



SAR TEST REPORT

Product Name: Tablet

Model Number: Flex 12C

FCC ID: O86-FLEX12C

Issued For : MobileDemand, LC

1501 Boyson Square Drive, Suite 101, Hiawatha, IA 52233,
USA

Issued By : Shenzhen LGT Test Service Co., Ltd.

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Report Number: LGT25L447HA03

Sample Received Date: Dec. 24, 2025

Date of Test Dec. 24, 2025 ~ Jan. 05, 2026

Date of Issue Jan. 05, 2026

Max. SAR (1g) Body: 1.118 W/kg

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Rev.	Issue Date	Contents
00	Jan. 05, 2026	Initial Issue



TEST REPORT CERTIFICATION

Applicant MobileDemand, LC
Address 1501 Boyson Square Drive, Suite 101, Hiawatha, IA 52233, USA
Manufacture EXPRESS LUCK INDUSTRIAL (ZHONGSHAN) LIMITED
Address NO.16, Langyuan Road, Jieyuan Administrative Village, Minzhong Town, Zhongshan, GuangDong, China
Product Name Tablet
Trademark N/A
Model Number Flex 12C
Sample number LGT2512464-1

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
ANSI/IEEE Std. C95.1-2019 FCC 47 CFR Part 2 (2.1093) IEEE 1528: 2013	PASS

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Manager





1. General Information

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

1.1 EUT Description

Product Name	Tablet	
Test Model Number	Flex 12C	
Series Number	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	WLAN 802.11b/g/n20/ax20: 2412 MHz ~ 2462 MHz WLAN 802.11n40/ax40: 2422 MHz ~ 2452 MHz WLAN 802.11a/ac20/ac40/ac80/ax20/ax40/ax80: 5150 ~ 5250 MHz WLAN 802.11a/ac20/ac40/ac80/ax20/ax40/ax80: 5250 ~ 5350 MHz WLAN 802.11a/ac20/ac40/ac80/ax20/ax40/ax80: 5470 ~ 5725 MHz WLAN 802.11a/ac20/ac40/ac80/ax20/ax40/ax80: 5725 ~ 5850 MHz Bluetooth: 2402 ~ 2480 MHz	
Max. Reported SAR(1g): (Limit:1.6W/kg) Test distance: Body: 0mm	Mode	Body Worn (W/kg)
	2.4GHz WLAN1	0.781
	2.4GHz WLAN2	0.562
	5.2GHz WLAN1	0.665
	5.2GHz WLAN2	0.890
	5.3GHz WLAN1	0.685
	5.3GHz WLAN2	1.034
	5.6GHz WLAN1	0.734
	5.6GHz WLAN2	1.012
	5.8GHz WLAN1	0.803
	5.8GHz WLAN2	1.118
	Bluetooth ^{Note}	0.093
	Sum SAR	1.211
Battery	Rated Voltage: 7.7V Capacity: 4820mAh	
Operating Mode:	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 802.11ax(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 802.11ax(OFDM): BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024-QAM Bluetooth: GFSK + π /4DQPSK+8DPSK BLE: GFSK	
Antenna Specification	Bluetooth: FPC Antenna WLAN: FPC Antenna	



Operating Mode	Maximum continuous output
Hotspot Mode	Not Support
DTM Mode	Not Support
Note 1: The BT value was Estimated.	

1.2 Test Software And Power LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Test software Version	Test program: BT		
DRTU	Mode Or Modulation type	Power setting	
	GFSK	4	
	π/4DQPSK	1	
	8DPSK	1	
Test software Version	Test program: BLE		
DRTU	Mode Or Modulation type	Power setting	
	GFSK-1M	-14	
	GFSK-2M	-14	
Test software Version	Test program: 2.4G WIFI		
DRTU	Mode Or Modulation type	ANT 1 Power setting	ANT 1 Power setting
	802.11b/g/n20/ax20	15.5	15.5
	802.11n40/ax40	14	14
Test software Version	Test program: 5G WIFI		
DRTU	Mode Or Modulation type	ANT 1 Power setting	ANT 1 Power setting
	802.11 a/ac20/ac40/ac80/ax20/ax40/ax80	12	12



1.3 Test Environment

Ambient conditions in the SAR laboratory:

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

1.4 Test Factory

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate	FCC Registration No.: 746540
	CAB ID: 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. C95.1-2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz 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 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
8	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices
9	FCC KDB 616217 D04 SAR for laptop and tablets v01r01	SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers

(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:

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

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

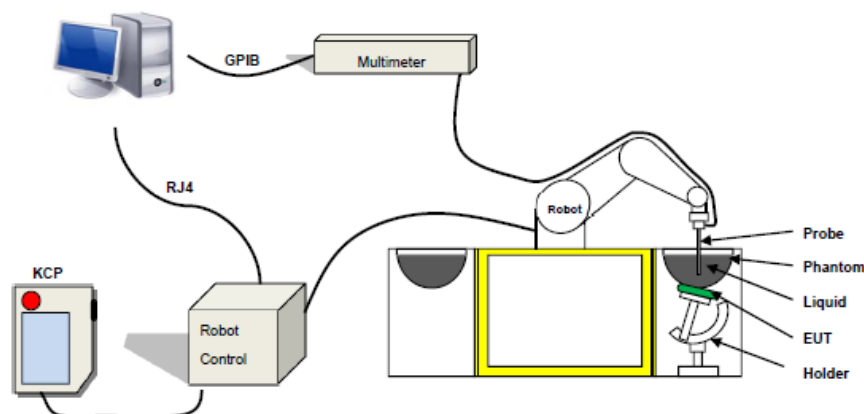
$$SAR = \frac{\sigma E^2}{\rho}$$

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 2225-EPGO-450 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: 0.15 GHz to 7.5 GHz for head 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.

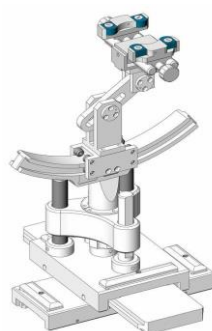


Figure-SN 06/22 SAM 148



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 if 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	ϵ_r	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 %
	Tem p. [°C]	Hu midity %	Frequency (MHz)	Temp. [°C]					
2025-12-28	24	56	2450	23.7	Permittivity	39.20	40.01	2.07	±5
					Conductivity	1.80	1.82	1.11	±5
2025-12-28	24.1	56	2437	23.8	Permittivity	39.22	40.05	2.12	±5
					Conductivity	1.79	1.81	1.12	±5
2025-12-28	24.1	57	2462	23.8	Permittivity	39.18	40.45	3.24	±5
					Conductivity	1.81	1.83	1.10	±5
2025-12-29	21.5	49	5200	21.2	Permittivity	36.00	36.11	0.31	±5
					Conductivity	4.66	4.61	-1.07	±5
2025-12-29	24.2	57	5180	23.8	Permittivity	36.02	36.11	0.25	±5
					Conductivity	4.64	4.69	1.08	±5
2025-12-29	24.1	57	5200	23.8	Permittivity	36.00	36.27	0.75	±5
					Conductivity	4.66	4.67	0.21	±5
2025-12-29	21.6	49	5240	21.3	Permittivity	35.96	37.28	3.67	±5
					Conductivity	4.70	4.76	1.28	±5
2025-12-28	24	56	5400	23.7	Permittivity	35.80	36.56	2.12	±5
					Conductivity	4.86	4.82	-0.82	±5
2025-12-28	21.7	50	5260	21.4	Permittivity	35.94	37.43	4.15	±5
					Conductivity	4.72	4.75	0.64	±5
2025-12-28	24	56	5290	23.6	Permittivity	35.91	36.70	2.20	±5
					Conductivity	4.75	4.70	-1.05	±5
2025-12-29	21.6	49	5600	21.3	Permittivity	35.55	36.15	1.69	±5
					Conductivity	5.07	5.13	1.18	±5
2025-12-29	21.8	50	5500	21.6	Permittivity	35.68	36.21	1.49	±5
					Conductivity	4.96	4.98	0.40	±5
2025-12-29	24.1	57	5580	23.9	Permittivity	35.58	36.89	3.68	±5
					Conductivity	5.04	5.03	-0.20	±5
2025-12-29	21.6	50	5700	21.3	Permittivity	35.43	36.33	2.54	±5
					Conductivity	5.17	5.09	-1.55	±5
2025-12-28	24.1	56	5800	23.8	Permittivity	35.30	36.12	2.32	±5
					Conductivity	5.27	5.25	-0.38	±5
2025-12-28	24.2	57	5775	23.9	Permittivity	35.33	36.00	1.90	±5
					Conductivity	5.24	5.22	-0.38	±5

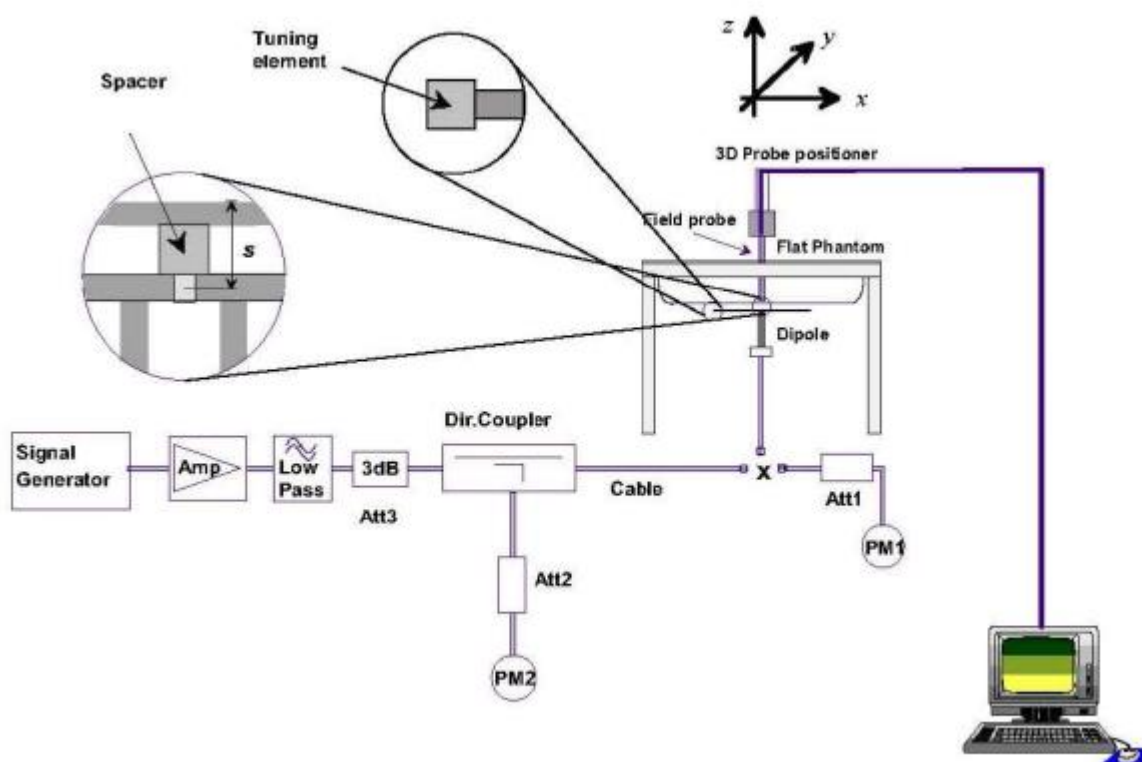


5. SAR System Validation

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 $\pm 10\%$.

Date	Freq.	Power	Tested Value	Normalized SAR	Target SAR	Tolerance	Limit
	(MHz)	(mW)	(W/Kg)	(W/kg)	1g(W/kg)	(%)	(%)
2025-12-28	2450	100	5.413	54.13	52.98	2.17	10
2025-12-29	5200	100	7.826	78.26	77.84	0.54	10
2025-12-28	5400	100	7.791	77.91	76.82	1.42	10
2025-12-29	5600	100	8.310	83.10	82.15	1.16	10
2025-12-28	5800	100	8.242	82.42	80.51	2.37	10

Note:

1. The tolerance limit of System validation $\pm 10\%$.
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 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

➤ 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 Tablet, support WLAN/BT mode.

Top side



Bottom side
(Front view)

Antenna Separation Distance(mm)					
ANT	Back Side	Left Side	Right Side	Top Side	Bottom Side
WLAN 1/BT	≤5	235	≤5	≤5	190
WLAN 2	≤5	70	162	≤5	190

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

Exposure Position	Wireless Interface	BT	2.4G WLAN ANT1	2.4G WLAN ANT2	5.2G WLAN ANT1	5.2G WLAN ANT2
	Calculated Frequency (MHz)	2402	2437	2462	5180	5180
	Maximum Turn-up power (dBm)	3.5	15.8	16.3	11.9	13
	Maximum rated power(mW)	2.24	38.02	42.66	15.49	19.95
Back Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	9.68	9.61	9.56	6.59	6.59
	Testing required?	NO	YES	YES	YES	YES
Left Edge	Separation distance (mm)	235	235	70	235	70
	exclusion threshold(mW)	1946.78	1946.09	295.60	1915.91	265.91
	Testing required?	NO	NO	NO	NO	NO
Right Edge	Separation distance (mm)	5	5	162	5	162
	exclusion threshold(mW)	9.68	9.61	1215.60	6.59	1185.91
	Testing required?	NO	YES	NO	YES	NO
Top Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	9.68	9.61	9.56	6.59	6.59
	Testing required?	NO	YES	YES	YES	YES
Bottom Edge	Separation distance (mm)	190	190	190	190	190
	exclusion threshold(mW)	1496.78	1496.09	1495.60	1465.91	1465.91
	Testing required?	NO	NO	NO	NO	NO



Exposure Position	Wireless Interface	5.3G WLAN ANT1	5.3G WLAN ANT2	5.6G WLAN ANT1
	Calculated Frequency (MHz)	5260	5290	5700
	Maximum Turn-up power (dBm)	11.3	13	11.9
	Maximum rated power(mW)	13.49	19.95	15.49
Back Side	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.54	6.52	6.28
	Testing required?	YES	YES	YES
Left Edge	Separation distance (mm)	235	70	235
	exclusion threshold(mW)	1915.40	265.22	1912.83
	Testing required?	NO	NO	NO
Right Edge	Separation distance (mm)	5	162	5
	exclusion threshold(mW)	6.54	1185.22	6.28
	Testing required?	YES	NO	YES
Top Edge	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.54	6.52	6.28
	Testing required?	YES	YES	YES
Bottom Edge	Separation distance (mm)	190	190	190
	exclusion threshold(mW)	1465.40	1465.22	1462.83
	Testing required?	NO	NO	NO



Exposure Position	Wireless Interface	5.6G WLAN ANT2	5.8G WLAN ANT1	5.8G WLAN ANT2
	Calculated Frequency (MHz)	5700	5775	5775
	Maximum Turn-up power (dBm)	13	13	14.2
	Maximum rated power(mW)	19.95	19.95	26.30
Back Side	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.28	6.24	6.24
	Testing required?	YES	YES	YES
Left Edge	Separation distance (mm)	70	235	70
	exclusion threshold(mW)	262.83	1912.42	262.42
	Testing required?	NO	NO	NO
Right Edge	Separation distance (mm)	162	5	162
	exclusion threshold(mW)	1182.83	6.24	1182.42
	Testing required?	NO	YES	NO
Top Edge	Separation distance (mm)	5	5	5
	exclusion threshold(mW)	6.28	6.24	6.24
	Testing required?	YES	YES	YES
Bottom Edge	Separation distance (mm)	190	190	190
	exclusion threshold(mW)	1462.83	1462.42	1462.42
	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 $\leq 50\text{mm}$ are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$

$$f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz. Power and distance are rounded to the nearest mW and mm before}$$



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.
7. Per KDB 616217 D04, SAR evaluation for the front surface of tablet display screens are generally not necessary.

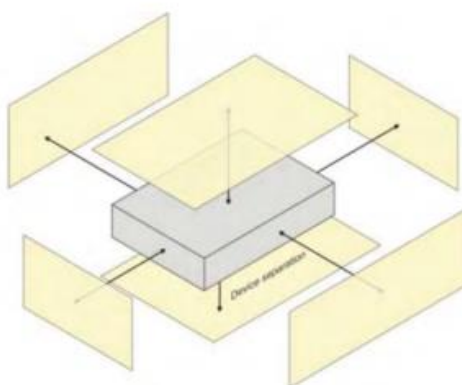


8. EUT Test Position

This EUT was tested in Back Side and Top Side.

8.1 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 from that surface or edge. When form factor of a handset is smaller than 9cm x 5cm, a test separation distance of 5mm (instead of 10mm) is required for testing hotspot mode. When the separate distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).





9. Uncertainty

9.1 Measurement Uncertainty

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

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



9.2 System validation Uncertainty

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



10. Conducted Power Measurement

10.1 Test Result

BT				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	3.19	2.08
	39	2441	2.87	1.94
	78	2480	2.71	1.87
$\pi/4$ -QPSK(2Mbps)	0	2402	2.06	1.61
	39	2441	2.15	1.64
	78	2480	2.13	1.63
8DPSK(3Mbps)	0	2402	2.34	1.71
	39	2441	2.46	1.76
	78	2480	2.26	1.68

BLE				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	3.24	2.11
	19	2440	3.08	2.03
	39	2480	3.08	2.03
GFSK(2Mbps)	0	2402	3.15	2.07
	19	2440	2.96	1.98
	39	2480	3.07	2.03

2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	ANT 1 Power (dBm)	ANT 2 Power (dBm)
802.11b	1	2412	15.37	16.10
	7	2437	15.62	16.11
	11	2462	15.51	16.18
802.11g	1	2412	15.15	15.98
	7	2437	15.54	16.05
	11	2462	15.50	15.98
802.11n-HT20	1	2412	15.19	15.99
	7	2437	15.40	15.98
	11	2462	15.41	16.06
802.11n-HT40	3	2422	13.98	14.71
	6	2437	13.94	14.68
	9	2452	14.10	14.75
802.11ax-HE20	1	2412	15.04	15.83
	7	2437	15.37	15.83
	11	2462	15.27	15.93
802.11ax-HE40	3	2422	13.79	14.43
	6	2437	13.80	14.43
	9	2452	13.82	14.42



5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	ANT 1 Power (dBm)	ANT 2 Power (dBm)
802.11a20	36	5180	11.58	12.92
	40	5200	11.18	12.59
	48	5240	11.03	12.46
802.11ac-VHT20	36	5180	11.36	12.75
	40	5200	10.86	12.46
	48	5240	11.04	12.50
802.11ac-VHT40	38	5190	11.32	12.35
	46	5230	11.15	12.35
802.11ac-VHT80	42	5210	11.24	12.43
802.11ax-HE20	36	5180	11.06	12.77
	40	5200	10.79	12.44
	48	5240	10.91	12.31
802.11ax-HE40	38	5190	10.99	12.45
	46	5230	10.55	12.12
802.11ax-HE80	42	5210	11.15	12.48

5.3G WLAN				
Mode	Channel Number	Frequency (MHz)	ANT 1 Power (dBm)	ANT 2 Power (dBm)
802.11a20	52	5260	11.11	12.64
	60	5300	10.99	12.27
	64	5320	10.94	12.64
802.11ac-VHT20	52	5260	11.09	12.28
	60	5300	10.75	12.24
	64	5320	11.00	12.31
802.11ac-VHT40	54	5270	11.14	12.13
	62	5310	11.14	12.17
802.11ac-VHT80	54	5290	11.25	12.68
802.11ax-HE20	52	5260	10.88	12.39
	60	5300	10.36	12.28
	64	5320	10.79	12.40
802.11ax-HE40	54	5270	10.74	12.19
	62	5310	10.79	12.10
802.11ax-HE80	54	5290	11.04	12.68



5.6G WLAN				
Mode	Channel Number	Frequency (MHz)	ANT 1 Power (dBm)	ANT 2 Power (dBm)
802.11a20	100	5500	11.25	12.67
	116	5580	10.89	12.29
	140	5700	11.60	12.85
802.11ac-VHT20	100	5500	11.15	12.37
	116	5580	10.92	11.90
	140	5700	11.26	11.92
802.11ac-VHT40	102	5510	11.32	12.22
	110	5550	11.15	12.28
	134	5670	11.00	11.72
802.11ac-VHT80	106	5530	11.36	12.51
	122	5610	11.24	12.07
802.11ax-HE20	100	5500	10.77	12.33
	116	5580	10.55	12.10
	140	5700	11.18	12.63
802.11ax-HE40	102	5510	10.87	12.30
	110	5550	10.55	12.22
	134	5670	10.67	11.80
802.11ax-HE80	106	5530	11.26	12.71
	122	5610	11.09	12.45

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	ANT 1 Power (dBm)	ANT 2 Power (dBm)
802.11a20	149	5745	12.07	13.10
	157	5785	12.69	13.61
	165	5825	12.55	13.92
802.11ac-VHT20	149	5745	11.78	12.28
	157	5785	12.26	12.72
	165	5825	12.23	13.22
802.11ac-VHT40	151	5755	12.38	12.72
	159	5795	12.59	13.18
802.11ac-VHT80	155	5775	12.82	13.31
802.11ax-HE20	149	5745	11.25	13.04
	157	5785	12.11	13.13
	165	5825	11.99	13.54
802.11ax-HE40	151	5755	12.10	13.29
	159	5795	12.08	13.59
802.11ax-HE80	155	5775	12.77	14.02

Note: The power data is derived from the RF report, the report number is RF251020010-01-001, RF251020010-01-002, RF251020010-01-004, RF251020010-01-005.



10.2 Tune up Power

Mode	BT
GFSK	2.3±1dBm
$\pi/4$ -DQPSK	1.5±1dBm
8DPSK	1.5±1dBm

Mode	BLE
GFSK(1Mbps)	2.5±1dBm
GFSK(2Mbps)	2.3±1dBm

Mode	2.4G WLAN	
	ANT 1	ANT 2
802.11b	14.8±1dBm	15.3±1dBm
802.11g	14.7±1dBm	15.2±1dBm
802.11n20	14.5±1dBm	15.1±1dBm
802.11n40	13.5±1dBm	15±1dBm
802.11ax-HE20	14.5±1dBm	15±1dBm
802.11ax-HE40	13±1dBm	13.5±1dBm

Mode	5.2G WLAN	
	ANT 1	ANT 2
802.11a	10.9±1dBm	12±1dBm
802.11ac20	10.5±1dBm	11.9±1dBm
802.11ac40	10.5±1dBm	11.5±1dBm
802.11ac80	10.3±1dBm	11.5±1dBm
802.11ax-HE20	10.2±1dBm	11.9±1dBm
802.11ax-HE40	10±1dBm	11.5±1dBm
802.11ax-HE80	10.3±1dBm	11.5±1dBm

Mode	5.3G WLAN	
	ANT 1	ANT 2
802.11a	10.3±1dBm	11.8±1dBm
802.11ac20	10.3±1dBm	11.5±1dBm
802.11ac40	10.3±1dBm	11.5±1dBm
802.11ac80	10.5±1dBm	12±1dBm
802.11ax-HE20	10±1dBm	11.5±1dBm
802.11ax-HE40	10±1dBm	11.3±1dBm
802.11ax-HE80	10.2±1dBm	11.8±1dBm



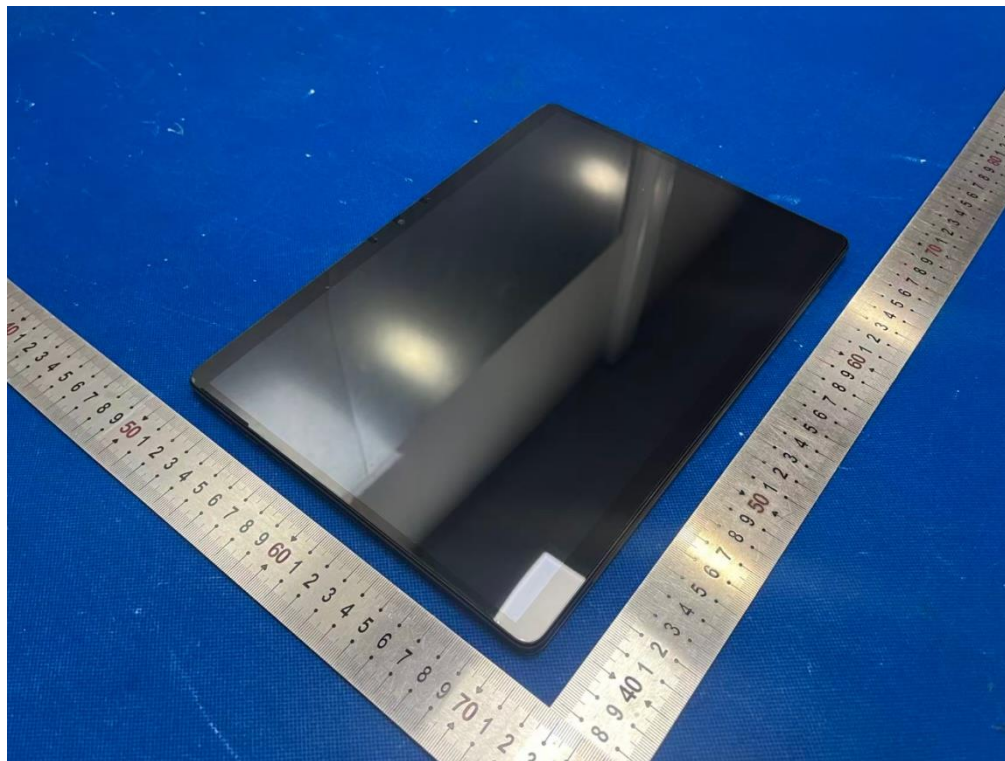
Mode	5.6G WLAN	
	ANT 1	ANT 2
802.11a	10.9±1dBm	12±1dBm
802.11ac20	10.3±1dBm	11.5±1dBm
802.11ac40	10.5±1dBm	11.5±1dBm
802.11ac80	10.5±1dBm	11.9±1dBm
802.11ax-HE20	10.3±1dBm	11.7±1dBm
802.11ax-HE40	10±1dBm	11.5±1dBm
802.11ax-HE80	10.5±1dBm	11.9±1dBm

Mode	5.8G WLAN	
	ANT 1	ANT 2
802.11a	11.9±1dBm	13±1dBm
802.11ac20	11.3±1dBm	12.5±1dBm
802.11ac40	11.3±1dBm	12.5±1dBm
802.11ac80	12±1dBm	12.5±1dBm
802.11ax-HE20	11.3±1dBm	12.7±1dBm
802.11ax-HE40	11.3±1dBm	12.7±1dBm
802.11ax-HE80	12±1dBm	13.2±1dBm

11. EUT and Test Setup Photo

11.1 EUT Photos

Front side

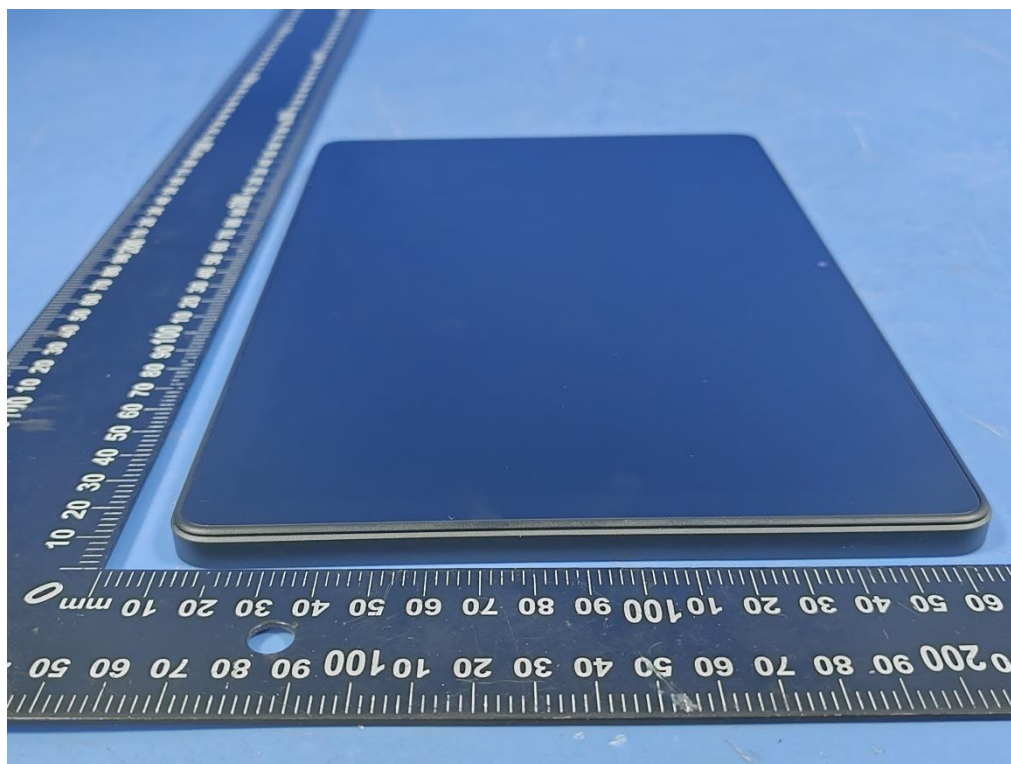


Back side

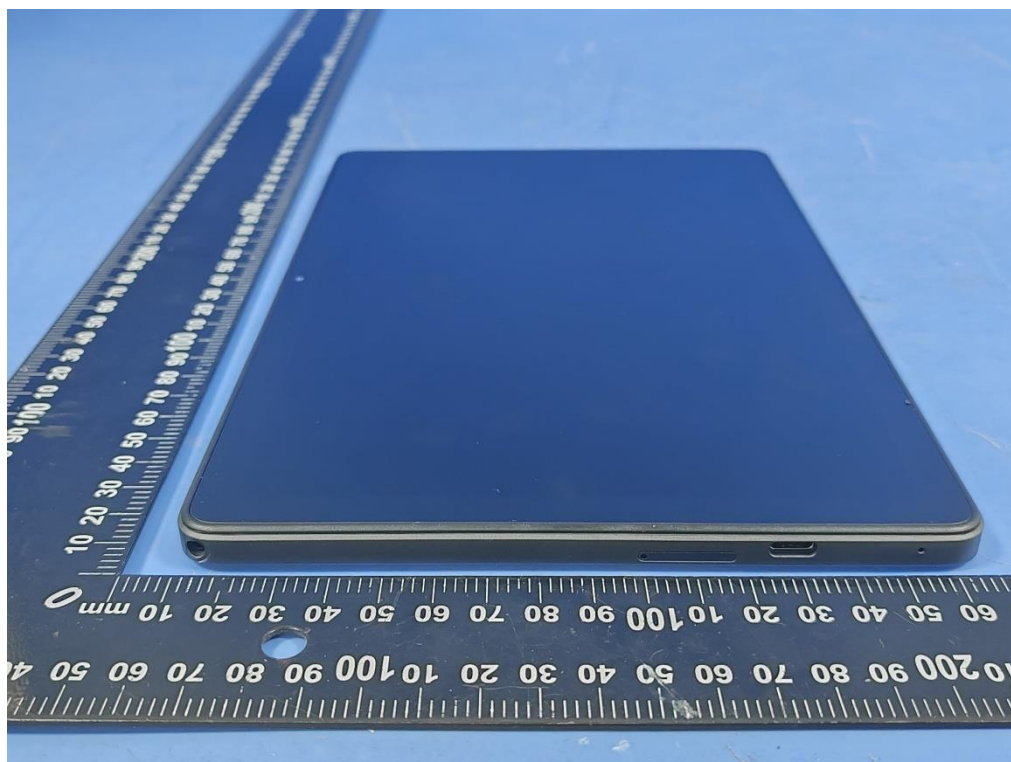




Right Edge

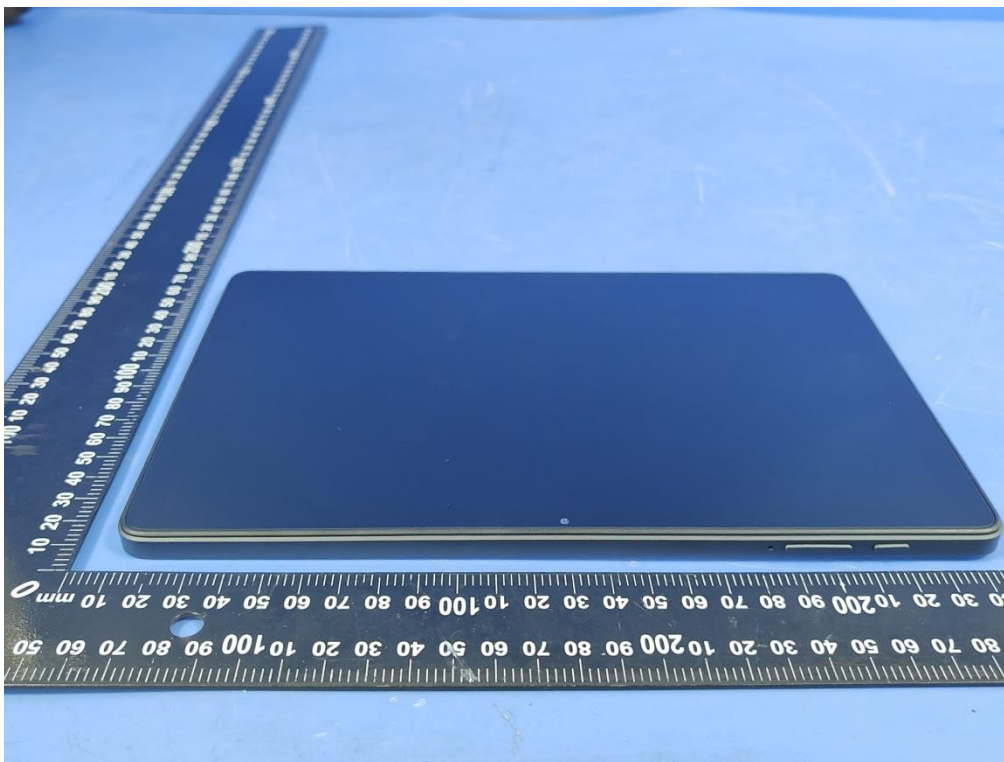


Left Edge

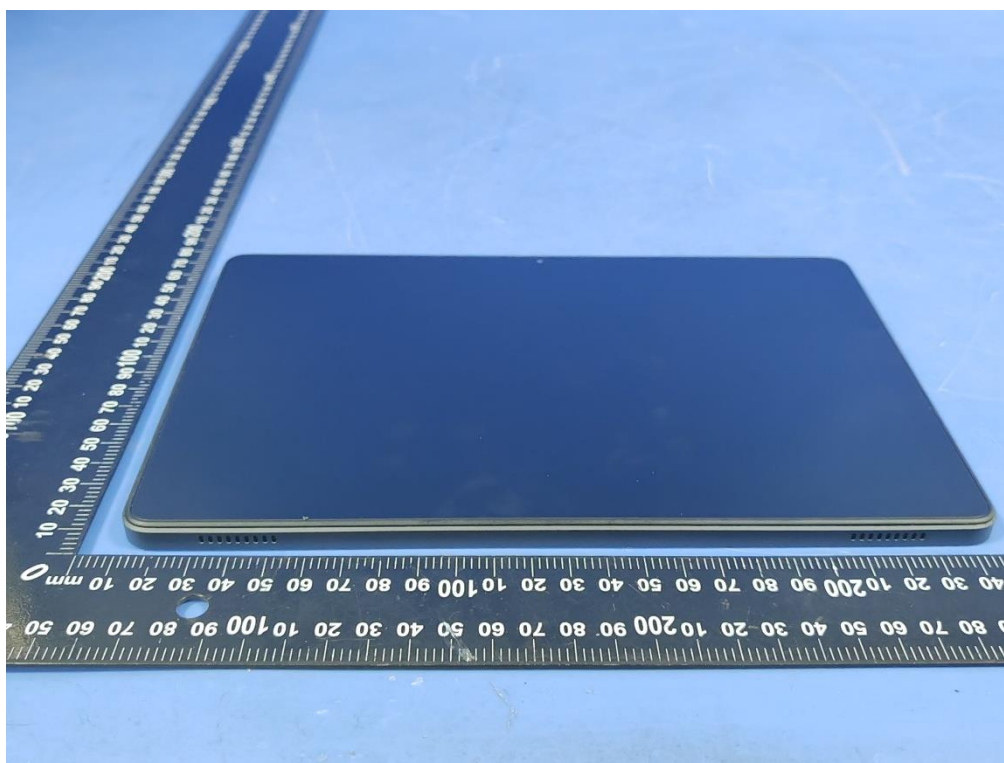




Top Edge



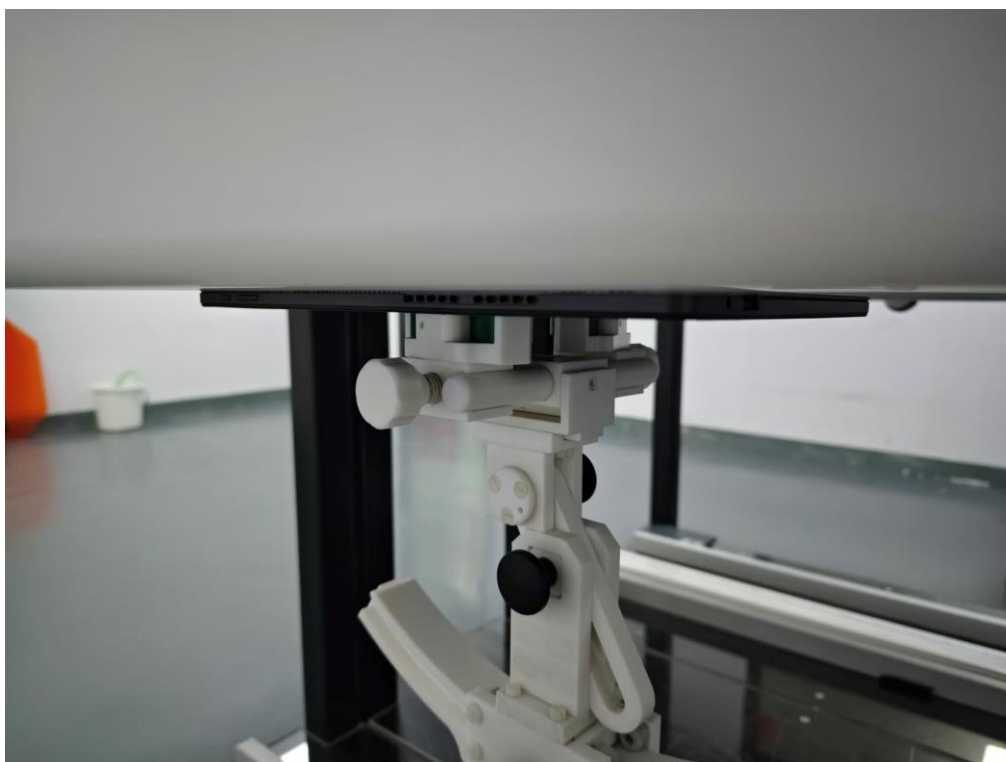
Bottom Edge



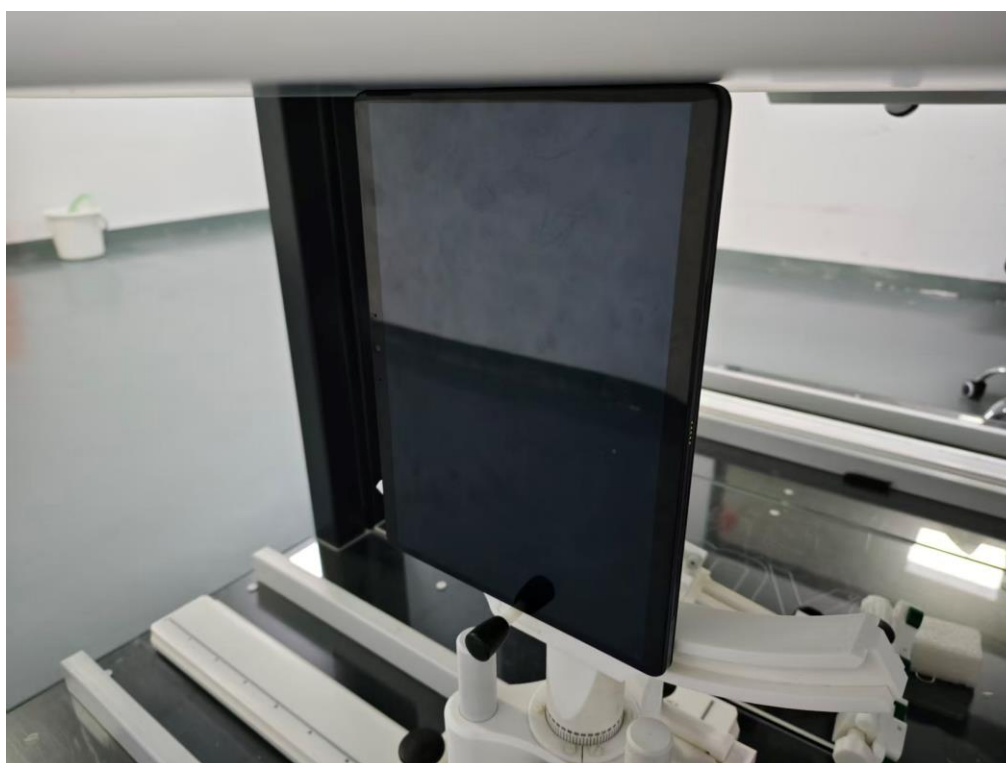


11.2 Setup Photos

Body Back side (separation distance is 0mm)



Body Right side (separation distance is 0mm)





Body Top Edge (separation distance is 0mm)





12. SAR Result Summary

12.1 Body-worn SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift(%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas. No.
2.4GHz WLAN ANT1	802.11b	Back Side	2437	0.487	0.76	15.80	15.62	1.042	0.508	/
		Right Side	2437	0.191	3.70	15.80	15.62	1.042	0.199	/
		Top Side	2437	0.749	2.58	15.80	15.62	1.042	0.781	1
2.4GHz WLAN ANT2	802.11b	Back Side	2462	0.359	-3.11	16.30	16.18	1.028	0.369	/
		Top Side	2462	0.547	-0.15	16.30	16.18	1.028	0.562	2
5.2GHz WLAN ANT1	802.11a	Back Side	5180	0.404	-1.22	11.90	11.58	1.076	0.435	/
		Right Side	5180	0.156	2.43	11.90	11.58	1.076	0.168	/
		Top Side	5180	0.618	2.96	11.90	11.58	1.076	0.665	3
5.2GHz WLAN ANT2	802.11a	Back Side	5180	0.569	-0.09	13.00	12.92	1.019	0.580	/
		Top Side	5180	0.874	3.73	13.00	12.92	1.019	0.890	4
		Top Side	5200	0.801	4.00	13.00	12.59	1.099	0.880	/
		Top Side	5240	0.730	2.15	13.00	12.46	1.132	0.827	/
5.3GHz WLAN ANT1	802.11ac-VHT80	Back Side	5290	0.423	0.66	11.50	11.25	1.059	0.448	/
		Right Side	5290	0.162	3.55	11.50	11.25	1.059	0.172	/
		Top Side	5290	0.647	-3.27	11.50	11.25	1.059	0.685	5
5.3GHz WLAN ANT2	802.11ac-VHT80	Back Side	5290	0.627	1.92	13.00	12.68	1.076	0.675	/
		Top Side	5290	0.961	-0.63	13.00	12.68	1.076	1.034	6
5.6GHz WLAN ANT1	802.11a	Back Side	5700	0.447	0.88	11.90	11.60	1.072	0.479	/
		Right Side	5700	0.171	1.02	11.90	11.60	1.072	0.183	/
		Top Side	5700	0.685	0.37	11.90	11.60	1.072	0.734	7
5.6GHz WLAN ANT2	802.11a	Back Side	5700	0.636	0.47	13.00	12.85	1.035	0.658	/
		Top Side	5500	0.892	-1.69	13.00	12.67	1.079	0.962	/
		Top Side	5580	0.833	-3.26	13.00	12.29	1.178	0.981	/
		Top Side	5700	0.978	-0.64	13.00	12.85	1.035	1.012	8
5.8GHz WLAN ANT1	802.11ac-VHT80	Back Side	5775	0.504	-1.06	13.00	12.82	1.042	0.525	/
		Right Side	5775	0.193	-3.72	13.00	12.82	1.042	0.201	/
		Top Side	5775	0.770	0.61	13.00	12.82	1.042	0.803	9
5.8GHz WLAN ANT2	802.11ax-HE80	Back Side	5775	0.698	-1.77	14.20	14.02	1.042	0.728	/
		Top Side	5775	1.073	0.04	14.20	14.02	1.042	1.118	10

Note:

1. The test separation of all above table is 0mm.
2. The Bluetooth and WLAN can't simultaneous transmission at the same time.
3. WIFI not support MIMO.
4. 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



12.2 Repeated SAR

Band	Mode	Test Position	Ch.	Result 1g (W/Kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)
5.2GHz WLAN ANT2	802.11a	Top Side	5180	0.849	1.22	13.00	12.92	1.019	0.865
		Top Side	5200	0.782	-0.54	13.00	12.59	1.099	0.859
		Top Side	5240	0.712	2.23	13.00	12.46	1.132	0.806
5.3GHz WLAN ANT2	802.11ac-VHT80	Top Side	5290	0.954	-1.84	13.00	12.68	1.076	1.027
5.6GHz WLAN ANT2	802.11a	Top Side	5500	0.878	-3.65	13.00	12.67	1.079	0.947
		Top Side	5580	0.822	-0.33	13.00	12.29	1.178	0.968
		Top Side	5700	0.975	-2.60	13.00	12.85	1.035	1.009
5.8GHz WLAN ANT1	802.11ac-VHT80	Top Side	5775	0.766	0.88	13.00	12.77	1.054	0.808
5.8GHz WLAN ANT2	802.11ax-HE80	Top Side	5775	1.056	-2.47	14.20	14.02	1.042	1.101

12.3 Repeated SAR measurement

Band	Mode	Test Position	Ch.	Original Measured SAR 1g (W/kg)	1 st Repeated SAR 1g	Ratio
5.2GHz WLAN ANT2	802.11a	Top Side	5180	0.874	0.849	1.029
		Top Side	5200	0.801	0.782	1.024
		Top Side	5240	0.730	0.712	1.026
5.3GHz WLAN ANT2	802.11ac-VHT80	Top Side	5290	0.961	0.954	1.007
5.6GHz WLAN ANT2	802.11a	Top Side	5500	0.892	0.878	1.016
		Top Side	5580	0.858	0.822	1.044
		Top Side	5700	0.978	0.975	1.003
5.8GHz WLAN ANT1	802.11ac-VHT80	Top Side	5775	0.770	0.766	1.005
5.8GHz WLAN ANT2	802.11ax-HE80	Top Side	5775	1.073	1.056	1.016

Note:

1. Per KDB 865664 D01, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/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 < 1.45 W/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 ≥ 1.45 W/Kg.
4. The ratio is the difference in percentage between original and repeated measured SAR.



12.4 Simultaneous Multi-band Transmission Evaluation

Application Simultaneous Transmission information:

Position	Simultaneous State
Body	Bluetooth + 2.4GHz WLAN/5G WLAN

NOTE:

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

Estimated SAR		Maximum Turn-up Power		Antenna to user(mm)	Frequency (GHz)	Stand Alone SAR(1g) [W/kg]
		dBm	mW			
BT	Body	3.5	2.239	5	2.402	0.093

Simultaneous Mode	Position	Mode	Max. 1-g SAR	1-g Sum SAR
			(W/kg)	(W/kg)
BT + 2.4G WLAN	Body	BT	0.093	0.874
		2.4G WLAN	0.781	
BT + 5G WLAN	Body	BT	0.093	1.211
		5G WLAN	1.118	

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
2450MHz Dipole	MVG	DIP2G450	SN 06/22 DIP2G450-645	2025.05.20	2028.05.19
5000MHz Dipole	MVG	DIP5G000	SN 06/22 DIP5G000-653	2025.05.22	2028.05.21
E-Field Probe	MVG	SSE2	2225-EPGO-450	2025.06.06	2026.06.05
Liquid Calibration Kit	MVG	OCPG 87	SN 06/22 OCPG87	2025.06.02	2026.06.01
Antenna	MVG	ANTA 73	SN 06/22 ANTA 73	N/A	N/A
Ellipsoid Phantom	MVG	ELLI 51	SN 06/22 ELLI 51	N/A	N/A
Phantom	MVG	SAM 148	SN 06/22 SAM148	N/A	N/A
Phone holder	MVG	MSH 117	SN 06/22 MSH 117	N/A	N/A
Laptop positioner	MVG	LSH 36	SN 06/22 LSH 38	N/A	N/A
Directional coupler	SHW	SHWDCP	202203280013	N/A	N/A
Network Analyzer	ZVL	R&S	116184	2025.03.05	2026.03.04
Multi Meter	DMM6500	Keithley	4527252	2025.03.06	2026.03.05
Signal Generator	Keysight	N5182B	MY59100717	2025.03.05	2026.03.04
Wireless Communication Test Set	R&S	CMW500	137737	2025.03.05	2026.03.04
Power Sensor	R&S	Z11	116184	2025.03.05	2026.03.04
Electronic Temperature hygrometer	N/A	ST-W2318	N/A	2025.03.05	2026.03.04
Temperature hygrometer	N/A	TP101	N/A	2025.03.05	2026.03.04



Appendix A. System Validation Plots

System Performance Check Data (2450MHz)

Type: Phone measurement (Complete)

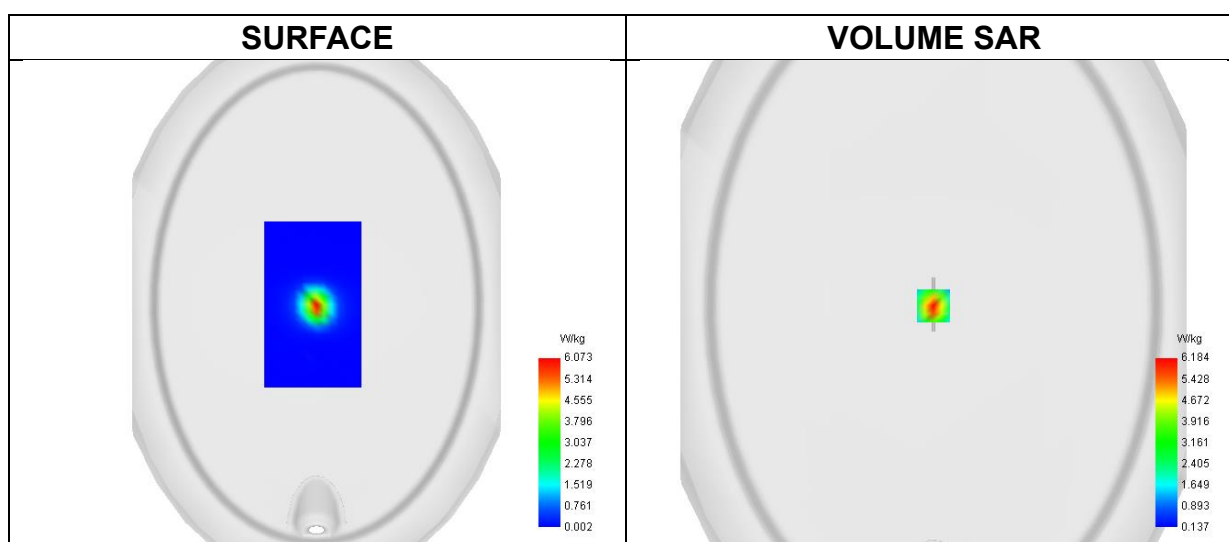
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement:2025-12-28

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW
Frequency (MHz)	2450.000
Relative permittivity	40.01
Conductivity (S/m)	1.82
Probe	SN 04/22 EPGO364
ConvF	1.51
Crest factor:	1:1

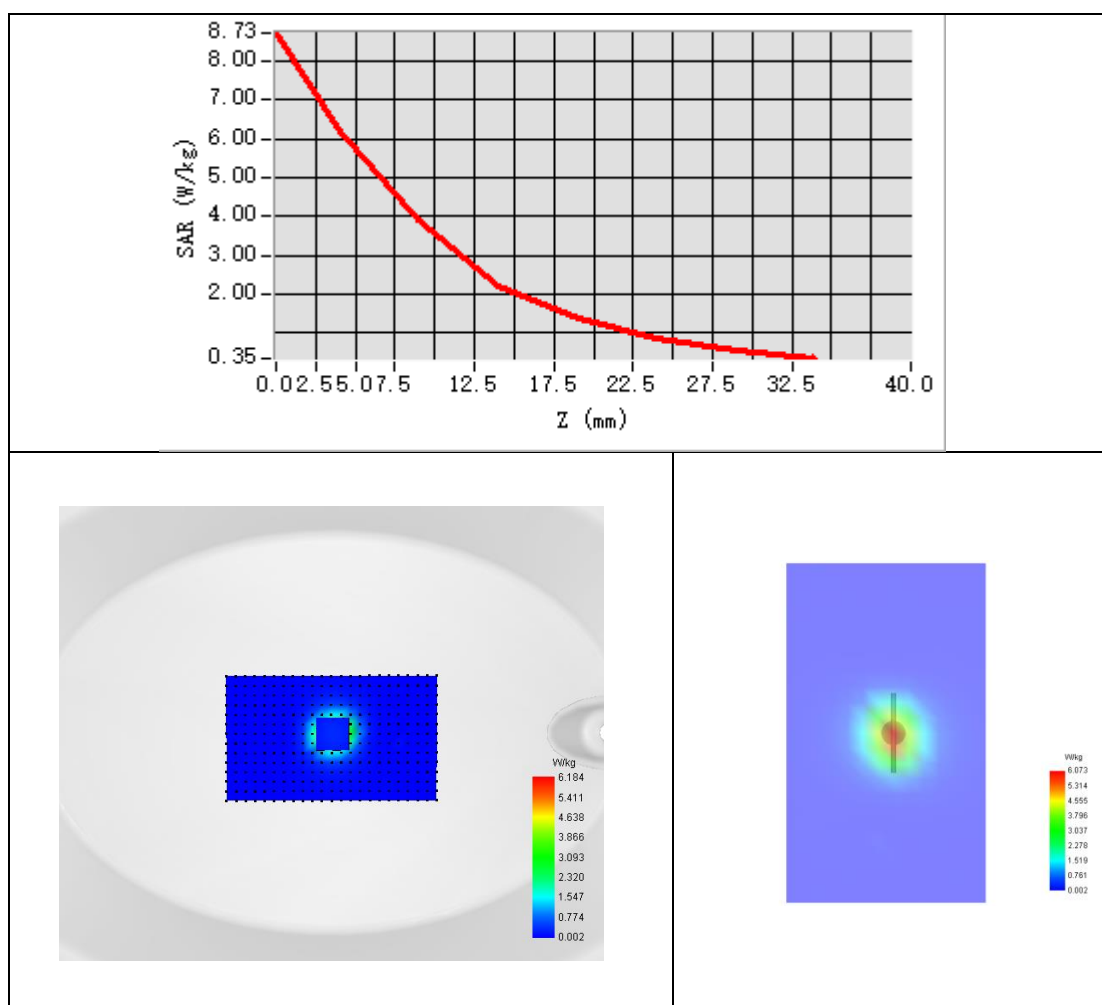


Maximum location: X=-3.00, Y=0.00 ; SAR Peak: 9.74 W/kg

SAR 10g (W/Kg)	2.475
SAR 1g (W/Kg)	5.413
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.281644



Z Axis Scan





System Performance Check Data (5200MHz)

Type: Phone measurement (Complete)

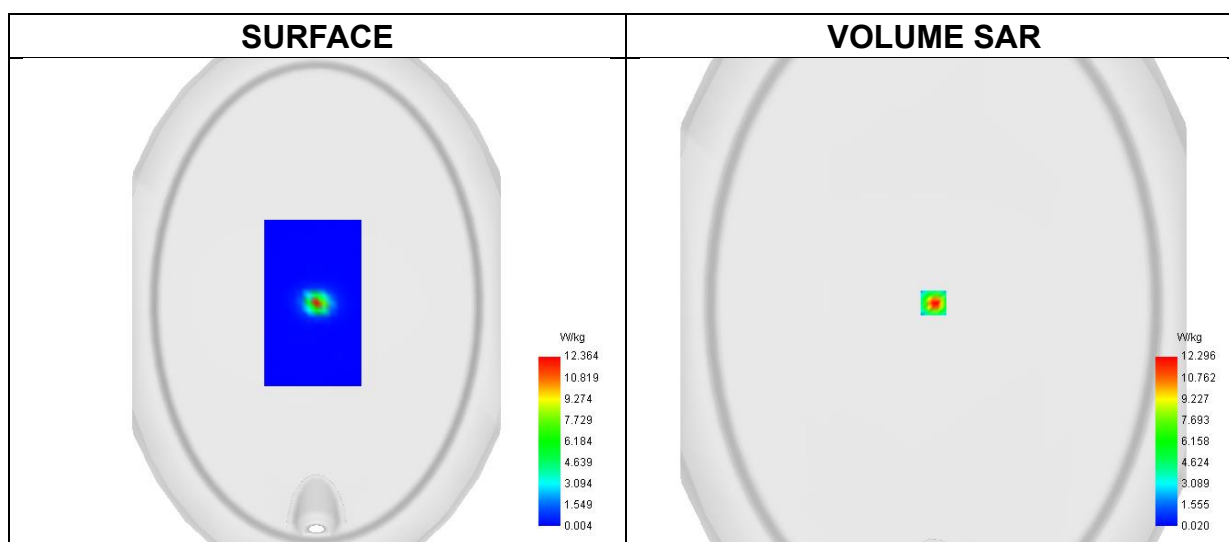
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement:2025-12-29

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW
Frequency (MHz)	5200.000
Relative permittivity	36.27
Conductivity (S/m)	4.67
Probe	SN 04/22 EPGO364
ConvF	1.58
Crest factor:	1:1

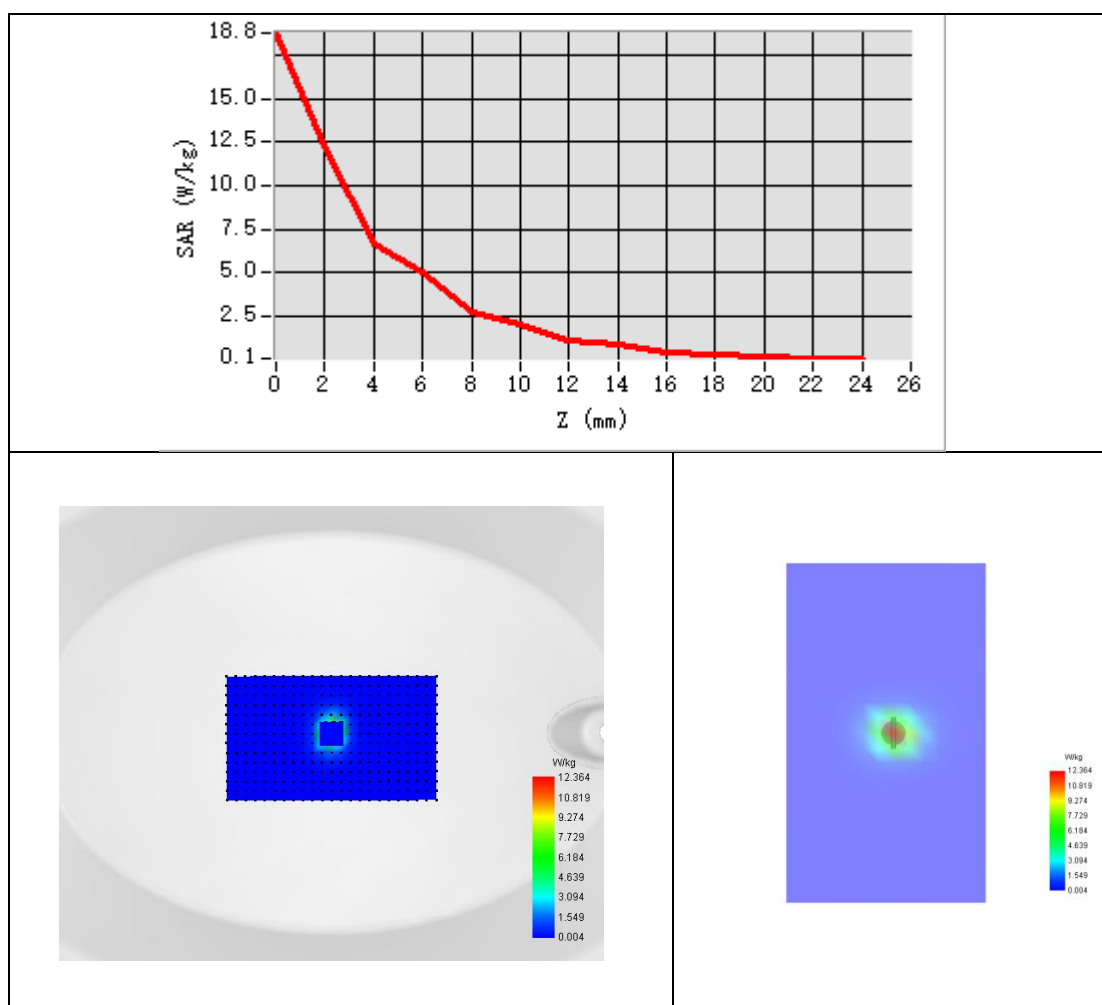


Maximum location: X=0.00, Y=0.00 ; SAR Peak: 19.14 W/kg

SAR 10g (W/Kg)	2.270
SAR 1g (W/Kg)	7.826
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.131838



Z Axis Scan





System Performance Check Data (5400MHz)

Type: Phone measurement (Complete)

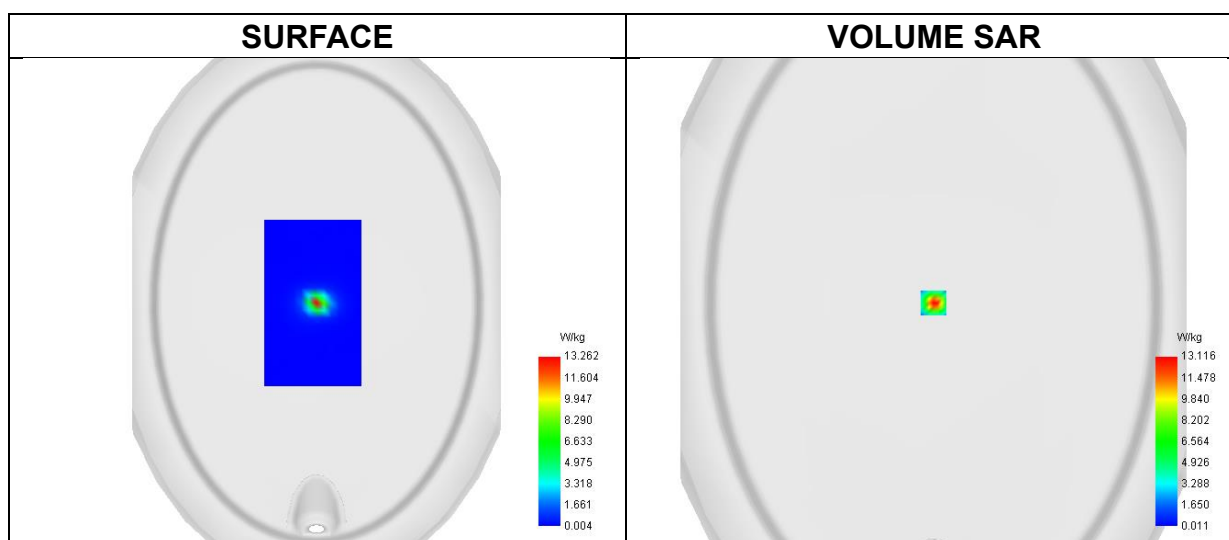
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement:2025-12-28

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	CW5400
Channels	Middle
Signal	CW
Frequency (MHz)	5400.000
Relative permittivity	36.56
Conductivity (S/m)	4.82
Probe	SN 04/22 EPGO364
ConvF	1.60
Crest factor:	1:1

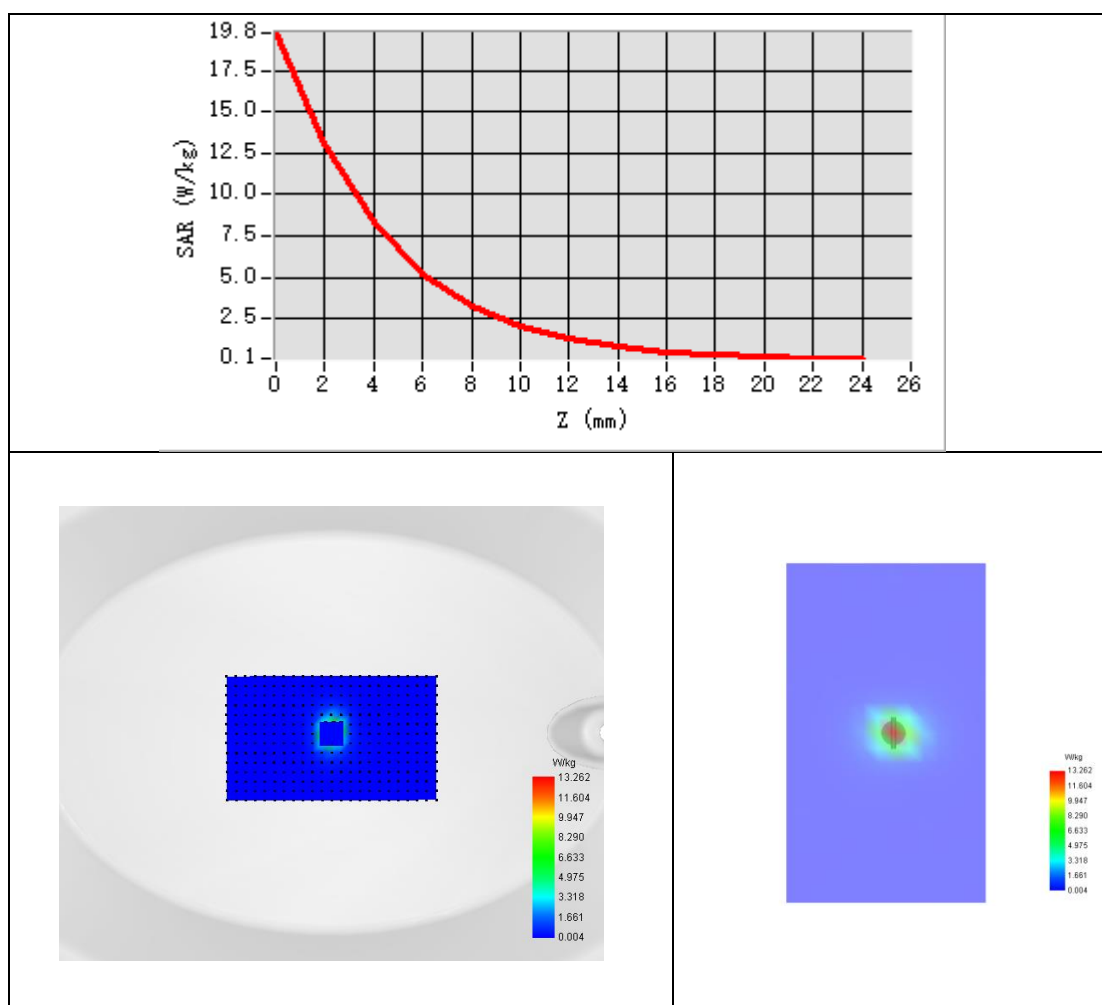


Maximum location: X=0.00, Y=0.00 ; SAR Peak: 20.12 W/kg

SAR 10g (W/Kg)	2.272
SAR 1g (W/Kg)	7.791
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	63.465085



Z Axis Scan





System Performance Check Data (5600MHz)

Type: Phone measurement (Complete)

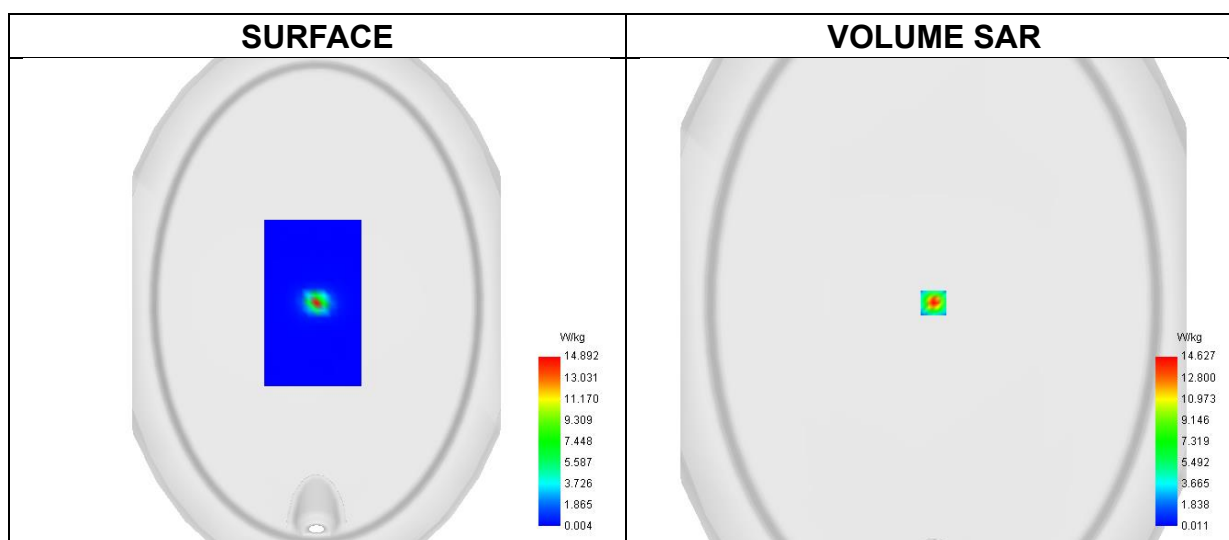
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement:2025-12-29

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	CW5600
Channels	Middle
Signal	CW
Frequency (MHz)	5600.000
Relative permittivity	36.15
Conductivity (S/m)	5.13
Probe	SN 04/22 EPGO364
ConvF	1.63
Crest factor:	1:1

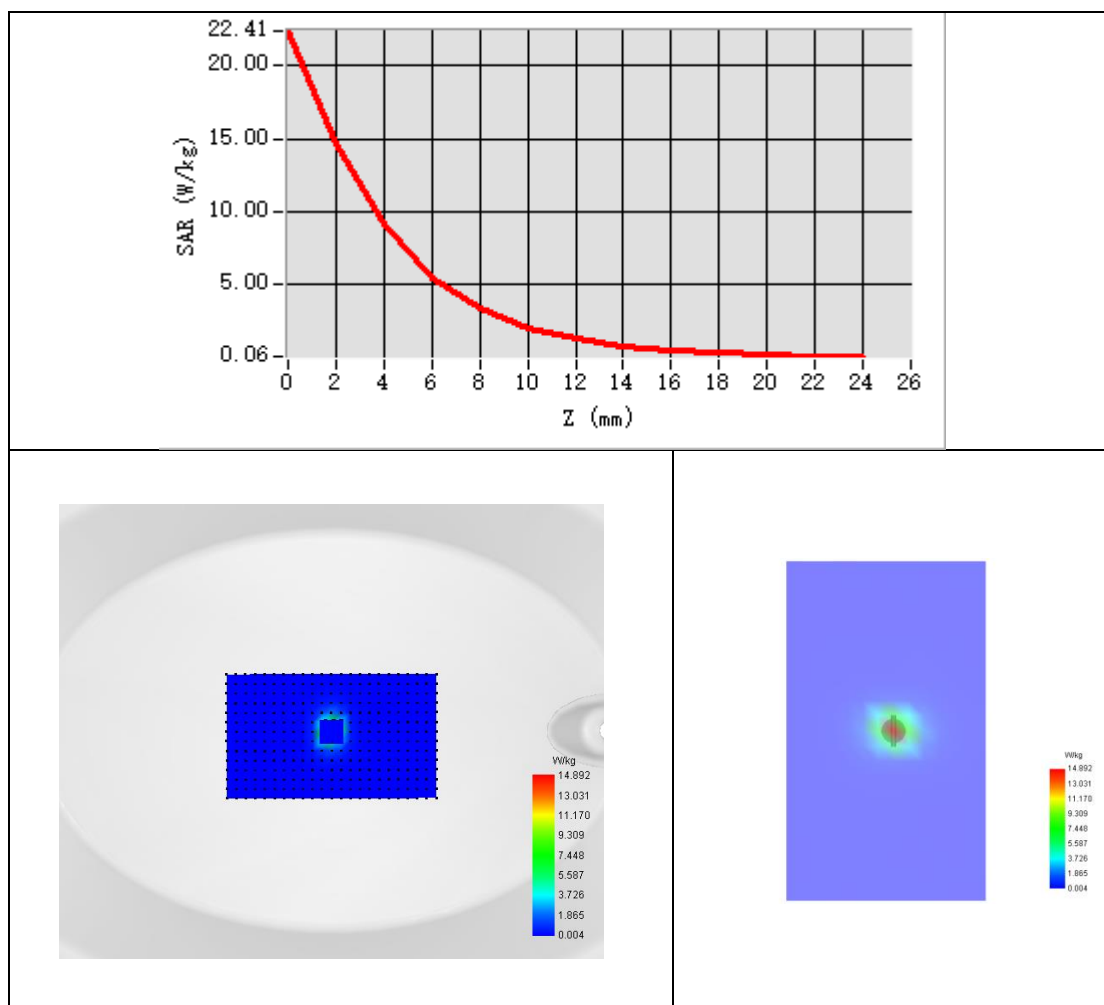


Maximum location: X=0.00, Y=0.00 ; SAR Peak: 22.79 W/kg

SAR 10g (W/Kg)	2.359
SAR 1g (W/Kg)	8.310
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	62.335783



Z Axis Scan





System Performance Check Data (5800MHz)

Type: Phone measurement (Complete)

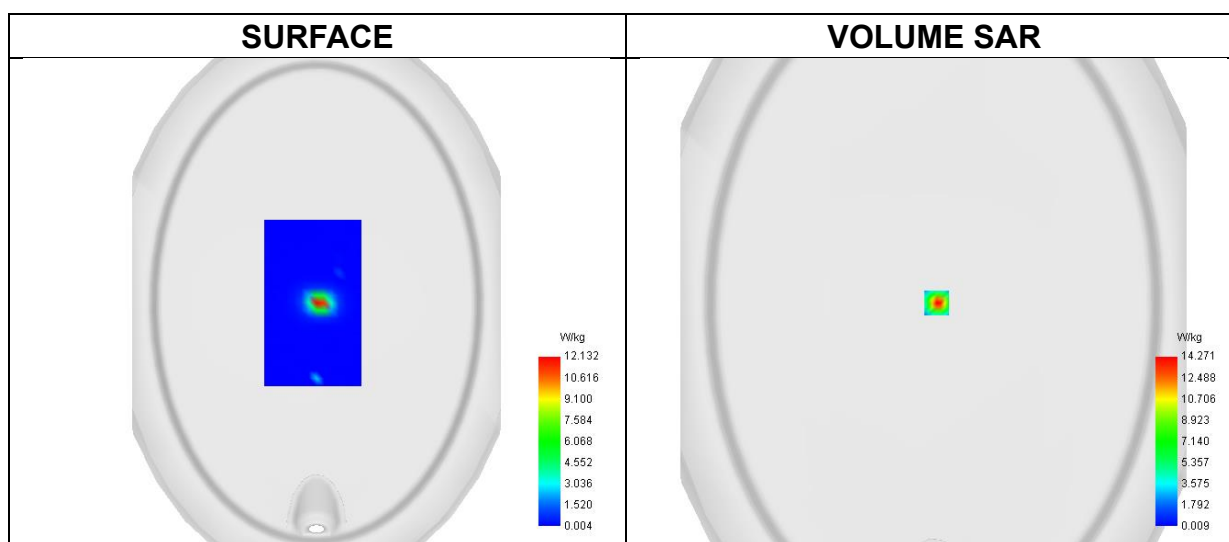
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement:2025-12-28

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW
Frequency (MHz)	5800.000
Relative permittivity	36.12
Conductivity (S/m)	5.25
Probe	SN 04/22 EPGO364
ConvF	1.62
Crest factor:	1:1

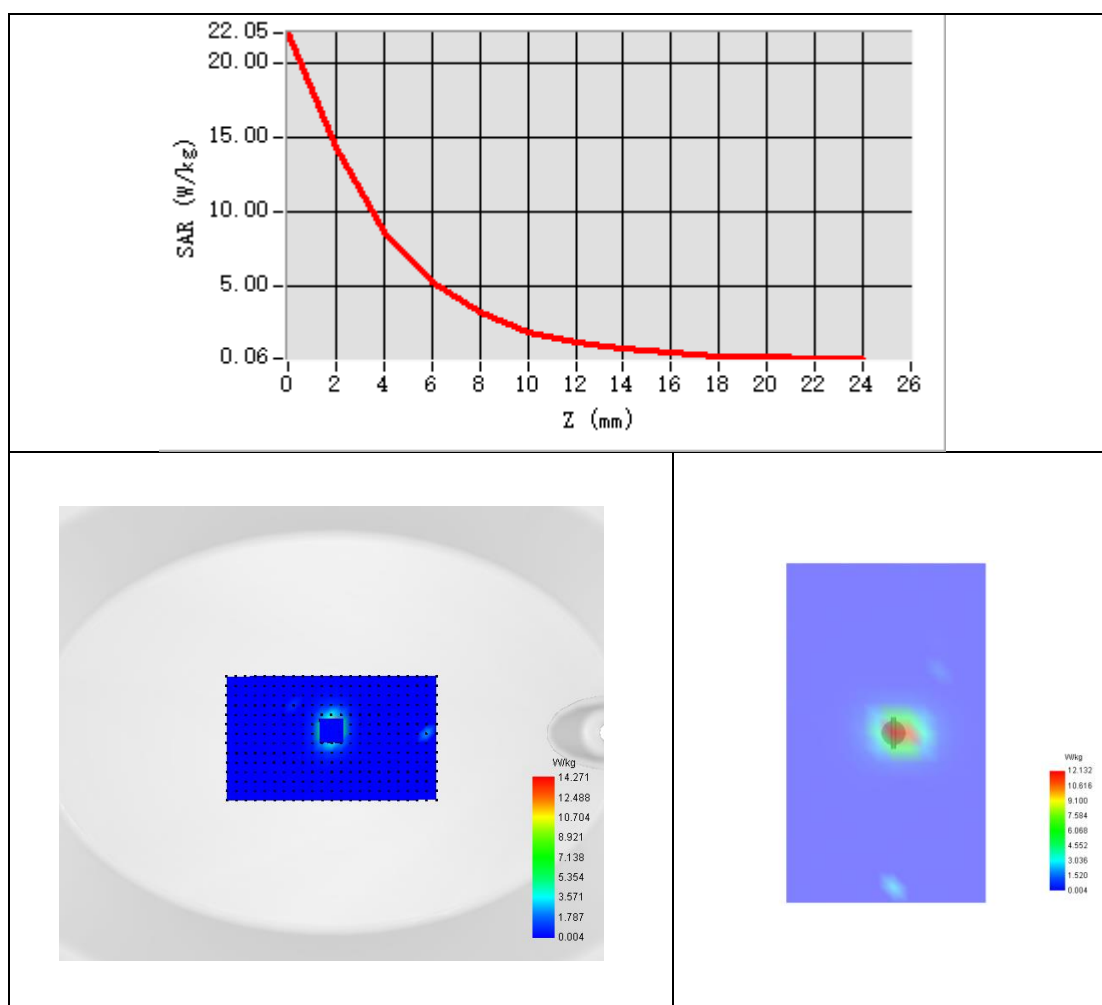


Maximum location: X=-5.00, Y=0.00 ; SAR Peak: 24.86 W/kg

SAR 10g (W/Kg)	2.338
SAR 1g (W/Kg)	8.242
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	60.519457



Z Axis Scan



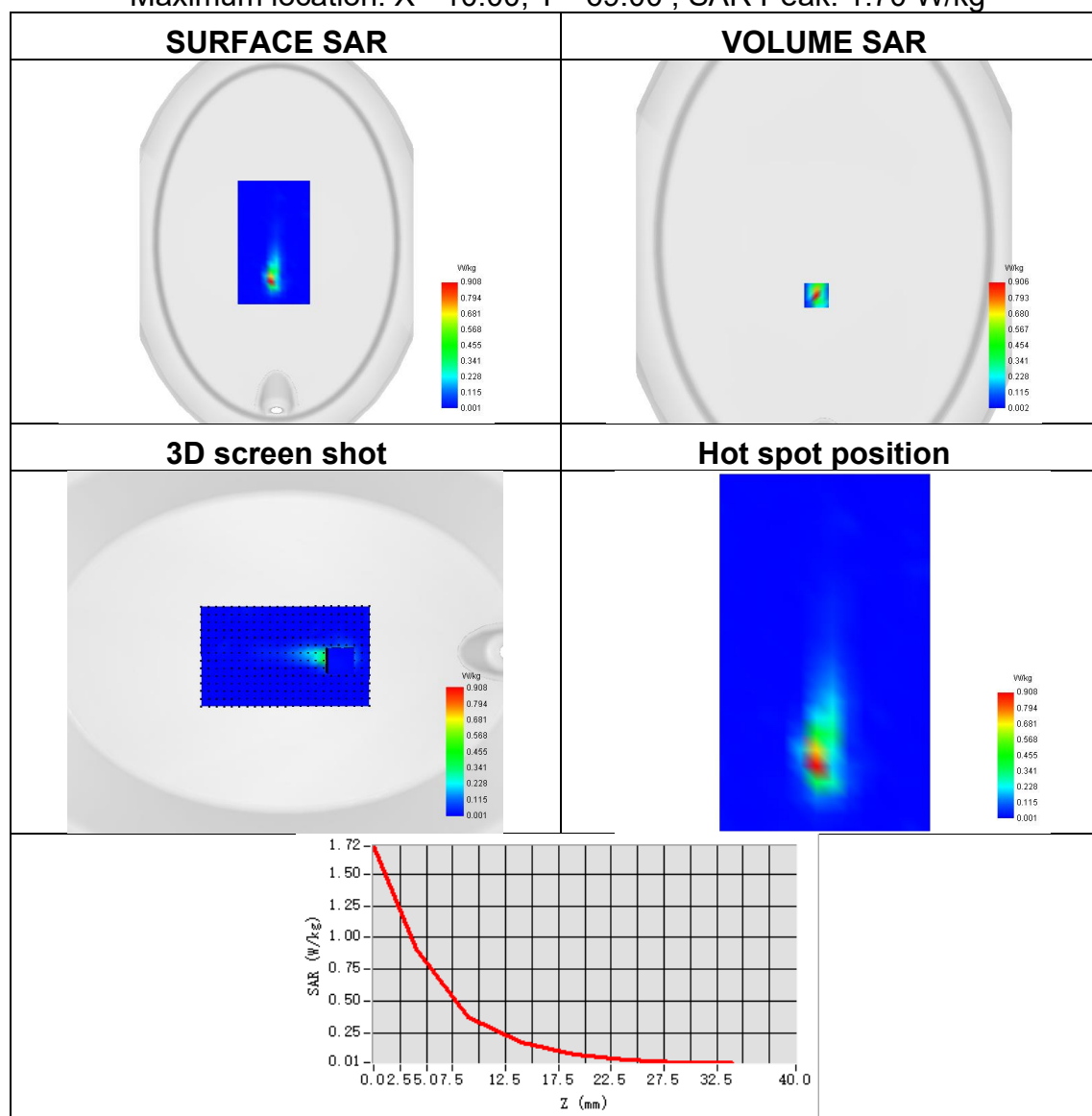


Appendix B. SAR Test Plots

Plot 1:

Test Date	2025-12-28
Area Scan	dx=8mm dy=8mm
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Top Side
Band	ISM
Signal	IEEE 802.11b
Frequency	2437
SAR 10g (W/Kg)	0.263
SAR 1g (W/Kg)	0.749
Horizontal validation criteria: minimum distance (mm)	11.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	40.504507
ConvF	1.51
Relative permittivity	40.05
Conductivity (S/m)	1.81

Maximum location: X=-10.00, Y=-69.00 ; SAR Peak: 1.70 W/kg

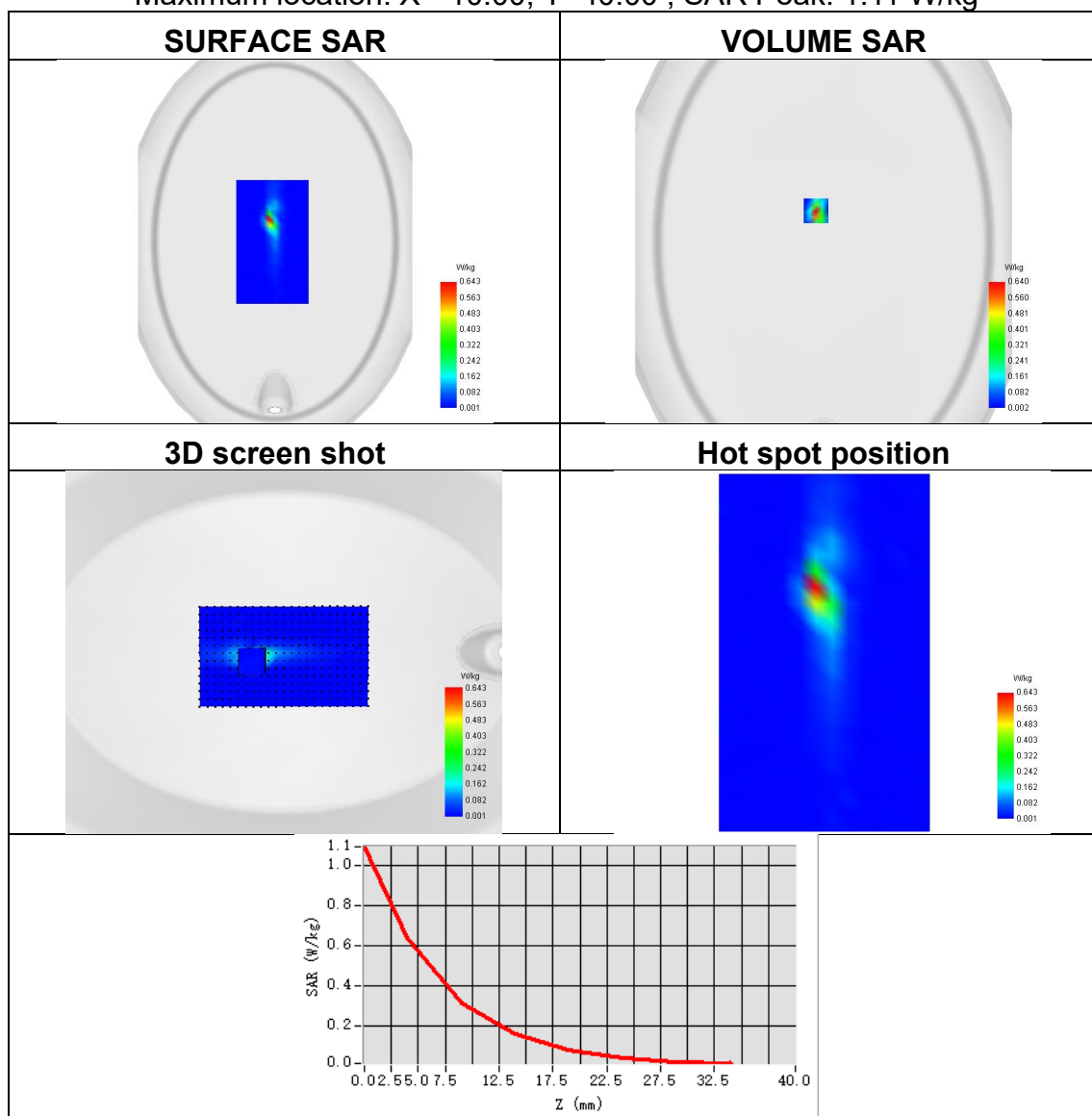




Plot 2:

Test Date	2025-12-28
Area Scan	dx=8mm dy=8mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Top Side
Band	ISM
Signal	IEEE 802.11b
Frequency	2462
SAR 10g (W/Kg)	0.206
SAR 1g (W/Kg)	0.547
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	48.750678
ConvF	1.51
Relative permittivity	40.45
Conductivity (S/m)	1.83

Maximum location: X=-10.00, Y=40.00 ; SAR Peak: 1.11 W/kg

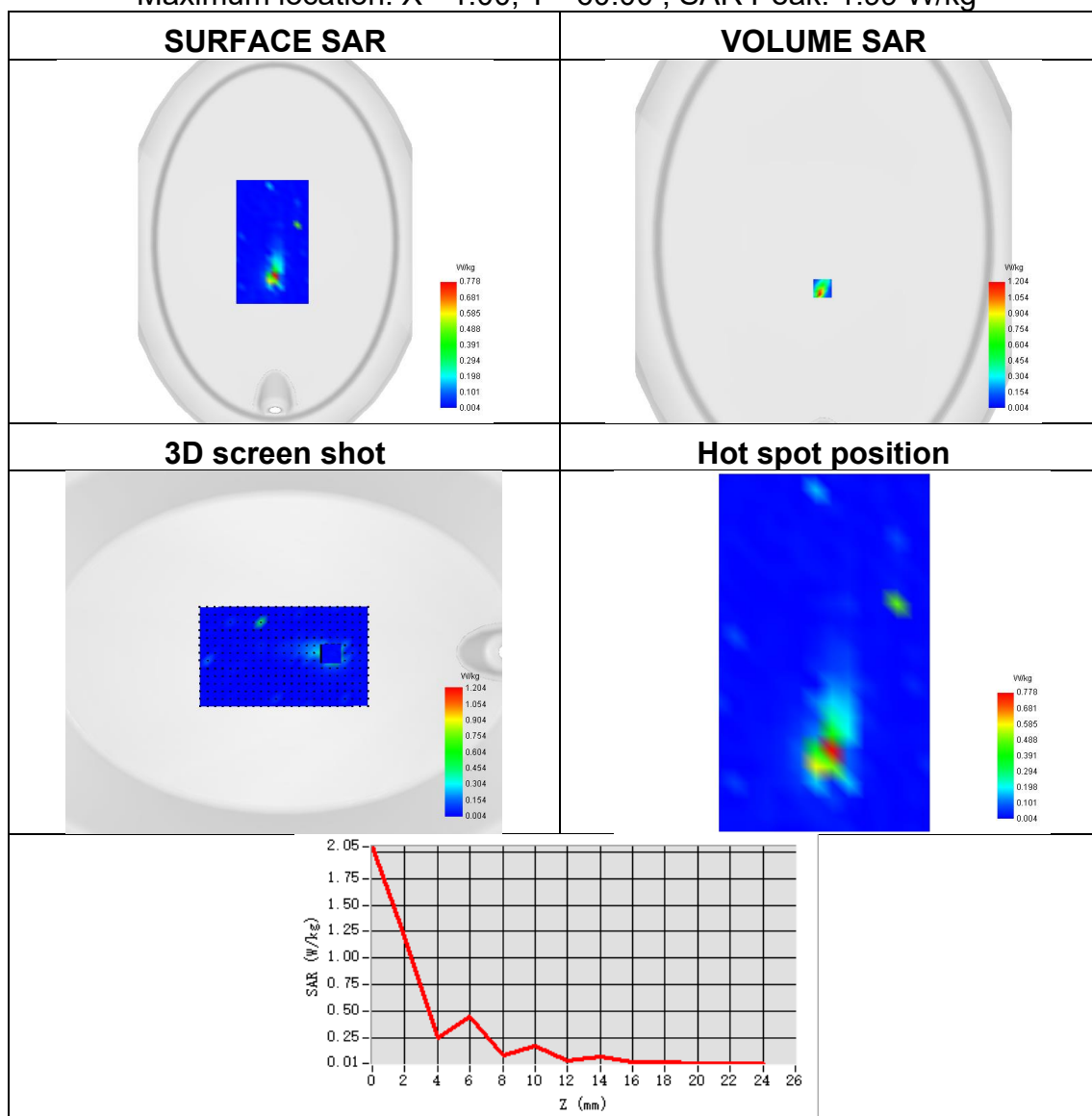




Plot 3:

Test Date	2025-12-29
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-1
Signal	IEEE 802.11a
Frequency	5180
SAR 10g (W/Kg)	0.149
SAR 1g (W/Kg)	0.618
Horizontal validation criteria: minimum distance (mm)	15.656854
Vertical validation criteria: SAR ratio M2/M1 (%)	60.686206
ConvF	1.58
Relative permittivity	36.11
Conductivity (S/m)	4.69

Maximum location: X=-1.00, Y=-60.00 ; SAR Peak: 1.99 W/kg

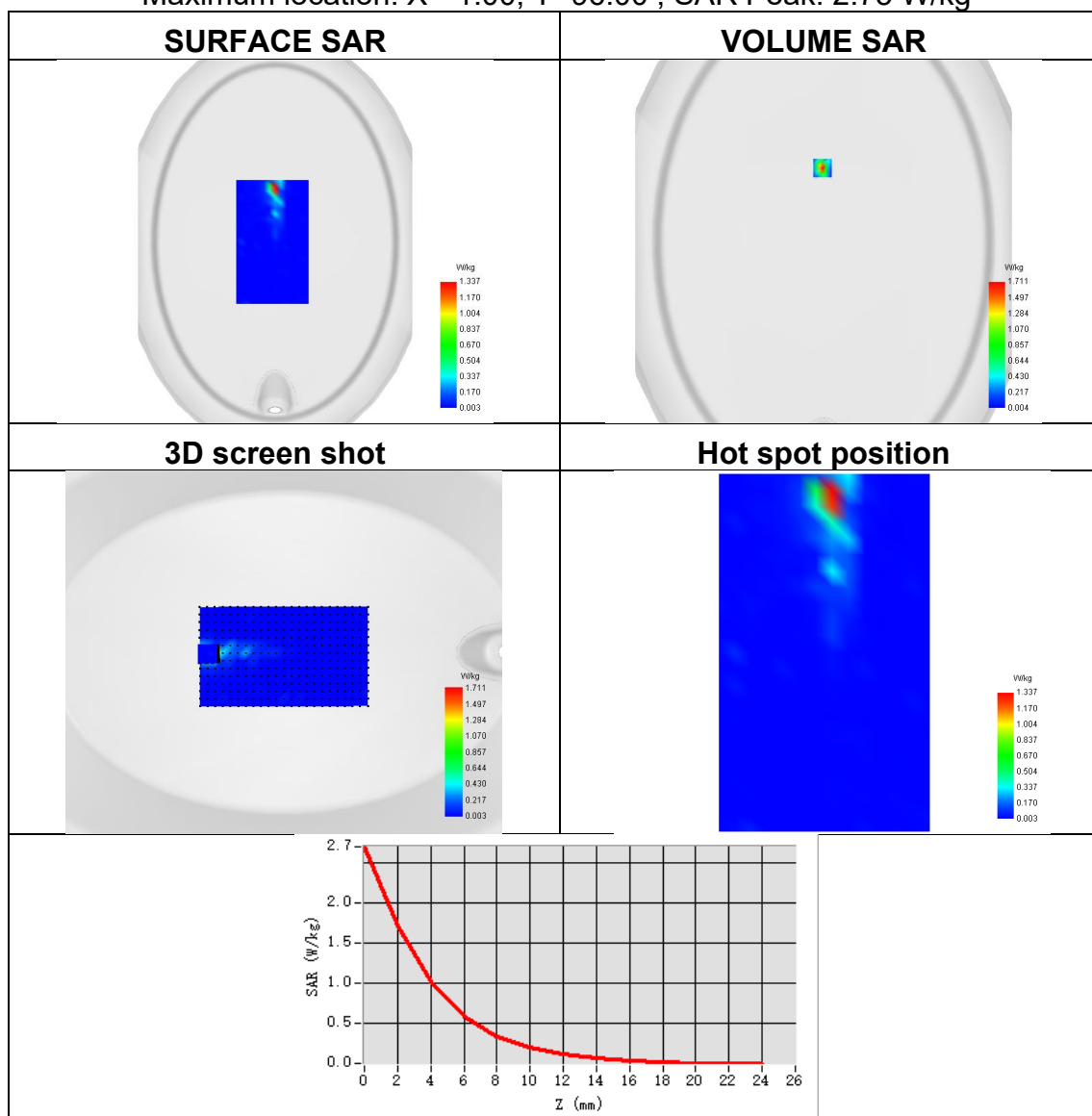




Plot 4:

Test Date	2025-12-29
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-1
Signal	IEEE 802.11a
Frequency	5180
SAR 10g (W/Kg)	0.247
SAR 1g (W/Kg)	0.874
Horizontal validation criteria: minimum distance (mm)	15.656854
Vertical validation criteria: SAR ratio M2/M1 (%)	59.406271
ConvF	1.58
Relative permittivity	36.11
Conductivity (S/m)	4.69

Maximum location: X=-1.00, Y=96.00 ; SAR Peak: 2.75 W/kg

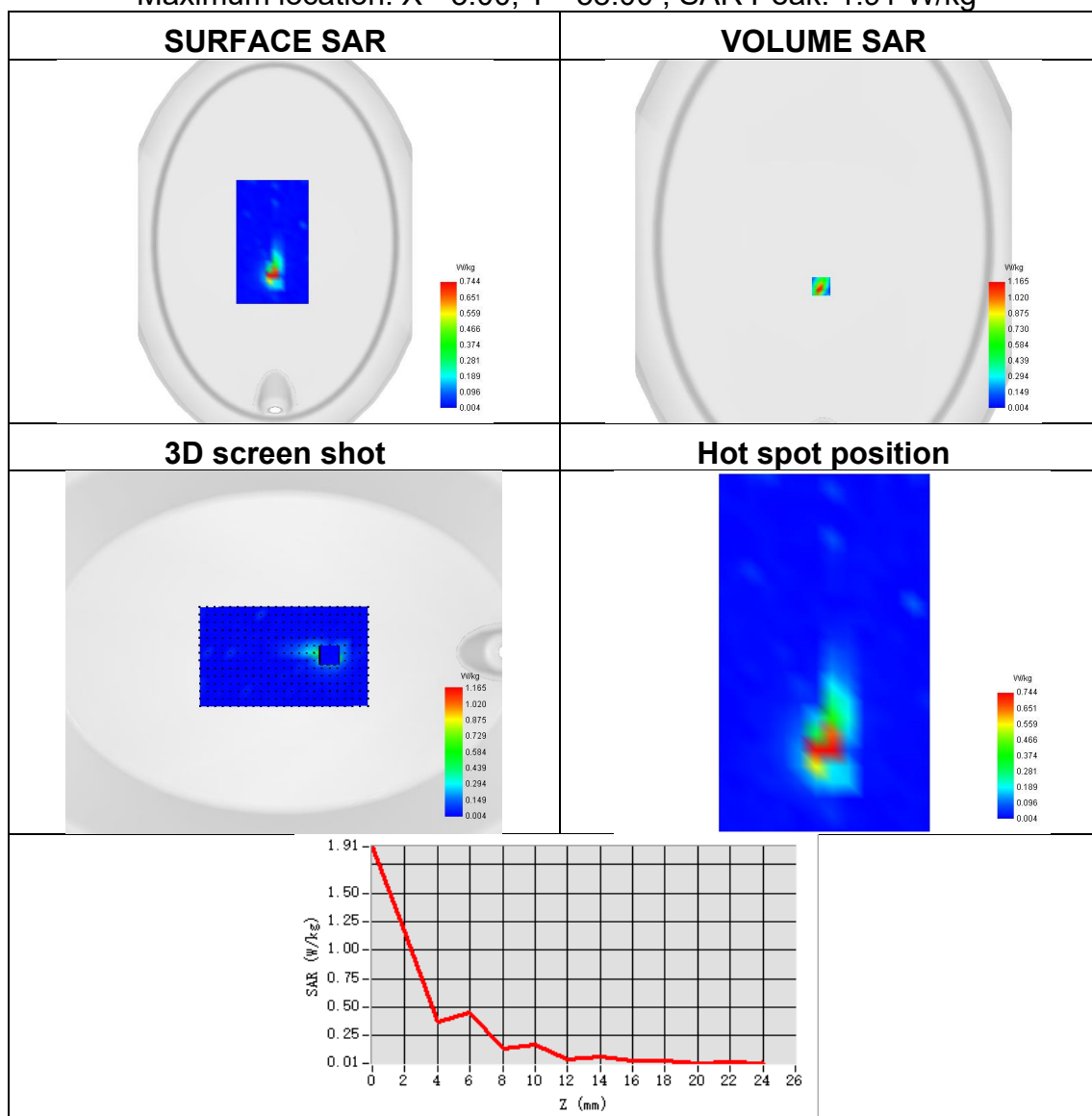




Plot 5:

Test Date	2025-12-28
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-2A
Signal	IEEE 802.11ac
Frequency	5290
SAR 10g (W/Kg)	0.181
SAR 1g (W/Kg)	0.647
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	62.447804
ConvF	1.60
Relative permittivity	36.70
Conductivity (S/m)	4.70

Maximum location: X=-3.00, Y=-58.00 ; SAR Peak: 1.91 W/kg

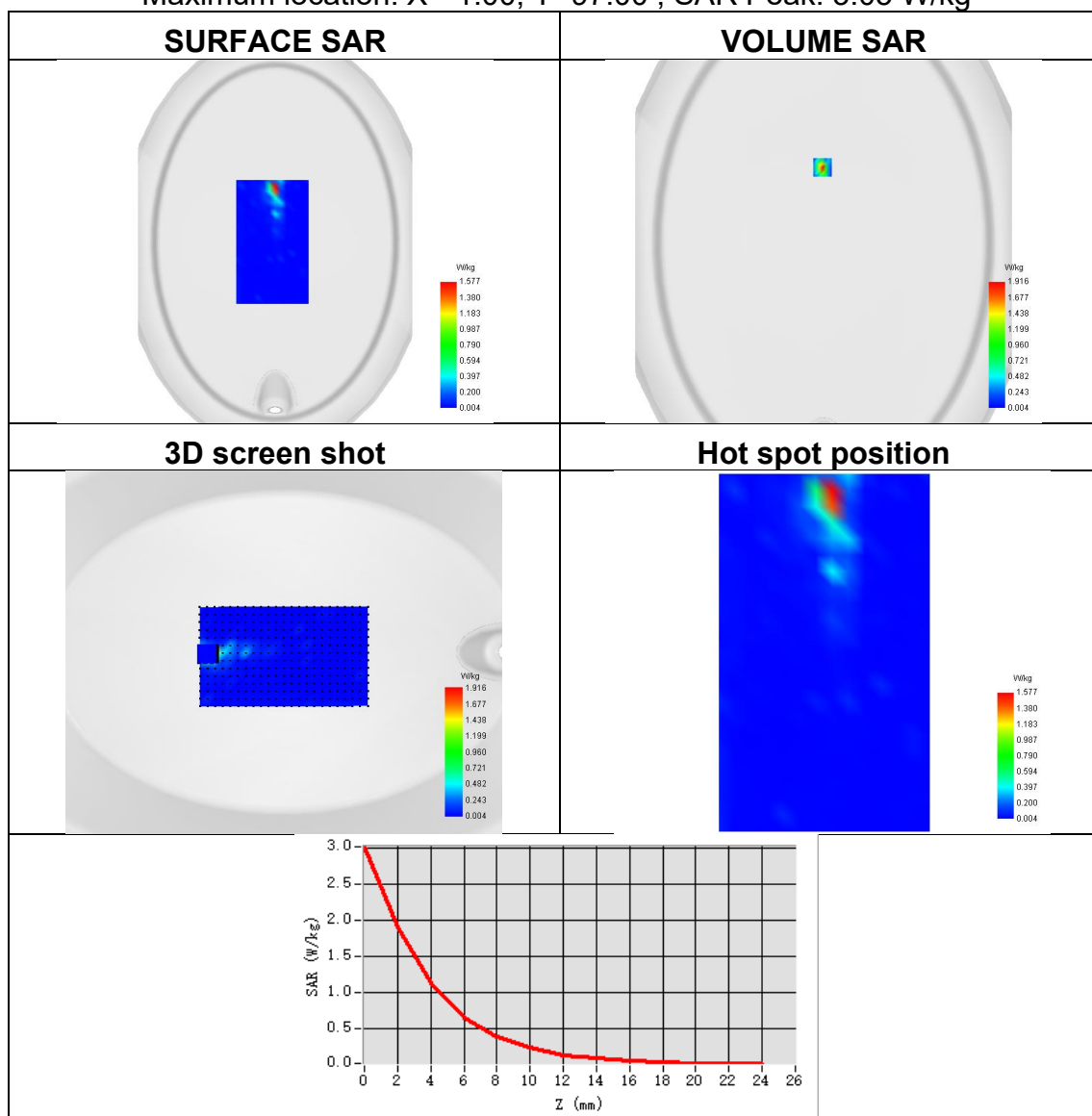




Plot 6:

Test Date	2025-12-28
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-2A
Signal	IEEE 802.11ac
Frequency	5290
SAR 10g (W/Kg)	0.269
SAR 1g (W/Kg)	0.961
Horizontal validation criteria: minimum distance (mm)	11.576383
Vertical validation criteria: SAR ratio M2/M1 (%)	59.241437
ConvF	1.60
Relative permittivity	36.70
Conductivity (S/m)	4.70

Maximum location: X=-1.00, Y=97.00 ; SAR Peak: 3.05 W/kg

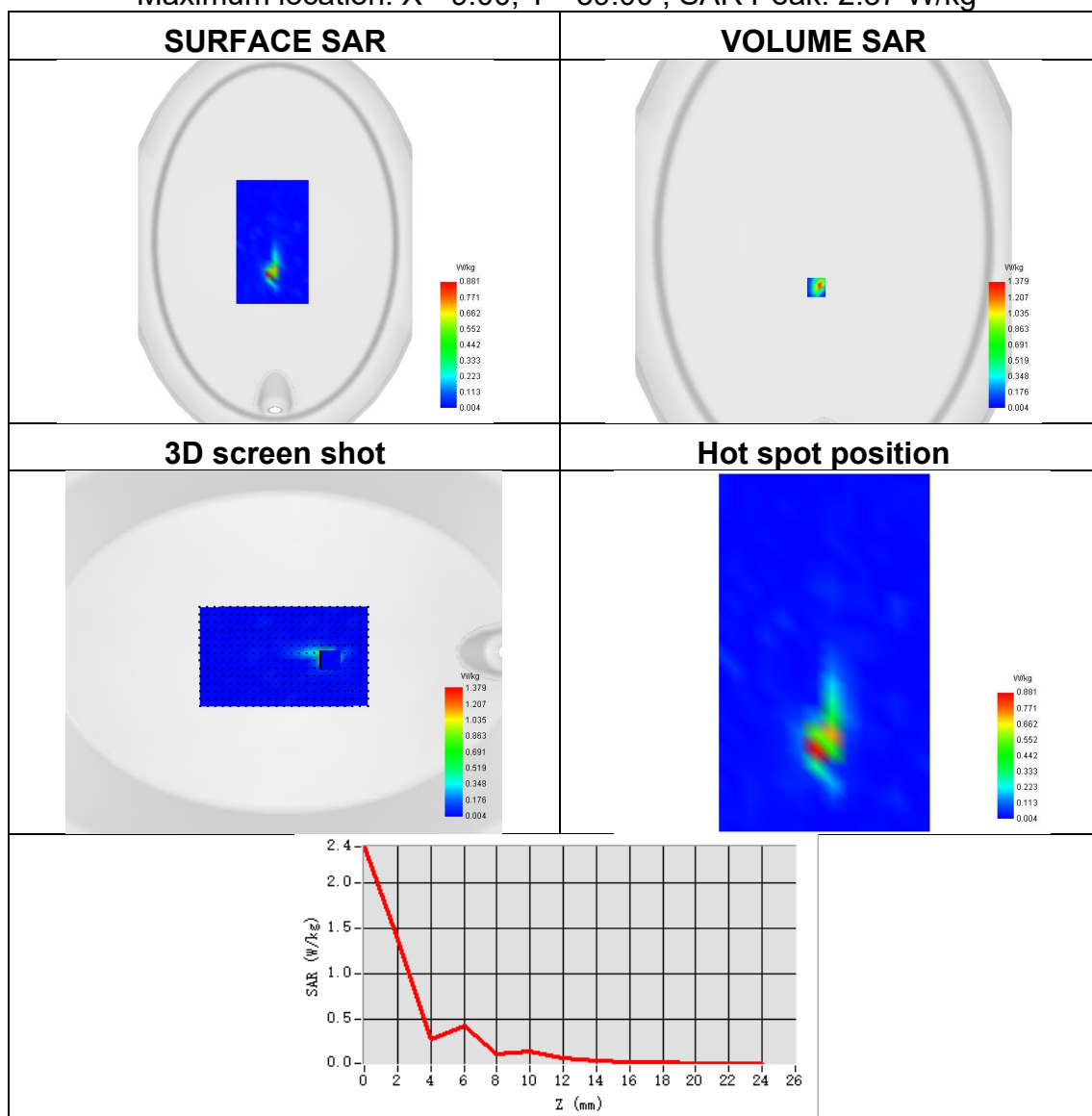




Plot 7:

Test Date	2025-12-29
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-2c
Signal	IEEE 802.11a
Frequency	5700
SAR 10g (W/Kg)	0.176
SAR 1g (W/Kg)	0.685
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	55.017588
ConvF	1.63
Relative permittivity	36.33
Conductivity (S/m)	5.09

Maximum location: X=-9.00, Y=-59.00 ; SAR Peak: 2.37 W/kg

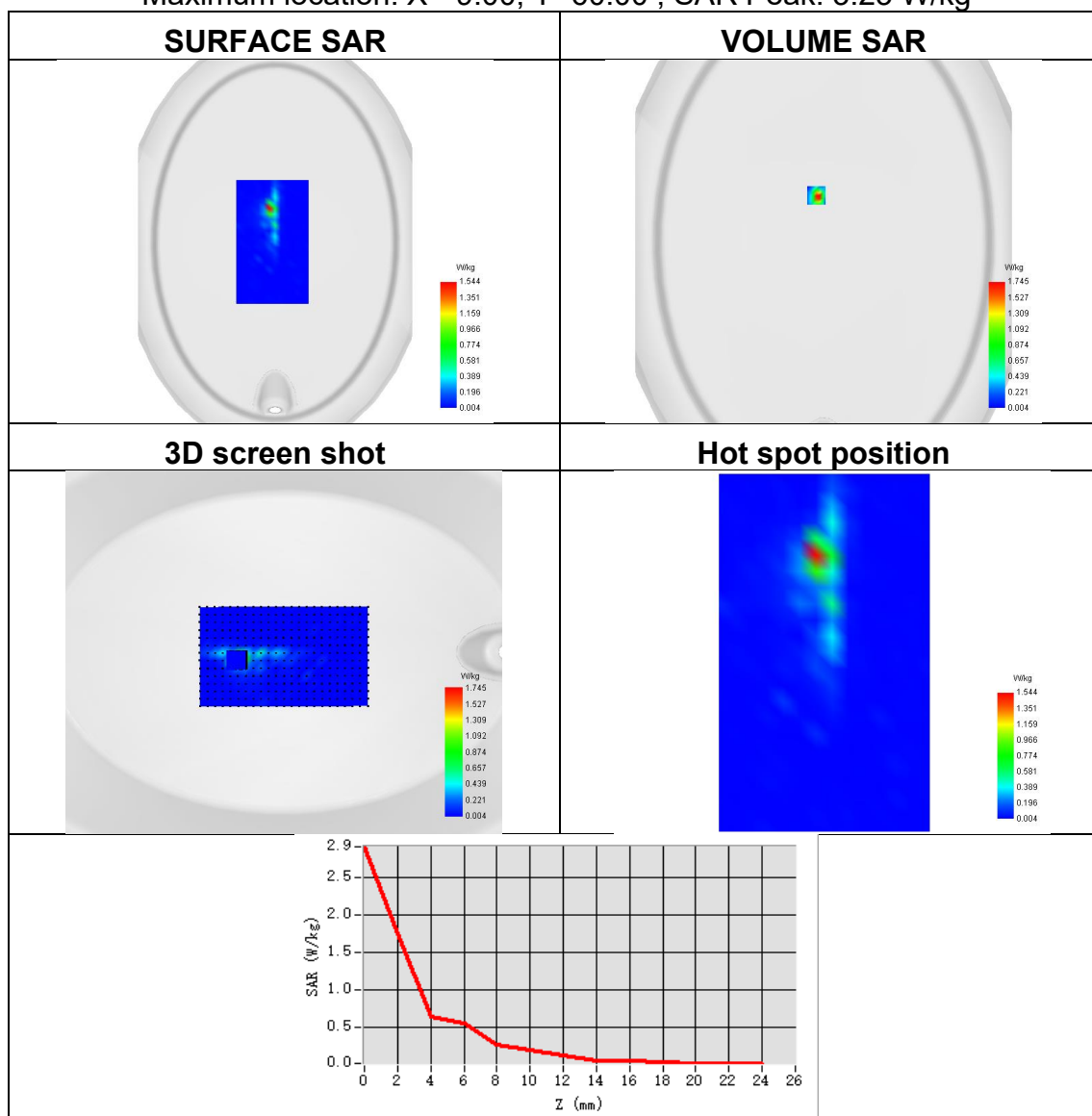




Plot 8:

Test Date	2025-12-29
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-2c
Signal	IEEE 802.11a
Frequency	5700
SAR 10g (W/Kg)	0.275
SAR 1g (W/Kg)	0.978
Horizontal validation criteria: minimum distance (mm)	12.665347
Vertical validation criteria: SAR ratio M2/M1 (%)	55.037586
ConvF	1.63
Relative permittivity	36.33
Conductivity (S/m)	5.09

Maximum location: X=-9.00, Y=60.00 ; SAR Peak: 3.23 W/kg

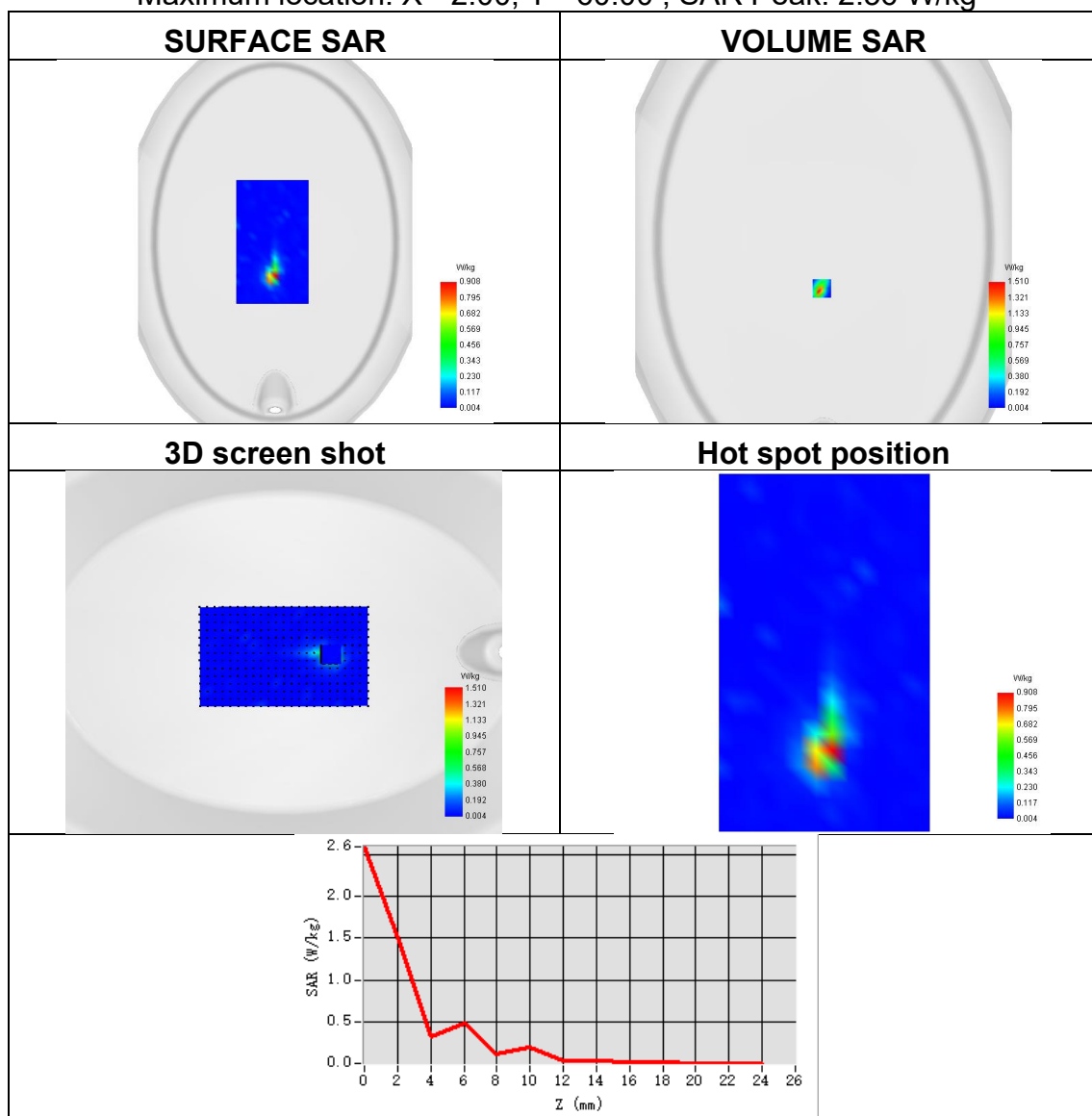




Plot 9:

Test Date	2025-12-28
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-3
Signal	IEEE 802.11ac
Frequency	5775
SAR 10g (W/Kg)	0.194
SAR 1g (W/Kg)	0.770
Horizontal validation criteria: minimum distance (mm)	14.155361
Vertical validation criteria: SAR ratio M2/M1 (%)	56.811413
ConvF	1.51
Relative permittivity	36.00
Conductivity (S/m)	5.22

Maximum location: X=-2.00, Y=-60.00 ; SAR Peak: 2.56 W/kg

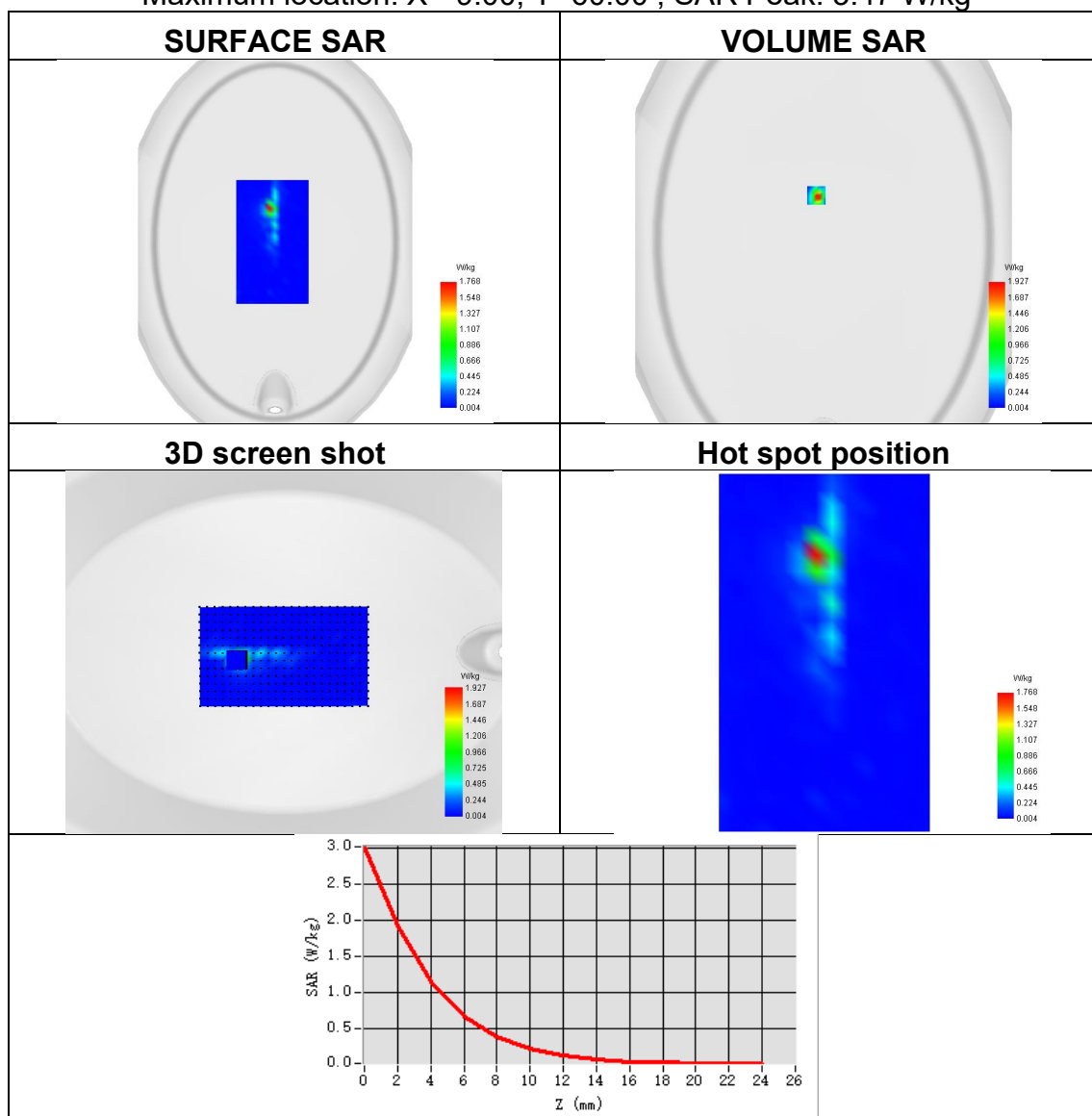




Plot 10:

Test Date	2025-12-28
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Top Side
Band	U-NII-3
Signal	IEEE 802.11ax
Frequency	5775
SAR 10g (W/Kg)	0.305
SAR 1g (W/Kg)	1.073
Horizontal validation criteria: minimum distance (mm)	11.657322
Vertical validation criteria: SAR ratio M2/M1 (%)	59.144978
ConvF	1.51
Relative permittivity	36.00
Conductivity (S/m)	5.22

Maximum location: X=-9.00, Y=60.00 ; SAR Peak: 3.47 W/kg





Appendix C. Probe Calibration and Dipole Calibration Report

Refer the appendix Calibration Report.

※※※※※END OF THE REPORT※※※※※