SAR TEST REPORT

Product Name: Smartphone

Model Name: VORTEX HD65 Choice

FCC ID: 2ADLJ-HD65CHOICE

Issued For	:	Xwireless LLC. 11565 0ld Georgetown Road, Rockville, MD, USA
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:		LGT23K001HA01
Sample Received Date:		Nov. 01, 2023
Date of Test:		Nov. 08, 2023 ~ Nov. 22, 2023
Date of Issue:		Nov. 27, 2023
Max. SAR (1g):		Head: 0.963 W/kg Body: 0.931 W/kg

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Revision History

Rev.	Issue Date	Contents
00	Nov. 27, 2023	Initial Issue

TEST REPORT CERTIFICATION

Applicant	Xwireless LLC.
Address	11565 0ld Georgetown Road, Rockville, MD, USA
Manufacture	Xwireless LLC.
Address	11565 0ld Georgetown Road, Rockville, MD, USA
Product Name	Smartphone
Trademark	VORTEX
Model Name	VORTEX HD65 Choice
Sample number	LGT2311001-4

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	Smartphone
Trademark	VORTEX
Model Name	VORTEX HD65 Choice
Series Model	N/A
Model Difference	N/A
Device Category	Portable
Product stage	Production unit
RF Exposure Environment	General Population / Uncontrolled
Hardware Version	N/A
Software Version	N/A
Frequency Range	GSM 850: 824 ~ 849 MHz PCS 1900: 1850 ~ 1910 MHz WCDMA Band II: 1850 ~ 1910 MHz WCDMA Band IV:1710 ~ 1755 MHz WCDMA Band V: 824 ~ 849 MHz LTE Band 2:1850 ~1910MHz LTE Band 4:1710 ~1755MHz LTE Band 5:824 ~ 849MHz LTE Band 12:699~716MHz LTE Band 13:777~787MHz LTE Band 25:1850~1915MHz LTE Band 26:814~824MHz/824-849MHz LTE Band 41:2496~2690MHz LTE Band 66:1710~1780MHz LTE Band 71: 663~ 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 ~ 5250 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5250 ~ 5350 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5470 ~ 5725 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5725 ~ 5850 MHz Bluetooth: 2402 ~ 2480 MHz

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	0.341	0.459
	PCS 1900	0.192	0.401
	WCDMA Band II	0.293	0.649
	WCDMA Band IV	0.374	0.477
	WCDMA Band V	0.243	0.343
	LTE Band 2	0.375	0.857
	LTE Band 4	0.308	0.593
	LTE Band 5	0.398	0.479
	LTE Band 12	0.313	0.524
	LTE Band 13	0.411	0.641
	LTE Band 25	0.331	0.858
	LTE Band 26	0.358	0.472
	LTE Band 41	0.107	0.305
	LTE Band 66	0.380	0.611
	LTE Band 71	0.364	0.516
	2.4G WLAN	0.174	0.115
	Bluetooth	0.055	0.067
	5.2G WLAN	0.170	0.188
	5.3G WLAN	0.157	0.158
	5.6G WLAN	0.679	0.931
	5.8G WLAN	0.963	0.864
1-g Sum SAR		1.404	1.580
Battery	Rated Voltage:3.8V Capacity: 3500mAh		
Description test modes	SIM 1 and SIM 2 is a chipset unit and tested as single chipset, SIM 1 is used to tested		
Operating Mode:	GSM: GSM Voice; GPRS/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: FPC Antenna Bluetooth: FPC Antenna WLAN: FPC Antenna		
Operating Mode	Maximum continuous output		
SIM Card	Support dual-SIM, dual standby, the multiple SIM card with two lines cannot trans mitting at the same time		
Hotspot Mode	Support		
DTM Mode	Not Support		

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 D01 v06	Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies
5	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
6	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
7	FCC KDB 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
8	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
9	FCC KDB 941225 D06 v02r01	Hotspot Mode SAR
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices

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

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

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

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

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

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

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

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

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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

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

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

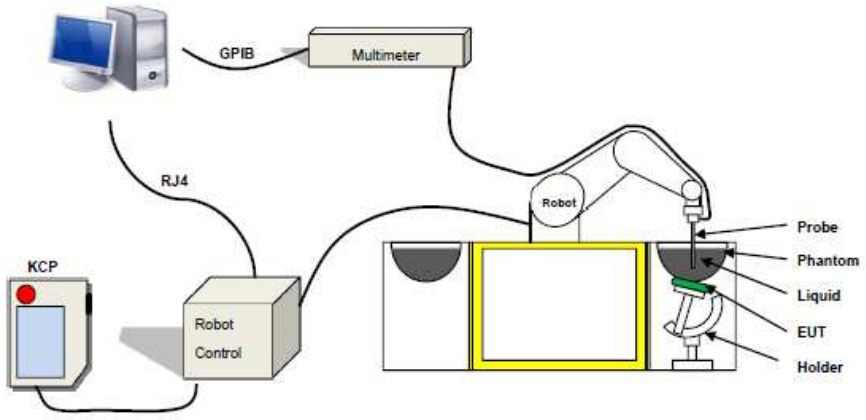
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

3.2 SAR System

MVG SAR System Diagram:



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

The following figure shows the system.

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

3.2.1 Probe

For the measurements the Specific Dosimetric E-Field Probe SN 04/22 EPGO364 with following specifications is used
- Probe Length: 330 mm
- Length of Individual Dipoles: 2mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 600 MHz to 6 GHz for head & body simulating liquid.
-Angle between probe axis (evaluation axis) and surface normal line: less than 30°

Figure 1-MVG COMOSAR Dosimetric E field Probe

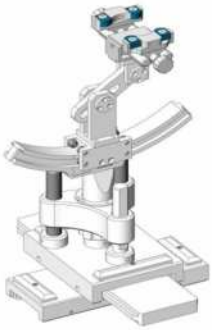
3.2.2 Phantom

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

Figure-SN 06/22 SAM 148

Figure-SN 06/22 ELLI 51

3.2.3 Device Holder



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

4. Tissue Simulating Liquids

4.1 Simulating Liquids Parameter Check

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

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

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

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

LIQUID MEASUREMENT RESULTS

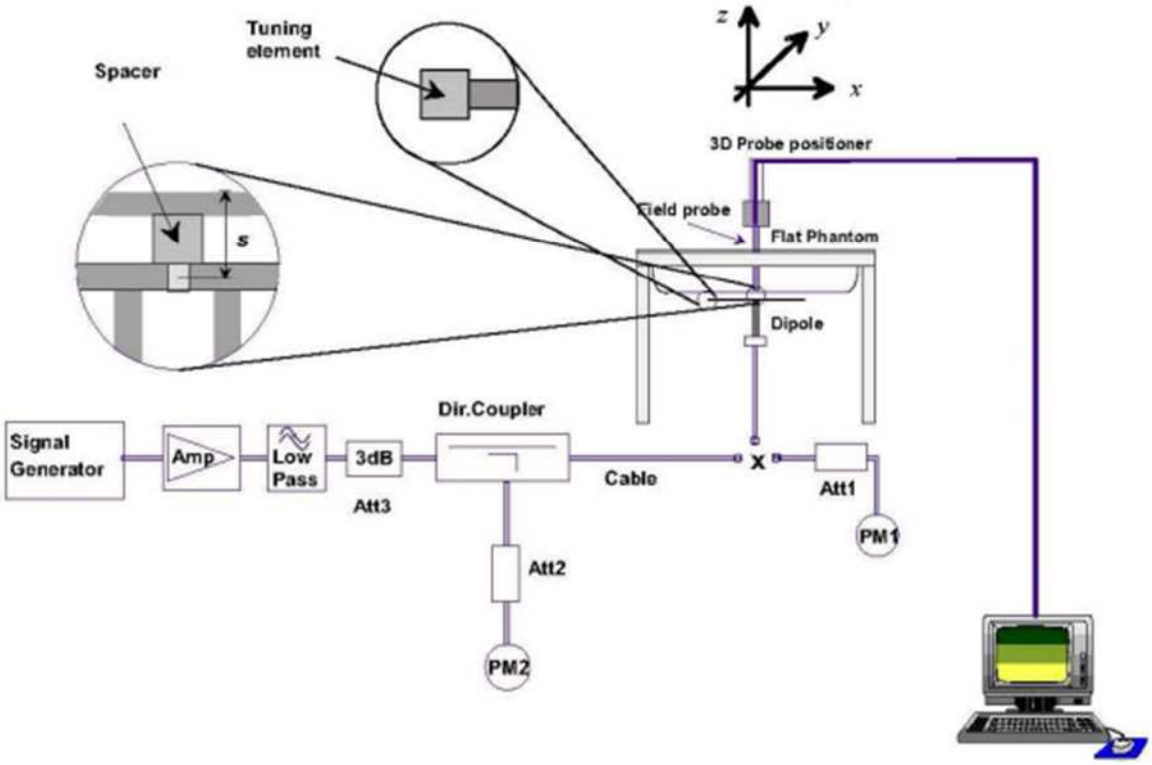
Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity%	Frequency (MHz)	Temp. [°C]					
2023-11-08	20.9	47	750	20.6	Permittivity	41.90	43.10	2.86	±5
					Conductivity	0.89	0.90	1.12	±5
2023-11-09	20.2	58	750	19.8	Permittivity	41.90	42.60	1.67	±5
					Conductivity	0.89	0.87	-2.25	±5
2023-11-10	22	56	835	21.7	Permittivity	41.50	41.07	-1.04	±5
					Conductivity	0.90	0.92	2.22	±5
2023-11-11	20.3	54	835	20.1	Permittivity	41.50	41.05	-1.08	±5
					Conductivity	0.90	0.92	2.22	±5
2023-11-12	21.3	57	1800	21	Permittivity	40.00	40.17	0.43	±5
					Conductivity	1.40	1.46	4.29	±5
2023-11-13	22	44	1800	21.7	Permittivity	40.00	40.14	0.35	±5
					Conductivity	1.40	1.45	3.57	±5
2023-11-14	23.9	60	1900	23.6	Permittivity	40.00	40.82	2.05	±5
					Conductivity	1.40	1.38	-1.43	±5
2023-11-15	20.2	55	1900	19.9	Permittivity	40.00	41.36	3.40	±5
					Conductivity	1.40	1.43	2.14	±5
2023-11-16	20.2	54	1900	20	Permittivity	40.00	40.69	1.72	±5
					Conductivity	1.40	1.37	-2.14	±5
2023-11-17	21	48	2450	20.7	Permittivity	39.20	39.63	1.10	±5
					Conductivity	1.80	1.84	2.22	±5
2023-11-18	22.1	40	2600	21.8	Permittivity	39.00	40.20	3.08	±5
					Conductivity	1.96	1.90	-3.06	±5
2023-11-19	23.7	45	5200	23.4	Permittivity	36.00	36.80	2.22	±5
					Conductivity	4.66	4.63	-0.64	±5
2023-11-20	21	44	5400	20.7	Permittivity	35.80	37.25	4.05	±5
					Conductivity	4.86	4.87	0.21	±5
2023-11-21	20.7	45	5600	20.3	Permittivity	35.55	36.44	2.50	±5
					Conductivity	5.07	5.05	-0.30	±5
2023-11-22	22.4	45	5800	22.2	Permittivity	35.30	35.91	1.73	±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	Tested Value	Normalized SAR	Target SAR	Tolerance	Limit
	(MHz)	(mW)	(W/Kg)	(W/kg)	1g(W/kg)	(%)	(%)
2023-11-08	750	100	0.861	8.61	8.27	4.11	10
2023-11-09	750	100	0.810	8.10	8.27	-2.06	10
2023-11-10	835	100	0.926	9.26	9.75	-5.03	10
2023-11-11	835	100	0.971	9.71	9.75	-0.41	10
2023-11-12	1800	100	3.695	36.95	39.06	-5.40	10
2023-11-13	1900	100	3.690	36.90	40.85	-9.67	10
2023-11-14	1900	100	3.893	38.93	40.85	-4.70	10
2023-11-15	1900	100	4.098	40.98	40.85	0.32	10
2023-11-16	1900	100	4.067	40.67	40.85	-0.44	10
2023-11-17	2450	100	5.269	52.69	54.28	-2.93	10
2023-11-18	2600	100	5.651	56.51	56.58	-0.12	10
2023-11-19	5200	100	7.618	76.18	77.64	-1.88	10
2023-11-20	5300	100	8.167	81.67	80.27	1.74	10
2023-11-21	5600	100	7.799	77.99	78.35	-0.46	10
2023-11-22	5800	100	7.590	75.90	74.92	1.31	10

Note:

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

6. SAR Evaluation Procedures

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

The following steps are used for each test position

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

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

- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.

- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

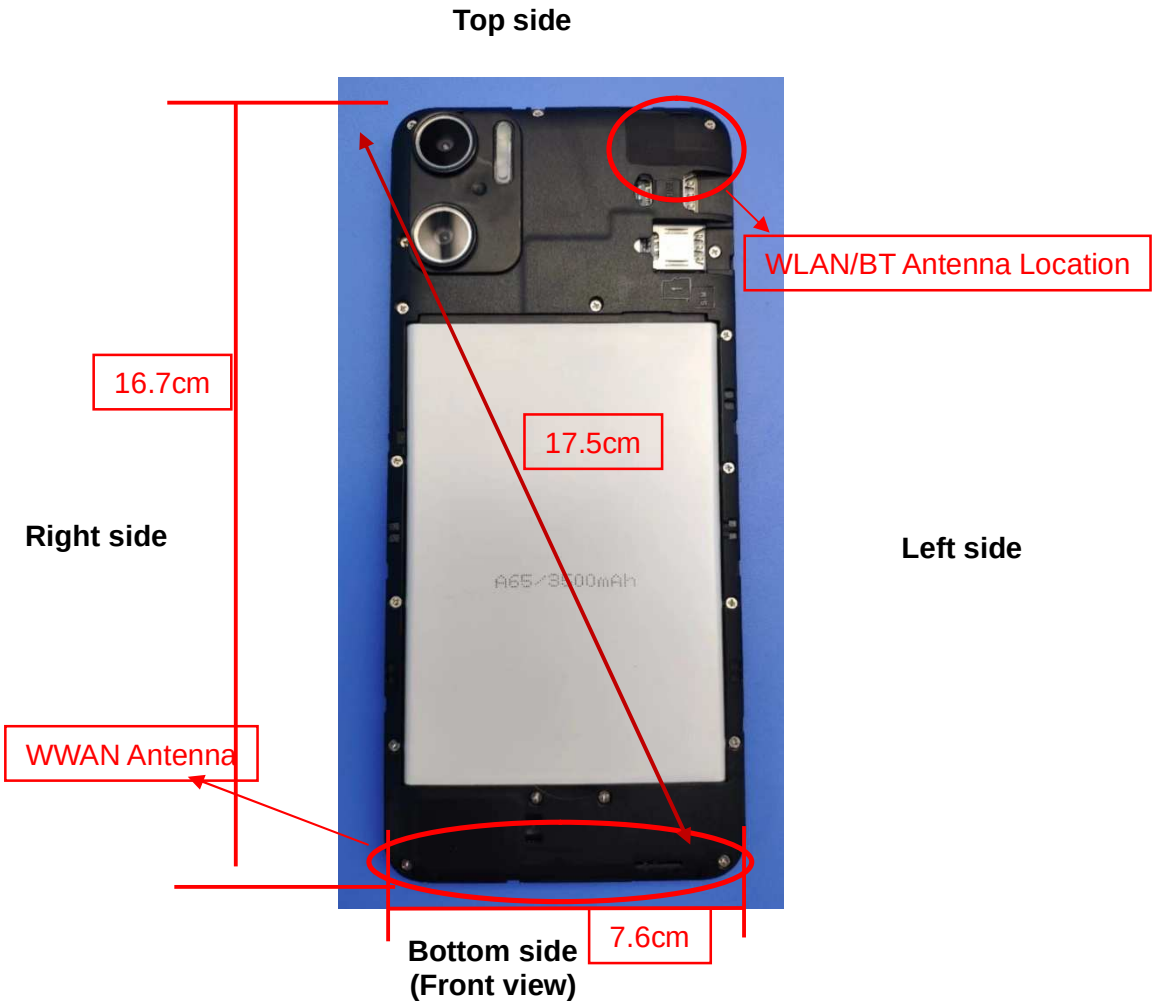
Ø Area Scan& Zoom Scan

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 Smartphone, support GSM/WCDMA/LTE/WLAN/BT mode.



Antenna Separation Distance(mm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN/BT	≤5	≤5	≤5	51	≤5	150
WWAN	≤5	≤5	≤5	≤5	157	≤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 (MHz)	848.8	1850.2	1880	1712.6	846.6
	Maximum Turn-up power (dBm)	34.5	31	24	24	24
	Maximum rated power(mW)	2818.38	1258.93	251.19	251.19	251.19
Back Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.28	11.03	10.94	11.46	16.30
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.28	11.03	10.94	11.46	16.30
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.28	11.03	10.94	11.46	16.30
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.28	11.03	10.94	11.46	16.30
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (mm)	157	157	157	157	157
	exclusion threshold(mW)	768.29	1180.28	1179.40	1336.28	1233.02
	Testing required?	YES	YES	NO	NO	NO
Bottom Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.28	11.03	10.94	11.46	16.30
	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 13
	Calculated Frequency (MHz)	1880	1720	844	704	782
	Maximum Turn-up power (dBm)	24.5	24	25.2	25	25
	Maximum rated power(mW)	281.84	251.19	331.13	316.23	316.23
Back Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.94	11.44	16.33	17.88	16.96
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.94	11.44	16.33	17.88	16.96
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.94	11.44	16.33	17.88	16.96
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.94	11.44	16.33	17.88	16.96
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (mm)	157	157	157	157	157
	exclusion threshold(mW)	1179.40	1184.37	765.33	680.96	727.45
	Testing required?	NO	NO	NO	NO	NO
Bottom Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.94	11.44	16.33	17.88	16.96
	Testing required?	YES	YES	YES	YES	YES

Exposure Position	Wireless Interface	LTE Band 25	LTE Band 26	LTE Band 41	LTE Band 66	LTE Band 71
	Calculated Frequency (MHz)	1882.5	841.5	2593	1720	680.5
	Maximum Turn-up power (dBm)	24.5	25.5	26.6	24	25
	Maximum rated power(mW)	281.84	354.81	457.09	251.19	316.23
Back Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.93	16.35	9.32	11.44	18.18
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.93	16.35	9.32	11.44	18.18
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.93	16.35	9.32	11.44	18.18
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.93	16.35	9.32	11.44	18.18
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (mm)	157	157	157	157	157
	exclusion threshold(mW)	1179.33	763.79	1163.15	1184.37	667.26
	Testing required?	NO	NO	NO	NO	NO
Bottom Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	10.93	16.35	9.32	11.44	18.18
	Testing required?	YES	YES	YES	YES	YES

Exposure Position	Wireless Interface	BT	2.4G WLAN	5.2G WLAN
	Calculated Frequency (MHz)	2441	2422	5180
	Maximum Turn-up power (dBm)	4	18.5	9.5
	Maximum rated power(mW)	2.51	70.79	8.91
Back Side	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	9.60	9.64	6.59
	Testing required?	NO	YES	YES
Front Side	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	9.60	9.64	6.59
	Testing required?	NO	YES	YES
Left Edge	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	9.60	9.64	6.59
	Testing required?	NO	YES	YES
Right Edge	Separation distance (mm)	51	51	51
	exclusion threshold(mW)	106.01	106.38	75.91
	Testing required?	NO	NO	NO
Top Edge	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	9.60	9.64	6.59
	Testing required?	NO	YES	YES
Bottom Edge	Separation distance (mm)	150	150	150
	exclusion threshold(mW)	1096.01	1096.38	1065.91
	Testing required?	NO	NO	NO

Exposure Position	Wireless Interface	5.3G WLAN	5.6G WLAN	5.8G WLAN
	Calculated Frequency (MHz)	5260	5700	5745
	Maximum Turn-up power (dBm)	9.5	10.5	10
	Maximum rated power(mW)	8.91	11.22	10.00
Back Side	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.54	6.28	6.26
	Testing required?	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.54	6.28	6.26
	Testing required?	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.54	6.28	6.26
	Testing required?	YES	YES	YES
Right Edge	Separation distance (mm)	51	51	51
	exclusion threshold(mW)	75.40	72.83	72.58
	Testing required?	NO	NO	NO
Top Edge	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.54	6.28	6.26
	Testing required?	YES	YES	YES
Bottom Edge	Separation distance (mm)	150	150	150
	exclusion threshold(mW)	1065.40	1062.83	1062.58
	Testing required?	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 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. per KDB 447498 D01, standalone SAR test exclusion threshold is applied; if the distance of the antenna to the user is <25mm,25mm is user to determine SAR exclusion threshold
4. per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distance ≤50mm are determined by:
   [(max.power of channel, including tune-up tolerance, mW)/(min. test separation distance,

mm)]*[√f(GHz）)≤3.0 for 1-g SAR and≤7.5 for10-g extremity SAR ,f(GHz) is the RF channel transmit frequency in GHz. Power and distance are rounded to the nearest mW and mm before calculation.

The result is rounded to one decimal place for comparison

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

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

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

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

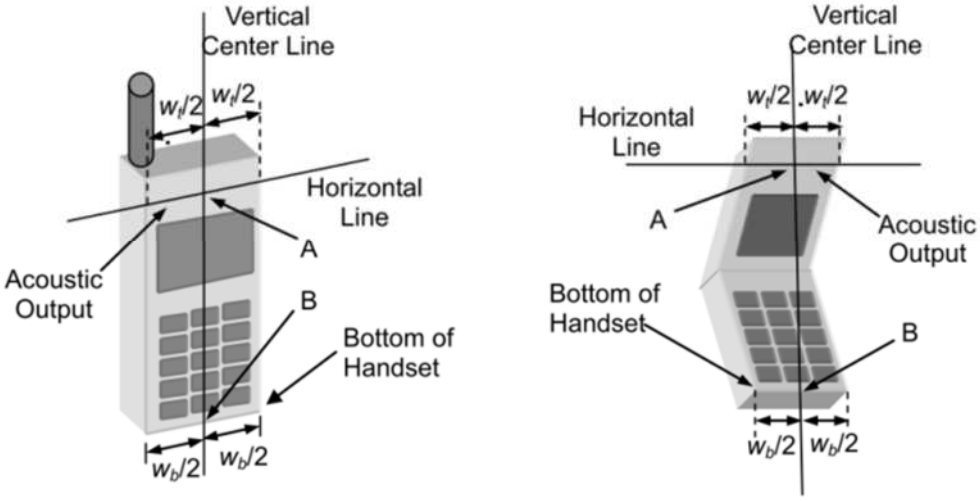
6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion 8.for each frequency band ,testing at higher data rates and higher order modulations is not required when the maximum average output power for each of each of these configurations is less than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

8. EUT Test Position

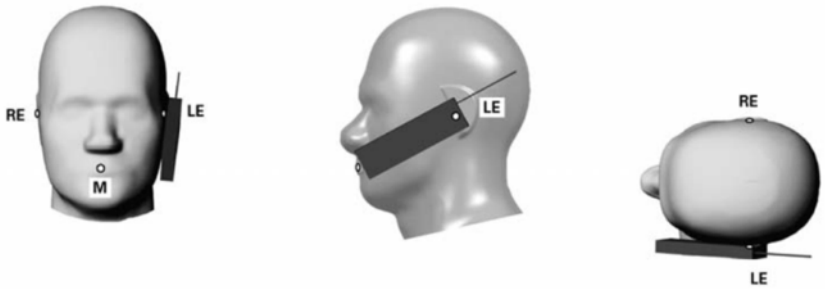
This EUT was tested in Right Cheek, Right Titled, Left Cheek, Left Titled, Front Face and Rear Face.

8.1 Define Two Imaginary Lines on the Handset

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

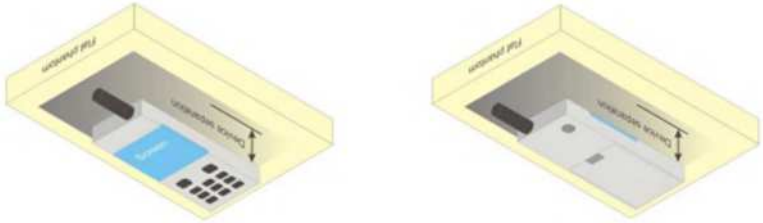


Cheek Position
1) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane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



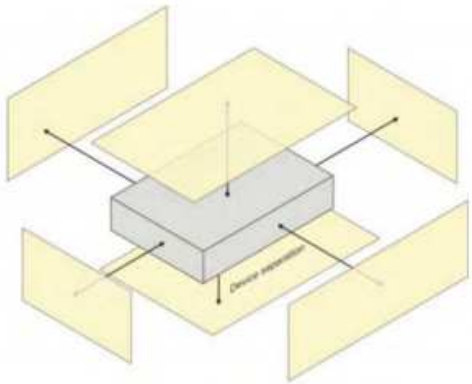
Title Position
(1) To position the device in the “cheek” position described above.
(2) While maintaining the device in the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until with the ear is lost.

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



8.2 Hotspot mode exposure position condition

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



9. Uncertainty

9.1 Measurement Uncertainty

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

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

10. Conducted Power Measurement

10.1 Test Result:

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)	33.76	33.75	34.16	30.57	30.51	30.23
GPRS (GMSK, 1-Slot)	33.80	33.78	34.15	30.62	30.56	30.29
GPRS (GMSK, 2-Slot)	33.14	32.99	33.43	29.85	29.81	29.49
GPRS (GMSK, 3-Slot)	31.28	31.08	31.53	27.86	27.81	27.47
GPRS (GMSK, 4-Slot)	30.06	29.77	30.25	26.62	26.56	26.12
EGPRS (8PSK, 1-Slot)	33.24	33.21	33.36	30.98	30.82	30.57
EGPRS (8PSK, 2-Slot)	33.21	33.00	33.47	30.75	30.71	30.45
EGPRS (8PSK, 3-Slot)	33.10	32.88	33.28	30.31	30.15	30.13
EGPRS (8PSK, 4-Slot)	32.86	32.46	32.07	29.91	29.78	29.53
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)	24.73	24.72	25.13	21.54	21.48	21.20
GPRS (GMSK, 1-Slot)	24.77	24.75	25.12	21.59	21.53	21.26
GPRS (GMSK, 2-Slot)	27.12	26.97	27.41	23.83	23.79	23.47
GPRS (GMSK, 3-Slot)	27.02	26.82	27.27	23.60	23.55	23.21
GPRS (GMSK, 4-Slot)	27.05	26.76	27.24	23.61	23.55	23.11
EGPRS (8PSK, 1-Slot)	24.21	24.18	24.33	21.95	21.79	21.54
EGPRS (8PSK, 2-Slot)	27.19	26.98	27.45	24.73	24.69	24.43
EGPRS (8PSK, 3-Slot)	28.84	28.62	29.02	26.05	25.89	25.87
EGPRS (8PSK, 4-Slot)	29.85	29.45	29.06	26.90	26.77	26.52
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	23.64	23.85	23.67	23.65	23.38	23.39	24.27	24.46	24.52
HSDPA Subtest-1	22.70	22.94	22.74	22.69	22.50	22.48	23.28	23.49	23.60
HSDPA Subtest-2	22.29	22.51	22.31	22.36	22.08	22.02	22.96	23.15	23.11
HSDPA Subtest-3	20.93	21.33	21.16	21.26	21.13	20.70	21.82	22.05	21.80
HSDPA Subtest-4	21.36	21.66	21.25	21.25	20.89	20.68	21.67	22.13	22.11
HSUPA Subtest-1	21.55	22.74	22.54	21.62	22.26	22.25	22.03	23.32	23.35
HSUPA Subtest-2	22.61	22.77	22.60	22.58	22.30	22.34	23.23	23.31	23.55
HSUPA Subtest-3	20.88	21.61	21.33	20.98	21.18	21.17	21.63	22.15	22.21
HSUPA Subtest-4	22.71	22.92	22.73	22.72	22.47	22.46	23.29	23.50	23.54
HSUPA Subtest-5	21.19	22.20	22.02	21.30	21.83	21.83	22.03	22.80	22.83

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)	Average Power (dBm)	Output Power (mW)
802.11b	1	2412	14.87	30.69
	7	2437	15.02	31.77
	11	2462	14.79	30.13
802.11g	1	2412	17.94	62.23
	7	2437	17.94	62.23
	11	2462	17.60	57.54
802.11n-HT20	1	2412	17.87	61.24
	7	2437	17.78	59.98
	11	2462	17.45	55.59
802.11n-HT40	3	2422	18.23	66.53
	6	2437	17.97	62.66
	9	2452	17.90	61.66

Bluetooth

BT				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	3.59	2.29
	39	2441	3.83	2.42
	78	2480	3.44	2.21
π/4-QPSK(2Mbps)	0	2402	2.71	1.87
	39	2441	3.05	2.02
	78	2480	2.45	1.76
8DPSK(3Mbps)	0	2402	2.59	1.82
	39	2441	2.85	1.93
	78	2480	2.54	1.79

BLE

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	-3.28	0.47
	19	2440	-2.91	0.51
	39	2480	-3.31	0.47
GFSK(2Mbps)	0	2402	-3.40	0.46
	19	2440	-3.01	0.50
	39	2480	-3.48	0.45

WLAN (5.2Gband)

5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	36	5180	9.34	8.59
	40	5200	8.67	7.36
	48	5240	8.86	7.69
802.11n-HT20	36	5180	9.26	8.43
	40	5200	8.65	7.33
	48	5240	8.85	7.67
802.11n-HT40	38	5190	7.91	6.18
	46	5230	7.83	6.07
802.11ac-VHT80	42	5210	7.72	5.92

5.3G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	52	5260	9.20	8.32
	60	5300	9.23	8.38
	64	5320	8.99	7.93
802.11n-HT20	52	5260	9.28	8.47
	60	5300	9.09	8.11
	64	5320	9.01	7.96
802.11n-HT40	54	5270	8.22	6.64
	62	5310	8.24	6.67
802.11ac-VHT80	58	5290	8.13	6.50

WLAN (5.6G band)

5.6G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	100	5500	9.20	8.32
	116	5580	9.64	9.20
	140	5700	10.04	10.09
802.11n-HT20	100	5500	8.59	7.23
	116	5580	9.00	7.94
	140	5700	9.22	8.36
802.11n-HT40	102	5510	7.18	5.22
	110	5550	7.37	5.46
	134	5670	8.07	6.41
802.11ac-VHT80	106	5530	7.25	5.31
	122	5610	8.36	6.85

WLAN (5.8G band)

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	149	5745	9.71	9.35
	157	5785	9.47	8.85
	165	5825	8.99	7.93
802.11n-HT20	149	5745	9.61	9.14
	157	5785	9.42	8.75
	165	5825	8.97	7.89
802.11n-HT40	151	5755	8.45	7.00
	159	5795	8.13	6.50
802.11ac-VHT80	155	5775	8.25	6.68

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	23.69	23.75	23.76
1.4	1	2		23.81	23.88	23.91
1.4	1	5		23.69	23.74	23.79
1.4	3	0		23.67	23.91	23.85
1.4	3	1		23.67	23.92	23.82
1.4	3	2		23.69	23.9	23.82
1.4	6	0		22.68	22.83	22.81
1.4	1	0	16-QAM	22.81	22.98	22.66
1.4	1	2		22.9	23.12	22.84
1.4	1	5		22.82	22.99	22.72
1.4	3	0		22.87	23.09	23.03
1.4	3	1		22.88	23.14	23.01
1.4	3	2		22.88	23.13	23.05
1.4	6	0		21.87	22.02	21.98
3	1	0	QPSK	23.64	23.88	23.75
3	1	7		23.9	24.17	24.03
3	1	14		23.59	23.92	23.78
3	8	0		22.66	22.88	22.81
3	8	4		22.68	22.87	22.84
3	8	7		22.68	22.87	22.85
3	15	0		22.64	22.86	22.79
3	1	0	16-QAM	22.89	22.79	23.3
3	1	7		23.14	23.04	23.59
3	1	14		22.82	22.76	23.31
3	8	0		21.69	21.87	21.85
3	8	4		21.71	21.91	21.87
3	8	7		21.67	21.91	21.86
3	15	0		21.6	21.96	21.86

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.58	23.76	23.58
5	1	12		23.88	24.14	24.19
5	1	24		23.52	23.77	23.66
5	12	0		22.63	22.87	22.72
5	12	6		22.72	22.93	22.85
5	12	11		22.68	22.96	22.82
5	25	0		22.68	22.93	22.81
5	1	0	16-QAM	23.09	23.1	23
5	1	12		23.47	23.5	23.41
5	1	24		23.07	23.19	23.09
5	12	0		21.6	21.81	21.8
5	12	6		21.69	21.91	21.88
5	12	11		21.68	21.89	21.85
5	25	0		21.65	22.02	21.8
10	1	0	QPSK	23.64	23.75	23.65
10	1	24		23.74	23.93	23.82
10	1	49		23.55	23.78	23.78
10	25	0		22.61	22.89	22.82
10	25	12		22.64	22.9	22.78
10	25	24		22.65	23.02	22.88
10	50	0		22.63	22.95	22.79
10	1	0	16-QAM	22.49	23.17	22.84
10	1	24		22.62	23.34	23.03
10	1	49		22.43	23.3	22.96
10	25	0		21.62	21.92	21.83
10	25	12		21.63	21.95	21.79
10	25	24		21.67	22.13	21.93
10	50	0		21.63	22	21.89

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.52	23.72	23.6
15	1	37		23.8	24.24	23.91
15	1	74		23.51	23.79	23.67
15	36	0		22.63	22.9	22.8
15	36	18		22.66	22.95	22.8
15	36	39		22.64	23	22.88
15	75	0		22.65	22.98	22.85
15	1	0	16-QAM	22.73	22.74	23.04
15	1	38		22.94	23.29	23.43
15	1	75		22.68	22.92	23.16
15	36	0		21.63	21.82	21.8
15	36	18		21.69	21.87	21.83
15	36	39		21.67	21.95	21.88
15	75	0		21.61	22	21.85
20	1	0	QPSK	23.29	23.53	23.49
20	1	49		23.63	24.04	23.83
20	1	99		23.44	23.62	23.55
20	50	0		22.52	22.82	22.83
20	50	24		22.6	22.93	22.77
20	50	49		22.57	23.07	22.75
20	100	0		22.5	22.96	22.78
20	1	0	16-QAM	22.69	22.63	22.78
20	1	49		22.96	23.17	23.1
20	1	99		22.76	22.93	22.87
20	50	0		21.56	21.82	21.89
20	50	24		21.64	21.89	21.86
20	50	49		21.61	22.07	21.79
20	100	0		21.54	21.99	21.87

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.66	23.51	23.32
1.4	1	2		23.79	23.63	23.53
1.4	1	5		23.63	23.51	23.33
1.4	3	0		23.66	23.46	23.49
1.4	3	1		23.67	23.51	23.48
1.4	3	2		23.65	23.52	23.47
1.4	6	0		22.61	22.45	22.41
1.4	1	0	16-QAM	22.4	22.68	22.57
1.4	1	2		22.58	22.82	22.64
1.4	1	5		22.43	22.67	22.58
1.4	3	0		22.79	22.75	22.67
1.4	3	1		22.77	22.76	22.69
1.4	3	2		22.81	22.72	22.69
1.4	6	0		21.83	21.66	21.6
3	1	0	QPSK	23.57	23.47	23.38
3	1	7		23.79	23.76	23.63
3	1	14		23.59	23.47	23.38
3	8	0		22.57	22.44	22.39
3	8	4		22.6	22.45	22.43
3	8	7		22.61	22.44	22.41
3	15	0		22.58	22.46	22.36
3	1	0	16-QAM	22.77	22.47	22.83
3	1	7		23.06	22.68	23.05
3	1	14		22.77	22.34	22.82
3	8	0		21.59	21.45	21.42
3	8	4		21.58	21.49	21.44
3	8	7		21.58	21.47	21.42
3	15	0		21.54	21.54	21.42

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.45	23.37	23.21
5	1	12		23.91	23.74	23.7
5	1	24		23.54	23.29	23.28
5	12	0		22.54	22.46	22.39
5	12	6		22.67	22.5	22.43
5	12	11		22.62	22.46	22.39
5	25	0		22.6	22.46	22.38
5	1	0	16-QAM	22.97	22.79	22.58
5	1	12		23.41	23.18	22.88
5	1	24		23.02	22.73	22.62
5	12	0		21.55	21.4	21.38
5	12	6		21.66	21.5	21.45
5	12	11		21.61	21.44	21.44
5	25	0		21.59	21.57	21.43
10	1	0	QPSK	23.62	23.48	23.35
10	1	24		23.85	23.56	23.49
10	1	49		23.7	23.34	23.4
10	25	0		22.61	22.53	22.44
10	25	12		22.7	22.47	22.42
10	25	24		22.7	22.51	22.48
10	50	0		22.67	22.55	22.43
10	1	0	16-QAM	22.4	22.98	22.51
10	1	24		22.65	23.09	22.7
10	1	49		22.51	22.84	22.54
10	25	0		21.64	21.61	21.47
10	25	12		21.71	21.59	21.42
10	25	24		21.72	21.56	21.5
10	50	0		21.68	21.59	21.49

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.53	23.4	23.29
15	1	37		23.88	23.69	23.54
15	1	74		23.57	23.31	23.37
15	36	0		22.65	22.51	22.4
15	36	18		22.71	22.51	22.47
15	36	39		22.66	22.49	22.48
15	75	0		22.72	22.54	22.48
15	1	0	16-QAM	22.6	22.9	22.5
15	1	38		23.05	23.24	22.86
15	1	75		22.71	22.74	22.57
15	36	0		21.54	21.53	21.45
15	36	18		21.67	21.52	21.51
15	36	39		21.64	21.52	21.5
15	75	0		21.69	21.51	21.44
20	1	0	QPSK	23.32	23.4	23.11
20	1	49		23.72	23.63	23.47
20	1	99		23.32	23.23	23.23
20	50	0		22.61	22.52	22.36
20	50	24		22.66	22.5	22.42
20	50	49		22.59	22.51	22.41
20	100	0		22.61	22.53	22.41
20	1	0	16-QAM	22.64	22.69	22.38
20	1	49		23.05	22.88	22.78
20	1	99		22.74	22.51	22.45
20	50	0		21.68	21.58	21.45
20	50	24		21.76	21.57	21.52
20	50	49		21.66	21.51	21.46
20	100	0		21.64	21.58	21.45

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.21	24.39	24.33
1.4	1	2		24.4	24.55	24.53
1.4	1	5		24.29	24.44	24.33
1.4	3	0		24.3	24.39	24.48
1.4	3	1		24.3	24.4	24.45
1.4	3	2		24.3	24.47	24.47
1.4	6	0		23.27	23.41	23.41
1.4	1	0	16-QAM	23.13	23.58	23.56
1.4	1	2		23.3	23.71	23.72
1.4	1	5		23.14	23.64	23.67
1.4	3	0		23.46	23.64	23.73
1.4	3	1		23.49	23.67	23.78
1.4	3	2		23.45	23.69	23.77
1.4	6	0		22.47	22.63	22.62
3	1	0	QPSK	24.24	24.35	24.46
3	1	7		24.64	24.5	24.78
3	1	14		24.34	24.4	24.4
3	8	0		23.24	23.39	23.45
3	8	4		23.28	23.41	23.49
3	8	7		23.27	23.39	23.4
3	15	0		23.24	23.37	23.42
3	1	0	16-QAM	23.17	23.86	23.67
3	1	7		23.44	24.22	23.99
3	1	14		23.12	23.97	23.65
3	8	0		22.28	22.44	22.48
3	8	4		22.26	22.49	22.53
3	8	7		22.26	22.42	22.39
3	15	0		22.32	22.48	22.41

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.12	24.18	24.29
5	1	12		24.66	24.65	24.76
5	1	24		24.12	24.33	24.34
5	12	0		23.22	23.46	23.32
5	12	6		23.3	23.48	23.54
5	12	11		23.35	23.23	23.21
5	25	0		23.32	23.39	23.26
5	1	0	16-QAM	23.69	23.57	23.69
5	1	12		24.09	24.17	24.11
5	1	24		23.68	23.77	23.73
5	12	0		22.22	22.45	22.38
5	12	6		22.3	22.44	22.53
5	12	11		22.34	22.22	22.24
5	25	0		22.29	22.5	22.24
10	1	0	QPSK	24.1	24.14	24.48
10	1	24		24.31	24.47	24.67
10	1	49		24.22	24.47	24.47
10	25	0		23.14	23.39	23.49
10	25	12		23.24	23.4	23.56
10	25	24		23.6	23.26	23.43
10	50	0		23.42	23.4	23.5
10	1	0	16-QAM	23.61	23.38	23.32
10	1	24		23.69	23.71	23.47
10	1	49		23.73	23.7	23.35
10	25	0		22.14	22.42	22.53
10	25	12		22.3	22.5	22.57
10	25	24		22.64	22.3	22.47
10	50	0		22.43	22.45	22.49

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.23	24.11	24.27
1.4	1	2		24.36	24.22	24.46
1.4	1	5		24.24	24.09	24.28
1.4	3	0		24.2	24.24	24.31
1.4	3	1		24.21	24.23	24.31
1.4	3	2		24.23	24.22	24.31
1.4	6	0		23.17	23.16	23.29
1.4	1	0	16-QAM	23.34	23.34	23.09
1.4	1	2		23.47	23.47	23.23
1.4	1	5		23.32	23.36	23.09
1.4	3	0		23.39	23.47	23.41
1.4	3	1		23.42	23.44	23.44
1.4	3	2		23.39	23.47	23.44
1.4	6	0		22.39	23.33	22.5
3	1	0	QPSK	24.17	24.15	24.23
3	1	7		24.45	24.52	24.58
3	1	14		24.1	24.14	24.38
3	8	0		23.18	23.15	23.21
3	8	4		23.18	23.19	23.33
3	8	7		23.16	23.2	23.27
3	15	0		23.11	23.11	23.22
3	1	0	16-QAM	23.66	23.37	23.13
3	1	7		23.89	23.75	23.4
3	1	14		23.59	23.38	23.12
3	8	0		22.23	22.24	22.29
3	8	4		22.29	22.31	22.33
3	8	7		22.25	22.2	22.34
3	15	0		22.24	22.17	22.33

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.06	24	24.09
5	1	12		24.41	24.35	24.5
5	1	24		24.09	24.1	24.17
5	12	0		23.16	23.08	23.2
5	12	6		23.18	23.21	23.29
5	12	11		23.11	23.2	23.25
5	25	0		23.16	23.15	23.28
5	1	0	16-QAM	23.42	23.34	23.65
5	1	12		23.81	23.83	24
5	1	24		23.46	23.41	23.7
5	12	0		22.08	22.14	22.27
5	12	6		22.18	22.28	22.32
5	12	11		22.15	22.22	22.3
5	25	0		22.2	22.19	22.31
10	1	0	QPSK	24.21	24.06	24.13
10	1	24		24.36	24.27	24.34
10	1	49		24.26	24.19	24.29
10	25	0		23.2	23.19	23.25
10	25	12		23.2	23.22	23.22
10	25	24		23.3	23.29	23.33
10	50	0		23.24	23.21	23.3
10	1	0	16-QAM	23.04	23.56	23.34
10	1	24		23.16	23.71	23.51
10	1	49		23.09	23.66	23.48
10	25	0		22.27	22.25	22.3
10	25	12		22.23	22.3	22.31
10	25	24		22.32	22.35	22.41
10	50	0		22.26	22.3	22.39

LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.18	24.09	24.11
5	1	12		24.58	24.61	24.68
5	1	24		24.2	24.14	24.11
5	12	0		23.31	23.29	23.22
5	12	6		23.34	23.3	23.31
5	12	11		23.14	23.29	23.37
5	25	0		23.26	23.33	23.34
5	1	0	16-QAM	23.82	23.55	23.54
5	1	12		24.26	23.94	23.96
5	1	24		23.81	23.63	23.49
5	12	0		22.32	22.23	22.35
5	12	6		22.38	22.28	22.38
5	12	11		22.22	22.3	22.47
5	25	0		22.27	22.37	22.35
10	1	0	QPSK	/	24.24	/
10	1	24		/	24.33	/
10	1	49		/	24.31	/
10	25	0		/	23.43	/
10	25	12		/	23.29	/
10	25	24		/	23.42	/
10	50	0		/	23.44	/
10	1	0	16-QAM	/	23.75	/
10	1	24		/	23.85	/
10	1	49		/	23.84	/
10	25	0		/	22.48	/
10	25	12		/	22.36	/
10	25	24		/	22.51	/
10	50	0		/	22.47	/

LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.61	23.84	23.68
1.4	1	2		23.74	24.05	23.9
1.4	1	5		23.61	23.87	23.7
1.4	3	0		23.65	23.85	23.83
1.4	3	1		23.62	23.86	23.81
1.4	3	2		23.63	23.9	23.82
1.4	6	0		22.62	22.87	22.8
1.4	1	0	16-QAM	22.43	22.98	22.95
1.4	1	2		22.58	23.09	23.06
1.4	1	5		22.47	23.01	22.94
1.4	3	0		22.79	23.05	23.03
1.4	3	1		22.77	23.07	23.05
1.4	3	2		22.8	23.06	23.08
1.4	6	0		21.81	22.04	21.95
3	1	0	QPSK	23.59	23.82	23.84
3	1	7		23.77	24.13	24.2
3	1	14		23.55	23.84	23.91
3	8	0		22.61	22.81	22.8
3	8	4		22.62	22.88	22.83
3	8	7		22.59	22.89	22.79
3	15	0		22.58	22.85	22.79
3	1	0	16-QAM	23.04	23.05	22.7
3	1	7		23.29	23.34	22.83
3	1	14		23.02	23.04	22.69
3	8	0		21.62	21.87	21.81
3	8	4		21.67	21.88	21.83
3	8	7		21.63	21.89	21.78
3	15	0		21.63	21.81	21.85

LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.47	23.74	23.7
5	1	12		23.85	24.21	24.14
5	1	24		23.43	23.73	23.72
5	12	0		22.57	22.82	22.76
5	12	6		22.64	22.96	22.82
5	12	11		22.61	22.95	22.78
5	25	0		22.63	22.92	22.82
5	1	0	16-QAM	22.85	23.23	23.03
5	1	12		23.24	23.6	23.4
5	1	24		22.85	23.38	23.07
5	12	0		21.6	21.77	21.75
5	12	6		21.68	21.91	21.81
5	12	11		21.67	21.94	21.71
5	25	0		21.57	21.88	21.82
10	1	0	QPSK	23.59	23.76	23.65
10	1	24		23.73	23.94	23.9
10	1	49		23.61	23.82	23.78
10	25	0		22.59	22.85	22.79
10	25	12		22.62	22.9	22.83
10	25	24		22.65	23.06	22.88
10	50	0		22.63	22.95	22.82
10	1	0	16-QAM	22.46	23.15	22.84
10	1	24		22.55	23.37	23.1
10	1	49		22.42	23.3	22.95
10	25	0		21.61	21.91	21.82
10	25	12		21.65	21.97	21.85
10	25	24		21.66	22.11	21.89
10	50	0		21.64	21.99	21.86

LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.5	23.78	23.56
15	1	37		23.87	24.13	23.95
15	1	74		23.5	23.78	23.7
15	36	0		22.56	22.89	22.79
15	36	18		22.62	22.94	22.83
15	36	39		22.71	22.99	22.93
15	75	0		22.62	22.96	22.89
15	1	0	16-QAM	22.67	22.8	23
15	1	38		22.92	23.28	23.42
15	1	75		22.68	22.9	23.14
15	36	0		21.58	21.86	21.79
15	36	18		21.66	21.9	21.83
15	36	39		21.69	21.96	21.94
15	75	0		21.57	21.97	21.86
20	1	0	QPSK	23.33	23.48	23.45
20	1	49		23.71	23.95	23.77
20	1	99		23.55	23.55	23.57
20	50	0		22.49	22.79	22.83
20	50	24		22.55	22.93	22.78
20	50	49		22.58	23.05	22.86
20	100	0		22.51	22.94	22.84
20	1	0	16-QAM	22.59	22.69	22.76
20	1	49		22.85	23.27	23.14
20	1	99		22.65	22.86	22.93
20	50	0		21.51	21.89	21.84
20	50	24		21.58	22.01	21.84
20	50	49		21.53	22.11	21.92
20	100	0		21.5	21.98	21.86

LTE Band 26(814-824) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.13	24.18	24.22
1.4	1	2		24.32	24.29	24.36
1.4	1	5		24.16	24.16	24.18
1.4	3	0		24.32	24.21	24.17
1.4	3	1		24.3	24.21	24.18
1.4	3	2		24.27	24.21	24.25
1.4	6	0		23.22	23.14	23.12
1.4	1	0	16-QAM	23.41	23.09	23.34
1.4	1	2		23.51	23.22	23.52
1.4	1	5		23.39	23.06	23.37
1.4	3	0		23.54	23.44	23.42
1.4	3	1		23.53	23.41	23.46
1.4	3	2		23.52	23.45	23.43
1.4	6	0		22.4	22.38	22.36
3	1	0	QPSK	24.3	24.16	24.18
3	1	7		24.49	24.54	24.62
3	1	14		24.31	24.2	24.26
3	8	0		23.18	23.2	23.17
3	8	4		23.28	23.19	23.18
3	8	7		23.28	23.14	23.15
3	15	0		23.24	23.17	23.19
3	1	0	16-QAM	23.18	23.66	23.46
3	1	7		23.42	24.01	23.76
3	1	14		23.07	23.74	23.41
3	8	0		22.21	22.28	22.22
3	8	4		22.25	22.29	22.23
3	8	7		22.27	22.19	22.18
3	15	0		22.31	22.25	22.16

LTE Band 26(814-824) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.08	24.06	24.01
5	1	12		24.36	24.53	24.66
5	1	24		24.11	24.11	24.09
5	12	0		23	23.22	23.4
5	12	6		23.22	23.28	23.27
5	12	11		23.19	22.98	23.06
5	25	0		23.14	23.19	23.29
5	1	0	16-QAM	23.45	23.65	23.52
5	1	12		23.81	24.13	23.89
5	1	24		23.56	23.74	23.48
5	12	0		22.09	22.3	22.32
5	12	6		22.3	22.33	22.23
5	12	11		22.21	22.01	22.03
5	25	0		22.11	22.22	23.30
10	1	0	QPSK	N/A	24.24	N/A
10	1	24		N/A	24.32	N/A
10	1	49		N/A	24.24	N/A
10	25	0		N/A	23.09	N/A
10	25	12		N/A	23.24	N/A
10	25	24		N/A	22.91	N/A
10	50	0		N/A	23.04	N/A
10	1	0	16-QAM	N/A	23.44	N/A
10	1	24		N/A	23.54	N/A
10	1	49		N/A	23.46	N/A
10	25	0		N/A	22.11	N/A
10	25	12		N/A	22.26	N/A
10	25	24		N/A	21.96	N/A
10	50	0		N/A	22.14	N/A

LTE Band 26(824-849) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.19	24.28	24.43
1.4	1	2		24.33	24.42	24.53
1.4	1	5		24.18	24.3	24.41
1.4	3	0		24.17	24.37	24.43
1.4	3	1		24.12	24.36	24.42
1.4	3	2		24.2	24.35	24.41
1.4	6	0		23.14	23.28	23.33
1.4	1	0	16-QAM	23.37	23.57	23.29
1.4	1	2		23.39	23.65	23.42
1.4	1	5		23.36	23.58	23.24
1.4	3	0		23.41	23.66	23.64
1.4	3	1		23.4	23.7	23.62
1.4	3	2		23.39	23.68	23.64
1.4	6	0		22.36	22.54	22.59
3	1	0	QPSK	24.17	24.27	24.39
3	1	7		24.58	24.74	24.97
3	1	14		24.3	24.39	24.38
3	8	0		23.14	23.37	23.48
3	8	4		23.18	23.36	23.5
3	8	7		23.23	23.39	23.4
3	15	0		23.17	23.38	23.43
3	1	0	16-QAM	23.12	23.85	23.67
3	1	7		23.44	24.21	24.08
3	1	14		23.11	23.91	23.65
3	8	0		22.16	22.45	22.52
3	8	4		22.21	22.47	22.5
3	8	7		22.24	22.45	22.39
3	15	0		22.26	22.51	22.47

LTE Band 26(824-849) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.04	24.19	24.29
5	1	12		24.53	24.66	24.68
5	1	24		24.11	24.29	24.32
5	12	0		23.18	23.46	23.28
5	12	6		23.27	23.48	23.5
5	12	11		23.27	23.29	23.21
5	25	0		23.27	23.45	23.32
5	1	0	16-QAM	23.63	23.57	23.69
5	1	12		24.06	24.25	24.18
5	1	24		23.65	23.75	23.8
5	12	0		22.21	22.43	22.41
5	12	6		22.28	22.5	22.54
5	12	11		22.3	22.25	22.26
5	25	0		22.26	22.54	22.31
10	1	0	QPSK	24.12	24.17	24.44
10	1	24		24.31	24.46	24.63
10	1	49		24.28	24.5	24.52
10	25	0		23.11	23.49	23.5
10	25	12		23.24	23.46	23.57
10	25	24		23.59	23.27	23.48
10	50	0		23.41	23.42	23.48
10	1	0	16-QAM	23.58	23.4	23.34
10	1	24		23.67	23.74	23.46
10	1	49		23.75	23.7	23.43
10	25	0		22.16	22.51	22.56
10	25	12		22.28	22.53	22.57
10	25	24		22.64	22.28	22.54
10	50	0		22.44	22.51	22.49

LTE Band 26(824-849) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.05	24	24.21
15	1	37		24.56	24.57	24.76
15	1	74		24.35	24.38	24.43
15	36	0		23.08	23.23	23.68
15	36	18		23.33	23.44	23.57
15	36	39		23.27	23.4	23.65
15	75	0		23.21	23.33	23.68
15	1	0	16-QAM	23.22	23.51	23.44
15	1	38		23.69	24.32	24
15	1	75		23.53	23.92	23.71
15	36	0		22.02	22.24	22.77
15	36	18		22.3	22.47	22.67
15	36	39		22.24	22.42	22.71
15	75	0		22.22	22.35	22.7

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	25.13	25.64	25.37
5	1	12		25.37	25.96	25.65
5	1	24		25.11	25.79	25.36
5	12	0		25.14	25.82	25.46
5	12	6		25.19	25.91	25.5
5	12	11		25.2	25.85	25.4
5	25	0		25.27	25.86	25.43
5	1	0	16-QAM	24.39	25.03	24.92
5	1	12		24.65	25.31	25.16
5	1	24		24.4	25.14	24.92
5	12	0		24.06	24.87	24.4
5	12	6		24.15	24.92	24.45
5	12	11		24.15	24.93	24.43
5	25	0		24.22	24.84	24.39
10	1	0	QPSK	25.15	25.77	25.47
10	1	24		25.33	26.05	25.66
10	1	49		25.22	26.03	25.47
10	25	0		25.18	25.9	25.55
10	25	12		25.23	25.94	25.52
10	25	24		25.29	25.99	25.51
10	50	0		25.26	25.93	25.54
10	1	0	16-QAM	24.63	24.91	24.41
10	1	24		24.8	25.19	24.57
10	1	49		24.73	25.16	24.39
10	25	0		24.22	24.89	24.54
10	25	12		24.28	24.97	24.5
10	25	24		24.33	24.99	24.49
10	50	0		24.26	24.97	24.52

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	25.1	25.68	25.43
15	1	37		25.42	26.13	25.83
15	1	74		25.24	26.03	25.48
15	36	0		25.2	25.85	25.56
15	36	18		25.28	25.97	25.56
15	36	39		25.35	26.04	25.56
15	75	0		25.3	25.96	25.58
15	1	0	16-QAM	24.92	24.86	24.57
15	1	38		24.92	25.28	24.92
15	1	75		24.71	25.13	24.57
15	36	0		24.23	24.9	24.49
15	36	18		24.33	25.03	24.49
15	36	39		24.37	25.08	24.49
15	75	0		24.29	24.95	24.57
20	1	0	QPSK	24.93	25.51	25.17
20	1	49		25.46	26.07	25.66
20	1	99		25.25	25.92	25.24
20	50	0		25.13	25.81	25.46
20	50	24		25.32	25.97	25.53
20	50	49		25.38	25.97	25.48
20	100	0		25.23	25.87	25.5
20	1	0	16-QAM	24.15	24.93	24.42
20	1	49		24.65	25.29	24.86
20	1	99		24.49	25.08	24.46
20	50	0		24.13	24.88	24.53
20	50	24		24.29	25.06	24.58
20	50	49		24.37	25.02	24.52
20	100	0		24.25	24.9	24.51

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.67	23.45	23.19
1.4	1	2		23.76	23.59	23.34
1.4	1	5		23.63	23.5	23.19
1.4	3	0		23.77	23.55	23.18
1.4	3	1		23.79	23.54	23.19
1.4	3	2		23.77	23.53	23.21
1.4	6	0		22.71	22.48	22.15
1.4	1	0	16-QAM	22.86	22.33	22.34
1.4	1	2		22.99	22.49	22.45
1.4	1	5		22.87	22.39	22.35
1.4	3	0		22.99	22.77	22.39
1.4	3	1		23	22.72	22.41
1.4	3	2		23	22.73	22.42
1.4	6	0		21.82	21.69	21.35
3	1	0	QPSK	23.73	23.52	23.22
3	1	7		24.08	23.78	23.48
3	1	14		23.81	23.49	23.23
3	8	0		22.71	22.5	22.19
3	8	4		22.76	22.52	22.2
3	8	7		22.72	22.51	22.19
3	15	0		22.69	22.45	22.18
3	1	0	16-QAM	22.6	22.98	22.4
3	1	7		22.91	23.26	22.68
3	1	14		22.59	23	22.4
3	8	0		21.72	21.53	21.23
3	8	4		21.71	21.57	21.2
3	8	7		21.74	21.56	21.21
3	15	0		21.78	21.55	21.16

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.59	23.36	23.08
5	1	12		23.97	23.88	23.49
5	1	24		23.65	23.45	23.06
5	12	0		22.7	22.48	22.21
5	12	6		22.77	22.58	22.27
5	12	11		22.74	22.54	22.19
5	25	0		22.73	22.53	22.24
5	1	0	16-QAM	23.14	22.81	22.5
5	1	12		23.53	23.21	22.86
5	1	24		23.2	22.79	22.49
5	12	0		21.71	21.46	21.27
5	12	6		21.8	21.53	21.31
5	12	11		21.74	21.54	21.26
5	25	0		21.73	21.61	21.27
10	1	0	QPSK	23.72	23.6	23.28
10	1	24		23.89	23.73	23.32
10	1	49		23.8	23.63	23.21
10	25	0		22.77	22.56	22.32
10	25	12		22.85	22.56	22.28
10	25	24		22.86	22.59	22.28
10	50	0		22.83	22.64	22.32
10	1	0	16-QAM	22.88	22.46	22.67
10	1	24		23.06	22.57	22.77
10	1	49		22.96	22.49	22.66
10	25	0		21.78	21.59	21.41
10	25	12		21.85	21.65	21.35
10	25	24		21.86	21.65	21.32
10	50	0		21.87	21.64	21.35

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.56	23.47	23.44
15	1	37		24.09	23.86	23.6
15	1	74		23.67	23.49	23.19
15	36	0		22.83	22.57	22.47
15	36	18		22.88	22.64	22.4
15	36	39		22.88	22.64	22.35
15	75	0		22.81	22.64	22.42
15	1	0	16-QAM	22.99	22.71	22.41
15	1	38		23.45	23.03	22.73
15	1	75		23.14	22.7	22.29
15	36	0		21.74	21.65	21.39
15	36	18		21.84	21.7	21.33
15	36	39		21.9	21.68	21.26
15	75	0		21.84	21.61	21.41
20	1	0	QPSK	23.45	23.25	23.29
20	1	49		23.86	23.62	23.49
20	1	99		23.48	23.37	23.05
20	50	0		22.74	22.52	22.45
20	50	24		22.8	22.63	22.41
20	50	49		22.76	22.59	22.22
20	100	0		22.72	22.57	22.37
20	1	0	16-QAM	22.69	22.67	22.47
20	1	49		23.13	23.01	22.62
20	1	99		22.81	22.7	22.3
20	50	0		21.8	21.61	21.47
20	50	24		21.86	21.69	21.37
20	50	49		21.83	21.67	21.28
20	100	0		21.75	21.59	21.39

LTE Band 71 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.91	24.06	23.97
5	1	12		24.41	24.57	24.4
5	1	24		23.97	24.13	24
5	12	0		22.9	23.23	23.15
5	12	6		23.15	23.25	23.24
5	12	11		23.06	23.26	23.29
5	25	0		22.95	23.29	23.25
5	1	0	16-QAM	23.55	23.43	23.35
5	1	12		23.99	23.87	23.83
5	1	24		23.61	23.47	23.35
5	12	0		21.85	22.19	22.19
5	12	6		22.14	22.26	22.26
5	12	11		22.06	22.23	22.29
5	25	0		21.91	22.36	22.25
10	1	0	QPSK	23.94	24.09	24.22
10	1	24		24.21	24.37	24.36
10	1	49		24.13	24.29	24.2
10	25	0		23.06	23.28	23.28
10	25	12		23.13	23.25	23.24
10	25	24		23.28	23.28	23.18
10	50	0		23.19	23.29	23.19
10	1	0	16-QAM	23.44	23.27	23.02
10	1	24		23.7	23.54	23.19
10	1	49		23.63	23.42	23.05
10	25	0		22.06	22.29	22.33
10	25	12		22.14	22.32	22.19
10	25	24		22.3	22.33	22.19
10	50	0		22.17	22.35	22.23

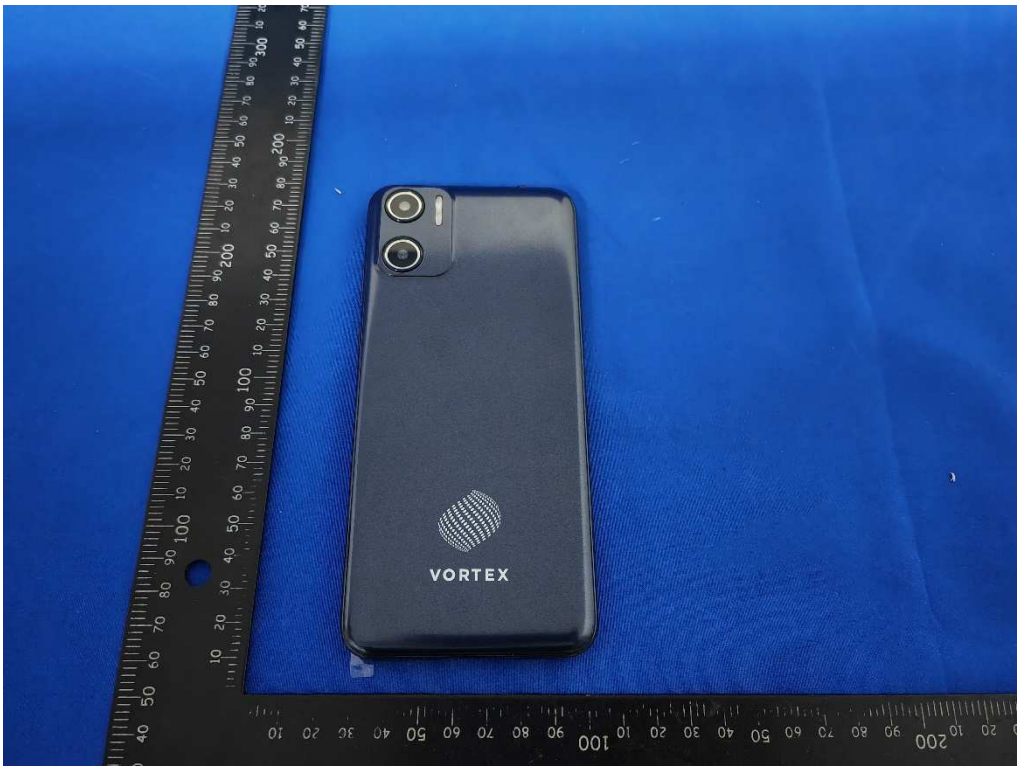
LTE Band 71 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.89	24.05	24.12
15	1	37		24.34	24.49	24.49
15	1	74		24.14	24.23	24.12
15	36	0		23.15	23.19	23.36
15	36	18		23.22	23.32	23.3
15	36	39		23.27	23.32	23.26
15	75	0		23.21	23.29	23.35
15	1	0	16-QAM	23.09	23.14	23.57
15	1	38		23.57	23.69	23.92
15	1	75		23.35	23.3	23.61
15	36	0		22.16	22.2	22.41
15	36	18		22.23	22.3	22.36
15	36	39		22.35	22.29	22.27
15	75	0		22.22	22.36	22.33
20	1	0	QPSK	23.67	23.86	23.95
20	1	49		24.26	24.4	24.37
20	1	99		24.02	24.11	23.95
20	50	0		23.05	23.11	23.24
20	50	24		23.2	23.29	23.28
20	50	49		23.25	23.25	23.25
20	100	0		23.13	23.17	23.22
20	1	0	16-QAM	23.04	23.1	23.18
20	1	49		23.59	23.63	23.62
20	1	99		23.39	23.35	23.28
20	50	0		22.12	22.14	22.35
20	50	24		22.24	22.35	22.39
20	50	49		22.32	22.24	22.3
20	100	0		22.18	22.23	22.3

11. EUT and Test Setup Photo

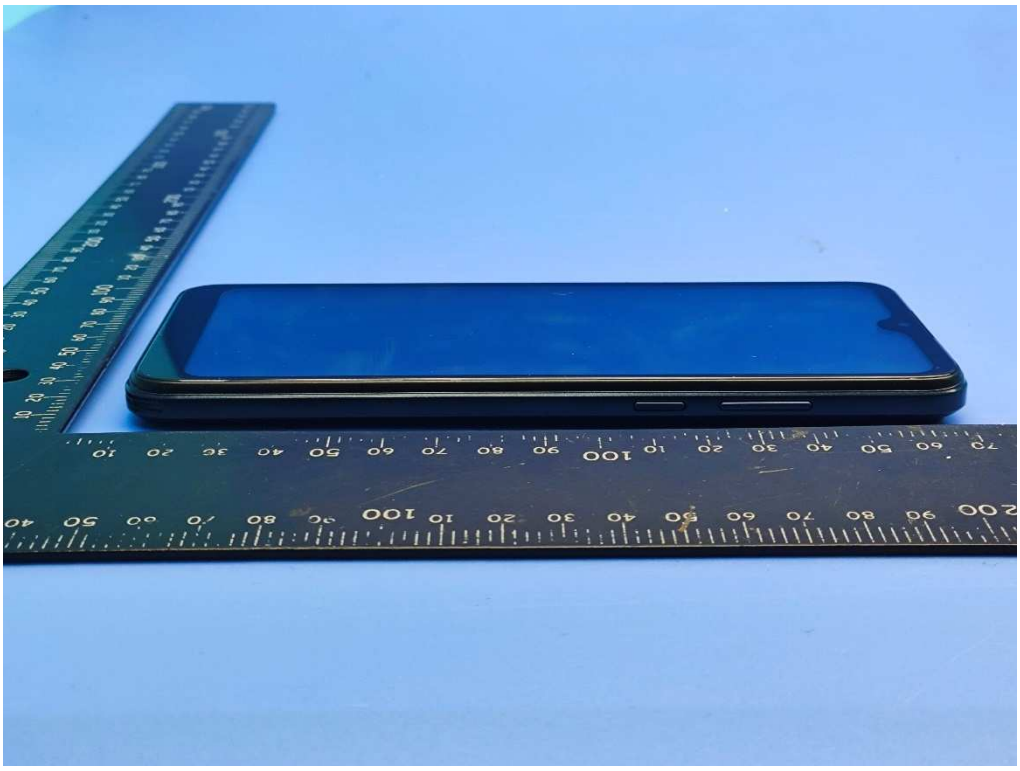
11.1 EUT Photos

Front side

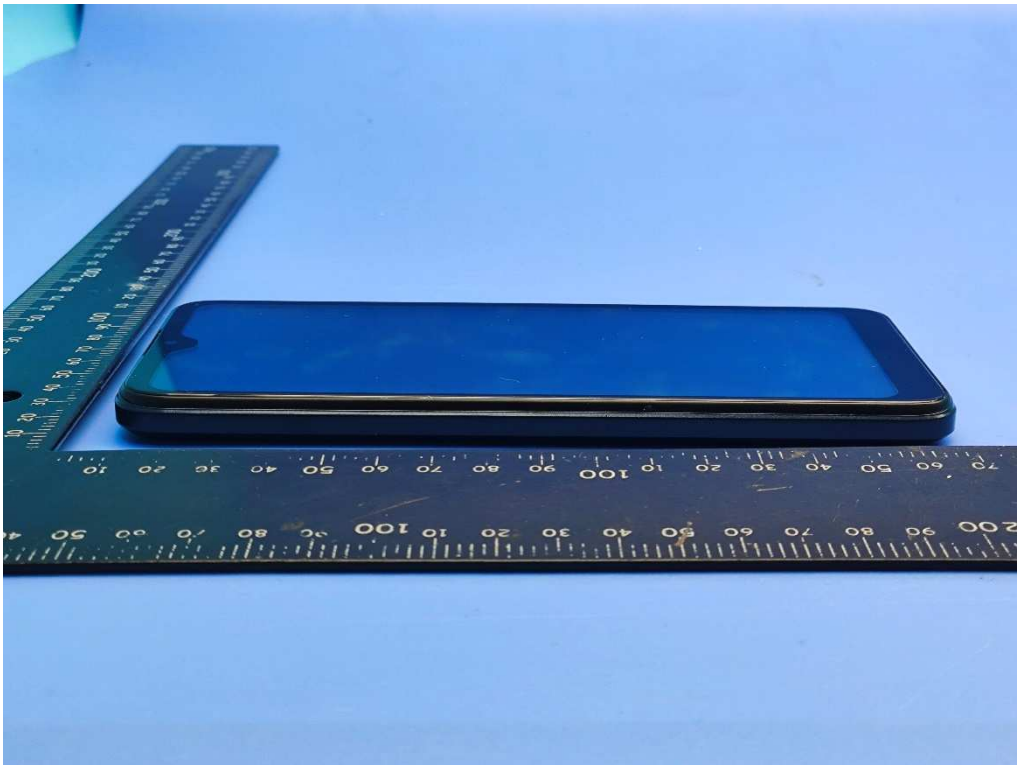
Back side



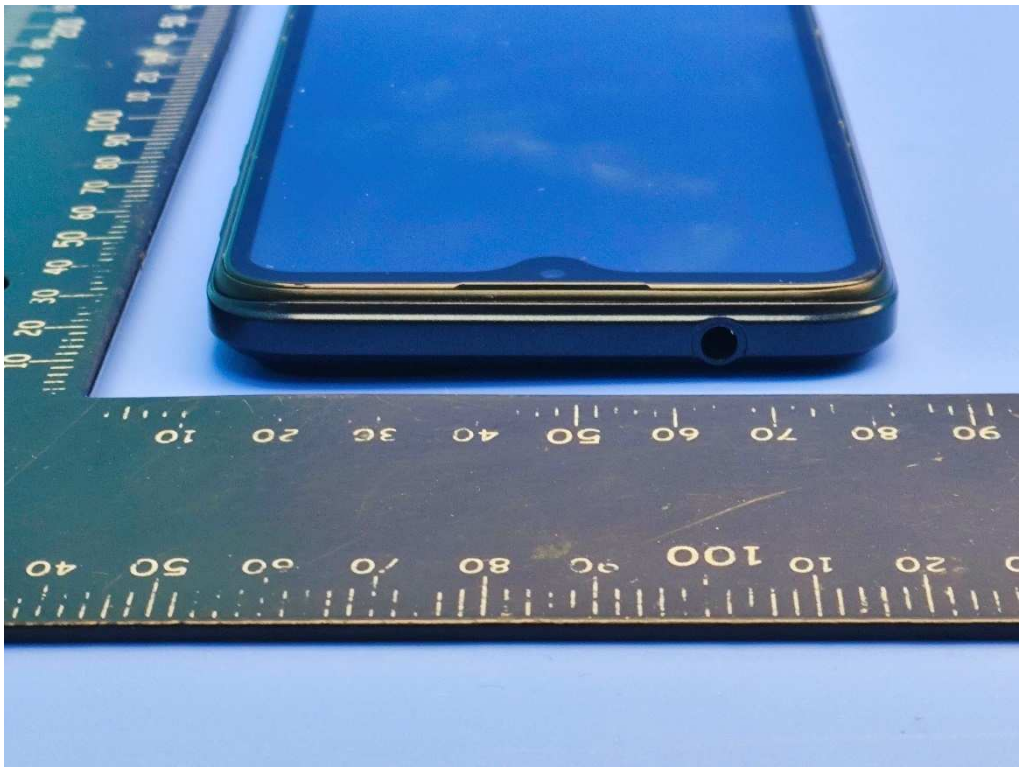
Right Edge



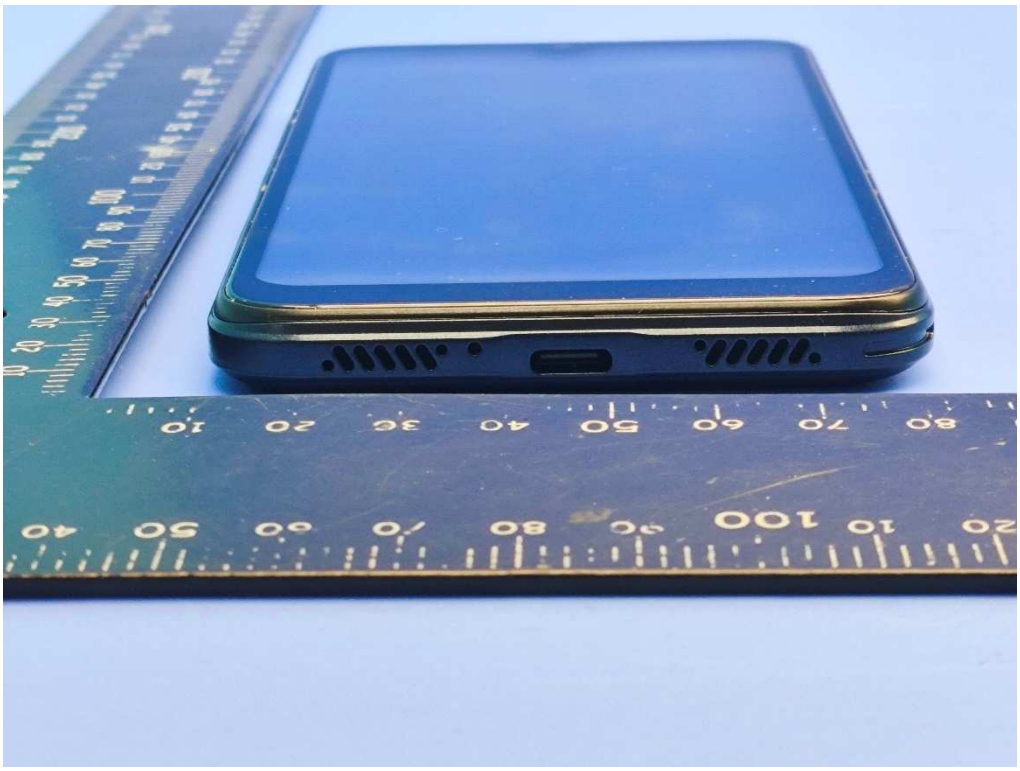
Left Edge



Top Edge

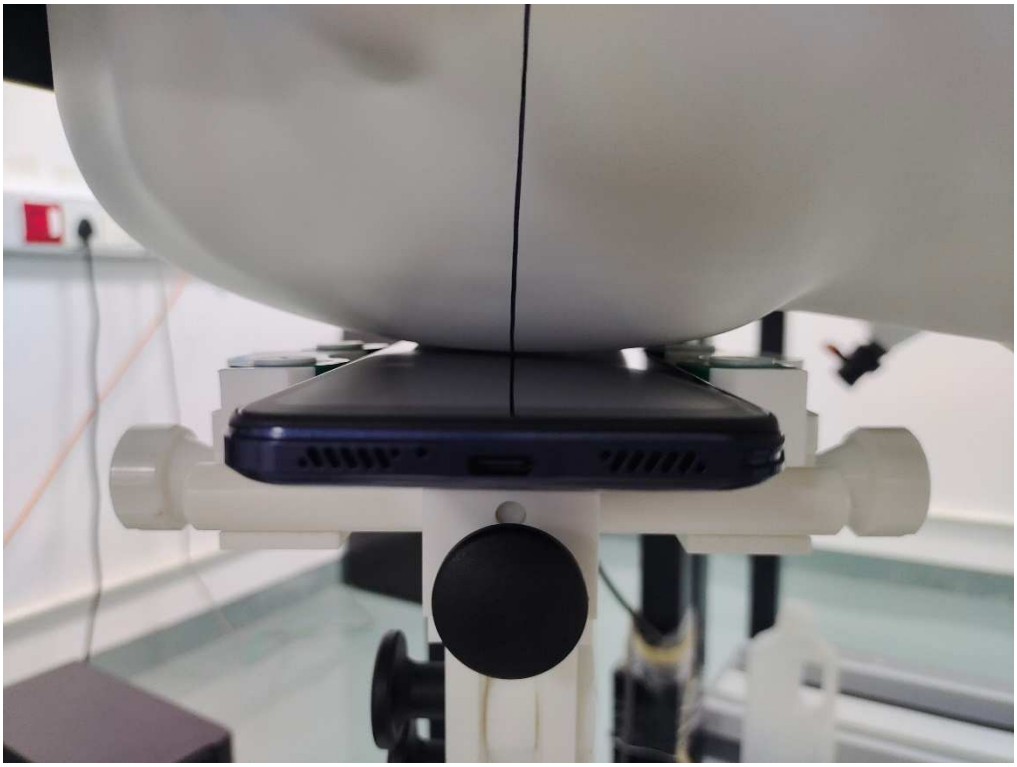


Bottom Edge

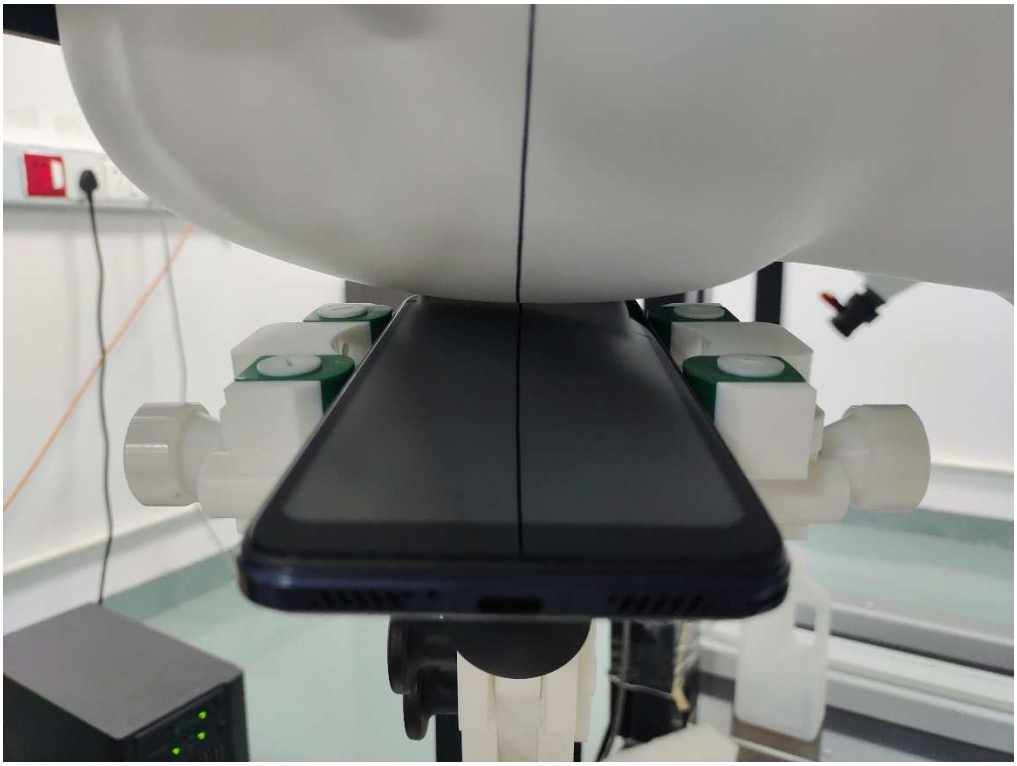


11.2 Setup Photos

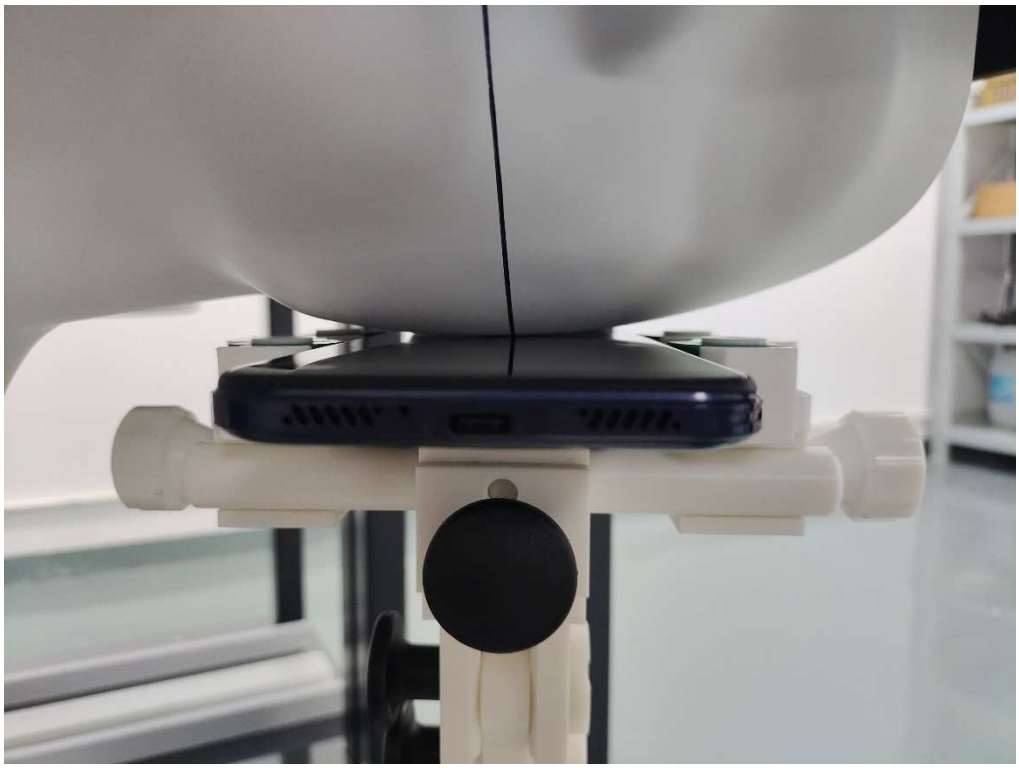
Right Touch



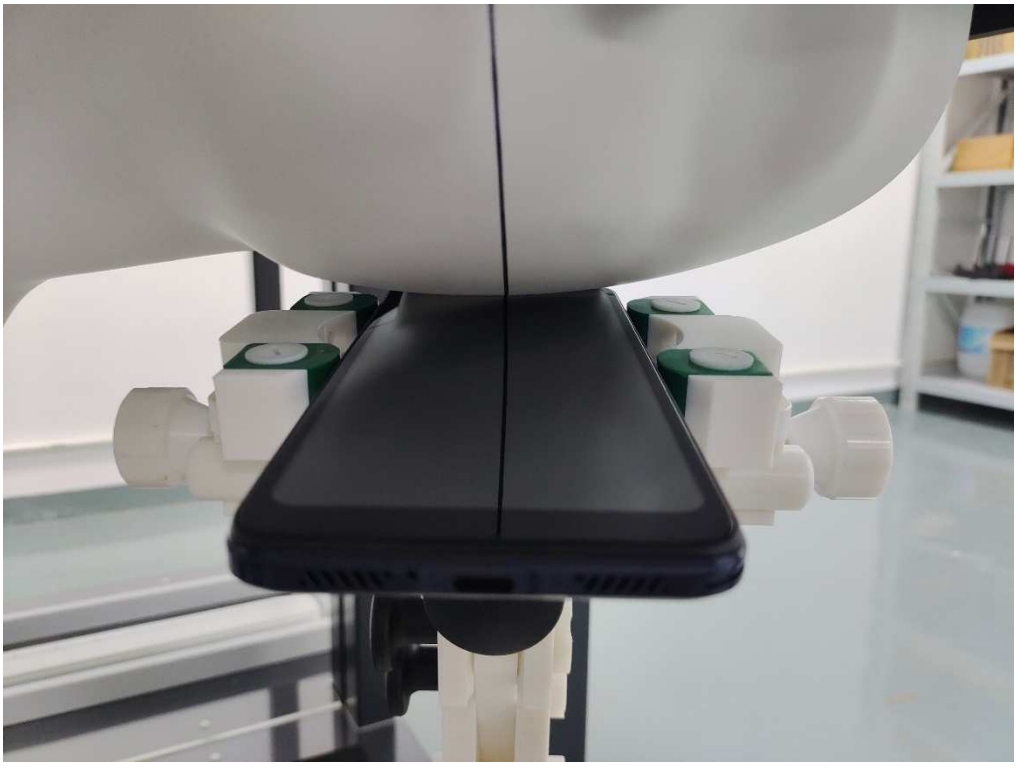
Right Tilt



Left Touch

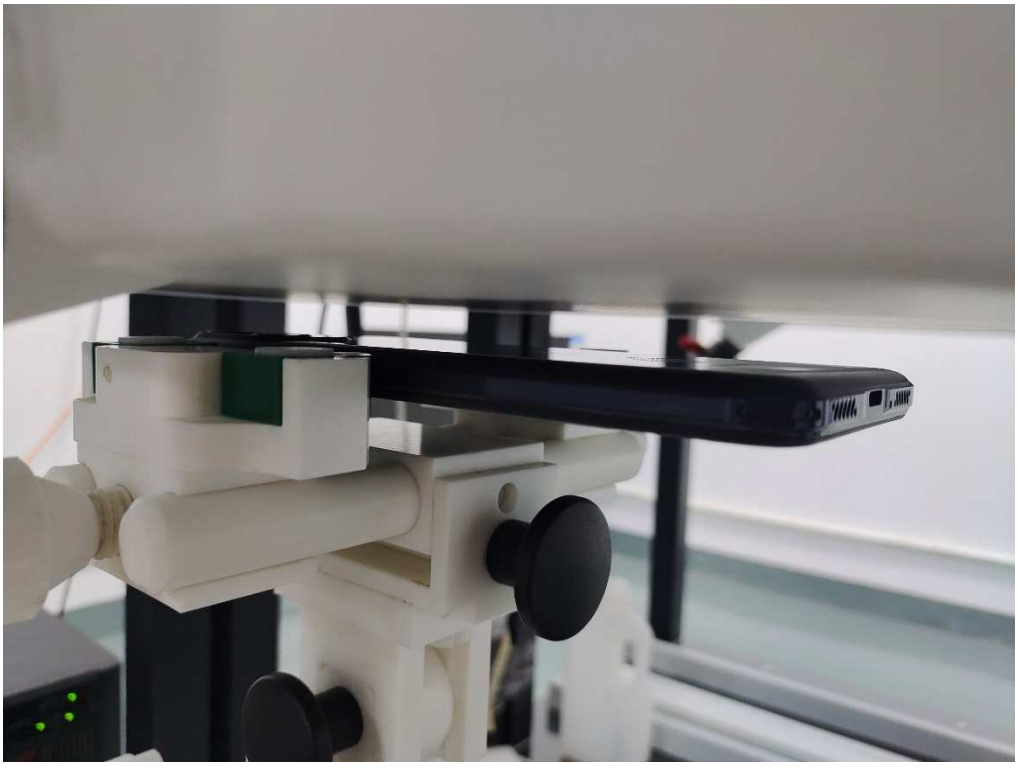


Left Tilt

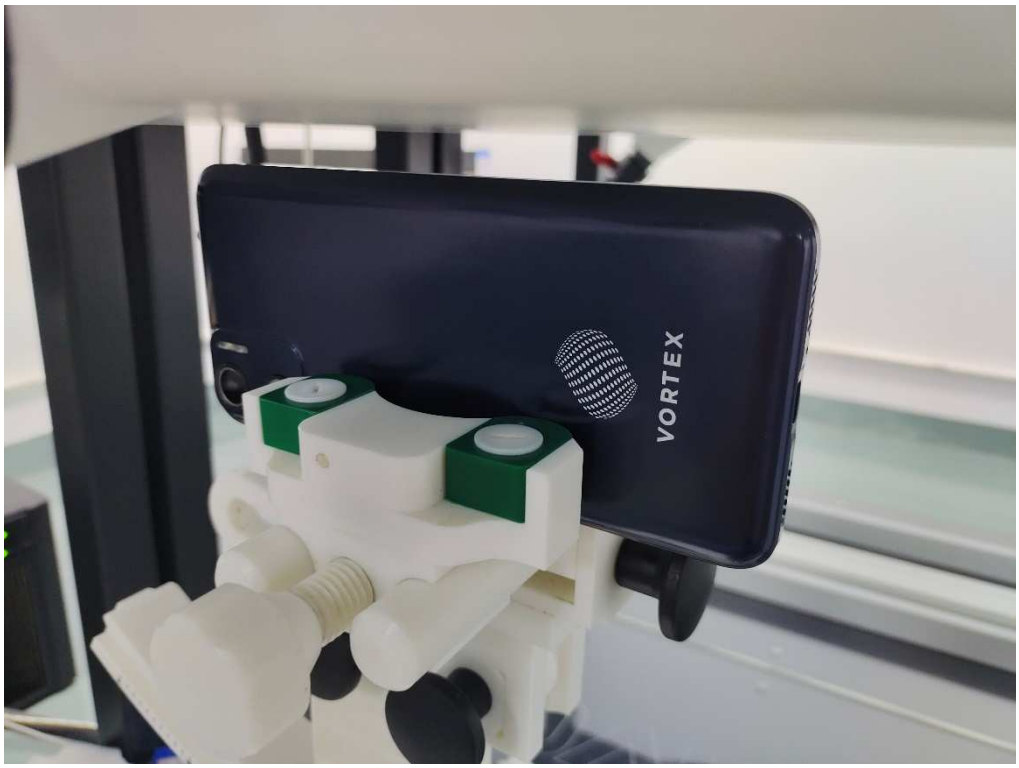


Body Front side (separation distance is 10mm)

Body Back side (separation distance10mm)

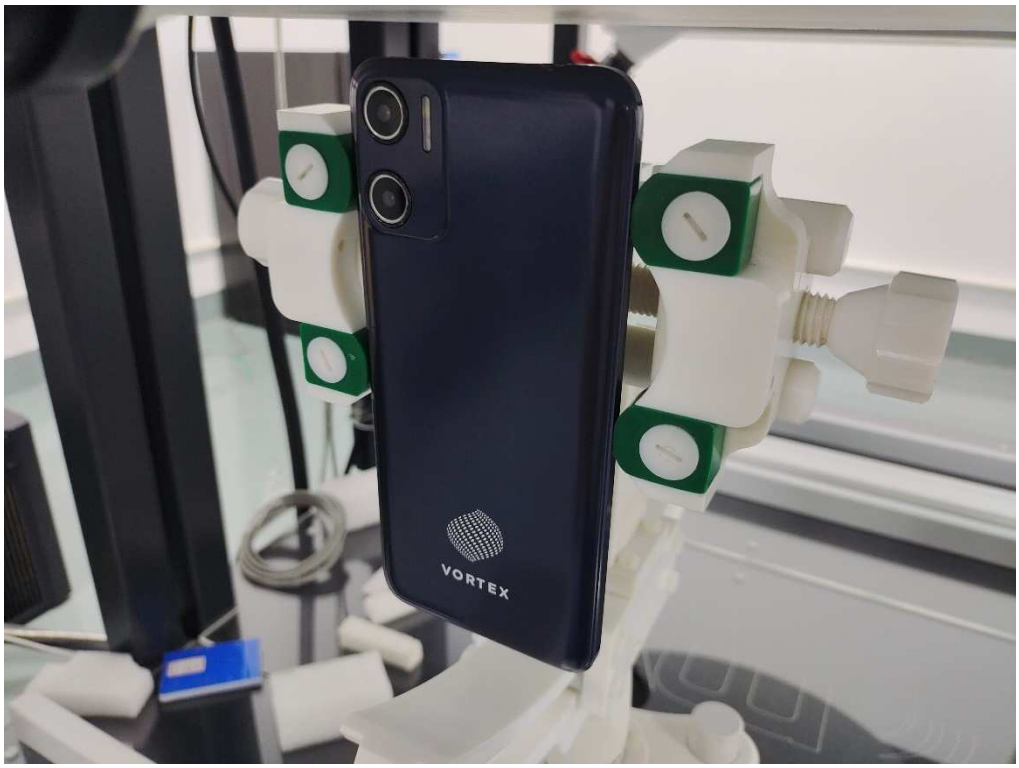


Body Left side (separation distance is 10mm)

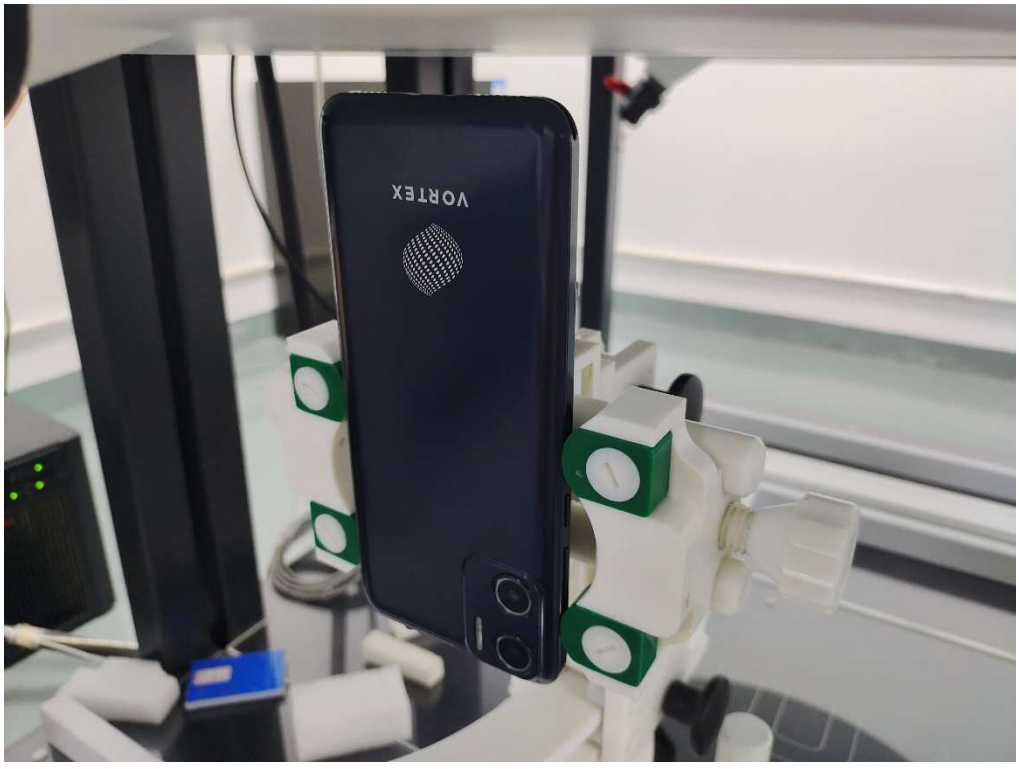


Body Right side (separation distance is 10mm)

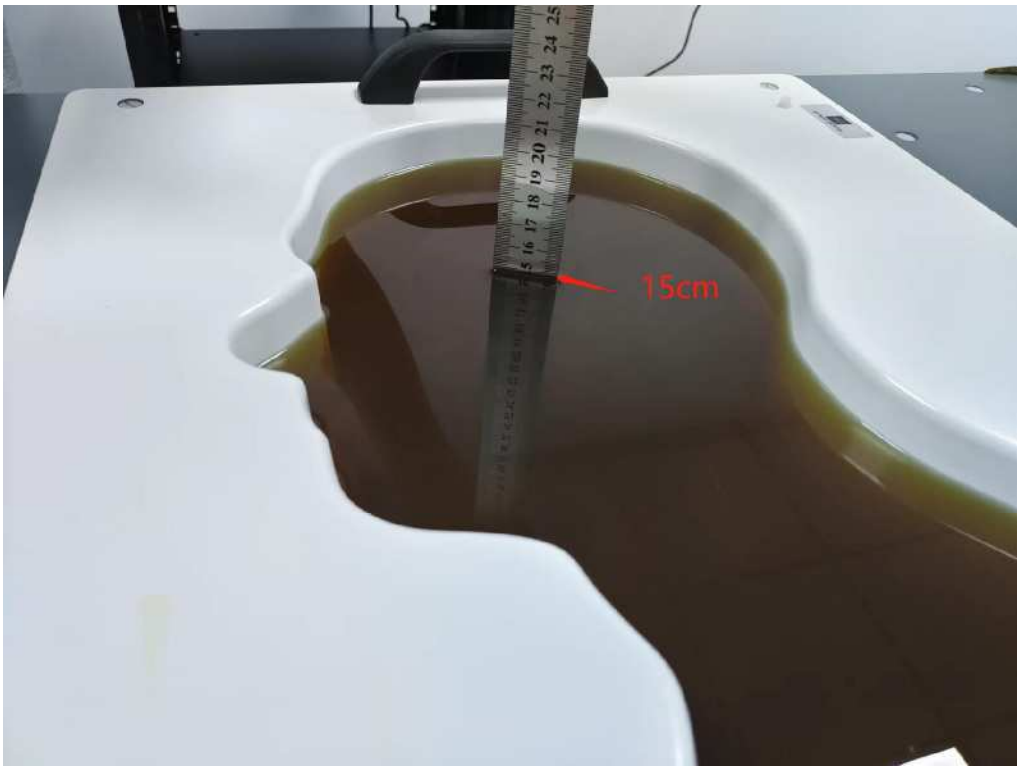
Body Top side (separation distance is 10mm)



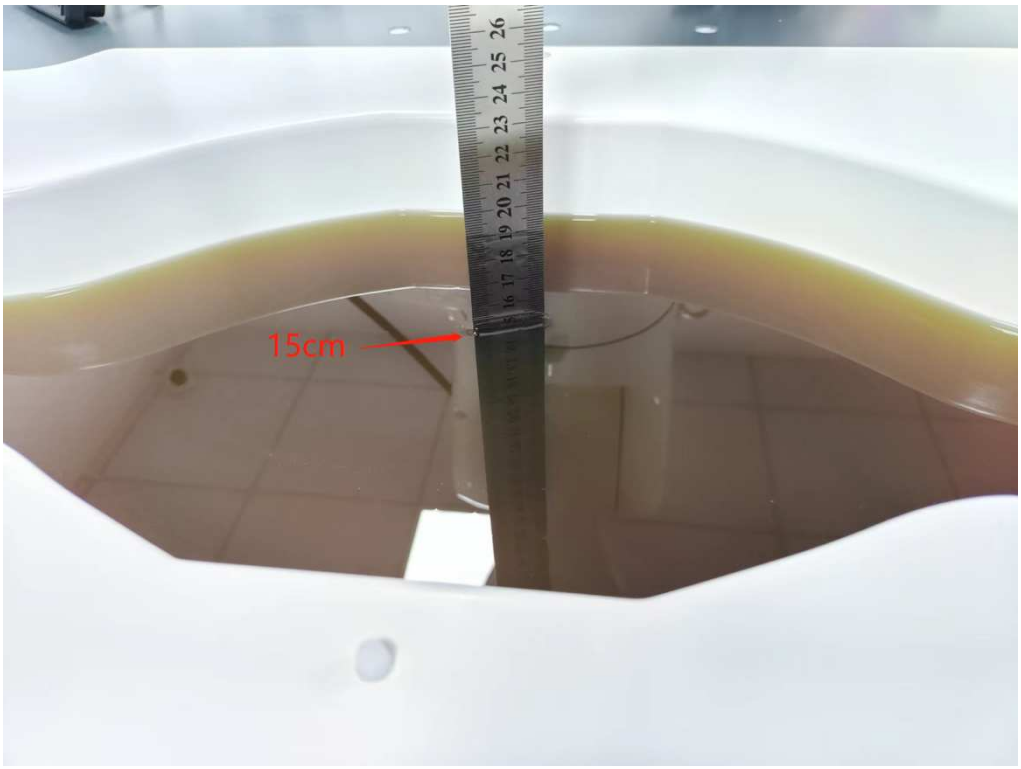
Body Bottom side (separation distance is 10mm)



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	GPRS Data-4 Slot	Right Cheek	848.8	0.315	3.57	34.50	34.16	**0.341**	**1**
		Right Tilt	848.8	0.232	-3.05	34.50	34.16	0.251	/
		Left Cheek	848.8	0.302	2.66	34.50	34.16	0.327	/
		Left Tilt	848.8	0.238	-3.64	34.50	34.16	0.257	/
PCS 1900	GPRS Data-4 Slot	Right Cheek	1850.2	0.130	-1.88	31.00	30.57	0.144	/
		Right Tilt	1850.2	0.104	-3.85	31.00	30.57	0.115	/
		Left Cheek	1850.2	0.174	-2.54	31.00	30.57	**0.192**	**3**
		Left Tilt	1850.2	0.146	0.40	31.00	30.57	0.161	/
WCDMA Band II	RMC	Right Cheek	1880	0.185	-1.38	24.00	23.85	0.192	/
		Right Tilt	1880	0.143	0.50	24.00	23.85	0.148	/
		Left Cheek	1880	0.283	-1.54	24.00	23.85	**0.293**	**5**
		Left Tilt	1880	0.210	2.33	24.00	23.85	0.217	/
WCDMA Band IV	RMC	Right Cheek	1712.6	0.267	-1.31	24.00	23.65	0.289	/
		Right Tilt	1712.6	0.207	3.34	24.00	23.65	0.224	/
		Left Cheek	1712.6	0.345	-1.83	24.00	23.65	**0.374**	**7**
		Left Tilt	1712.6	0.263	-3.12	24.00	23.65	0.285	/
WCDMA Band V	RMC	Right Cheek	846.6	0.231	-1.67	24.00	24.52	0.205	/
		Right Tilt	846.6	0.179	-1.49	24.00	24.52	0.159	/
		Left Cheek	846.6	0.274	-2.64	24.00	24.52	**0.243**	**9**
		Left Tilt	846.6	0.217	-1.96	24.00	24.52	0.193	/

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
LTE Band 2	20M	QPSK	1	0	Right Cheek	1880	0.322	3.87	24.5	24.04	0.358	/
			50	0	Right Cheek	1880	0.263	0.62	23.5	23.07	0.290	/
			1	0	Right Tilt	1880	0.212	3.94	24.5	24.04	0.236	/
			50	0	Right Tilt	1880	0.186	-2.35	23.5	23.07	0.205	/
			1	0	Left Cheek	1880	0.337	1.42	24.5	24.04	**0.375**	**11**
			50	0	Left Cheek	1880	0.276	0.75	23.5	23.07	0.305	/
			1	0	Left Tilt	1880	0.220	-3.63	24.5	24.04	0.245	/
			50	0	Left Tilt	1880	0.184	3.01	23.5	23.07	0.203	/
LTE Band 4	20M	QPSK	1	0	Right Cheek	1720	0.221	1.99	24	23.72	0.236	/
			50	0	Right Cheek	1720	0.195	-2.56	23	22.66	0.211	/
			1	0	Right Tilt	1720	0.171	-0.37	24	23.72	0.182	/
			50	0	Right Tilt	1720	0.138	0.47	23	22.66	0.149	/
			1	0	Left Cheek	1720	0.289	1.59	24	23.72	**0.308**	**13**
			50	0	Left Cheek	1720	0.226	3.38	23	22.66	0.244	/
			1	0	Left Tilt	1720	0.225	2.79	24	23.72	0.240	/
			50	0	Left Tilt	1720	0.195	-1.57	23	22.66	0.211	/
LTE Band 5	10M	QPSK	1	0	Right Cheek	844	0.352	0.66	25.2	24.67	**0.398**	**15**
			25	0	Right Cheek	829	0.308	3.35	24	23.6	0.338	/
			1	0	Right Tilt	844	0.182	-1.21	25.2	24.67	0.206	/
			25	0	Right Tilt	829	0.138	0.14	24	23.6	0.151	/
			1	0	Left Cheek	844	0.347	0.44	25.2	24.67	0.392	/
			25	0	Left Cheek	829	0.278	-3.20	24	23.6	0.305	/
			1	0	Left Tilt	844	0.221	-3.44	25.2	24.67	0.250	/
			25	0	Left Tilt	829	0.185	1.26	24	23.6	0.203	/
LTE Band 12	10M	QPSK	1	0	Right Cheek	704	0.270	1.53	25	24.36	**0.313**	**17**
			25	0	Right Cheek	711	0.217	2.56	23.5	23.33	0.226	/
			1	0	Right Tilt	704	0.195	2.06	25	24.36	0.226	/
			25	0	Right Tilt	711	0.152	-3.67	23.5	23.33	0.158	/
			1	0	Left Cheek	704	0.221	3.90	25	24.36	0.256	/
			25	0	Left Cheek	711	0.167	2.86	23.5	23.33	0.174	/
			1	0	Left Tilt	704	0.138	0.11	25	24.36	0.160	/
			25	0	Left Tilt	711	0.095	2.45	23.5	23.33	0.099	/
LTE Band 13	10M	QPSK	1	0	Right Cheek	782	0.352	-3.86	25	24.33	**0.411**	**19**
			25	0	Right Cheek	782	0.290	-0.41	24	23.43	0.331	/
			1	0	Right Tilt	782	0.257	-3.59	25	24.33	0.300	/
			25	0	Right Tilt	782	0.223	-2.85	24	23.43	0.254	/
			1	0	Left Cheek	782	0.342	-0.09	25	24.33	0.399	/
			25	0	Left Cheek	782	0.274	-1.47	24	23.43	0.312	/
			1	0	Left Tilt	782	0.232	-0.22	25	24.33	0.271	/
			25	0	Left Tilt	782	0.198	-3.22	24	23.43	0.226	/

LTE Band 25	20M	QPSK	1	0	Right Cheek	1882.5	0.277	-2.32	24.5	23.95	0.314	/
			50	0	Right Cheek	1882.5	0.226	-2.90	23.5	23.05	0.251	/
			1	0	Right Tilt	1882.5	0.214	3.36	24.5	23.95	0.243	/
			50	0	Right Tilt	1882.5	0.153	-3.95	23.5	23.05	0.170	/
			1	0	Left Cheek	1882.5	0.292	-1.02	24.5	23.95	**0.331**	**21**
			50	0	Left Cheek	1882.5	0.227	1.26	23.5	23.05	0.252	/
			1	0	Left Tilt	1882.5	0.237	-3.05	24.5	23.95	0.269	/
			50	0	Left Tilt	1882.5	0.195	-3.40	23.5	23.05	0.216	/
LTE Band 26	15M	QPSK	1	0	Right Cheek	841.5	0.277	2.46	25.5	24.76	0.328	/
			36	0	Right Cheek	841.5	0.212	3.09	24	23.68	0.228	/
			1	0	Right Tilt	841.5	0.179	3.27	25.5	24.76	0.212	/
			36	0	Right Tilt	841.5	0.137	0.10	24	23.68	0.147	/
			1	0	Left Cheek	841.5	0.302	1.52	25.5	24.76	**0.358**	**23**
			36	0	Left Cheek	841.5	0.243	1.69	24	23.68	0.262	/
			1	0	Left Tilt	841.5	0.213	-2.99	25.5	24.76	0.253	/
			36	0	Left Tilt	841.5	0.166	1.78	24	23.68	0.179	/
LTE Band 41	20M	QPSK	1	0	Right Cheek	2593	0.083	-2.20	26.6	26.07	0.094	/
			50	0	Right Cheek	2593	0.076	-3.11	26	25.97	0.077	/
			1	0	Right Tilt	2593	0.069	1.77	26.6	26.07	0.078	/
			50	0	Right Tilt	2593	0.056	2.29	26	25.97	0.056	/
			1	0	Left Cheek	2593	0.095	3.72	26.6	26.07	**0.107**	**25**
			50	0	Left Cheek	2593	0.086	2.77	26	25.97	0.087	/
			1	0	Left Tilt	2593	0.077	3.63	26.6	26.07	0.087	/
			50	0	Left Tilt	2593	0.062	1.37	26	25.97	0.062	/
LTE Band 66	20M	QPSK	1	0	Right Cheek	1720	0.368	3.44	24	23.86	**0.380**	**27**
			50	0	Right Cheek	1720	0.306	-0.74	23	22.80	0.320	/
			1	0	Right Tilt	1720	0.183	2.93	24	23.86	0.189	/
			50	0	Right Tilt	1720	0.135	-3.49	23	22.80	0.141	/
			1	0	Left Cheek	1720	0.262	-0.59	24	23.86	0.271	/
			50	0	Left Cheek	1720	0.217	0.62	23	22.80	0.227	/
			1	0	Left Tilt	1720	0.215	-2.03	24	23.86	0.222	/
			50	0	Left Tilt	1720	0.153	0.74	23	22.80	0.160	/
LTE Band 71	20M	QPSK	1	0	Right Cheek	680.5	0.317	0.01	25	24.4	**0.364**	**29**
			50	0	Right Cheek	680.5	0.272	0.22	23.5	23.29	0.285	/
			1	0	Right Tilt	680.5	0.261	2.21	25	24.4	0.300	/
			50	0	Right Tilt	680.5	0.195	-3.37	23.5	23.29	0.205	/
			1	0	Left Cheek	680.5	0.263	-3.52	25	24.4	0.302	/
			50	0	Left Cheek	680.5	0.204	-0.40	23.5	23.29	0.214	/
			1	0	Left Tilt	680.5	0.212	-3.54	25	24.4	0.243	/
			50	0	Left Tilt	680.5	0.187	1.04	23.5	23.29	0.196	/

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	2422	0.155	-1.87	15.50	15.02	0.173	/
		Right Tilt	2422	0.156	-0.56	15.50	15.02	**0.174**	**31**
		Left Cheek	2422	0.128	-2.80	15.50	15.02	0.143	/
		Left Tilt	2422	0.122	-1.55	15.50	15.02	0.136	/
BT	GFSK	Right Cheek	2441	0.036	0.94	4.00	3.83	0.037	/
		Right Tilt	2441	0.053	-2.28	4.00	3.83	**0.055**	**33**
		Left Cheek	2441	0.044	2.89	4.00	3.83	0.046	/
		Left Tilt	2441	0.029	3.04	4.00	3.83	0.030	/
5.2G WLAN	802.11a	Right Cheek	5180	0.156	3.20	9.50	9.34	0.162	/
		Right Tilt	5180	0.164	-3.98	9.50	9.34	**0.170**	**35**
		Left Cheek	5180	0.123	-1.48	9.50	9.34	0.128	/
		Left Tilt	5180	0.154	3.22	9.50	9.34	0.160	/
5.3G WLAN	802.11n-HT20	Right Cheek	5260	0.128	-3.05	9.50	9.28	0.135	/
		Right Tilt	5260	0.149	-1.78	9.50	9.28	**0.157**	**37**
		Left Cheek	5260	0.096	-1.77	9.50	9.28	0.101	/
		Left Tilt	5260	0.126	-3.23	9.50	9.28	0.133	/
5.6G WLAN	802.11a	Right Cheek	5700	0.476	-3.77	10.50	10.04	0.529	/
		Right Tilt	5700	0.611	-2.92	10.50	10.04	**0.679**	**39**
		Left Cheek	5700	0.372	3.50	10.50	10.04	0.414	/
		Left Tilt	5700	0.493	-3.32	10.50	10.04	0.548	/
5.8G WLAN	802.11a	Right Cheek	5745	0.688	-3.46	10.00	9.71	0.736	/
		Right Tilt	5745	0.901	2.97	10.00	9.71	**0.963**	**41**
		Left Cheek	5745	0.599	-0.26	10.00	9.71	0.640	/
		Left Tilt	5745	0.772	-0.05	10.00	9.71	0.825	/

Note:

1. Per KDB 447498 D01, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.

a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.

b. Scaled SAR(W/kg) = Measured SAR(W/kg) *Tune-up Scaling Factor

2. Per KDB 865664 D01, Repeated measurement is not required when the original highest measured SAR is <0.80 W/kg

12.2 Body-worn and Hotspot SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
GSM850	EGPRS (8PSK, 4-Slot)	Front Side	824.2	0.346	-0.32	33.00	32.86	0.357	/
		Back Side	824.2	0.444	-3.41	33.00	32.86	**0.459**	**2**
		Left Side	824.2	0.205	-3.88	33.00	32.86	0.212	/
		Right Side	824.2	0.414	3.56	33.00	32.86	0.428	/
		Top Side	824.2	0.124	1.77	33.00	32.86	0.128	/
		Bottom Side	824.2	0.236	-1.89	33.00	32.86	0.244	/
PCS 1900	EGPRS (8PSK, 4-Slot)	Front Side	1850.2	0.350	0.36	30.50	29.91	**0.401**	**4**
		Back Side	1850.2	0.296	-1.49	30.50	29.91	0.339	/
		Left Side	1850.2	0.247	1.45	30.50	29.91	0.283	/
		Right Side	1850.2	0.151	1.60	30.50	29.91	0.173	/
		Top Side	1850.2	0.064	3.16	30.50	29.91	0.073	/
		Bottom Side	1850.2	0.153	-3.25	30.50	29.91	0.175	/
WCDMA Band II	RMC	Front Side	1880	0.627	1.01	24.00	23.85	**0.649**	**6**
		Back Side	1880	0.504	-2.82	24.00	23.85	0.522	/
		Left Side	1880	0.462	3.78	24.00	23.85	0.478	/
		Right Side	1880	0.221	-1.90	24.00	23.85	0.229	/
		Bottom Side	1880	0.253	0.86	24.00	23.85	0.262	/
WCDMA Band IV	RMC	Front Side	1712.6	0.440	3.45	24.00	23.65	**0.477**	**8**
		Back Side	1712.6	0.440	0.63	24.00	23.65	0.477	/
		Left Side	1712.6	0.361	-3.34	24.00	23.65	0.391	/
		Right Side	1712.6	0.182	-1.27	24.00	23.65	0.197	/
		Bottom Side	1712.6	0.221	-0.85	24.00	23.65	0.240	/
WCDMA Band V	RMC	Front Side	846.6	0.242	1.69	24.00	24.52	0.215	/
		Back Side	846.6	0.317	1.17	24.00	24.52	0.281	/
		Left Side	846.6	0.194	-0.38	24.00	24.52	0.172	/
		Right Side	846.6	0.387	-3.63	24.00	24.52	**0.343**	**10**
		Bottom Side	846.6	0.165	-1.73	24.00	24.52	0.146	/

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
LTE Band 2	20M	QPSK	1	0	Front side	1860	0.594	-1.03	24.5	23.64	0.724	/
			1	0	Front side	1880	0.771	-0.33	24.5	24.04	**0.857**	**12**
			1	0	Front side	1900	0.672	1.40	24.5	23.83	0.784	/
			50	0	Front side	1880	0.632	1.98	23.5	23.07	0.698	/
			1	0	Back Side	1880	0.518	3.22	24.5	24.04	0.576	/
			50	0	Back Side	1880	0.416	-0.53	23.5	23.07	0.459	/
			1	0	Left Side	1880	0.496	3.45	24.5	24.04	0.551	/
			50	0	Left Side	1880	0.392	2.35	23.5	23.07	0.433	/
			1	0	Right Side	1880	0.267	2.74	24.5	24.04	0.297	/
			50	0	Right Side	1880	0.202	-1.65	23.5	23.07	0.223	/
			1	0	Bottom Side	1880	0.542	-3.11	24.5	24.04	0.603	/
			50	0	Bottom Side	1880	0.443	-0.86	23.5	23.07	0.489	/
LTE Band 4	20M	QPSK	1	0	Front side	1720	0.556	3.85	24	23.72	**0.593**	**14**
			50	0	Front side	1720	0.442	-1.77	23	22.66	0.478	/
			1	0	Back Side	1720	0.513	0.74	24	23.72	0.547	/
			50	0	Back Side	1720	0.419	-1.67	23	22.66	0.453	/
			1	0	Left Side	1720	0.455	0.46	24	23.72	0.485	/
			50	0	Left Side	1720	0.366	3.69	23	22.66	0.396	/
			1	0	Right Side	1720	0.151	2.23	24	23.72	0.161	/
			50	0	Right Side	1720	0.126	-3.38	23	22.66	0.136	/
			1	0	Bottom Side	1720	0.543	3.81	24	23.72	0.579	/
			50	0	Bottom Side	1720	0.435	-0.70	23	22.66	0.470	/
LTE Band 5	10M	QPSK	1	0	Front side	844	0.315	0.02	25.2	24.67	0.356	/
			25	0	Front side	829	0.270	-1.03	24	23.6	0.296	/
			1	0	Back Side	844	0.410	1.72	25.2	24.67	0.463	/
			25	0	Back Side	829	0.340	1.40	24	23.6	0.373	/
			1	0	Left Side	844	0.277	-0.36	25.2	24.67	0.313	/
			25	0	Left Side	829	0.221	3.47	24	23.6	0.242	/
			1	0	Right Side	844	0.424	1.55	25.2	24.67	**0.479**	**16**
			25	0	Right Side	829	0.333	-1.83	24	23.6	0.365	/
			1	0	Bottom Side	844	0.183	-2.87	25.2	24.67	0.207	/
			25	0	Bottom Side	829	0.141	0.68	24	23.6	0.155	/
LTE Band 12	10M	QPSK	1	0	Front side	704	0.148	-2.92	25	24.36	0.171	/
			25	0	Front side	711	0.113	3.22	23.5	23.33	0.118	/
			1	0	Back Side	704	0.435	1.67	25	24.36	0.504	/
			25	0	Back Side	711	0.343	1.39	23.5	23.33	0.357	/
			1	0	Left Side	704	0.316	0.23	25	24.36	0.366	/
			25	0	Left Side	711	0.271	-2.87	23.5	23.33	0.282	/
			1	0	Right Side	704	0.452	-1.92	25	24.36	**0.524**	**18**
			25	0	Right Side	711	0.364	-3.91	23.5	23.33	0.379	/
			1	0	Bottom Side	704	0.195	-1.98	25	24.36	0.226	/
			25	0	Bottom Side	711	0.162	-1.23	23.5	23.33	0.168	/

LTE Band 13	10M	QPSK	1	0	Front side	782	0.117	-3.61	25	24.33	0.137	/
			25	0	Front side	782	0.077	3.18	24	23.43	0.088	/
			1	0	Back Side	782	0.492	2.04	25	24.33	0.574	/
			25	0	Back Side	782	0.384	-2.96	24	23.43	0.438	/
			1	0	Left Side	782	0.341	2.91	25	24.33	0.398	/
			25	0	Left Side	782	0.251	-3.26	24	23.43	0.286	/
			1	0	Right Side	782	0.549	3.64	25	24.33	**0.641**	**20**
			25	0	Right Side	782	0.448	0.69	24	23.43	0.511	/
			1	0	Bottom Side	782	0.243	-2.43	25	24.33	0.284	/
			25	0	Bottom Side	782	0.199	-0.77	24	23.43	0.227	/
LTE Band 25	20M	QPSK	1	0	Front side	1860	0.605	-3.07	24.5	23.71	0.726	/
			1	0	Front side	1882.5	0.756	3.83	24.5	23.95	**0.858**	**22**
			1	0	Front side	1905	0.623	-0.16	24.5	23.77	0.737	/
			50	0	Front side	1882.5	0.625	3.70	23.5	23.05	0.693	/
			1	0	Back Side	1882.5	0.646	2.13	24.5	23.95	0.733	/
			50	0	Back Side	1882.5	0.507	3.98	23.5	23.05	0.562	/
			1	0	Left Side	1882.5	0.521	0.13	24.5	23.95	0.591	/
			50	0	Left Side	1882.5	0.432	3.94	23.5	23.05	0.479	/
			1	0	Right Side	1882.5	0.146	-2.30	24.5	23.95	0.166	/
			50	0	Right Side	1882.5	0.109	-2.12	23.5	23.05	0.121	/
			1	0	Bottom Side	1882.5	0.458	-2.91	24.5	23.95	0.520	/
			50	0	Bottom Side	1882.5	0.373	1.02	23.5	23.05	0.414	/
LTE Band 26	15M	QPSK	1	0	Front side	841.5	0.272	-0.10	25.5	24.76	0.323	/
			36	0	Front side	841.5	0.218	-2.22	24	23.68	0.235	/
			1	0	Back Side	841.5	0.398	0.00	25.5	24.76	**0.472**	**24**
			36	0	Back Side	841.5	0.311	2.20	24	23.68	0.335	/
			1	0	Left Side	841.5	0.303	2.66	25.5	24.76	0.359	/
			36	0	Left Side	841.5	0.244	2.22	24	23.68	0.263	/
			1	0	Right Side	841.5	0.366	-0.78	25.5	24.76	0.434	/
			36	0	Right Side	841.5	0.318	0.81	24	23.68	0.342	/
			1	0	Bottom Side	841.5	0.168	3.07	25.5	24.76	0.199	/
			36	0	Bottom Side	841.5	0.129	-1.56	24	23.68	0.139	/
LTE Band 41	20M	QPSK	1	0	Front side	2593	0.122	3.44	26.6	26.07	0.138	/
			50	0	Front side	2593	0.079	-3.84	26	25.97	0.080	/
			1	0	Back Side	2593	0.241	-0.63	26.6	26.07	0.272	/
			50	0	Back Side	2593	0.193	3.16	26	25.97	0.194	/
			1	0	Left Side	2593	0.142	-0.62	26.6	26.07	0.160	/
			50	0	Left Side	2593	0.111	1.08	26	25.97	0.112	/
			1	0	Right Side	2593	0.098	0.08	26.6	26.07	0.111	/
			50	0	Right Side	2593	0.079	-0.87	26	25.97	0.080	/
			1	0	Bottom Side	2593	0.270	-3.00	26.6	26.07	**0.305**	**26**
			50	0	Bottom Side	2593	0.211	0.90	26	25.97	0.212	/

LTE Band 66	20M	QPSK	1	0	Front side	1720	0.592	1.11	24	23.86	**0.611**	**28**
			50	0	Front side	1720	0.480	2.26	23	22.80	0.503	/
			1	0	Back Side	1720	0.562	-0.29	24	23.86	0.580	/
			50	0	Back Side	1720	0.435	-3.65	23	22.80	0.456	/
			1	0	Left Side	1720	0.390	-3.07	24	23.86	0.403	/
			50	0	Left Side	1720	0.324	3.50	23	22.80	0.339	/
			1	0	Right Side	1720	0.142	3.98	24	23.86	0.147	/
			50	0	Right Side	1720	0.119	0.69	23	22.80	0.125	/
			1	0	Bottom Side	1720	0.532	-2.28	24	23.86	0.549	/
			50	0	Bottom Side	1720	0.437	-0.97	23	22.80	0.458	/
LTE Band 71	20M	QPSK	1	0	Front side	680.5	0.149	3.07	25	24.4	0.171	/
			50	0	Front side	680.5	0.122	3.37	23.5	23.29	0.128	/
			1	0	Back Side	680.5	0.449	-1.91	25	24.4	**0.516**	**30**
			50	0	Back Side	680.5	0.375	0.59	23.5	23.29	0.394	/
			1	0	Left Side	680.5	0.352	-3.36	25	24.4	0.404	/
			50	0	Left Side	680.5	0.290	-2.77	23.5	23.29	0.304	/
			1	0	Right Side	680.5	0.385	-2.35	25	24.4	0.442	/
			50	0	Right Side	680.5	0.322	3.24	23.5	23.29	0.338	/
			1	0	Bottom Side	680.5	0.192	-1.41	25	24.4	0.220	/
			50	0	Bottom Side	680.5	0.158	-0.27	23.5	23.29	0.166	/

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	2422	0.080	1.61	15.50	15.02	0.089	/
		Back Side	2422	0.100	-1.89	15.50	15.02	0.112	/
		Left Side	2422	0.103	1.96	15.50	15.02	**0.115**	**32**
		Top Side	2422	0.071	-2.04	15.50	15.02	0.079	/
BT	GFSK	Front Side	2441	0.051	1.15	4.00	3.83	0.053	/
		Back Side	2441	0.064	-2.29	4.00	3.83	**0.067**	**34**
		Left Side	2441	0.060	-0.38	4.00	3.83	0.062	/
		Top Side	2441	0.055	0.88	4.00	3.83	0.057	/
5.2GHz WLAN	802.11a	Front Side	5180	0.100	1.51	9.50	9.34	0.104	/
		Back Side	5180	0.181	-2.78	9.50	9.34	**0.188**	**36**
		Left Side	5180	0.091	2.14	9.50	9.34	0.094	/
		Top Side	5180	0.092	-2.56	9.50	9.34	0.095	/
5.3GHz WLAN	802.11n-HT20	Front Side	5260	0.086	1.87	9.50	9.28	0.090	/
		Back Side	5260	0.150	-2.57	9.50	9.28	**0.158**	**38**
		Left Side	5260	0.071	1.83	9.50	9.28	0.075	/
		Top Side	5260	0.088	3.49	9.50	9.28	0.093	/
5.6GHz WLAN	802.11a	Front Side	5500	0.680	0.82	10.50	10.04	0.756	/
		Back Side	5500	0.621	-1.76	10.50	9.20	0.838	/
		Back Side	5580	0.722	0.81	10.50	9.64	0.880	/
		Back Side	5700	0.837	1.74	10.50	10.04	**0.931**	**40**
		Left Side	5700	0.521	-1.73	10.50	10.04	0.579	/
		Top Side	5700	0.582	-3.77	10.50	10.04	0.647	/
5.8GHz WLAN	802.11a	Front Side	5745	0.656	-0.19	10.00	9.71	0.701	/
		Back Side	5745	0.808	-3.06	10.00	9.71	**0.864**	**42**
		Back Side	5785	0.730	2.43	10.00	9.47	0.825	/
		Back Side	5825	0.619	-2.82	10.00	8.99	0.781	/
		Left Side	5745	0.488	3.76	10.00	9.71	0.522	/
		Top Side	5745	0.572	-0.93	10.00	9.71	0.611	/

Note:

1. The test separation of all above table is 5mm.
2. Per KDB 447498 D01, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. Scaled SAR(W/kg) = Measured SAR(W/kg) *Tune-up Scaling Factor
3. When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The “Portable Hotspot” feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

Repeated SAR

Band	Mode	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)
5.6GHz WLAN	802.11a	Back Side	5500	0.621	-3.03	10.5	9.2	0.838
		Back Side	5580	0.706	2.99	10.5	9.64	0.861
		Back Side	5700	0.810	3.19	10.5	10.04	0.901
5.8GHz WLAN	802.11a	Back Side	5745	0.792	3.49	10	9.71	0.847
		Back Side	5785	0.719	3.61	10	9.47	0.812

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)
LTE Band 2	20M	QPSK	1	0	Front side	1880	0.771	1.25	24.5	24.04	0.857
LTE Band 25	20M	QPSK	1	0	Front side	1882.5	0.724	-2.92	24.5	23.95	0.822

Repeated SAR measurement

Band	Mode	Test Position	Freq.	Original Measured SAR 1g(W/kg)	1 st Repeated SAR 1g	Ratio
5.6GHz WLAN	802.11a	Back Side	5500	0.621	0.621	1.000
		Back Side	5580	0.722	0.706	1.023
		Back Side	5700	0.837	0.810	1.033
5.8GHz WLAN	802.11a	Back Side	5745	0.808	0.792	1.020
		Back Side	5785	0.730	0.719	1.015

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Original Measured SAR 1g(W/kg) 1g (W/Kg)	1 st Repeated SAR 1g	Ratio
LTE Band 2	20M	QPSK	1	0	Front side	1880	0.771	0.771	1.000
LTE Band 25	20M	QPSK	1	0	Front side	1882.5	0.756	0.724	1.044

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 / 4.3.2 (2) when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
a) (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f (GHz) /x] W/kg for test separation distances≤ 50 mm;
Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.
b) 0.4W/Kg for 1-g SAR and 1.0W/Kg for 10-g SAR, when the separation distance is >50mm.

Simultaneous Mode	Position	Mode	Max. 1-g SAR (W/kg)	1-g Sum SAR (W/kg)
GSM + 2.4G WLAN	Head	GSM	0.341	0.515
		2.4G WLAN	0.174	
	Body	GSM	0.459	0.574
		2.4G WLAN	0.115	
GSM + Bluetooth	Head	GSM	0.341	0.396
		Bluetooth	0.055	
	Body	GSM	0.459	0.526
		Bluetooth	0.067	
GSM + 5G WLAN	Head	GSM	0.341	1.304
		5G WLAN	0.963	
	Body	GSM	0.459	1.390
		5G WLAN	0.931	
WCDMA + 2.4G WLAN	Head	WCDMA	0.374	0.548
		2.4G WLAN	0.174	
	Body	WCDMA	0.649	0.764
		2.4G WLAN	0.115	
WCDMA + Bluetooth	Head	WCDMA	0.374	0.429
		Bluetooth	0.055	
	Body	WCDMA	0.649	0.716
		Bluetooth	0.067	
WCDMA + 5G WLAN	Head	WCDMA	0.374	1.337
		5G WLAN	0.963	
	Body	WCDMA	0.649	1.580
		5G WLAN	0.931	
LTE + 2.4G WLAN	Head	LTE	0.441	0.615
		2.4G WLAN	0.174	
	Body	LTE	0.858	0.973
		2.4G WLAN	0.115	
LTE + Bluetooth	Head	LTE	0.441	0.496
		Bluetooth	0.055	
	Body	LTE	0.858	0.925
		Bluetooth	0.067	
LTE + 5G WLAN	Head	LTE	0.441	1.404
		5G WLAN	0.963	
	Body Front side	LTE	0.858	1.438
		5G WLAN	0.580	
	Body Back Side	LTE	0.646	1.577
		5G WLAN	0.931	

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
2600MHz Dipole	MVG	DIP2G600	SN 06/22 DIP2G600-646	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	202303280013	N/A	N/A
Network Analyzer	Agilent	E5071C	MY46418070	2023.03.27	2024.03.26
Multi Meter	Keithley	DMM6500	DMM6500	2023.03.27	2024.03.26
Signal Generator	Keithley	N5182B	MY59100717	2023.04.07	2024.04.06
Wireless Communication Test Set	R&S	CMW500	137737	2023.04.14	2024.04.13
Power Sensor	R&S	Z11	116184	2023.04.13	2024.04.12
Temperature hygrometer	N/A	ST-W2318	N/A	2023.04.24	2024.04.23
Thermograph	N/A	TP101	N/A	2023.04.25	2024.04.24

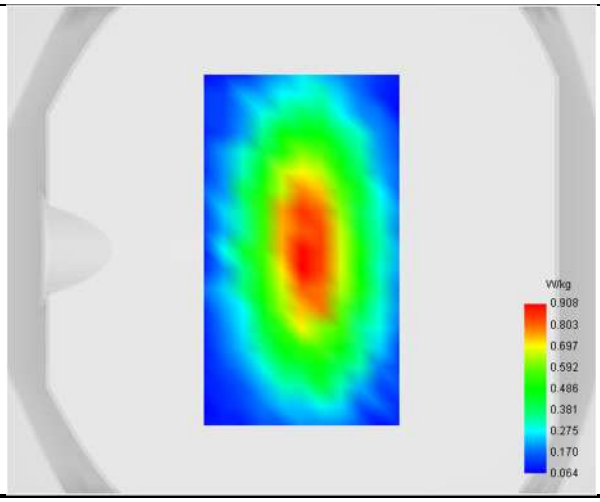
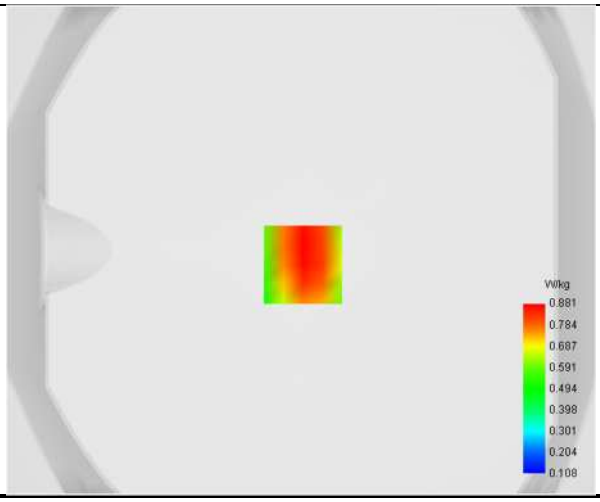
Appendix A. System Validation Plots

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: 2023-11-08

Experimental conditions.

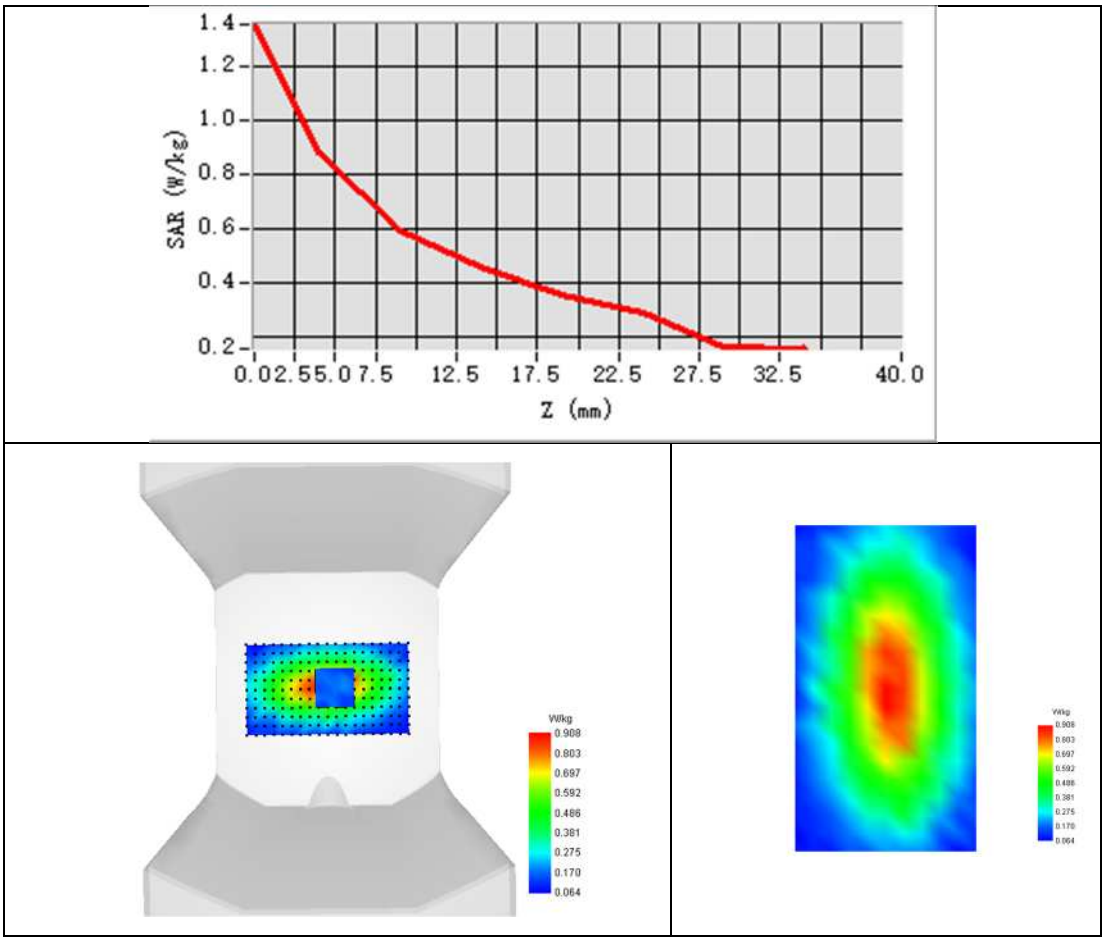
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW
Frequency (MHz)	750.000
Relative permittivity	43.10
Conductivity (S/m)	0.90
Probe	SN 04/22 EPGO364
ConvF	1.69
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=9.00 ; SAR Peak: 1.32 W/kg

SAR 10g (W/Kg)	0.545
SAR 1g (W/Kg)	0.861

Z Axis Scan

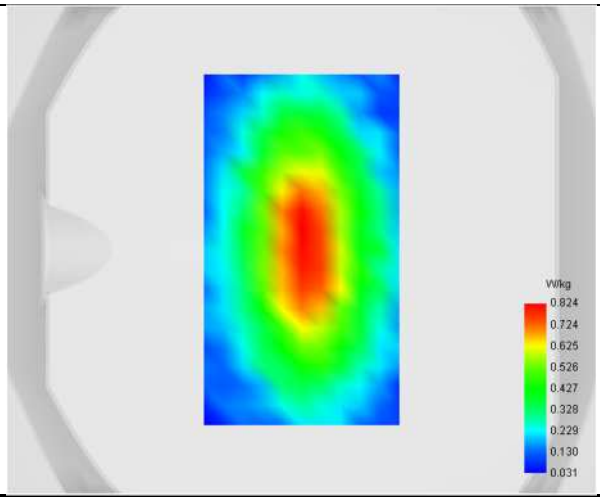
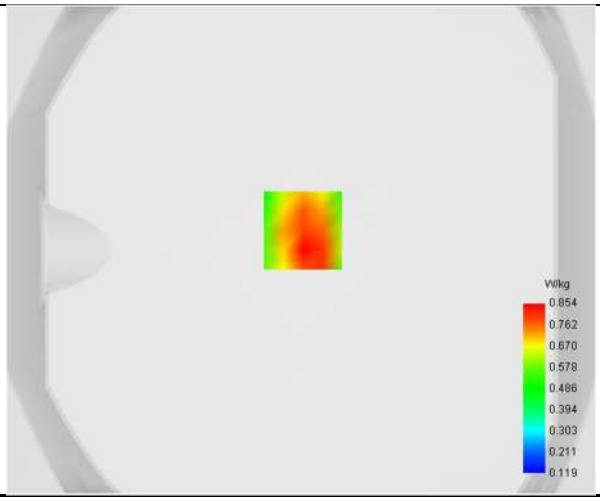

SAR (W/kg)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
0.908
0.803
0.697
0.592
0.486
0.381
0.275
0.170
0.064

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: 2023-11-09

Experimental conditions.

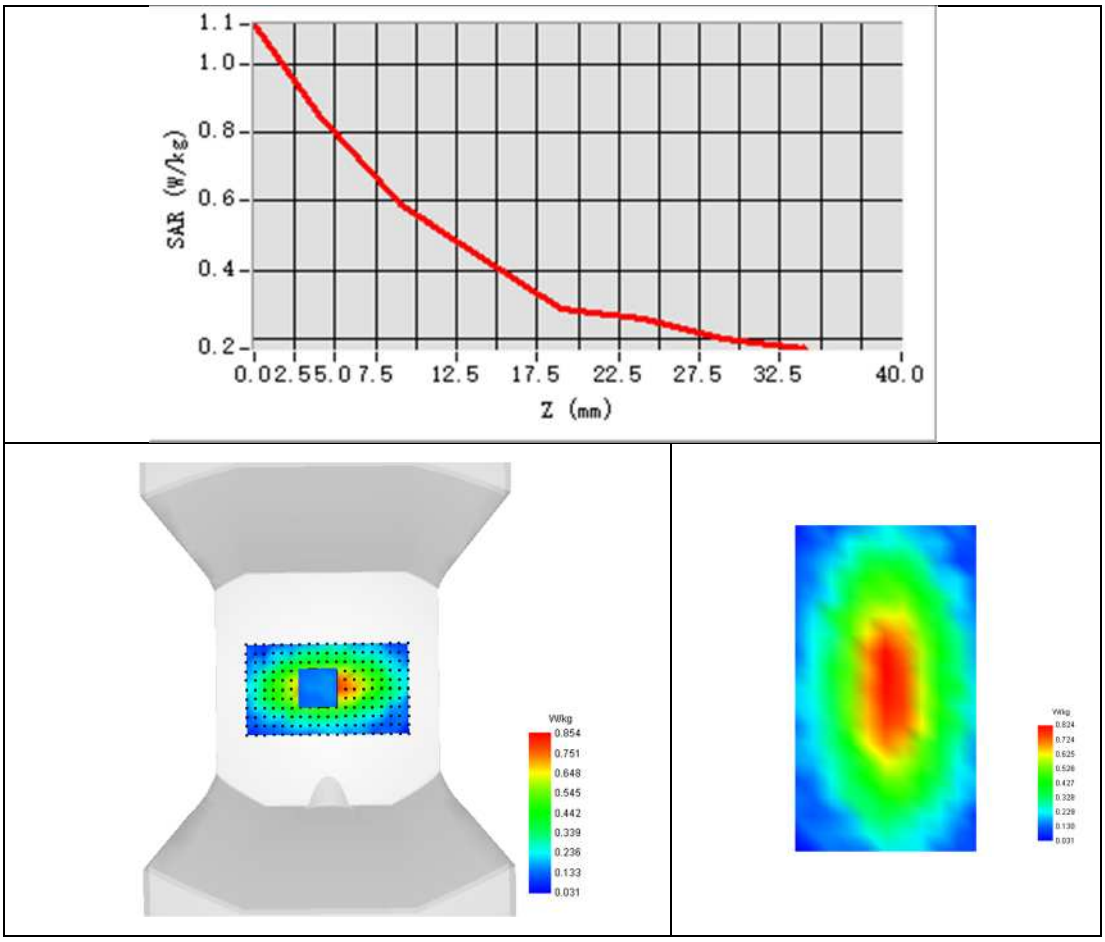
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW
Frequency (MHz)	750.000
Relative permittivity	42.60
Conductivity (S/m)	0.87
Probe	SN 04/22 EPGO364
ConvF	1.69
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

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

SAR 10g (W/Kg)	0.540
SAR 1g (W/Kg)	0.810

Z Axis Scan

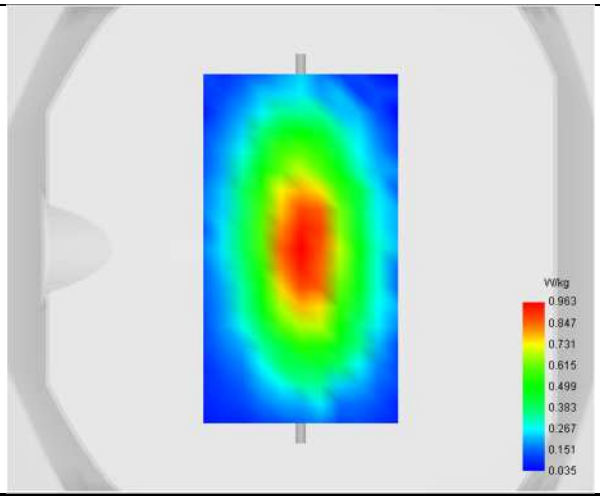
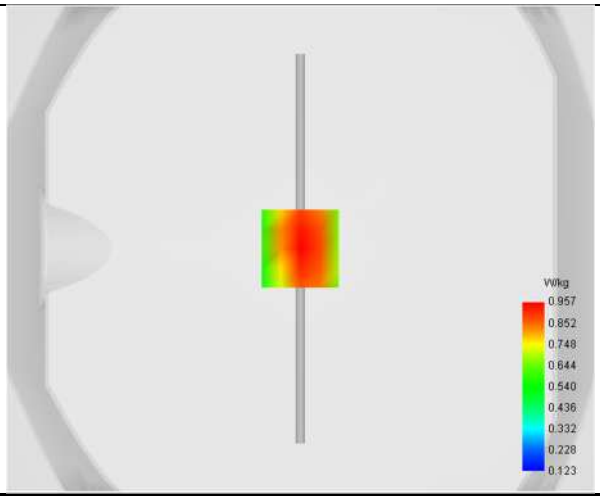

1.1
1.0
0.8
0.6
0.4
0.2
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
0.854
0.751
0.648
0.545
0.442
0.339
0.236
0.133
0.031

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: 2023-11-10

Experimental conditions.

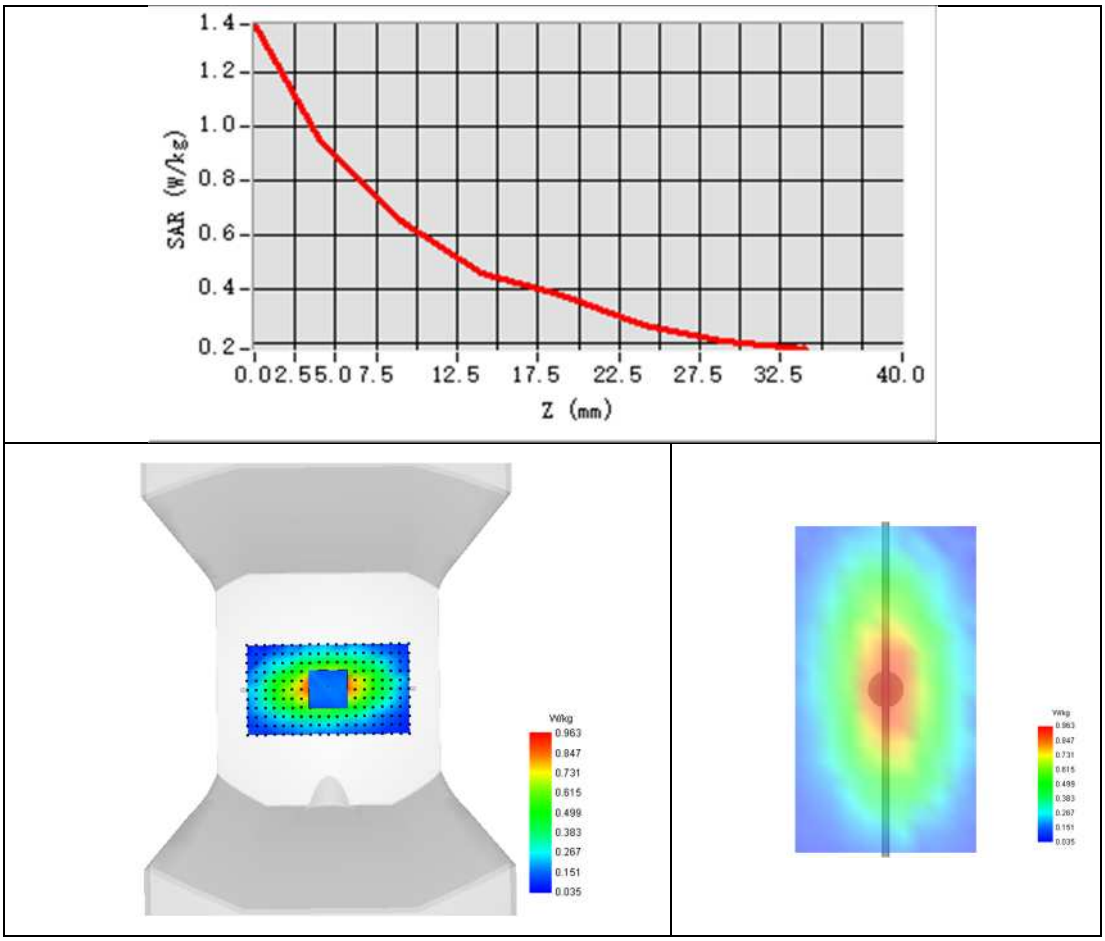
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW
Frequency (MHz)	835.000
Relative permittivity	41.07
Conductivity (S/m)	0.92
Probe	SN 04/22 EPGO364
ConvF	1.72
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=5.00 ; SAR Peak: 1.35 W/kg

SAR 10g (W/Kg)	0.611
SAR 1g (W/Kg)	0.926

Z Axis Scan

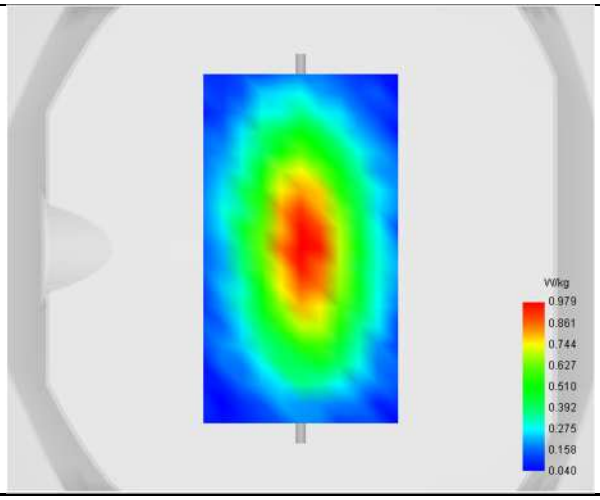
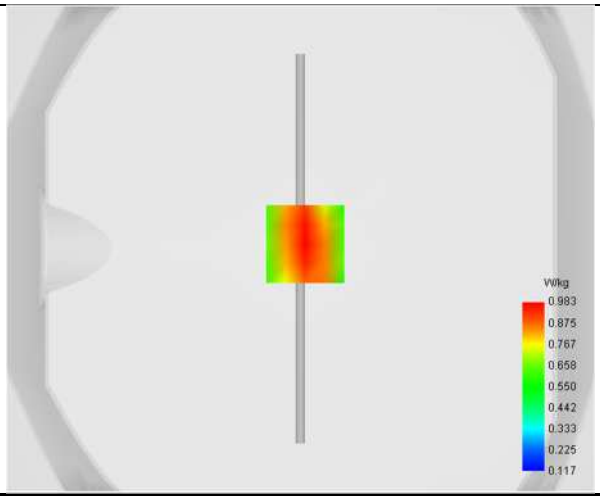

SAR (W/kg)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
0.963
0.847
0.731
0.615
0.499
0.383
0.267
0.151
0.035

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: 2023-11-11

Experimental conditions.

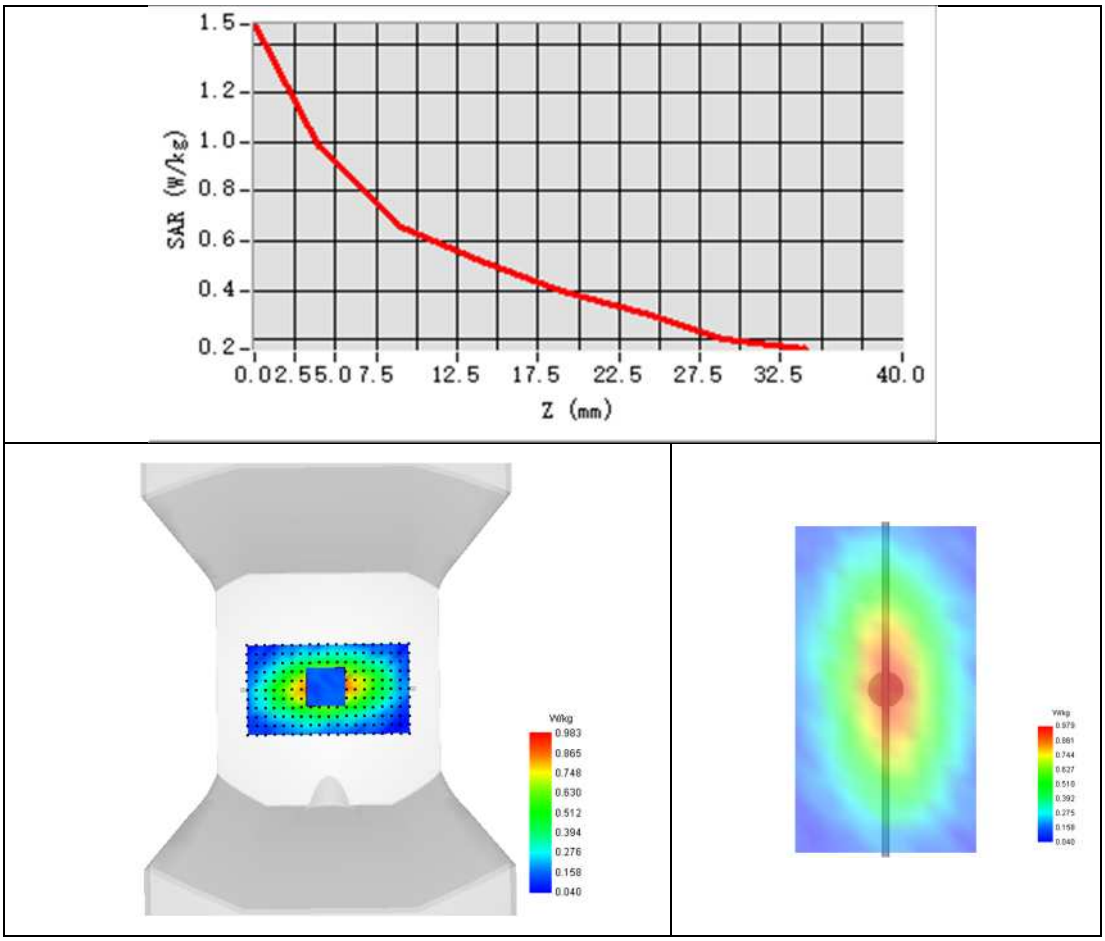
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW
Frequency (MHz)	835.000
Relative permittivity	41.05
Conductivity (S/m)	0.92
Probe	SN 04/22 EPGO364
ConvF	1.72
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=5.00 ; SAR Peak: 1.48 W/kg

SAR 10g (W/Kg)	0.584
SAR 1g (W/Kg)	0.971

Z Axis Scan

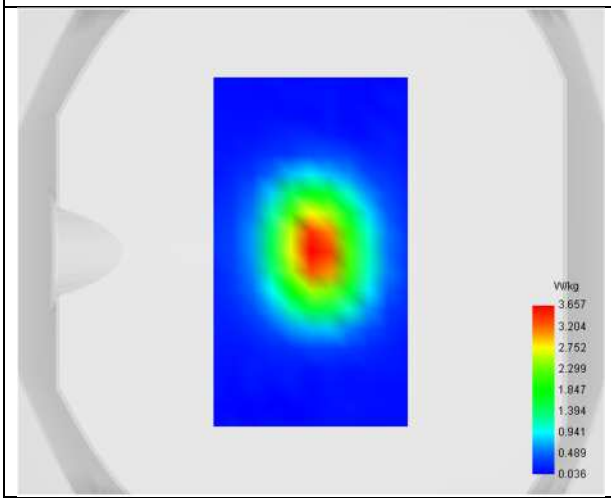
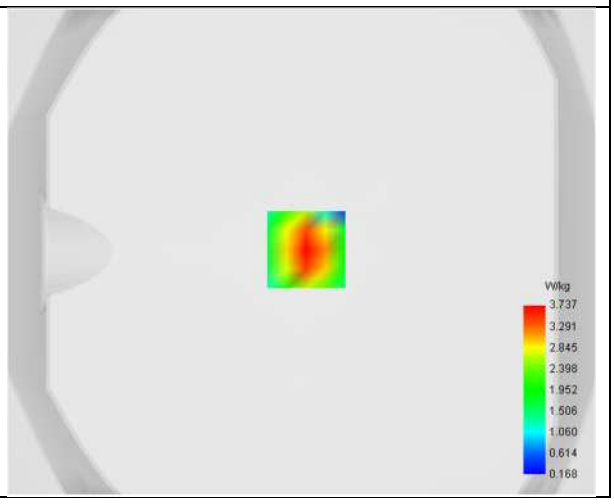

SAR (W/kg)
1.5
1.2
1.0
0.8
0.6
0.4
0.2
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
0.983
0.865
0.748
0.630
0.512
0.394
0.276
0.158
0.040

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: 2023-11-12

Experimental conditions.

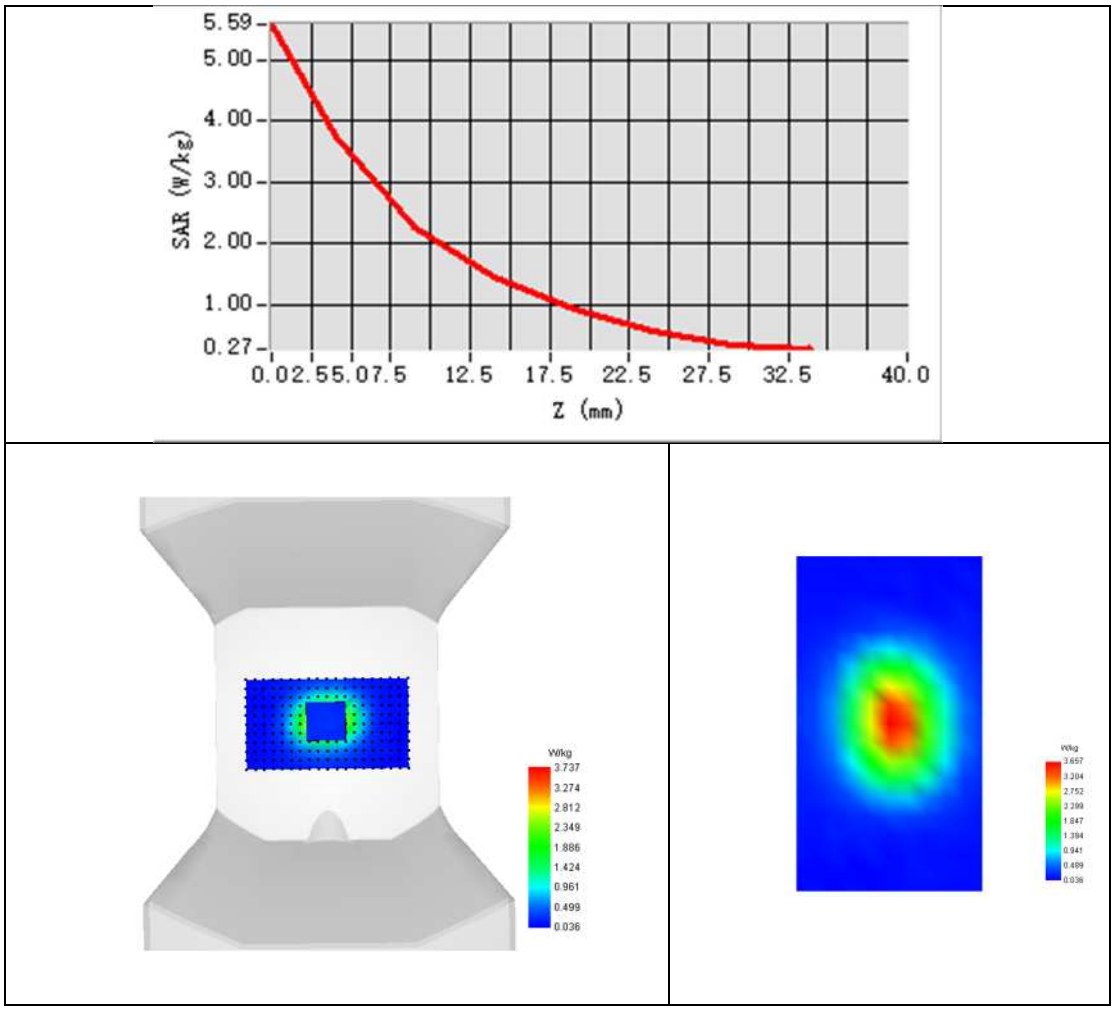
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW
Frequency (MHz)	1800.000
Relative permittivity	40.17
Conductivity (S/m)	1.46
Probe	SN 04/22 EPGO364
ConvF	1.95
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00 ; SAR Peak: 5.84 W/kg

SAR 10g (W/Kg)	2.057
SAR 1g (W/Kg)	3.695

Z Axis Scan

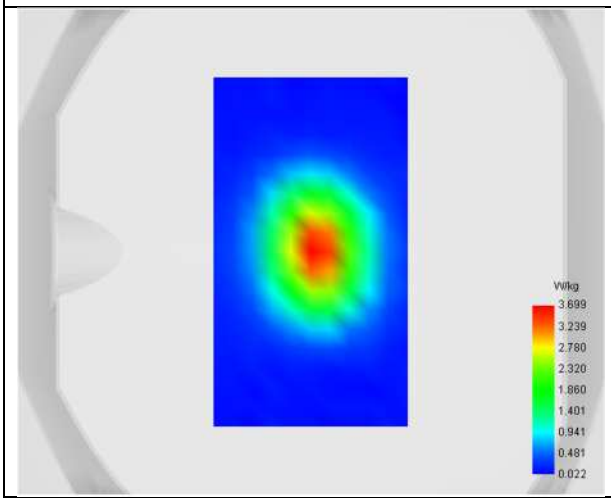
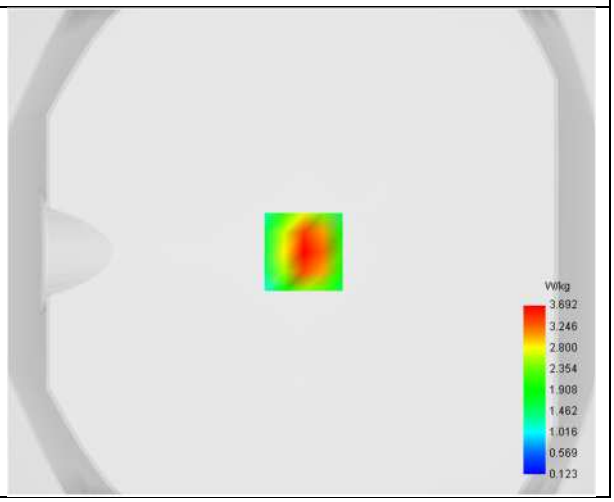

5.59
5.00
4.00
3.00
2.00
1.00
0.27
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
3.737
3.274
2.812
2.349
1.886
1.424
0.961
0.499
0.036

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: 2023-11-13

Experimental conditions.

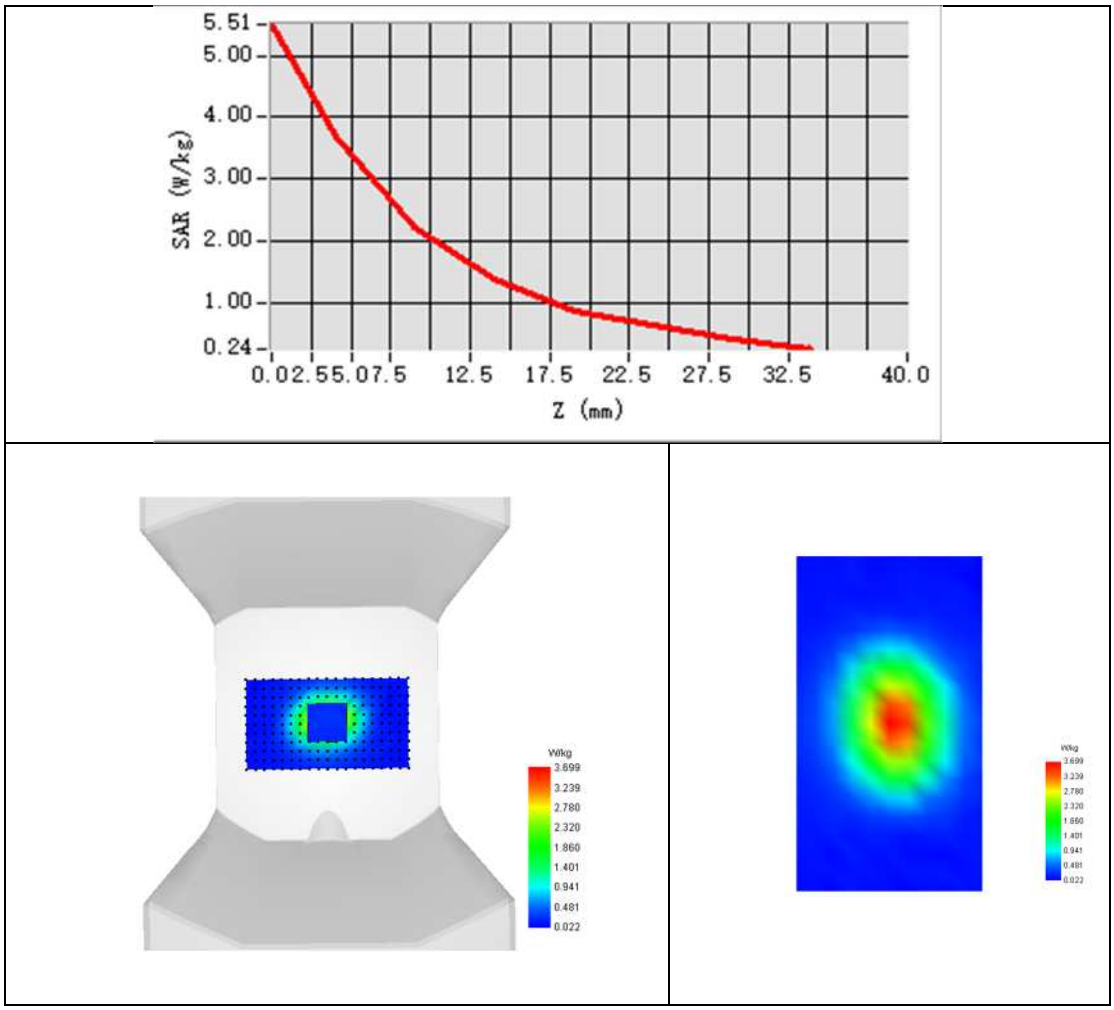
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW
Frequency (MHz)	1800.000
Relative permittivity	40.14
Conductivity (S/m)	1.45
Probe	SN 04/22 EPGO364
ConvF	1.95
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00 ; SAR Peak: 5.84 W/kg

SAR 10g (W/Kg)	2.082
SAR 1g (W/Kg)	3.690

Z Axis Scan

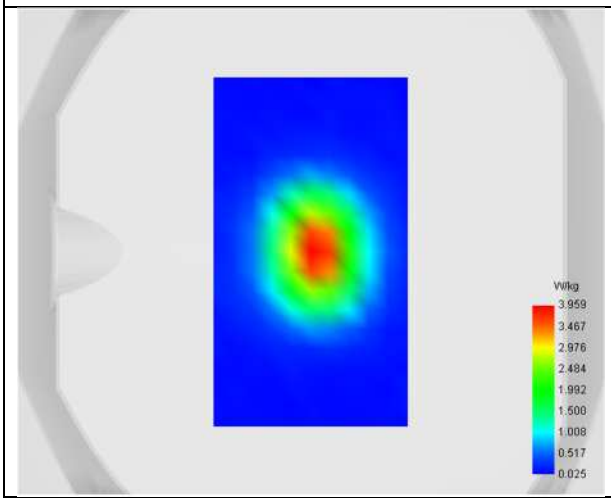
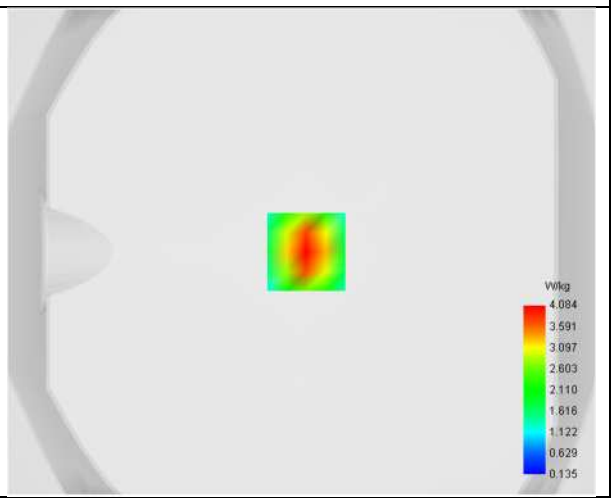

5.51
5.00
4.00
3.00
2.00
1.00
0.24
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
3.699
3.239
2.780
2.320
1.860
1.401
0.941
0.481
0.022

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: 2023-11-14

Experimental conditions.

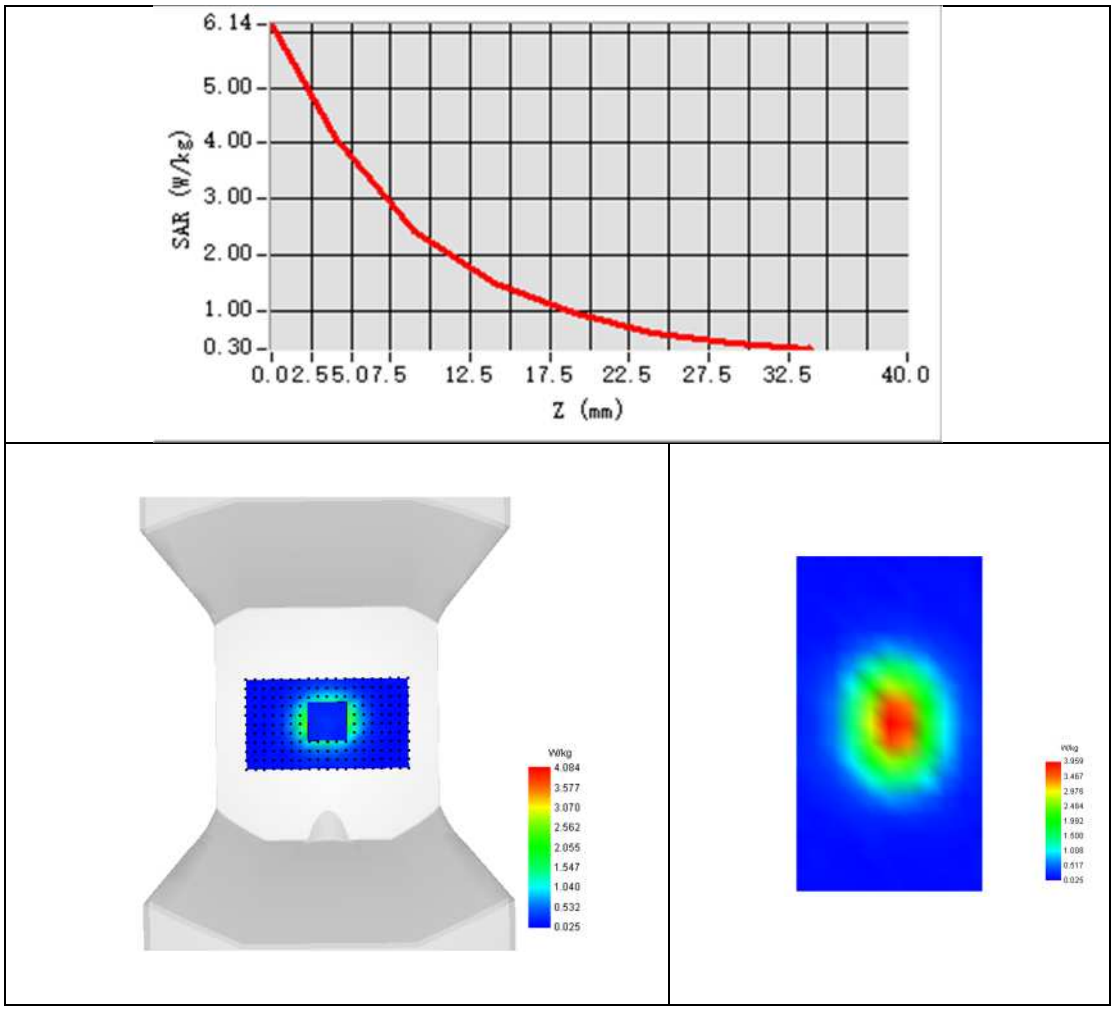
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW
Frequency (MHz)	1900.000
Relative permittivity	40.82
Conductivity (S/m)	1.38
Probe	SN 04/22 EPGO364
ConvF	2.25
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=5.00, Y=1.00 ; SAR Peak: 6.38 W/kg

SAR 10g (W/Kg)	2.023
SAR 1g (W/Kg)	3.893

Z Axis Scan

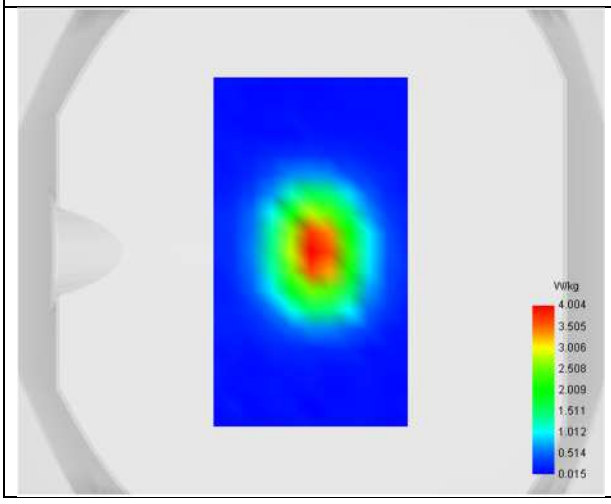
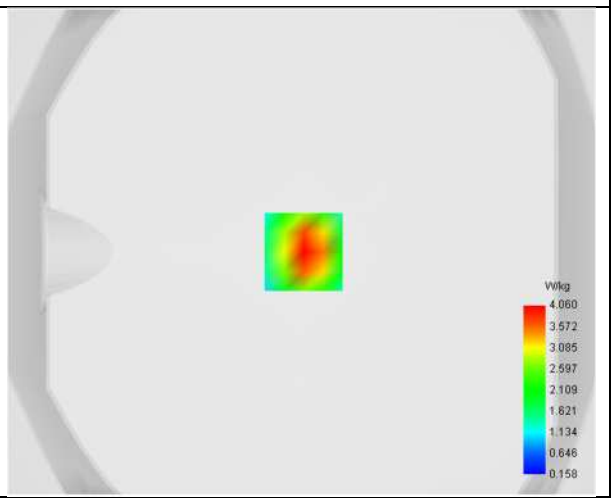

6.14
5.00
4.00
3.00
2.00
1.00
0.30
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
4.084
3.577
3.070
2.562
2.055
1.547
1.040
0.532
0.025
W/kg

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: 2023-11-15

Experimental conditions.

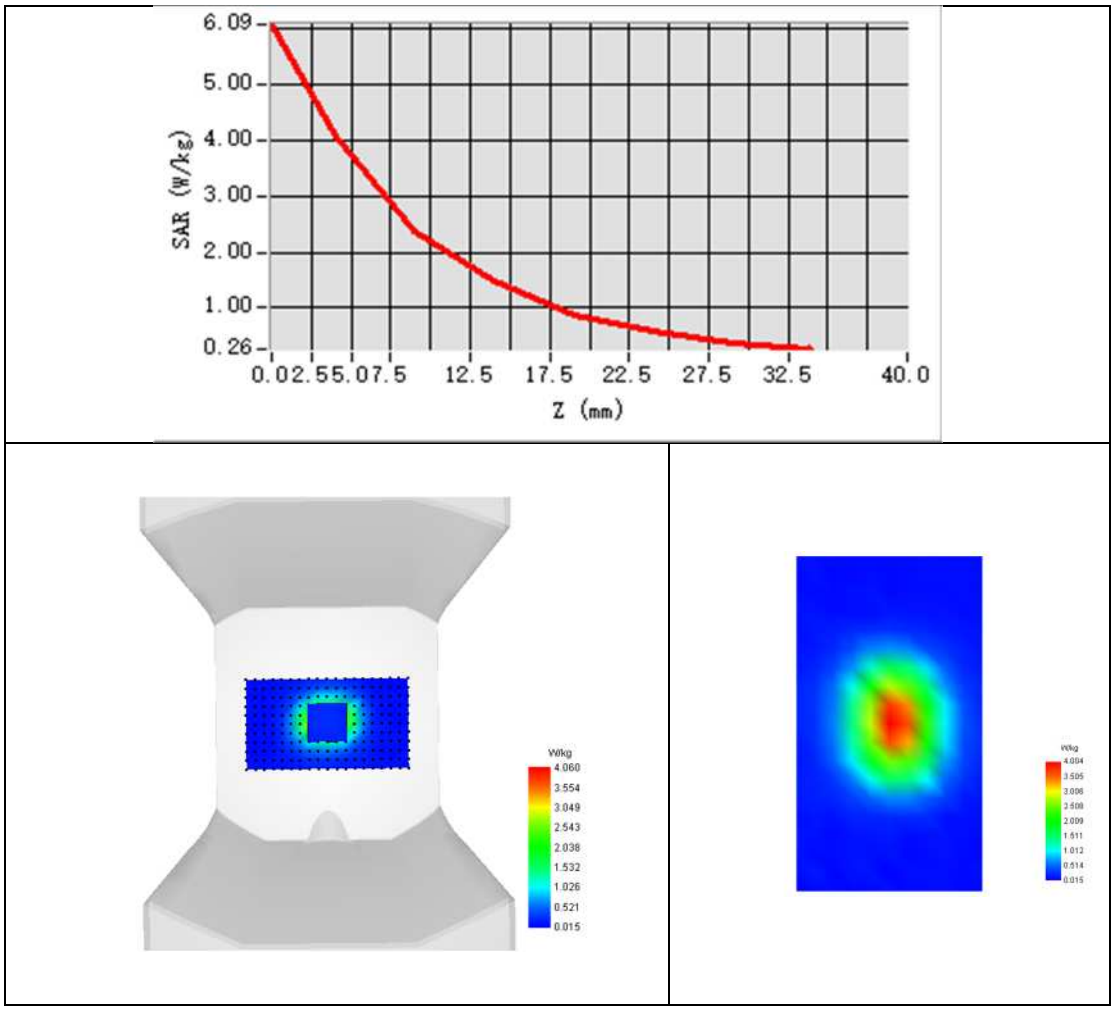
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW
Frequency (MHz)	1900.000
Relative permittivity	41.36
Conductivity (S/m)	1.43
Probe	SN 04/22 EPGO364
ConvF	2.25
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=5.00, Y=1.00 ; SAR Peak: 6.59 W/kg

SAR 10g (W/Kg)	2.077
SAR 1g (W/Kg)	4.098

Z Axis Scan

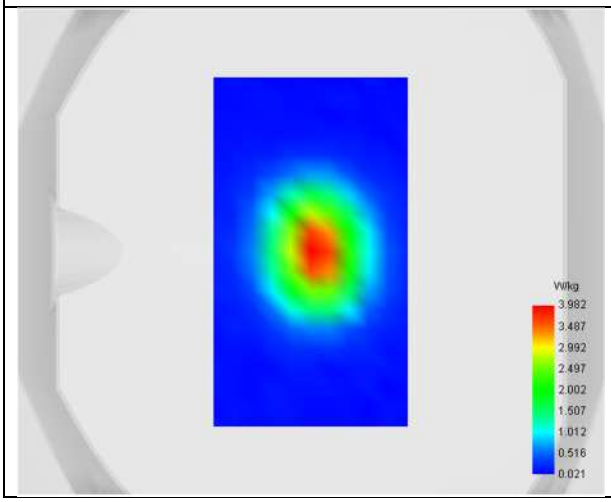
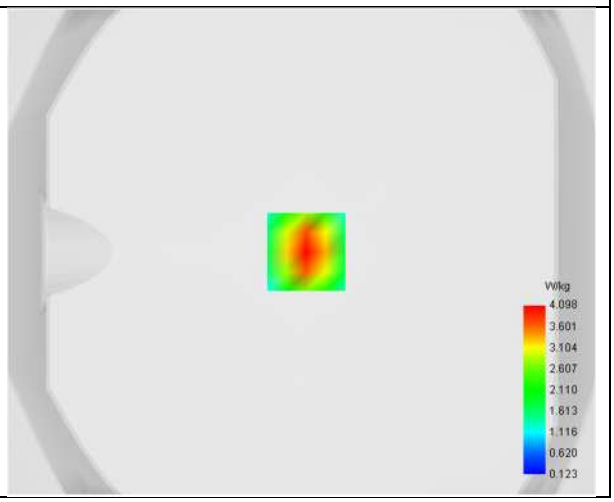

6.09
5.00
4.00
3.00
2.00
1.00
0.26
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
4.060
3.554
3.049
2.543
2.038
1.532
1.026
0.521
0.015

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: 2023-11-16

Experimental conditions.

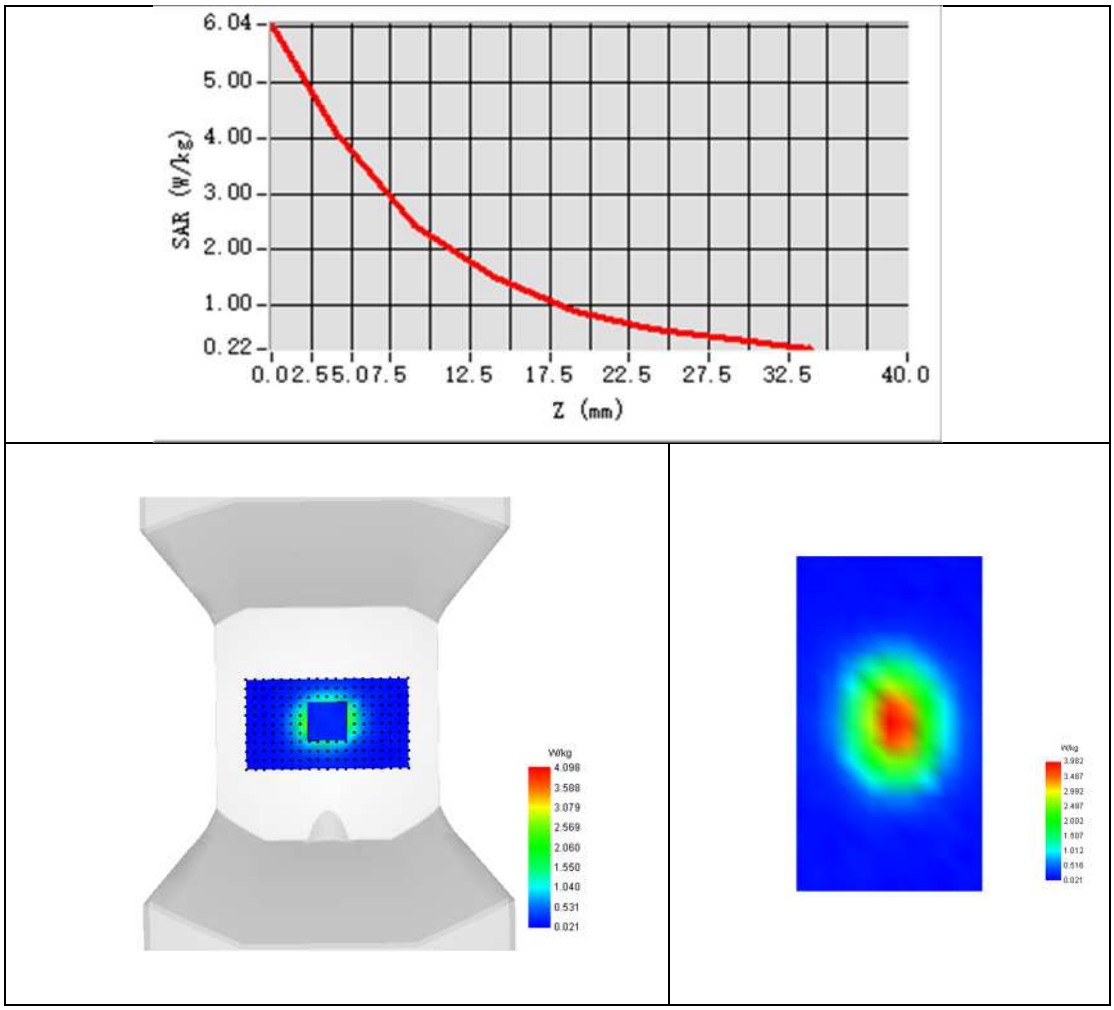
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW
Frequency (MHz)	1900.000
Relative permittivity	40.69
Conductivity (S/m)	1.37
Probe	SN 04/22 EPGO364
ConvF	2.25
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=5.00, Y=1.00 ; SAR Peak: 6.62 W/kg

SAR 10g (W/Kg)	2.029
SAR 1g (W/Kg)	4.067

Z Axis Scan

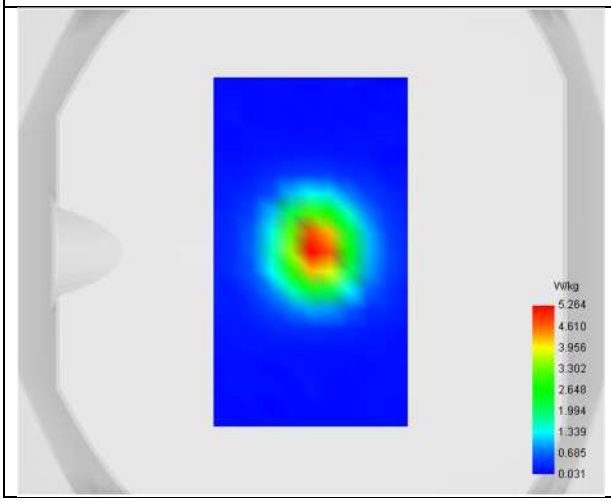
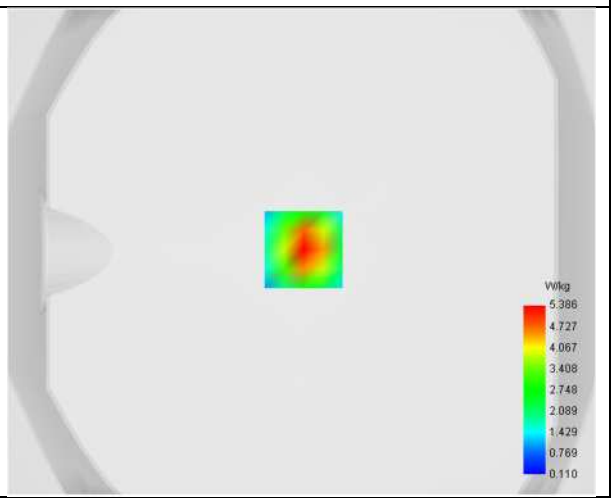

6.04
5.00
4.00
3.00
2.00
1.00
0.22
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
4.098
3.588
3.079
2.569
2.060
1.550
1.040
0.531
0.021

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: 2023-11-17

Experimental conditions.

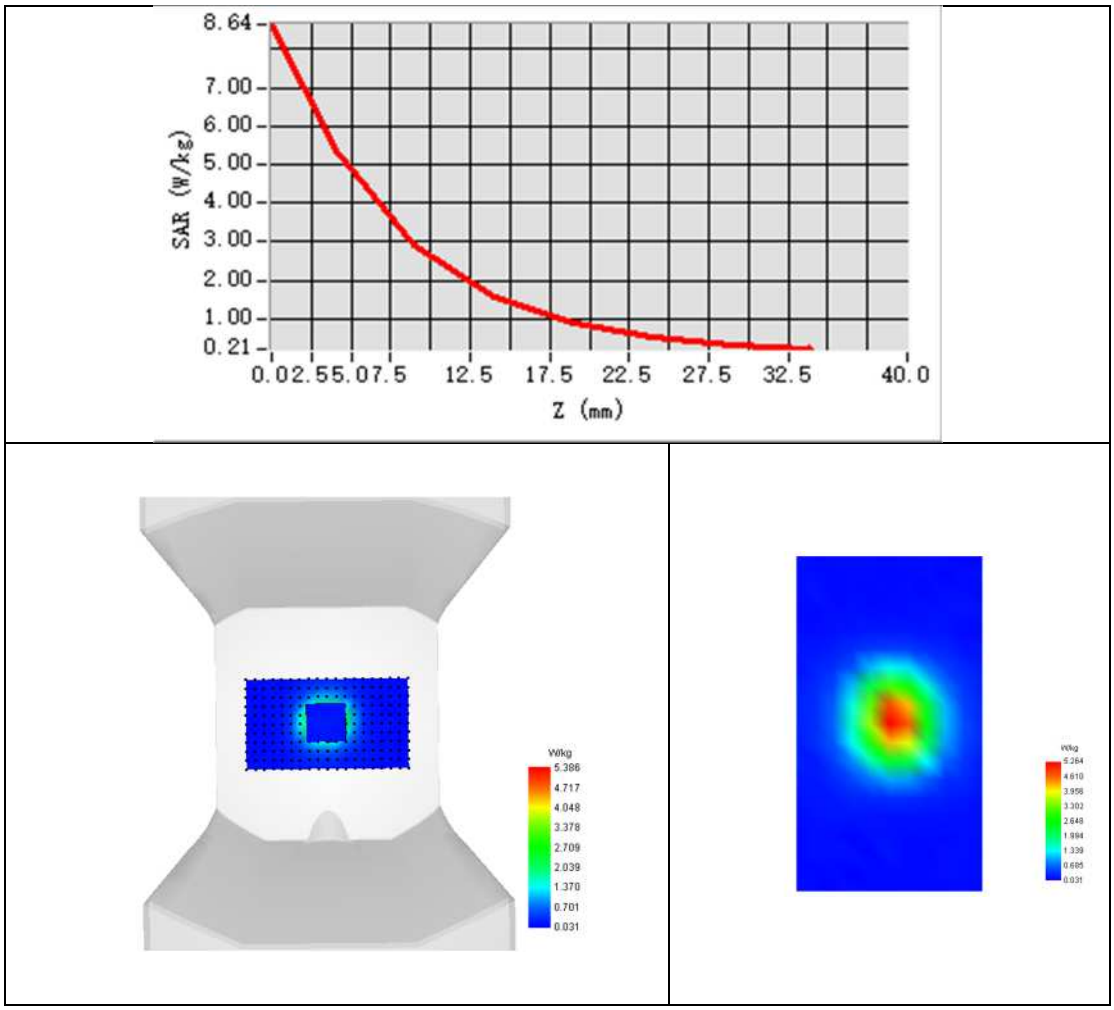
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW
Frequency (MHz)	2450.000
Relative permittivity	39.63
Conductivity (S/m)	1.84
Probe	SN 04/22 EPGO364
ConvF	2.33
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=5.00, Y=3.00 ; SAR Peak: 8.49 W/kg

SAR 10g (W/Kg)	2.388
SAR 1g (W/Kg)	5.269

Z Axis Scan

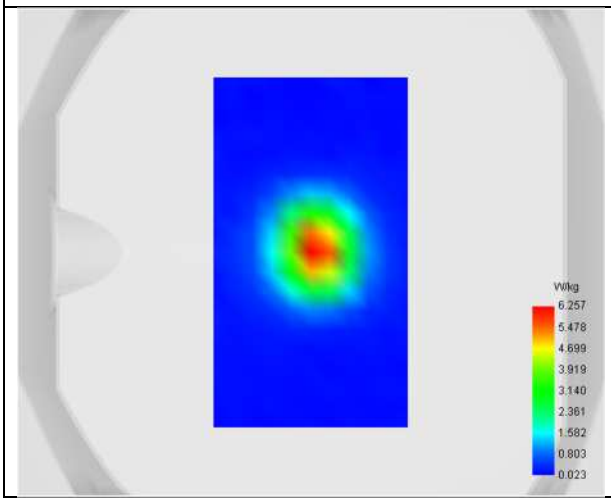
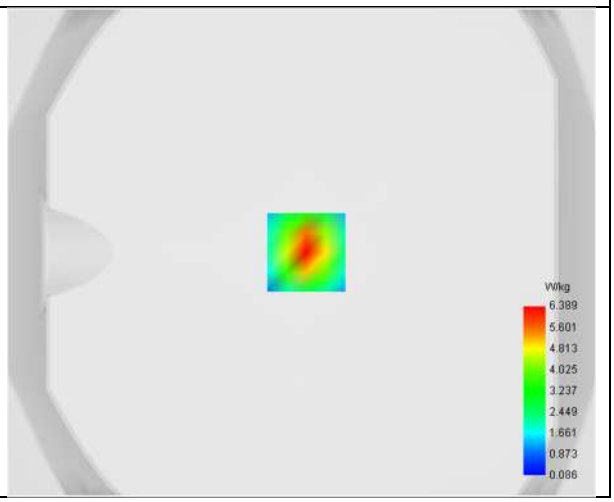

8.64
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.21
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
5.386
4.717
4.048
3.378
2.709
2.039
1.370
0.701
0.031

System Performance Check Data (2600MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2023-11-18

Experimental conditions.

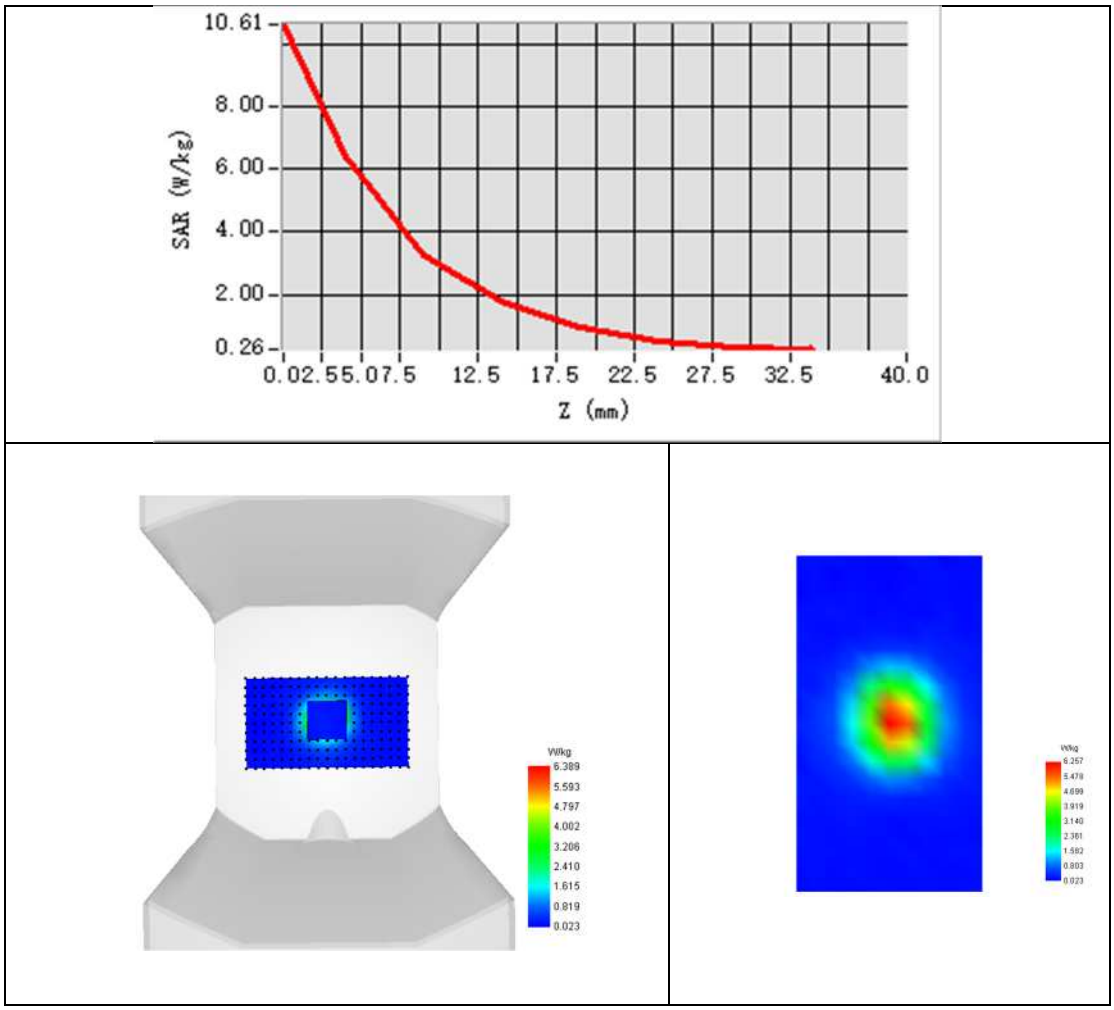
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels	Middle
Signal	CW
Frequency (MHz)	2600.000
Relative permittivity	40.20
Conductivity (S/m)	1.90
Probe	SN 04/22 EPGO364
ConvF	2.36
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00 ; SAR Peak: 9.48 W/kg

SAR 10g (W/Kg)	2.460
SAR 1g (W/Kg)	5.651

Z Axis Scan

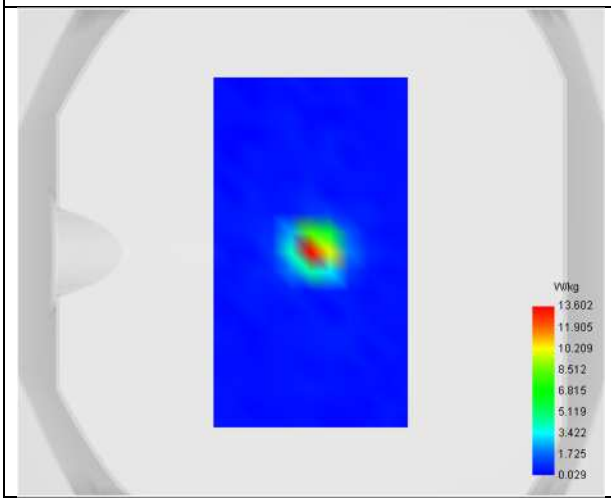
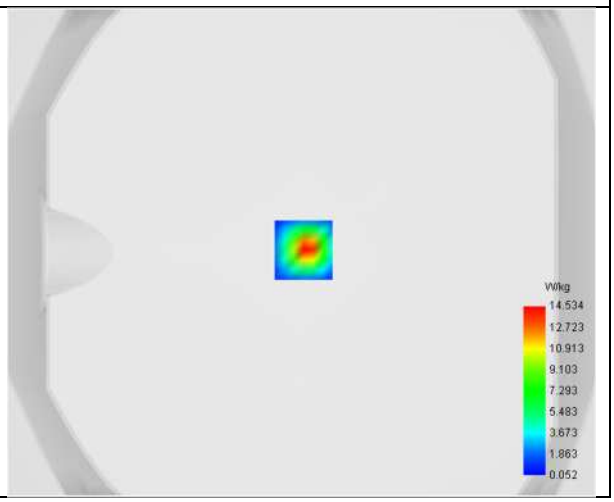

10.61
8.00
6.00
4.00
2.00
0.26
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)
W/kg
6.389
5.593
4.797
4.002
3.206
2.410
1.615
0.819
0.023

System Performance Check Data (5200MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2023-11-19

Experimental conditions.

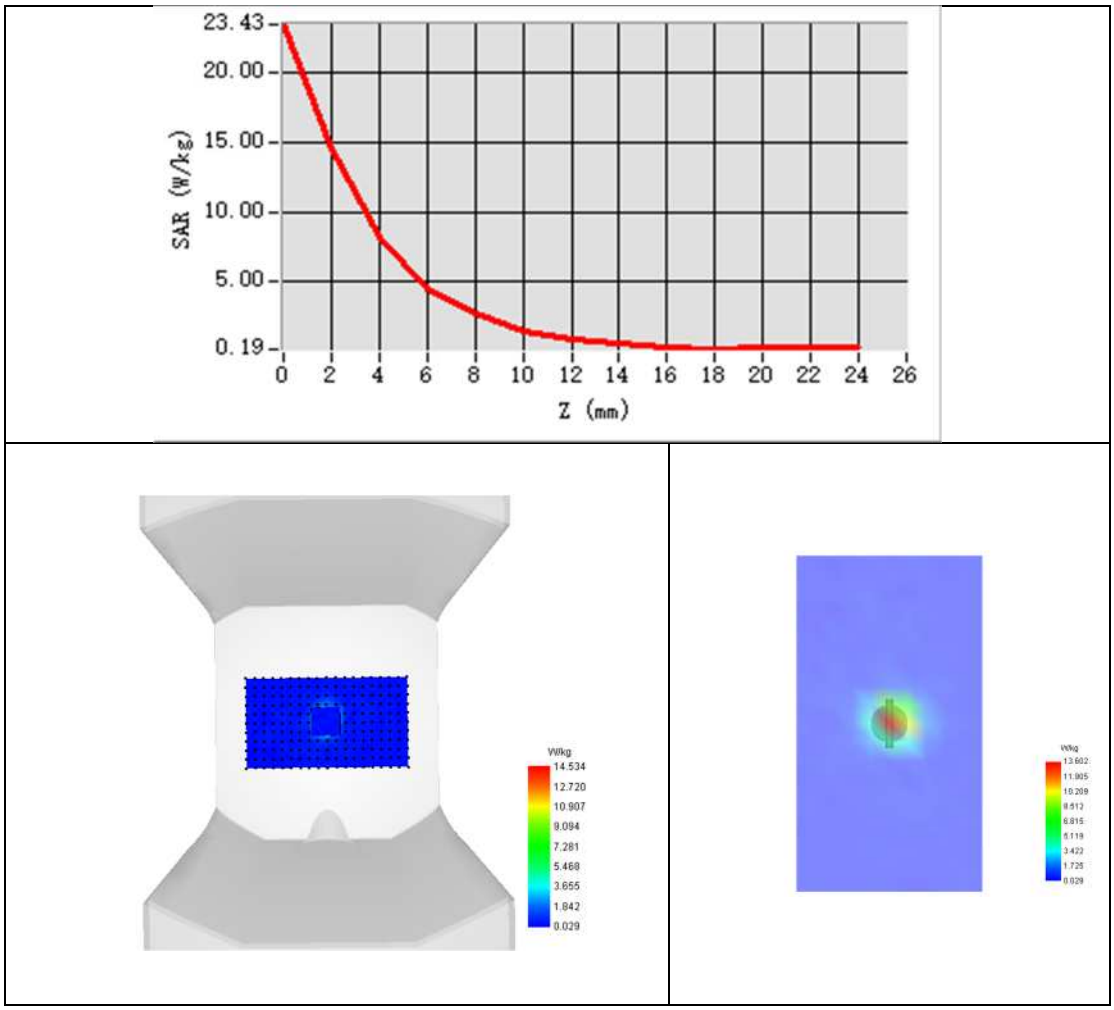
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW
Frequency (MHz)	5200.000
Relative permittivity	36.80
Conductivity (S/m)	4.63
Probe	SN 04/22 EPGO364
ConvF	1.95
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=7.00, Y=6.00 ; SAR Peak: 22.79 W/kg

SAR 10g (W/Kg)	2.184
SAR 1g (W/Kg)	7.618

Z Axis Scan

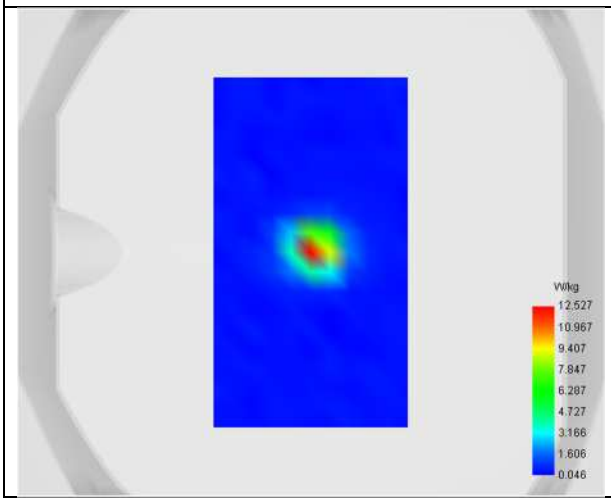
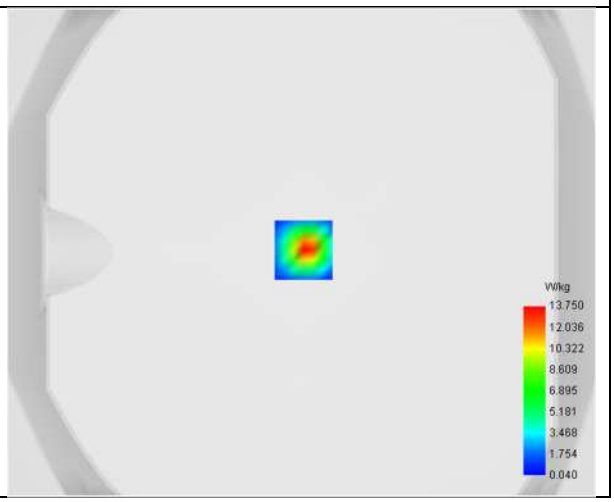

23.43
20.00
15.00
10.00
5.00
0.19
SAR (W/kg)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
Z (mm)
W/kg
14.534
12.720
10.907
9.094
7.281
5.468
3.655
1.842
0.029

System Performance Check Data (5400MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2023-11-20

Experimental conditions.

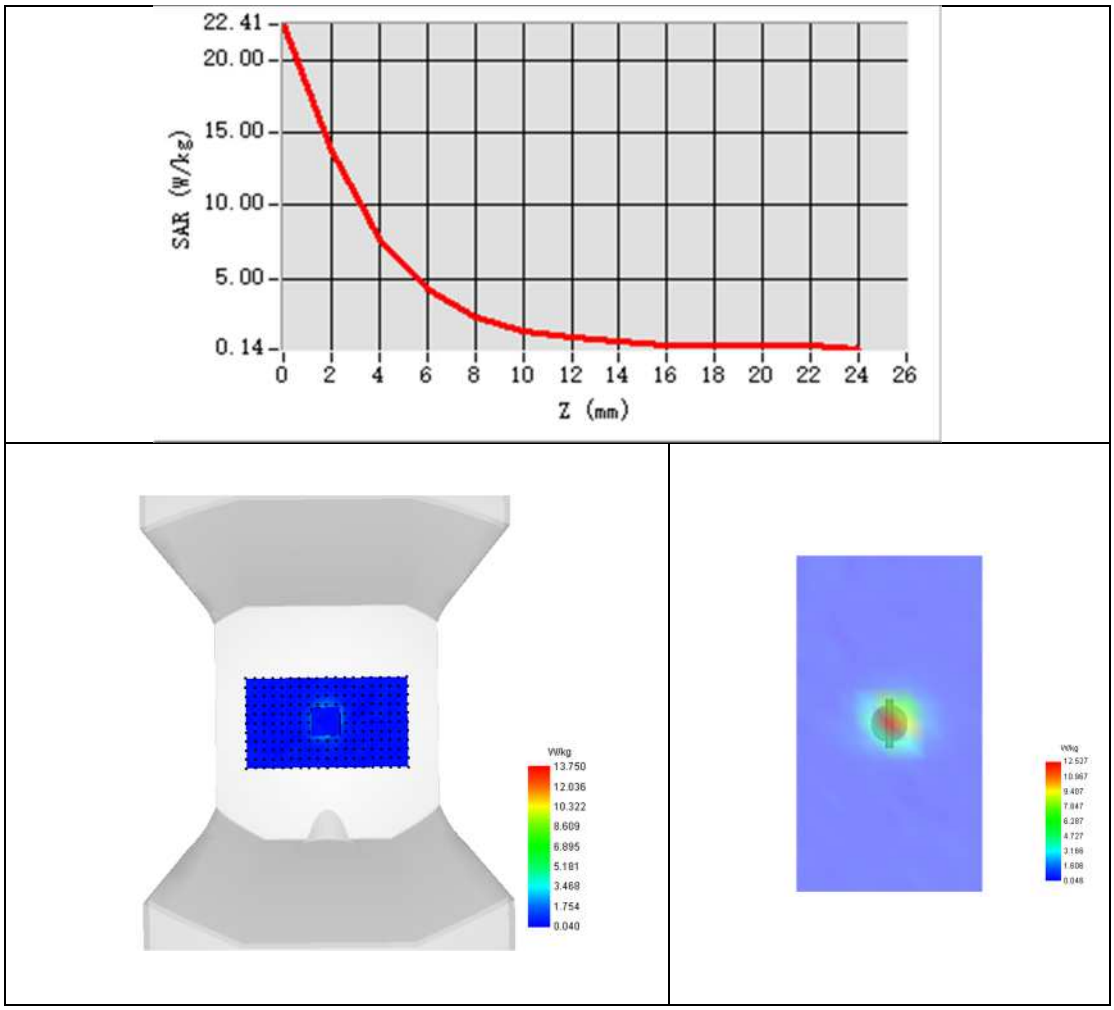
Phantom	Validation plane
Device Position	Dipole
Band	CW5400
Channels	Middle
Signal	CW
Frequency (MHz)	5400.000
Relative permittivity	37.25
Conductivity (S/m)	4.87
Probe	SN 04/22 EPGO364
ConvF	1.85
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=6.00, Y=5.00 ; SAR Peak: 23.72 W/kg

SAR 10g (W/Kg)	2.254
SAR 1g (W/Kg)	8.167

Z Axis Scan

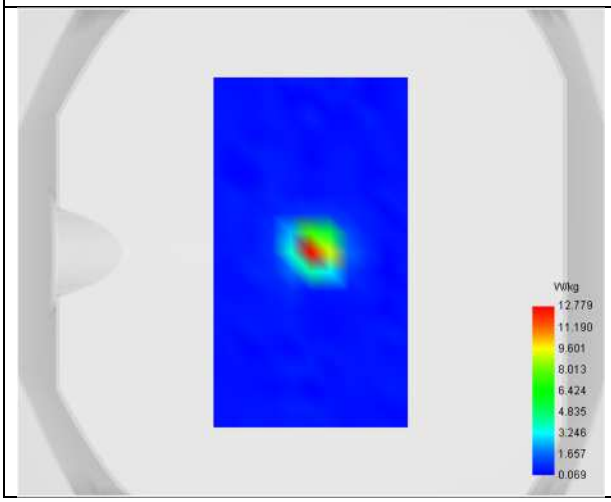
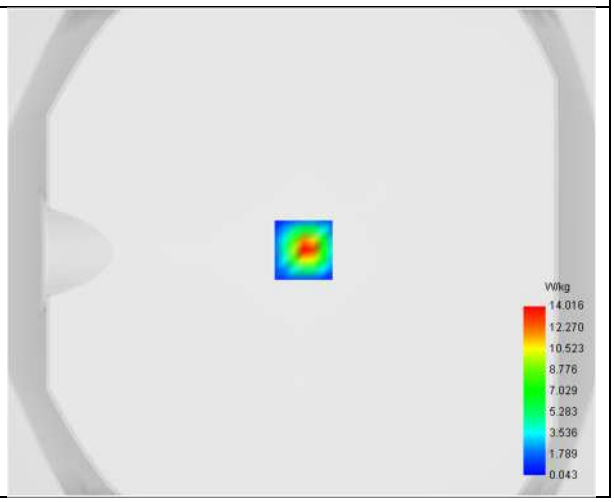

22.41
20.00
15.00
10.00
5.00
0.14
SAR (W/kg)
0 2 4 6 8 10 12 14 16 18 20 22 24 26
Z (mm)
W/kg
13.750
12.036
10.322
8.609
6.895
5.181
3.468
1.754
0.040

System Performance Check Data (5600MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2023-11-21

Experimental conditions.

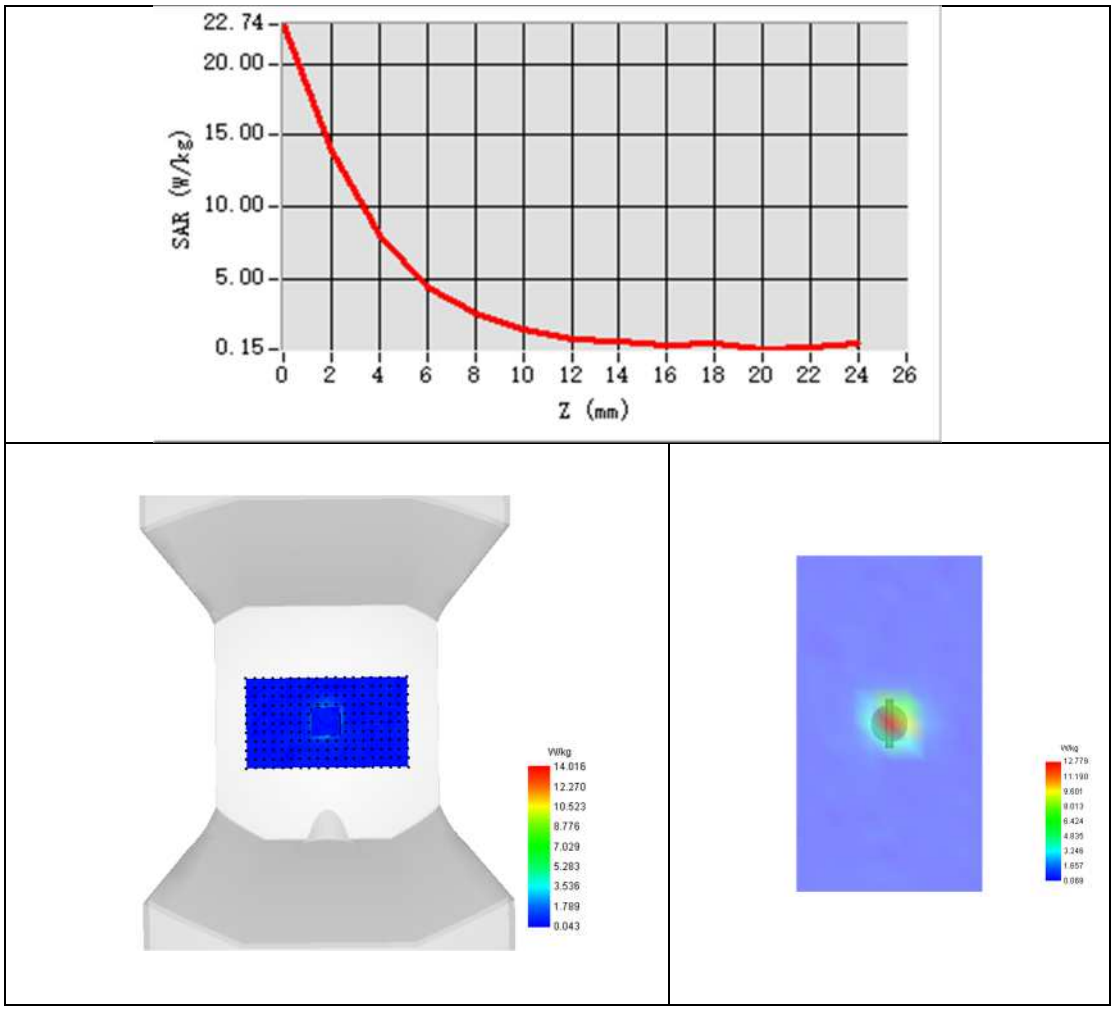
Phantom	Validation plane
Device Position	Dipole
Band	CW5600
Channels	Middle
Signal	CW
Frequency (MHz)	5600.000
Relative permittivity	36.44
Conductivity (S/m)	5.05
Probe	SN 04/22 EPGO364
ConvF	1.86
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=-5.00, Y=5.00 ; SAR Peak: 23.45 W/kg

SAR 10g (W/Kg)	2.193
SAR 1g (W/Kg)	7.799

Z Axis Scan

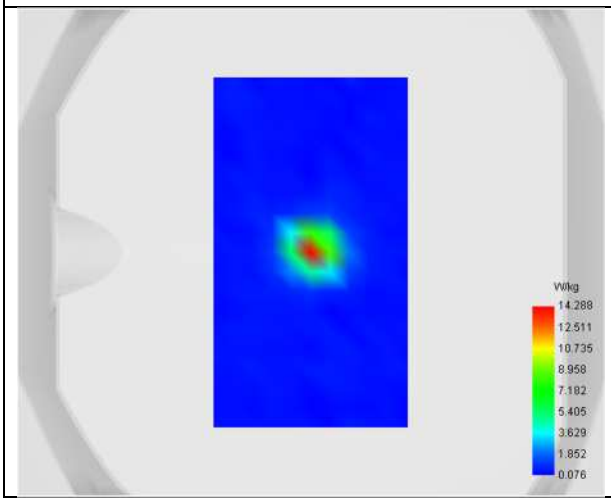
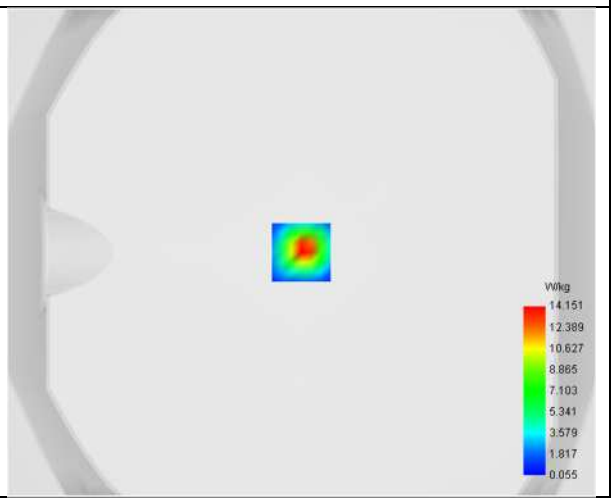

22.74
20.00
15.00
10.00
5.00
0.15
SAR (W/kg)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
Z (mm)
W/kg
14.016
12.270
10.523
8.776
7.029
5.283
3.536
1.789
0.043

System Performance Check Data (5800MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2023-11-22

Experimental conditions.

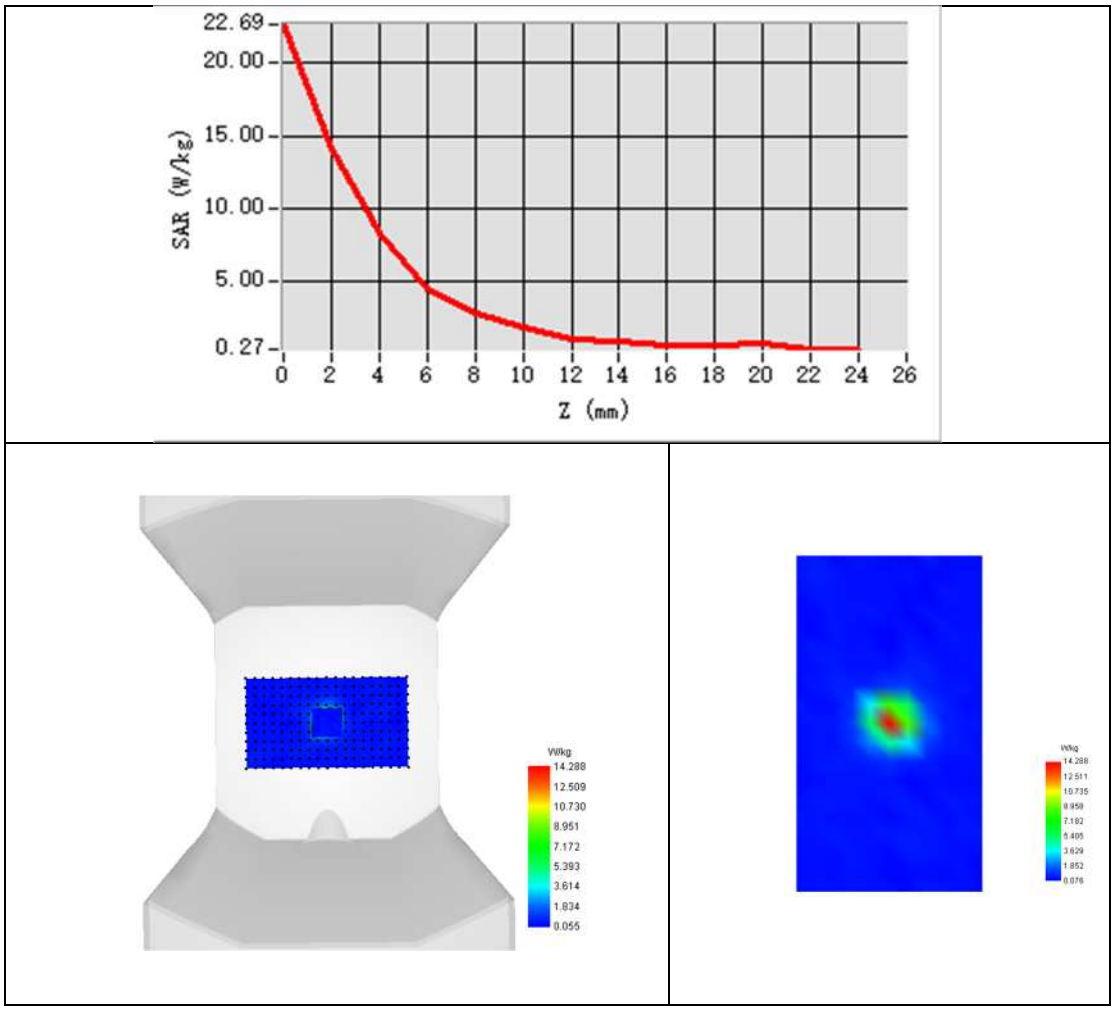
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW
Frequency (MHz)	5800.000
Relative permittivity	35.91
Conductivity (S/m)	5.21
Probe	SN 04/22 EPGO364
ConvF	1.73
Crest factor:	1:1

SURFACE	VOLUME SAR
	

Maximum location: X=5.00, Y=6.00 ; SAR Peak: 24.18 W/kg

SAR 10g (W/Kg)	2.126
SAR 1g (W/Kg)	7.590

Z Axis Scan


22.69
20.00
15.00
10.00
5.00
0.27
SAR (W/kg)
0 2 4 6 8 10 12 14 16 18 20 22 24 26
Z (mm)
W/kg
14.288
12.509
10.730
8.951
7.172
5.393
3.614
1.834
0.055

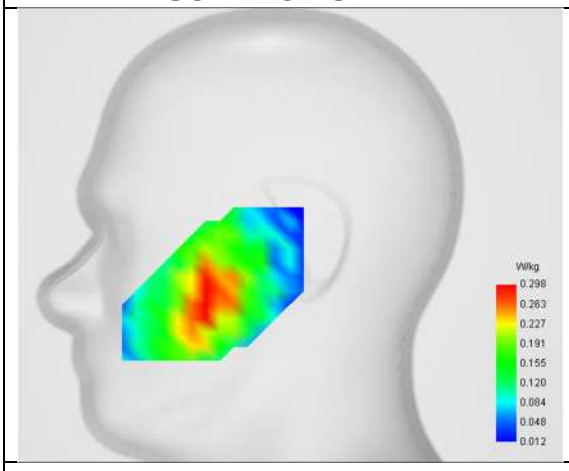
Appendix B. SAR Test Plots

Plot 1:

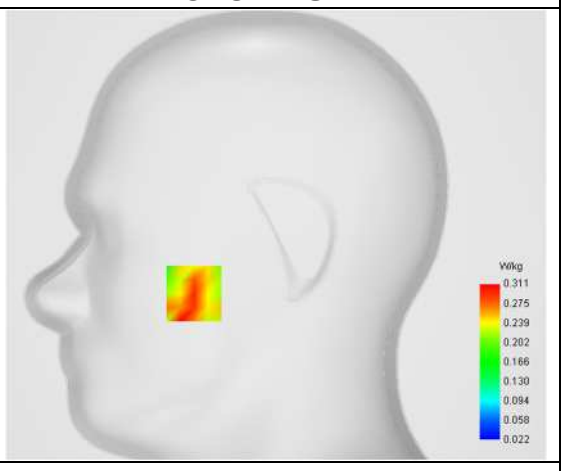
Test Date	2023-11-10
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	GSM850
Signal	TDMA (GSM)
Frequency	848.8
SAR 10g (W/Kg)	0.211
SAR 1g (W/Kg)	0.315

Maximum location: X=-47.00, Y=-34.00 ; SAR Peak: 0.51 W/kg

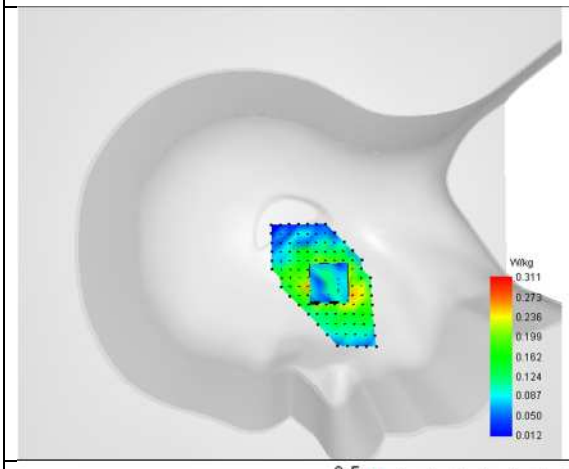
SURFACE SAR



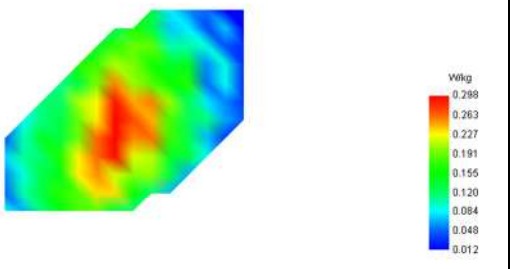
VOLUME SAR

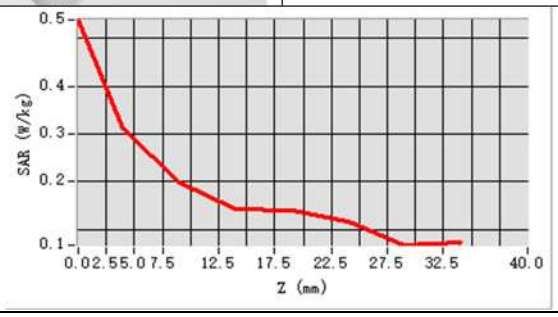


3D screen shot



Hot spot position

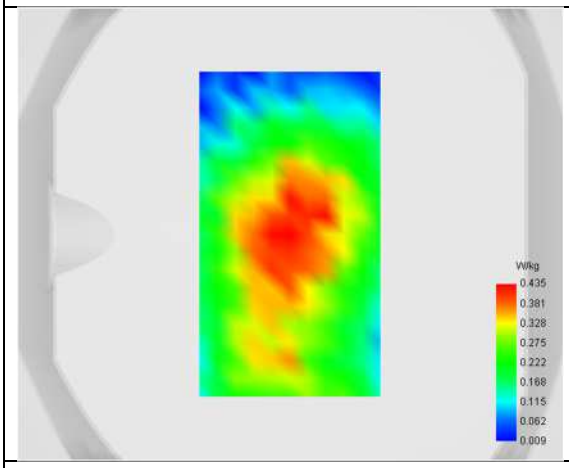
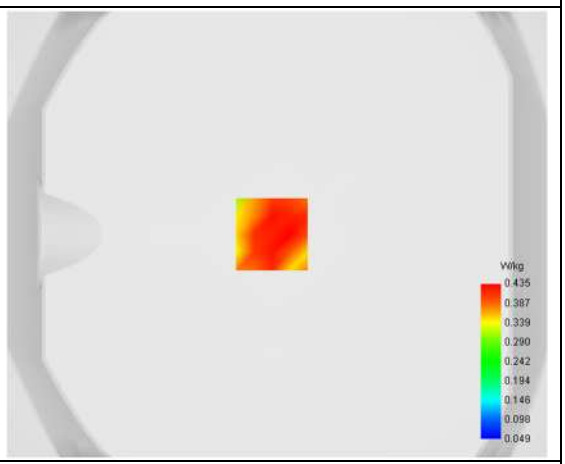
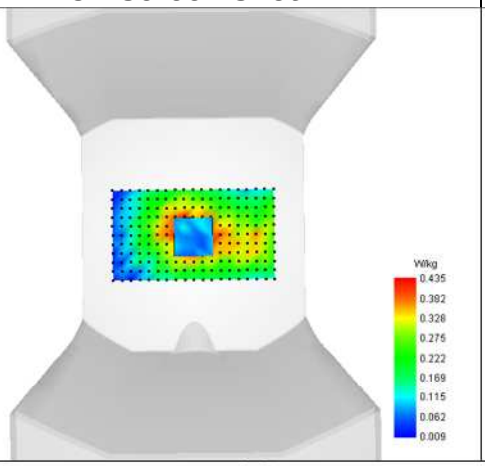
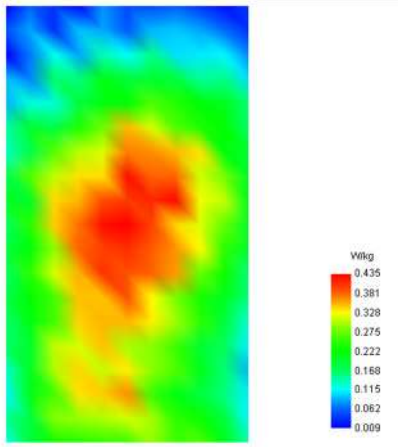
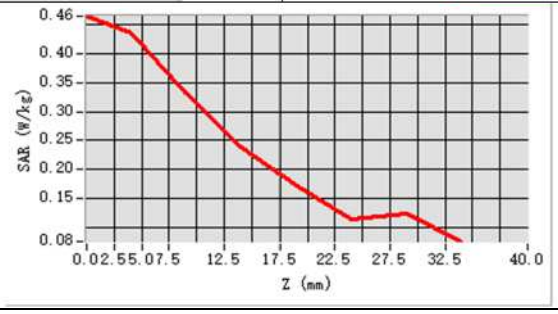




Plot 2:

Test Date	2023-11-10
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	GPRS850
Signal	TDMA (EGPRS)
Frequency	824.2
SAR 10g (W/Kg)	0.303
SAR 1g (W/Kg)	0.444

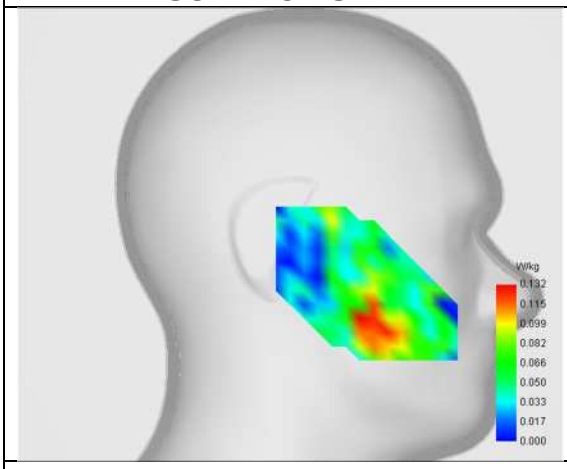
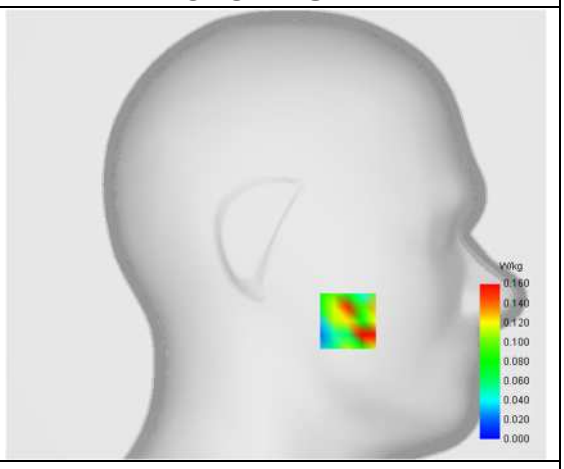
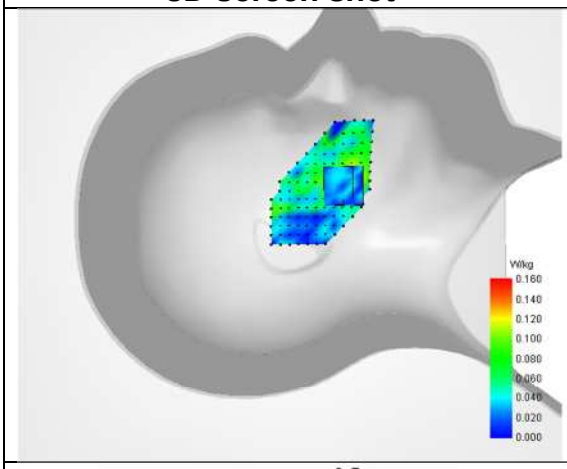
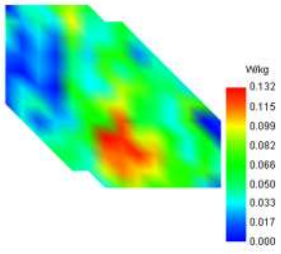
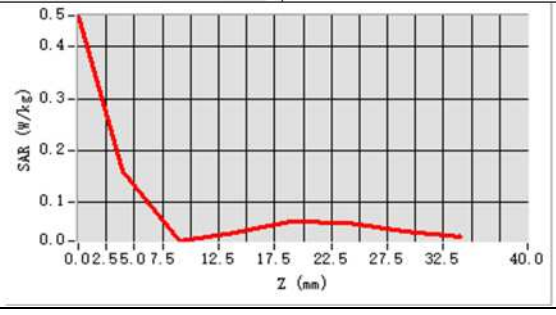
Maximum location: X=-2.00, Y=0.00 ; SAR Peak: 0.66 W/kg

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

Plot 3:

Test Date	2023-11-16
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Signal	TDMA (GSM)
Frequency	1850.2
SAR 10g (W/Kg)	0.081
SAR 1g (W/Kg)	0.174

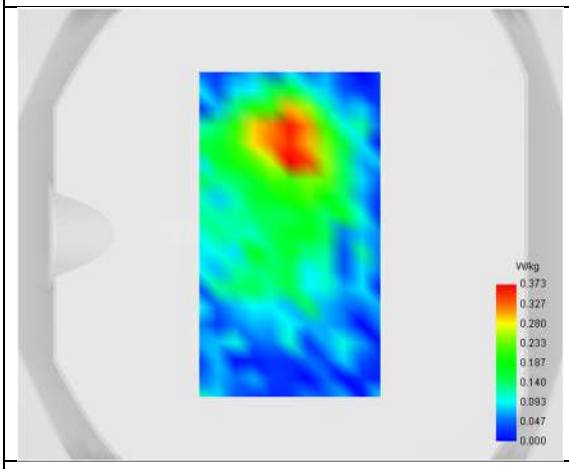
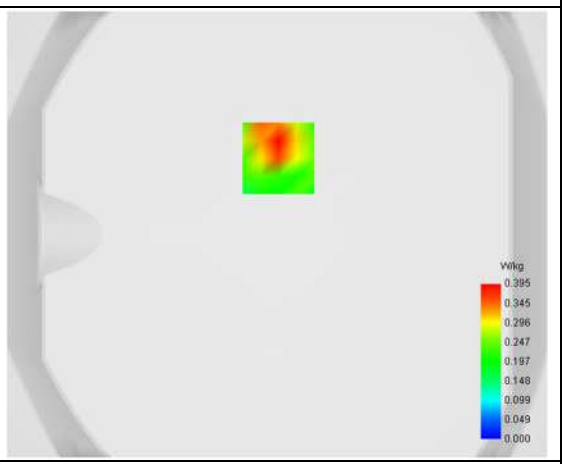
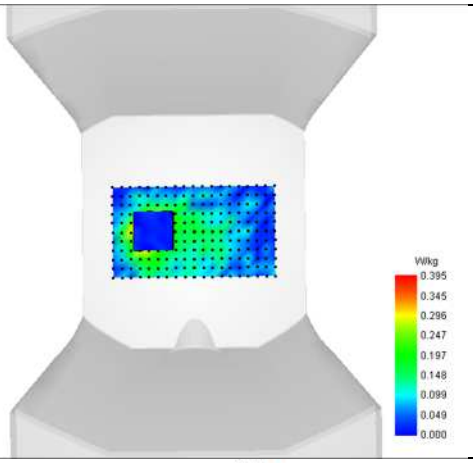
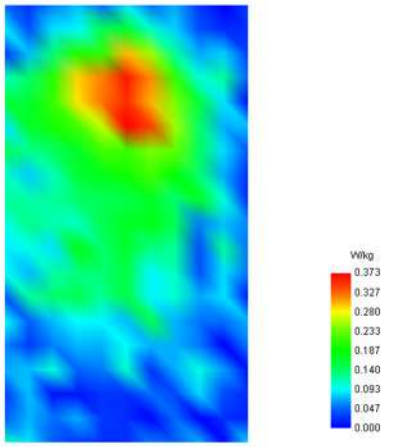
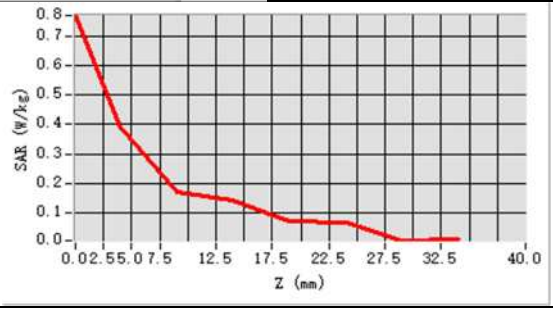
Maximum location: X=-42.00, Y=-50.00 ; SAR Peak: 0.40 W/kg

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

Plot 4:

Test Date	2023-11-16
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Front Side
Band	GPRS1900
Signal	TDMA (EGPRS)
Frequency	1850.2
SAR 10g (W/Kg)	0.193
SAR 1g (W/Kg)	0.350

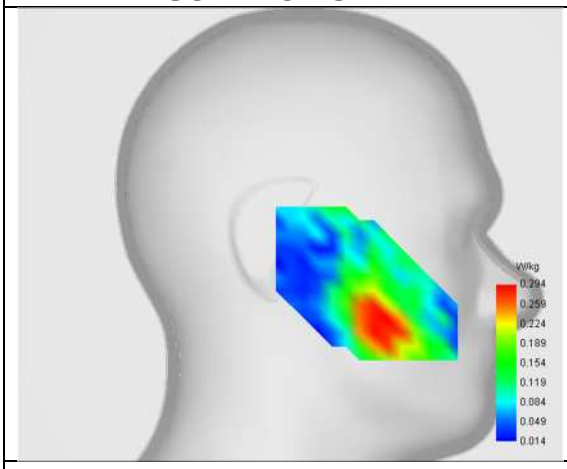
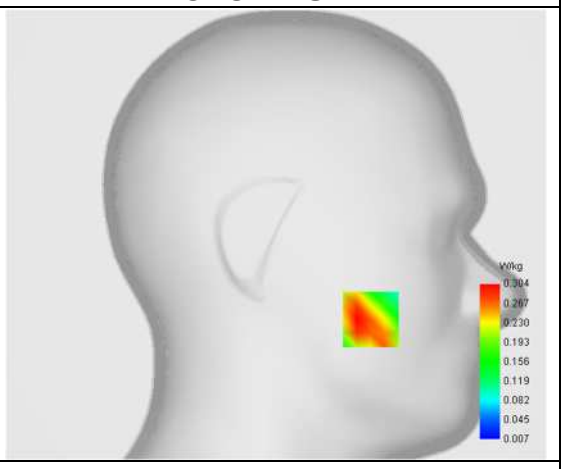
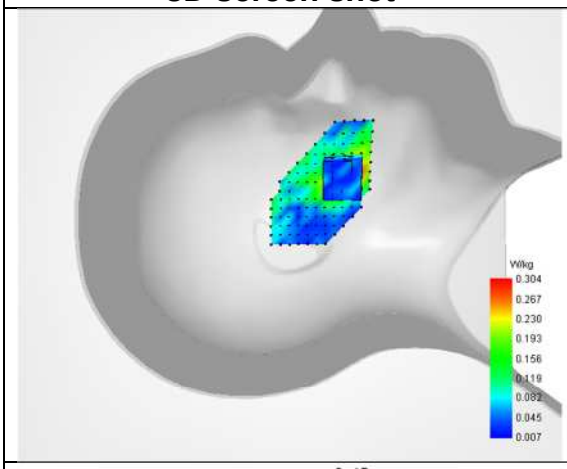
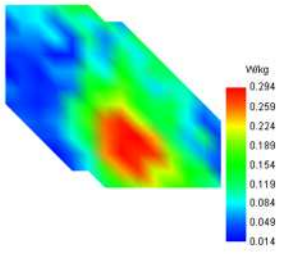
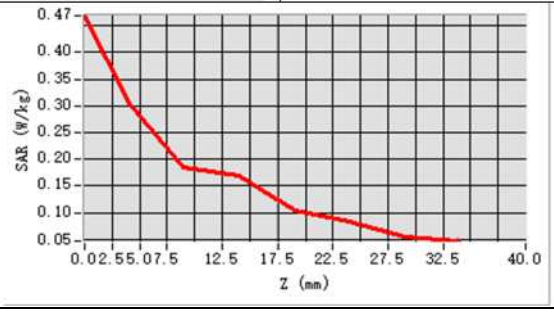
Maximum location: X=1.00, Y=34.00 ; SAR Peak: 0.54 W/kg

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

Plot 5:

Test Date	2023-11-14
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	Band 2 (1900)
Signal	WCDMA
Frequency	1880
SAR 10g (W/Kg)	0.165
SAR 1g (W/Kg)	0.283

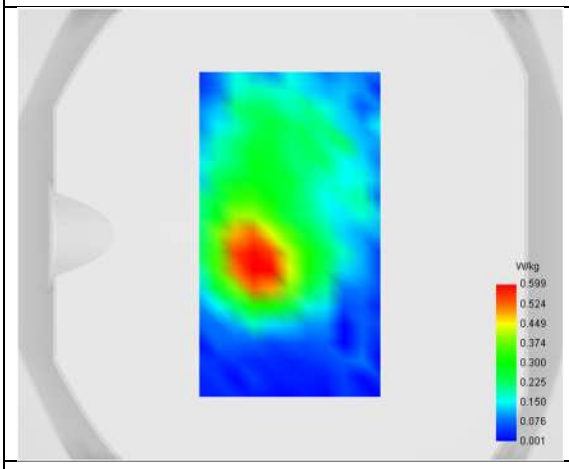
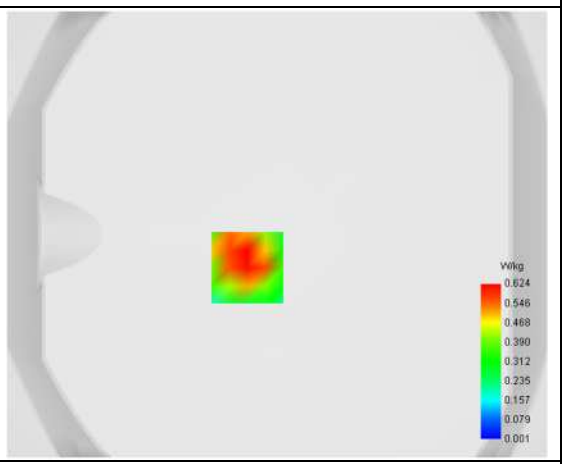
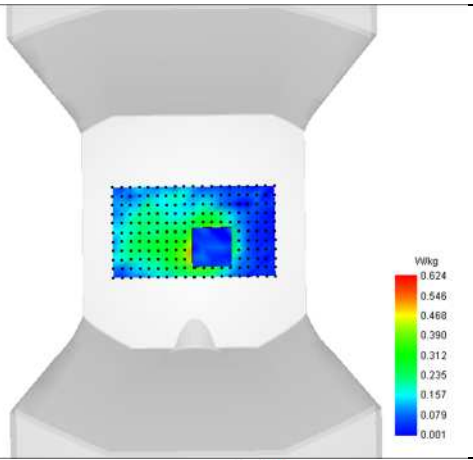
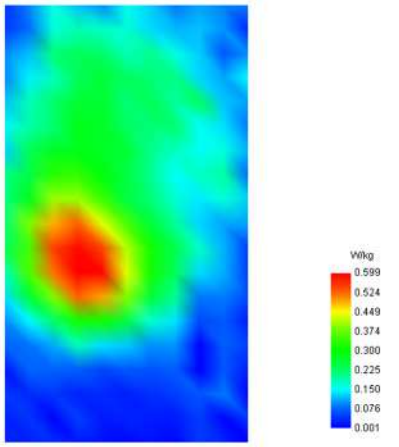
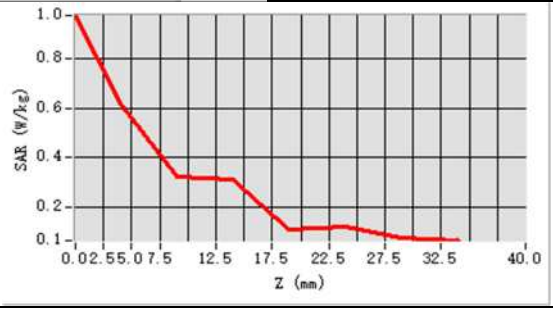
Maximum location: X=-55.00, Y=-49.00 ; SAR Peak: 0.51 W/kg

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

Plot 6:

Test Date	2023-11-14
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Front Side
Band	Band 2 (1900)
Signal	WCDMA
Frequency	1880
SAR 10g (W/Kg)	0.350
SAR 1g (W/Kg)	0.627

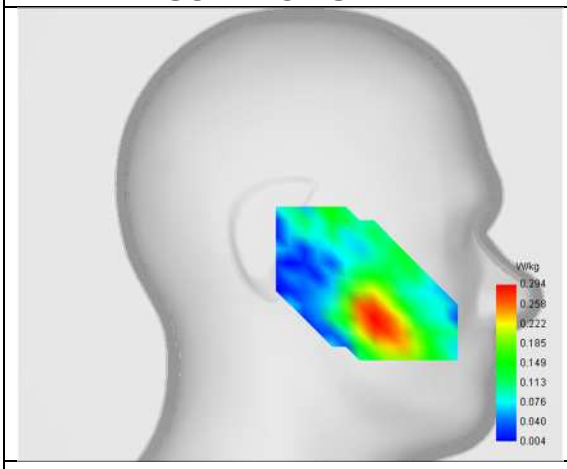
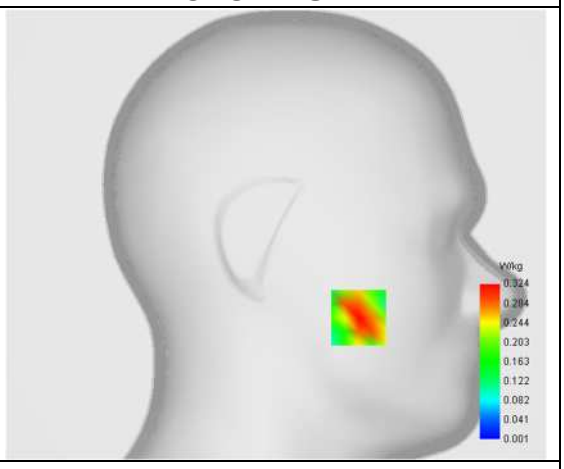
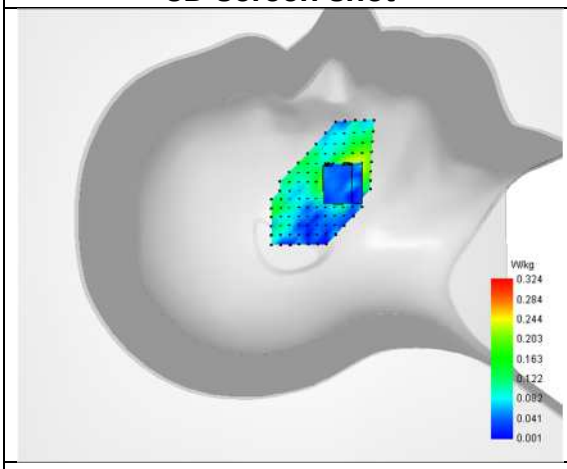
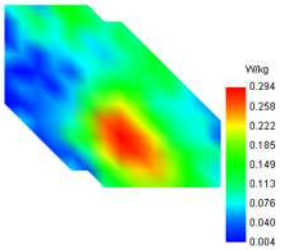
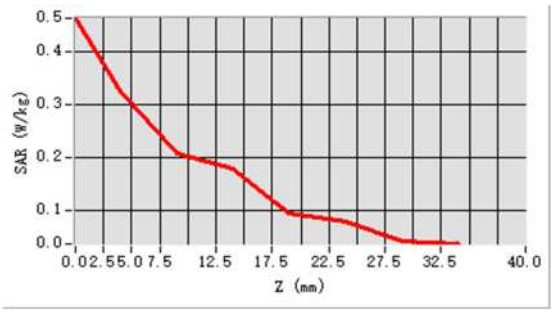
Maximum location: X=-13.00, Y=-15.00 ; SAR Peak: 1.06 W/kg

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

Plot 7:

Test Date	2023-11-13
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	Band 4 (1700)
Signal	WCDMA
Frequency	1712.6
SAR 10g (W/Kg)	0.187
SAR 1g (W/Kg)	0.345

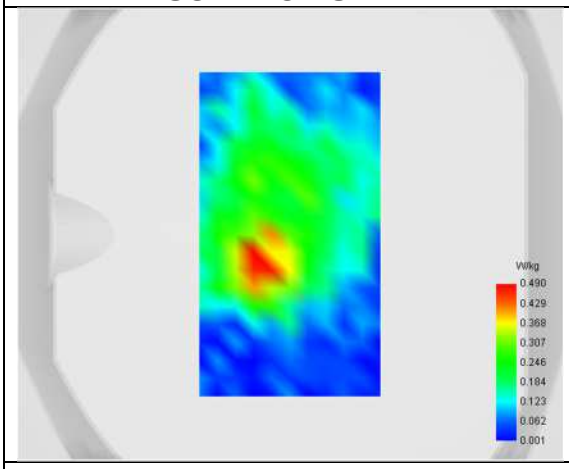
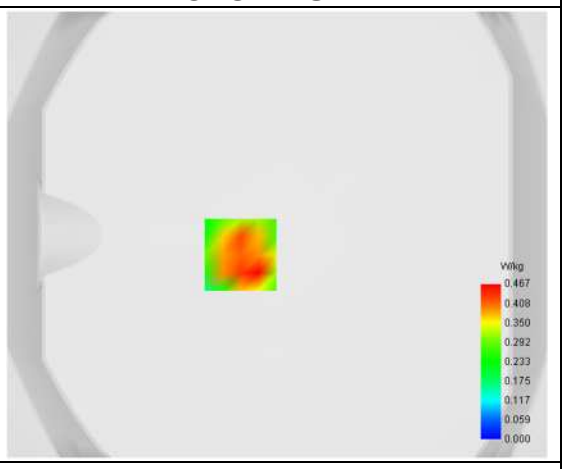
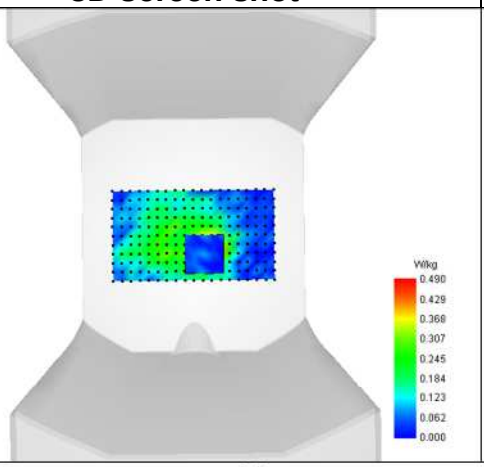
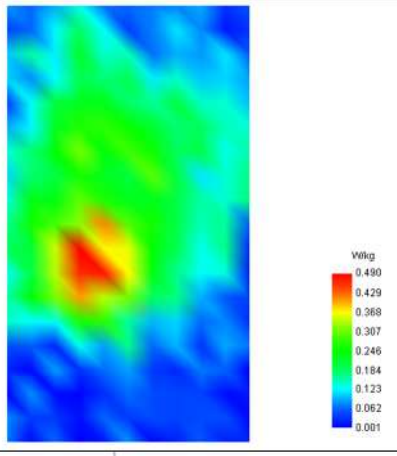
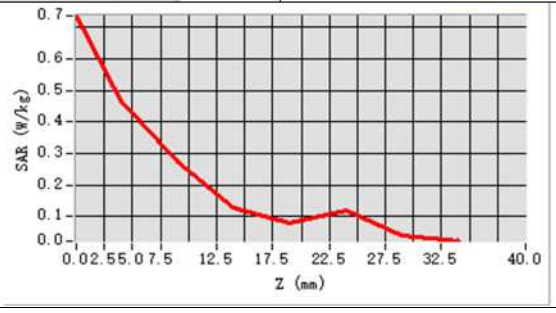
Maximum location: X=-48.00, Y=-48.00 ; SAR Peak: 0.66 W/kg

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

Plot 8:

Test Date	2023-11-13
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Front Side
Band	Band 4 (1700)
Signal	WCDMA
Frequency	1712.6
SAR 10g (W/Kg)	0.255
SAR 1g (W/Kg)	0.440

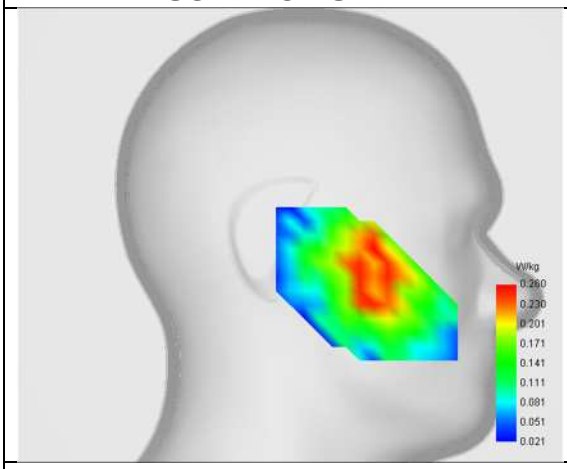
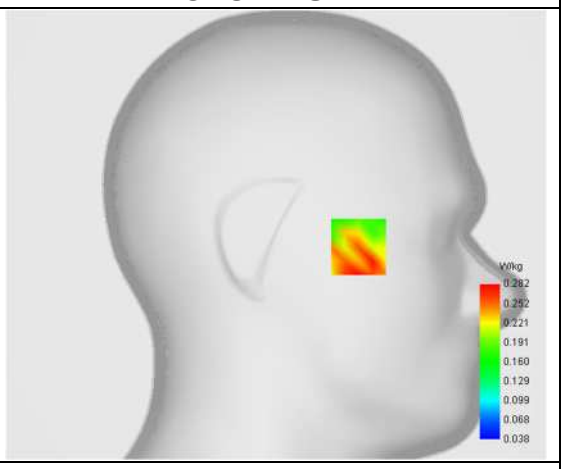
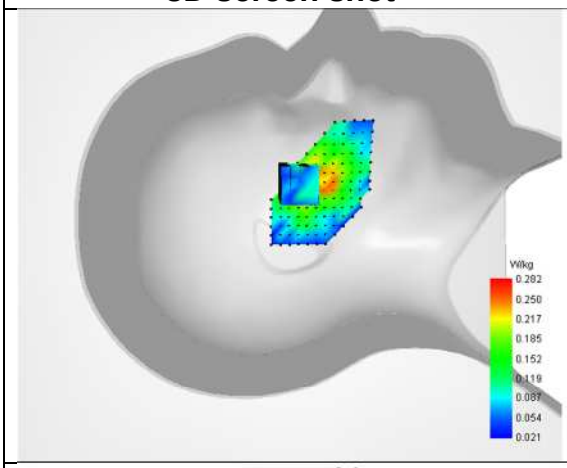
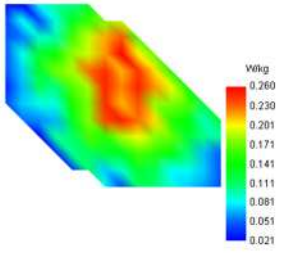
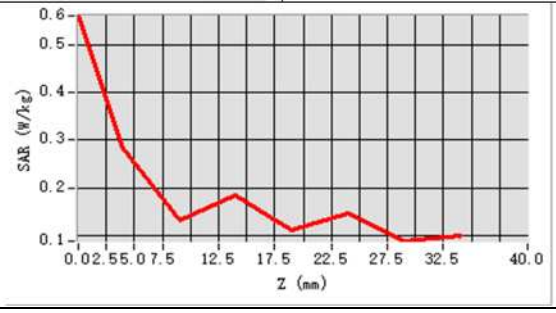
Maximum location: X=-16.00, Y=-9.00 ; SAR Peak: 0.76 W/kg

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

Plot 9:

Test Date	2023-11-10
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	Band 5 (850)
Signal	WCDMA
Frequency	846.6
SAR 10g (W/Kg)	0.159
SAR 1g (W/Kg)	0.274

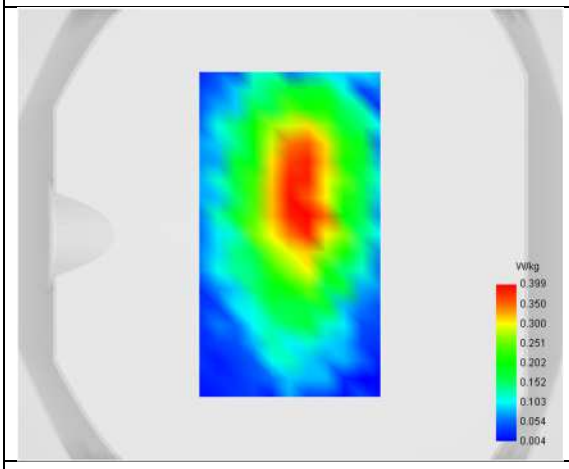
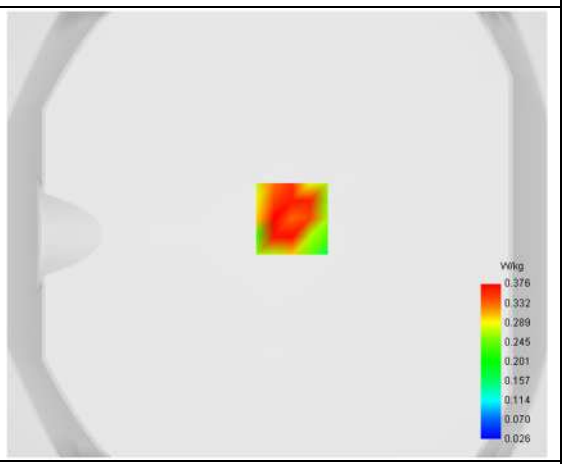
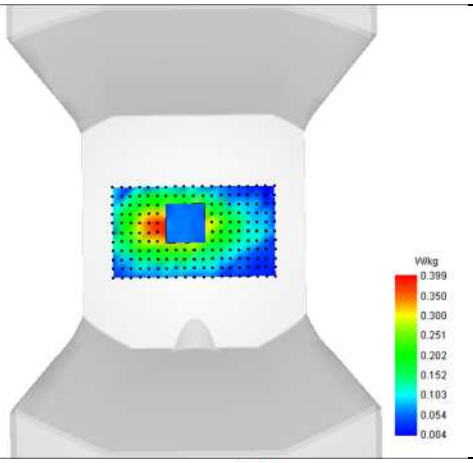
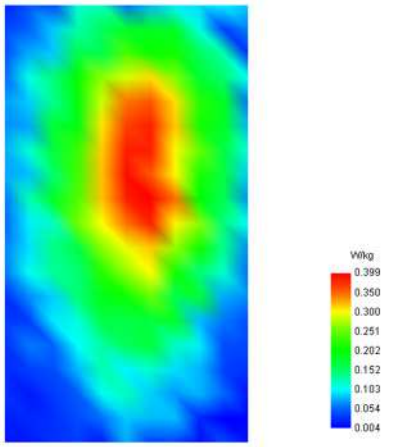
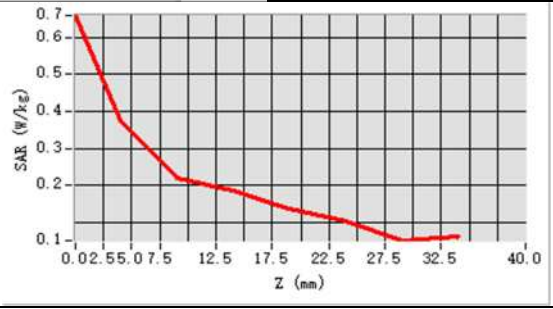
Maximum location: X=-48.00, Y=-7.00 ; SAR Peak: 0.47 W/kg

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

Plot 10:

Test Date	2023-11-10
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Right Side
Band	Band 5 (850)
Signal	WCDMA
Frequency	846.6
SAR 10g (W/Kg)	0.227
SAR 1g (W/Kg)	0.387

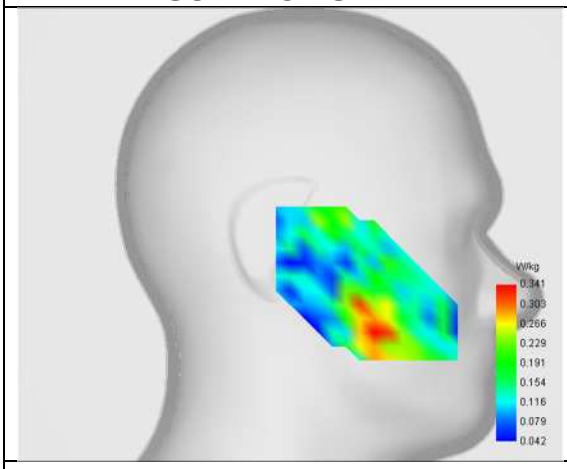
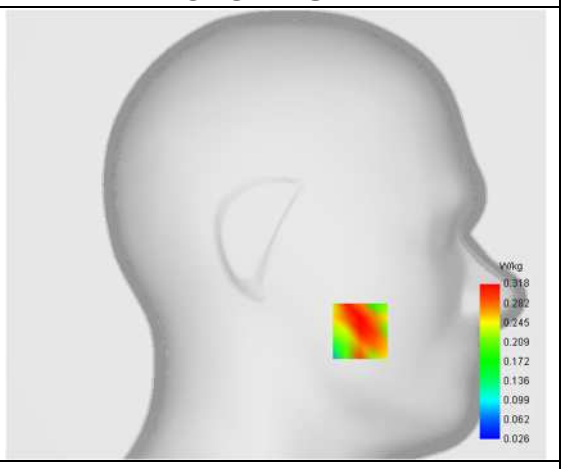
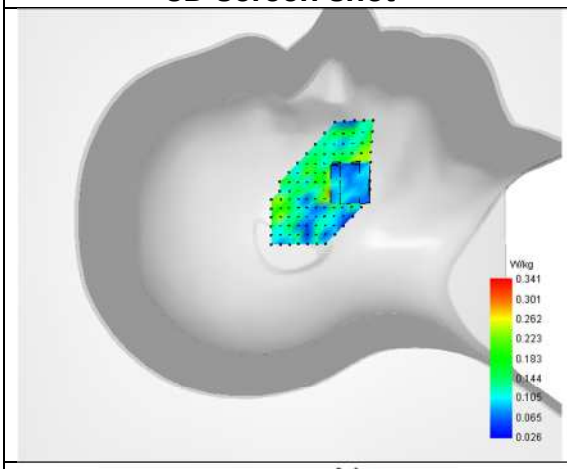
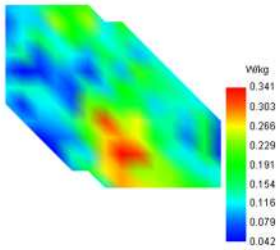
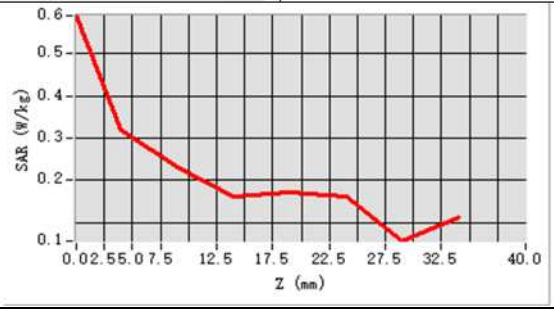
Maximum location: X=7.00, Y=7.00 ; SAR Peak: 0.68 W/kg

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

Plot 11:

Test Date	2023-11-14
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 2
Signal	LTE FDD
Frequency	1880
SAR 10g (W/Kg)	0.199
SAR 1g (W/Kg)	0.337

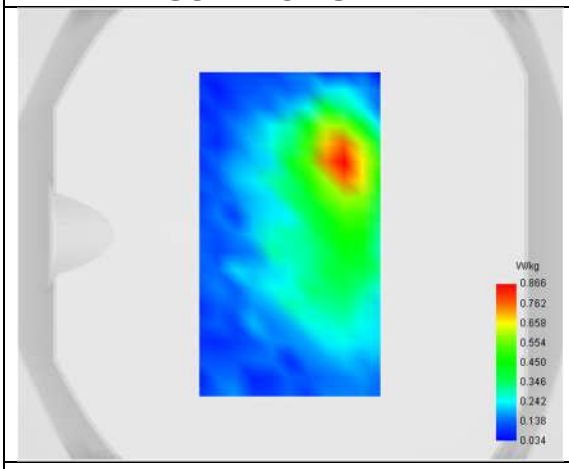
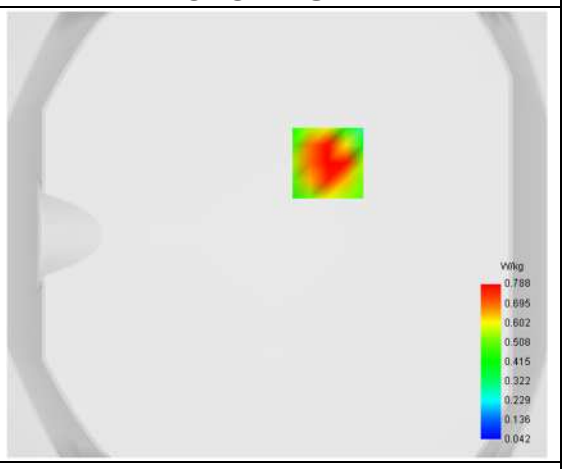
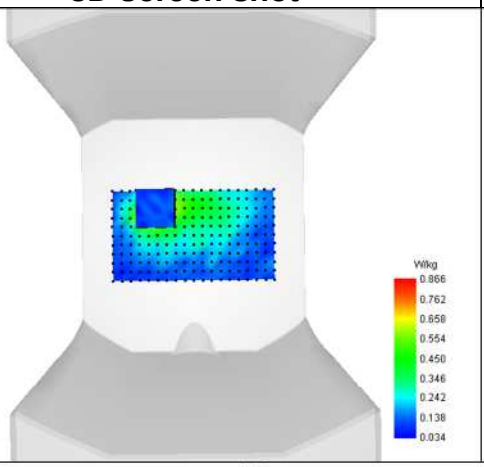
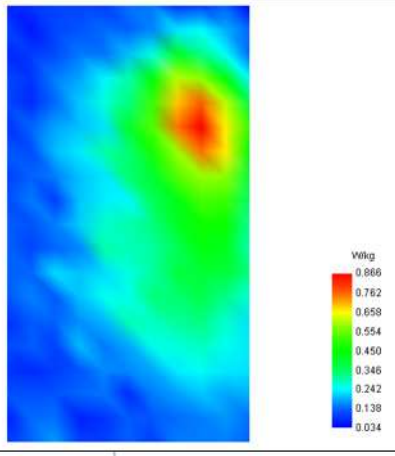
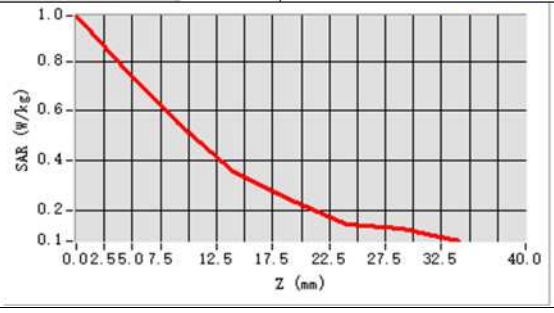
Maximum location: X=-49.00, Y=-56.00 ; SAR Peak: 0.59 W/kg

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

Plot 12:

Test Date	2023-11-14
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Front side
Band	LTE band 2
Signal	LTE FDD
Frequency	1880
SAR 10g (W/Kg)	0.464
SAR 1g (W/Kg)	0.771

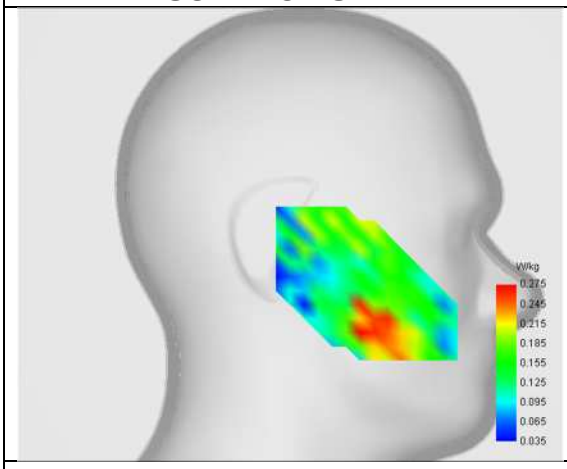
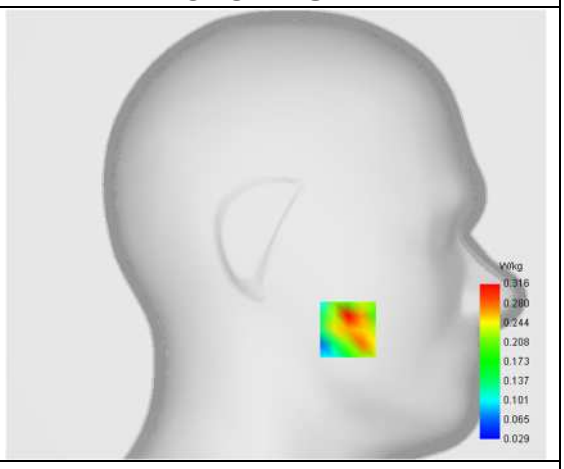
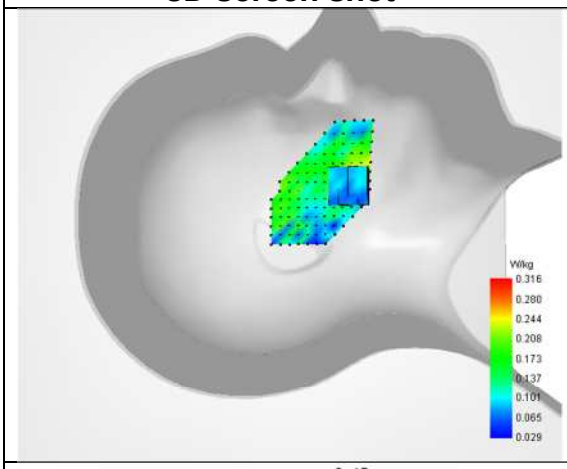
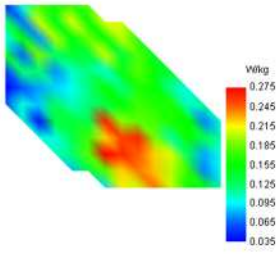
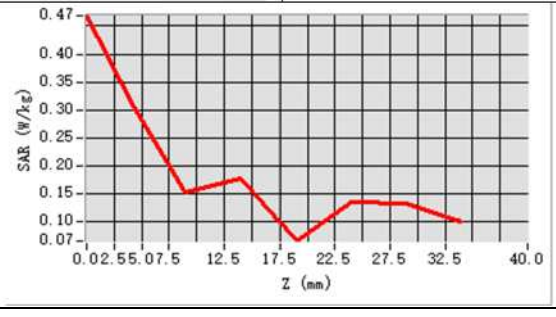
Maximum location: X=23.00, Y=32.00 ; SAR Peak: 1.23 W/kg

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

Plot 13:

Test Date	2023-11-13
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 4
Signal	LTE FDD
Frequency	1720
SAR 10g (W/Kg)	0.166
SAR 1g (W/Kg)	0.289

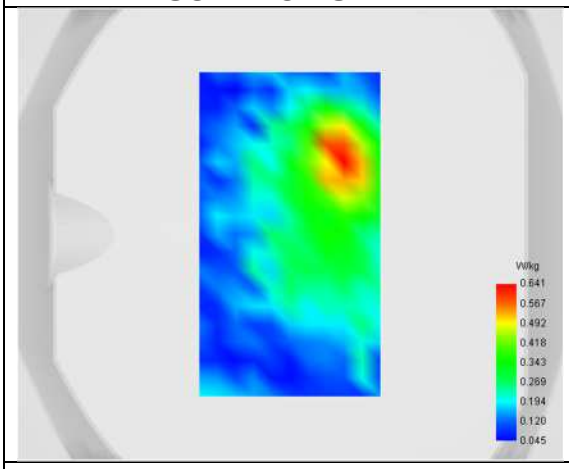
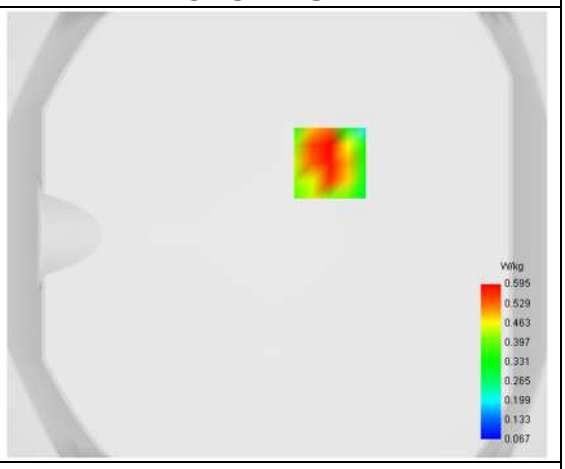
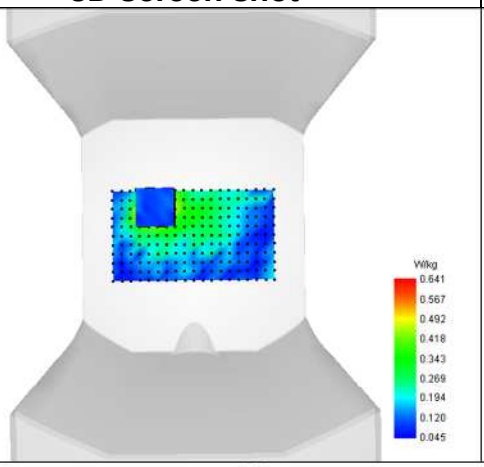
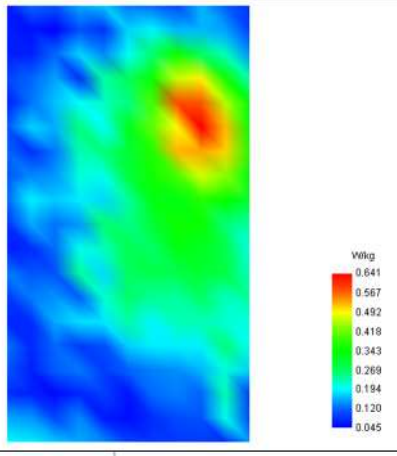
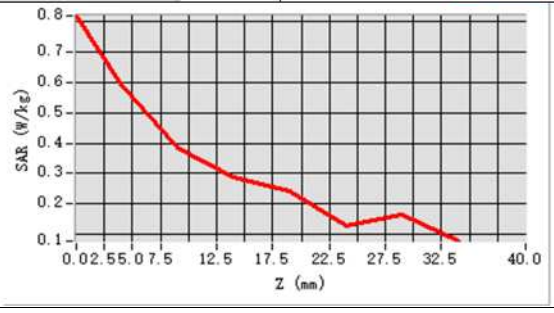
Maximum location: X=-42.00, Y=-55.00 ; SAR Peak: 0.53 W/kg

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

Plot 14:

Test Date	2023-11-13
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Front side
Band	LTE band 4
Signal	LTE FDD
Frequency	1720
SAR 10g (W/Kg)	0.349
SAR 1g (W/Kg)	0.556

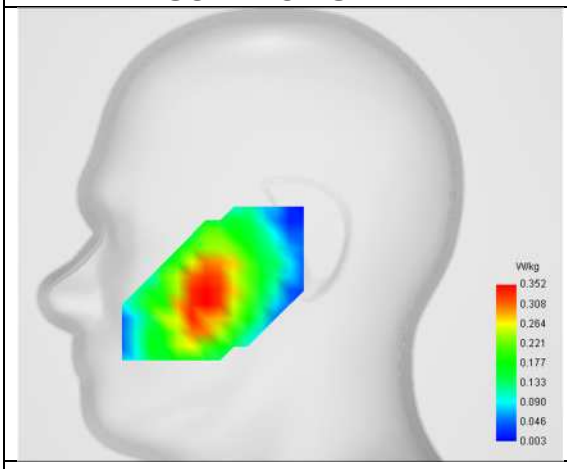
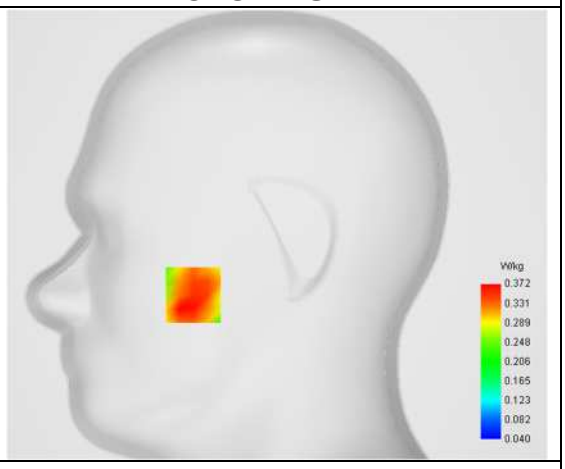
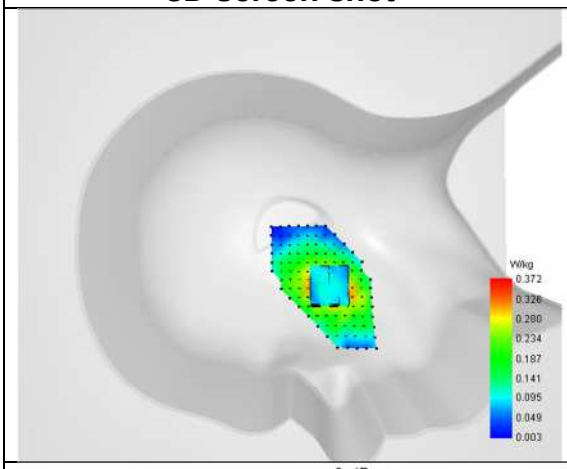
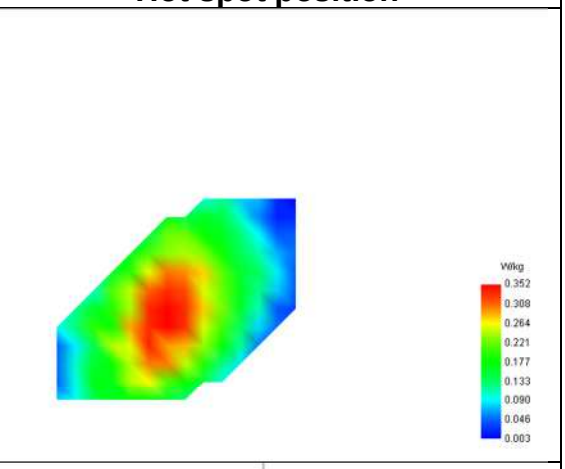
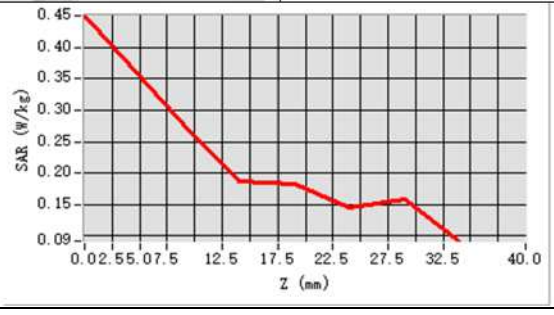
Maximum location: X=24.00, Y=32.00 ; SAR Peak: 0.90 W/kg

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

Plot 15:

Test Date	2023-11-11
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 5
Signal	LTE FDD
Frequency	844
SAR 10g (W/Kg)	0.263
SAR 1g (W/Kg)	0.352

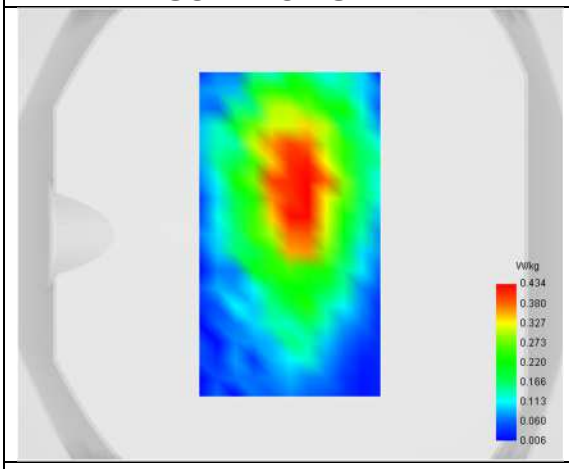
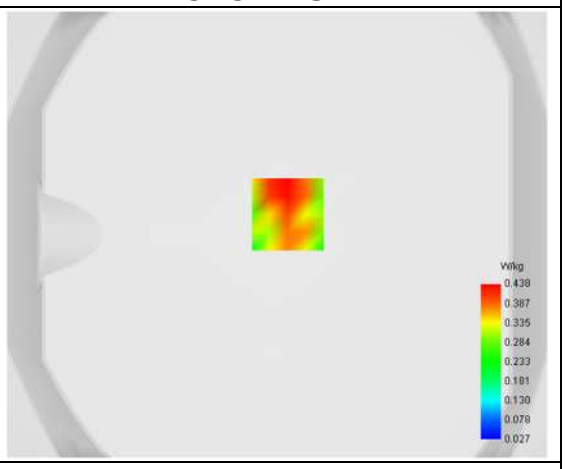
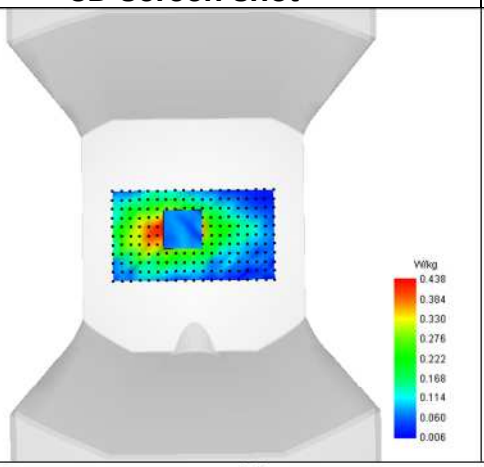
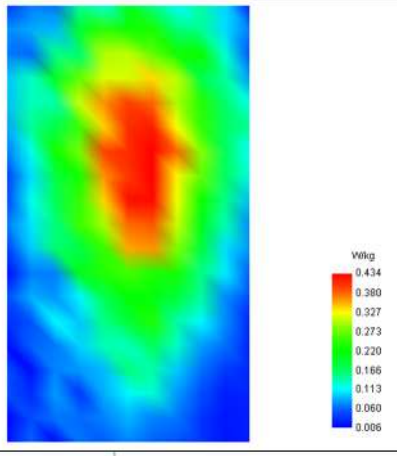
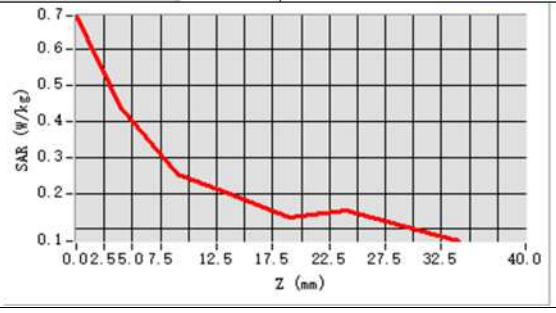
Maximum location: X=-48.00, Y=-35.00 ; SAR Peak: 0.48 W/kg

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

Plot 16:

Test Date	2023-11-11
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Right Side
Band	LTE band 5
Signal	LTE FDD
Frequency	844
SAR 10g (W/Kg)	0.223
SAR 1g (W/Kg)	0.424

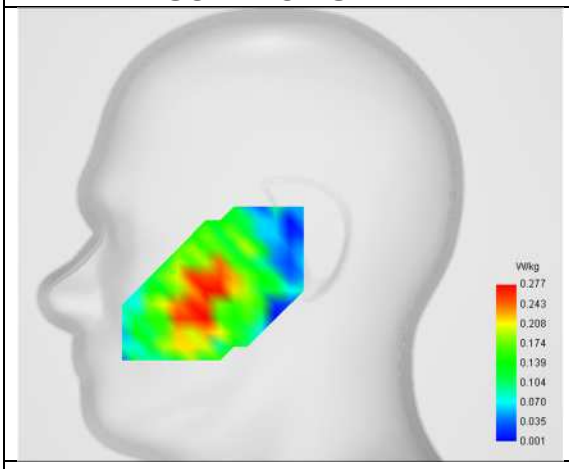
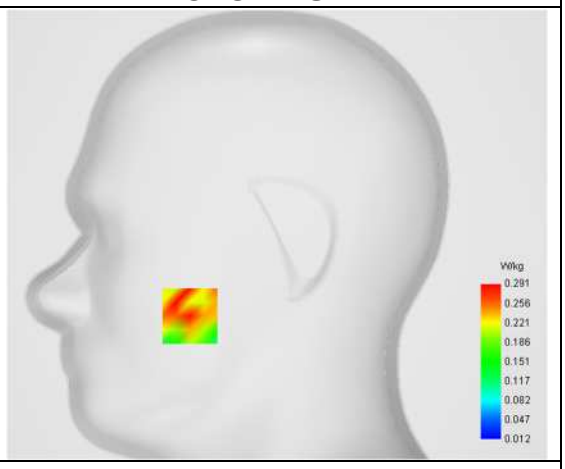
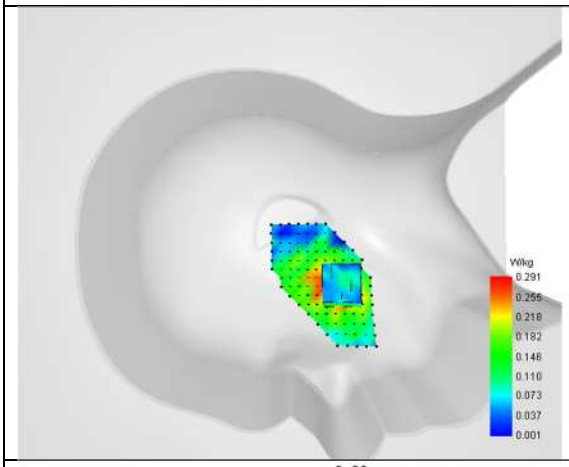
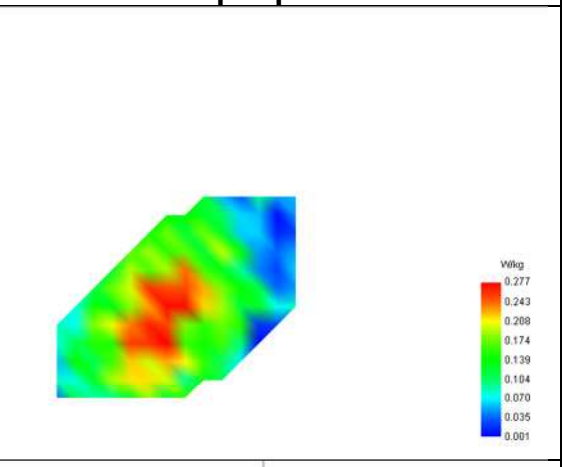
Maximum location: X=5.00, Y=9.00 ; SAR Peak: 0.62 W/kg

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

Plot 17:

Test Date	2023-11-08
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 12
Signal	LTE FDD
Frequency	704
SAR 10g (W/Kg)	0.172
SAR 1g (W/Kg)	0.270

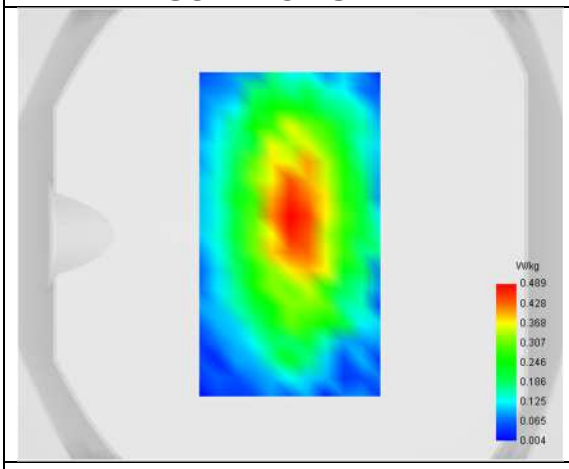
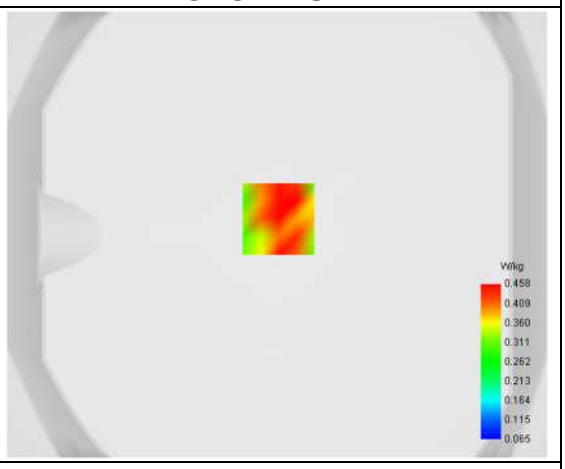
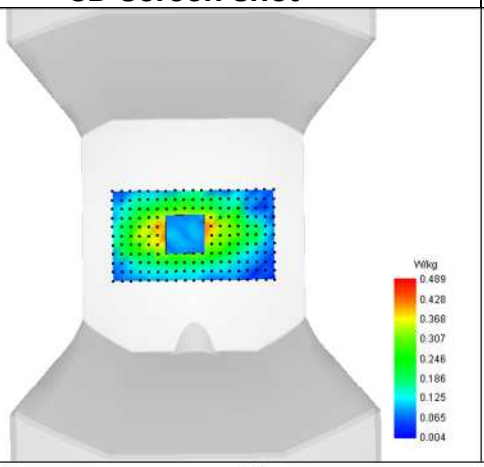
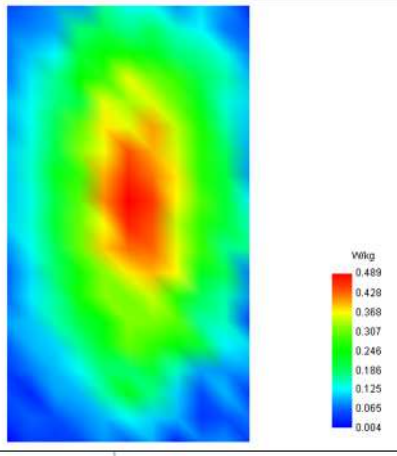
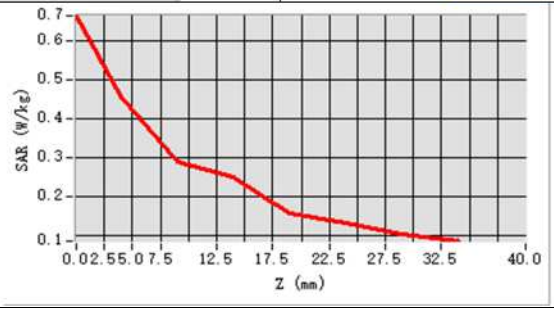
Maximum location: X=-50.00, Y=-47.00 ; SAR Peak: 0.47 W/kg

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

Plot 18:

Test Date	2023-11-08
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Right Side
Band	LTE band 12
Signal	LTE FDD
Frequency	704
SAR 10g (W/Kg)	0.275
SAR 1g (W/Kg)	0.452

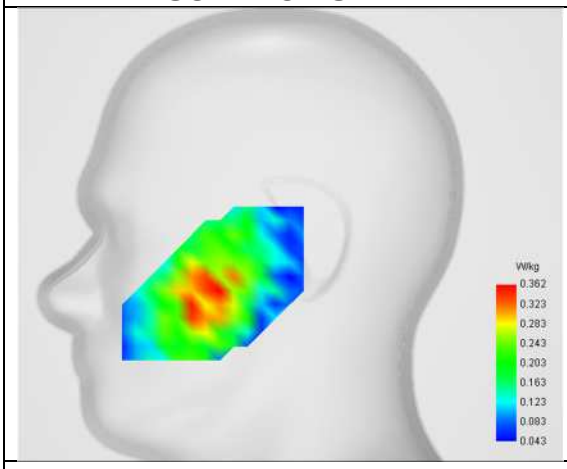
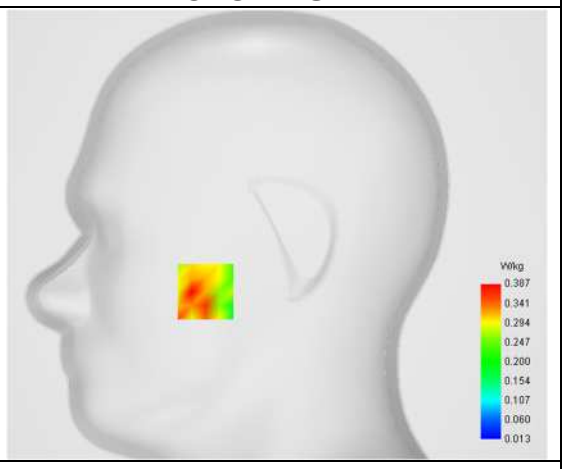
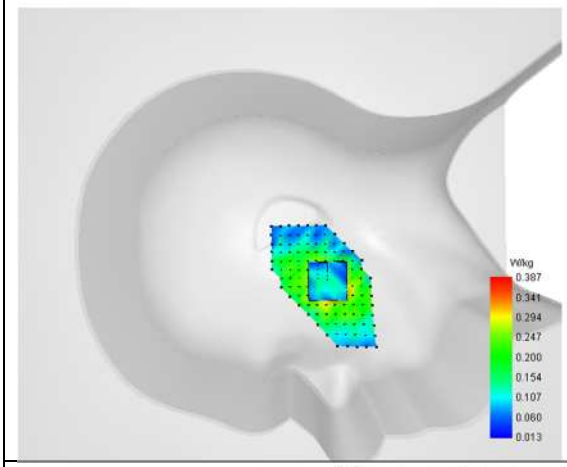
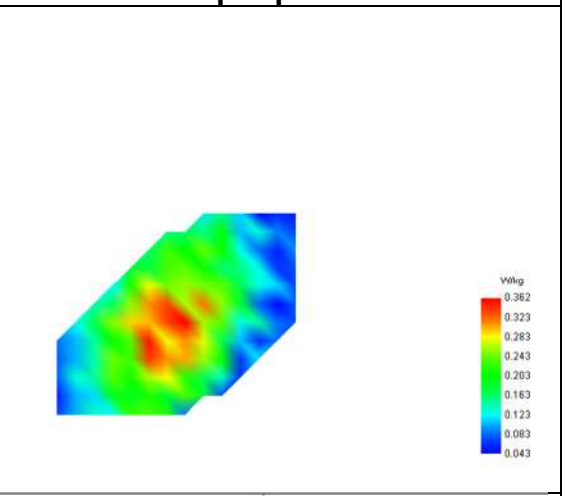
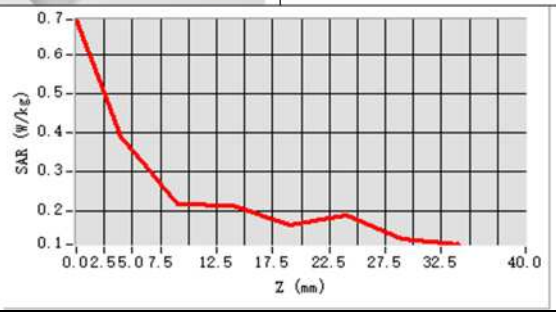
Maximum location: X=1.00, Y=7.00 ; SAR Peak: 0.68 W/kg

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

Plot 19:

Test Date	2023-11-09
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 13
Signal	LTE FDD
Frequency	782
SAR 10g (W/Kg)	0.243
SAR 1g (W/Kg)	0.352

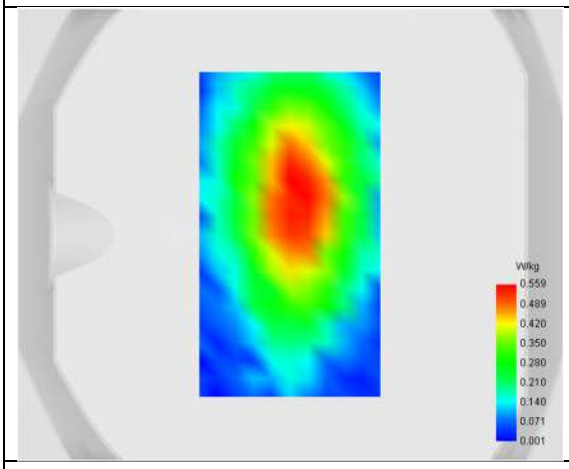
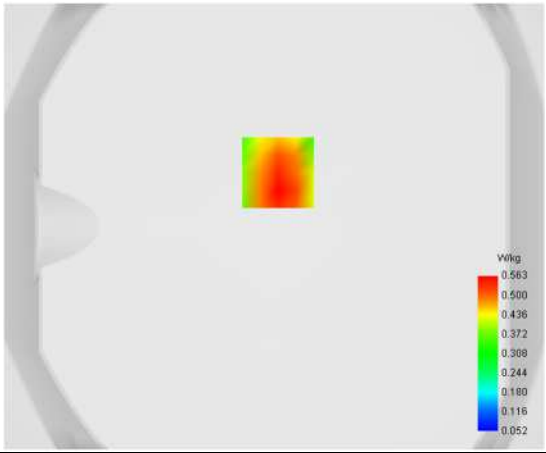
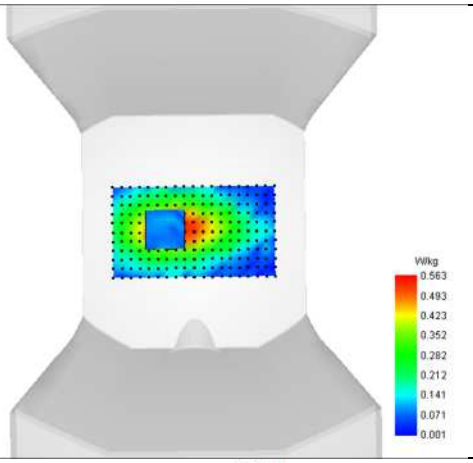
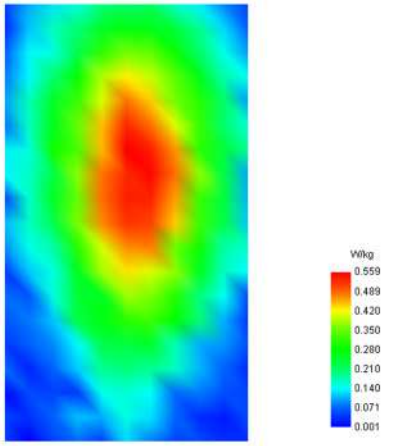
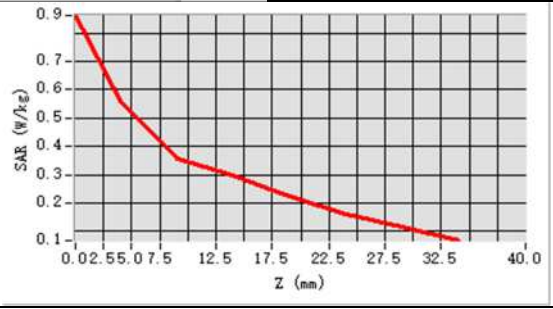
Maximum location: X=-41.00, Y=-33.00 ; SAR Peak: 0.54 W/kg

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

Plot 20:

Test Date	2023-11-09
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Right Side
Band	LTE band 13
Signal	LTE FDD
Frequency	782
SAR 10g (W/Kg)	0.363
SAR 1g (W/Kg)	0.549

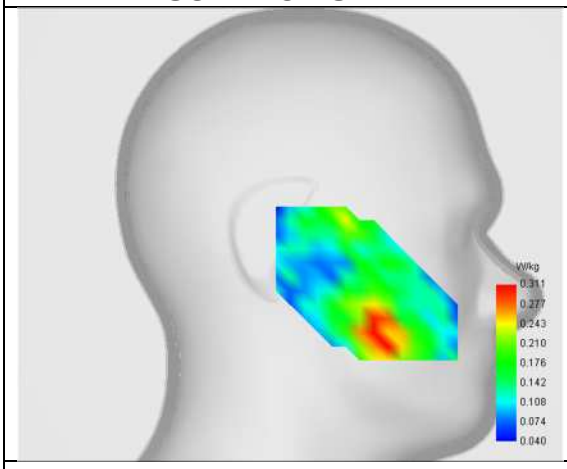
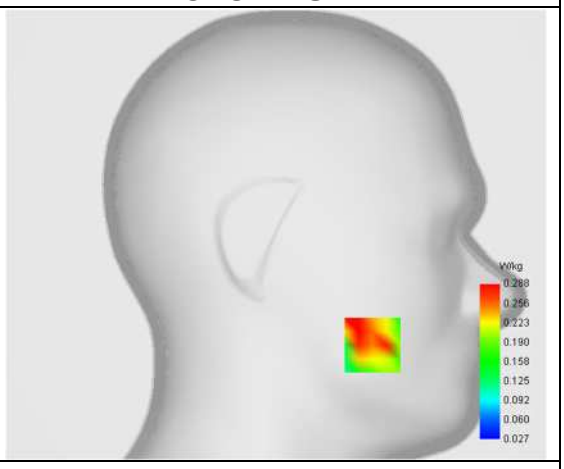
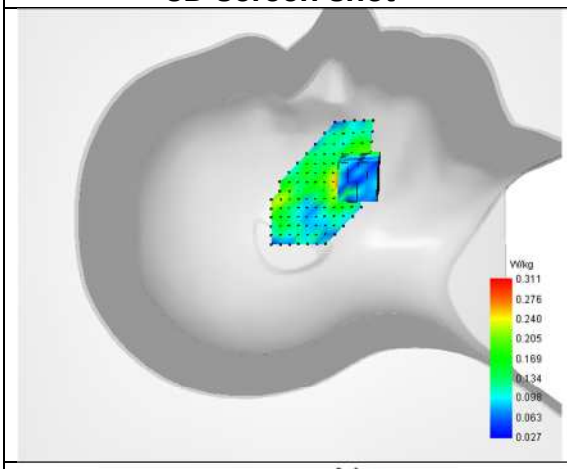
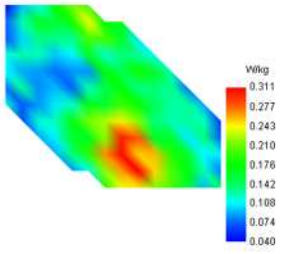
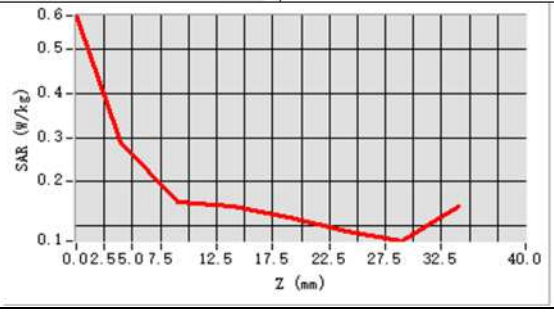
Maximum location: X=2.00, Y=24.00 ; SAR Peak: 0.77 W/kg

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

Plot 21:

Test Date	2023-11-15
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 25
Signal	LTE FDD
Frequency	1882.5
SAR 10g (W/Kg)	0.184
SAR 1g (W/Kg)	0.292

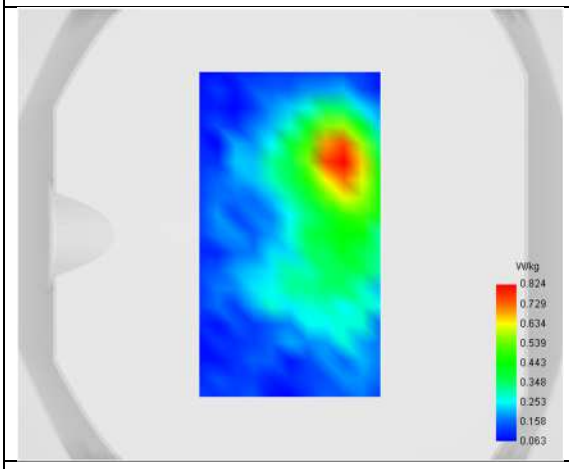
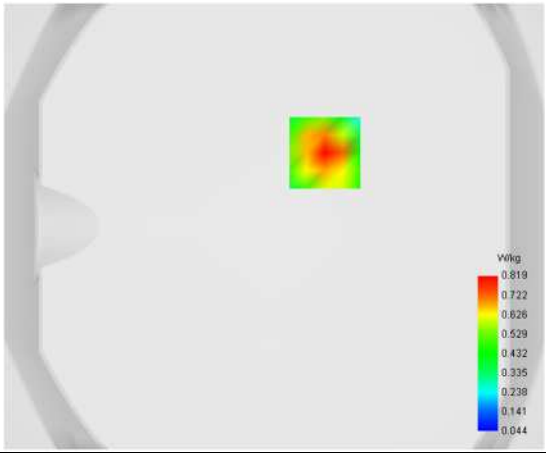
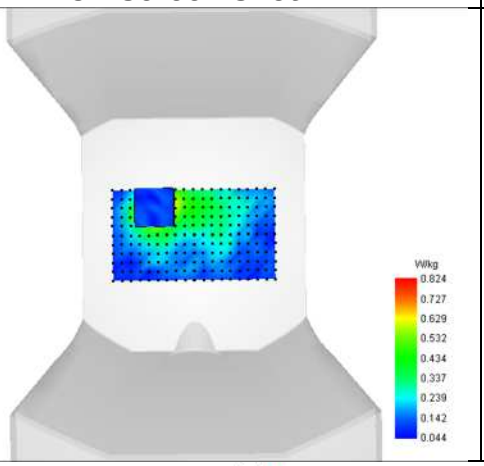
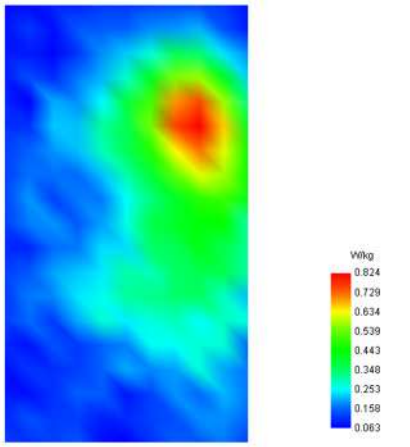
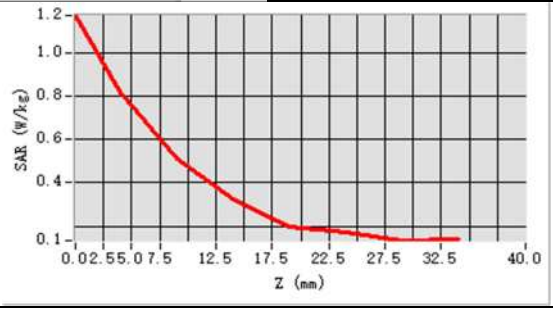
Maximum location: X=-56.00, Y=-64.00 ; SAR Peak: 0.48 W/kg

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

Plot 22:

Test Date	2023-11-15
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Front side
Band	LTE band 25
Signal	LTE FDD
Frequency	1882.5
SAR 10g (W/Kg)	0.453
SAR 1g (W/Kg)	0.756

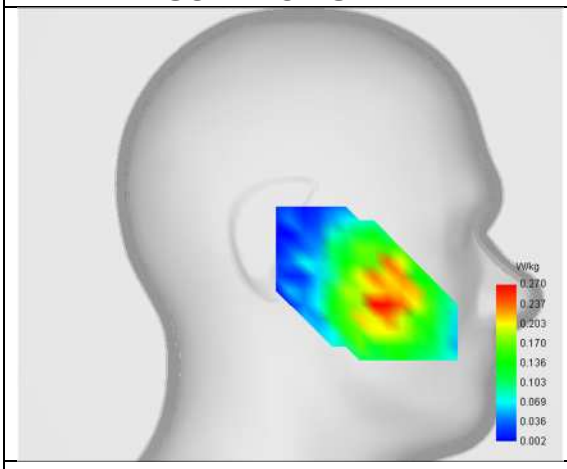
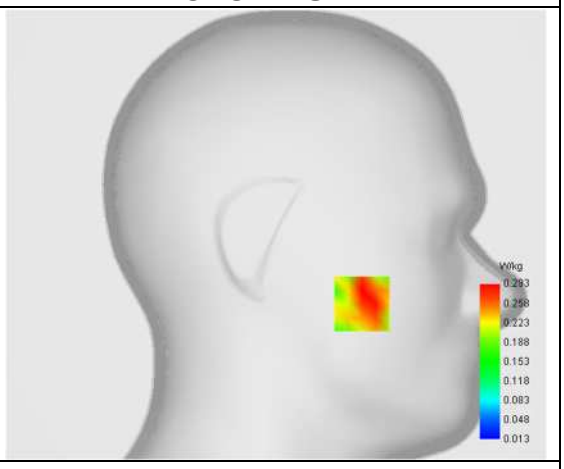
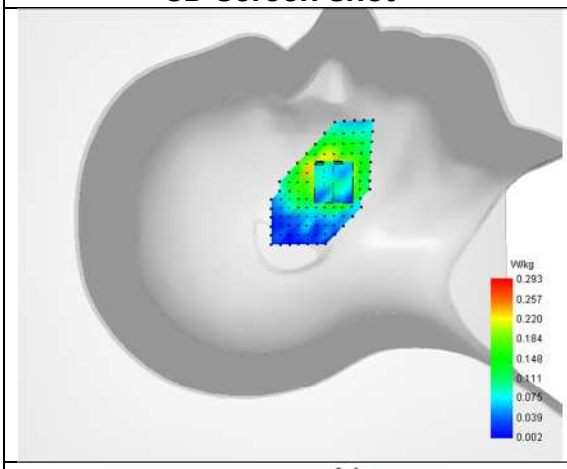
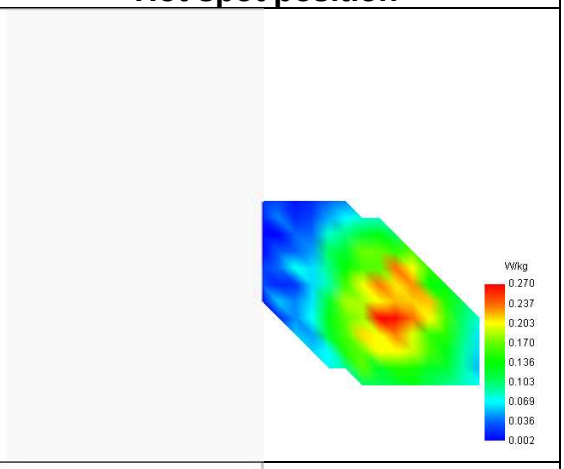
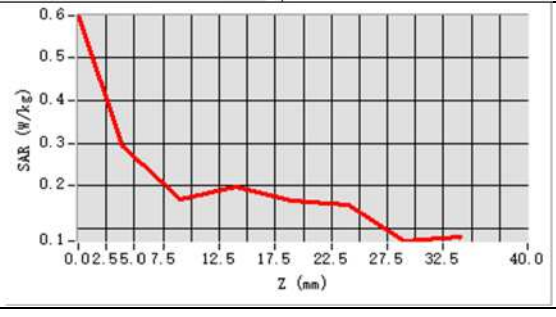
Maximum location: X=23.00, Y=33.00 ; SAR Peak: 1.18 W/kg

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

Plot 23:

Test Date	2023-11-11
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 26
Signal	LTE FDD
Frequency	841.5
SAR 10g (W/Kg)	0.206
SAR 1g (W/Kg)	0.302

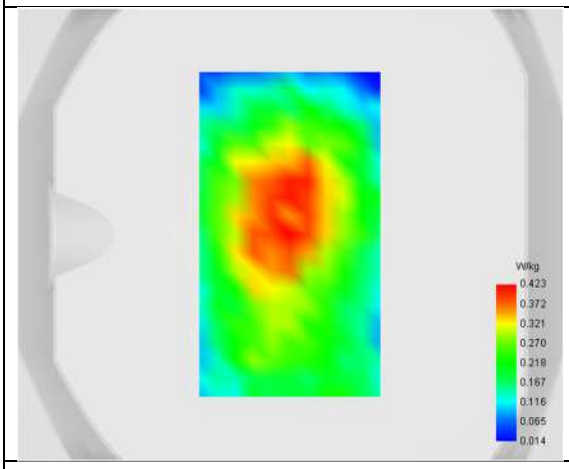
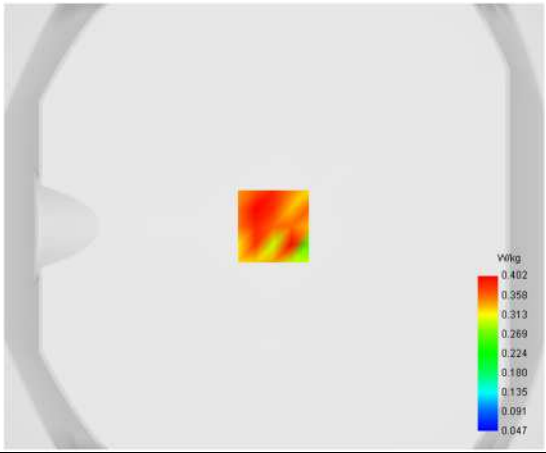
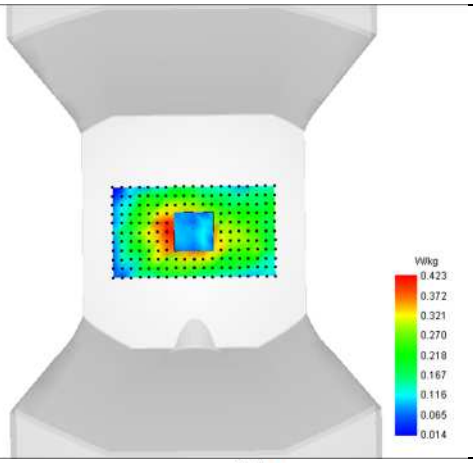
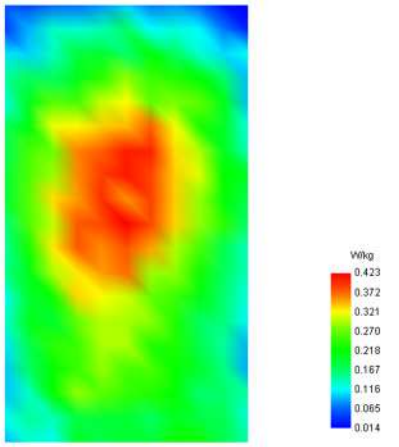
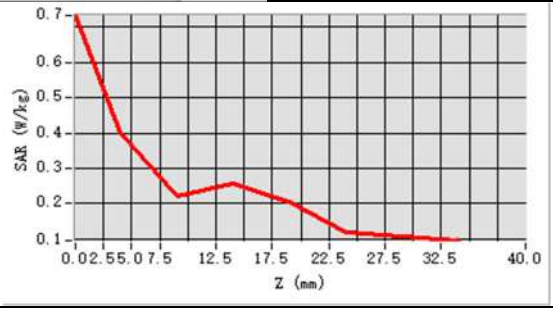
Maximum location: X=-50.00, Y=-40.00 ; SAR Peak: 0.53 W/kg

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

Plot 24:

Test Date	2023-11-11
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 26
Signal	LTE FDD
Frequency	841.5
SAR 10g (W/Kg)	0.232
SAR 1g (W/Kg)	0.398

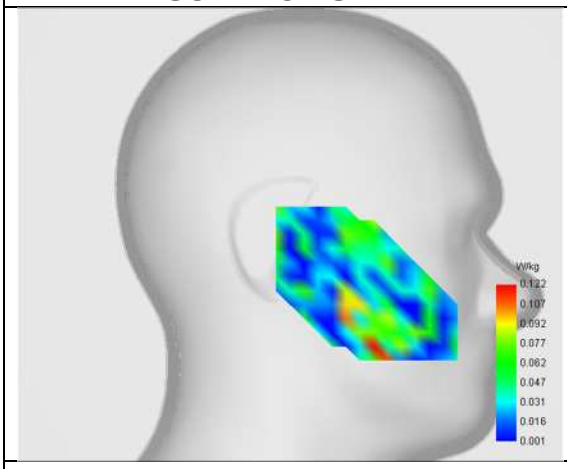
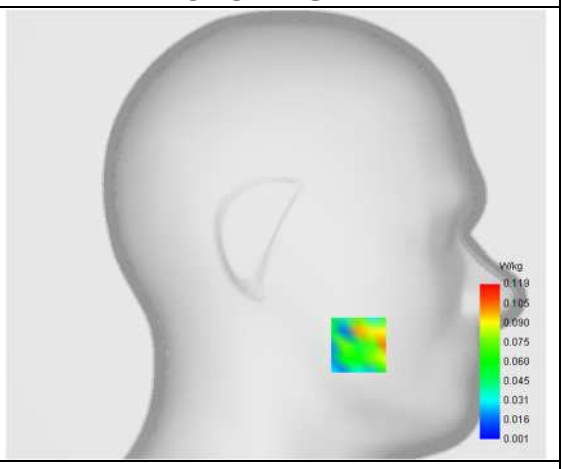
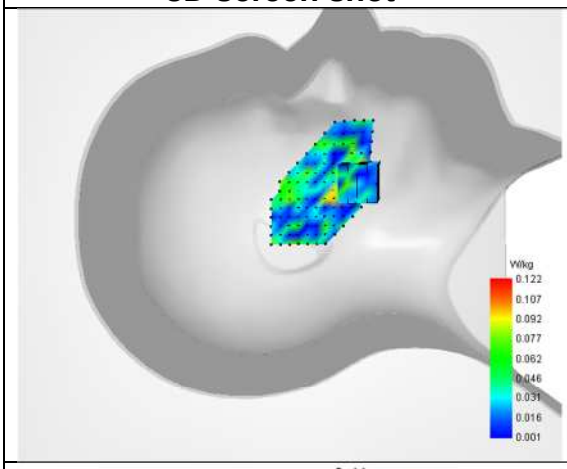
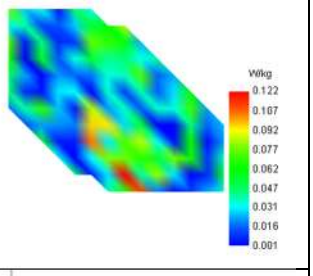
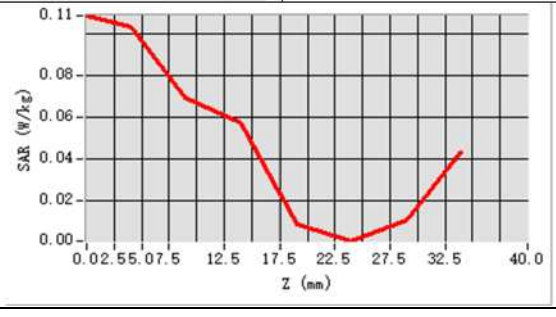
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 0.73 W/kg

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

Plot 25:

Test Date	2023-11-18
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE band 41
Signal	LTE TDD
Frequency	2593
SAR 10g (W/Kg)	0.043
SAR 1g (W/Kg)	0.095

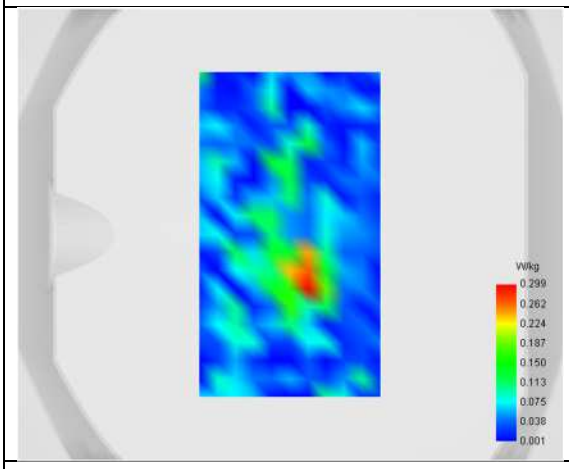
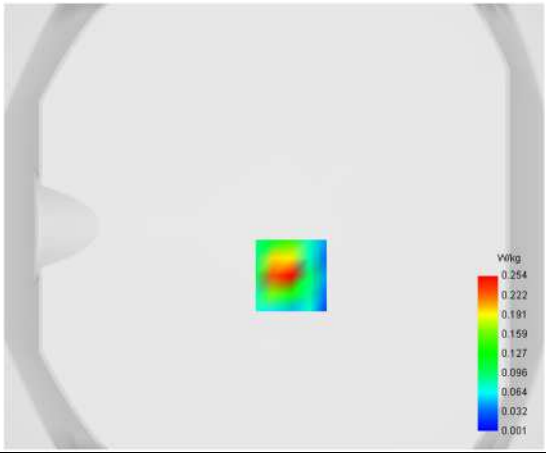
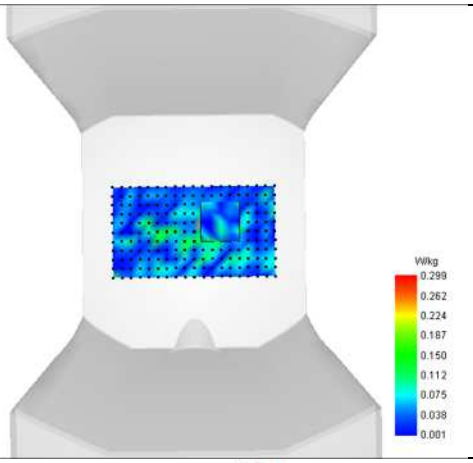
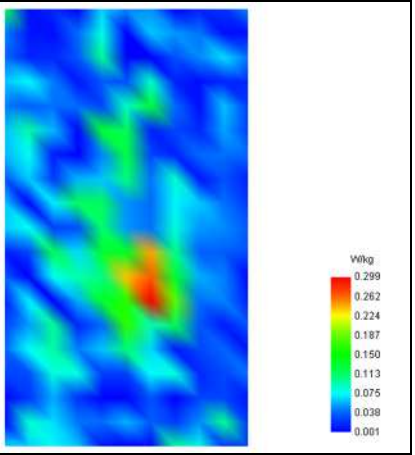
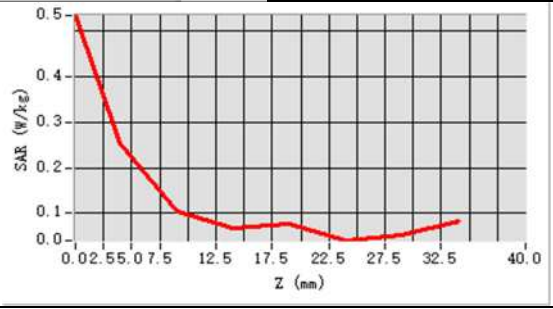
Maximum location: X=-48.00, Y=-64.00 ; SAR Peak: 0.25 W/kg

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

Plot 26:

Test Date	2023-11-18
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Bottom Side
Band	LTE band 41
Signal	LTE TDD
Frequency	2593
SAR 10g (W/Kg)	0.113
SAR 1g (W/Kg)	0.270

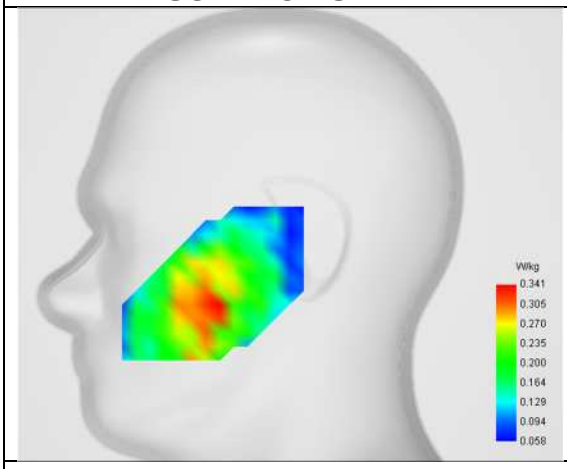
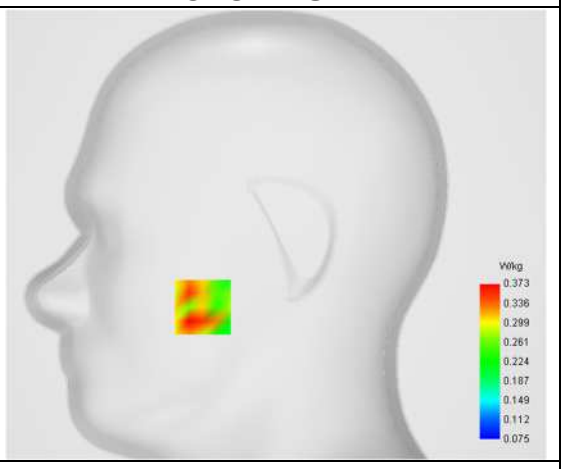
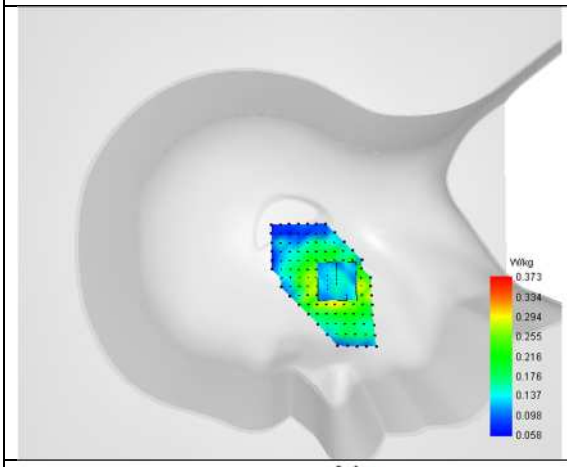
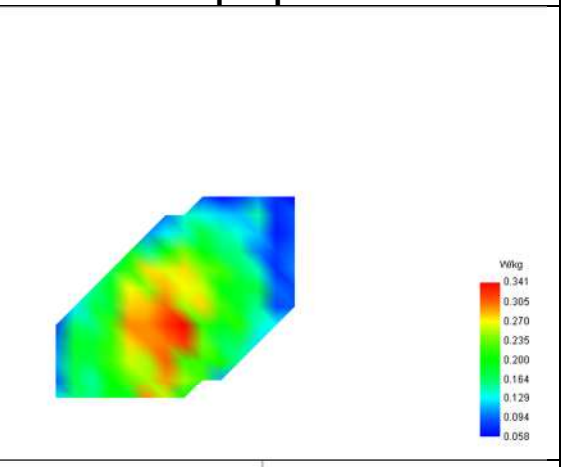
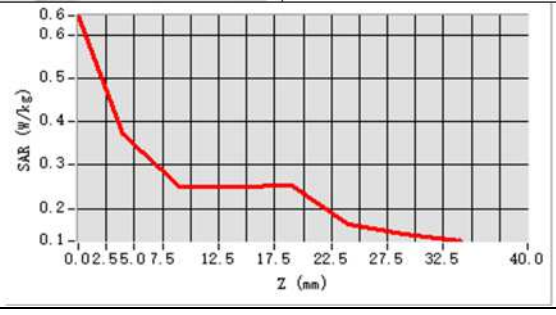
Maximum location: X=8.00, Y=-22.00 ; SAR Peak: 0.57 W/kg

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

Plot 27:

Test Date	2023-11-12
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	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)	0.244
SAR 1g (W/Kg)	0.368

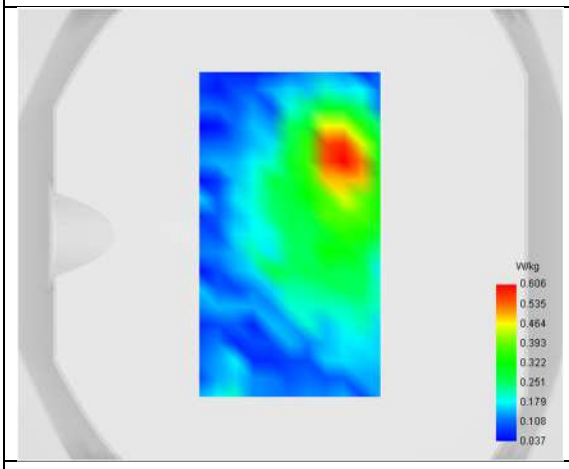
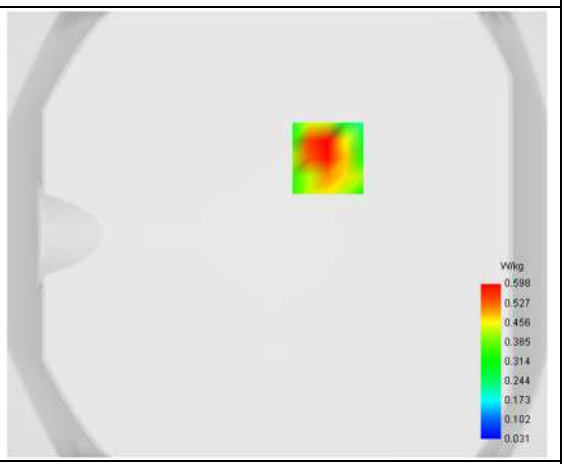
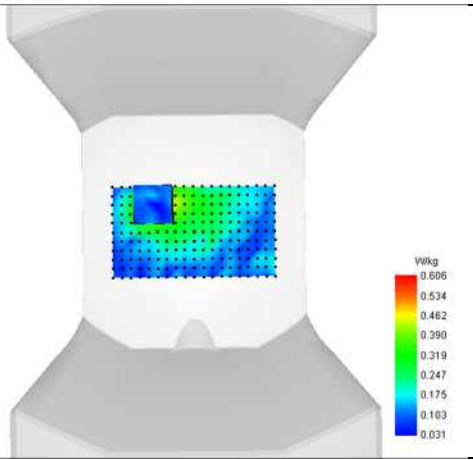
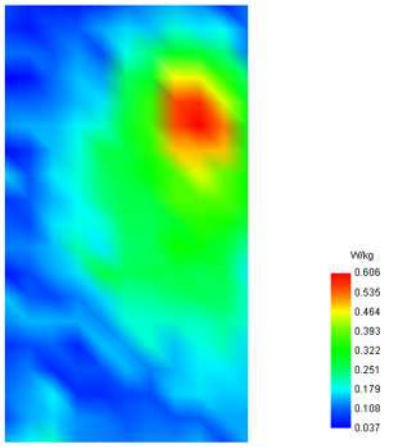
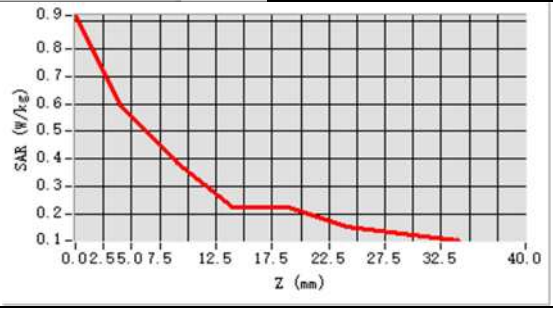
Maximum location: X=-42.00, Y=-42.00 ; SAR Peak: 0.59 W/kg

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

Plot 28:

Test Date	2023-11-12
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Bottom Side
Band	LTE band 66
Signal	LTE FDD
Frequency	1720
SAR 10g (W/Kg)	0.351
SAR 1g (W/Kg)	0.592

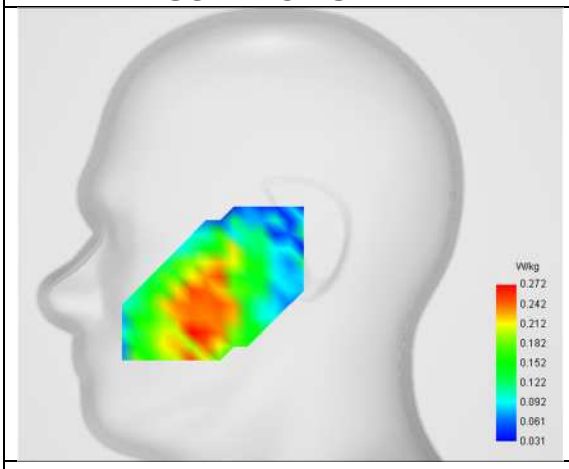
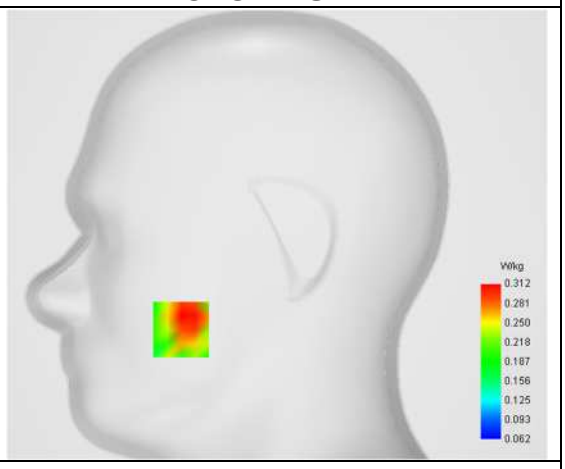
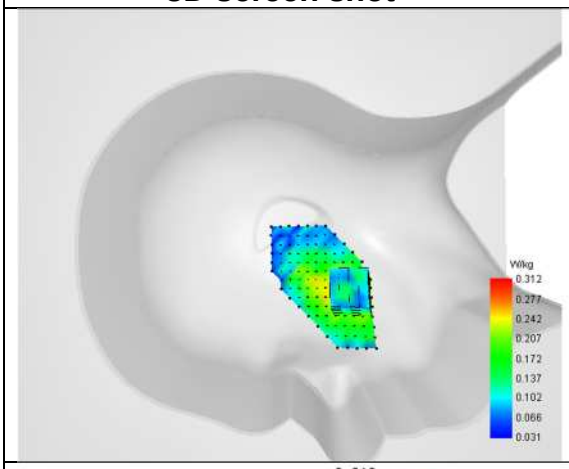
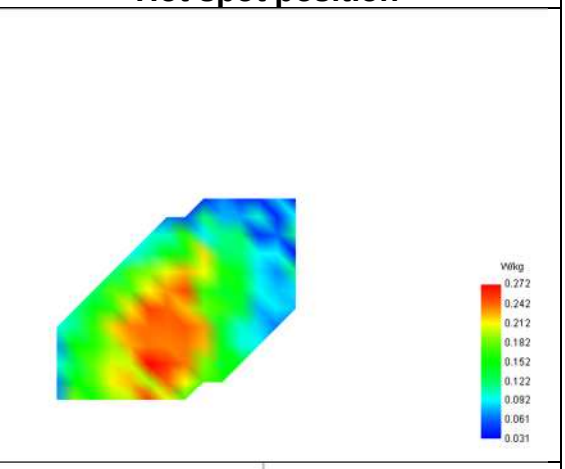
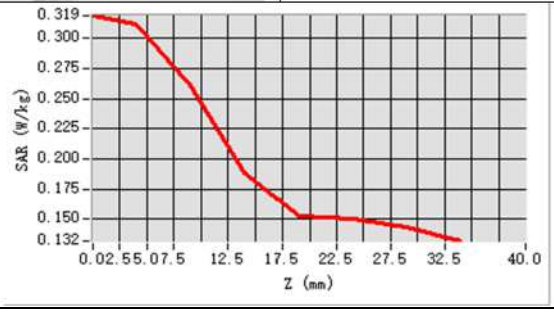
Maximum location: X=23.00, Y=34.00 ; SAR Peak: 0.96 W/kg

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

Plot 29:

Test Date	2023-11-08
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE band 71
Signal	LTE FDD
Frequency	680.5
SAR 10g (W/Kg)	0.215
SAR 1g (W/Kg)	0.317

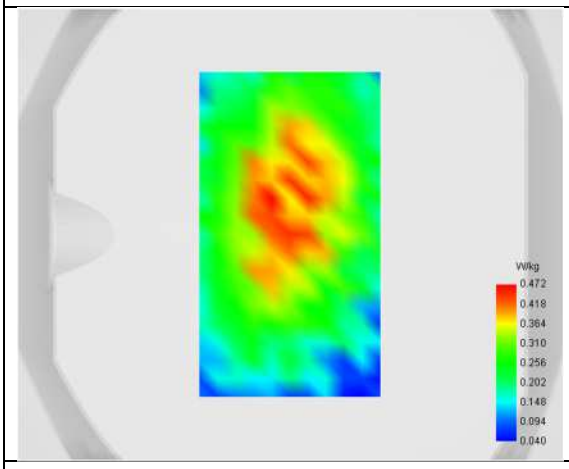
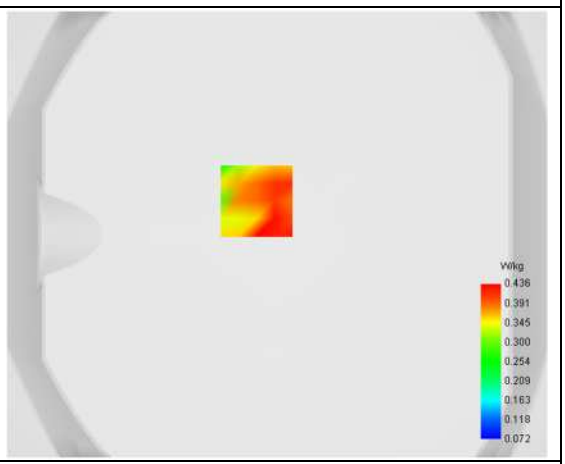
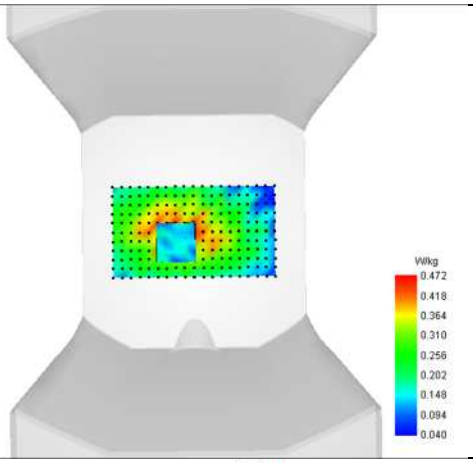
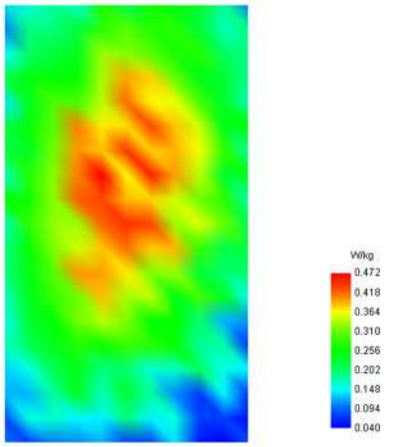
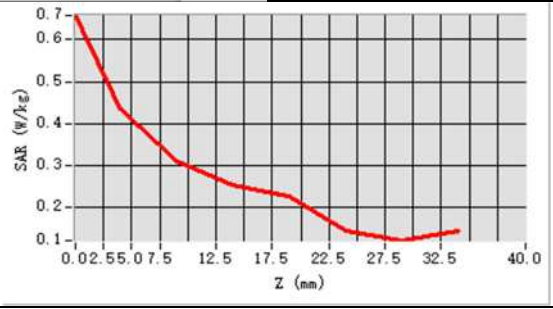
Maximum location: X=-55.00, Y=-55.00 ; SAR Peak: 0.48 W/kg

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

Plot 30:

Test Date	2023-11-08
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE band 71
Signal	LTE FDD
Frequency	680.5
SAR 10g (W/Kg)	0.226
SAR 1g (W/Kg)	0.449

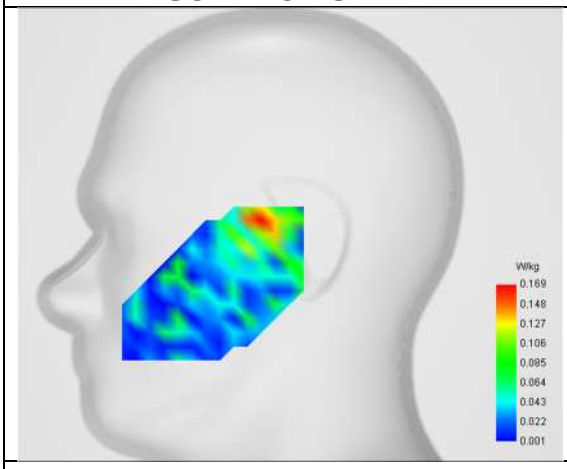
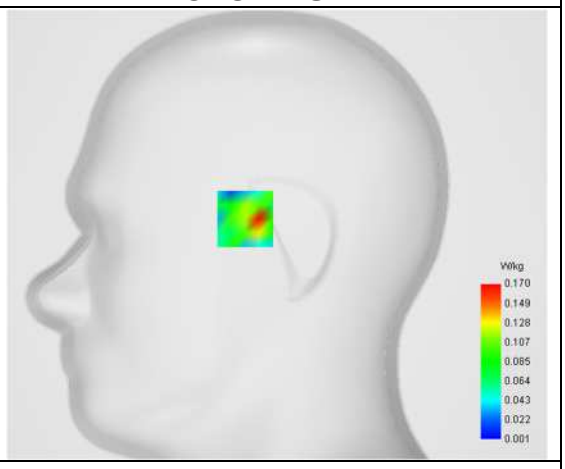
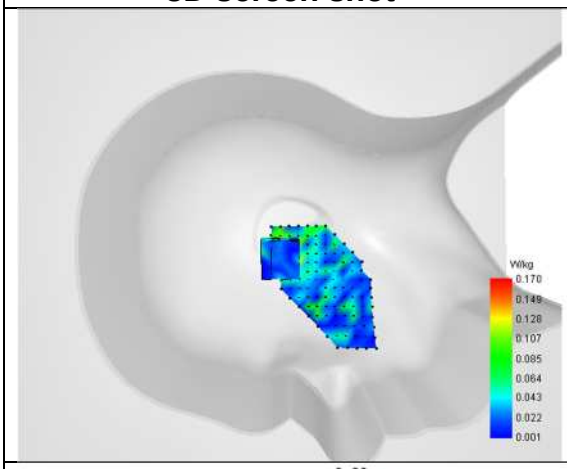
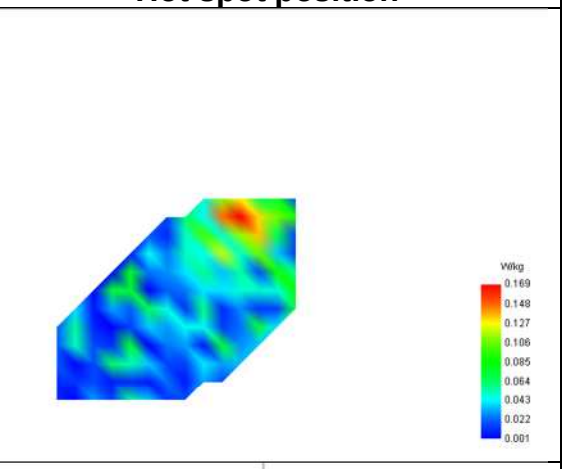
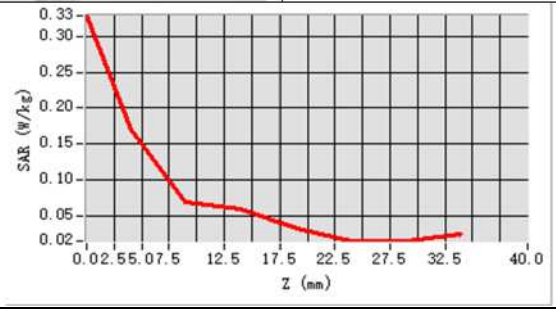
Maximum location: X=-9.00, Y=15.00 ; SAR Peak: 0.65 W/kg

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

Plot 31:

Test Date	2023-11-17
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Tilt
Band	ISM
Signal	IEEE 802.11 n
Frequency	2422
SAR 10g (W/Kg)	0.075
SAR 1g (W/Kg)	0.156

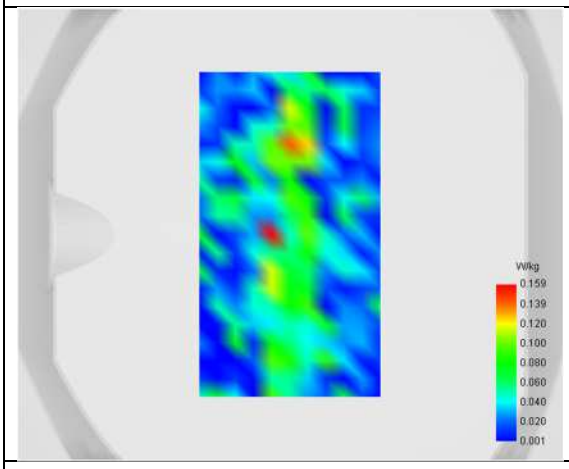
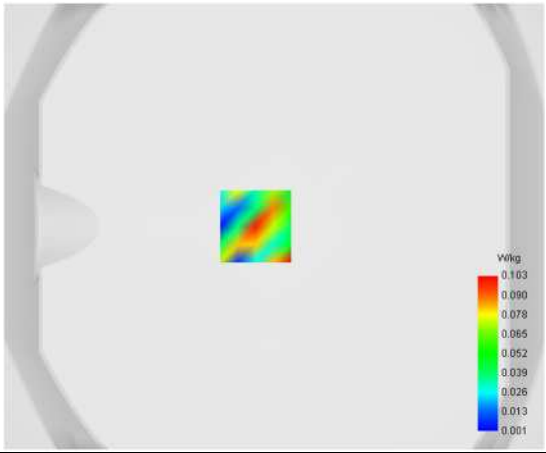
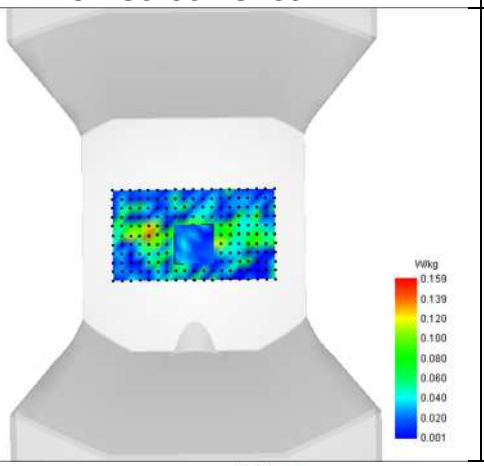
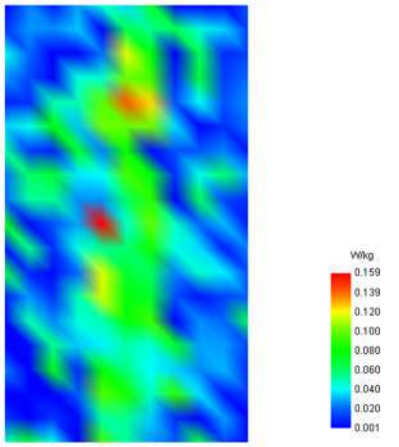
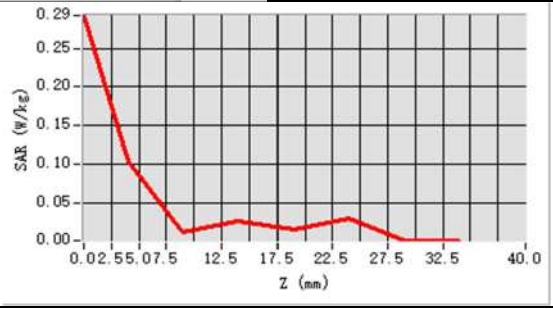
Maximum location: X=-18.00, Y=9.00 ; SAR Peak: 0.33 W/kg

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

Plot 32:

Test Date	2023-11-17
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Left Side
Band	ISM
Signal	IEEE 802.11 n
Frequency	2422
SAR 10g (W/Kg)	0.041
SAR 1g (W/Kg)	0.103

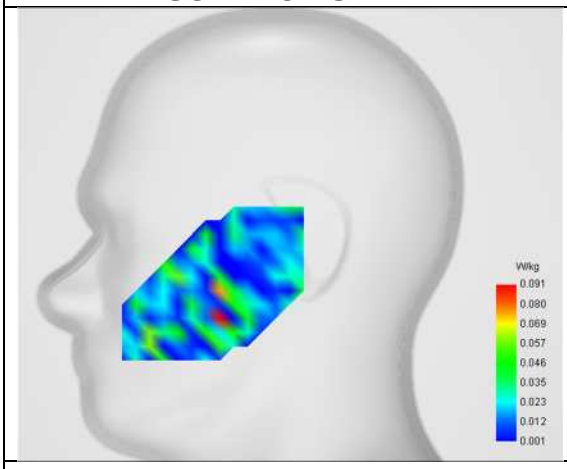
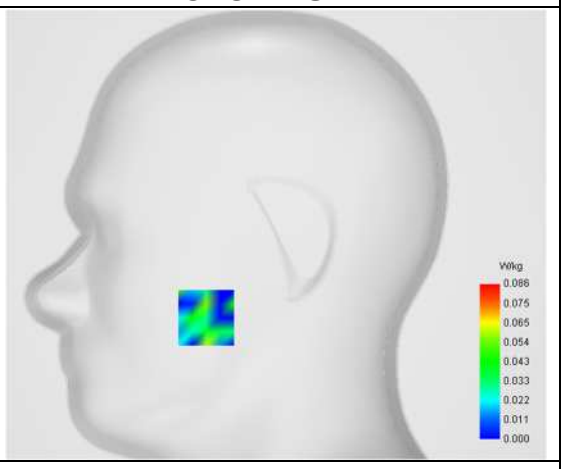
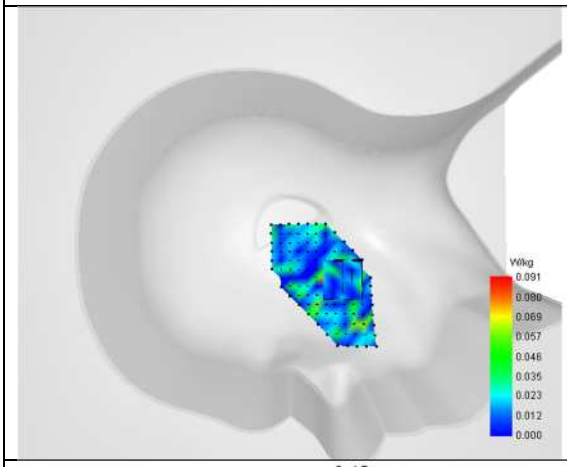
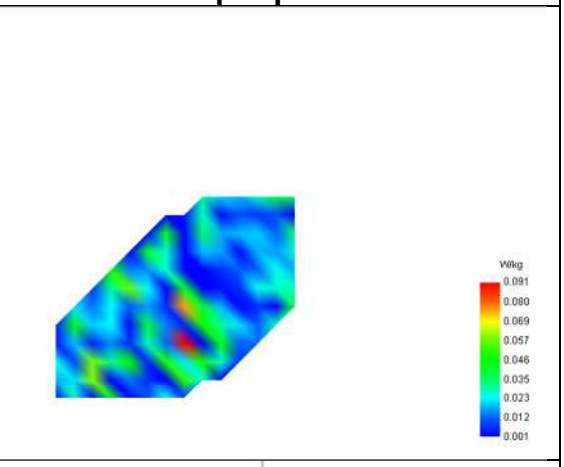
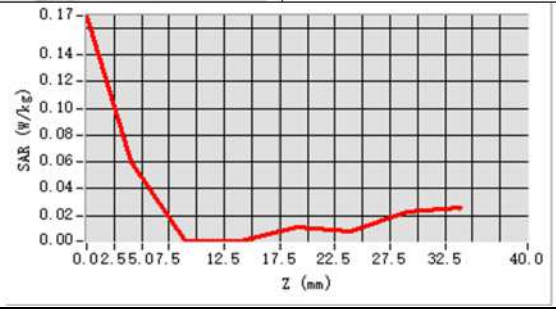
Maximum location: X=-8.00, Y=0.00 ; SAR Peak: 0.26 W/kg

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

Plot 33:

Test Date	2023-11-17
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Tilt
Band	Bluetooth
Signal	Bluetooth
Frequency	2441
SAR 10g (W/Kg)	0.020
SAR 1g (W/Kg)	0.053

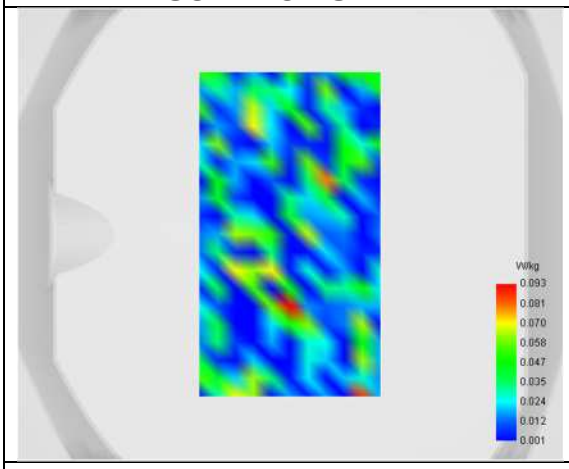
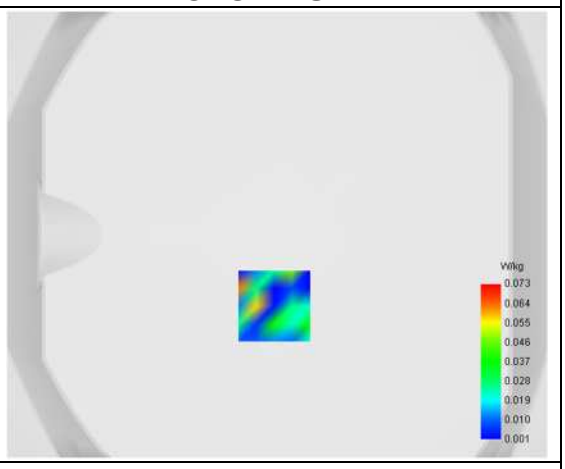
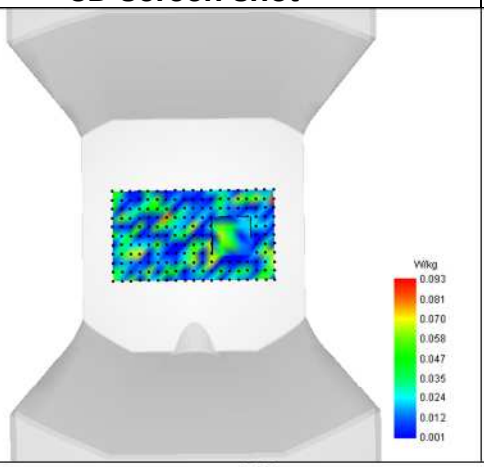
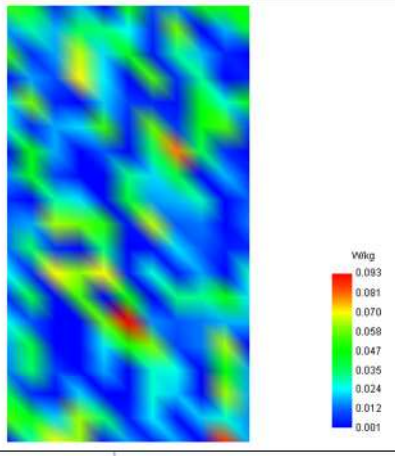
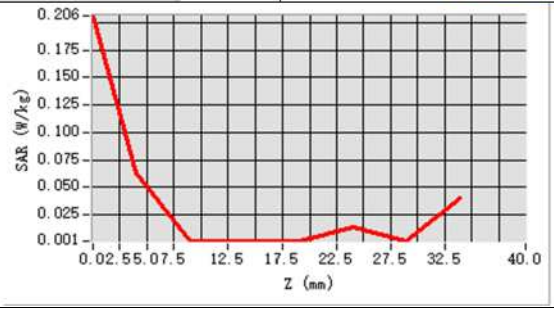
Maximum location: X=-40.00, Y=-48.00 ; SAR Peak: 0.23 W/kg

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

Plot 34:

Test Date	2023-11-17
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	Bluetooth
Signal	Bluetooth
Frequency	2441
SAR 10g (W/Kg)	0.026
SAR 1g (W/Kg)	0.064

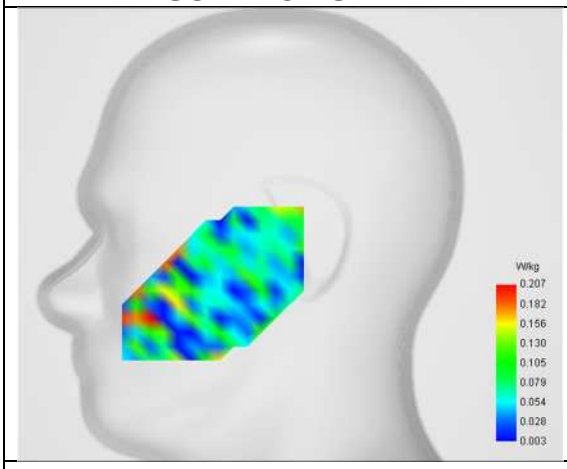
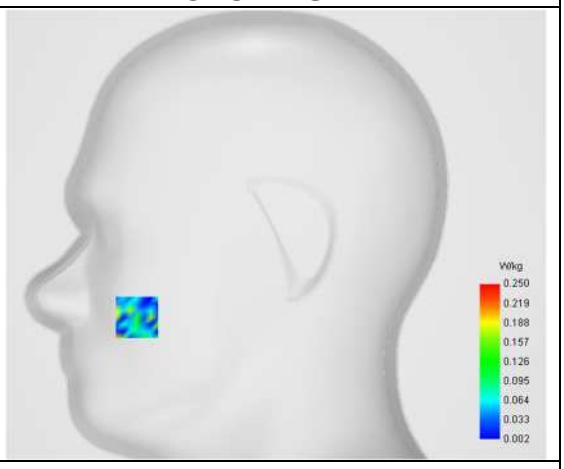
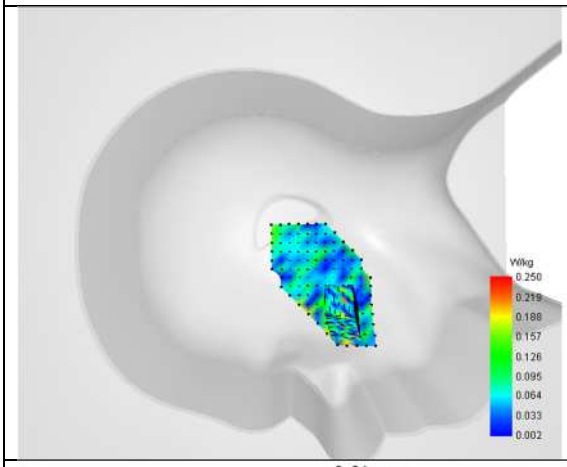
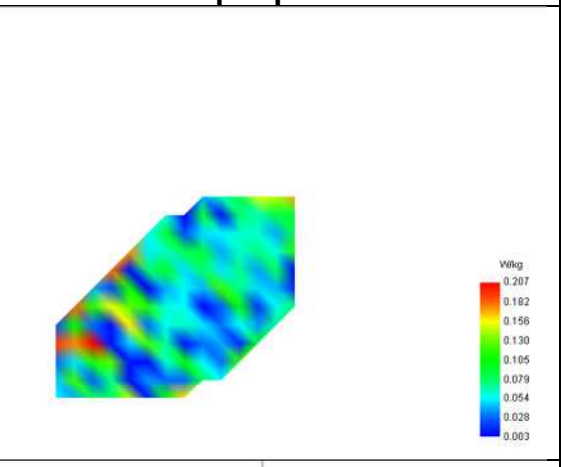
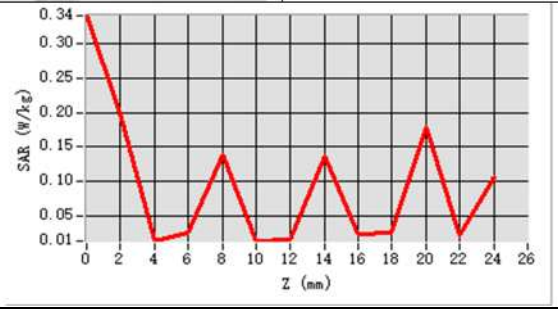
Maximum location: X=-1.00, Y=-32.00 ; SAR Peak: 0.19 W/kg

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

Plot 35:

Test Date	2023-11-19
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	U-NII-1
Signal	IEEE 802.11 a
Frequency	5180
SAR 10g (W/Kg)	0.071
SAR 1g (W/Kg)	0.140

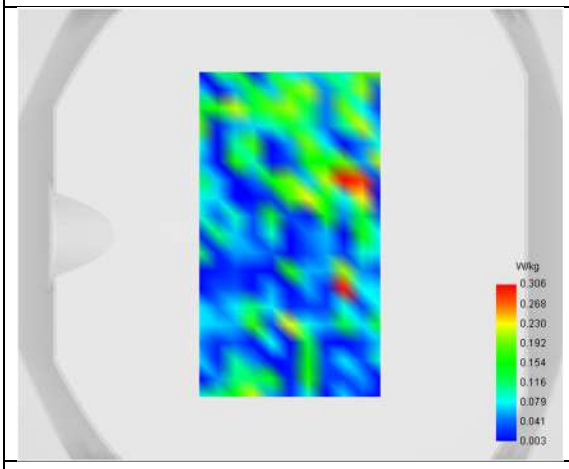
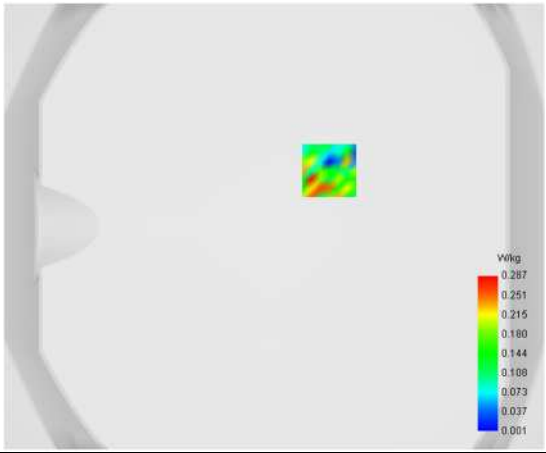
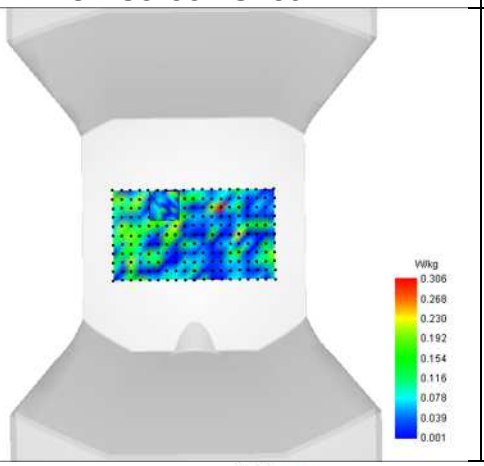
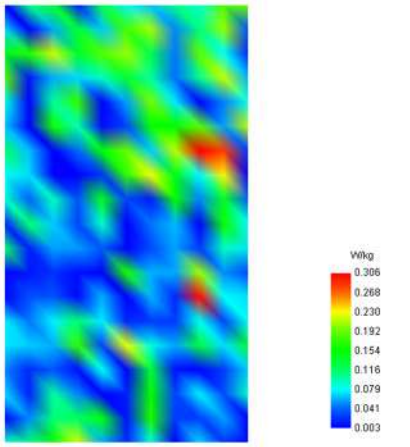
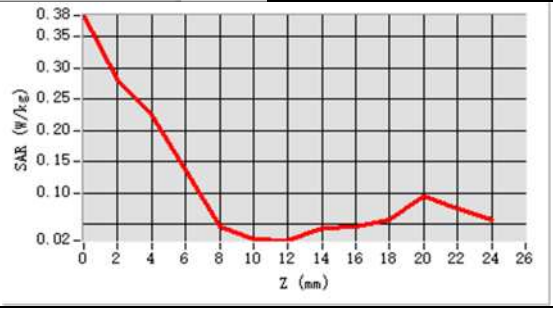
Maximum location: X=-80.00, Y=-48.00 ; SAR Peak: 1.24 W/kg

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

Plot 36:

Test Date	2023-11-19
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Back Side
Band	U-NII-1
Signal	IEEE 802.11 a
Frequency	5180
SAR 10g (W/Kg)	0.069
SAR 1g (W/Kg)	0.181

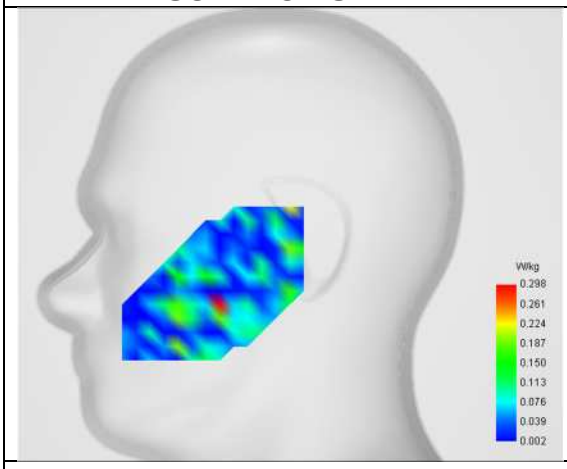
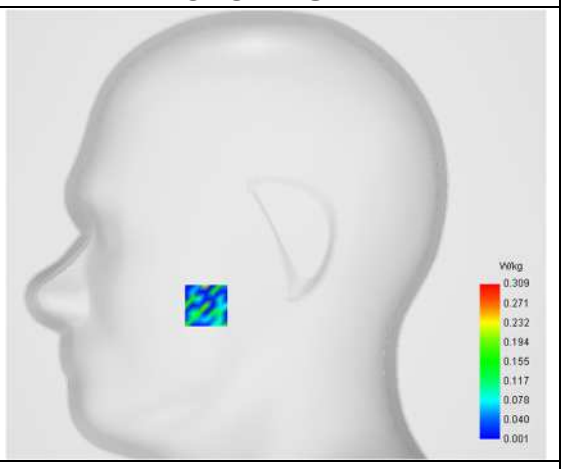
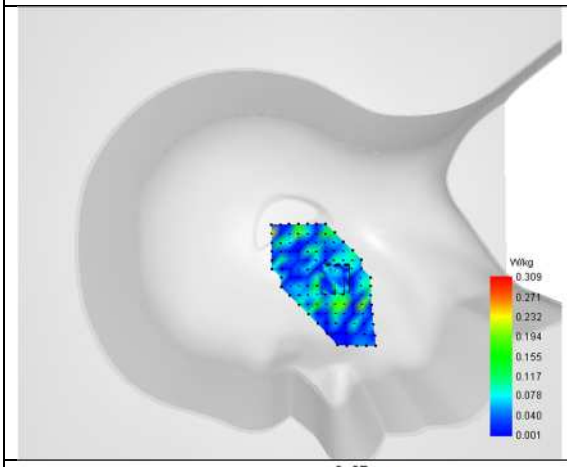
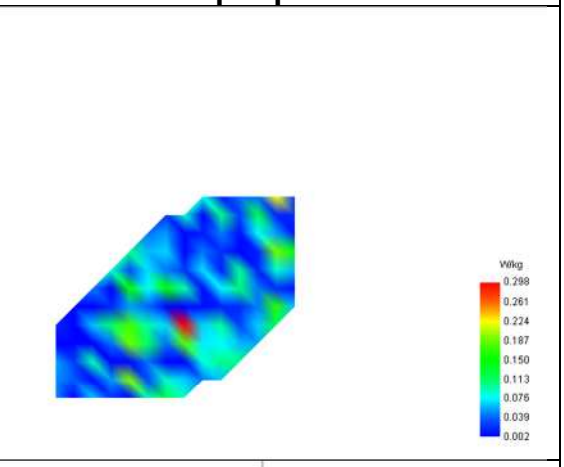
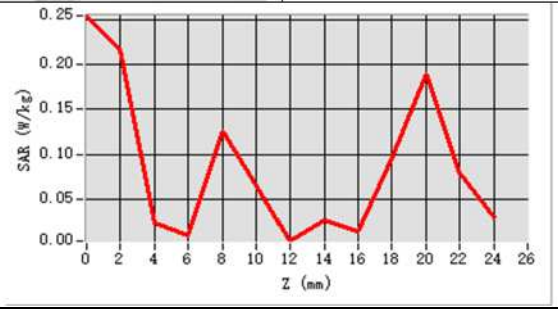
Maximum location: X=25.00, Y=25.00 ; SAR Peak: 0.88 W/kg

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

Plot 37:

Test Date	2023-11-20
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	U-NII-2a
Signal	IEEE 802.11 n
Frequency	5260
SAR 10g (W/Kg)	0.045
SAR 1g (W/Kg)	0.149

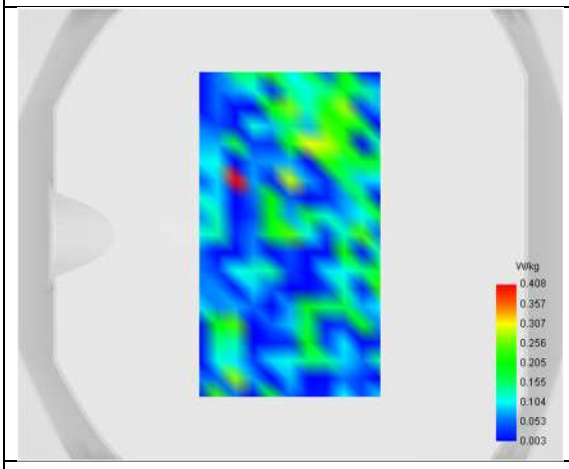
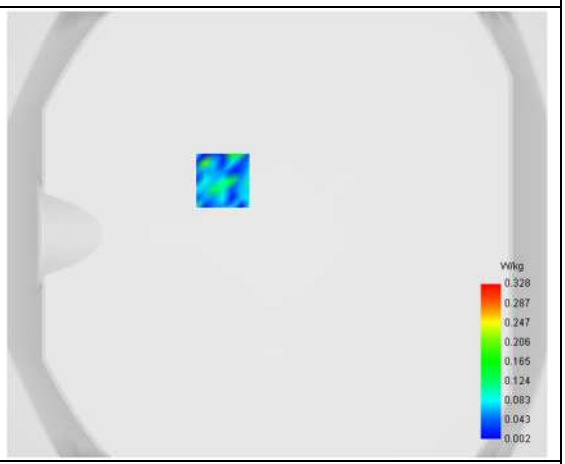
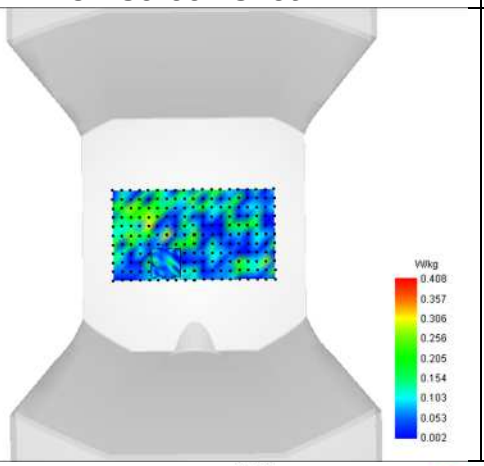
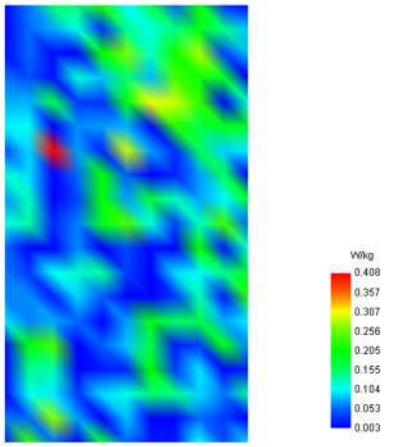
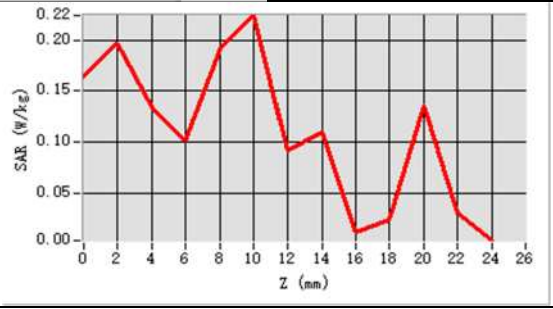
Maximum location: X=-40.00, Y=-41.00 ; SAR Peak: 1.31 W/kg

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

Plot 38:

Test Date	2023-11-20
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Back Side
Band	U-NII-2a
Signal	IEEE 802.11 n
Frequency	5260
SAR 10g (W/Kg)	0.063
SAR 1g (W/Kg)	0.150

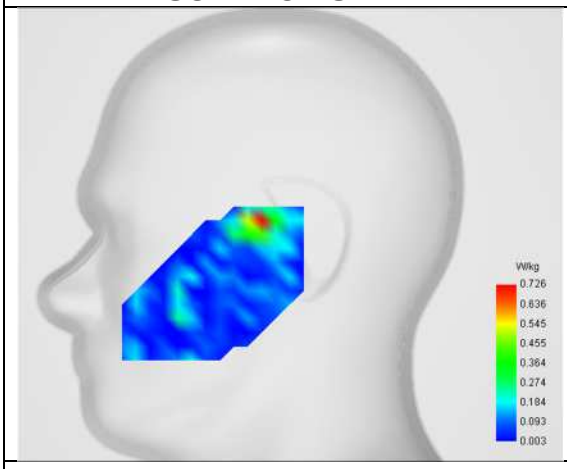
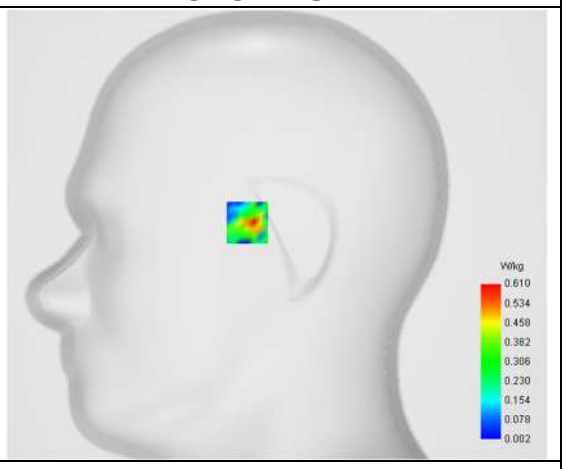
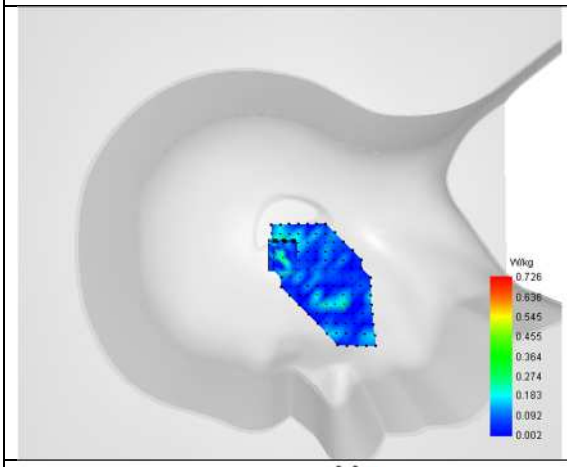
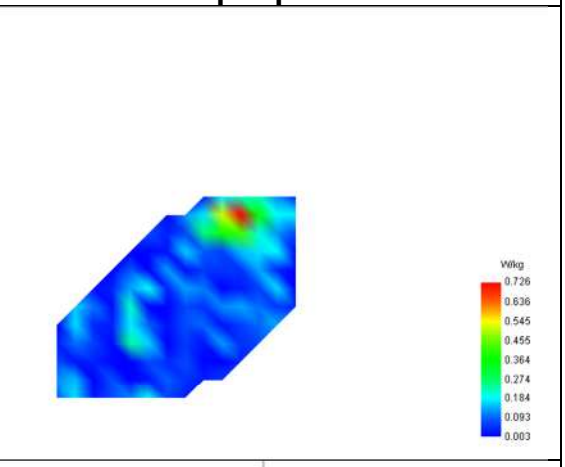
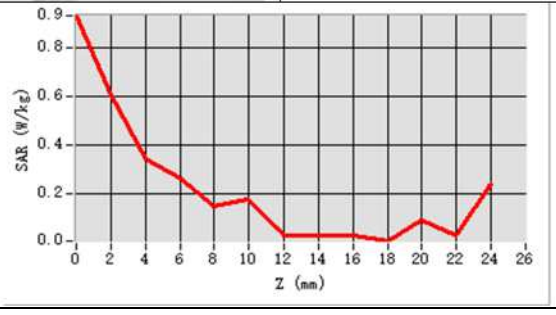
Maximum location: X=-24.00, Y=24.00 ; SAR Peak: 0.88 W/kg

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

Plot 39:

Test Date	2023-11-21
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	U-NII-2c
Signal	IEEE 802.11 a
Frequency	5700
SAR 10g (W/Kg)	0.202
SAR 1g (W/Kg)	0.611

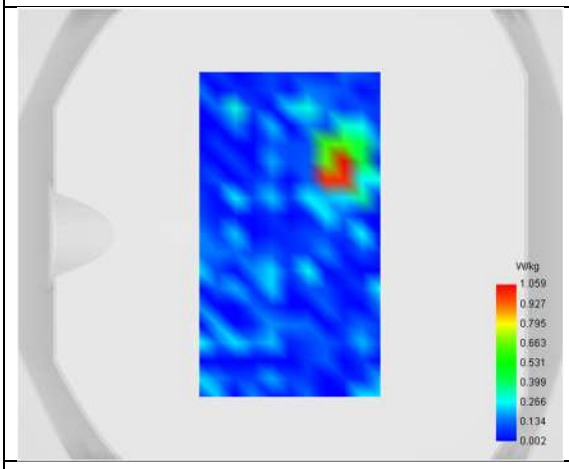
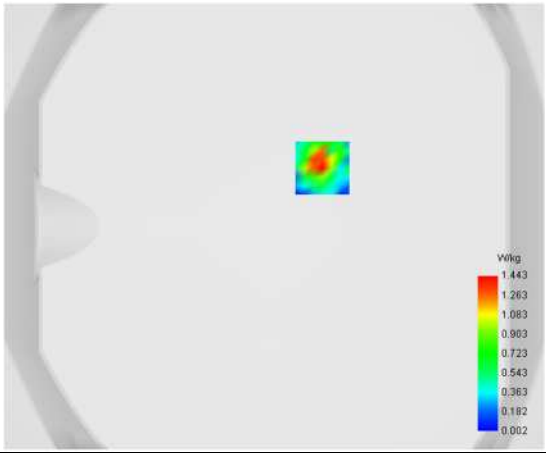
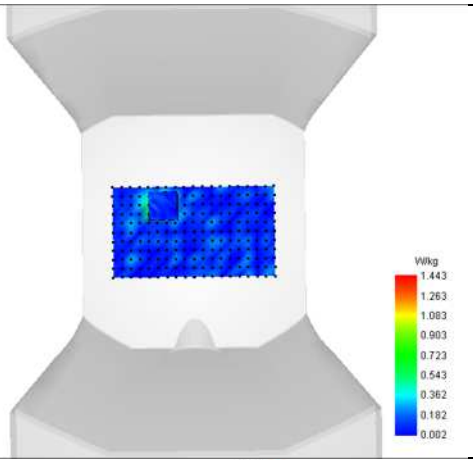
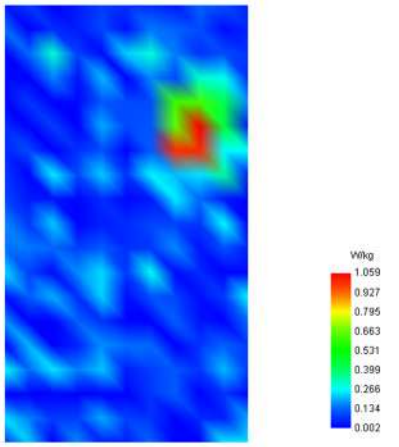
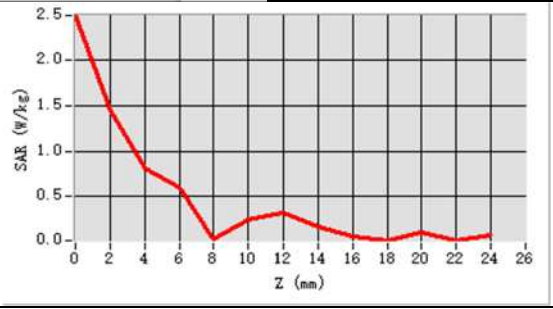
Maximum location: X=-17.00, Y=7.00 ; SAR Peak: 2.33 W/kg

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

Plot 40:

Test Date	2023-11-21
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Back Side
Band	U-NII-2c
Signal	IEEE 802.11 a
Frequency	5700
SAR 10g (W/Kg)	0.266
SAR 1g (W/Kg)	0.837

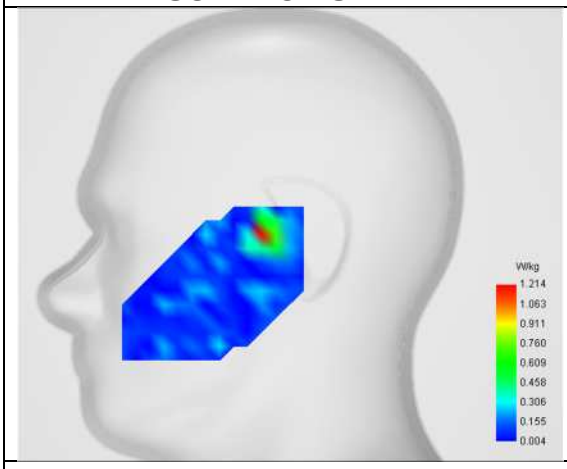
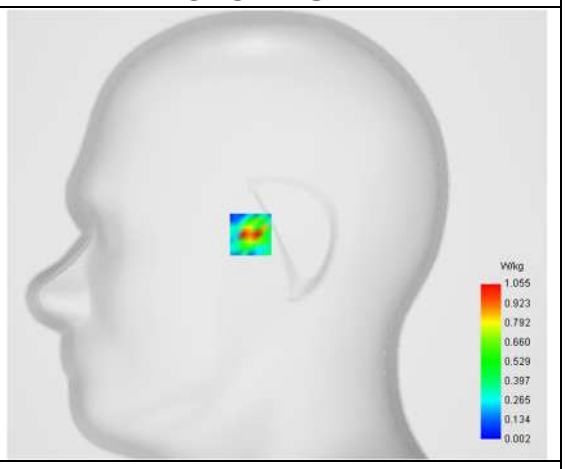
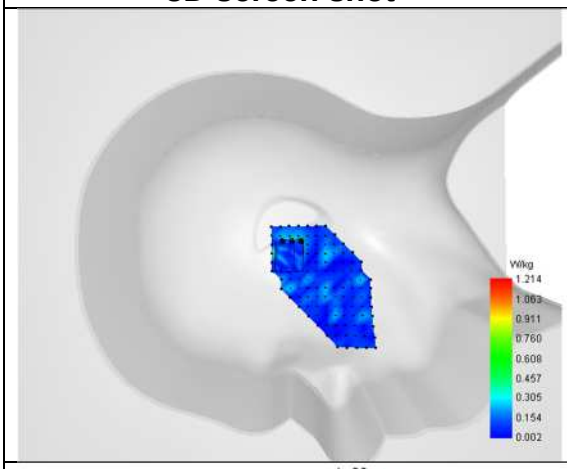
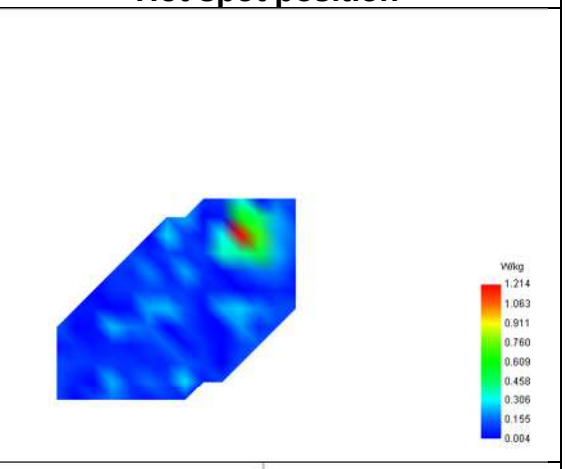
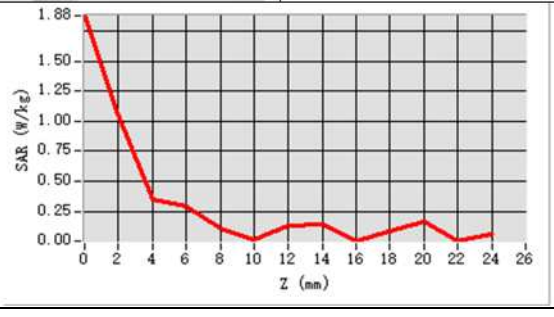
Maximum location: X=22.00, Y=26.00 ; SAR Peak: 3.47 W/kg

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

Plot 41:

Test Date	2023-11-22
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Tilt
Band	U-NII-3
Signal	IEEE 802.11 a
Frequency	5745
SAR 10g (W/Kg)	0.272
SAR 1g (W/Kg)	0.901

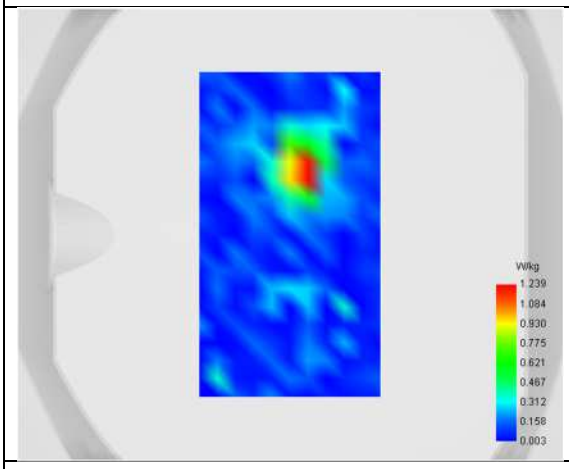
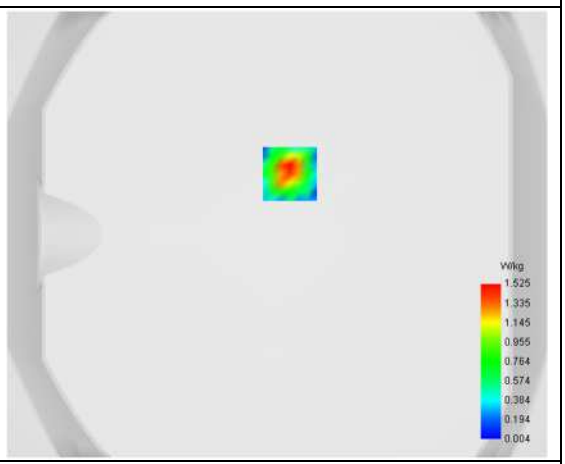
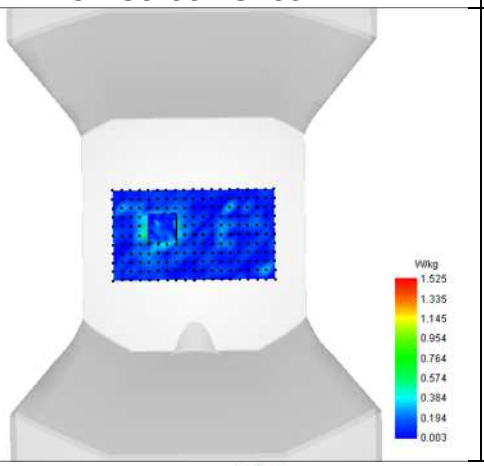
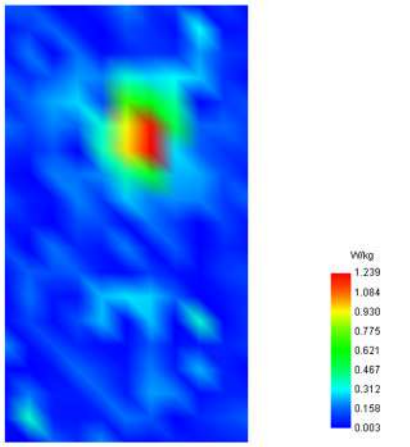
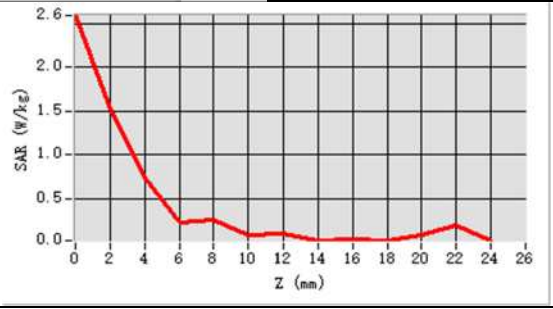
Maximum location: X=-15.00, Y=0.00 ; SAR Peak: 3.99 W/kg

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

Plot 42:

Test Date	2023-11-22
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Back Side
Band	U-NII-3
Signal	IEEE 802.11 a
Frequency	5745
SAR 10g (W/Kg)	0.281
SAR 1g (W/Kg)	0.808

Maximum location: X=6.00, Y=27.00 ; SAR Peak: 3.91 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※※※※※