



SAR Test Report

Report No.: STS2504039H01

Issued for

Shenzhen Huawanlong Technology Co., Ltd.

Room 302, A, No. 2, Jihua Road, Jihua Industrial Zone,
Longgang District, Shenzhen, China.

Product Name: laptop

Brand Name: COOYES

Model Name: K156

Series Model(s): N/A

FCC ID: 2BOOL-K156

Test Standard: ANSI/IEEE Std. C95.1
FCC 47 CFR Part 2 (2.1093)
IEEE Std. 1528-2013

Max. Report SAR (1g) Body: 0.527 W/kg

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

**TEST REPORT CERTIFICATION**

Applicant's name : Shenzhen Huawanlong Technology Co., Ltd.
Address : Room 302, A, No. 2, Jihua Road, Jihua Industrial Zone,
Longgang District, Shenzhen, China.
Manufacturer's Name : Shenzhen Huawanlong Technology Co., Ltd.
Address : Room 302, A, No. 2, Jihua Road, Jihua Industrial Zone,
Longgang District, Shenzhen, China.

Product description

Product name : laptop
Brand name : COOYES
Model name : K156
Series Model(s) : N/A

Standards : ANSI/IEEE Std. C95.1
FCC 47 CFR Part 2 (2.1093)
IEEE Std. 1528-2013

The device was tested by Shenzhen STS Test Services Co., Ltd. in accordance with the measurement methods and procedures specified in KDB 865664 The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Date of Test..... :

Date (s) of performance of tests..... : 15 Jun. 2025 ~ 16 Jun. 2025

Date of Issue..... : 17 Jun. 2025

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

Testing Engineer :

Xin Liu

(Xin.Liu)

Technical Manager :

Shi fan-long

(Shifan. Long)

Authorized Signatory :

Bovey Yang

(Bovey Yang)





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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	17 Jun. 2025	STS2504039H01	ALL	Initial Issue



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	laptop		
Brand Name	COOYES		
Model Name	K156		
Series Model	N/A		
Model Difference	N/A		
Battery	Rated Voltage:11.1V Charge Limit Voltage:12.6V Capacity: 4300mAh		
Device Category	Portable		
Product stage	Production unit		
RF Exposure Environment	General Population / Uncontrolled		
Hardware Version	N2108067		
Software Version	windows 11pro		
Frequency Range	WLAN802.11b/g/n20: 2412 MHz ~ 2462 MHz WLAN 802.11a/n20: 5725 ~ 5850 MHz Bluetooth: 2402 MHz to 2480 MHz		
Max. Reported SAR(1g): (Limit:1.6W/kg) Test distance: Body:0mm	Band	Mode	Body Worn (W/kg)
	DTS	2.4G WLAN_ANT_1	0.184
	DTS	2.4G WLAN_ANT_2	0.160
	DTS	2.4G WLAN_ANT MIMO	0.288
	DSS	BT	0.089
	NII	5.8G WLAN_ANT_1	0.242
	NII	5.8G WLAN_ANT_2	0.527
	NII	5.8G WLAN_ANT MIMO	0.471
1-g Sum SAR			0.616
FCC Equipment Class	Digital Transmission System (DTS) Unlicensed National Information Infrastructure TX(NII) Part 15 Spread Spectrum Transmitter (DSS)		
Operating Mode:	WLAN: 802.11 a/b/g/n20 Bluetooth: GFSK + π /4DQPSK+8DPSK BLE: GFSK		
Antenna Specification:	Bluetooth: FPC antenna WLAN: FPC antenna		
Hotspot Mode	Not Support		
DTM Mode	Not Support		
Note: 1. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power			



1.2 Test Environment

Ambient conditions in the SAR laboratory:

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

1.3 Test Factory

ShenZhen STS Test Services Co.,Ltd.

101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration No.: 625569

IC Registration No.: 12108A

A2LA Certificate No.: 4338.01



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	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. It specifies the maximum exposure limit of 1.6 W/kg as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D04 v01	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
5	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
6	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
7	FCC KDB 616217 D04 v01r02	SAR for laptop and tablets
8	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:

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

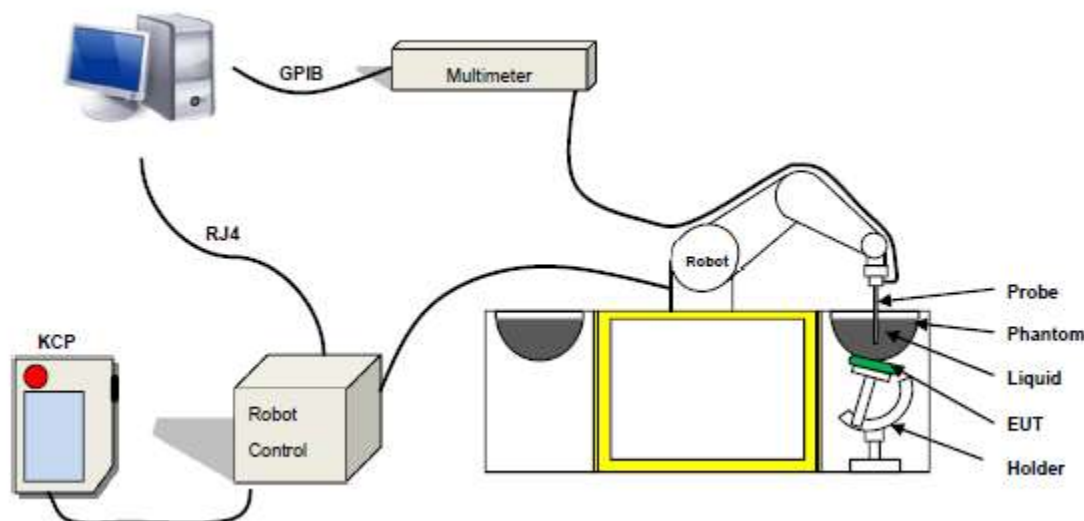
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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 Open SAR software computes the results to give a SAR value in a 1g or 10g mass.

3.2.1 Probe

For the measurements the Specific Dosimetric E-Field Probe SN 08/21 EPGO352 with following specifications is used

- Probe Length: 330 mm
- Length of Individual Dipoles: 2 mm
- 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: 150 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 Dipole



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.

		The thickness of the phantom amounts to 2 mm±0.2 mm. The materials for the phantom do not affect the radiation of the device under test (DUT) : $\epsilon_r' < 5$ The head is filled with tissue simulating liquid. The hand do not have to be modeled.	
SN 32/14 SAM115			
TWIN SAM phantom			
Mechanical		Electrical	
Overall thickness	2±0.2 mm(except ear area)	Relative permittivity	3.4
Dimensions	1000 mm(L) x 500 mm(W) x 200 mm(H)	Loss tangent	0.02
Maximum volume	27 L		
Material	Eiberglass based		

ELLIPTICAL Phantom	
The phantom is for Body performance check filled with tissue-equivalent liquid to a depth of at least 150 mm, whose shell material is resistant to damage or reaction with tissue-equivalent liquid chemicals.	
 ELLI Phantom Figure-SN 21/21 ELLI48	The shape of the phantom is an ellipse with length 600mm±5mm and width 400mm±5mm. The phantom shell is made of low-loss and low-permittivity material, having loss tangent $\tan\delta \leq 0.05$ and relative permittivity: $\epsilon_r' \leq 5$ for $f \leq 3$ GHz $3 \leq \epsilon_r' \leq 5$ for $f > 3$ GHz The thickness of the bottom-wall of the flat phantom is 2.0 mm with a tolerance of ± 0.2 mm.
Technical & mechanical characteristics	
Shell thickness	2 mm ± 0.2 mm
Filling volume	25 L
Dimensions	600 mm x 400 mm x 200mm
Permittivity	4.4
Loss tangent	0.017



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

The following table gives the recipes for tissue simulating liquid and the theoretical Conductivity/Permittivity.

Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.4	40.0
2450	55.0	0	0	0.1	0	44.9	1.80	39.2
2600	54.9	0	0	0.1	0	45.0	1.96	39.0
Frequency (MHz)	Water (%)	Hexyl Carbitol (%)			Triton X-100 (%)		Conductivity σ (S/m)	Permittivity ϵ
5200	62.52	17.24			17.24		4.66	36.0
5800	62.52	17.24			17.24		5.27	35.3
Body (From instrument manufacturer)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0.1	0	31.3	1.95	52.7
2600	68.2	0	0	0.1	0	31.7	2.16	52.5
Frequency(MHz)	Water	DGBE (%)			Salt (%)		Conductivity σ (S/m)	Permittivity ϵ
5200	78.60	21.40			/		5.30	49.00
5800	78.50	21.40			0.1		6.00	48.20

**LIQUID MEASUREMENT RESULTS**

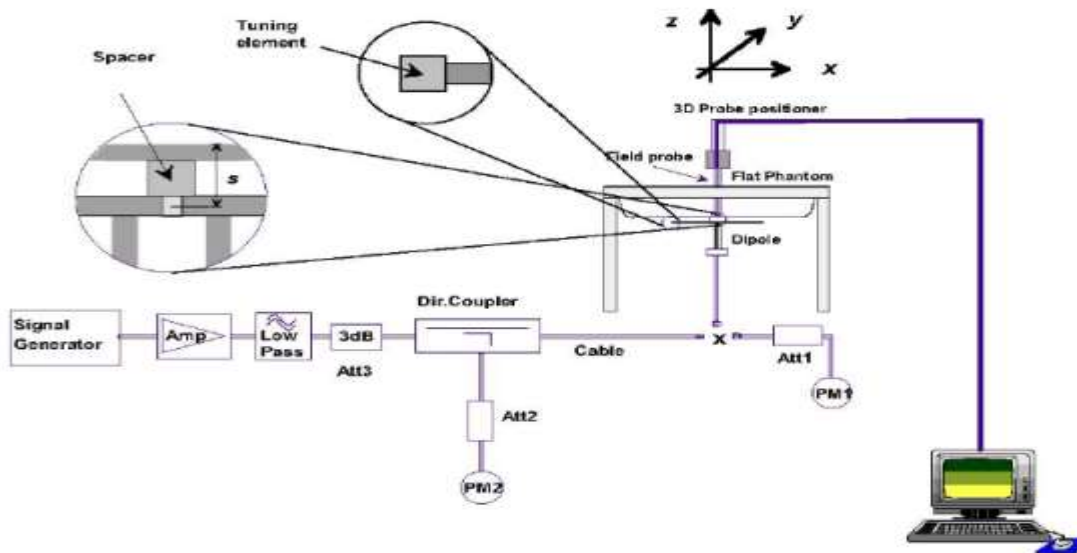
Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity %	Frequency (MHz)	Temp. [°C]					
2025-06-15	23.5	51	2450	23.3	Permittivity	39.20	40.25	2.68	±5
					Conductivity	1.80	1.82	1.11	±5
2025-06-15	23.4	51	2462	23.2	Permittivity	39.18	39.66	1.23	±5
					Conductivity	1.81	1.85	2.17	±5
2025-06-15	23.5	51	2480	23.3	Permittivity	39.15	39.99	2.15	±5
					Conductivity	1.83	1.78	-2.55	±5
2025-06-16	22.8	55	5745	22.6	Permittivity	35.36	35.90	1.54	±5
					Conductivity	5.21	5.02	-3.69	±5
2025-06-16	22.8	55	5785	22.6	Permittivity	35.32	36.41	3.10	±5
					Conductivity	5.25	5.11	-2.75	±5
2025-06-16	22.9	54	5800	22.6	Permittivity	35.30	36.01	2.01	±5
					Conductivity	5.27	5.12	-2.85	±5
2025-06-16	22.8	55	5825	22.6	Permittivity	35.28	35.21	-0.18	±5
					Conductivity	5.30	5.41	2.15	±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

Justification for Extended SAR Dipole Calibrations

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss (>20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB 865664 D01:

Dipole		Date of Measurement	Return Loss (dB)	Delta (%)	Impedance	Delta(ohm)
SN 30/14 DIP2G450-335	Head	2023-07-04	-26.03	/	46.3	/
	Liquid	2024-07-01	-26.91	3.38	47.4	1.1
SN 13/14 WGA32	Head	2023-07-04	< -8.23	/	/	/
	Liquid	2024-07-01	-12.07	/	/	/

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

Date	Freq.	Power	Tested Value	Normalized SAR	Target SAR	Tolerance	Limit
	(MHz)	(mW)	(W/Kg)	(W/kg)	1g(W/kg)	(%)	(%)
2025-06-15	2450	100	5.633	56.33	54.70	2.98	10
2025-06-16	5800	100	19.580	195.80	188.95	3.63	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

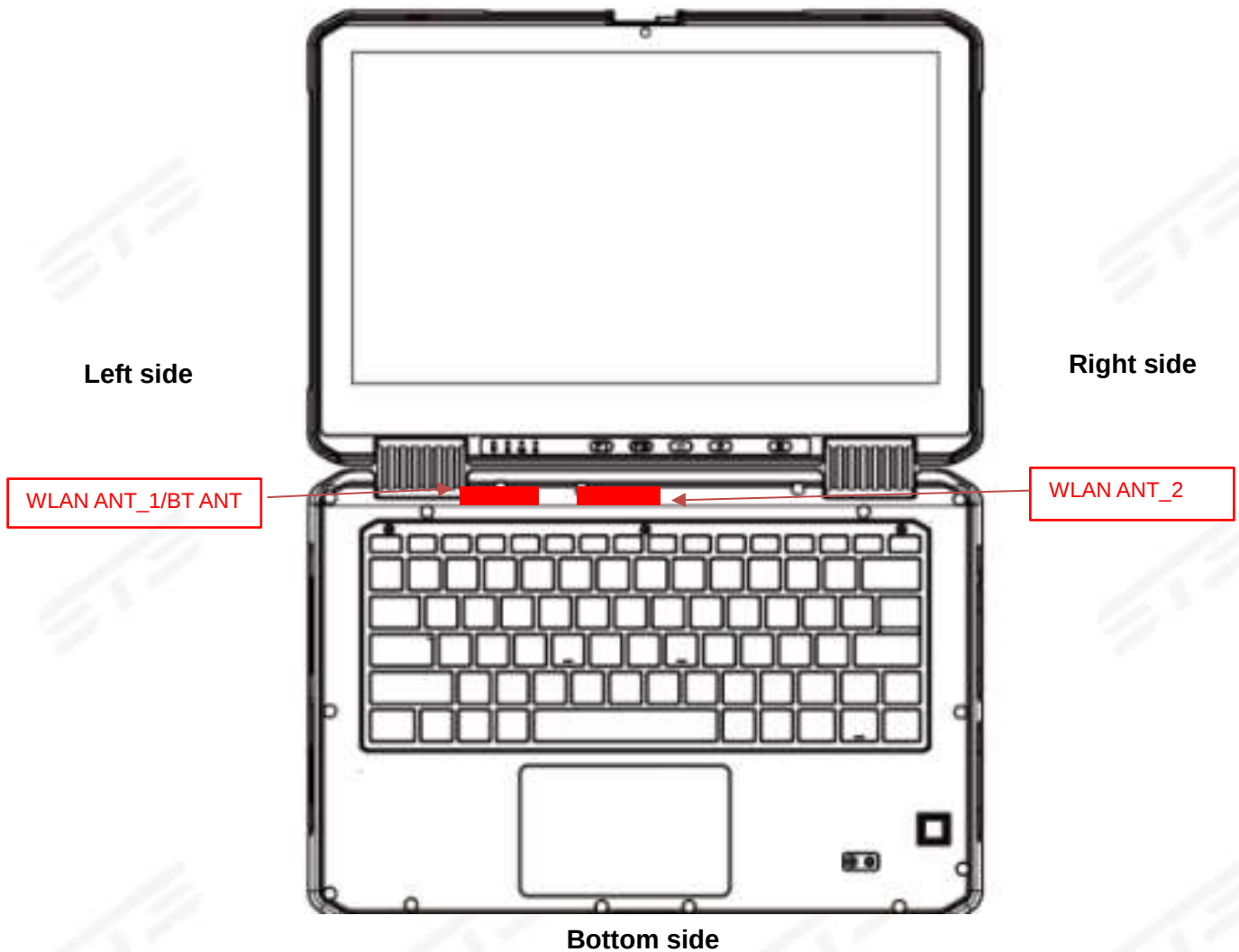
First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan 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 laptop, support WLAN/BT mode.

Top side



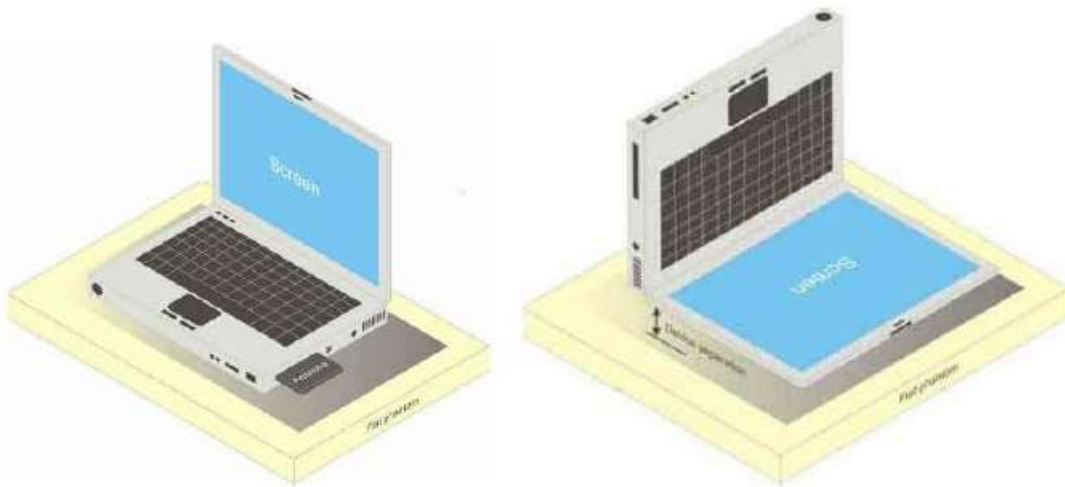
The edge of Phantom is more than 5cm away from the edge of EUT

8. EUT Test Position

This EUT was tested in Back Side. Front Side.

8.1 Body-worn Position Conditions

The required minimum test separation distance for incorporating transmitters and antennas into laptop, notebook and netbook computer displays is determined with the display screen opened at an angle of 90° to the keyboard compartment. If a computer has other operating configurations that require a different or more conservative display to keyboard angle for normal use, a KDB inquiry should be submitted to determine the test requirements. When antennas are incorporated in the keyboard section of a laptop computer, SAR is required for the bottom surface of the keyboard. Provided tablet use conditions are not supported by the laptop computer, SAR tests for bystander exposure from the edges of the Keyboard and display screen of laptop computers are generally not required.





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 $k=2$.

SATIMO Uncertainty- SN 08/21 EPGO352									
Measurement uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+ - %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+ %)	10g Ui (+ %)	vi
Measurement System									
Probe calibration	E.2.1	5.72	N	1.00	1.00	1.00	5.72	5.72	∞
Axial Isotropy	E.2.2	0.18	R	1.73	0.71	0.71	0.07	0.07	∞
Hemispherical Isotropy	E.2.2	1.04	R	1.73	0.71	0.71	0.42	0.42	∞
Boundary effect	E.2.3	0.80	R	1.73	1.00	1.00	0.46	0.46	∞
Linearity	E.2.4	1.25	R	1.73	1.00	1.00	0.72	0.72	∞
System detection limits	E.2.4	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Modulation response	E.2.5	3.42	R	1.73	1.00	1.00	1.97	1.97	∞
Readout Electronics	E.2.6	0.26	N	1.00	1.00	1.00	0.26	0.26	∞
Response Time	E.2.7	0.17	R	1.73	1.00	1.00	0.10	0.10	∞
Integration Time	E.2.8	1.43	R	1.73	1.00	1.00	0.83	0.83	∞
RF ambient conditions-Noise	E.6.1	3.51	R	1.73	1.00	1.00	2.03	2.03	∞
RF ambient conditions- reflections	E.6.1	3.15	R	1.73	1.00	1.00	1.82	1.82	∞
Probe positioner mechanical tolerance	E.6.2	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Probe positioning with respect to phantom shell	E.6.3	1.40	R	1.73	1.00	1.00	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.10	R	1.73	1.00	1.00	1.21	1.21	∞
Test sample Related									
Test sample positioning	E.4.2	3.10	N	1.00	1.00	1.00	3.10	3.10	∞
Device holder uncertainty	E.4.1	3.80	N	1.00	1.00	1.00	3.80	3.80	∞
Output power variation— SAR drift measurement	E.2.9	4.50	R	1.73	1.00	1.00	2.60	2.60	∞
SAR scaling	E.6.5	1.80	R	1.73	1.00	1.00	1.04	1.04	∞
Phantom and tissue parameters									
Phantom shell uncertainty— shape, thickness, and permittivity	E.3.1	3.70	R	1.73	1.00	1.00	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.90	N	1.00	1.00	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	2.40	R	1.73	0.78	0.71	1.08	0.98	M
Liquid permittivity measurement	E.3.3	4.10	N	1.00	0.78	0.71	3.20	2.91	M
Liquid conductivity— temperature uncertainty	E.3.4	2.70	R	1.73	0.23	0.26	0.36	0.41	∞
Liquid permittivity— temperature uncertainty	E.3.4	4.80	N	1.00	0.23	0.26	1.10	1.25	∞
Combined Standard Uncertainty			RSS				10.08	9.59	
Expanded Uncertainty (95% Confidence interval)			K=2				19.58	19.18	



SATIMO Uncertainty- SN 08/21 EPGO352									
System Validation uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+/- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+- %)	10g Ui (+-%)	vi
Measurement System									
Probe calibration	E.2.1	5.72	N	1.00	1.00	1.00	5.72	5.72	∞
Axial Isotropy	E.2.2	0.18	R	1.73	1.00	1.00	0.10	0.10	∞
Hemispherical Isotropy	E.2.2	1.04	R	1.73	0.00	0.00	0.00	0.00	∞
Boundary effect	E.2.3	0.80	R	1.73	1.00	1.00	0.46	0.46	∞
Linearity	E.2.4	1.25	R	1.73	1.00	1.00	0.72	0.72	∞
System detection limits	E.2.4	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Modulation response	E.2.5	3.42	R	1.73	0.00	0.00	0.00	0.00	∞
Readout Electronics	E.2.6	0.26	N	1.00	1.00	1.00	0.26	0.26	∞
Response Time	E.2.7	0.17	R	1.73	0.00	0.00	0.00	0.00	∞
Integration Time	E.2.8	1.43	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions- Noise	E.6.1	3.51	R	1.73	1.00	1.00	2.03	2.03	∞
RF ambient conditions- reflections	E.6.1	3.15	R	1.73	1.00	1.00	1.82	1.82	∞
Probe positioner mechanical tolerance	E.6.2	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Probe positioning with respect to phantom shell	E.6.3	1.40	R	1.73	1.00	1.00	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.10	R	1.73	1.00	1.00	1.21	1.21	∞
System validation source									
Deviation of experimental dipole from numerical dipole	E.6.4	4.80	N	1.00	1.00	1.00	4.80	4.80	∞
Input power and SAR drift measurement	8,6.6.4	5.10	R	1.73	1.00	1.00	2.94	2.94	∞
Dipole axis to liquid distance	8,E.6.6	2.40	R	1.73	1.00	1.00	1.39	1.39	∞
Phantom and set-up									
Phantom shell uncertainty— shape, thickness, and permittivity	E.3.1	3.70	R	1.73	1.00	1.00	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.90	N	1.00	1.00	0.84	1.90	1.60	∞
Liquid conductivity (temperature uncertainty)	E.3.3	2.40	R	1.73	0.78	0.71	1.08	0.98	∞
Liquid conductivity (measured)	E.3.3	4.10	N	1.00	0.78	0.71	3.20	2.91	M
Liquid permittivity (temperature uncertainty)	E.3.4	2.70	R	1.73	0.23	0.26	0.36	0.41	∞
Liquid permittivity (measured)	E.3.4	4.80	N	1.00	0.23	0.26	1.10	1.25	M
Combined Standard Uncertainty			RSS				9.72	9.52	
Expanded Uncertainty (95% Confidence interval)			K=2				19.44	19.03	



System Check uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System									
Probe calibration drift	E.2.1.3	5.72	N	1.00	1.00	1.00	5.72	5.72	∞
Axial Isotropy	E.2.2	0.18	R	1.73	0.00	0.00	0.00	0.00	∞
Hemispherical Isotropy	E.2.2	1.04	R	1.73	0.00	0.00	0.00	0.00	∞
Boundary effect	E.2.3	0.8	R	1.73	0.00	0.00	0.00	0.00	∞
Linearity	E.2.4	1.25	R	1.73	0.00	0.00	0.00	0.00	∞
System detection limits	E.2.4	1.20	R	1.73	0.00	0.00	0.00	0.00	∞
Modulation response	E.2.5	3.42	R	1.73	0.00	0.00	0.00	0.00	∞
Readout Electronics	E.2.6	0.26	N	1.00	0.00	0.00	0.00	0.00	∞
Response Time	E.2.7	0.17	R	1.73	0.00	0.00	0.00	0.00	∞
Integration Time	E.2.8	1.43	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3.51	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions-reflections	E.6.1	3.15	R	1.73	0.00	0.00	0.00	0.00	∞
Probe positioner mechanical tolerance	E.6.2	1.2	R	1.73	1.00	1.00	0.69	0.69	∞
Probe positioning with respect to phantom shell	E.6.3	1.4	R	1.73	1.00	1.00	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	3.9	R	1.73	0.00	0.00	0.00	0.00	∞
System check source (dipole)									
Deviation of experimental dipoles	E.6.4	4.8	N	1.00	1.00	1.00	4.80	4.80	∞
Input power and SAR drift measurement	8,6.6.4	5.1	R	1.73	1.00	1.00	2.94	2.94	∞
Dipole axis to liquid distance	8,E.6.6	2.4	R	1.73	1.00	1.00	1.39	1.39	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	3.7	R	1.73	1.00	1.00	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1.00	1.00	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	2.4	R	1.73	0.78	0.71	1.08	0.98	∞
Liquid permittivity measurement	E.3.3	4.1	N	1.00	0.78	0.71	3.20	2.91	M
Liquid conductivity—temperature uncertainty	E.3.4	2.7	R	1.73	0.23	0.26	0.36	0.41	∞
Liquid permittivity—temperature uncertainty	E.3.4	4.8	N	1.00	0.23	0.26	1.10	1.25	M
Combined Standard Uncertainty			RSS				5.56	5.20	
Expanded Uncertainty (95% Confidence interval)			K=2				11.12	10.41	



10. Conducted Power Measurement

10.1 Test Result

2.4G WLAN

2.4GWIFI					
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)_ANT_1	Average Power (dBm)_ANT_2	Average Power (dBm)_ANT_1+2
802.11b	1	2412	12.84	13.19	N/A
	6	2437	13.35	13.31	N/A
	11	2462	13.63	13.49	N/A
802.11g	1	2412	12.36	12.74	N/A
	6	2437	12.82	12.92	N/A
	11	2462	13.18	12.92	N/A
802.11 n-HT20	1	2412	11.23	11.63	14.44
	6	2437	11.73	11.69	14.72
	11	2462	11.97	11.80	14.90

BT

BT				
Mode	Channel Number	Frequency (MHz)	Peak Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	6.3	4.27
	39	2441	6.26	4.23
	78	2480	6.82	4.81
$\pi/4$ -QPSK(2Mbps)	0	2402	5.34	3.42
	39	2441	5.63	3.66
	78	2480	6.13	4.10
8DPSK(3Mbps)	0	2402	5.37	3.44
	39	2441	5.69	3.71
	78	2480	6.19	4.16

**BLE**

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	-2.61	0.55
	19	2440	-2.49	0.56
	39	2480	-2.07	0.62
GFSK(2Mbps)	0	2402	-2.47	0.57
	19	2440	-2.34	0.58
	39	2480	-2.00	0.63

WLAN (5.8Gband)

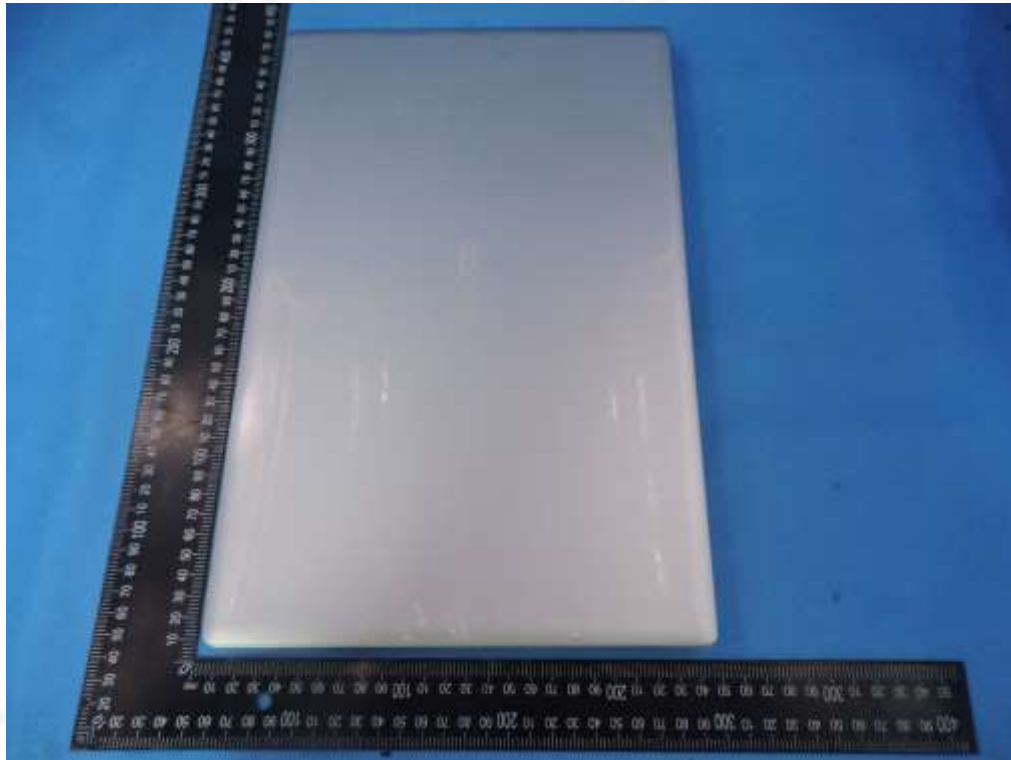
5.8G WLAN					
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)_ANT_1	Average Power (dBm)_ANT_2	Average Power (dBm)_ANT_1+2
802.11a	149	5745	12.58	12.03	N/A
	157	5785	12.68	12.17	N/A
	165	5825	12.79	12.34	N/A
802.11 n-HT20	149	5745	10.57	9.97	13.29
	157	5785	10.66	10.14	13.42
	165	5825	10.60	10.12	13.38



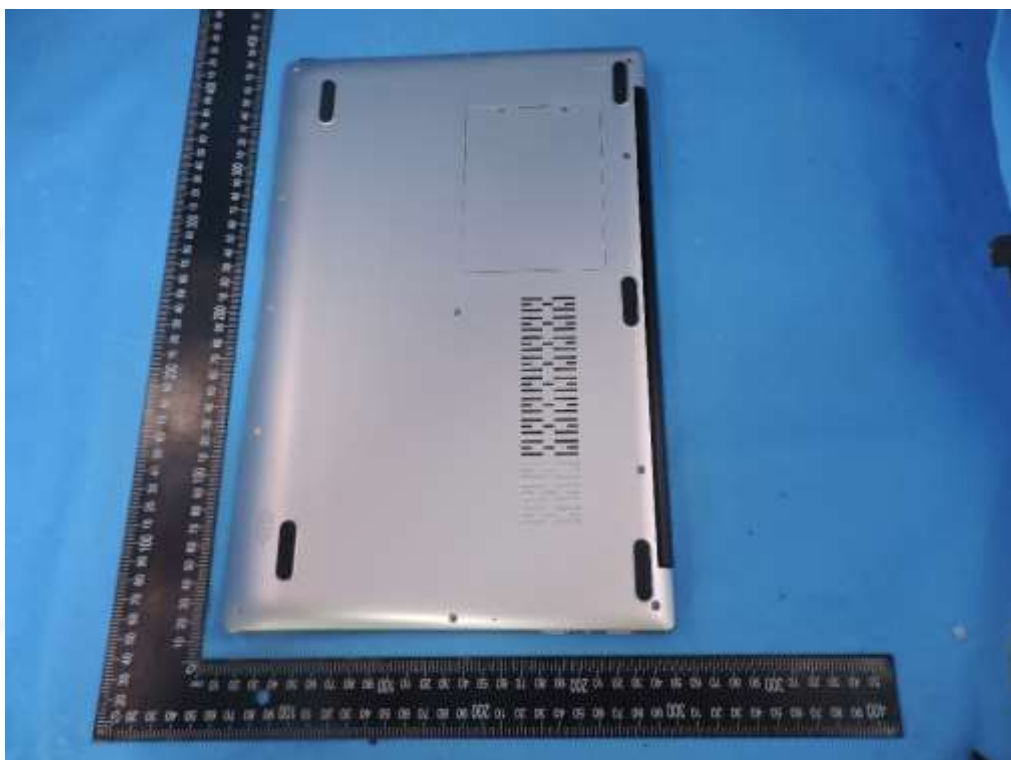
11. EUT and Test Setup Photo

11.1 EUT Photo

Front side



Back side





Top side



Bottom side





Left side



Right side



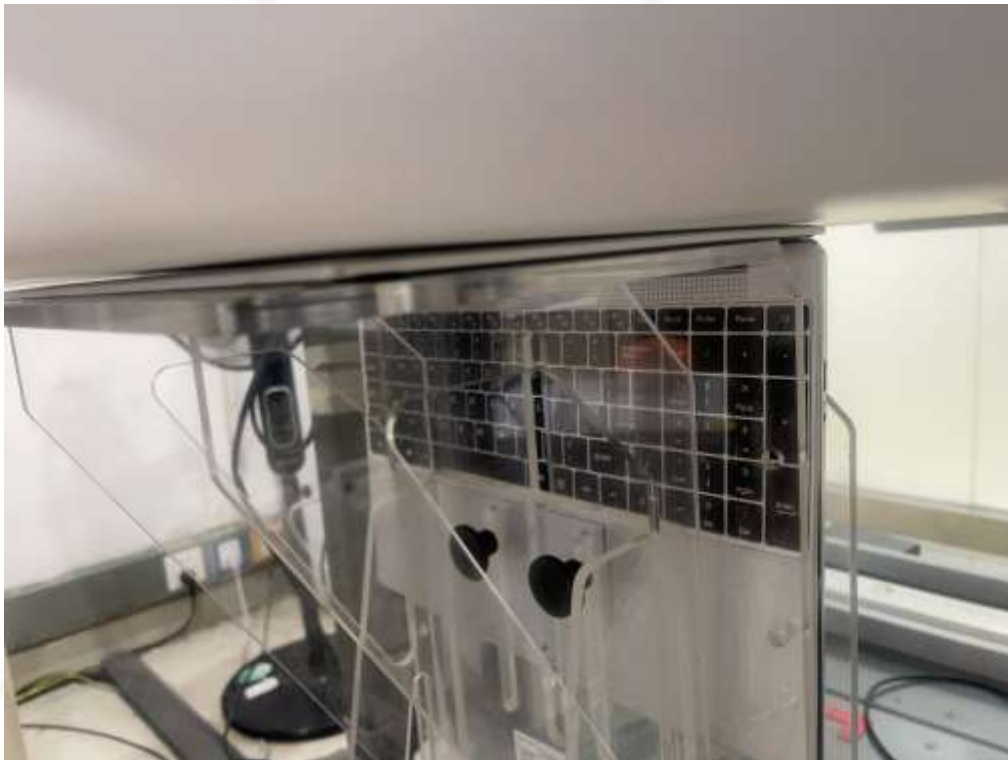


11.2 Setup Photo

Body Back side(separation distance is 0mm)

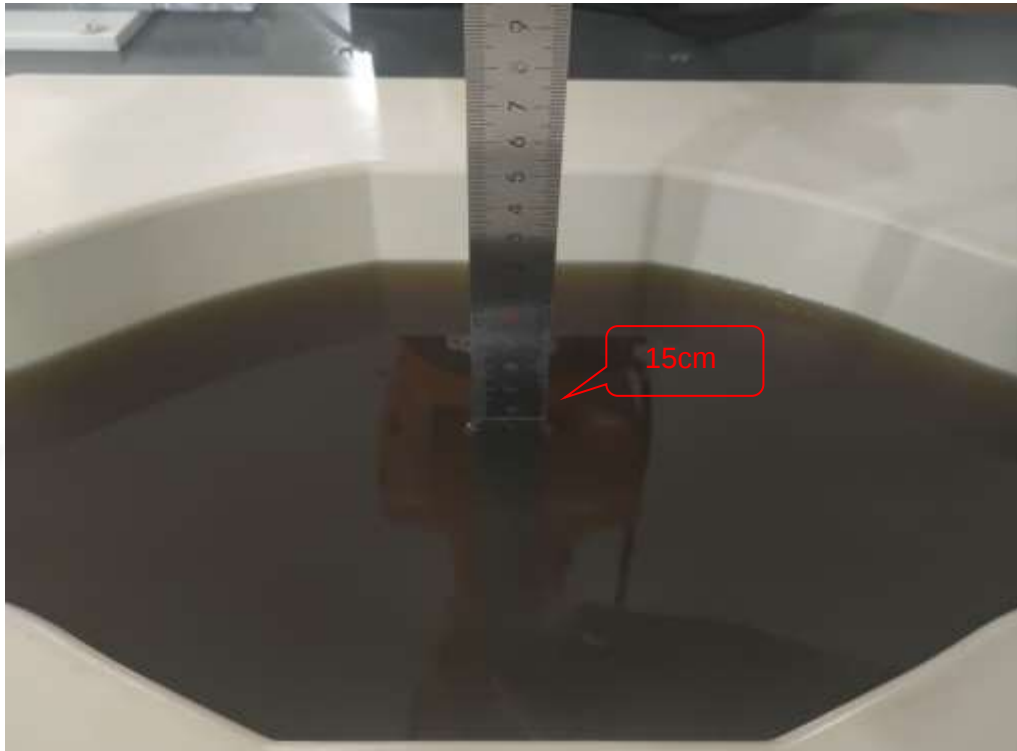


Body Front Side (separation distance is 0mm)





Liquid depth (15 cm)





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_ANT_1	802.11b	Back Side	2462	0.169	-3.39	14.00	13.63	1.089	0.184	1
		Front Side	2462	0.041	2.94	14.00	13.63	1.089	0.045	/
2.4GHz WLAN_ANT_2	802.11b	Back Side	2462	0.160	3.38	13.50	13.49	1.002	0.160	2
		Front Side	2462	0.069	-0.82	13.50	13.49	1.002	0.069	/
2.4GHz WLAN_MIMO_ANT_1	802.11 n-HT20	Back Side	2462	0.140	-1.31	15.00	14.90	1.023	0.143	3
		Front Side	2462	0.058	-3.97	15.00	14.90	1.023	0.059	/
2.4GHz WLAN_MIMO_ANT_2	802.11 n-HT20	Back Side	2462	0.141	0.29	15.00	14.90	1.023	0.144	4
		Front Side	2462	0.069	3.84	15.00	14.90	1.023	0.071	/
BT	GFSK	Back Side	2480	0.085	-1.38	7.00	6.82	1.042	0.089	5
		Front Side	2480	0.055	0.65	7.00	6.82	1.042	0.057	/
5.8GHz WLAN_ANT_1	802.11a	Back Side	5825	0.231	0.03	13.00	12.79	1.050	0.242	6
		Front Side	5825	0.025	-1.48	13.00	12.79	1.050	0.026	/
5.8GHz WLAN_ANT_2	802.11a	Back Side	5745	0.433	-1.24	12.50	12.03	1.114	0.482	/
		Back Side	5785	0.456	-0.84	12.50	12.17	1.079	0.492	/
		Back Side	5825	0.508	2.06	12.50	12.34	1.038	0.527	7
		Front Side	5825	0.091	0.65	12.50	12.34	1.038	0.094	/
5.8GHz WLAN_MIMO_ANT_1	802.11 n-HT20	Back Side	5785	0.224	-2.04	13.50	13.42	1.019	0.228	8
		Front Side	5785	0.069	3.86	13.50	13.42	1.019	0.070	/
5.8GHz WLAN_MIMO_ANT_2	802.11 n-HT20	Back Side	5785	0.238	-0.37	13.50	13.42	1.019	0.242	9
		Front Side	5785	0.052	-3.78	13.50	13.42	1.019	0.053	/



Band	ANT	Max SAR	2.4G
		(W/Kg)	WLAN_ANT_1+2
2.4G WLAN_MIMO_ANT_1+2	ANT-1	0.143	0.288
	ANT-2	0.144	
Band	ANT	Max SAR	5.8G
		(W/Kg)	WLAN_ANT_1+2
5.8G WLAN_MIMO_ANT_1+2	ANT-1	0.228	0.471
	ANT-2	0.242	

Note:

1. The test separation of all above table is 0mm.
2. Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. Scaled SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
3. Per KDB 248227- When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg. (The highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power was **0.123W/Kg** for ANT-1)
4. Per KDB 248227- When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg. (The highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power was **0.250W/Kg** for ANT-2)



12.2 Simultaneous Multi-band Transmission Evaluation

Application Simultaneous Transmission information:

Position	Simultaneous State
Body	1.BT +2.4GHz WLAN_ANT_2
	2.BT +5.8GHz WLAN_ANT_2

NOTE:

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

Simultaneous Mode	Position	Mode	Max. 1-g SAR	1-g Sum SAR
			(W/kg)	(W/kg)
BT + 2.4GHz WLAN_ANT_2	Body	BT	0.089	0.249
		2.4GHz WLAN_ANT_2	0.160	
BT + 5.8G WLAN_ANT_2	Body	BT	0.089	0.616
		5.8GHz WLAN_ANT_2	0.527	



13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
2450MHzDipole	MVG	SID2450	SN 30/14 DIP2G450-335	2023.07.04	2026.07.03
Waveguide	MVG	SWG5500	SN 13/14 WGA32	2023.07.04	2026.07.03
E-Field Probe	MVG	SSE2	SN 08/21 EPGO352	2024.09.18	2025.09.17
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2024.09.18	2025.09.17
Antenna	MVG	ANTA3	SN 07/13 ZNTA52	N/A	N/A
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom3	MVG	SAM	SN 21/21 ELLI48	N/A	N/A
Phone holder	MVG	N/A	SN 32/14 MSH97	N/A	N/A
Laptop holder	MVG	N/A	SN 32/14 LSH29	N/A	N/A
Attenuator	Agilent	HXT-10-8-SMA	240327017	2025-02-22	2026-02-21
Directional coupler	Xi'an Xingbo	XBOH-OA08- 20dB	211123-4-3	2025-02-22	2026-02-21
Network Analyzer	Agilent	E5071C	MY46520378	2024-09-25	2025-09-26
Multi Meter	Keithley	Multi Meter 2000	4050073	2024-09-25	2025-09-26
Signal Generator	Agilent	N5182A	MY50140530	2024-09-25	2025-09-26
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2025-02-22	2026-02-21
Wireless Communication Test Set	R&S	CMW500	156324	2024-09-25	2025-09-26
Power Amplifier	DESAY	ZHL-42W	9638	2024-09-25	2025-09-26
Power Meter	R&S	NRP	100510	2024-09-25	2025-09-26
Power Sensor	R&S	NRP-Z11	101919	2024-09-25	2025-09-26
Power Sensor	Keysight	U2021XA	MY56280002	2024-09-25	2025-09-26
Temperature hygrometer	SuWei	SW-108	N/A	2024.10.15	2025.10.14
Thermograph	Elitech	RC-4	S/N EF7176501537	2024.10.15	2025.10.14



Appendix A. System Validation Plots

System Performance Check Data (2450MHz)

Type: Phone measurement (Complete)

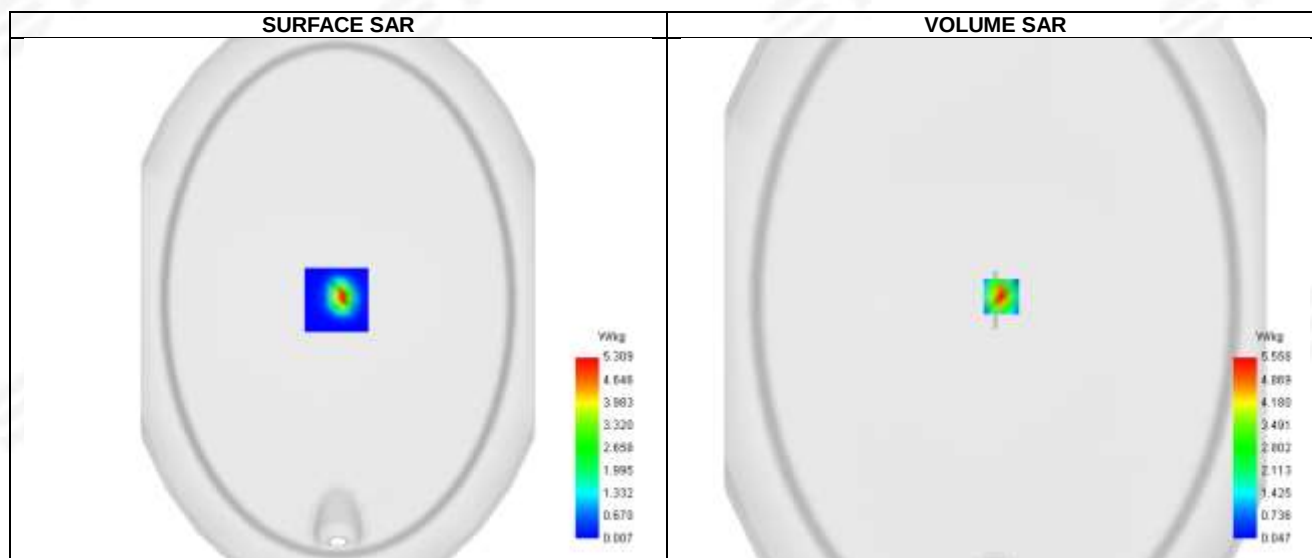
Area scan resolution: dx=8mm, dy=8mm

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

Date of measurement: 2025-06-15

Experimental conditions.

Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	40.25
Conductivity (S/m)	1.82
Probe	SN 08/21 EPGO352
ConvF	1.80
Crest factor:	1:1



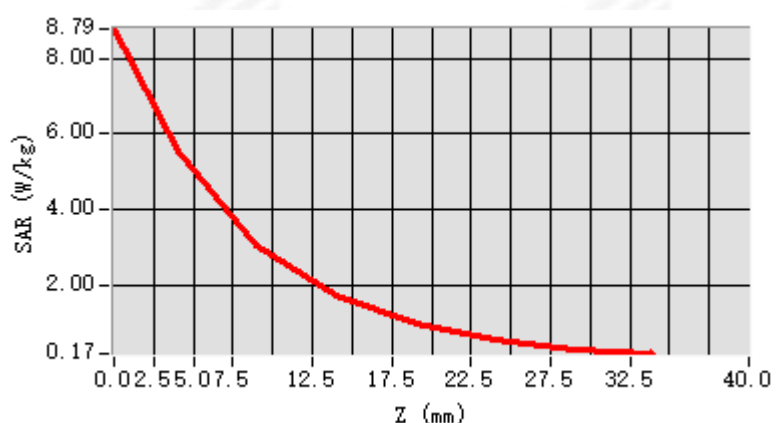
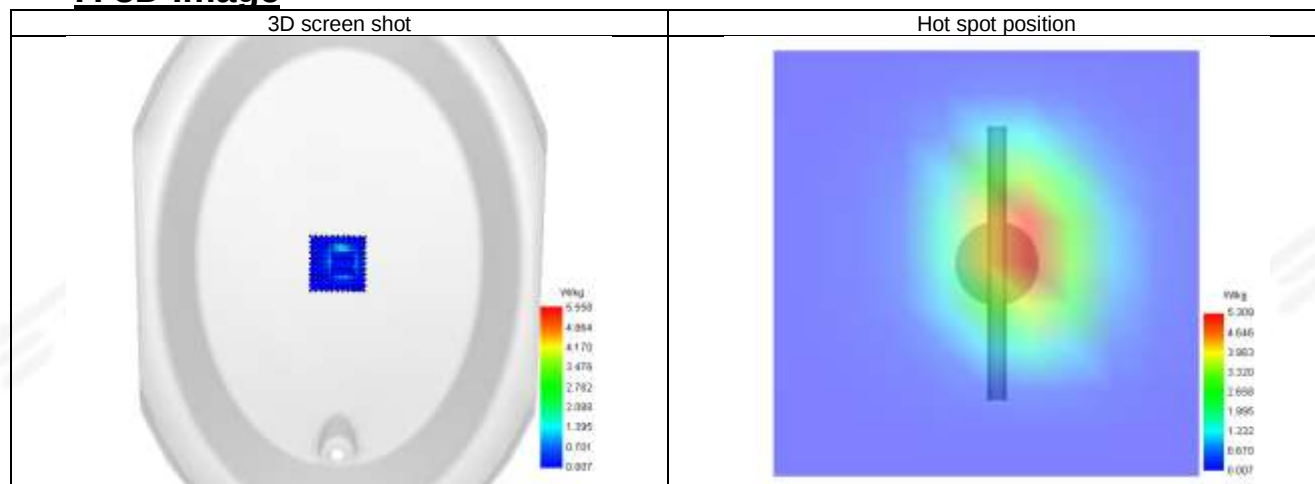
Maximum location: X=5.00, Y=3.00 ; SAR Peak: 8.73 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	2.568
SAR 1g (W/Kg)	5.633
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.782196

**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	8.790	5.558	3.045	1.721	0.960	0.536	0.299

**F. 3D Image**

**System Performance Check Data (5800MHz)**

Type: Dipole measurement (Complete)

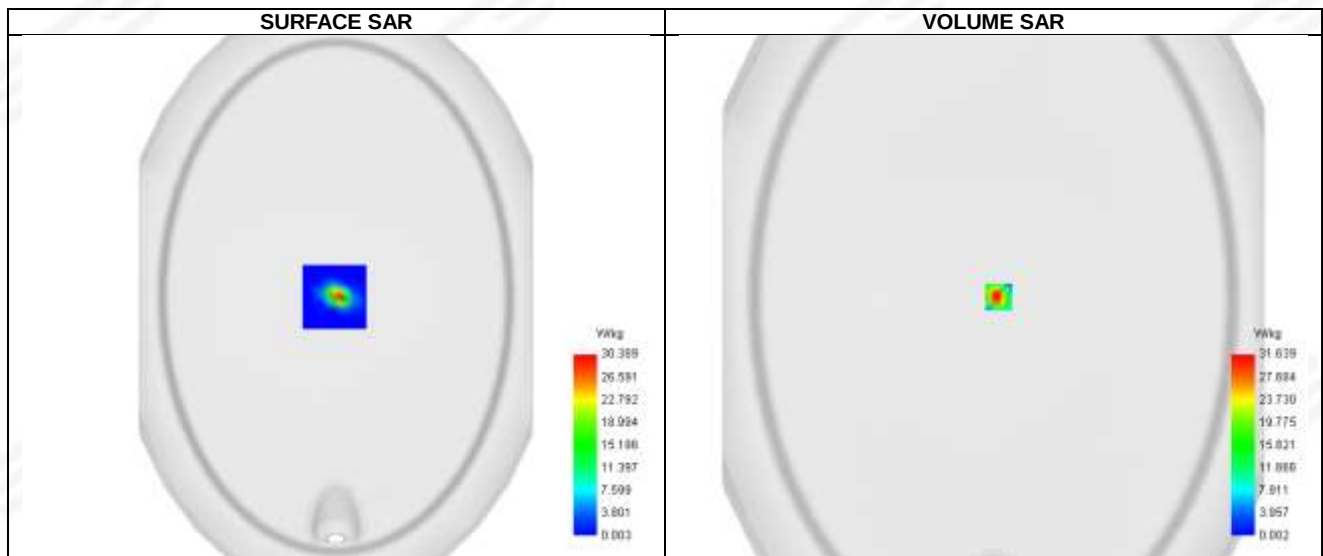
Area scan resolution: dx=8mm,dy=8mm

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

Date of measurement: 2025-06-16

Experimental conditions.

Device Position	Validation plane
Band	5800 MHz
Channels	-
Signal	CW
Frequency (MHz)	5800
Relative permittivity	36.01
Conductivity (S/m)	5.12
Probe	SN 08/21 EPGO352
ConvF	1.35
Crest factor:	1:1



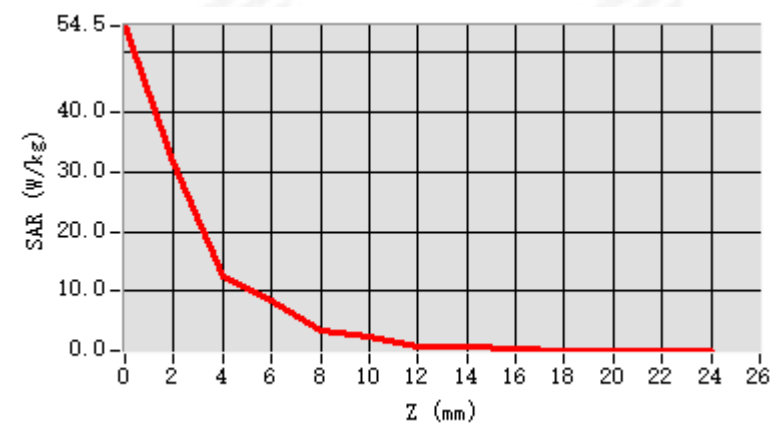
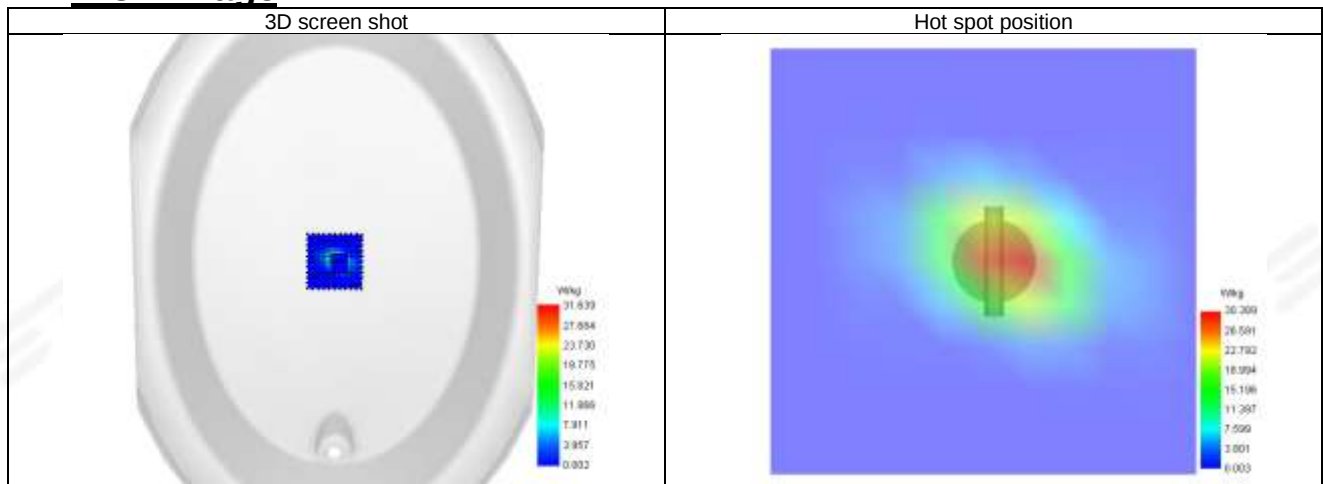
Maximum location: X=5.00, Y=0.00 ; SAR Peak: 57.34 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	6.251
SAR 1g (W/Kg)	19.580
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	51.492730

**E. Z Axis Scan**

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	54.482	31.639	12.519	8.353	3.221	2.204	0.828	0.581	0.213	0.153	0.055	0.040

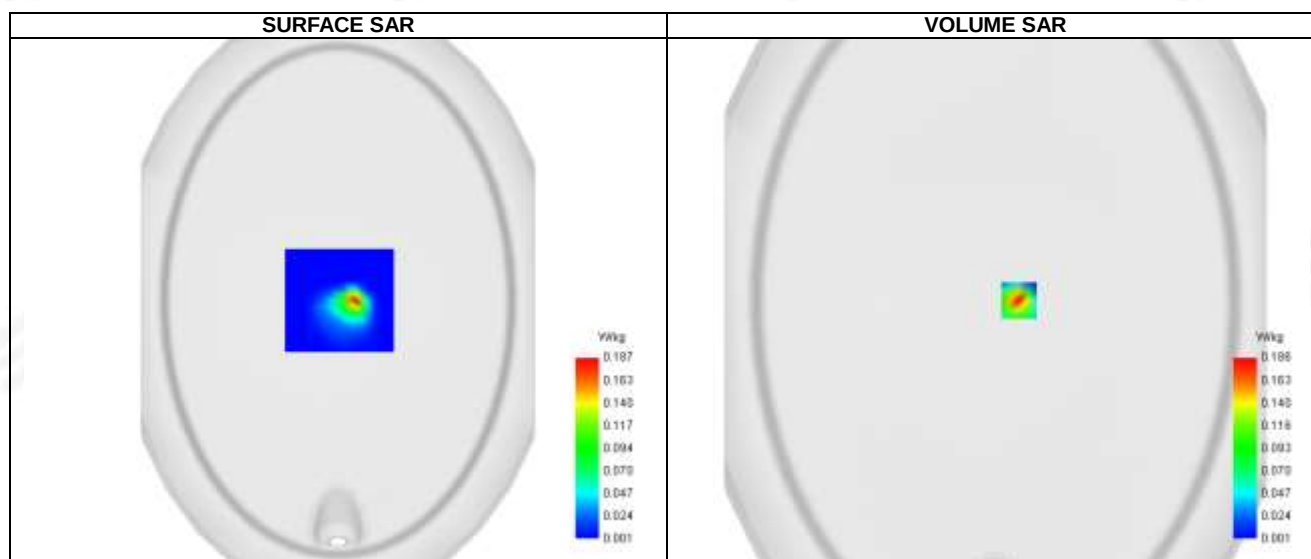
**F. 3D Image**



Appendix B. SAR Test Plots

Plot 1: DUT: laptop; EUT Model: K156

Test Date	2025-06-15
ConvF	1.80
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	2.4G WLAN_ANT_1
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	39.66
Conductivity (S/m)	1.85



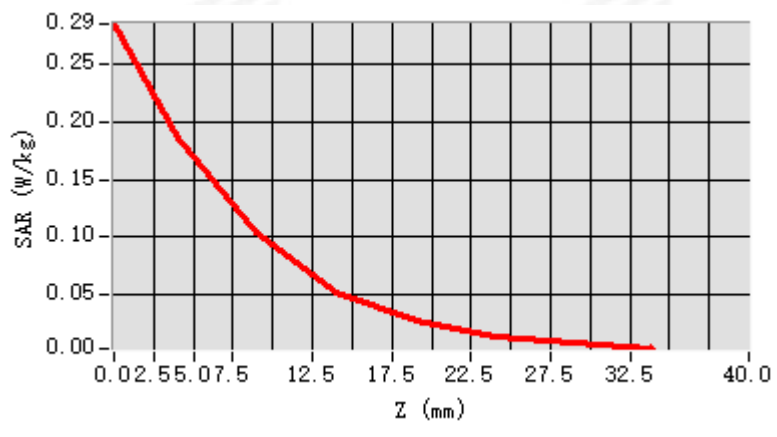
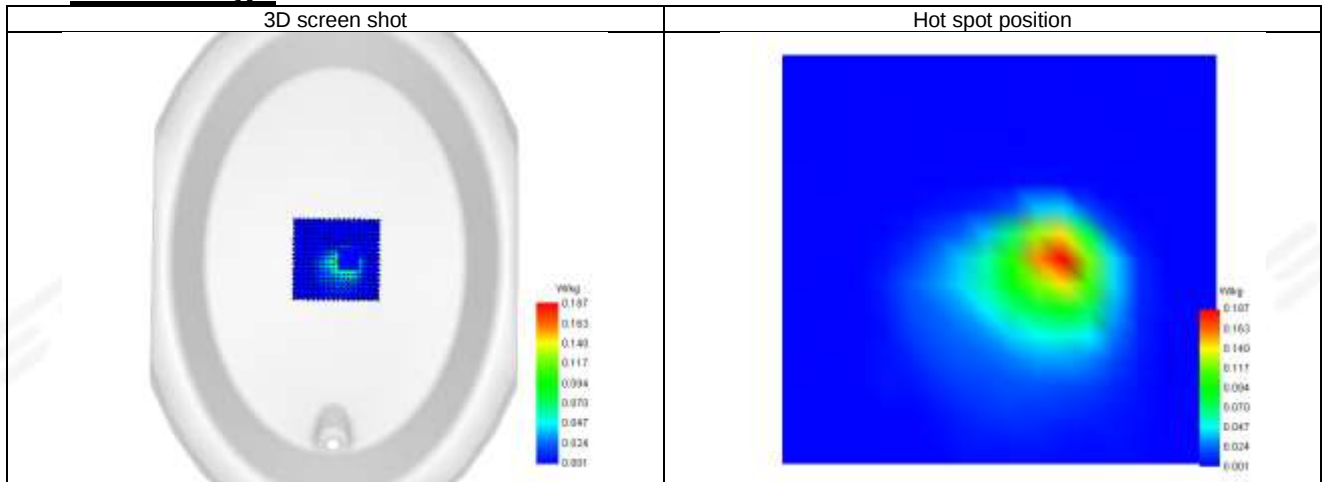
Maximum location: X=21.00, Y=0.00 ; SAR Peak: 0.29 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.080
SAR 1g (W/Kg)	0.169
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	55.717270

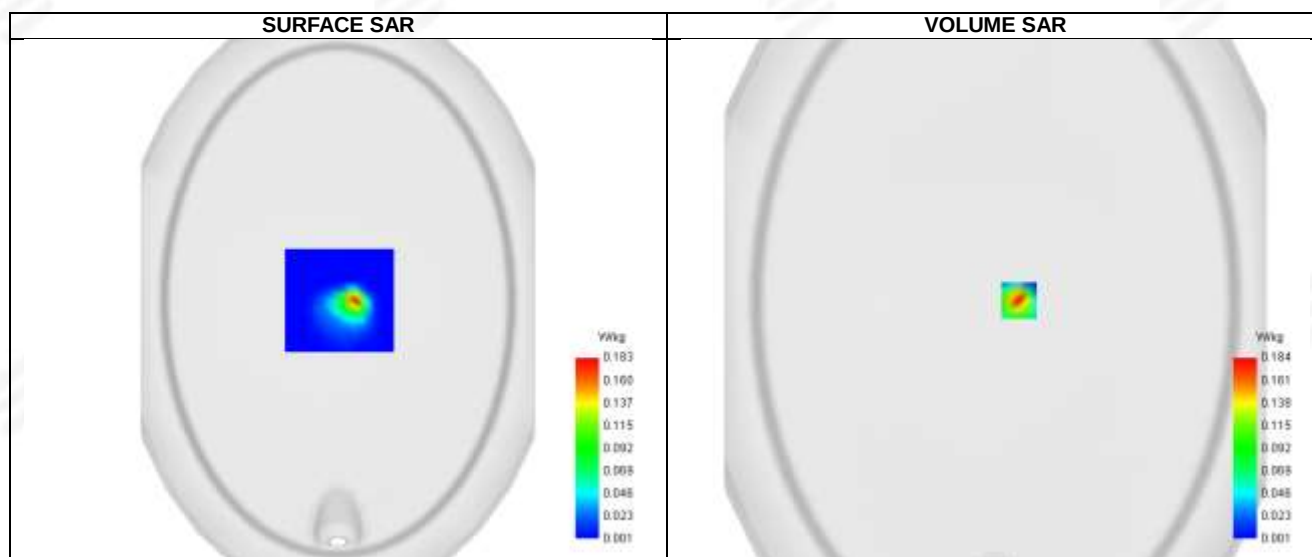
**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.285	0.186	0.104	0.052	0.027	0.014	0.007

**F. 3D Image**

**Plot 2: DUT: laptop; EUT Model: K156**

Test Date	2025-06-15
ConvF	1.80
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	2.4G WLAN_ANT_2
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	39.66
Conductivity (S/m)	1.85



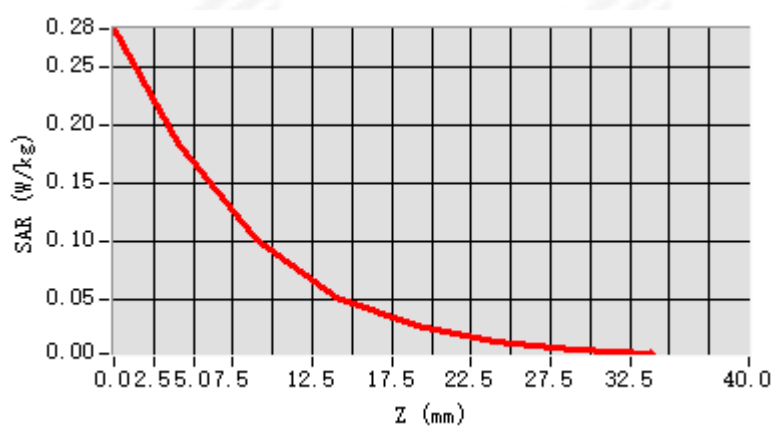
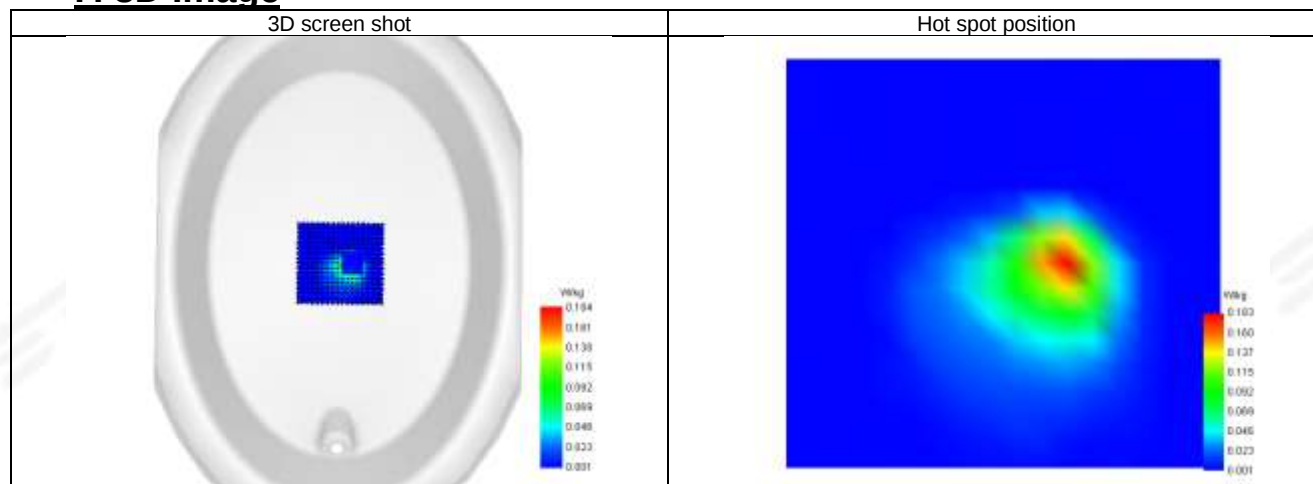
Maximum location: X=21.00, Y=0.00 ; SAR Peak: 0.29 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.079
SAR 1g (W/Kg)	0.160
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	55.539066

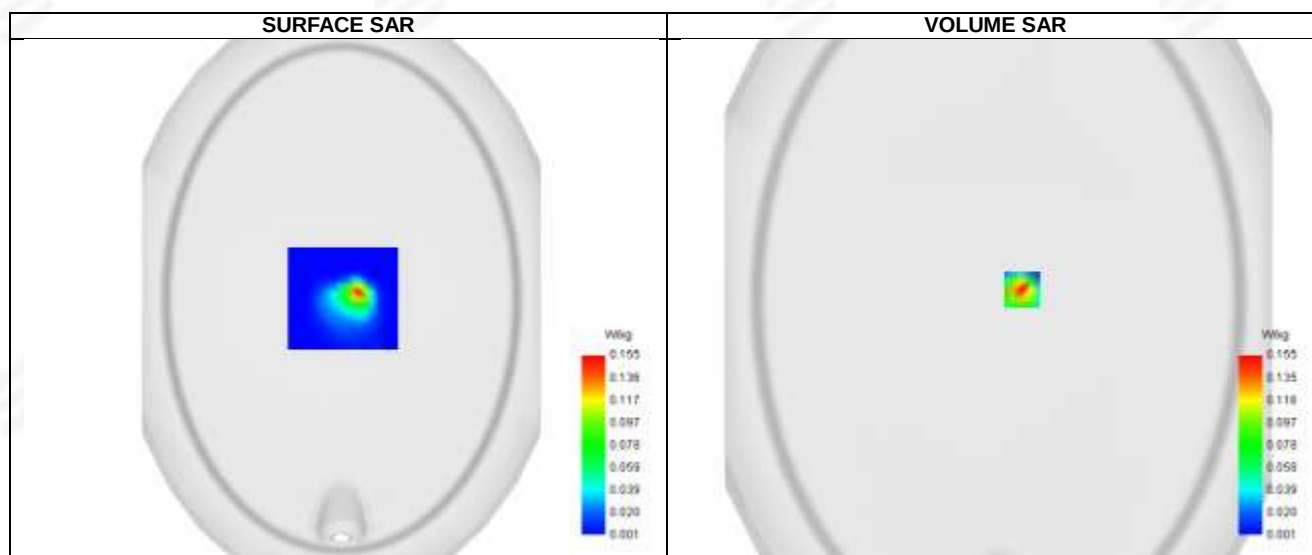
**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.282	0.184	0.102	0.051	0.027	0.014	0.007

**F. 3D Image**

**Plot 3: DUT: laptop; EUT Model: K156**

Test Date	2025-06-15
ConvF	1.80
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	2.4G WLAN_MIMO_ANT_1
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	39.66
Conductivity (S/m)	1.85



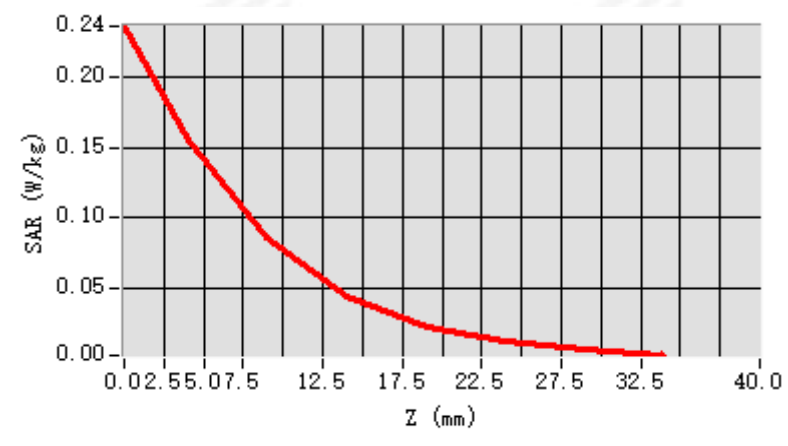
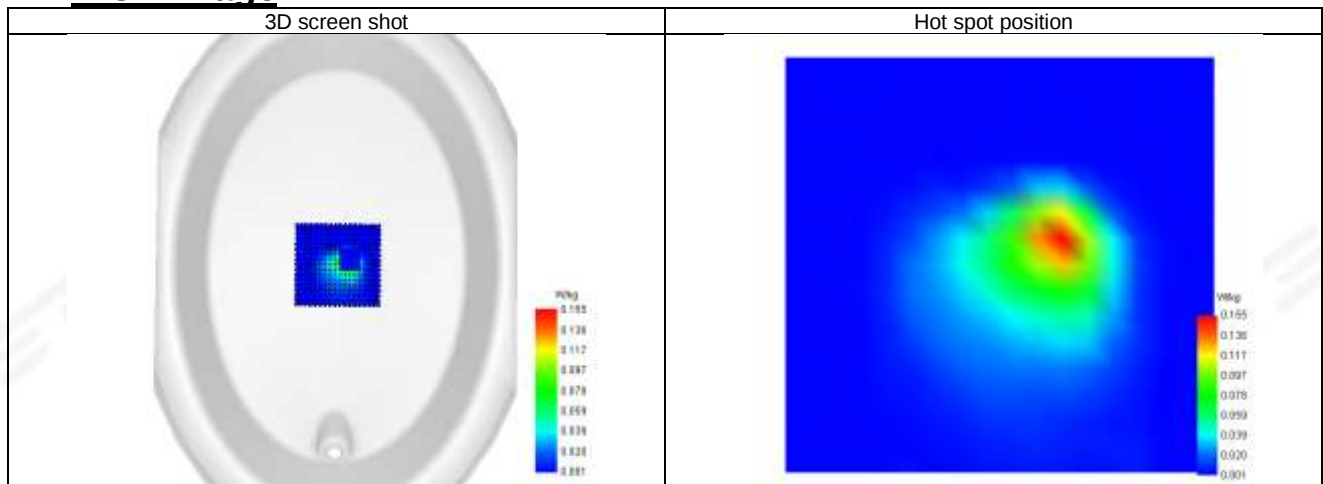
Maximum location: X=21.00, Y=8.00 ; SAR Peak: 0.24 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.068
SAR 1g (W/Kg)	0.140
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	56.191942

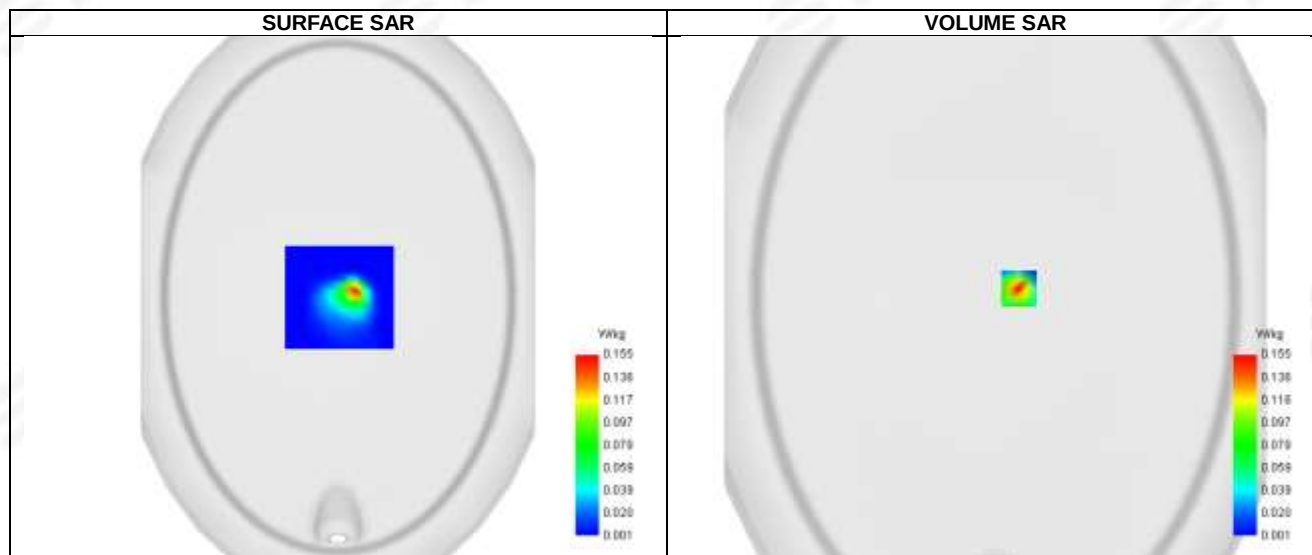
**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.236	0.155	0.087	0.044	0.023	0.012	0.006

**F. 3D Image**

**Plot 4: DUT: laptop; EUT Model: K156**

Test Date	2025-06-15
ConvF	1.80
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	2.4G WLAN_MIMO_ANT_2
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	39.66
Conductivity (S/m)	1.85



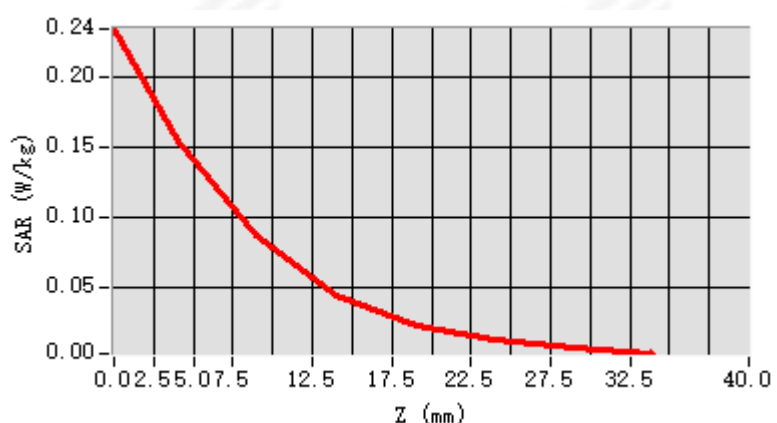
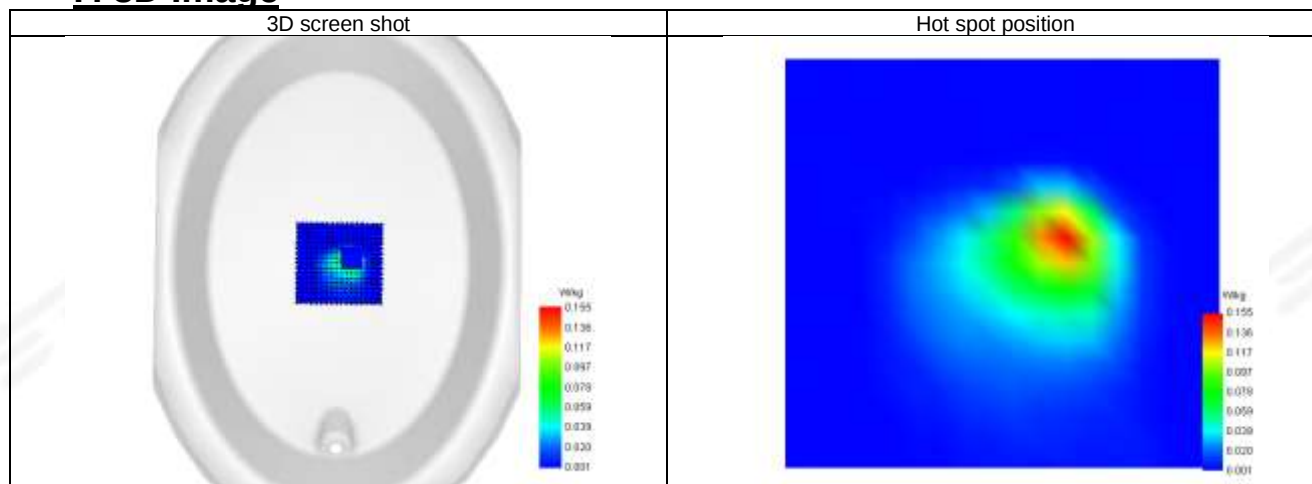
Maximum location: X=21.00, Y=8.00 ; SAR Peak: 0.24 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.068
SAR 1g (W/Kg)	0.141
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	56.417957

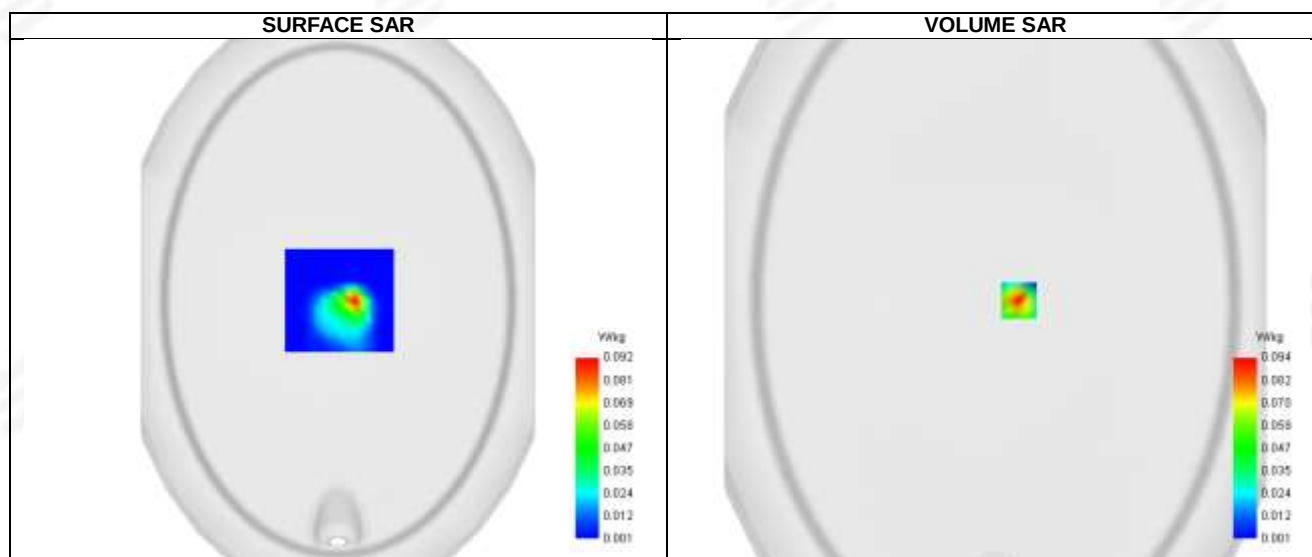
**E. Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.235	0.155	0.088	0.043	0.023	0.012	0.006

**F. 3D Image**

**Plot 5: DUT: laptop; EUT Model: K156**

Test Date	2025-06-15
ConvF	1.80
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	BT
Signal	GFSK (Crest factor: 1.0)
Frequency (MHz)	2480
Relative permittivity (real part)	39.99
Conductivity (S/m)	1.78



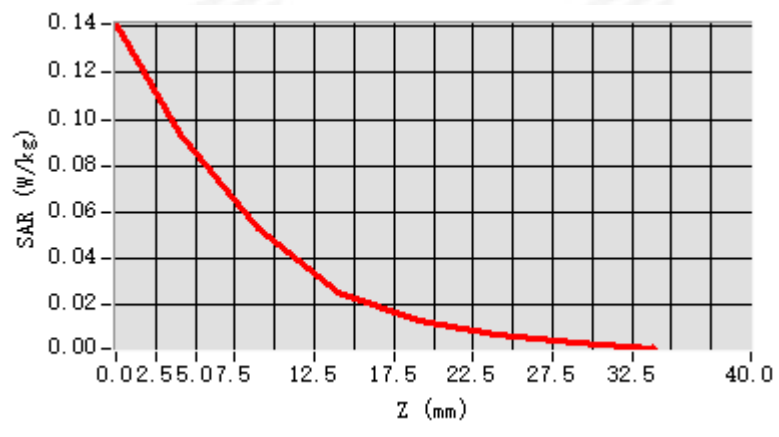
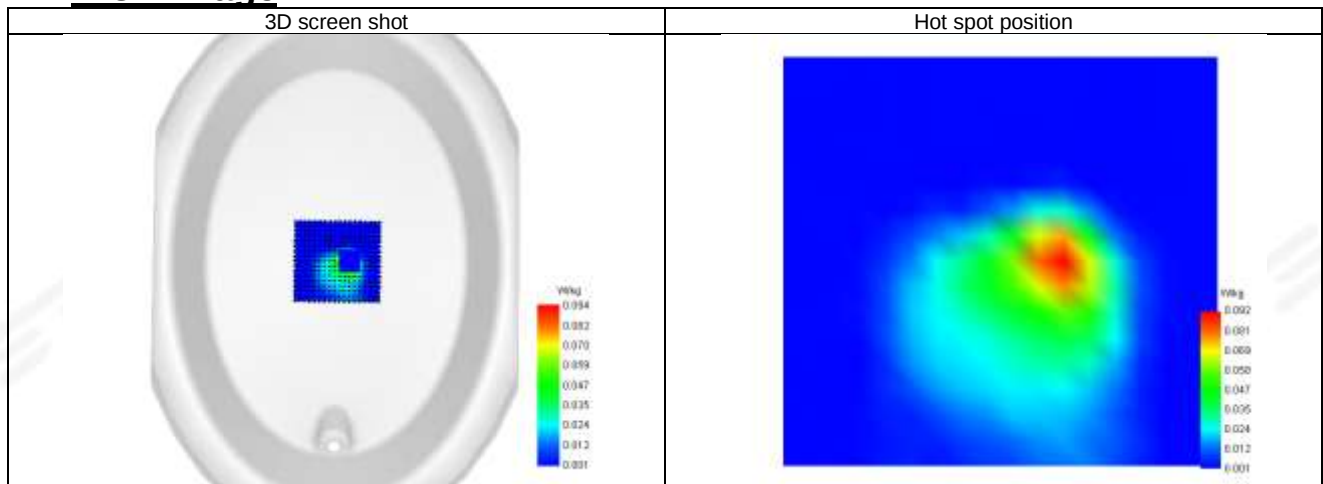
Maximum location: X=21.00, Y=0.00 ; SAR Peak: 0.14 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.041
SAR 1g (W/Kg)	0.085
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	56.438528

**E. Z Axis Scan**

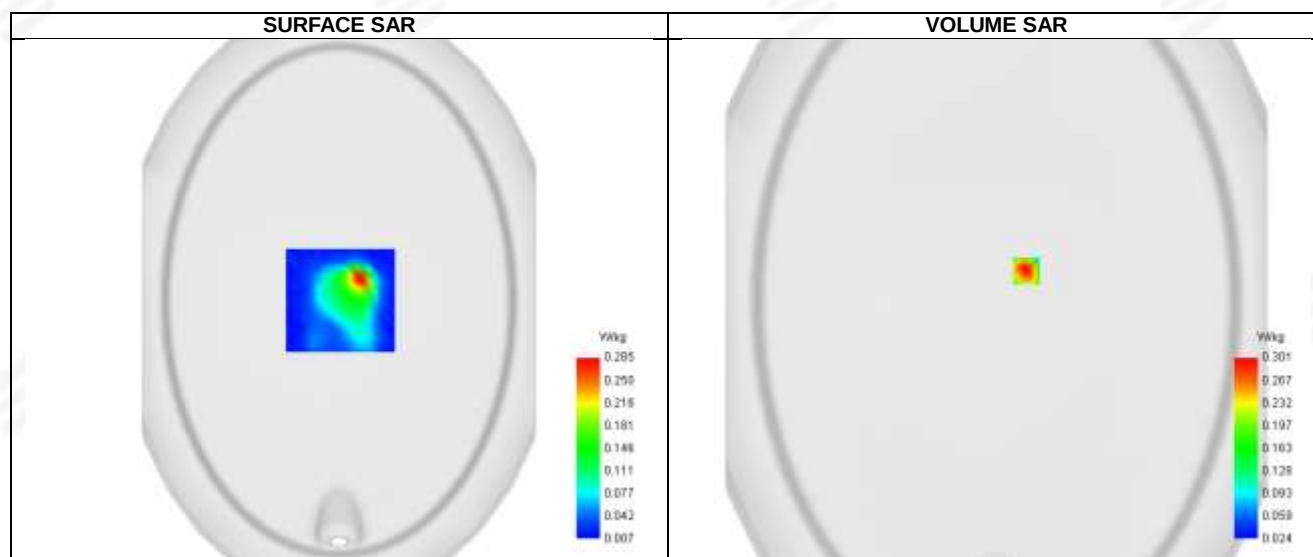
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.141	0.094	0.053	0.025	0.013	0.007	0.003

**F. 3D Image**



Plot 6: DUT: laptop; EUT Model: K156

Test Date	2025-06-16
ConvF	1.35
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Validation plane
Device Position	Back Side
Band	5.8G WLAN_ANT_1
Signal	IEEE802.a(Crest factor: 1.0)
Frequency (MHz)	5825
Relative permittivity (real part)	35.21
Conductivity (S/m)	5.41

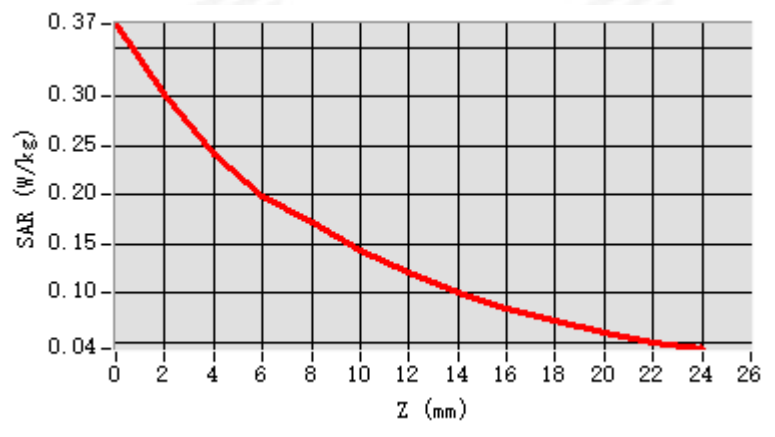
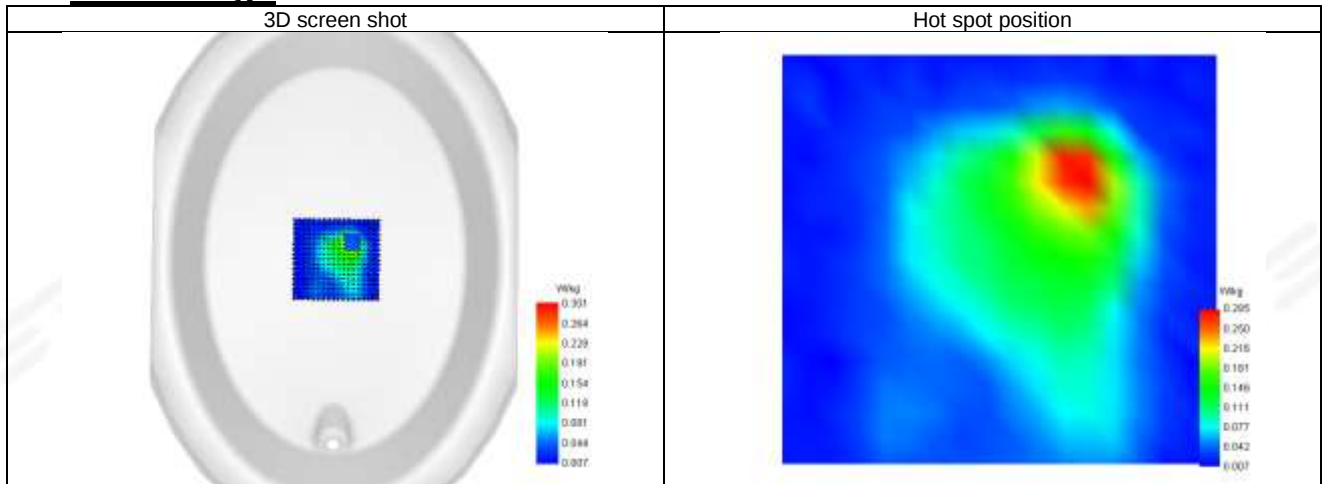


D. SAR 1g & 10g

SAR 10g (W/Kg)	0.130
SAR 1g (W/Kg)	0.231
Horizontal validation criteria: minimum distance (mm)	12.649111
Vertical validation criteria: SAR ratio M2/M1 (%)	80.257424

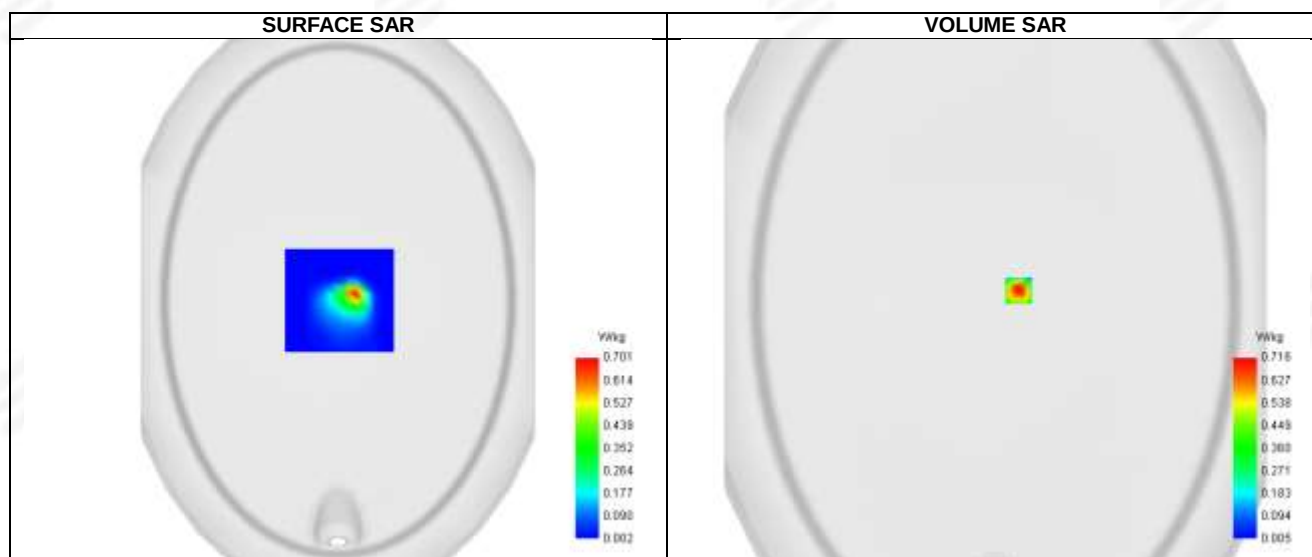
**E. Z Axis Scan**

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.374	0.301	0.242	0.199	0.172	0.144	0.121	0.101	0.085	0.071	0.059	0.050

**F. 3D Image**

**Plot 7: DUT: laptop; EUT Model: K156**

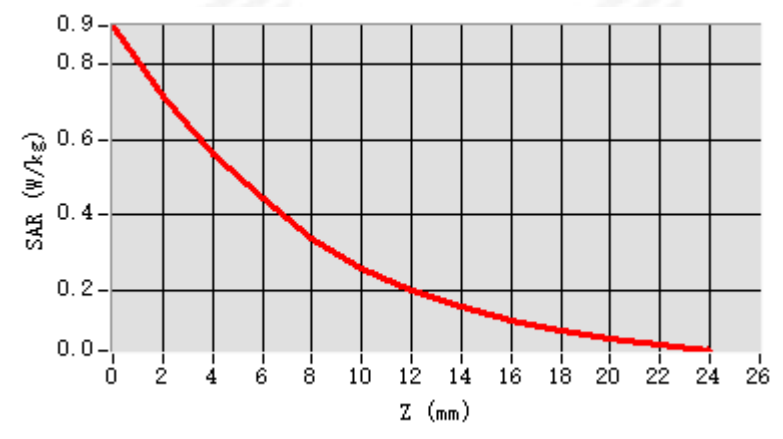
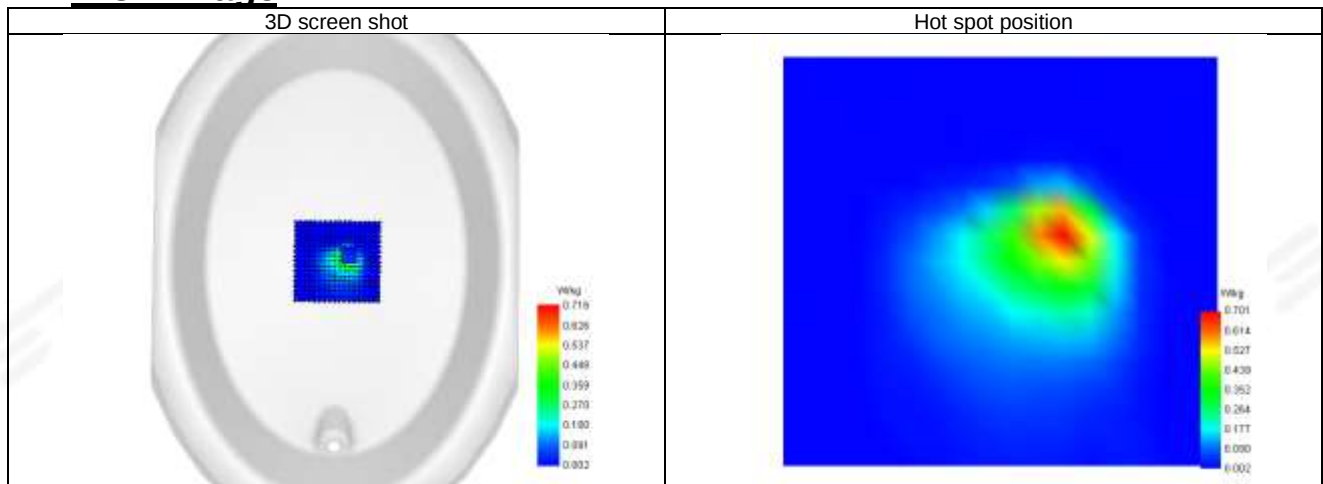
Test Date	2025-06-16
ConvF	1.35
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Validation plane
Device Position	Back Side
Band	5.8G WLAN_ANT_2
Signal	IEEE802.a(Crest factor: 1.0)
Frequency (MHz)	5825
Relative permittivity (real part)	35.21
Conductivity (S/m)	5.41

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.239
SAR 1g (W/Kg)	0.508
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	78.511364

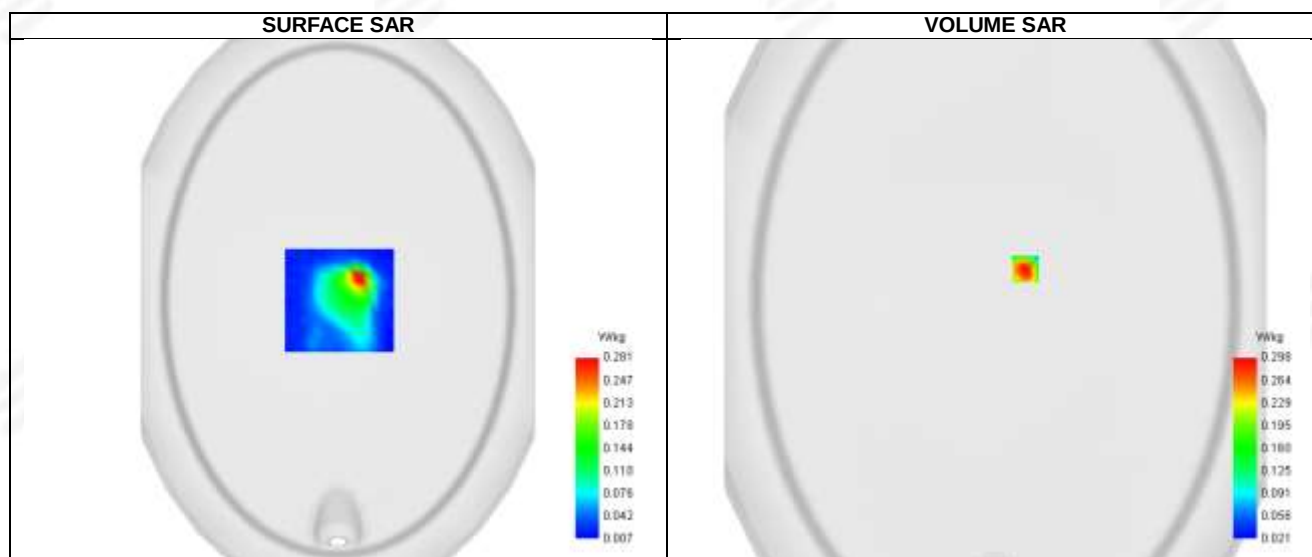
**E. Z Axis Scan**

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.900	0.716	0.562	0.445	0.338	0.262	0.203	0.158	0.122	0.095	0.074	0.057

**F. 3D Image**

**Plot 8: DUT: laptop; EUT Model: K156**

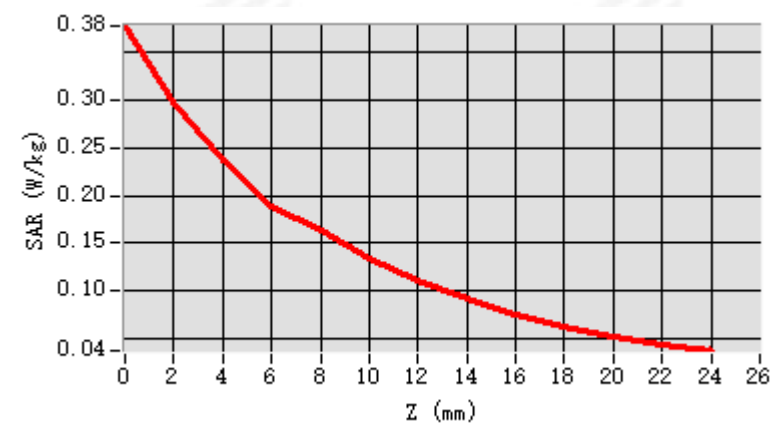
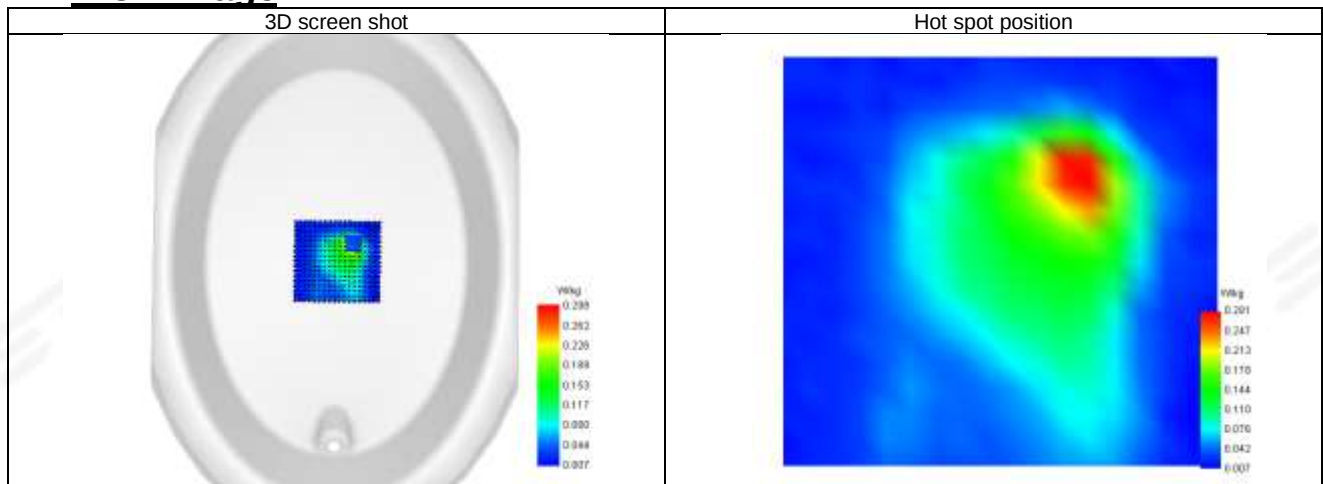
Test Date	2025-06-16
ConvF	1.35
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Validation plane
Device Position	Back Side
Band	5.8G WLAN_MIMO_ANT_1
Signal	802.11 n-HT20 (Crest factor: 1.0)
Frequency (MHz)	5785
Relative permittivity (real part)	36.41
Conductivity (S/m)	5.11

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.119
SAR 1g (W/Kg)	0.224
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	79.646710

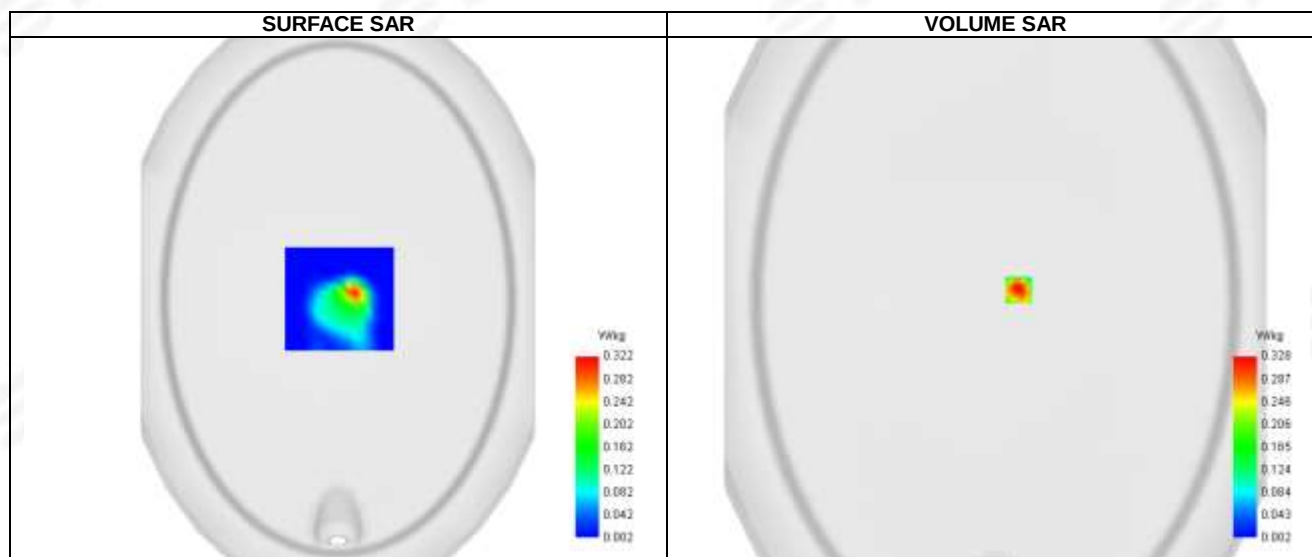
**E. Z Axis Scan**

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.378	0.298	0.238	0.188	0.163	0.135	0.111	0.092	0.076	0.063	0.052	0.043

**F. 3D Image**

**Plot 9: DUT: laptop; EUT Model: K156**

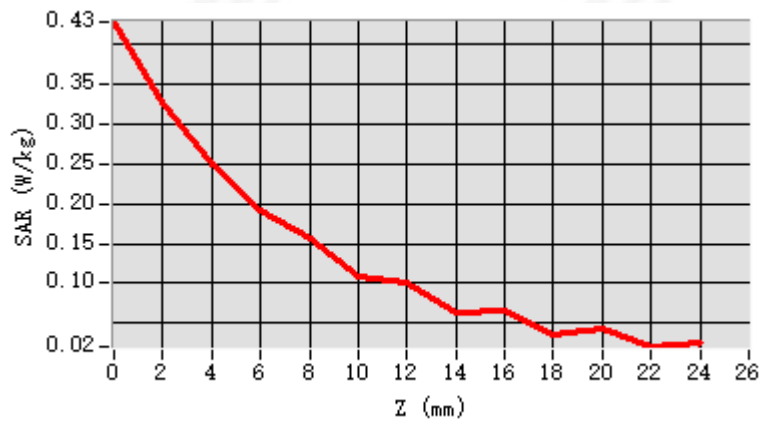
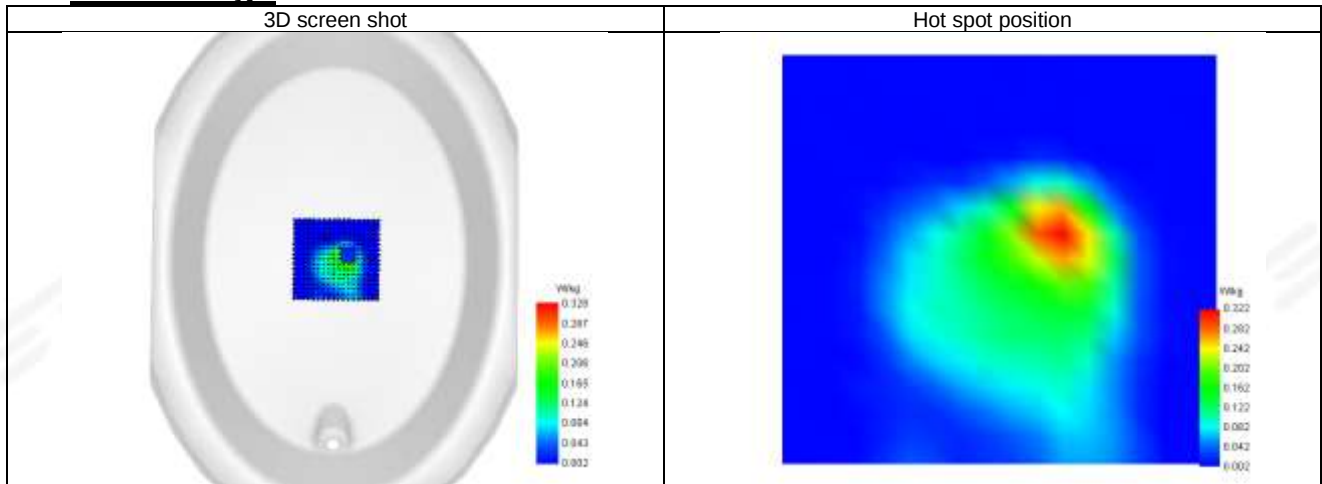
Test Date	2025-06-16
ConvF	1.35
Probe	SN 08/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Validation plane
Device Position	Back Side
Band	5.8G WLAN_MIMO_ANT_2
Signal	802.11 n-HT20 (Crest factor: 1.0)
Frequency (MHz)	5785
Relative permittivity (real part)	36.41
Conductivity (S/m)	5.11

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.115
SAR 1g (W/Kg)	0.238
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	76.900222

**E. Z Axis Scan**

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.427	0.328	0.249	0.193	0.157	0.110	0.102	0.063	0.066	0.036	0.043	0.021

**F. 3D Image**



Appendix C. Probe Calibration and Dipole Calibration Report

Refer the appendix Calibration Report.

※※※※END OF THE REPORT※※※※