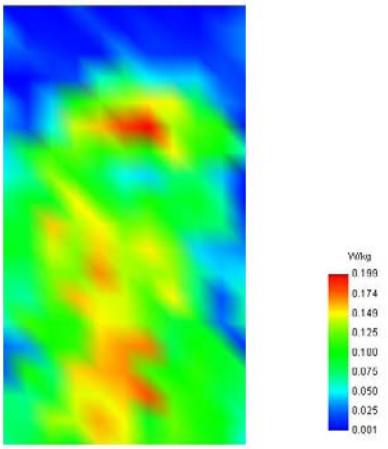
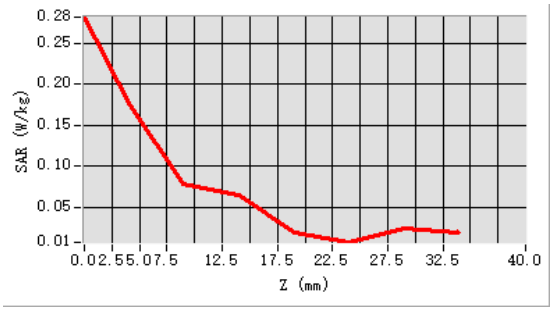
Maximum location: X=-55.00, Y=-39.00 ; SAR Peak: 0.25 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 10:

Test Date	2023-03-30
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	Band 5 (850)
Signal	WCDMA
Frequency	826.4
SAR 10g (W/Kg)	0.085
SAR 1g (W/Kg)	0.169

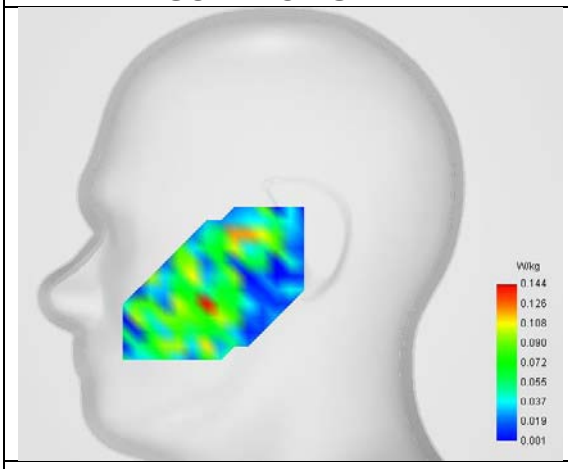
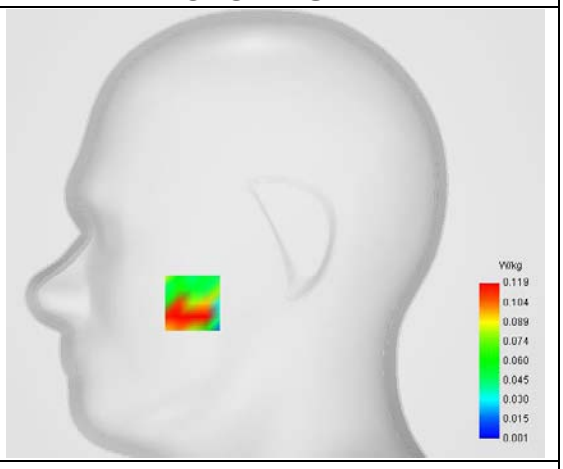
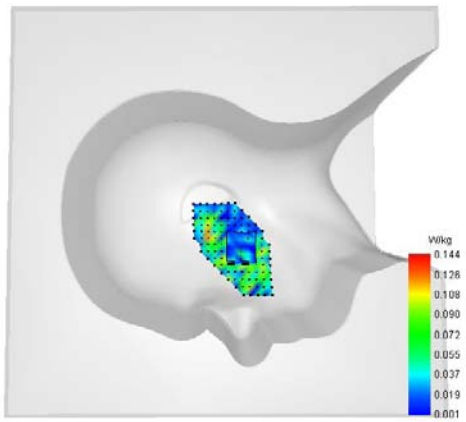
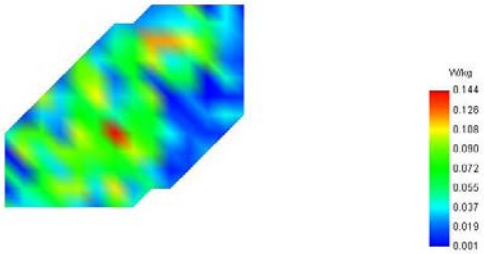
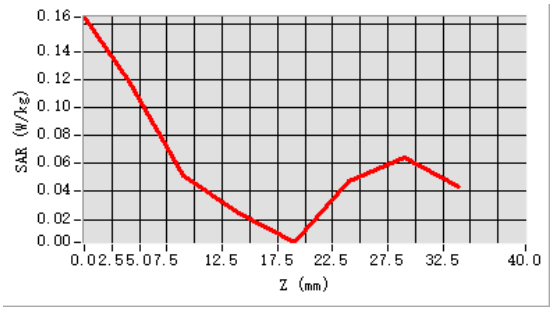
Maximum location: X=7.00, Y=33.00 ; SAR Peak: 0.30 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 11:

Test Date	2023-04-03
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 2
Signal	LTE FDD
Frequency	1860
SAR 10g (W/Kg)	0.058
SAR 1g (W/Kg)	0.119

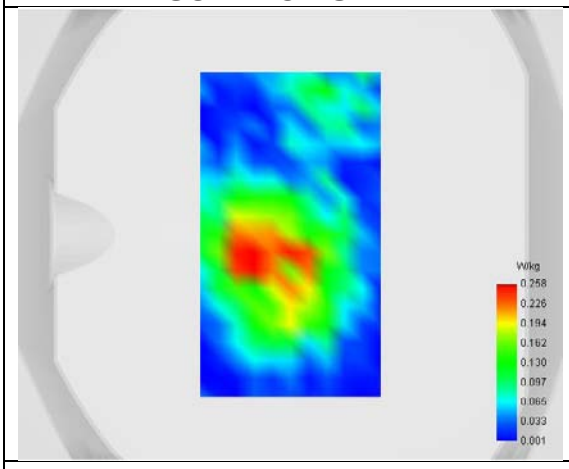
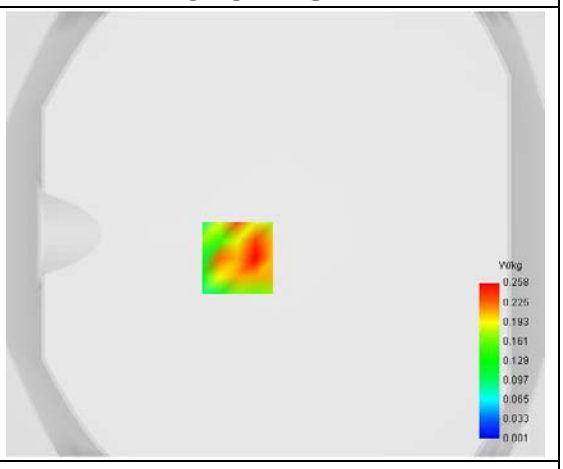
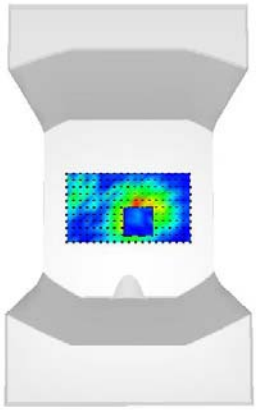
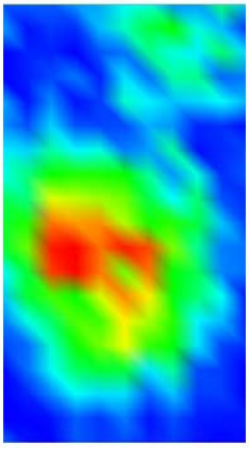
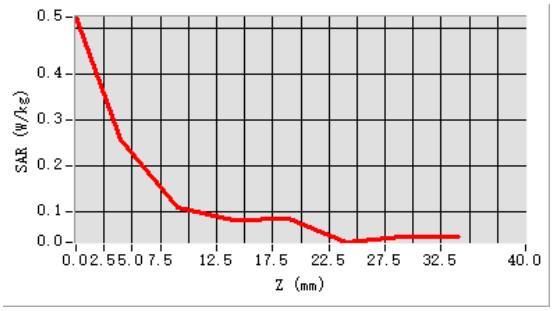
Maximum location: X=-15.00, Y=-5.00 ; SAR Peak: 0.08 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 12:

Test Date	2023-04-03
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 2
Signal	LTE FDD
Frequency	1860
SAR 10g (W/Kg)	0.058
SAR 1g (W/Kg)	0.119

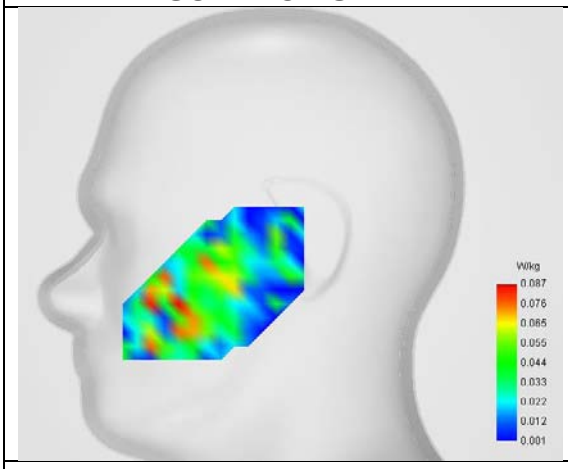
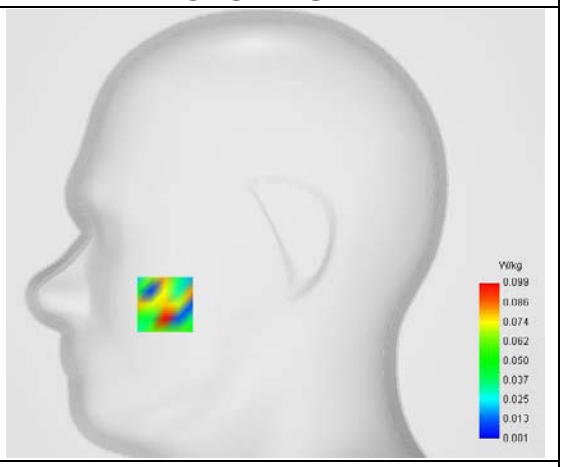
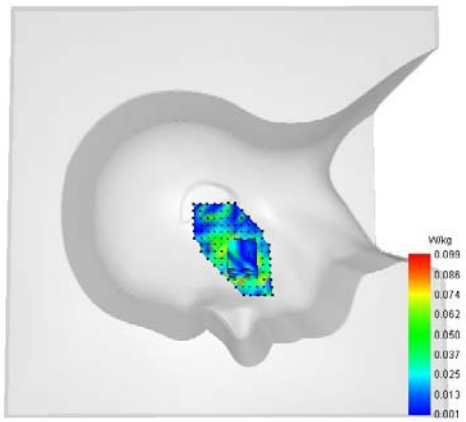
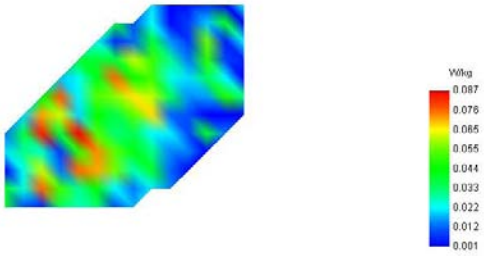
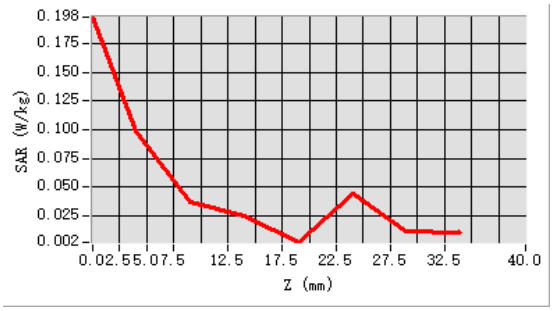
Maximum location: X=-17.00, Y=-11.00 ; SAR Peak: 0.46 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 13:

Test Date	2023-04-01
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 4
Signal	LTE FDD
Frequency	1720
SAR 10g (W/Kg)	0.041
SAR 1g (W/Kg)	0.090

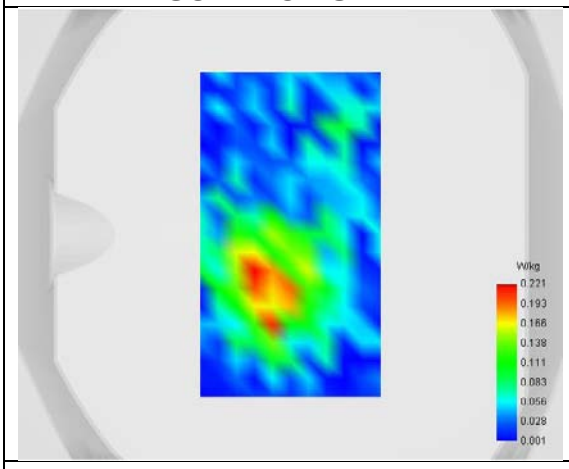
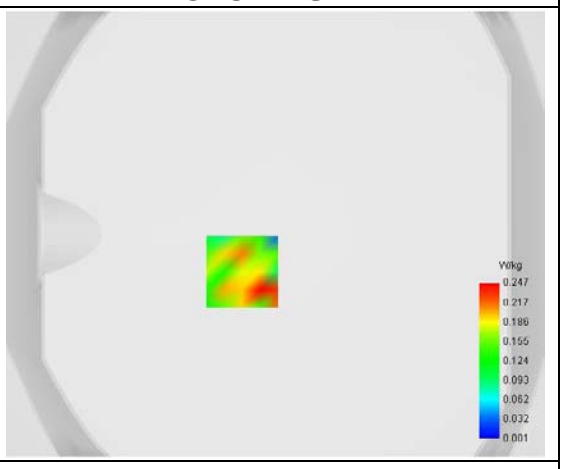
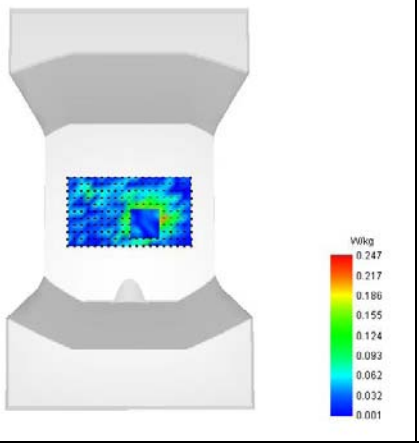
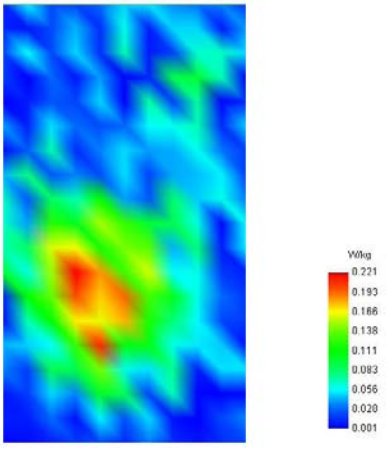
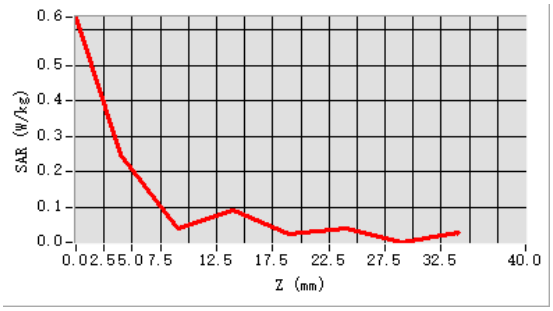
Maximum location: X=-64.00, Y=-41.00 ; SAR Peak: 0.21 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 14:

Test Date	2023-04-01
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 4
Signal	LTE FDD
Frequency	1720
SAR 10g (W/Kg)	0.120
SAR 1g (W/Kg)	0.233

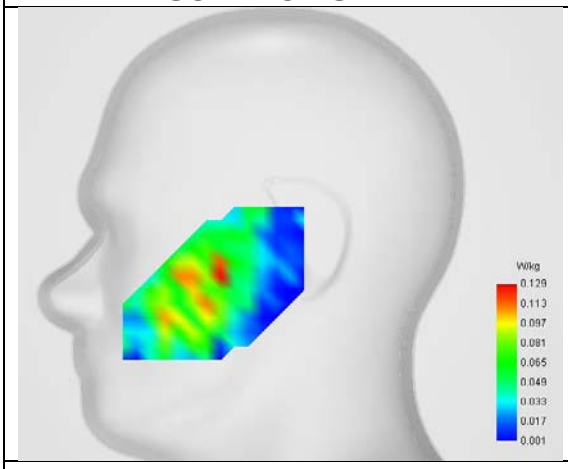
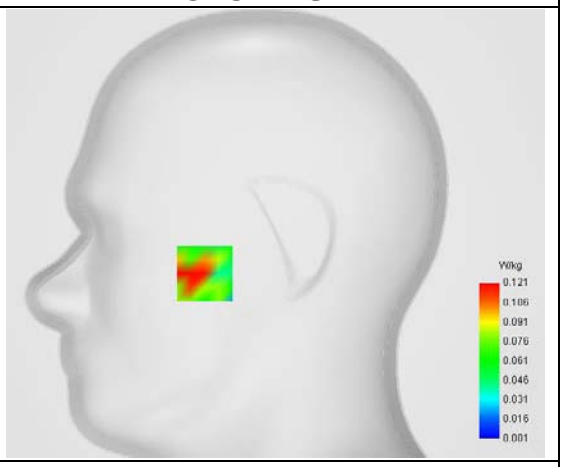
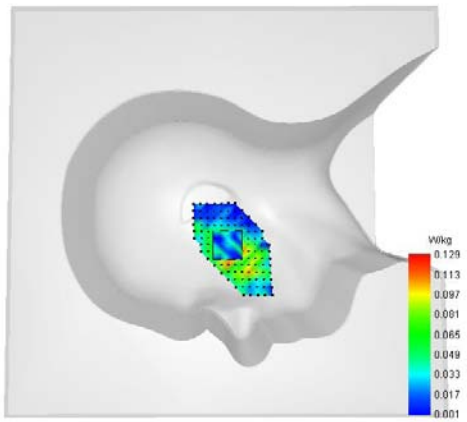
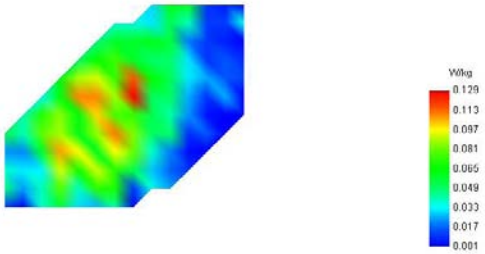
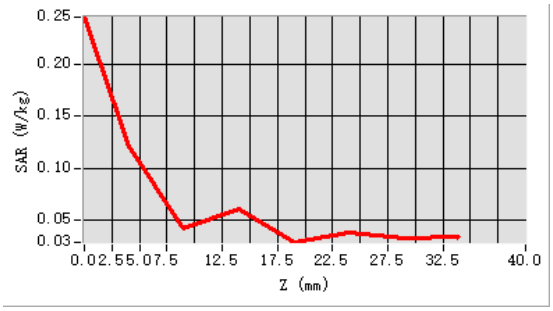
Maximum location: X=-15.00, Y=-17.00 ; SAR Peak: 0.48 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 15:

Test Date	2023-03-30
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 5
Signal	LTE FDD
Frequency	829
SAR 10g (W/Kg)	0.073
SAR 1g (W/Kg)	0.133

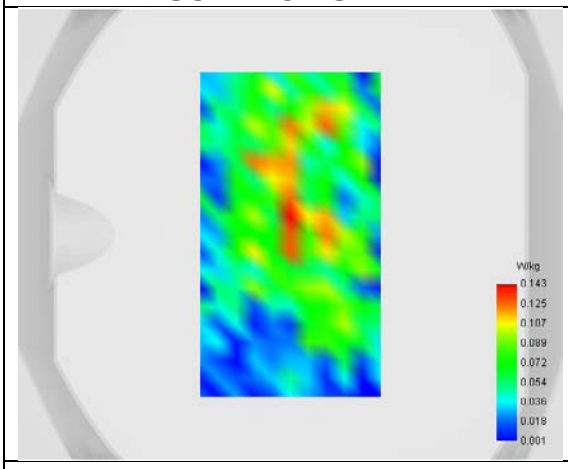
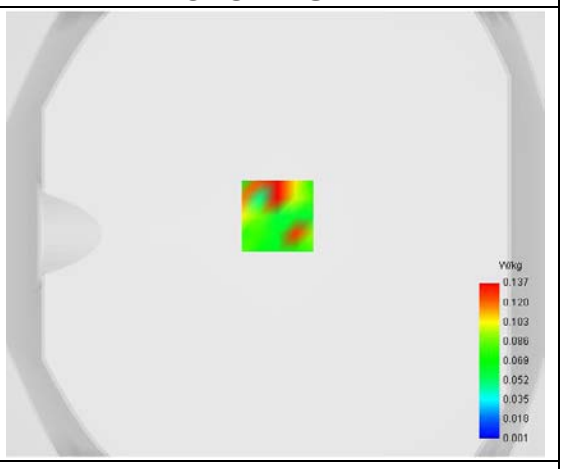
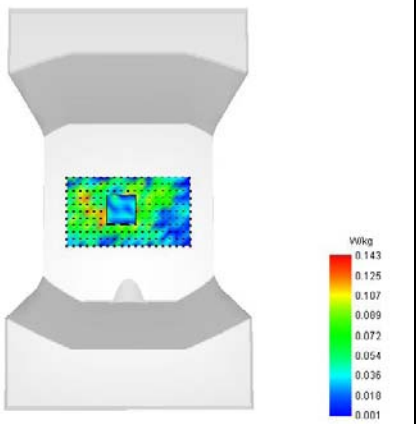
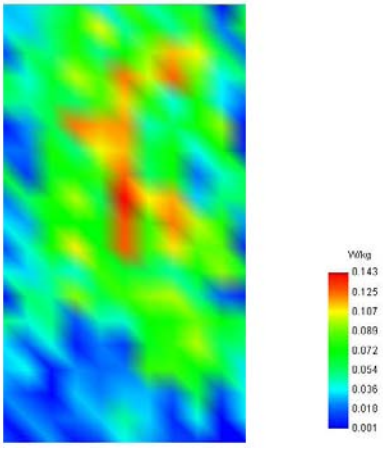
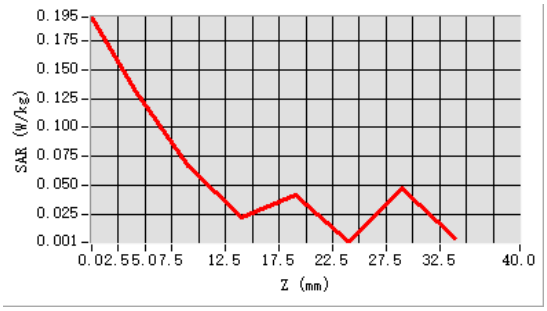
Maximum location: X=-41.00, Y=-23.00 ; SAR Peak: 0.31 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 16:

Test Date	2023-03-30
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Front side
Band	LTE band 5
Signal	LTE FDD
Frequency	829
SAR 10g (W/Kg)	0.071
SAR 1g (W/Kg)	0.151

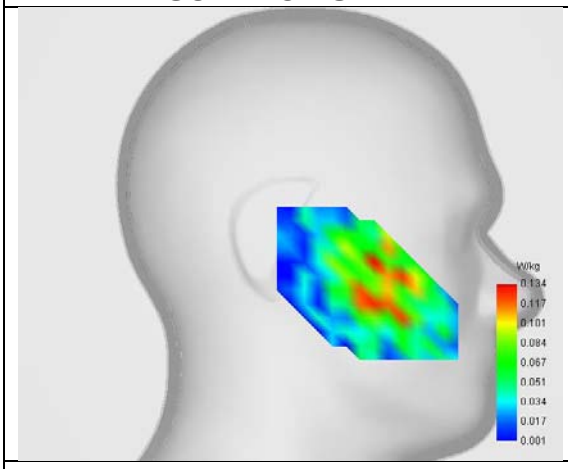
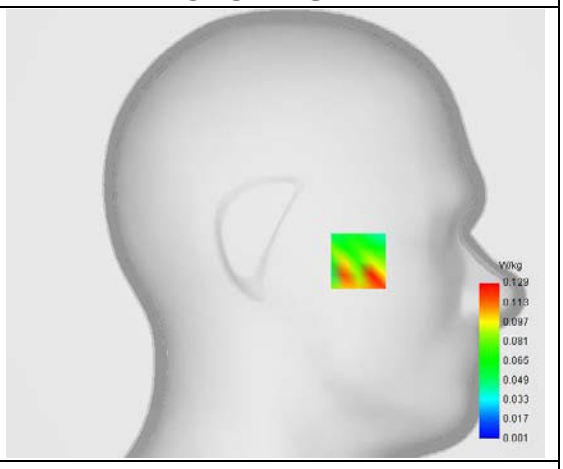
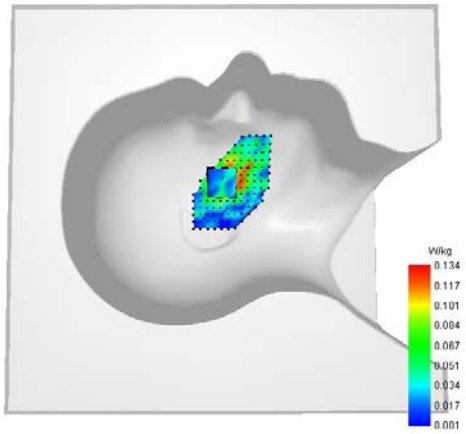
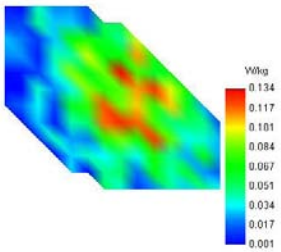
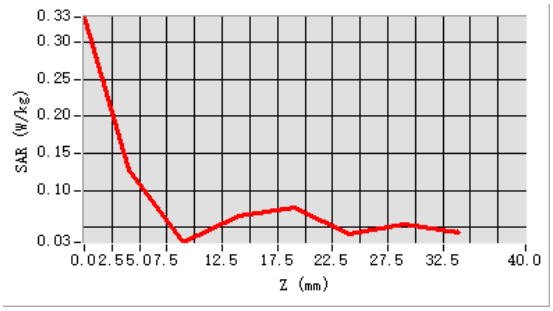
Maximum location: X=1.00, Y=8.00 ; SAR Peak: 0.42 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 17:

Test Date	2023-03-29
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 12
Signal	LTE FDD
Frequency	704
SAR 10g (W/Kg)	0.078
SAR 1g (W/Kg)	0.125

Maximum location: X=-48.00, Y=-16.00 ; SAR Peak: 0.24 W/kg

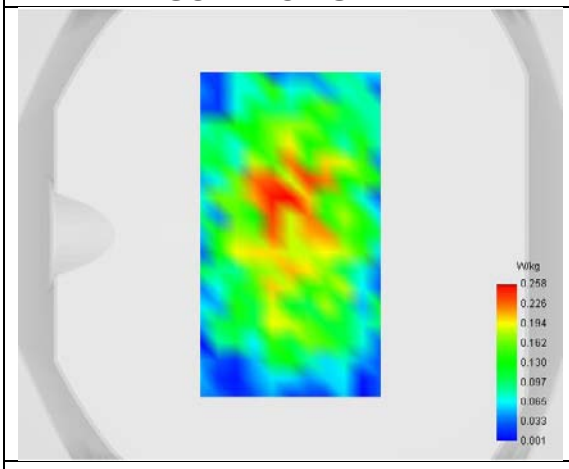
SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 18:

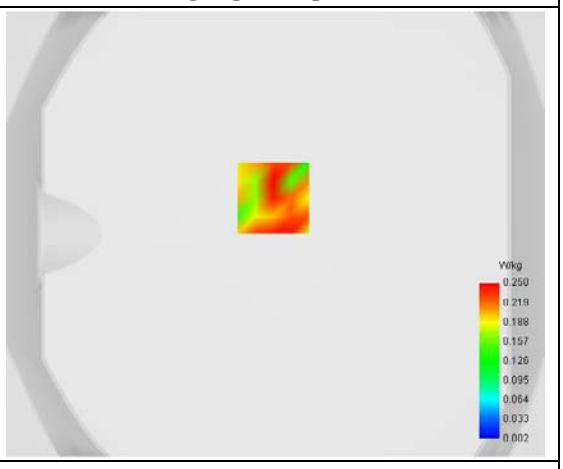
Test Date	2023-03-29
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 12
Signal	LTE FDD
Frequency	704
SAR 10g (W/Kg)	0.161
SAR 1g (W/Kg)	0.257

Maximum location: X=-1.00, Y=16.00 ; SAR Peak: 0.50 W/kg

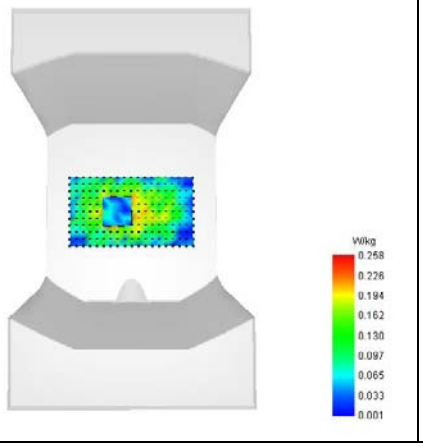
SURFACE SAR



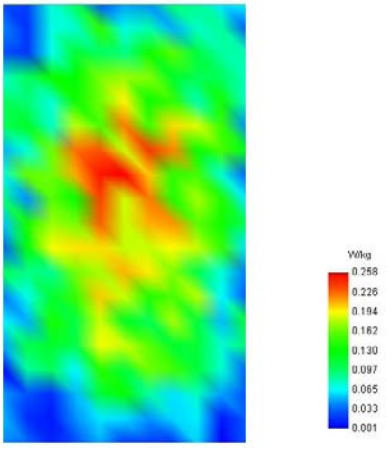
VOLUME SAR

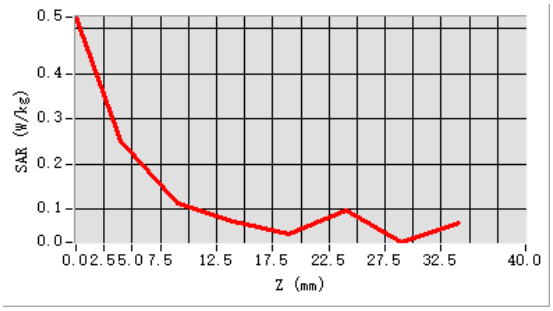


3D screen shot



Hot spot position

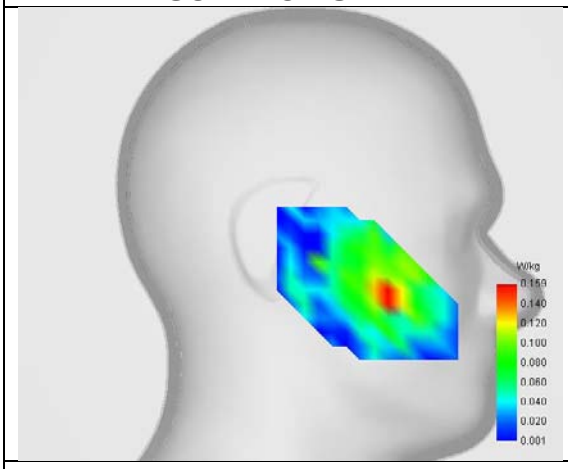
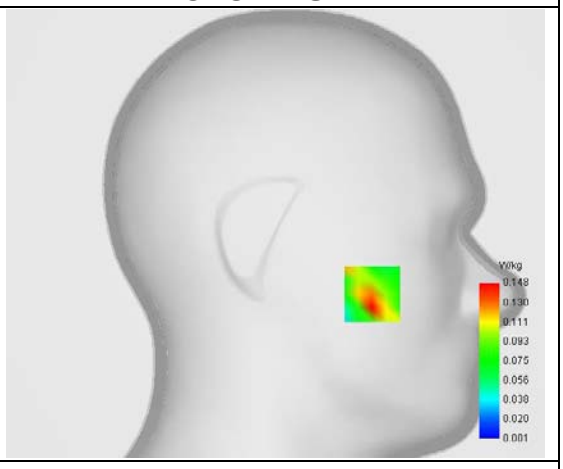
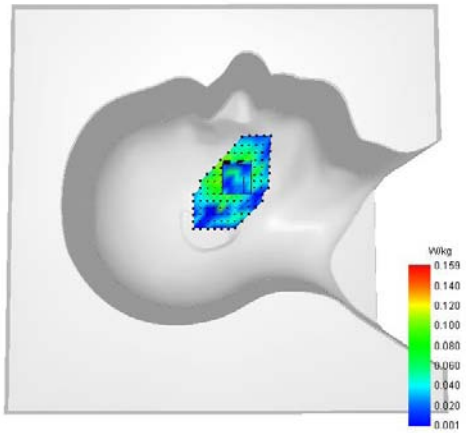
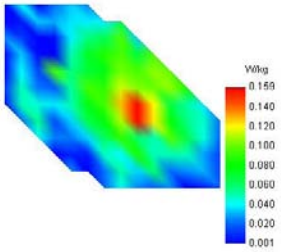
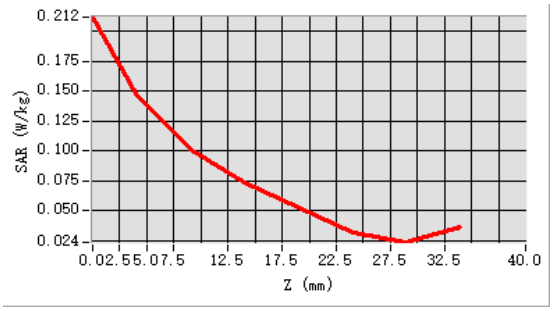




Plot 19:

Test Date	2023-03-29
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 17
Signal	LTE FDD
Frequency	710
SAR 10g (W/Kg)	0.087
SAR 1g (W/Kg)	0.134

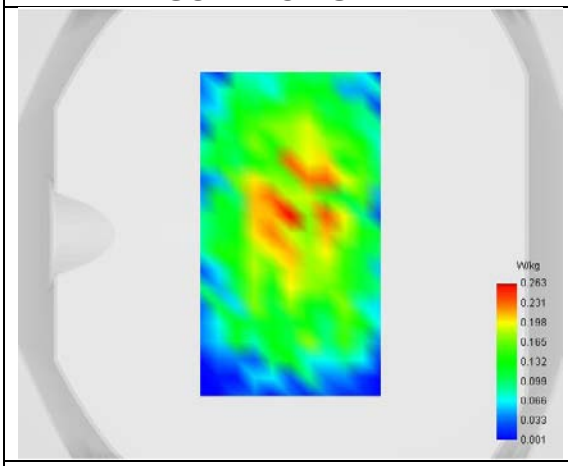
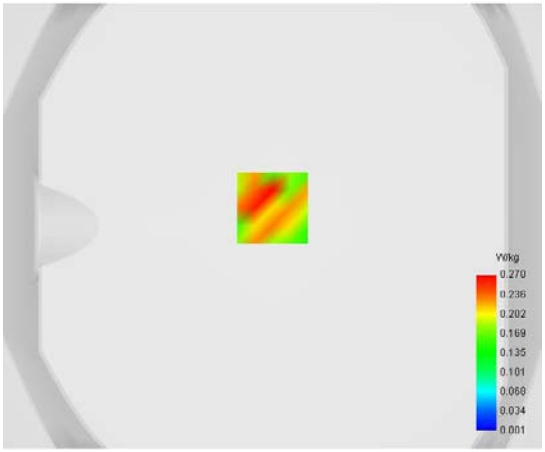
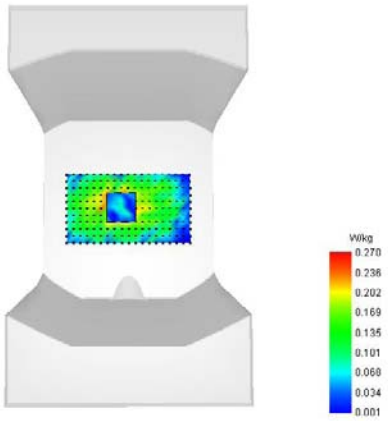
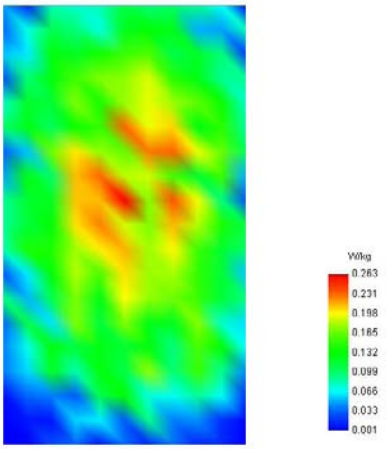
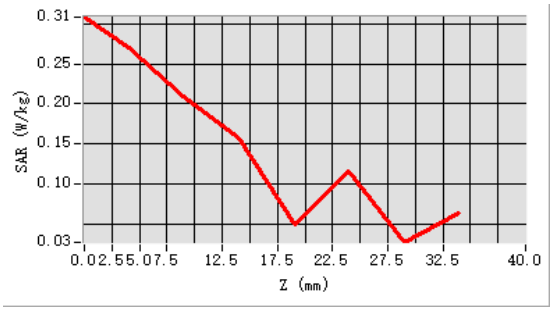
Maximum location: X=-56.00, Y=-35.00 ; SAR Peak: 0.24 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 20:

Test Date	2023-03-29
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 17
Signal	LTE FDD
Frequency	710
SAR 10g (W/Kg)	0.175
SAR 1g (W/Kg)	0.289

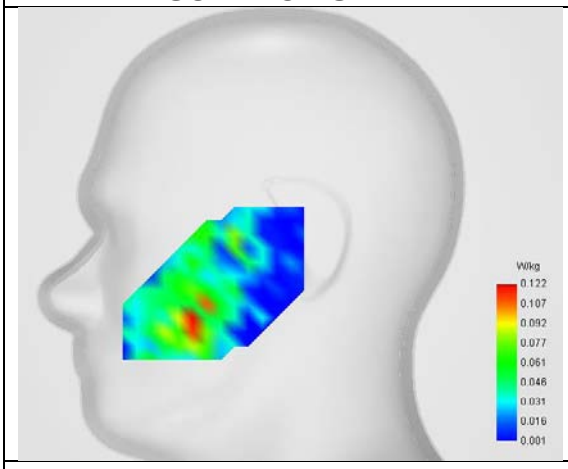
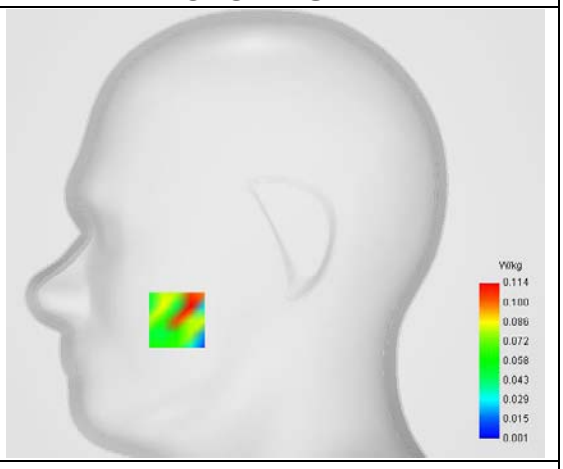
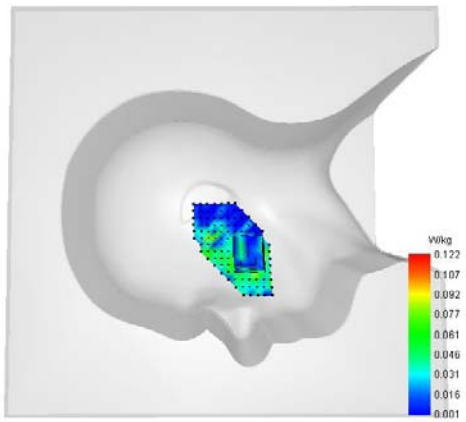
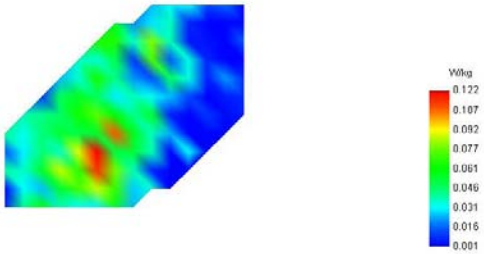
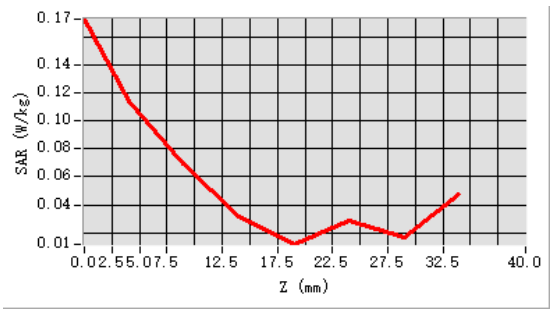
Maximum location: X=0.00, Y=8.00 ; SAR Peak: 0.58 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 21:

Test Date	2023-04-01
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 66
Signal	LTE FDD
Frequency	1720
SAR 10g (W/Kg)	0.054
SAR 1g (W/Kg)	0.102

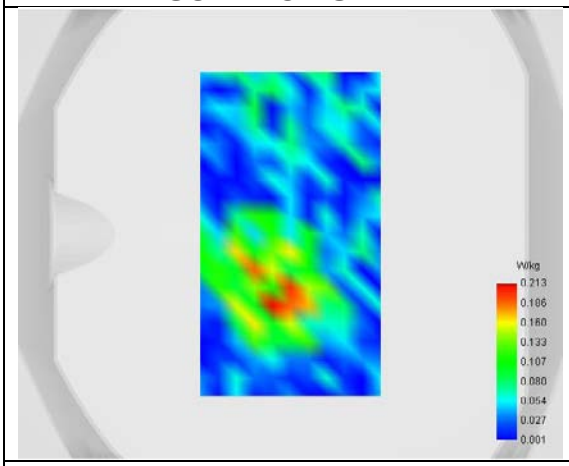
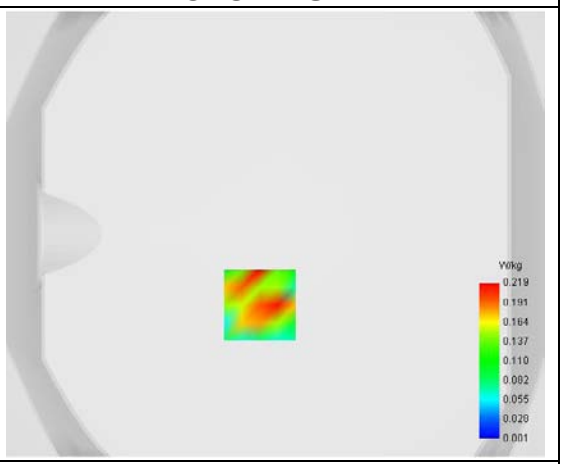
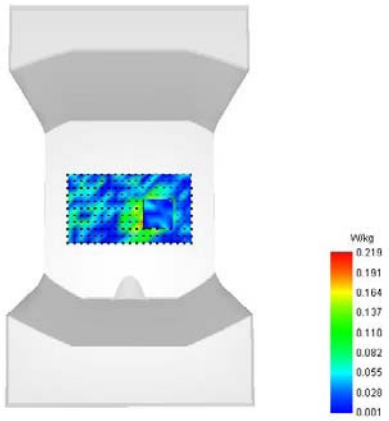
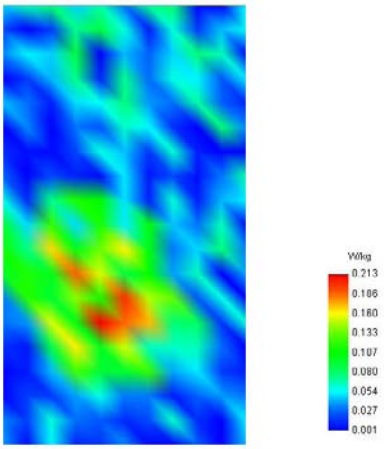
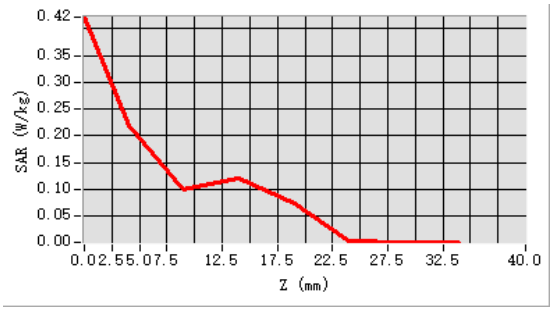
Maximum location: X=-57.00, Y=-50.00 ; SAR Peak: 0.24 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 22:

Test Date	2023-04-01
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 66
Signal	LTE FDD
Frequency	1720
SAR 10g (W/Kg)	0.112
SAR 1g (W/Kg)	0.200

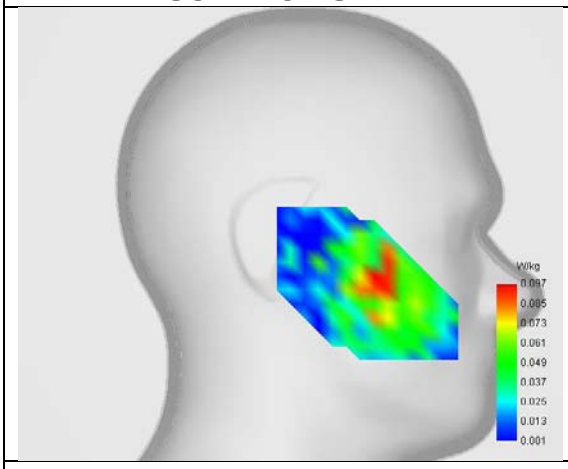
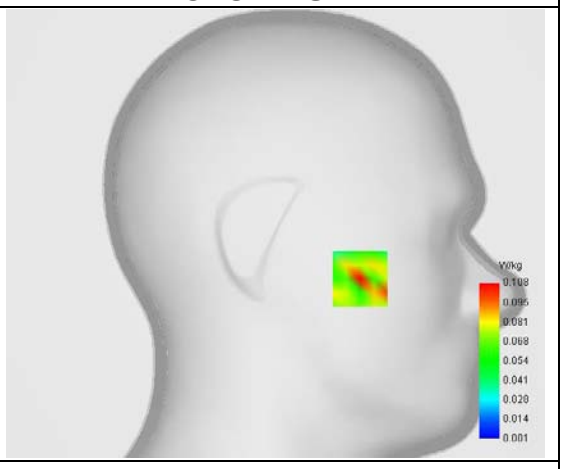
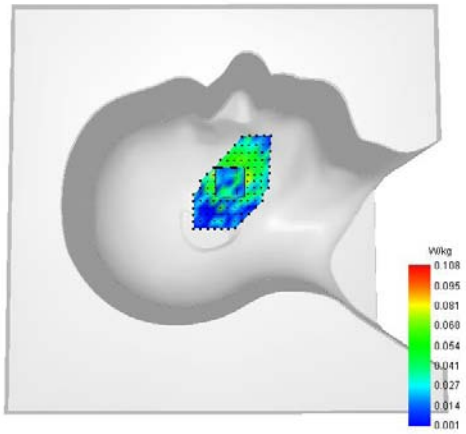
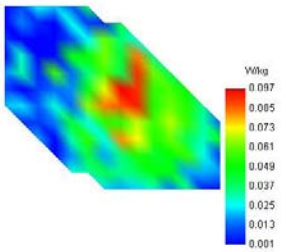
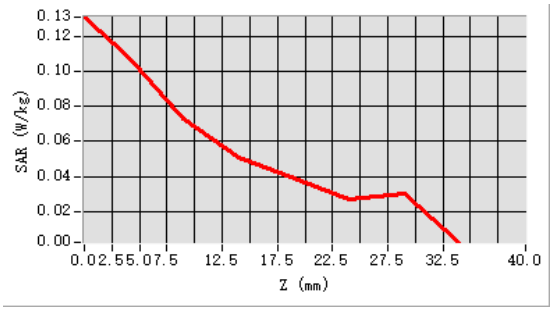
Maximum location: X=-7.00, Y=-32.00 ; SAR Peak: 0.47 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 23:

Test Date	2023-03-29
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 71
Signal	LTE FDD
Frequency	688
SAR 10g (W/Kg)	0.057
SAR 1g (W/Kg)	0.095

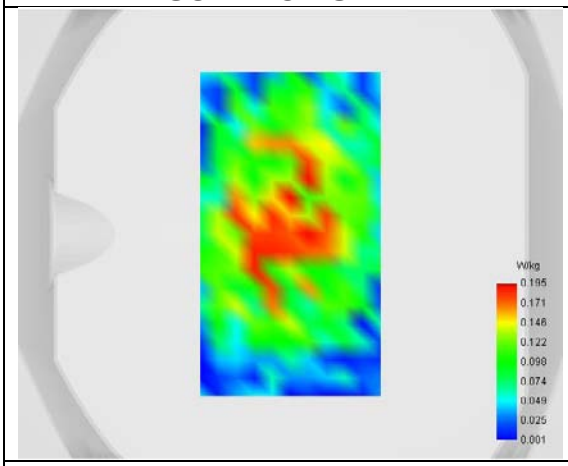
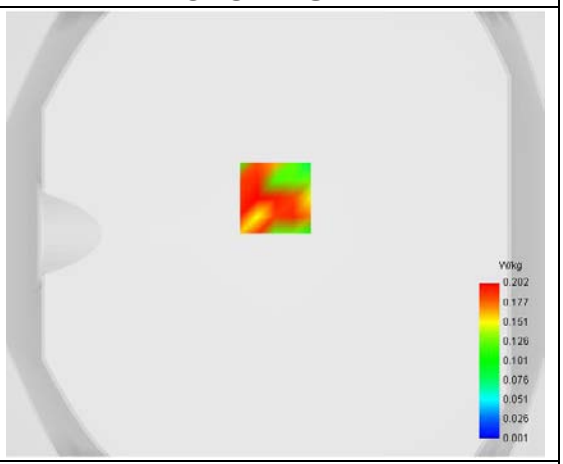
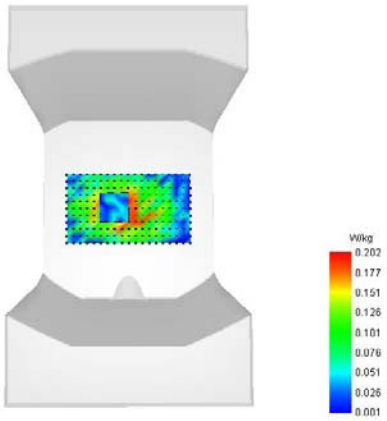
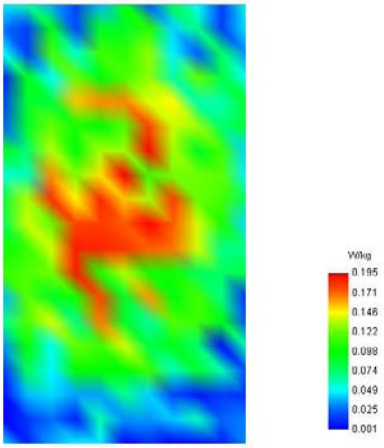
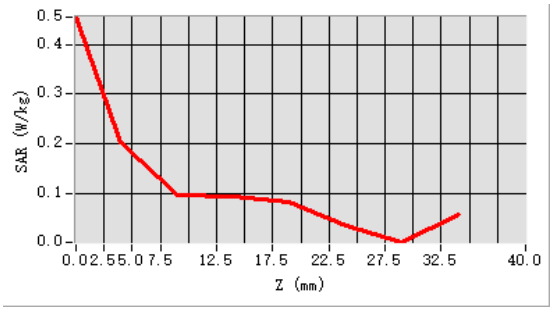
Maximum location: X=-49.00, Y=-26.00 ; SAR Peak: 0.21 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 24:

Test Date	2023-03-29
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 71
Signal	LTE FDD
Frequency	688
SAR 10g (W/Kg)	0.135
SAR 1g (W/Kg)	0.241

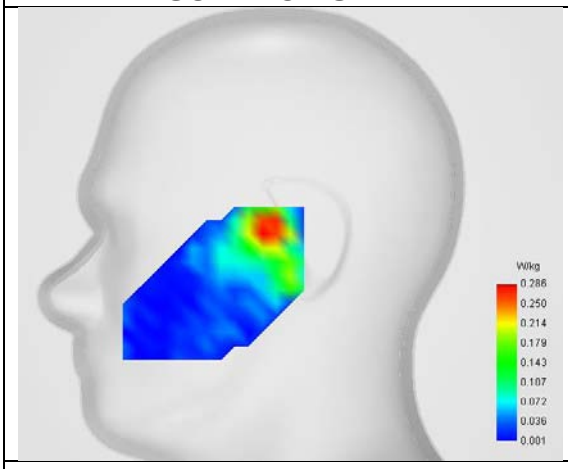
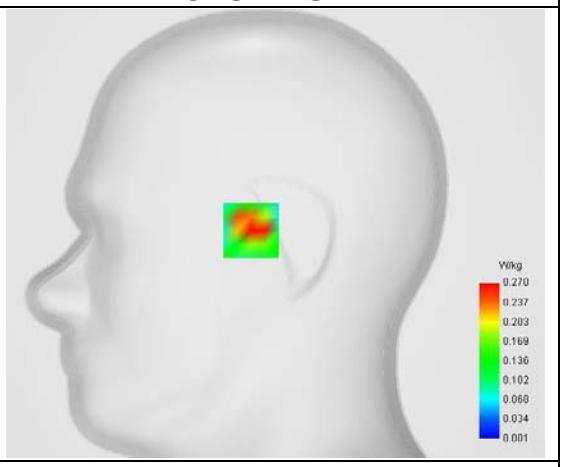
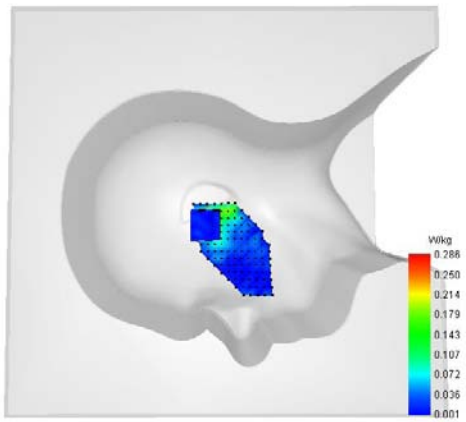
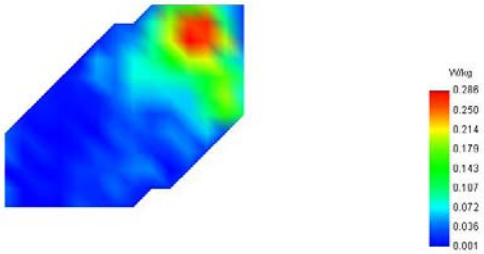
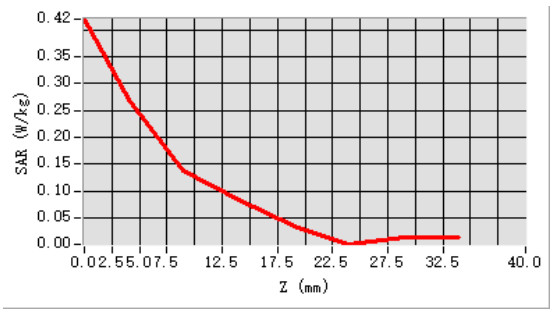
Maximum location: X=0.00, Y=16.00 ; SAR Peak: 0.45 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 25:

Test Date	2023-04-06
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Tilt
Band	IEEE 802.11b ISM
Signal	IEEE 802.11
Frequency	2412
SAR 10g (W/Kg)	0.116
SAR 1g (W/Kg)	0.255

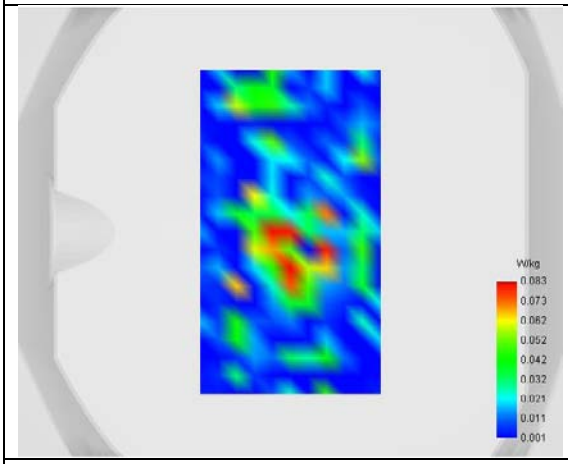
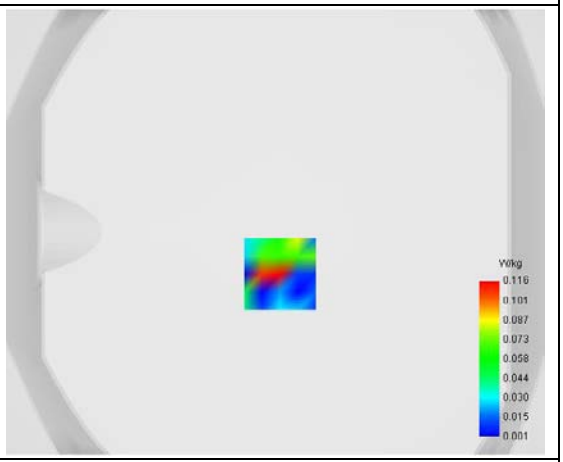
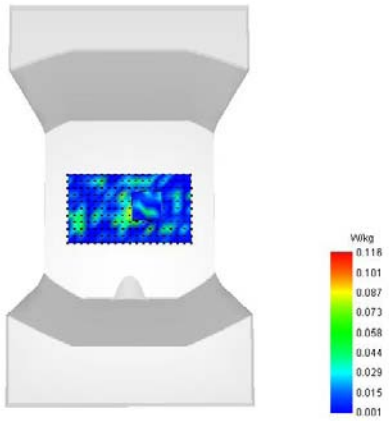
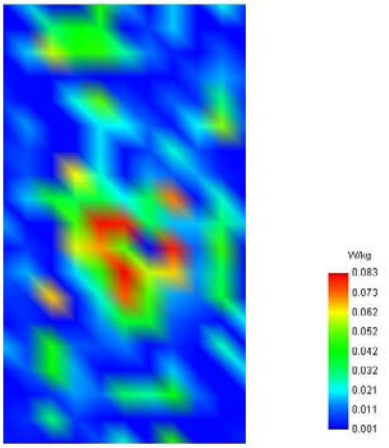
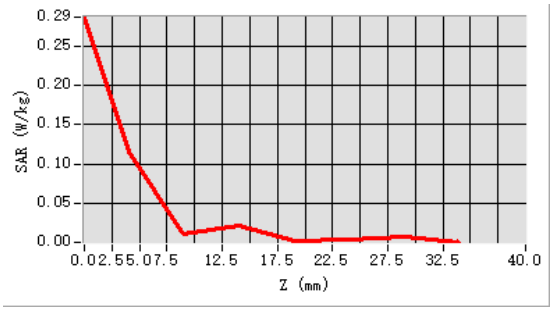
Maximum location: X=-14.00, Y=2.00 ; SAR Peak: 0.49 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 26:

Test Date	2023-04-06
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Top Side
Band	IEEE 802.11b ISM
Signal	IEEE 802.11
Frequency	2412
SAR 10g (W/Kg)	0.038
SAR 1g (W/Kg)	0.124

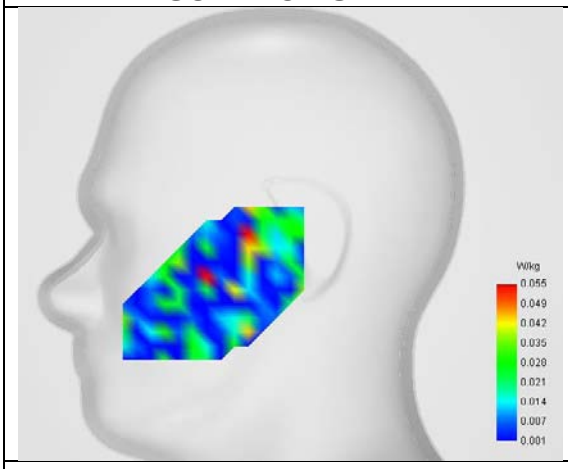
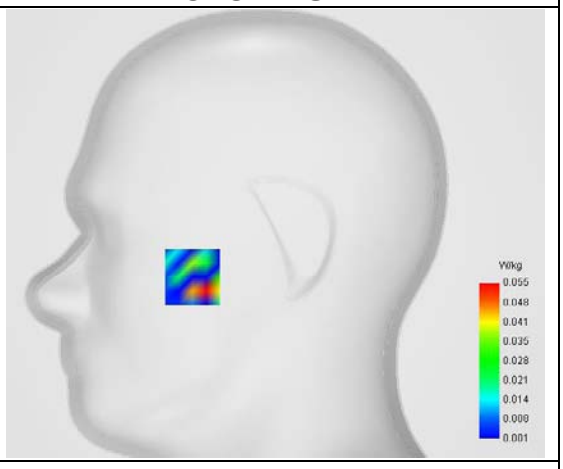
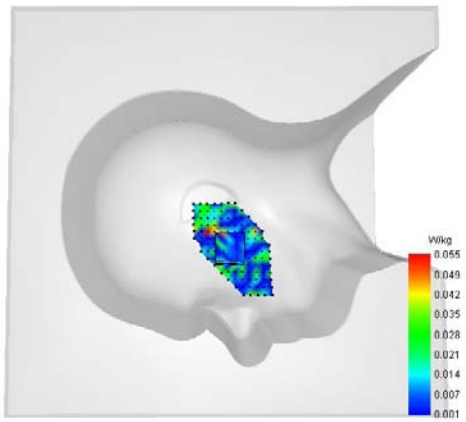
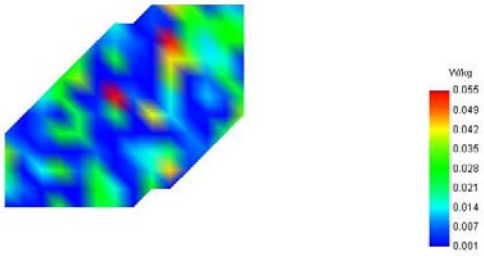
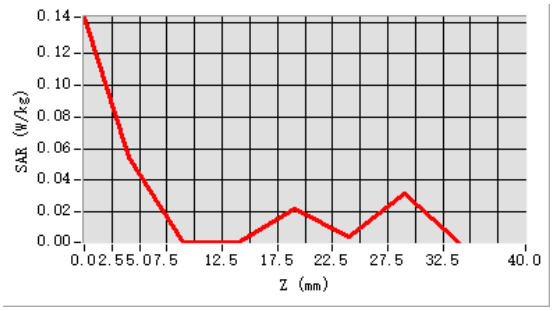
Maximum location: X=2.00, Y=-19.00 ; SAR Peak: 0.34 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 27:

Test Date	2023-04-06
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Tilt
Band	Bluetooth
Signal	GFSK
Frequency	2402
SAR 10g (W/Kg)	0.015
SAR 1g (W/Kg)	0.047

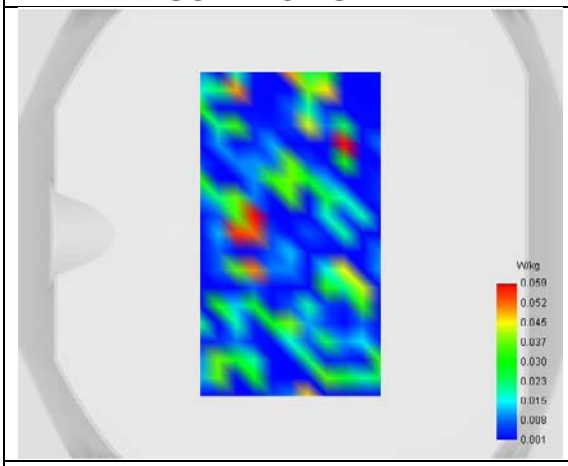
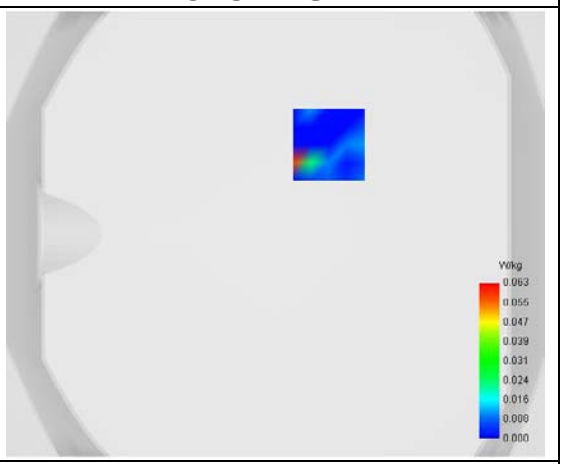
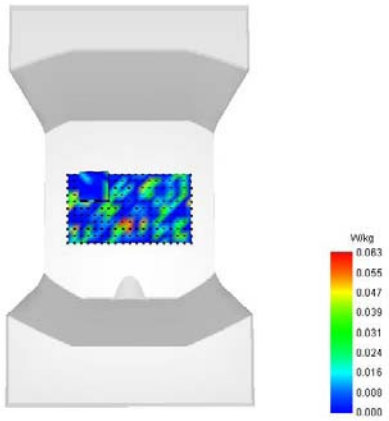
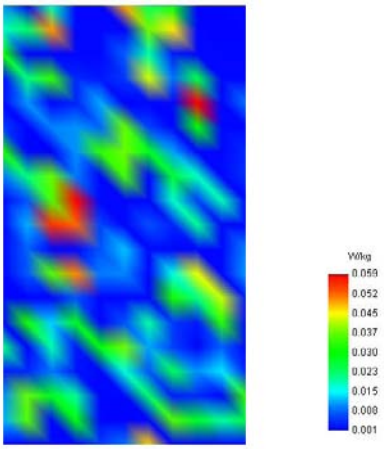
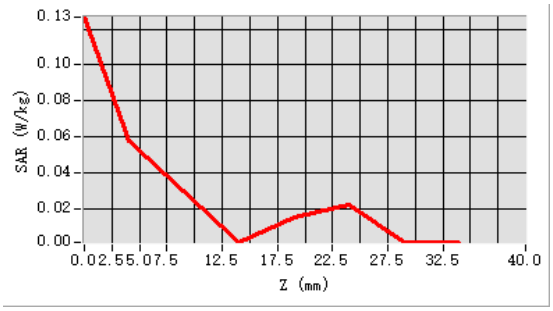
Maximum location: X=-48.00, Y=-25.00 ; SAR Peak: 0.16 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 28:

Test Date	2023-04-06
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	Bluetooth
Signal	GFSK
Frequency	2402
SAR 10g (W/Kg)	0.018
SAR 1g (W/Kg)	0.036

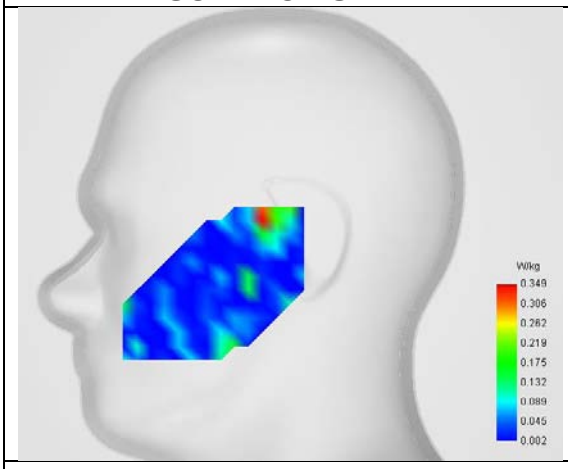
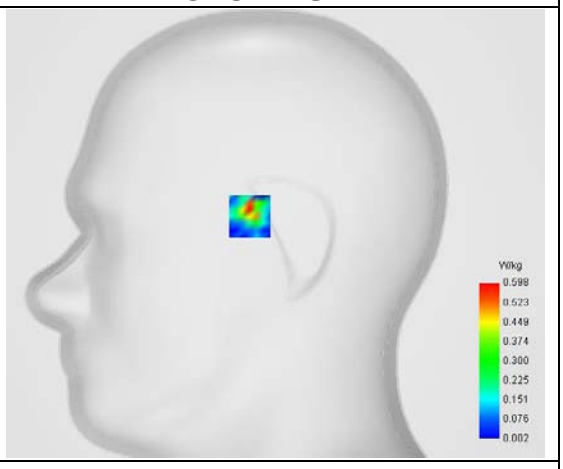
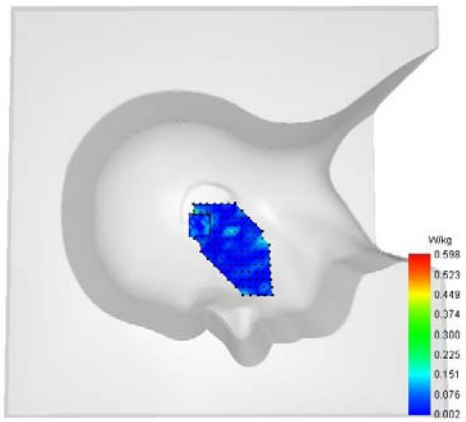
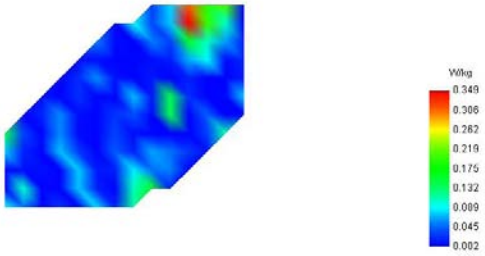
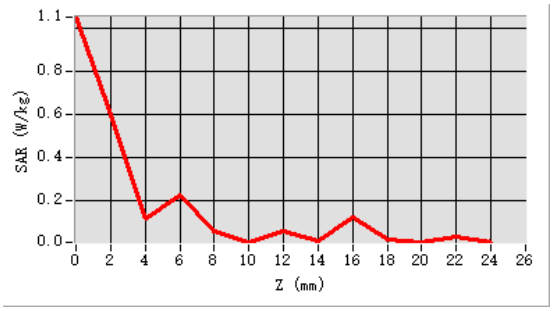
Maximum location: X=24.00, Y=40.00 ; SAR Peak: 0.17 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 29:

Test Date	2023-04-06
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	IEEE 802.11n U-NII
Signal	IEEE 802.11n-HT20
Frequency	5180
SAR 10g (W/Kg)	0.134
SAR 1g (W/Kg)	0.384

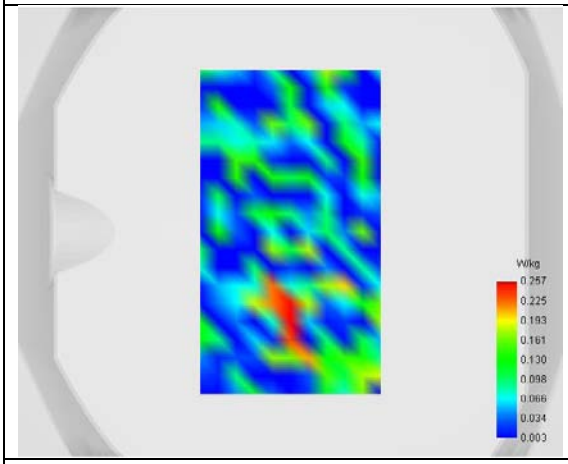
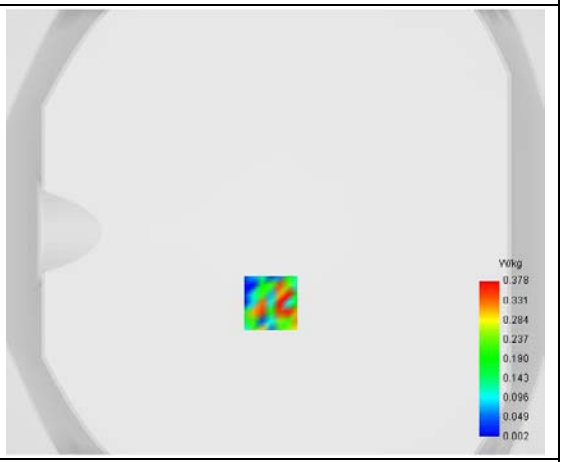
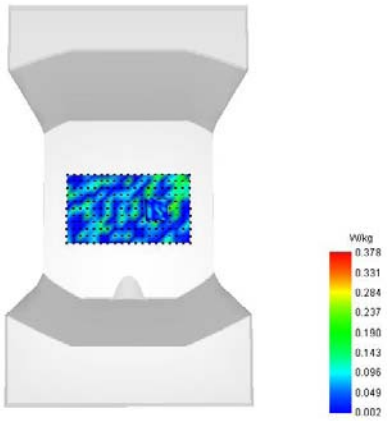
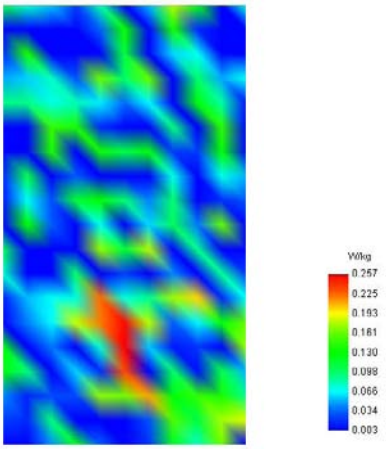
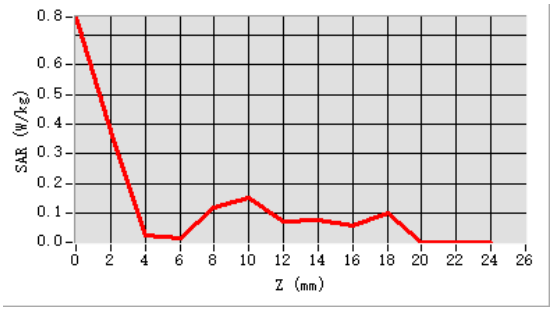
Maximum location: X=-15.00, Y=10.00 ; SAR Peak: 1.84 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 30:

Test Date	2023-04-06
Area Scan	surf_sam_plan.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Left Side
Band	IEEE 802.11n U-NII
Signal	IEEE 802.11n-HT20
Frequency	5180
SAR 10g (W/Kg)	0.106
SAR 1g (W/Kg)	0.186

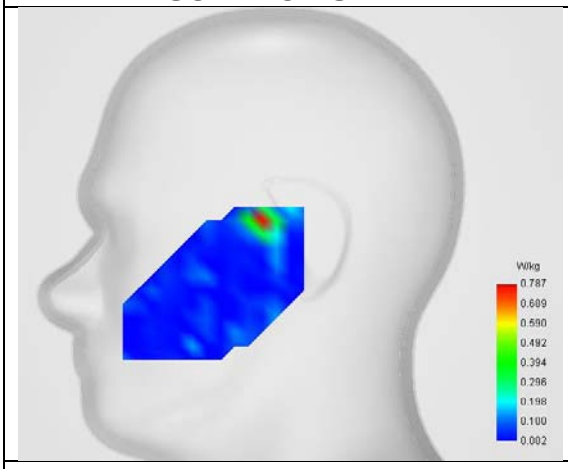
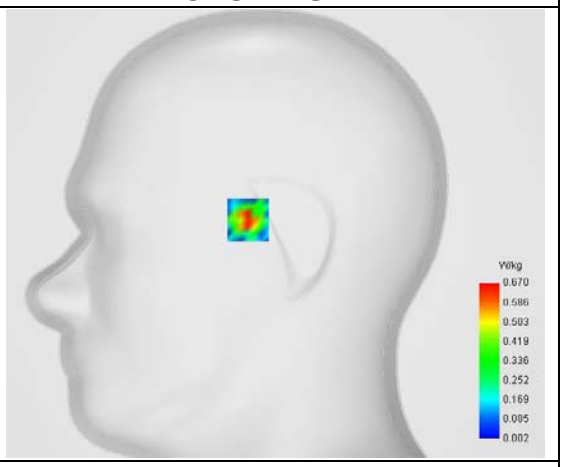
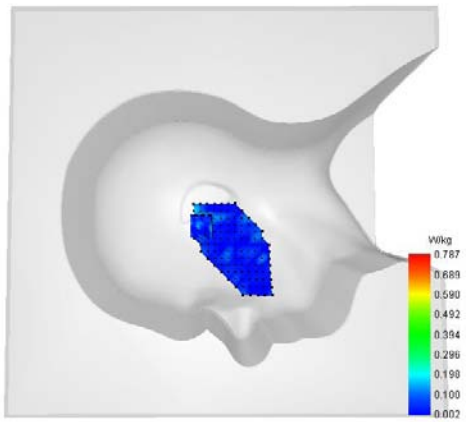
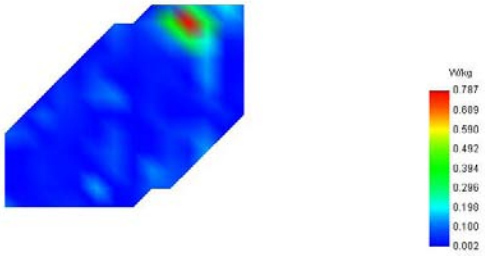
Maximum location: X=-2.00, Y=-32.00 ; SAR Peak: 0.98 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 31:

Test Date	2023-04-07
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	IEEE 802.11a U-NII
Signal	IEEE 802.11a
Frequency	5260
SAR 10g (W/Kg)	0.200
SAR 1g (W/Kg)	0.567

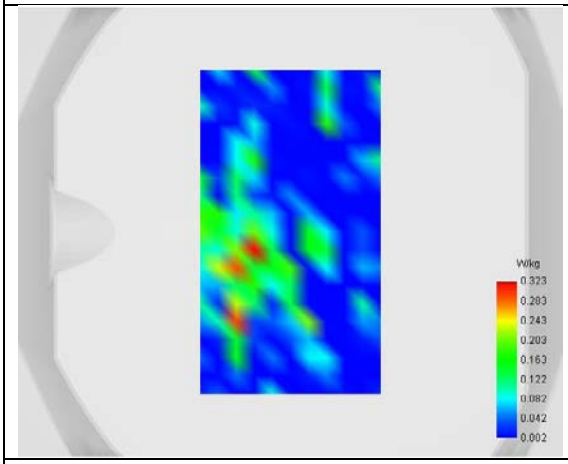
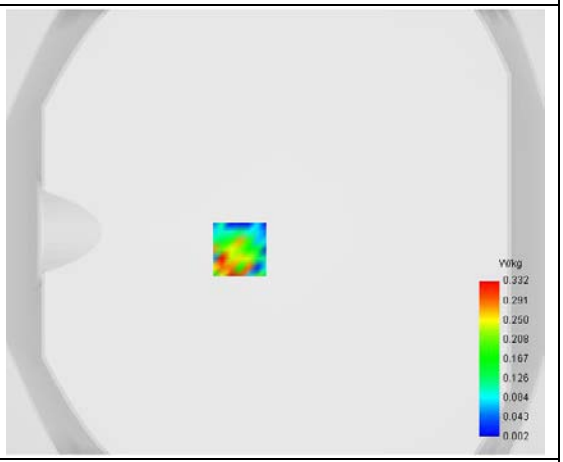
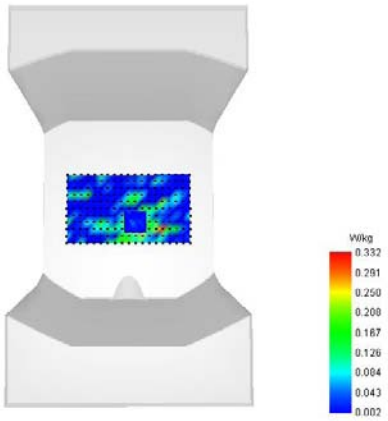
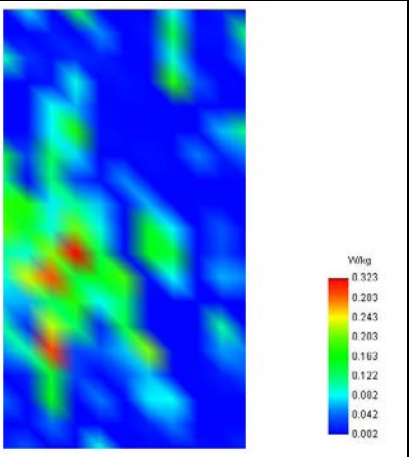
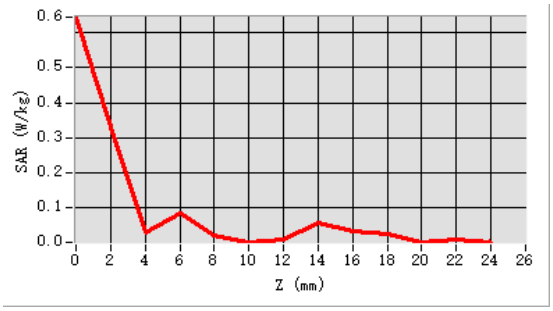
Maximum location: X=-16.00, Y=8.00 ; SAR Peak: 2.38 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 32:

Test Date	2023-04-07
Area Scan	surf_sam_plan.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Back Side
Band	IEEE 802.11a U-NII
Signal	IEEE 802.11a
Frequency	5260
SAR 10g (W/Kg)	0.074
SAR 1g (W/Kg)	0.149

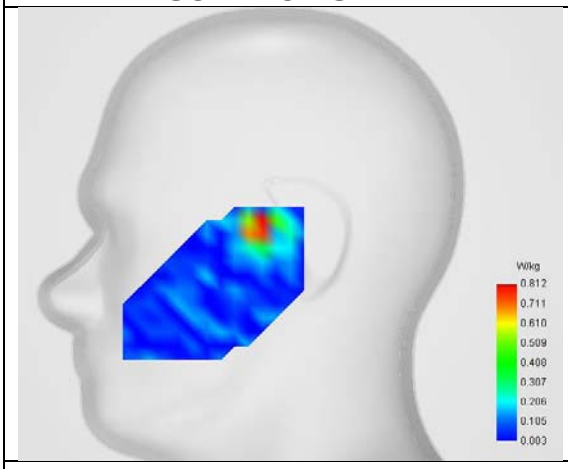
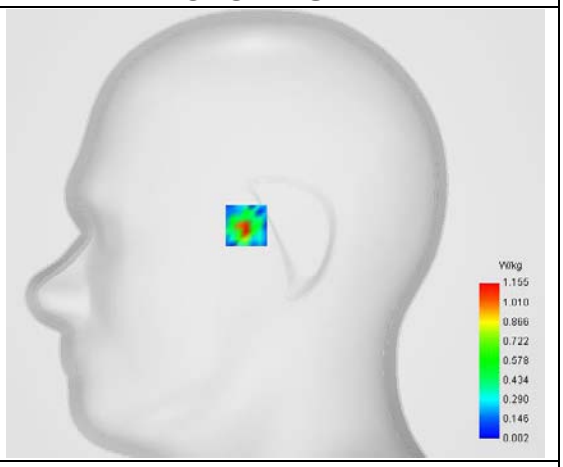
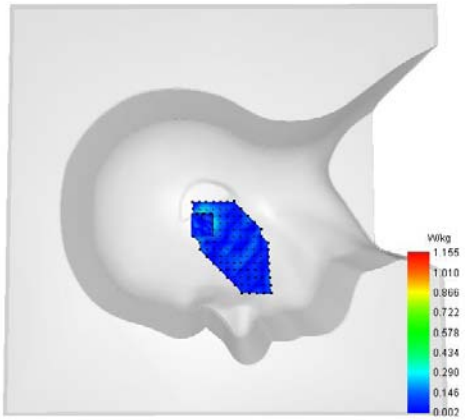
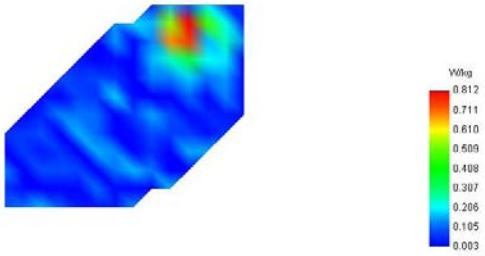
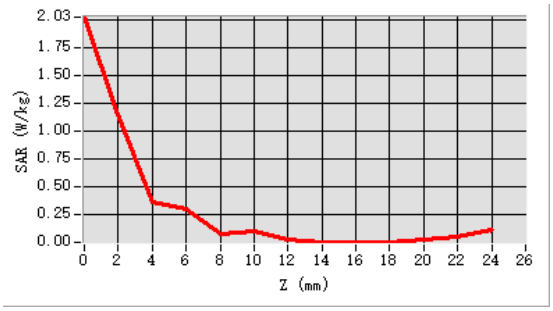
Maximum location: X=-16.00, Y=-8.00 ; SAR Peak: 0.71 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 33:

Test Date	2023-04-07
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	IEEE 802.11a U-NII
Signal	IEEE 802.11n-HT20
Frequency	5700
SAR 10g (W/Kg)	0.271
SAR 1g (W/Kg)	0.886

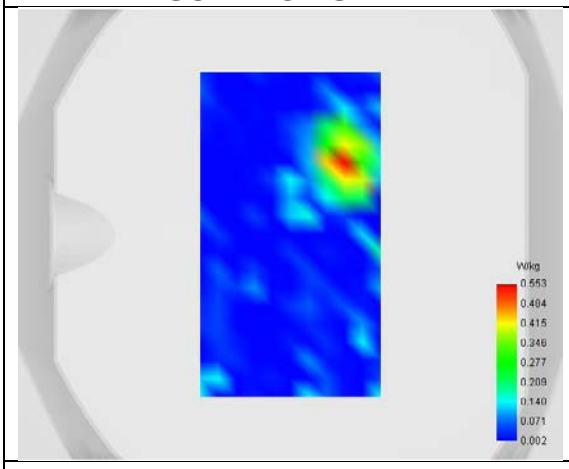
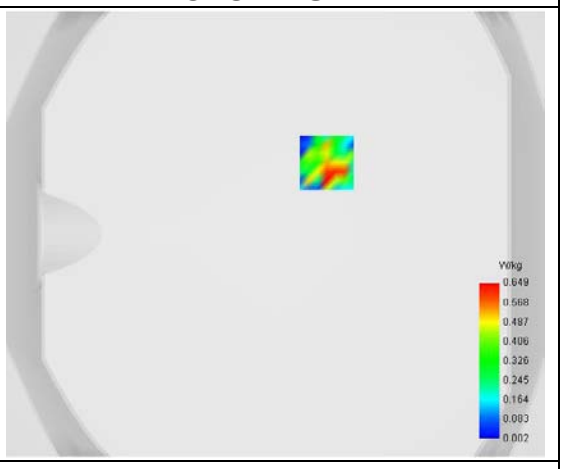
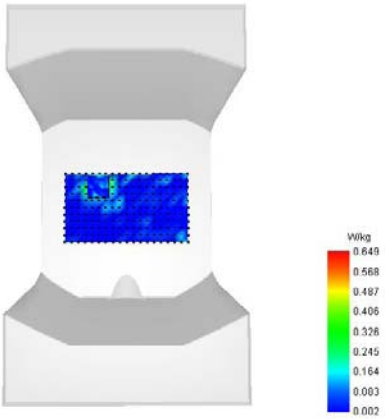
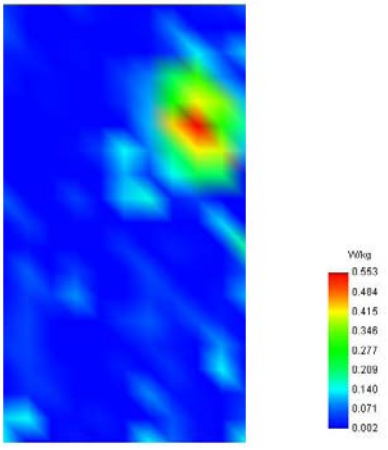
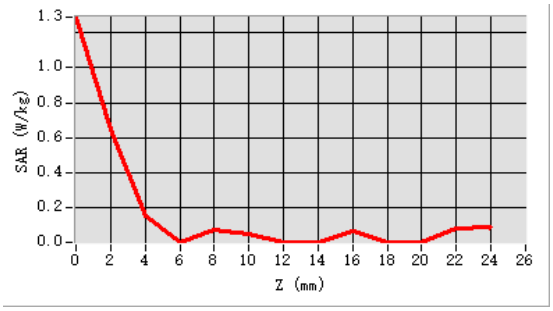
Maximum location: X=-17.00, Y=5.00 ; SAR Peak: 3.62 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 34:

Test Date	2023-04-07
Area Scan	surf_sam_plan.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Back Side
Band	IEEE 802.11a U-NII
Signal	IEEE 802.11n-HT20
Frequency	5700
SAR 10g (W/Kg)	0.142
SAR 1g (W/Kg)	0.352

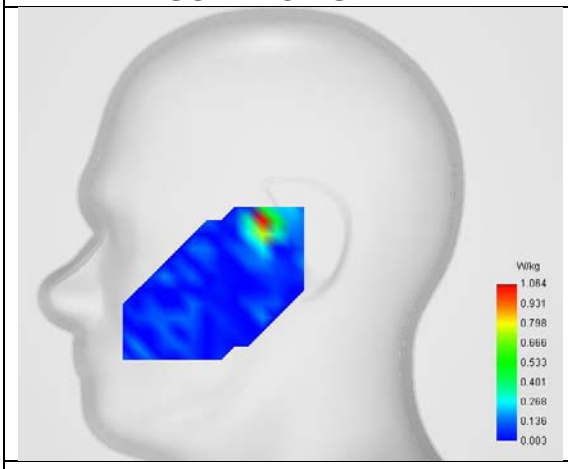
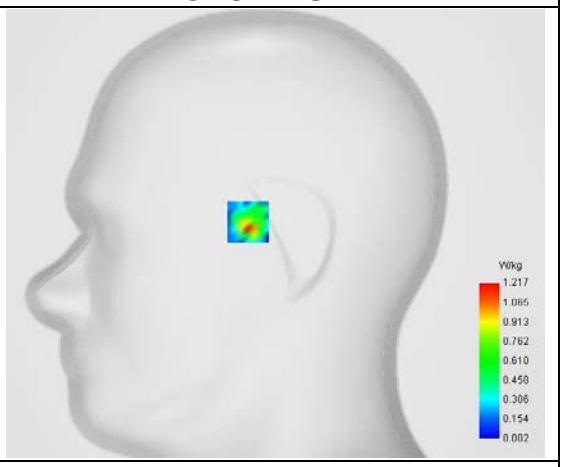
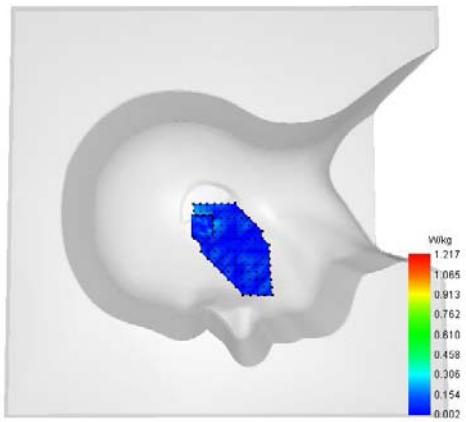
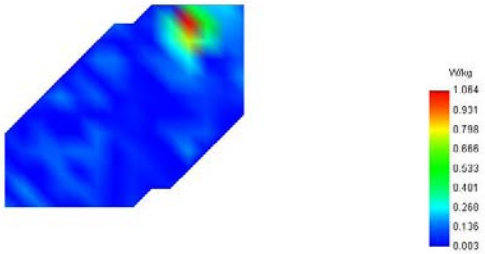
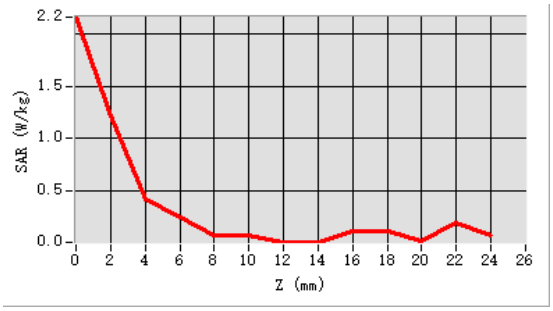
Maximum location: X=23.00, Y=32.00 ; SAR Peak: 1.66 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 35:

Test Date	2023-04-08
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	IEEE 802.11a U-NII
Signal	IEEE 802.11ac-VHT40
Frequency	5755
SAR 10g (W/Kg)	0.305
SAR 1g (W/Kg)	0.953

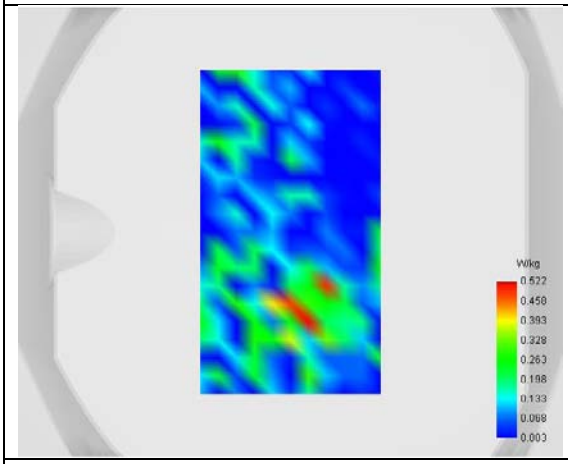
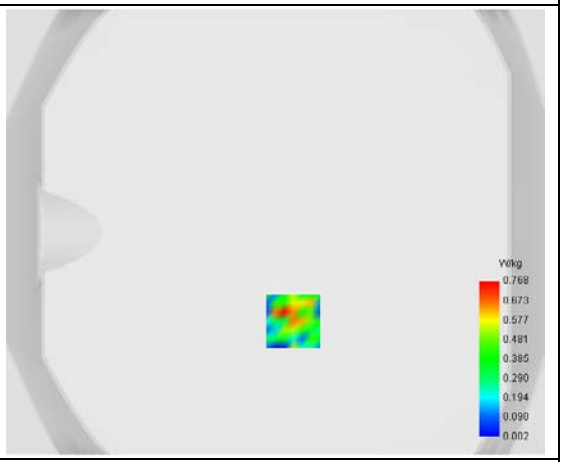
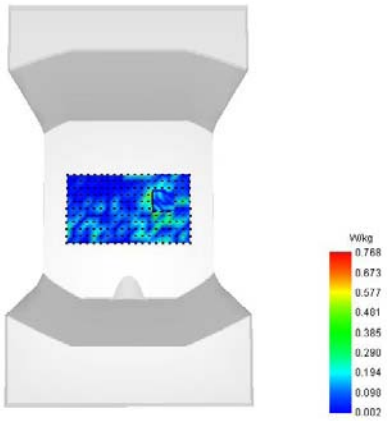
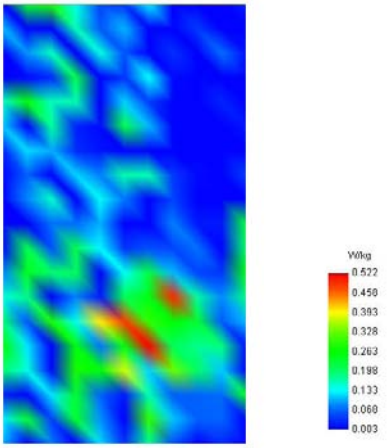
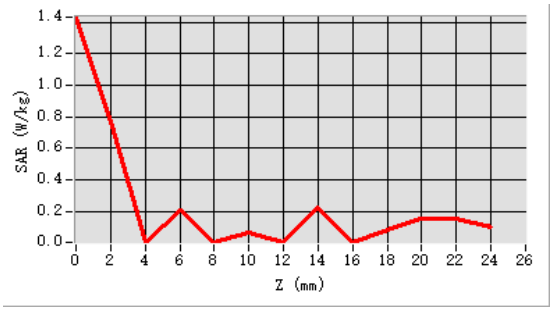
Maximum location: X=-16.00, Y=7.00 ; SAR Peak: 3.40 W/kg

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Hot spot position**
	
	

Plot 36:

Test Date	2023-04-08
Area Scan	surf_sam_plan.txt
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Left Side
Band	IEEE 802.11a U-NII
Signal	IEEE 802.11ac-VHT40
Frequency	5755
SAR 10g (W/Kg)	0.177
SAR 1g (W/Kg)	0.360

Maximum location: X=8.00, Y=-40.00 ; SAR Peak: 1.66 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※※※※※