



SAR Test Report

Report No.:STS2508160H02

Issued for

Shenzhen Gotron Electronic CO.,LTD

7B01, Building A, Block 1, Anhongji Tianyao Plaza, Longhua
District, Shenzhen City, Guangdong Province, China

Product Name: Smart Phone

Brand Name: ulefone

Model Name: RugKing 4 Pro

Series Model(s): GQ3129, RugKing 4, RugKing 4 Ultra,
RugKing 4E, RugKing 4S, RugKing 4 Lite,
RugKing 4 Pro+, RugKing 4s, RugKing 4s
Pro

FCC ID: 2AOWK-3129

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

Max. Report Head: 0.751 W/kg
SAR (1g) Body: 0.555 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 Gotron Electronic CO.,LTD
Address : 7B01, Building A, Block 1, Anhongji Tianyao Plaza, Longhua District, Shenzhen City, Guangdong Province, China
Manufacturer's Name : Shenzhen Gotron Electronic CO.,LTD
Address : 7B01, Building A, Block 1, Anhongji Tianyao Plaza, Longhua District, Shenzhen City, Guangdong Province, China

Product description

Product name : Smart Phone
Brand name : ulefone
Model name : RugKing 4 Pro
Series Model..... : GQ3129, RugKing 4, RugKing 4 Ultra, RugKing 4E, RugKing 4S, RugKing 4 Lite, RugKing 4 Pro+, RugKing 4s, RugKing 4s Pro
ANSI/IEEE Std. C95.1
Standards..... : 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..... : 09 Jul. 2025 ~ 12 Jul. 2025

Date of Issue..... : 20 Sep. 2025

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

Testing Engineer :

Xin Liu

(Xin.Liu)

Technical Manager :

Shi fan. long

(Shifan. Long)

Authorized Signatory :

Bovey Yang

(Bovey Yang)





Table of Contents

1. General Information	5
1.1 EUT Description	5
1.2 Test Environment	7
1.3 Test Factory	7
2. Test Standards and Limits	8
3. SAR Measurement System	9
3.1 Definition of Specific Absorption Rate (SAR)	9
3.2 SAR System	9
4. Tissue Simulating Liquids	12
4.1 Simulating Liquids Parameter Check	12
5. SAR System Validation	16
5.1 Validation System	16
5.2 Validation Result	17
6. SAR Evaluation Procedures	18
7. EUT Antenna Location Sketch	19
7.1 SAR test exclusion consider table	20
8. EUT Test Position	23
8.1 Define Two Imaginary Lines on the Handset	23
8.2 Body-worn Position Conditions:	24
9. Uncertainty	25
9.1 Measurement Uncertainty	25
10. Conducted Power Measurement	28
10.1 Test Result	28
11. EUT and Test Setup Photo	52
11.1 EUT Photo	52
11.2 Setup Photo	55
12. SAR Result Summary	61
12.1 Head SAR	61
12.2 Body-worn SAR	64
12.3 Simultaneous Multi-band Transmission Evaluation	67
13. Equipment List	69
Appendix A. System Validation Plots	70
Appendix B. SAR Test Plots	88
Appendix C. Probe Calibration and Dipole Calibration Report	70

**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	20 Sep. 2025	STS2508160H02	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	Smart Phone			
Brand Name	ulefone			
Model Name	RugKing 4 Pro			
Series Model	GQ3129, RugKing 4, RugKing 4 Ultra, RugKing 4E, RugKing 4S, RugKing 4 Lite, RugKing 4 Pro+, RugKing 4s, RugKing 4s Pro			
Model Difference	All models are the same circuit and RF module, except for model names.			
Sample number	250822008-3			
Battery	Model: 3129 Rated Voltage: 3.87 V Charge Limit Voltage: 4.45V Capacity: 10000mAh			
Device Category	Portable			
Product stage	Production unit			
RF Exposure Environment	General Population / Uncontrolled			
Hardware Version	N/A			
Software Version	N/A			
Frequency Range	GSM 850: 824 MHz ~ 849 MHz PCS1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 41: 2535-2655 MHz / 2535-2655 MHz LTE Band 66: 1710 MHz ~ 1780 MHz WLAN 802.11b/g/n20: 2412 MHz ~ 2462 MHz WLAN 802.11n40: 2422 MHz ~ 2452 MHz WLAN 802.11a/n20/ac20: 5150 ~ 5250 MHz WLAN 802.11a/n20/ac20: 5250 ~ 5350 MHz WLAN 802.11a/n20/ac20: 5725 ~ 5850 MHz Bluetooth: 2402 MHz to 2480 MHz			
Max. Reported SAR(1g): (Limit: 1.6W/kg) Test distance: Head: 0mm Body: 10mm	Band	Mode	Head (W/kg)	Body (W/kg)
	PCE	GSM 850	0.751	0.382
	PCE	GSM 1900	0.509	0.249
	PCE	WCDMA Band II	0.078	0.434
	PCE	WCDMA Band V	0.081	0.395
	PCE	WCDMA Band IV	0.132	0.252
	PCE	LTE Band 2	0.107	0.555
	PCE	LTE Band 4	0.114	0.504
	PCE	LTE Band 5	0.165	0.294



	PCE	LTE Band 7	0.159	0.461
	PCE	LTE Band 12	0.102	0.208
	PCE	LTE Band 17	0.094	0.204
	PCE	LTE Band 41	0.045	0.398
	PCE	LTE Band 66	0.124	0.348
	DTS	2.4G WLAN	0.166	0.071
	DSS	BT ^{NOTE}	0.491	0.246
	NII	5.2G WLAN	0.142	0.236
	NII	5.3G WLAN	0.112	0.136
	NII	5.8G WLAN	0.074	0.087
1-g Sum SAR			1.242	0.801
FCC Equipment Class	Licensed Portable Transmitter Held to Ear (PCE) Part 15 Spread Spectrum Transmitter (DSS) Digital Transmission System (DTS) Unlicensed National Information Infrastructure TX(NII)			
Operating Mode:	GSM: GSM Voice; GPRS/EGPRS Class 12 WCDMA: RMC, HSDPA, HSUPA Release 6 LTE: QPSK, 16QAM 2.4G WLAN : 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 5G WLAN: 802.11a(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM):BPSK,QPSK,16-QAM,64-QAM,256-QAM Bluetooth: GFSK + π /4DQPSK+8DPSK BLE: GFSK			
Antenna Specification:	GSM/WCDMA/LTE: FPC Antenna Bluetooth: FPC Antenna WLAN: FPC Antenna			
SIM Card	Support dual-SIM, dual standby, the multiple SIM card with two lines cannot transmitting at the same time			
Hotspot Mode	Not Support			
DTM Mode	Not Support			
Note: 1. The dual SIM card mobile has 2 SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (Single active) 2. After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 card to perform all tests. 3. 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.

A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong 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 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
8	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
9	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
10	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

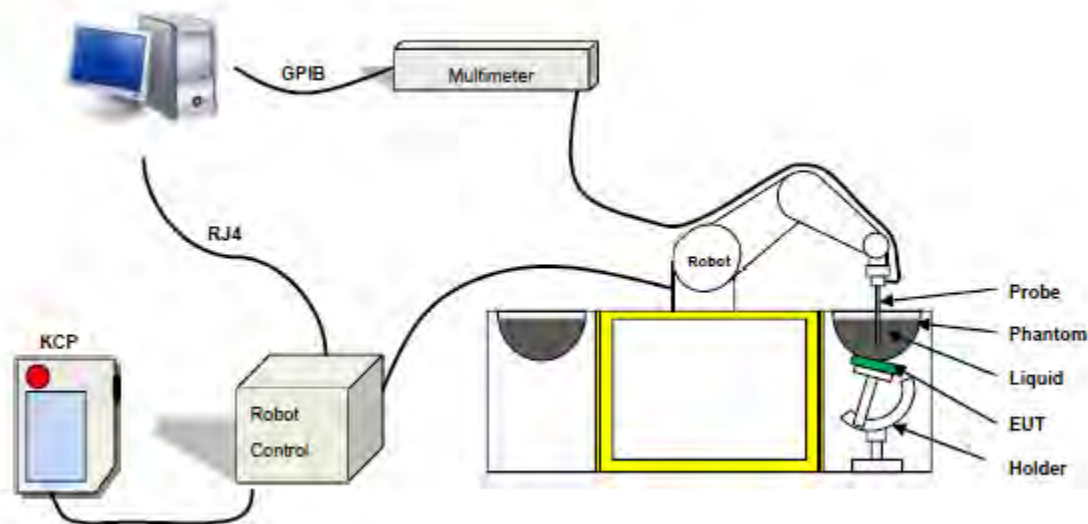
$$SAR = \frac{\sigma E^2}{\rho}$$

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.

SN 32/14 SAM115



Figure-SN 21/21 ELLI48



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]					
2025-07-09	23.2	45	704	23.0	Permittivity	42.15	43.35	2.86	±10
					Conductivity	0.89	0.89	0.35	±10
2025-07-09	23.3	45	708	23.0	Permittivity	42.13	42.49	0.86	±10
					Conductivity	0.89	0.89	0.32	±10
2025-07-09	23.3	46	711	23.0	Permittivity	42.11	42.36	0.60	±10
					Conductivity	0.89	0.91	2.55	±10
2025-07-09	23.3	46	750	23.0	Permittivity	41.90	42.20	0.72	±10
					Conductivity	0.89	0.87	-2.25	±10
2025-07-09	23.7	50	824.2	23.5	Permittivity	41.55	41.16	-0.94	±10
					Conductivity	0.90	0.95	5.70	±10
2025-07-09	23.7	50	826.4	23.3	Permittivity	41.54	41.00	-1.30	±10
					Conductivity	0.90	0.90	0.11	±10
2025-07-09	23.7	51	829	23.4	Permittivity	41.53	41.68	0.37	±10
					Conductivity	0.90	0.97	7.86	±10
2025-07-09	23.7	51	835	23.4	Permittivity	41.50	42.05	1.33	±10
					Conductivity	0.90	0.92	2.22	±10
2025-07-09	23.8	50	836.6	23.5	Permittivity	41.49	42.02	1.27	±10
					Conductivity	0.90	0.94	4.42	±10
2025-07-09	23.9	51	848.8	23.6	Permittivity	41.44	41.61	0.42	±10
					Conductivity	0.90	0.91	0.93	±10
2025-07-10	23.0	58	1720	22.7	Permittivity	40.11	40.03	-0.21	±10
					Conductivity	1.35	1.37	1.16	±10
2025-07-10	23.0	58	1740	22.8	Permittivity	40.09	40.54	1.13	±10
					Conductivity	1.37	1.39	1.78	±10
2025-07-10	23.1	59	1800	22.9	Permittivity	40.00	41.04	2.60	±10
					Conductivity	1.40	1.41	0.71	±10
2025-07-10	21.4	48	1860	21.1	Permittivity	40.00	41.10	2.75	±10
					Conductivity	1.40	1.44	2.86	±10
2025-07-10	21.5	48	1880	21.2	Permittivity	40.00	40.90	2.25	±10
					Conductivity	1.40	1.43	2.14	±10
2025-07-10	21.5	49	1900	21.2	Permittivity	40.00	40.52	1.30	±10
					Conductivity	1.40	1.35	-3.57	±10
2025-07-10	21.5	48	1907.6	21.2	Permittivity	40.00	40.63	1.58	±10
					Conductivity	1.40	1.41	0.71	±10



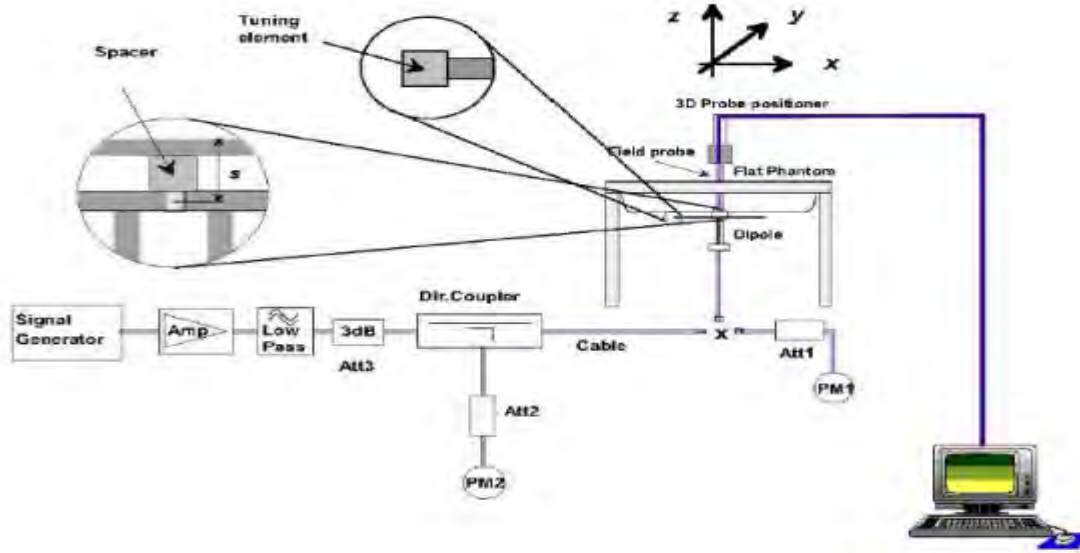
2025-07-11	21.6	44	2450	21.3	Permittivity	39.20	39.12	-0.20	±10
					Conductivity	1.80	1.83	1.67	±10
2025-07-11	21.7	44	2462	21.5	Permittivity	39.18	40.41	3.14	±10
					Conductivity	1.81	1.76	-2.80	±10
2025-07-11	22.0	54	2506	21.7	Permittivity	39.13	39.09	-0.09	±10
					Conductivity	1.86	1.90	2.17	±10
2025-07-11	22.0	54	2535	21.7	Permittivity	39.09	39.40	0.80	±10
					Conductivity	1.89	1.90	0.49	±10
2025-07-11	22.1	55	2560	21.8	Permittivity	39.05	39.55	1.27	±10
					Conductivity	1.92	1.95	1.70	±10
2025-07-11	22.2	55	2600	21.9	Permittivity	39.00	39.81	2.08	±10
					Conductivity	1.96	2.00	2.04	±10
2025-07-12	20.4	58	5200	20.1	Permittivity	36.00	36.78	2.17	±10
					Conductivity	4.66	4.63	-0.64	±10
2025-07-12	20.4	58	5240	20.1	Permittivity	35.96	36.85	2.47	±10
					Conductivity	4.70	4.65	-1.11	±10
2025-07-12	21.3	53	5320	20.9	Permittivity	35.88	36.44	1.56	±10
					Conductivity	4.78	4.76	-0.42	±10
2025-07-12	21.3	53	5400	21.1	Permittivity	35.80	37.06	3.52	±10
					Conductivity	4.86	4.83	-0.62	±10
2025-07-12	21.9	60	5800	21.6	Permittivity	35.30	36.17	2.46	±10
					Conductivity	5.27	5.27	0.00	±10
2025-07-12	21.9	60	5825	21.6	Permittivity	35.28	36.08	2.28	±10
					Conductivity	5.30	5.32	0.45	±10

5. SAR System Validation

5.1 Validation System

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

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





5.2 Validation Result

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

Date	Frequency (MHz)	Power	SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	Drift (%)	1W Target		Difference percentage		Limited %
						SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	1g	10g	
2025-07-09	750	100 mW	0.805	0.540	-1.28	8.49	5.53	-5.18%	-2.35%	10
		Normalize to 1 Watt	8.05	5.40						
2025-07-09	835	100 mW	0.942	0.593	0.40	9.63	6.15	-2.18%	-3.58%	10
		Normalize to 1 Watt	9.42	5.93						
2025-07-10	1800	100 mW	3.727	1.825	1.50	38.40	20.10	-2.94%	-9.20%	10
		Normalize to 1 Watt	37.27	18.25						
2025-07-10	1900	100 mW	3.928	1.936	0.43	39.84	20.20	-1.41%	-4.16%	10
		Normalize to 1 Watt	39.28	19.36						
2025-07-11	2450	100 mW	5.455	2.369	3.55	54.70	24.11	-0.27%	-1.74%	10
		Normalize to 1 Watt	54.55	23.69						
2025-07-11	2600	100 mW	5.543	2.222	-2.98	56.19	24.08	-1.35%	-7.72%	10
		Normalize to 1 Watt	55.43	22.22						
2025-07-12	5200	10 mW	1.551	0.536	2.39	163.88	57.29	-5.36%	-6.41%	10
		Normalize to 1 Watt	155.10	53.62						
2025-07-12	5800	10 mW	1.864	0.585	0.22	188.95	63.45	-1.34%	-7.83%	10
		Normalize to 1 Watt	186.42	58.48						

Note:

(1) We use a CW signal of 20dBm(750,835,1800,1900,2450,2600MHz) and 10dBm(5000-6000MHz) for system check, and then all SAR values are normalized to 1W forward power. The result must be within $\pm 10\%$ of target value.



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

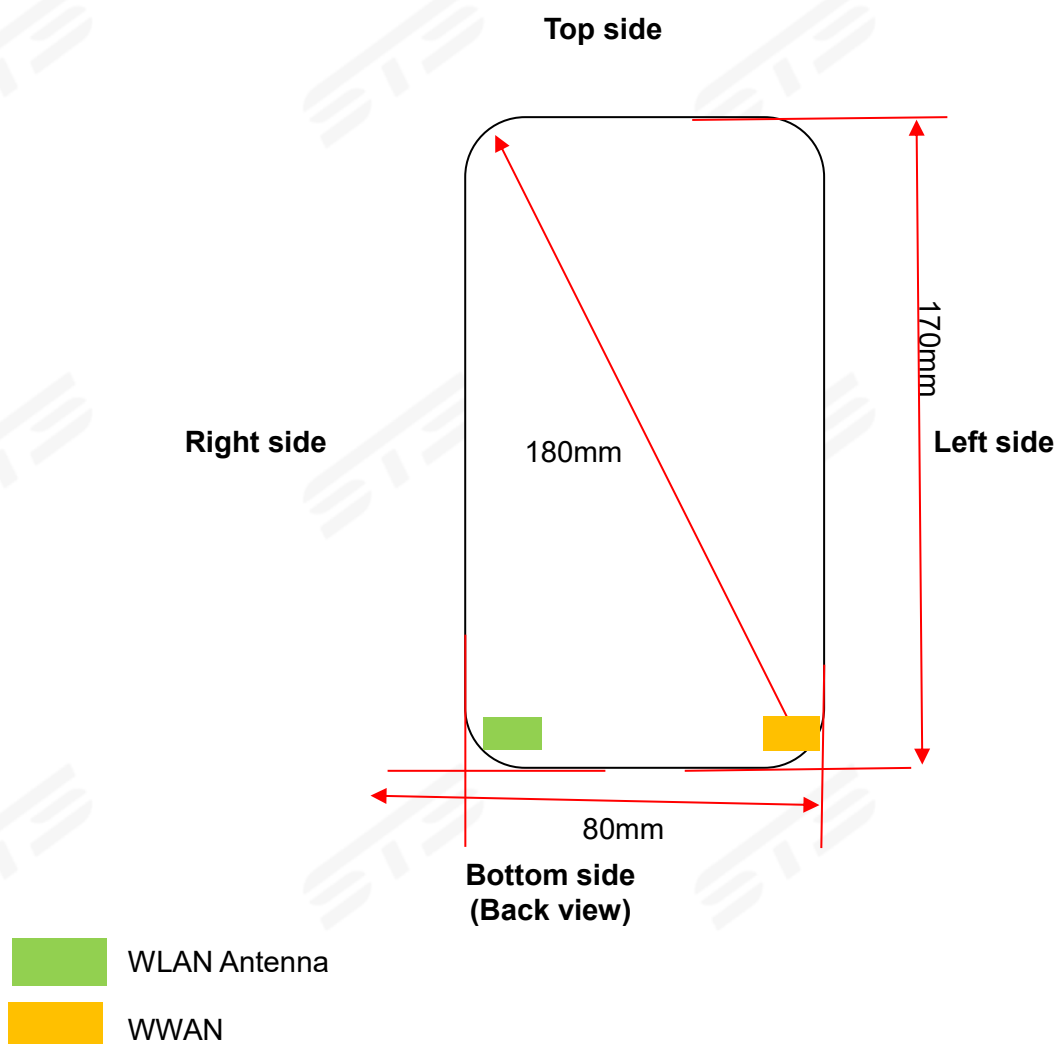
- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible 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 Smart phone, support GSM/WCDMA/LTE/WLAN/BT mode.



Antenna Separation Distance(cm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN/BT	0.5	0.5	0.5	8	17	0.5
WWAN	0.5	0.5	8	0.5	17	0.5

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



7.1 SAR test exclusion consider table

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

Exposure Position	Wireless Interface	GSM850	PCS1900	WCDMA II	WCDMA IV	WCDMA V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7
	Calculated Frequency(GHz)	0.8488	1.88	1.9076	1.74	0.8264	1.86	1.72	0.829	2.56
	Maximum Turn-up power (dBm)	32.5	29	23.5	23.5	24	24	23.5	23.5	23
	Maximum rated power(mW)	1778.28	794.33	223.87	223.87	251.19	251.19	223.87	223.87	199.53
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Back Side	exclusion threshold(mW)	9.04	3.39	3.35	3.30	6.55	3.42	3.64	9.34	2.65
	Testing required?	YES	YES	YES	YES	YES	YES	YES	YES	YES
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Front Side	exclusion threshold(mW)	9.04	3.39	3.35	3.30	6.55	3.42	3.64	9.34	2.65
	Testing required?	YES	YES	YES	YES	YES	YES	YES	YES	YES
	Separation distance (cm)	8	8	8	8	8	8	8	8	8
Left Side	exclusion threshold(mW)	469.35	564.50	562.86	626.84	664.79	565.70	574.58	464.90	530.86
	Testing required?	YES	YES	NO	NO	NO	NO	NO	NO	NO
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Right Side	exclusion threshold(mW)	9.04	3.39	3.35	3.30	6.55	3.42	3.64	9.34	2.65
	Testing required?	YES	YES	YES	YES	YES	YES	YES	YES	YES
	Separation distance (cm)	17	17	17	17	17	17	17	17	17
Top Side	exclusion threshold(mW)	1373.66	2267.38	2266.21	2609.87	2334.11	2268.23	2274.51	1344.97	2242.81
	Testing required?	YES	NO	NO	NO	NO	NO	NO	NO	NO
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Bottom Side	exclusion threshold(mW)	9.04	3.39	3.35	3.30	6.55	3.42	3.64	9.34	2.65
	Testing required?	YES	YES	YES	YES	YES	YES	YES	YES	YES
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Exposure Position	Wireless Interface	LTE Band 12	LTE Band 17	LTE Band 41	LTE Band 66	BT	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.8G WLAN
	Calculated Frequency(GHz)	0.704	0.711	2.506	1.72	2.402	2.462	5.24	5.32	5.825
	Maximum Turn-up power (dBm)	23.5	23.5	23	23.5	2	14	13	13	12.5
	Maximum rated power(mW)	223.87	223.87	199.53	223.87	1.58	25.12	19.95	19.95	17.78
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Back Side	exclusion threshold(mW)	11.75	11.59	2.69	3.64	2.79	2.73	1.49	1.47	1.37
	Testing required?	YES	YES	YES	YES	NO	YES	YES	YES	YES
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Front Side	exclusion threshold(mW)	11.75	11.59	2.69	3.64	2.79	2.73	1.49	1.47	1.37
	Testing required?	YES	YES	YES	YES	NO	YES	YES	YES	YES
	Separation distance (cm)	8	8	8	8	0.5	0.5	0.5	0.5	0.5
Left Side	exclusion threshold(mW)	435.26	437.00	533.12	574.58	2.79	2.73	1.49	1.47	1.37
	Testing required?	NO	NO	NO	NO	NO	YES	YES	YES	YES
	Separation distance (cm)	0.5	0.5	0.5	0.5	8	8	8	8	8
Right Side	exclusion threshold(mW)	11.75	11.59	2.69	3.64	537.64	535.00	460.35	458.96	450.75
	Testing required?	YES	YES	YES	YES	NO	NO	NO	NO	NO
	Separation distance (cm)	17	17	17	17	17	17	17	17	17
Top Side	exclusion threshold(mW)	1162.11	1172.44	2244.50	2274.51	2247.86	2245.90	2186.82	2185.65	2178.67
	Testing required?	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Bottom Side	exclusion threshold(mW)	11.75	11.59	2.69	3.64	2.79	2.73	1.49	1.47	1.37
	Testing required?	YES	YES	YES	YES	NO	YES	YES	YES	YES
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Note:

1. maximum power is the source-based time-average power and represents the maximum RF output power among production units.
2. Per KDB 447498 D04, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. Per KDB 447498 D04, if the maximum time-averaged power available does not exceed 1 mW. This stand-alone SAR exemption test.



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

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

Where

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

and

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

d = the separation distance (cm);

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

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



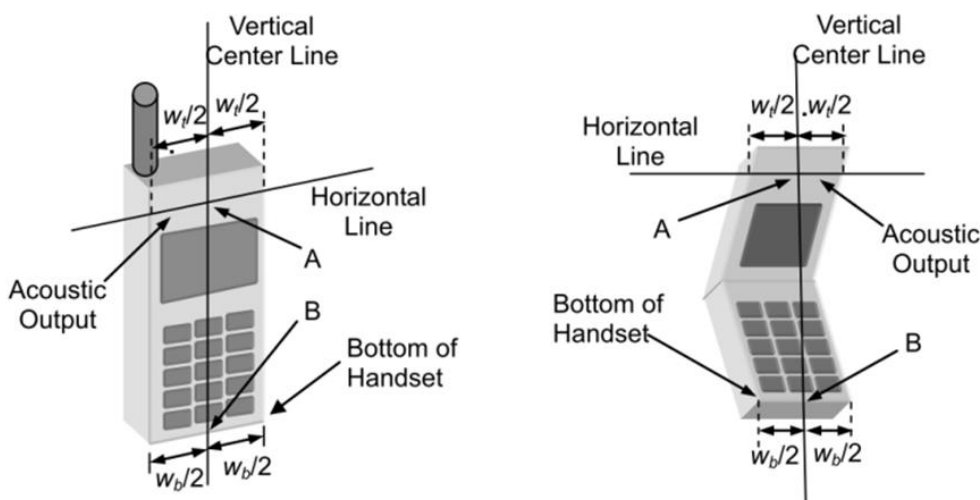
6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion 8. for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of each of these configurations is less than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

8. EUT Test Position

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

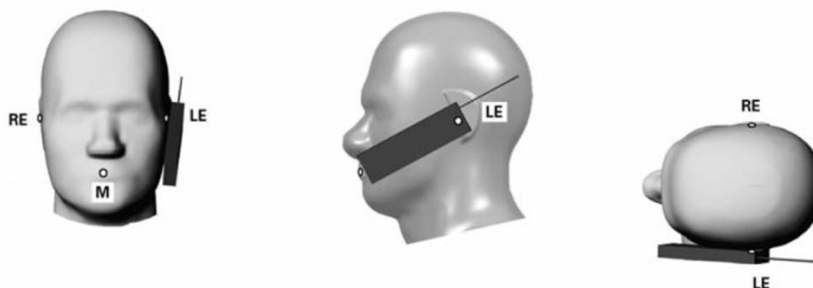
8.1 Define Two Imaginary Lines on the Handset

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



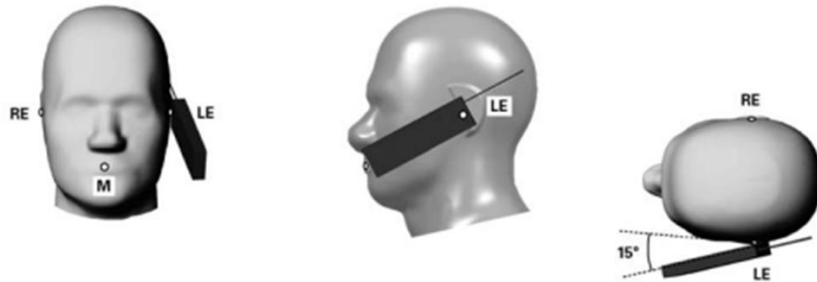
Cheek Position

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



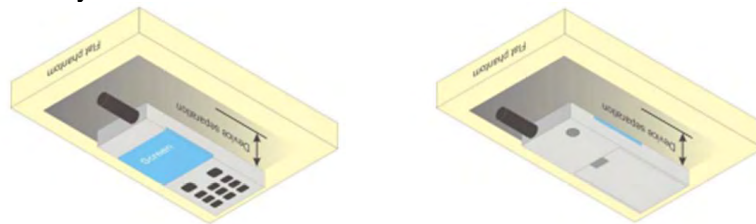
Title Position

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



8.2 Body-worn Position Conditions:

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D04 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative *test separation distance* configuration may be used to support both SAR conditions. When the *reported SAR* for a body-worn accessory, measured without a headset connected to the handset, is $> 1.2 \text{ W/kg}$, the highest *reported SAR* configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.





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	



SATIMO Uncertainty- SN 08/21 EPG0352									
° 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

Burst Average Power (dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM(GMSK, 1-Slot)	33.89	34.04	34.15	30.96	31.07	30.97
GPRS (GMSK, 1-Slot)	33.88	34.04	34.16	30.90	31.02	30.92
GPRS (GMSK, 2-Slot)	31.83	31.94	32.10	28.75	28.77	28.54
GPRS (GMSK, 3-Slot)	29.95	30.09	30.23	27.17	27.21	27.03
GPRS (GMSK, 4-Slot)	27.79	27.94	28.12	25.09	25.14	25.02
EGPRS(8PSK, 1-Slot)	28.16	27.54	27.66	27.15	27.39	27.36
EGPRS(8PSK, 2-Slot)	26.59	26.39	26.55	25.77	26.57	25.48
EGPRS(8PSK, 3-Slot)	24.72	24.09	24.32	23.27	24.30	23.24
EGPRS(8PSK, 4-Slot)	21.58	21.85	21.92	21.51	21.83	21.47
Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme. Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link						

Frame- Average Power(dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM(GMSK, 1-Slot)	24.86	25.01	25.12	21.93	22.04	21.94
GPRS (GMSK, 1-Slot)	24.85	25.01	25.13	21.87	21.99	21.89
GPRS (GMSK, 2-Slot)	25.81	25.92	26.08	22.73	22.75	22.52
GPRS (GMSK, 3-Slot)	25.69	25.83	25.97	22.91	22.95	22.77
GPRS (GMSK, 4-Slot)	24.78	24.93	25.11	22.08	22.13	22.01
EGPRS(8PSK, 1-Slot)	19.13	18.51	18.63	18.12	18.36	18.33
EGPRS(8PSK, 2-Slot)	20.57	20.37	20.53	19.75	20.55	19.46
EGPRS(8PSK, 3-Slot)	20.46	19.83	20.06	19.01	20.04	18.98
EGPRS(8PSK, 4-Slot)	18.57	18.84	18.91	18.50	18.82	18.46
Remark : 1. SAR testing was performed on the maximum frame-averaged power mode. 2. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum Burst - averaged power based on time slots. The calculated method is shown as below: Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB						

**WCDMA**

Band	WCDMA Band 2			WCDMA Band 4			WCDMA Band 5		
Channel	9262	9400	9538	1312	1413	1513	4132	4183	4233
Frequency (MHz)	1852.4	1880	1907.6	1712.6	1740	1752.4	826.4	836.6	846.6
RMC 12.2Kbps	23.06	23.26	23.19	23.48	23.40	23.40	23.81	23.93	23.91
HSDPA Subtest-1	22.65	22.42	22.02	22.74	22.51	22.34	23.93	23.56	23.30
HSDPA Subtest-2	21.98	22.87	22.72	21.72	22.95	22.76	23.20	23.96	23.56
HSDPA Subtest-3	22.31	22.30	22.55	22.42	22.20	22.87	23.03	23.23	23.71
HSDPA Subtest-4	22.16	22.36	21.97	22.70	22.37	22.50	23.51	23.21	23.05
HSUPA Subtest-1	22.43	22.36	21.91	22.74	22.39	22.18	23.88	23.51	23.35
HSUPA Subtest-2	21.87	22.51	22.79	22.07	22.76	22.99	23.06	23.88	23.91
HSUPA Subtest-3	22.56	22.34	22.25	22.75	22.51	22.25	23.65	23.29	23.25
HSUPA Subtest-4	22.79	22.49	22.35	22.92	22.62	22.31	23.90	23.66	23.40
HSUPA Subtest-5	21.92	21.91	22.43	22.50	22.42	22.53	23.16	23.20	23.65

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

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

UE Transmit Channel Configuration	CM(db)	MPR(db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	$0 \leq CM \leq 3.5$	$MAX(CM-1,0)$
Note: CM=1 for $\beta_c/\beta_d=12/15$, $\beta_{hs}/\beta_c=24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

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

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

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

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

**2.4G WLAN**

2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	Conducted Power (dBm)	Output Power (mW)
802.11b	1	2412	12.99	19.91
	6	2437	13.54	22.59
	11	2462	13.63	23.07
802.11g	1	2412	13.64	23.12
	6	2437	13.35	21.63
	11	2462	13.59	22.86
802.11 n-HT20	1	2412	13.33	21.53
	6	2437	13.96	24.89
	11	2462	13.38	21.78

Bluetooth

BT				
Mode	Channel Number	Frequency (MHz)	Conducted Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	-0.69	0.85
	39	2441	-0.97	0.80
	78	2480	-0.83	0.83
$\pi/4$ -QPSK(2Mbps)	0	2402	1.66	1.47
	39	2441	1.45	1.40
	78	2480	1.52	1.42
8DPSK(3Mbps)	0	2402	1.90	1.55
	39	2441	1.69	1.48
	78	2480	1.84	1.53

BLE

BLE				
Mode	Channel Number	Frequency (MHz)	Conducted Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	0.62	1.15
	19	2440	0.40	1.10
	39	2480	0.36	1.09

**WLAN (5.2Gband)**

5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11a	36	5180	12.17	16.48
	40	5200	11.72	14.86
	48	5240	12.00	15.85
802.11 n-HT20	36	5180	12.10	16.22
	40	5200	11.70	14.79
	48	5240	12.79	19.01
802.11ac-VHT20	36	5180	11.75	14.96
	40	5200	11.31	13.52
	48	5240	11.54	14.26

WLAN (5.3Gband)

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11a	52	5260	12.14	16.37
	60	5300	12.08	16.14
	64	5320	12.16	16.44
802.11 n-HT20	52	5260	12.06	16.07
	60	5300	12.07	16.11
	64	5320	12.06	16.07
802.11ac-VHT20	52	5260	12.01	15.89
	60	5300	12.86	19.32
	64	5320	12.93	19.63



WLAN (5.8Gband)

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11a	149	5745	11.27	13.40
	157	5785	11.27	13.40
	165	5825	11.96	15.70
802.11 n-HT20	149	5745	11.21	13.21
	157	5785	11.25	13.34
	165	5825	12.43	17.50
802.11ac-VHT20	149	5745	10.96	12.47
	157	5785	11.08	12.82
	165	5825	11.65	14.62



LTE Conducted Power

General Note:

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



LTE Band 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.24	23.17	23.04
1.4	1	2		23.28	23.21	23.14
1.4	1	5		23.23	23.14	22.87
1.4	3	0		23.06	23.24	23.01
1.4	3	1		23.00	23.16	23.03
1.4	3	2		23.06	23.21	22.89
1.4	6	0		21.47	21.67	21.69
1.4	1	0	16-QAM	22.12	22.19	22.55
1.4	1	2		22.10	22.23	22.59
1.4	1	5		22.12	22.16	22.54
1.4	3	0		22.23	22.28	22.33
1.4	3	1		22.23	22.18	22.33
1.4	3	2		22.29	22.17	22.29
1.4	6	0		20.51	20.84	20.85
3	1	0	QPSK	23.27	23.14	23.02
3	1	7		23.25	23.17	23.00
3	1	14		23.27	23.21	22.66
3	8	0		21.48	21.72	21.69
3	8	4		21.47	21.74	21.64
3	8	7		21.52	21.71	21.61
3	15	0		21.56	21.70	21.71
3	1	0	16-QAM	21.77	22.48	22.68
3	1	7		21.87	22.38	22.70
3	1	14		21.90	22.56	22.59
3	8	0		20.60	20.76	20.70
3	8	4		20.52	20.74	20.67
3	8	7		20.50	20.74	20.83
3	15	0		20.70	20.78	20.77



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.10	23.39	22.95
5	1	12		23.10	23.36	23.08
5	1	24		23.12	23.39	22.27
5	12	0		21.58	21.63	21.71
5	12	6		21.56	21.65	21.70
5	12	11		21.55	21.66	21.64
5	25	0		21.57	21.68	21.54
5	1	0		22.48	22.52	21.72
5	1	12	16-QAM	22.49	22.52	21.78
5	1	24		22.56	22.47	21.71
5	12	0		20.52	20.87	20.73
5	12	6		20.55	20.79	20.69
5	12	11		20.53	20.87	20.76
5	25	0		20.69	20.77	20.66
10	1	0	QPSK	23.32	23.20	23.34
10	1	24		23.36	23.22	23.38
10	1	49		23.39	23.27	22.96
10	25	0		21.57	21.71	21.66
10	25	12		21.58	21.77	21.60
10	25	24		21.62	21.74	21.76
10	50	0		21.58	21.62	21.59
10	1	0		21.79	22.68	22.29
10	1	24	16-QAM	21.84	22.76	22.32
10	1	49		21.92	22.83	22.33
10	25	0		20.66	20.95	20.84
10	25	12		20.69	20.94	20.88
10	25	24		20.77	20.94	20.87
10	50	0		20.64	20.93	20.85



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.33	23.12	23.42
15	1	37		23.39	23.16	23.39
15	1	74		23.48	23.26	22.70
15	36	0		21.58	21.63	21.67
15	36	18		21.68	21.71	21.69
15	36	39		21.67	21.70	21.75
15	75	0		21.53	21.73	21.67
15	1	0	16-QAM	21.88	22.91	22.09
15	1	38		21.94	22.93	22.09
15	1	75		21.92	23.04	22.01
15	36	0		20.76	20.90	20.74
15	36	18		20.79	20.94	20.77
15	36	39		20.76	20.93	20.75
15	75	0		20.75	20.72	20.84
20	1	0	QPSK	23.20	23.40	23.54
20	1	49		23.26	23.43	23.50
20	1	99		23.29	23.67	22.97
20	50	0		21.53	21.62	21.72
20	50	24		21.63	21.74	21.68
20	50	49		21.60	21.66	21.73
20	100	0		21.59	21.74	21.71
20	1	0	16-QAM	22.29	22.39	22.95
20	1	49		22.33	22.46	22.92
20	1	99		22.32	22.61	22.92
20	50	0		20.77	20.71	20.90
20	50	24		20.73	20.81	20.83
20	50	49		20.78	20.87	20.85
20	100	0		20.67	20.80	20.87



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.97	22.53	22.75
1.4	1	2		22.95	22.48	22.65
1.4	1	5		22.99	22.53	22.71
1.4	3	0		22.65	22.52	22.59
1.4	3	1		22.71	22.43	22.56
1.4	3	2		22.66	22.51	22.53
1.4	6	0		21.61	21.47	21.60
1.4	1	0	16-QAM	22.95	22.53	22.42
1.4	1	2		22.93	22.63	22.43
1.4	1	5		22.89	22.55	22.46
1.4	3	0		21.68	21.66	21.76
1.4	3	1		21.64	21.69	21.67
1.4	3	2		21.68	21.70	21.74
1.4	6	0		20.86	20.83	21.04
3	1	0	QPSK	22.97	22.58	22.65
3	1	7		22.96	22.51	22.68
3	1	14		22.88	22.55	22.68
3	8	0		21.55	21.51	21.62
3	8	4		21.65	21.59	21.62
3	8	7		21.62	21.49	21.52
3	15	0		21.67	21.58	21.59
3	1	0	16-QAM	21.88	22.64	22.42
3	1	7		21.93	22.61	22.48
3	1	14		21.83	22.60	22.44
3	8	0		20.81	20.61	21.03
3	8	4		20.89	20.59	21.12
3	8	7		20.74	20.62	20.92
3	15	0		20.58	20.63	20.72



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.55	22.71	22.68
5	1	12		22.48	22.72	22.68
5	1	24		22.49	22.72	22.71
5	12	0		21.70	21.53	21.53
5	12	6		21.50	21.53	21.49
5	12	11		21.55	21.52	21.52
5	25	0		21.52	21.50	21.60
5	1	0	16-QAM	22.10	22.22	21.88
5	1	12		21.99	22.20	21.97
5	1	24		21.99	22.17	21.95
5	12	0		20.74	20.49	20.73
5	12	6		20.65	20.44	20.76
5	12	11		20.67	20.48	20.79
5	25	0		20.81	20.54	20.76
10	1	0	QPSK	22.90	22.48	22.84
10	1	24		22.80	22.44	22.83
10	1	49		22.85	22.48	22.88
10	25	0		21.66	21.47	21.48
10	25	12		21.55	21.56	21.51
10	25	24		21.67	21.48	21.49
10	50	0		21.61	21.44	21.61
10	1	0	16-QAM	21.94	22.85	22.55
10	1	24		21.89	22.83	22.54
10	1	49		21.95	22.81	22.57
10	25	0		20.67	20.71	20.69
10	25	12		20.70	20.66	20.72
10	25	24		20.73	20.65	20.76
10	50	0		20.65	20.60	20.74



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.91	22.44	22.67
15	1	37		22.78	22.51	22.66
15	1	74		22.81	22.52	22.61
15	36	0		21.49	21.58	21.61
15	36	18		21.65	21.48	21.60
15	36	39		21.61	21.46	21.58
15	75	0		21.59	21.51	21.56
15	1	0	16-QAM	21.92	22.85	22.42
15	1	38		21.93	22.82	22.43
15	1	75		21.87	22.79	22.48
15	36	0		20.71	20.72	20.66
15	36	18		20.78	20.72	20.76
15	36	39		20.71	20.73	20.70
15	75	0		20.68	20.65	20.66
20	1	0	QPSK	22.87	22.71	22.66
20	1	49		23.01	22.70	22.71
20	1	99		22.69	22.74	22.78
20	50	0		21.63	21.50	21.53
20	50	24		21.64	21.56	21.57
20	50	49		21.53	21.53	21.64
20	100	0		21.52	21.55	21.57
20	1	0	16-QAM	22.35	22.54	22.18
20	1	49		22.31	22.48	22.16
20	1	99		22.29	22.52	22.26
20	50	0		20.75	20.61	20.66
20	50	24		20.84	20.68	20.73
20	50	49		20.76	20.70	20.78
20	100	0		20.73	20.60	20.78



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.28	22.84	22.10
1.4	1	2		23.29	22.70	22.04
1.4	1	5		23.26	22.80	21.90
1.4	3	0		23.02	22.72	21.89
1.4	3	1		23.05	22.83	21.99
1.4	3	2		23.05	22.75	21.99
1.4	6	0		22.51	22.26	21.38
1.4	1	0	16-QAM	23.19	22.88	21.79
1.4	1	2		23.20	22.88	21.85
1.4	1	5		23.18	22.82	21.76
1.4	3	0		21.91	21.75	20.98
1.4	3	1		21.95	21.79	21.05
1.4	3	2		21.96	21.78	20.95
1.4	6	0		21.61	21.54	20.69
3	1	0	QPSK	22.75	22.29	22.24
3	1	7		22.73	22.15	22.02
3	1	14		22.67	22.28	21.97
3	8	0		21.97	21.96	21.50
3	8	4		22.01	21.85	21.43
3	8	7		21.83	21.78	21.45
3	15	0		21.95	21.77	21.47
3	1	0	16-QAM	21.62	22.37	21.96
3	1	7		21.66	22.22	21.76
3	1	14		21.59	22.31	21.65
3	8	0		21.11	20.80	20.62
3	8	4		21.13	20.74	20.63
3	8	7		21.07	20.79	20.64
3	15	0		20.87	20.71	20.53



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.34	22.33	22.21
5	1	12		22.34	22.33	22.11
5	1	24		22.25	22.30	21.99
5	12	0		21.91	21.83	21.49
5	12	6		21.84	21.85	21.61
5	12	11		21.96	21.85	21.42
5	25	0		21.85	21.85	21.58
5	1	0	16-QAM	21.90	21.97	21.62
5	1	12		21.75	21.92	21.58
5	1	24		21.77	21.87	21.35
5	12	0		20.96	20.69	20.58
5	12	6		20.90	20.66	20.63
5	12	11		20.85	20.72	20.48
5	25	0		21.05	20.70	20.47
10	1	0	QPSK	22.66	22.28	22.54
10	1	24		23.31	22.22	22.34
10	1	49		22.59	22.16	22.16
10	25	0		21.97	21.75	21.75
10	25	12		21.84	21.86	21.59
10	25	24		21.86	21.75	21.66
10	50	0		21.92	21.85	21.55
10	1	0	16-QAM	21.71	22.62	22.26
10	1	24		21.69	22.49	22.02
10	1	49		21.64	22.39	21.80
10	25	0		20.94	20.77	20.80
10	25	12		20.95	20.80	20.77
10	25	24		20.96	20.81	20.71
10	50	0		20.92	20.78	20.62



LTE BAND 7

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.64	23.05	22.13
5	1	12		22.65	23.04	22.12
5	1	24		22.66	23.01	21.59
5	12	0		21.82	21.84	21.41
5	12	6		21.80	21.91	21.36
5	12	11		21.84	21.86	21.39
5	25	0		21.85	21.85	21.31
5	1	0	16-QAM	22.16	22.49	21.43
5	1	12		22.14	22.51	21.45
5	1	24		22.12	22.43	21.26
5	12	0		20.89	21.09	20.46
5	12	6		20.85	20.99	20.48
5	12	11		20.88	21.06	20.52
5	25	0		21.08	21.00	20.26
10	1	0	QPSK	22.52	22.36	22.46
10	1	24		22.46	22.35	22.42
10	1	49		22.43	22.31	21.88
10	25	0		21.27	21.43	21.39
10	25	12		21.34	21.34	21.35
10	25	24		21.36	21.37	21.38
10	50	0		21.25	21.43	21.39
10	1	0	16-QAM	21.61	22.46	22.00
10	1	24		21.60	22.43	22.07
10	1	49		21.53	22.45	21.61
10	25	0		20.41	20.64	20.52
10	25	12		20.48	20.61	20.53
10	25	24		20.41	20.66	20.57
10	50	0		20.50	20.66	20.45



LTE BAND 7

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.44	22.23	22.21
15	1	37		22.41	22.26	22.33
15	1	74		22.36	22.29	21.87
15	36	0		21.24	21.39	21.33
15	36	18		21.16	21.39	21.27
15	36	39		21.24	21.32	21.34
15	75	0		21.24	21.41	21.34
15	1	0	16-QAM	21.67	22.65	21.47
15	1	38		21.53	22.62	21.57
15	1	75		21.46	22.49	21.36
15	36	0		20.52	20.59	20.38
15	36	18		20.45	20.63	20.40
15	36	39		20.34	20.58	20.41
15	75	0		20.30	20.46	20.51
20	1	0	QPSK	22.34	22.27	22.37
20	1	49		22.28	22.27	22.53
20	1	99		22.25	22.31	22.10
20	50	0		21.25	21.42	21.26
20	50	24		21.23	21.47	21.32
20	50	49		21.23	21.46	21.32
20	100	0		21.23	21.42	21.40
20	1	0	16-QAM	21.90	22.50	22.21
20	1	49		21.71	23.12	22.41
20	1	99		21.81	22.46	21.69
20	50	0		20.49	20.54	20.45
20	50	24		20.41	20.58	20.55
20	50	49		20.38	20.59	20.53
20	100	0		20.36	20.52	20.54



LTE BAND 12

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.77	22.80	22.96
1.4	1	2		22.78	22.86	22.98
1.4	1	5		22.78	22.93	22.98
1.4	3	0		22.43	22.92	22.84
1.4	3	1		22.50	22.85	22.88
1.4	3	2		22.60	22.90	22.92
1.4	6	0		21.46	21.86	21.81
1.4	1	0	16-QAM	21.73	22.34	22.06
1.4	1	2		21.77	22.39	22.08
1.4	1	5		21.76	22.37	22.11
1.4	3	0		21.56	21.84	21.92
1.4	3	1		21.57	21.83	21.91
1.4	3	2		21.50	21.86	21.89
1.4	6	0		20.35	20.80	21.00
3	1	0	QPSK	22.70	22.83	22.90
3	1	7		22.80	22.80	22.94
3	1	14		23.23	22.90	22.98
3	8	0		21.43	21.89	21.73
3	8	4		21.48	21.94	21.77
3	8	7		21.90	21.82	21.79
3	15	0		21.47	21.91	21.88
3	1	0	16-QAM	21.16	22.33	22.22
3	1	7		21.15	22.36	22.13
3	1	14		21.53	22.34	22.09
3	8	0		20.57	20.89	20.72
3	8	4		20.59	20.76	20.77
3	8	7		20.86	20.78	20.75
3	15	0		20.33	20.79	20.77



LTE BAND 12

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.43	23.04	22.93
5	1	12		22.72	23.08	22.91
5	1	24		22.77	23.07	22.87
5	12	0		21.49	21.85	21.82
5	12	6		21.75	21.81	21.75
5	12	11		21.85	21.81	21.79
5	25	0		21.77	21.85	21.83
5	1	0	16-QAM	21.82	22.04	21.82
5	1	12		22.19	22.00	21.77
5	1	24		22.28	22.06	21.78
5	12	0		20.34	20.76	20.85
5	12	6		20.69	20.78	20.87
5	12	11		20.61	20.67	20.83
5	25	0		20.81	20.64	20.84
10	1	0	QPSK	22.74	22.80	23.04
10	1	24		23.09	22.88	23.06
10	1	49		23.25	22.89	23.10
10	25	0		21.85	21.89	21.76
10	25	12		21.82	21.87	21.89
10	25	24		21.90	21.91	21.77
10	50	0		21.88	21.88	21.88
10	1	0	16-QAM	21.14	22.31	22.04
10	1	24		21.51	22.33	22.11
10	1	49		21.53	22.36	22.09
10	25	0		20.71	20.94	20.72
10	25	12		20.77	20.82	20.86
10	25	24		20.85	20.93	20.92
10	50	0		20.81	20.84	20.81



LTE BAND 17

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.67	23.01	22.95
5	1	12		22.70	22.98	22.85
5	1	24		22.79	22.95	22.92
5	12	0		21.91	21.84	21.82
5	12	6		21.78	21.89	21.80
5	12	11		21.76	21.76	21.84
5	25	0		21.86	21.83	21.84
5	1	0	16-QAM	21.71	21.96	21.84
5	1	12		21.66	22.06	21.83
5	1	24		21.71	22.02	21.76
5	12	0		20.68	20.61	20.77
5	12	6		20.65	20.68	20.88
5	12	11		20.61	20.64	20.86
5	25	0		20.86	20.71	20.86
10	1	0	QPSK	23.04	22.76	23.12
10	1	24		23.12	22.79	23.09
10	1	49		23.07	22.78	23.12
10	25	0		21.84	21.76	21.75
10	25	12		21.85	21.78	21.88
10	25	24		21.79	21.80	21.78
10	50	0		21.86	21.94	21.89
10	1	0	16-QAM	21.53	22.37	22.07
10	1	24		21.56	22.40	22.10
10	1	49		21.58	22.37	22.09
10	25	0		20.76	20.75	20.81
10	25	12		20.72	20.78	20.87
10	25	24		20.77	20.77	20.91
10	50	0		20.75	20.76	20.81



LTE BAND 41

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.74	22.67	22.57
5	1	12		22.72	22.56	22.54
5	1	24		22.74	22.65	22.65
5	12	0		21.81	21.50	21.48
5	12	6		21.73	21.57	21.44
5	12	11		21.83	21.55	21.32
5	25	0		21.78	21.59	21.31
5	1	0		22.48	22.34	21.51
5	1	12	16-QAM	22.36	22.11	22.28
5	1	24		22.40	21.72	21.92
5	12	0		20.77	20.71	20.52
5	12	6		20.73	20.67	20.53
5	12	11		20.67	20.67	20.53
5	25	0		20.96	20.43	20.56
10	1	0	QPSK	22.72	22.12	22.04
10	1	24		22.70	22.05	21.94
10	1	49		22.72	21.99	21.94
10	25	0		21.76	21.27	21.17
10	25	12		21.76	21.25	21.04
10	25	24		21.81	21.21	21.06
10	50	0		21.42	20.86	20.73
10	1	0		22.26	22.11	21.86
10	1	24	16-QAM	22.35	22.42	21.86
10	1	49		22.35	22.32	21.81
10	25	0		20.80	20.51	20.34
10	25	12		20.76	20.46	20.35
10	25	24		20.72	20.46	20.43
10	50	0		20.43	20.07	19.96



LTE BAND 40

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.43	22.03	22.20
15	1	37		22.46	22.05	22.13
15	1	74		22.47	21.97	22.14
15	36	0		21.53	21.26	21.35
15	36	18		21.45	21.26	21.18
15	36	39		21.51	21.26	21.21
15	75	0		21.16	20.79	20.79
15	1	0	16-QAM	22.27	22.08	22.23
15	1	38		22.25	22.40	22.64
15	1	75		22.07	22.28	22.19
15	36	0		20.68	20.49	20.33
15	36	18		20.63	20.37	20.35
15	36	39		20.65	20.40	20.23
15	75	0		20.18	19.93	20.04
20	1	0	QPSK	22.45	22.36	22.40
20	1	49		22.76	22.29	22.39
20	1	99		22.51	22.32	22.35
20	50	0		21.51	21.28	21.50
20	50	24		21.47	21.31	21.40
20	50	49		21.59	21.33	21.37
20	100	0		21.11	20.90	21.08
20	1	0	16-QAM	22.12	21.94	22.15
20	1	49		22.10	21.87	21.99
20	1	99		22.11	21.93	22.15
20	50	0		20.75	20.53	20.64
20	50	24		20.72	20.53	20.58
20	50	49		20.69	20.58	20.47
20	100	0		20.71	20.52	20.48



LTE BAND 66

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.27	22.94	23.29
1.4	1	2		23.32	22.95	23.26
1.4	1	5		23.27	22.95	23.32
1.4	3	0		23.06	23.00	23.05
1.4	3	1		23.12	23.04	23.05
1.4	3	2		23.11	22.95	23.02
1.4	6	0		21.53	21.52	21.52
1.4	1	0	16-QAM	22.13	22.59	22.14
1.4	1	2		22.11	22.58	22.12
1.4	1	5		22.09	22.58	22.10
1.4	3	0		22.33	22.29	22.26
1.4	3	1		22.24	22.27	22.32
1.4	3	2		22.27	22.27	22.31
1.4	6	0		20.49	20.56	20.82
3	1	0	QPSK	23.34	22.92	23.30
3	1	7		23.28	22.92	23.27
3	1	14		23.31	22.91	23.31
3	8	0		21.57	21.46	21.43
3	8	4		21.55	21.44	21.37
3	8	7		21.56	21.62	21.47
3	15	0		21.50	21.54	21.45
3	1	0	16-QAM	21.82	22.63	22.31
3	1	7		21.79	22.59	22.37
3	1	14		21.77	22.58	22.33
3	8	0		20.74	20.57	20.47
3	8	4		20.70	20.53	20.49
3	8	7		20.72	20.53	20.45
3	15	0		20.56	20.61	20.54



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.21	23.21	23.19
5	1	12		23.17	23.25	23.08
5	1	24		23.10	23.27	23.16
5	12	0		21.47	21.57	21.51
5	12	6		21.58	21.54	21.40
5	12	11		21.47	21.53	21.54
5	25	0		21.43	21.62	21.50
5	1	0	16-QAM	22.48	22.28	22.15
5	1	12		22.50	22.28	22.09
5	1	24		22.48	22.35	22.13
5	12	0		20.53	20.62	20.57
5	12	6		20.53	20.61	20.54
5	12	11		20.42	20.63	20.55
5	25	0		20.72	20.59	20.60
10	1	0	QPSK	23.38	22.83	23.12
10	1	24		23.34	22.88	23.14
10	1	49		23.36	22.94	23.19
10	25	0		21.45	21.59	21.47
10	25	12		21.64	21.55	21.44
10	25	24		21.49	21.53	21.47
10	50	0		21.60	21.56	21.51
10	1	0	16-QAM	21.86	22.62	22.17
10	1	24		21.83	22.66	22.08
10	1	49		21.85	22.69	22.14
10	25	0		20.64	20.68	20.61
10	25	12		20.64	20.67	20.65
10	25	24		20.66	20.68	20.59
10	50	0		20.74	20.69	20.57



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.34	22.80	23.15
15	1	37		23.35	22.89	23.16
15	1	74		23.35	22.86	23.11
15	36	0		21.51	21.49	21.46
15	36	18		21.51	21.52	21.53
15	36	39		21.54	21.62	21.43
15	75	0		21.56	21.52	21.50
15	1	0	16-QAM	21.83	22.71	21.89
15	1	38		21.85	22.68	21.84
15	1	75		21.85	22.71	21.78
15	36	0		20.61	20.53	20.43
15	36	18		20.62	20.56	20.53
15	36	39		20.69	20.63	20.53
15	75	0		20.62	20.64	20.57
20	1	0	QPSK	23.24	23.05	23.26
20	1	49		23.42	23.10	23.26
20	1	99		23.34	23.17	23.26
20	50	0		21.56	21.54	21.41
20	50	24		21.55	21.49	21.51
20	50	49		21.48	21.50	21.42
20	100	0		21.49	21.60	21.53
20	1	0	16-QAM	22.24	22.28	22.72
20	1	49		22.20	22.27	22.65
20	1	99		22.36	22.42	22.73
20	50	0		20.66	20.66	20.60
20	50	24		20.70	20.73	20.60
20	50	49		20.63	20.73	20.62
20	100	0		20.63	20.60	20.58

11. EUT and Test Setup Photo

11.1 EUT Photo

Front side



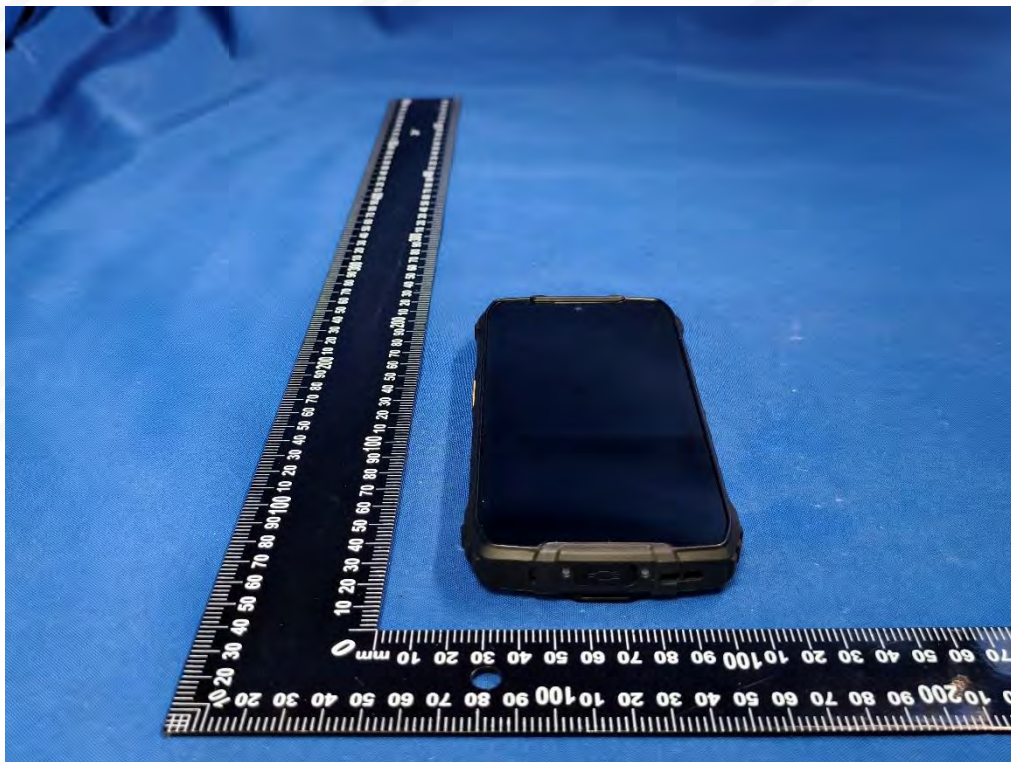
Back side



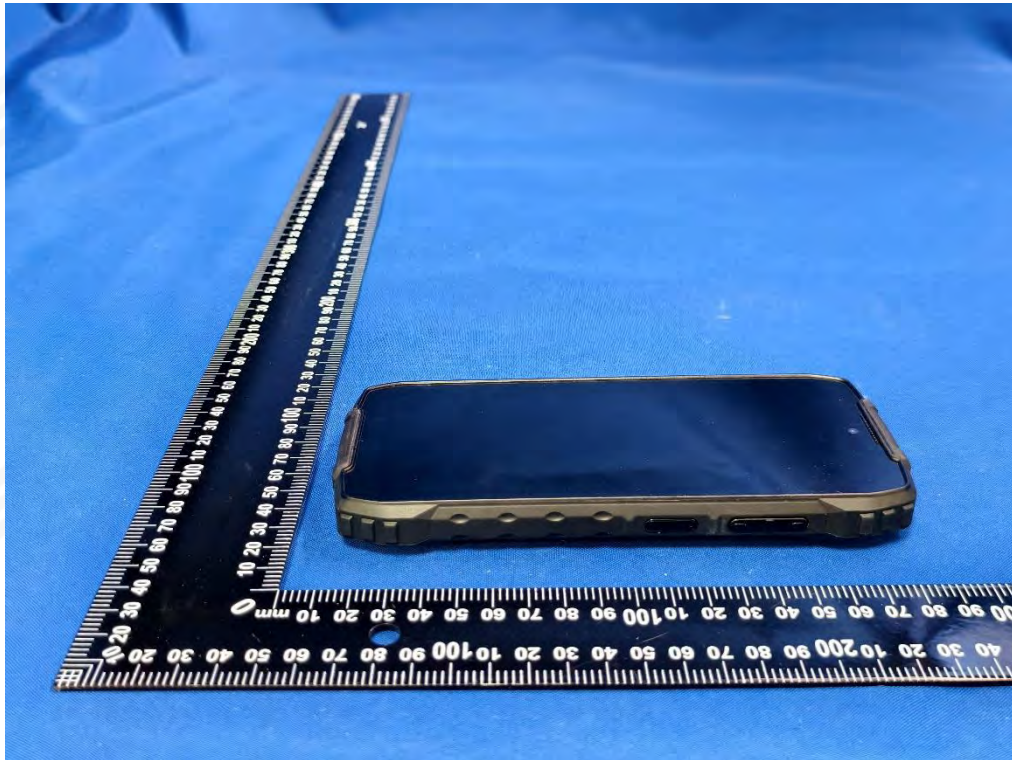
Top side



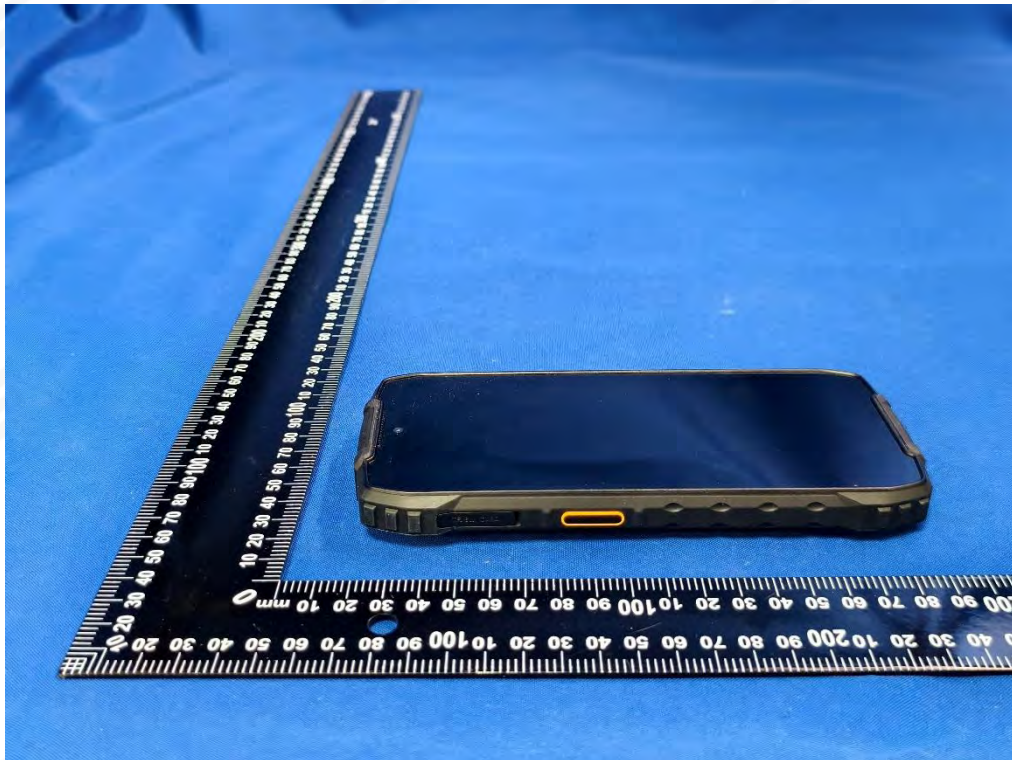
Bottom side



Left side



Right side



11.2 Setup Photo

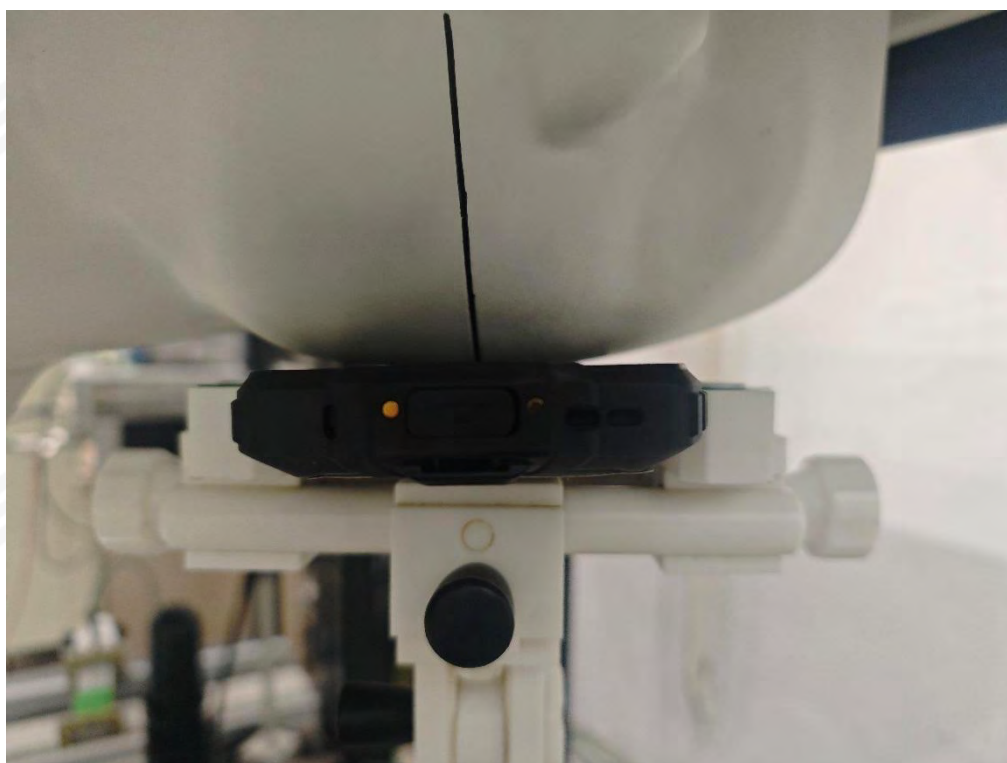
Right Touch



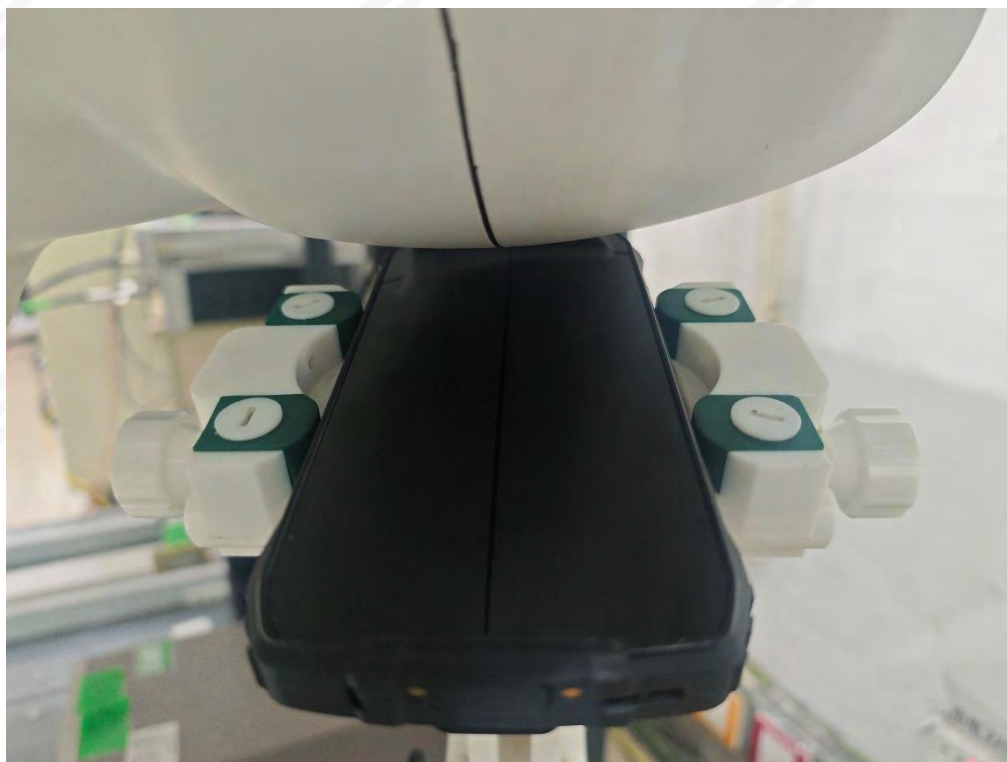
Right Tilt



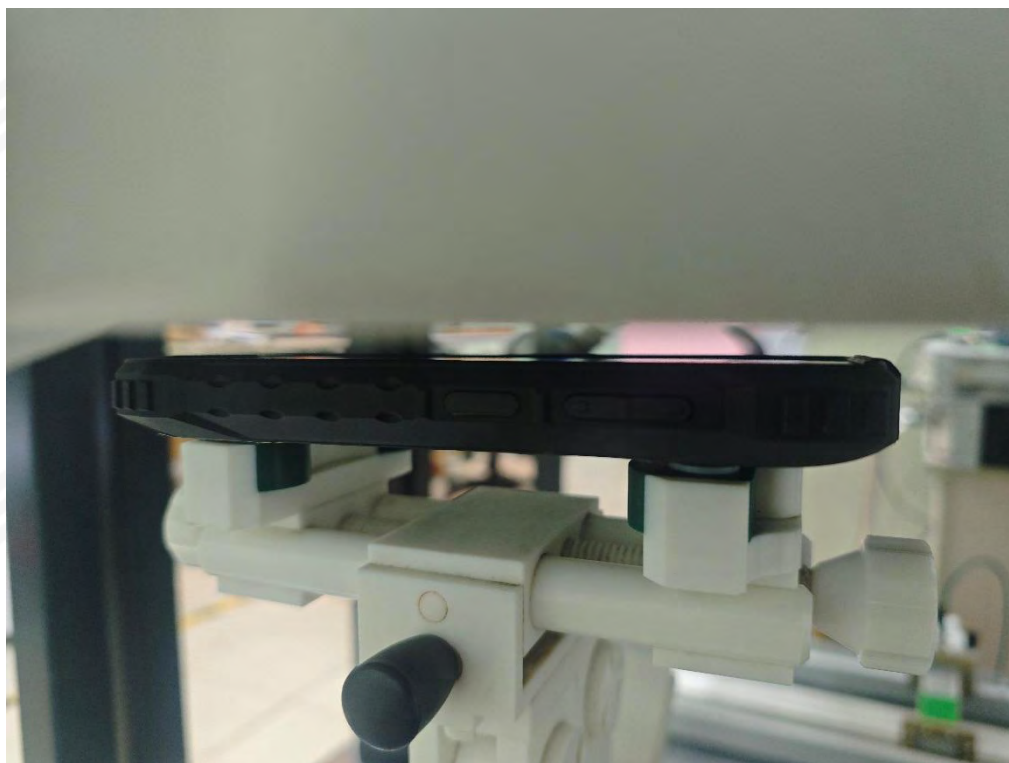
Left Touch



Left Tilt



Body Front side(separation distance is 10mm)



Body Back side(separation distance is 10mm)



Body Left side(separation distance is 10mm)



Body Right side(separation distance is 10mm)



Body Bottom side(separation distance is 10mm)

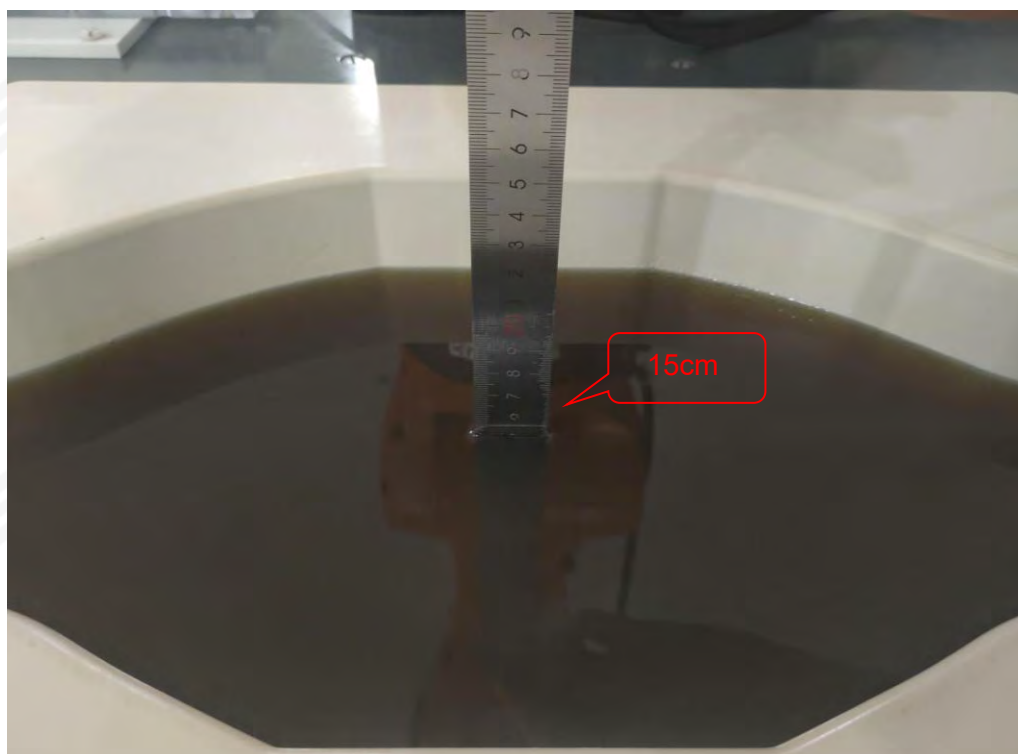


Body Top side(separation distance is 10mm)





Liquid depth (15 cm)





12. SAR Result Summary

12.1 Head SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
GSM850	GPRS Data-2 Slot	Right Cheek	824.2	0.614	2.50	32.50	31.83	1.167	0.716	/
		Right Cheek	836.6	0.635	1.40	32.50	31.94	1.138	0.722	/
		Right Cheek	848.8	0.685	3.96	32.50	32.10	1.096	0.751	1
		Right Tilt	848.8	0.421	-1.01	32.50	32.10	1.096	0.462	/
		Left Cheek	848.8	0.651	3.47	32.50	32.10	1.096	0.714	/
		Left Tilt	848.8	0.408	-3.76	32.50	32.10	1.096	0.447	/
GSM1900	GPRS Data-3 Slot	Right Cheek	1880	0.476	2.45	27.50	27.21	1.069	0.509	3
		Right Tilt	1880	0.210	-1.92	27.50	27.21	1.069	0.225	/
		Left Cheek	1880	0.453	1.18	27.50	27.21	1.069	0.484	/
		Left Tilt	1880	0.196	2.15	27.50	27.21	1.069	0.210	/
WCDMA Band II	RMC	Right Cheek	1907.6	0.073	-3.55	23.50	23.19	1.074	0.078	5
		Right Tilt	1907.6	0.032	-2.57	23.50	23.19	1.074	0.034	/
		Left Cheek	1907.6	0.068	-0.67	23.50	23.19	1.074	0.073	/
		Left Tilt	1907.6	0.029	-0.76	23.50	23.19	1.074	0.031	/
WCDMA Band IV	RMC	Right Cheek	1740	0.079	-3.31	23.50	23.40	1.023	0.081	7
		Right Tilt	1740	0.034	-2.08	23.50	23.40	1.023	0.035	/
		Left Cheek	1740	0.070	-3.59	23.50	23.40	1.023	0.072	/
		Left Tilt	1740	0.032	3.66	23.50	23.40	1.023	0.033	/
WCDMA Band V	RMC	Right Cheek	826.4	0.126	1.10	24.00	23.81	1.045	0.132	9
		Right Tilt	826.4	0.061	3.75	24.00	23.81	1.045	0.064	/
		Left Cheek	826.4	0.117	-3.38	24.00	23.81	1.045	0.122	/
		Left Tilt	826.4	0.052	-1.95	24.00	23.81	1.045	0.054	/
2.4G WLAN	802.11b	Right Cheek	2462	0.152	2.66	14.00	13.63	1.089	0.166	27
		Right Tilt	2462	0.121	-0.45	14.00	13.63	1.089	0.132	/
		Left Cheek	2462	0.149	-3.19	14.00	13.63	1.089	0.162	/
		Left Tilt	2462	0.117	0.28	14.00	13.63	1.089	0.127	/
5.2G WLAN	802.11 n- HT20	Right Cheek	5240	0.135	0.11	13.00	12.79	1.050	0.142	29
		Right Tilt	5240	0.105	1.95	13.00	12.79	1.050	0.110	/
		Left Cheek	5240	0.124	0.26	13.00	12.79	1.050	0.130	/
		Left Tilt	5240	0.095	-1.34	13.00	12.79	1.050	0.100	/
5.3G WLAN	802.11ac- VHT20	Right Cheek	5320	0.110	-3.54	13.00	12.93	1.016	0.112	31
		Right Tilt	5320	0.086	-0.60	13.00	12.93	1.016	0.087	/
		Left Cheek	5320	0.105	-0.84	13.00	12.93	1.016	0.107	/
		Left Tilt	5320	0.075	-1.63	13.00	12.93	1.016	0.076	/
5.8G WLAN	802.11 n- HT20	Right Cheek	5825	0.073	-2.38	12.50	12.43	1.016	0.074	33
		Right Tilt	5825	0.062	-2.00	12.50	12.43	1.016	0.063	/
		Left Cheek	5825	0.069	0.13	12.50	12.43	1.016	0.070	/
		Left Tilt	5825	0.062	-1.00	12.50	12.43	1.016	0.063	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
LTE Band 2	20M	QPSK	1	99	Right Cheek	1860	0.099	1.95	24	23.67	1.079	0.107	11
			50	49	Right Cheek	1860	0.085	-0.72	22	21.74	1.062	0.090	/
			1	99	Right Tilt	1860	0.048	0.70	24	23.67	1.079	0.052	/
			50	49	Right Tilt	1860	0.042	2.59	22	21.74	1.062	0.045	/
			1	99	Left Cheek	1860	0.092	-0.47	24	23.67	1.079	0.099	/
			50	49	Left Cheek	1860	0.078	1.56	22	21.74	1.062	0.083	/
			1	99	Left Tilt	1860	0.047	0.42	24	23.67	1.079	0.051	/
LTE Band 4	20M	QPSK	50	49	Left Tilt	1860	0.038	2.11	22	21.74	1.062	0.040	/
			1	49	Right Cheek	1720	0.102	-2.73	23.5	23.01	1.119	0.114	13
			50	24	Right Cheek	1720	0.089	-2.51	22	21.64	1.086	0.097	/
			1	49	Right Tilt	1720	0.046	1.29	23.5	23.01	1.119	0.051	/
			50	24	Right Tilt	1720	0.040	3.49	22	21.64	1.086	0.043	/
			1	49	Left Cheek	1720	0.095	-2.49	23.5	23.01	1.119	0.106	/
			50	24	Left Cheek	1720	0.087	-3.64	22	21.64	1.086	0.095	/
LTE Band 5	10M	QPSK	1	49	Left Tilt	1720	0.044	2.88	23.5	23.01	1.119	0.049	/
			50	24	Left Tilt	1720	0.037	-0.16	22	21.64	1.086	0.040	/
			1	24	Right Cheek	829	0.158	-0.69	23.5	23.31	1.045	0.165	15
			25	0	Right Cheek	829	0.141	-3.74	22	21.97	1.007	0.142	/
			1	24	Right Tilt	829	0.059	-1.75	23.5	23.31	1.045	0.062	/
			25	0	Right Tilt	829	0.052	1.76	22	21.97	1.007	0.052	/
			1	24	Left Cheek	829	0.144	-1.44	23.5	23.31	1.045	0.150	/
LTE Band 7	20M	QPSK	25	0	Left Cheek	829	0.132	3.68	22	21.97	1.007	0.133	/
			1	24	Left Tilt	829	0.057	-3.14	23.5	23.31	1.045	0.060	/
			25	0	Left Tilt	829	0.049	-0.34	22	21.97	1.007	0.049	/
			1	99	Right Cheek	2560	0.143	-3.39	23	22.53	1.114	0.159	17
			50	0	Right Cheek	2535	0.133	-3.16	21.5	21.47	1.007	0.134	/
			1	99	Right Tilt	2560	0.071	-0.57	23	22.53	1.114	0.079	/
			50	0	Right Tilt	2535	0.062	3.17	21.5	21.47	1.007	0.062	/
LTE Band 12	10M	QPSK	1	99	Left Cheek	2560	0.140	-1.52	23	22.53	1.114	0.156	/
			50	0	Left Cheek	2535	0.128	-0.16	21.5	21.47	1.007	0.129	/
			1	99	Left Tilt	2560	0.067	-3.64	23	22.53	1.114	0.075	/
			50	0	Left Tilt	2535	0.058	-1.56	21.5	21.47	1.007	0.058	/
			1	24	Right Cheek	704	0.096	-0.57	23.5	23.25	1.059	0.102	19
			25	24	Right Cheek	707.5	0.082	1.70	22	21.91	1.021	0.084	/
			1	24	Right Tilt	704	0.073	-0.51	23.5	23.25	1.059	0.077	/
LTE Band 17	5M	QPSK	25	24	Right Tilt	707.5	0.059	-2.13	22	21.91	1.021	0.060	/
			1	24	Left Cheek	704	0.078	2.29	23.5	23.25	1.059	0.083	/
			25	24	Left Cheek	707.5	0.062	-2.32	22	21.91	1.021	0.063	/
			1	24	Left Tilt	704	0.070	-1.97	23.5	23.25	1.059	0.074	/
			25	24	Left Tilt	707.5	0.053	-3.81	22	21.91	1.021	0.054	/
			1	24	Right Cheek	711	0.086	-1.73	23.5	23.12	1.091	0.094	21
			12	0	Right Cheek	711	0.073	0.14	22	21.88	1.028	0.075	/
LTE Band 41	20M	QPSK	1	24	Right Tilt	711	0.044	3.18	23.5	23.12	1.091	0.048	/
			12	0	Right Tilt	711	0.035	0.58	22	21.88	1.028	0.036	/
			1	24	Left Cheek	711	0.082	0.23	23.5	23.12	1.091	0.089	/
			12	0	Left Cheek	711	0.070	-3.89	22	21.88	1.028	0.072	/
			1	24	Left Tilt	711	0.041	-0.30	23.5	23.12	1.091	0.045	/
			12	0	Left Tilt	711	0.032	2.31	22	21.88	1.028	0.033	/
			1	49	Right Cheek	2506	0.043	2.15	23	22.76	1.057	0.045	23
LTE Band 66	20M	QPSK	50	24	Right Cheek	2506	0.035	-1.82	22	21.59	1.099	0.038	/
			1	49	Right Tilt	2506	0.022	1.45	23	22.76	1.057	0.023	/
			50	24	Right Tilt	2506	0.018	0.76	22	21.59	1.099	0.020	/
			1	49	Left Cheek	2506	0.040	-3.09	23	22.76	1.057	0.042	/
			50	24	Left Cheek	2506	0.032	0.33	22	21.59	1.099	0.035	/
			1	49	Left Tilt	2506	0.020	-0.09	23	22.76	1.057	0.021	/
			50	24	Left Tilt	2506	0.017	-2.38	22	21.59	1.099	0.019	/
LTE Band 66	20M	QPSK	1	49	Right Cheek	1720	0.122	3.30	23.5	23.42	1.019	0.124	25
			50	49	Right Cheek	1720	0.108	-1.87	22	21.56	1.107	0.120	/
			1	0	Right Tilt	1720	0.059	0.40	23.5	23.42	1.019	0.060	/
			50	0	Right Tilt	1720	0.047	-3.26	22	21.56	1.107	0.052	/
			1	0	Left Cheek	1720	0.116	-2.17	23.5	23.42	1.019	0.118	/
			50	0	Left Cheek	1720	0.101	-2.75	22	21.56	1.107	0.112	/
			1	0	Left Tilt	1720	0.052	-1.61	23.5	23.42	1.019	0.053	/
LTE Band 66	20M	QPSK	50	0	Left Tilt	1720	0.041	2.77	22	21.56	1.107	0.045	/



Note:

1. Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. Scaled SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
2. Per KDB 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 **0.179** W/Kg for Head)
3. Per KDB 865664 D01, Repeated measurement is not required when the original highest measured SAR is <0.80 W/kg



12.2 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.
GSM850	GPRS (GMSK, 2- Slot)	Front Side	848.8	0.157	1.62	32.50	32.10	1.096	0.172	/
		Back Side	848.8	0.348	0.16	32.50	32.10	1.096	0.382	2
		Left Side	848.8	0.045	-1.45	32.50	32.10	1.096	0.049	/
		Right Side	848.8	0.162	0.86	32.50	32.10	1.096	0.178	/
		Top Side	848.8	0.035	3.53	32.50	32.10	1.096	0.038	/
		Bottom Side	848.8	0.221	1.96	32.50	32.10	1.096	0.242	/
GSM1900	GPRS (GMSK, 3- Slot)	Front Side	1880	0.120	-3.82	27.50	27.21	1.069	0.128	/
		Back Side	1880	0.233	-0.28	27.50	27.21	1.069	0.249	4
		Left Side	1880	0.031	-0.78	27.50	27.21	1.069	0.033	/
		Right Side	1880	0.144	-3.65	27.50	27.21	1.069	0.154	/
		Bottom Side	1880	0.189	0.43	27.50	27.21	1.069	0.202	/
WCDMA Band II	RMC	Front Side	1907.6	0.251	1.29	23.50	23.19	1.074	0.270	/
		Back Side	1907.6	0.404	-2.17	23.50	23.19	1.074	0.434	6
		Right Side	1907.6	0.315	-3.27	23.50	23.19	1.074	0.338	/
		Bottom Side	1907.6	0.372	3.36	23.50	23.19	1.074	0.400	/
WCDMA Band IV	RMC	Front Side	1740	0.177	-0.83	23.50	23.40	1.023	0.181	/
		Back Side	1740	0.386	1.09	23.50	23.40	1.023	0.395	8
		Right Side	1740	0.244	-1.66	23.50	23.40	1.023	0.250	/
		Bottom Side	1740	0.311	-3.73	23.50	23.40	1.023	0.318	/
WCDMA Band V	RMC	Front Side	826.4	0.123	1.34	24.00	23.81	1.045	0.129	/
		Back Side	826.4	0.241	1.18	24.00	23.81	1.045	0.252	10
		Right Side	826.4	0.156	-1.15	24.00	23.81	1.045	0.163	/
		Bottom Side	826.4	0.189	1.89	24.00	23.81	1.045	0.197	/
2.4GHz WLAN	802.11b	Front Side	2462	0.034	-1.70	14.00	13.63	1.089	0.037	/
		Back Side	2462	0.065	-2.33	14.00	13.63	1.089	0.071	28
		Left Side	2462	0.047	3.54	14.00	13.63	1.089	0.051	/
		Bottom Side	2462	0.039	0.68	14.00	13.63	1.089	0.042	/
5.2GHz WLAN	802.11 n- HT20	Front Side	5240	0.143	-1.95	13.00	12.79	1.050	0.150	/
		Back Side	5240	0.225	-3.78	13.00	12.79	1.050	0.236	30
		Left Side	5240	0.172	1.76	13.00	12.79	1.050	0.181	/
		Bottom Side	5240	0.156	2.46	13.00	12.79	1.050	0.164	/
5.3GHz WLAN	802.11 n- HT20	Front Side	5320	0.111	-0.95	13.00	12.93	1.016	0.113	/
		Back Side	5320	0.134	0.05	13.00	12.93	1.016	0.136	32
		Left Side	5320	0.120	2.31	13.00	12.93	1.016	0.122	/
		Bottom Side	5320	0.108	-3.03	13.00	12.93	1.016	0.110	/
5.8GHz WLAN	802.11 n- HT20	Front Side	5825	0.053	2.86	12.50	12.43	1.016	0.054	/
		Back Side	5825	0.086	3.23	12.50	12.43	1.016	0.087	34
		Left Side	5825	0.062	-2.85	12.50	12.43	1.016	0.063	/
		Bottom Side	5825	0.055	-1.46	12.50	12.43	1.016	0.056	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
LTE Band 2	20M	QPSK	1	99	Front side	1880	0.317	1.31	24	23.67	1.079	0.342	/
			50	49	Front side	1880	0.285	-1.63	22	21.74	1.062	0.303	/
			1	99	Back Side	1860	0.423	-2.10	24	23.29	1.178	0.498	/
			1	99	Back Side	1880	0.514	2.48	24	23.67	1.079	0.555	12
			1	99	Back Side	1900	0.413	0.30	24	22.97	1.268	0.524	/
			50	49	Back Side	1880	0.481	3.72	22	21.74	1.062	0.511	/
			1	99	Right Side	1880	0.238	-0.23	24	23.67	1.079	0.257	/
			50	49	Right Side	1880	0.224	-3.70	22	21.74	1.062	0.238	/
			1	99	Bottom Side	1880	0.389	0.32	24	23.67	1.079	0.420	/
LTE Band 4	20M	QPSK	50	49	Bottom Side	1880	0.377	-2.60	22	21.74	1.062	0.400	/
			1	49	Front side	1720	0.225	-2.75	23.5	23.01	1.119	0.252	/
			50	24	Front side	1720	0.216	-0.01	22	21.64	1.086	0.235	/
			1	49	Back Side	1720	0.450	-3.11	23.5	23.01	1.119	0.504	14
			50	24	Back Side	1720	0.433	0.31	22	21.64	1.086	0.470	/
			1	49	Right Side	1720	0.323	-0.36	23.5	23.01	1.119	0.362	/
			50	24	Right Side	1720	0.305	-1.41	22	21.64	1.086	0.331	/
			1	49	Bottom Side	1720	0.384	-0.94	23.5	23.01	1.119	0.430	/
			50	24	Bottom Side	1720	0.371	3.23	22	21.64	1.086	0.403	/
LTE Band 5	10M	QPSK	1	24	Front side	829	0.103	-3.08	23.5	23.31	1.045	0.108	/
			25	0	Front side	829	0.092	-0.99	22	21.97	1.007	0.093	/
			1	24	Back Side	829	0.281	2.76	23.5	23.31	1.045	0.294	16
			25	0	Back Side	829	0.246	3.20	22	21.97	1.007	0.248	/
			1	24	Right Side	829	0.145	-0.53	23.5	23.31	1.045	0.151	/
			25	0	Right Side	829	0.132	-2.55	22	21.97	1.007	0.133	/
			1	24	Bottom Side	829	0.189	2.01	23.5	23.31	1.045	0.197	/
			25	0	Bottom Side	829	0.177	0.59	22	21.97	1.007	0.178	/
			1	99	Front side	2560	0.201	-1.59	23	22.53	1.114	0.224	/
LTE Band 7	10M	QPSK	50	0	Front side	2535	0.179	2.71	21.5	21.47	1.007	0.180	/
			1	99	Back Side	2560	0.414	-0.16	23	22.53	1.114	0.461	18
			50	0	Back Side	2535	0.378	-3.35	21.5	21.47	1.007	0.381	/
			1	99	Right Side	2560	0.241	2.91	23	22.53	1.114	0.269	/
			50	0	Right Side	2535	0.232	3.67	21.5	21.47	1.007	0.234	/
			1	99	Bottom Side	2560	0.297	-0.52	23	22.53	1.114	0.331	/
			50	0	Bottom Side	2535	0.266	-3.41	21.5	21.47	1.007	0.268	/
			1	24	Front side	704	0.153	0.44	23.5	23.25	1.059	0.162	/
			25	24	Front side	707.5	0.141	-2.86	22	21.91	1.021	0.144	/
LTE Band 12	10M	QPSK	1	24	Back Side	704	0.196	0.45	23.5	23.25	1.059	0.208	20
			25	24	Back Side	707.5	0.177	-0.65	22	21.91	1.021	0.181	/
			1	24	Right Side	704	0.145	-2.20	23.5	23.25	1.059	0.154	/
			25	24	Right Side	707.5	0.123	-1.57	22	21.91	1.021	0.126	/
			1	24	Bottom Side	704	0.141	-0.88	23.5	23.25	1.059	0.149	/
			25	24	Bottom Side	707.5	0.129	3.34	22	21.91	1.021	0.132	/
			1	24	Front side	711	0.110	-1.11	23.5	23.12	1.091	0.120	/
			12	0	Front side	711	0.102	1.57	22	21.88	1.028	0.105	/
			1	24	Back Side	711	0.187	-3.02	23.5	23.12	1.091	0.204	22
LTE Band 17	5M	QPSK	12	0	Back Side	711	0.162	-0.27	22	21.88	1.028	0.167	/
			1	24	Right Side	711	0.133	1.22	23.5	23.12	1.091	0.145	/
			12	0	Right Side	711	0.121	-2.02	22	21.88	1.028	0.124	/
			1	24	Bottom Side	711	0.152	-2.95	23.5	23.12	1.091	0.166	/
			12	0	Bottom Side	711	0.143	-0.48	22	21.88	1.028	0.147	/
			1	49	Front side	2506	0.174	-2.57	23	22.76	1.057	0.184	/
			50	24	Front side	2506	0.162	-1.03	22	21.59	1.099	0.178	/
			1	49	Back Side	2506	0.377	-0.91	23	22.76	1.057	0.398	24
			50	24	Back Side	2506	0.350	2.94	22	21.59	1.099	0.385	/
LTE Band 41	20M	QPSK	1	49	Right Side	2506	0.231	2.80	23	22.76	1.057	0.244	/
			50	24	Right Side	2506	0.218	0.04	22	21.59	1.099	0.240	/
			1	49	Bottom Side	2506	0.274	-2.78	23	22.76	1.057	0.290	/
			50	24	Bottom Side	2506	0.266	-1.01	22	21.59	1.099	0.292	/
			1	49	Front side	1720	0.179	0.73	23.5	23.42	1.019	0.182	/
			50	49	Front side	1720	0.160	1.98	22	21.56	1.107	0.177	/
			1	49	Back Side	1720	0.342	2.57	23.5	23.42	1.019	0.348	26
			50	49	Back Side	1720	0.330	1.68	22	21.56	1.107	0.365	/
			1	49	Right Side	1720	0.245	2.08	23.5	23.42	1.019	0.250	/
LTE Band 66	20M	QPSK	50	49	Right Side	1720	0.236	1.00	22	21.56	1.107	0.261	/
			1	49	Bottom Side	1720	0.269	2.45	23.5	23.42	1.019	0.274	/
			50	49	Bottom Side	1720	0.256	3.22	22	21.56	1.107	0.283	/



Note:

1. The test separation of all above table is 5mm.
2. Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. Scaled SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
3. 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 **0.077W/Kg** for Body)
4. When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.



12.3 Simultaneous Multi-band Transmission Evaluation

Application Simultaneous Transmission information:

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

NOTE:

1. Bluetooth and WLAN can't simultaneous transmission at the same time.
2. For simultaneous transmission at head and body exposure position, 2 transmitters simultaneous transmission was the worst state.
3. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
4. KDB 447498 / 4.3.2 (2) when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion: a) (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f (GHz) /x] W/kg for test separation distances≤ 50 mm; Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR. b) 0.4W/Kg for 1-g SAR and 1.0W/Kg for 10-g SAR, when the separation distance is >50mm.

Estimated SAR		Maximum Average Power		Dis.	Frequency (GHz)	Stand alone SAR(1g) [W/kg]
		dBm	mW			
BT	Head	2	1.585	5	2.402	0.491
	Body			10	2.402	0.246



Simultaneous Mode	Position	Mode	Max. 1-g SAR	1-g Sum SAR
			(W/kg)	(W/kg)
GSM + 2.4G WLAN	Head	GSM	0.751	0.917
		2.4G WLAN	0.166	
	Body	GSM	0.382	0.453
		2.4G WLAN	0.071	
GSM + Bluetooth	Head	GSM	0.751	1.242
		Bluetooth	0.491	
	Body	GSM	0.382	0.628
		Bluetooth	0.246	
GSM + 5G WLAN	Head	GSM	0.751	0.893
		5G WLAN	0.142	
	Body	GSM	0.382	0.618
		5G WLAN	0.236	
WCDMA + 2.4G WLAN	Head	WCDMA	0.132	0.298
		2.4G WLAN	0.166	
	Body	WCDMA	0.434	0.505
		2.4G WLAN	0.071	
WCDMA + Bluetooth	Head	WCDMA	0.132	0.623
		Bluetooth	0.491	
	Body	WCDMA	0.434	0.680
		Bluetooth	0.246	
WCDMA + 5G WLAN	Head	WCDMA	0.132	0.274
		5G WLAN	0.142	
	Body	WCDMA	0.434	0.670
		5G WLAN	0.236	
LTE + 2.4G WLAN	Head	LTE	0.165	0.331
		2.4G WLAN	0.166	
	Body	LTE	0.555	0.626
		2.4G WLAN	0.071	
LTE + Bluetooth	Head	LTE	0.165	0.656
		Bluetooth	0.491	
	Body	LTE	0.555	0.801
		Bluetooth	0.246	
LTE + 5G WLAN	Head	LTE	0.165	0.307
		5G WLAN	0.142	
	Body	LTE	0.555	0.791
		5G WLAN	0.236	

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

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



13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
750MHz Dipole	MVG	SID750	SN 30/14 DIP0G750-331	2023.07.04	2026.07.03
835MHz Dipole	MVG	SID835	SN 30/14 DIP0G835-332	2023.07.04	2026.07.03
1800MHz Dipole	MVG	SID1800	5023-DIP1G800- 747	2023.12.20	2026.12.19
1900MHz Dipole	MVG	SID1900	SN 30/14 DIP1G900-333	2023.09.14	2026.09.13
2450MHzDipole	MVG	SID2450	SN 30/14 DIP2G450-335	2023.07.04	2026.07.03
2600MHz Dipole	MVG	SID2600	SN 30/14 DIP2G600-336	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 EPOG352	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 (750MHz)

Type: Phone measurement (Complete)

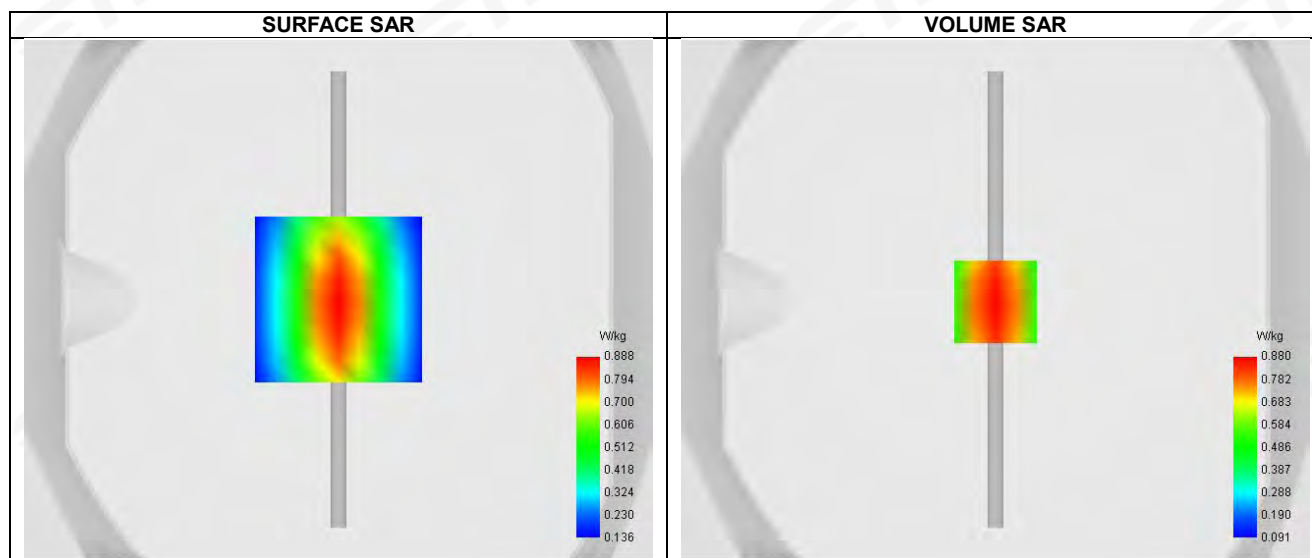
Area scan resolution: dx=8mm, dy=8mm

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

Date of measurement: 2025-07-09

Experimental conditions

Phantom	Validation plane
Device Position	Dipole
Band	750MHz
Channels	Middle
Signal	CW
Frequency (MHz)	750MHz
Relative permittivity	42.20
Conductivity (S/m)	0.87
Probe	SN 08/21 EPGO352
ConvF	1.56
Crest factor	1:1



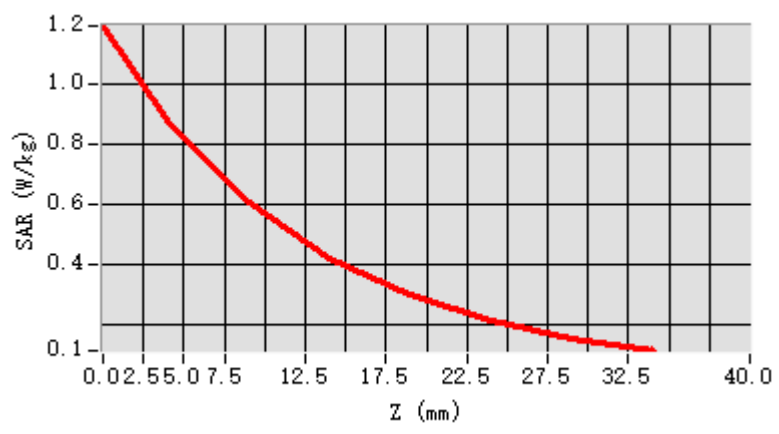
Maximum location: X=0.00, Y=-1.00 ; SAR Peak: 1.19 W/kg

D. SAR 1g & 10g

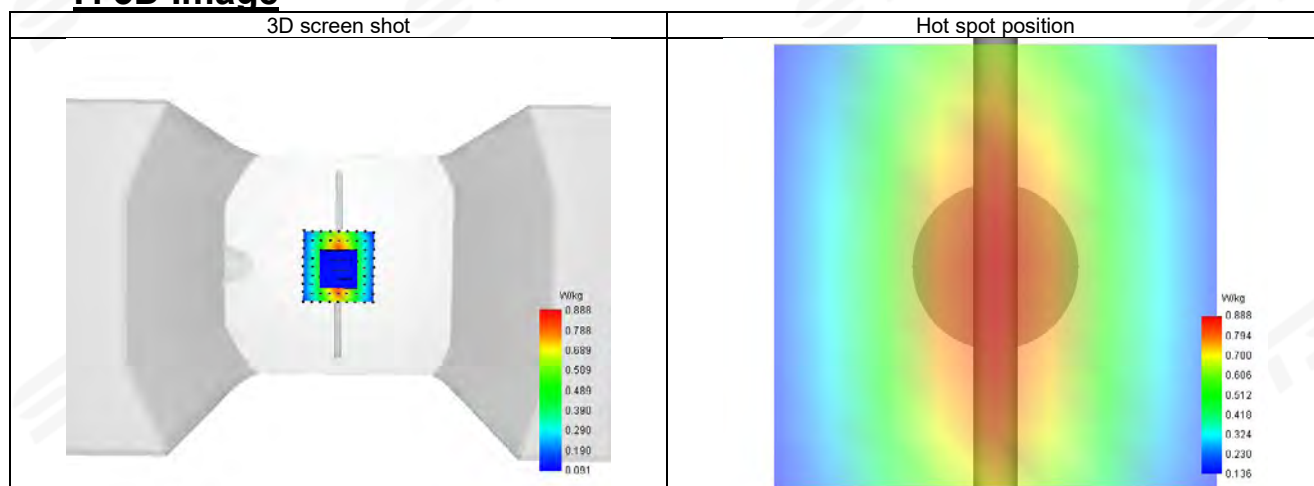
SAR 10g (W/Kg)	0.540
SAR 1g (W/Kg)	0.805
Horizontal validation criteria: minimum distance (mm)	11.174566
Vertical validation criteria: SAR ratio M2/M1 (%)	68.526112

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.191	0.880	0.605	0.422	0.298	0.214	0.155



F. 3D Image



**System Performance Check Data (835MHz)**

Type: Phone measurement (Complete)

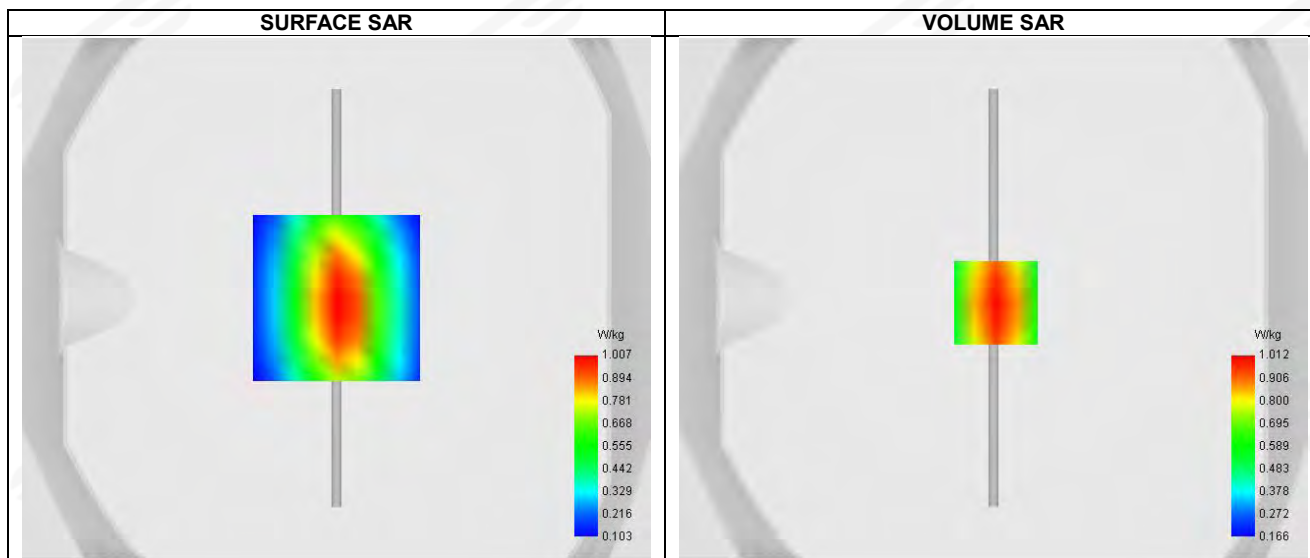
Area scan resolution: dx=8mm, dy=8mm

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

Date of measurement: 2025-07-09

Experimental conditions

Phantom	Validation plane
Device Position	Dipole
Band	835MHz
Channels	Middle
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	42.05
Conductivity (S/m)	0.92
Probe	SN 08/21 EPGO352
ConvF	1.44
Crest factor:	1:1



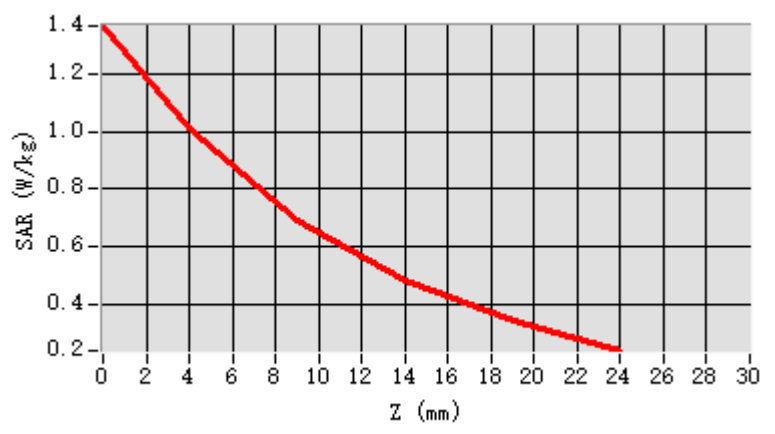
Maximum location: X=1.00, Y=-2.00 ; SAR Peak: 1.36 W/kg

D. SAR 1g & 10g

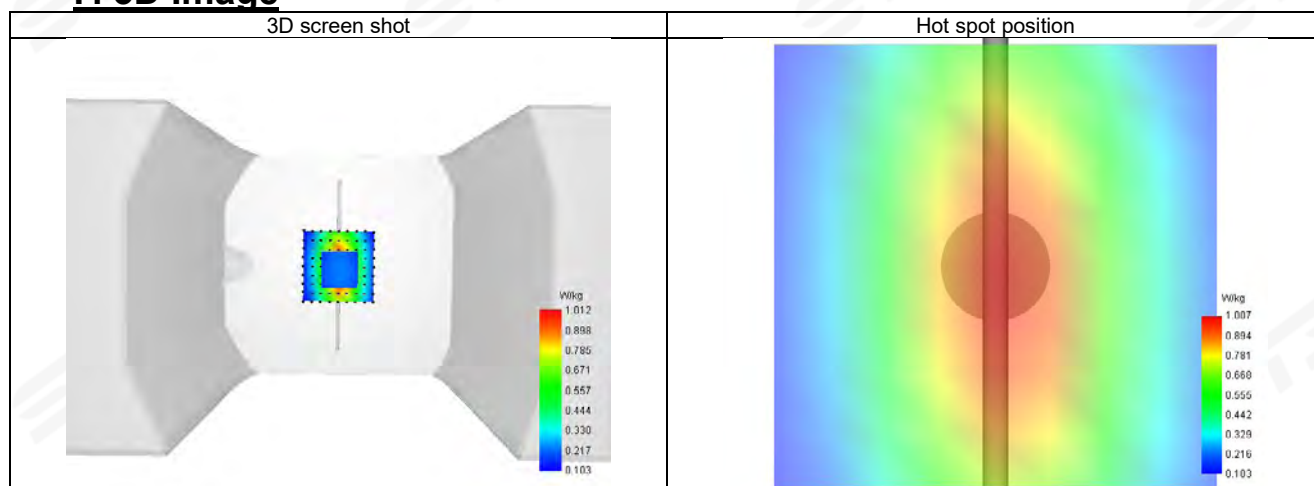
SAR 10g (W/Kg)	0.593
SAR 1g (W/Kg)	0.942
Horizontal validation criteria: minimum distance (mm)	14.774123
Vertical validation criteria: SAR ratio M2/M1 (%)	68.463215

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	0.00	4.00
SAR (W/Kg)	1.365	1.012	0.695	0.483	0.344	1.365	1.012



F. 3D Image



**System Performance Check Data(1800MHz)**

Type: Phone measurement (Complete)

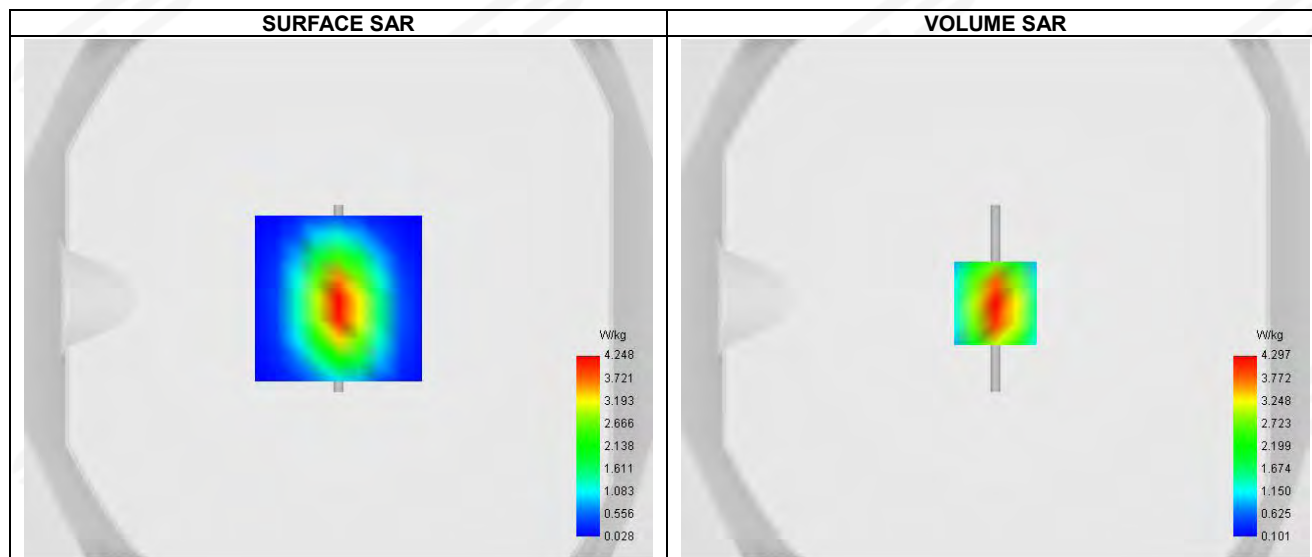
Area scan resolution: dx=8mm, dy=8mm

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

Date of measurement: 2025-07-10

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	1800MHz
Channels	Middle
Signal	CW
Frequency (MHz)	1800MHz
Relative permittivity	41.04
Conductivity (S/m)	1.41
Probe	SN 08/21 EPGO352
ConvF	1.58
Crest factor:	1:1



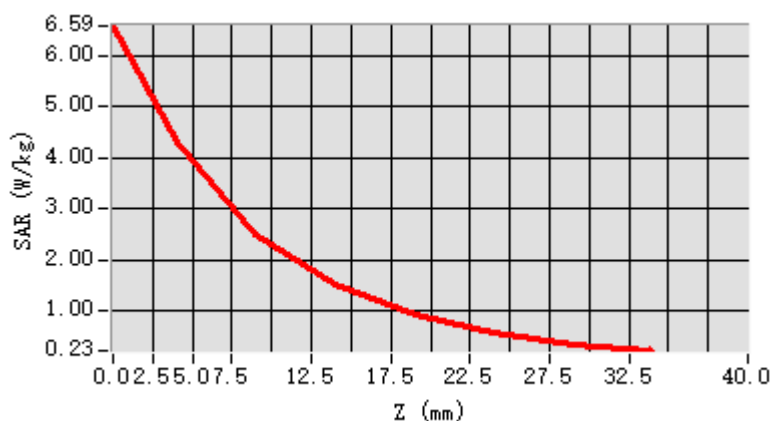
Maximum location: X=0.00, Y=-2.00 ; SAR Peak: 6.55 W/kg

D. SAR 1g & 10g

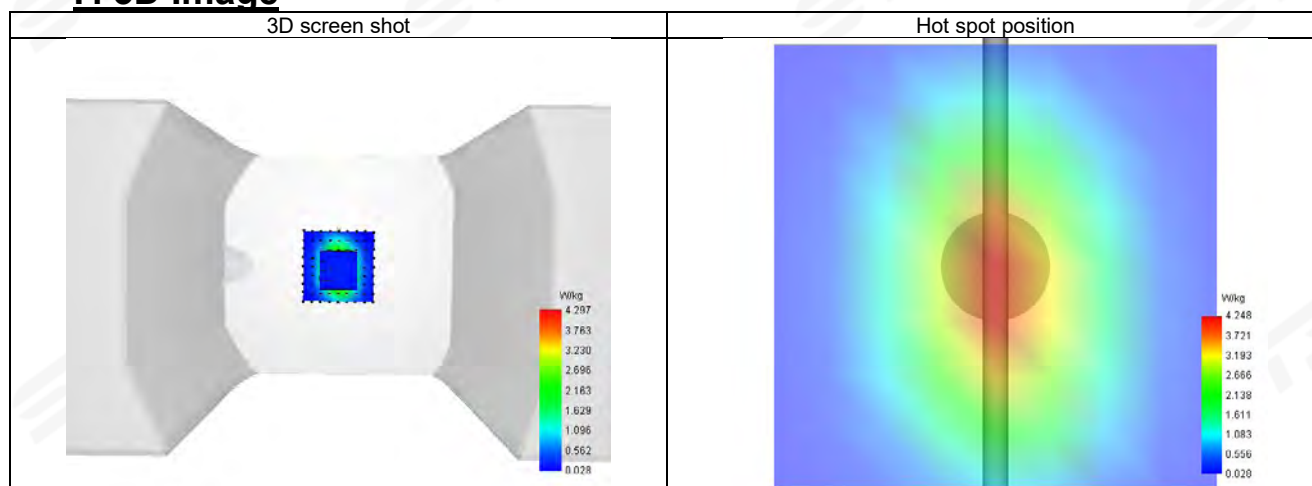
SAR 10g (W/Kg)	1.825
SAR 1g (W/Kg)	3.727
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.081624

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.587	4.297	2.496	1.510	0.931	0.572	0.357



F. 3D Image



**System Performance Check Data (1900MHz)**

Type: Phone measurement (Complete)

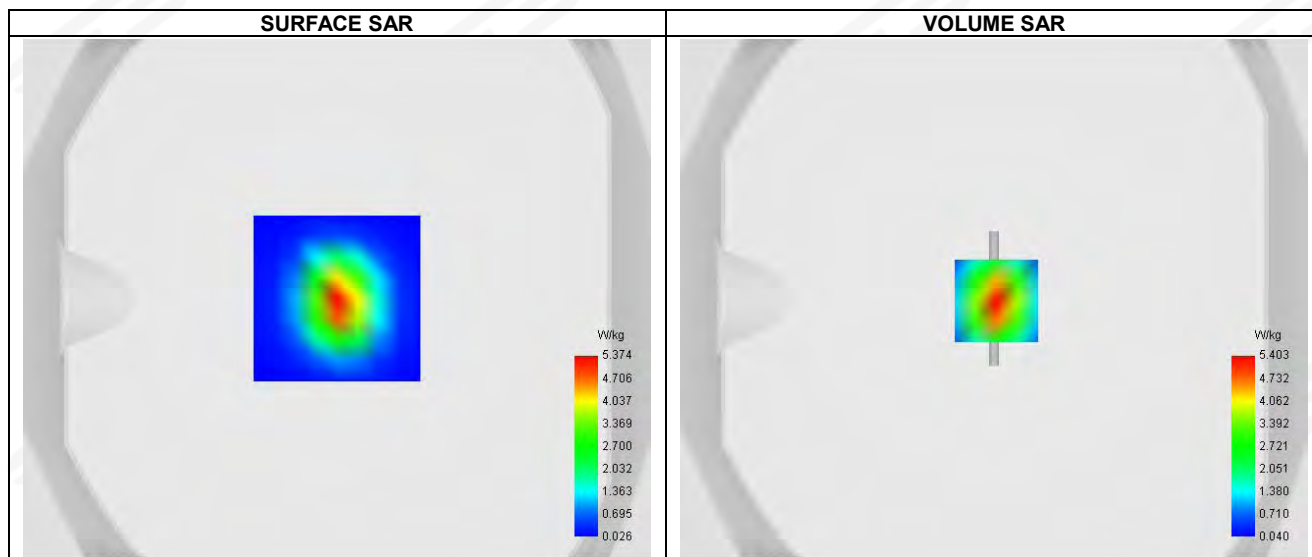
Area scan resolution: dx=8mm, dy=8mm

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

Date of measurement: 2025-07-10

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	1900MHz
Channels	Middle
Signal	CW
Frequency (MHz)	1900MHz
Relative permittivity	40.52
Conductivity (S/m)	1.35
Probe	SN 08/21 EPGO352
ConvF	1.72
Crest factor:	1:1



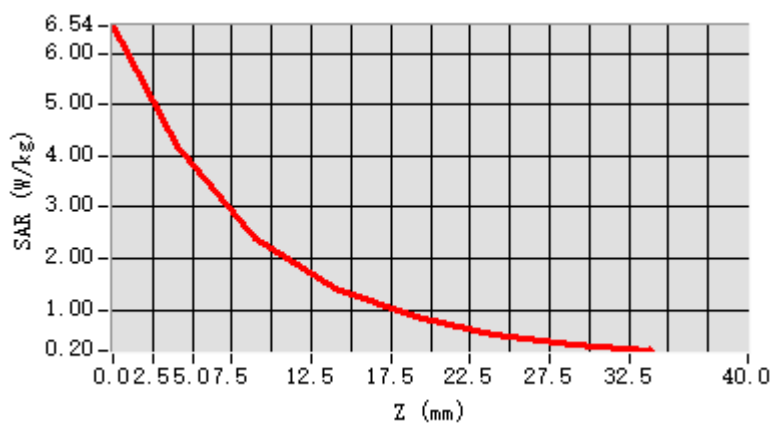
Maximum location: X=1.00, Y=-1.00 ; SAR Peak: 8.82 W/kg

D. SAR 1g & 10g

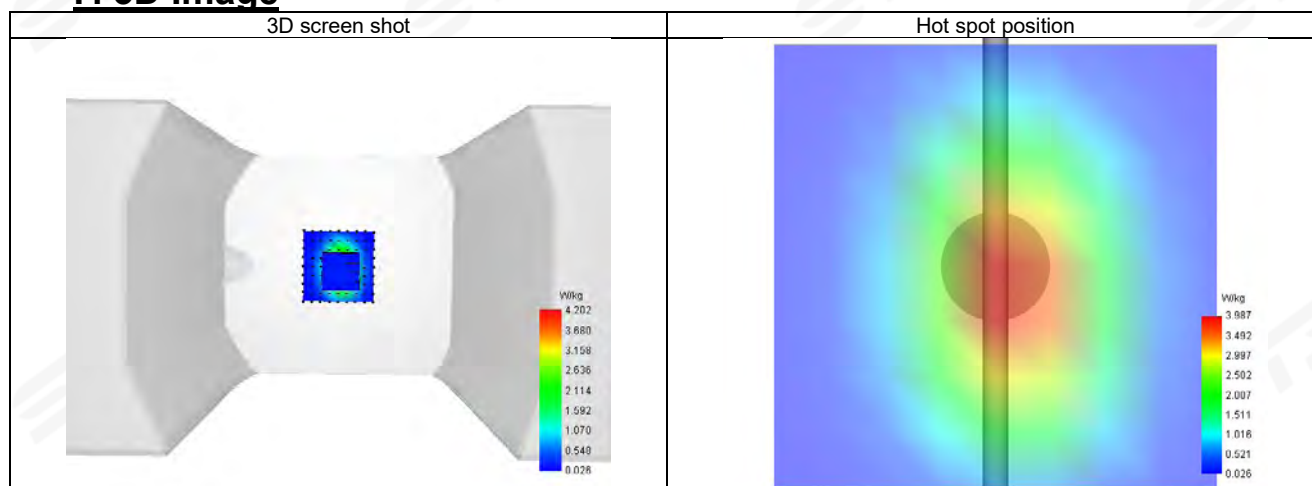
SAR 10g (W/Kg)	1.936
SAR 1g (W/Kg)	3.928
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	56.860342

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.539	4.202	2.389	1.420	0.862	0.525	0.321



F. 3D Image



**System Performance Check Data (2450MHz)**

Type: Phone measurement (Complete)

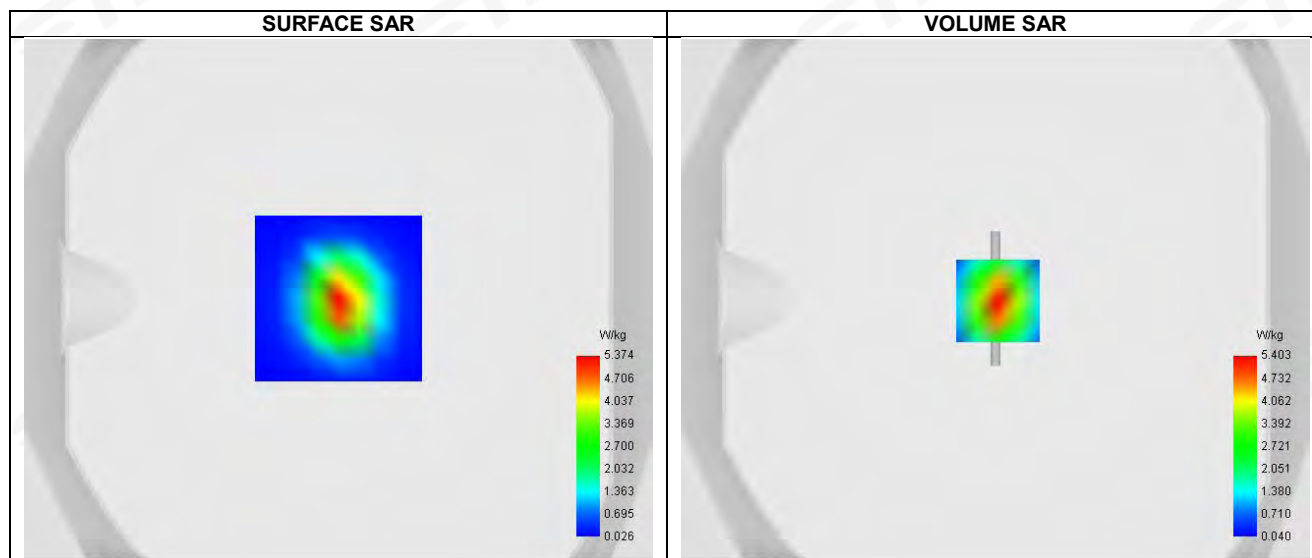
Area scan resolution: dx=8mm, dy=8mm

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

Date of measurement: 2025-07-11

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	2450MHz
Channels	Middle
Signal	CW
Frequency (MHz)	2450
Relative permittivity	39.12
Conductivity (S/m)	1.83
Probe	SN 08/21 EPG0352
ConvF	1.8
Crest factor:	1:1



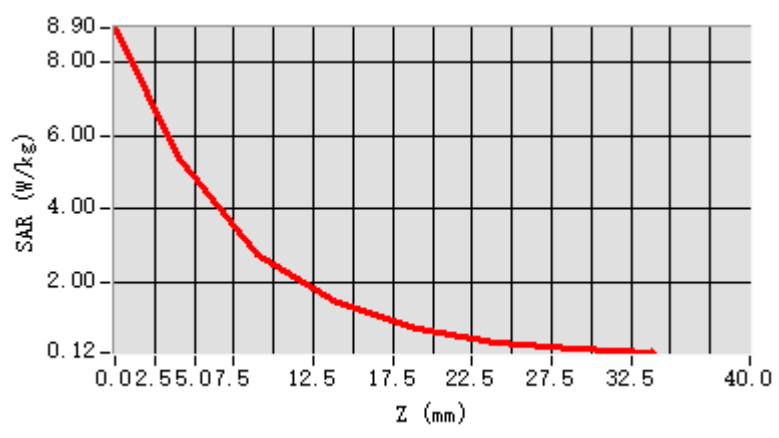
Maximum location: X=1.00, Y=-1.00 ; SAR Peak: 8.82 W/kg

D. SAR 1g & 10g

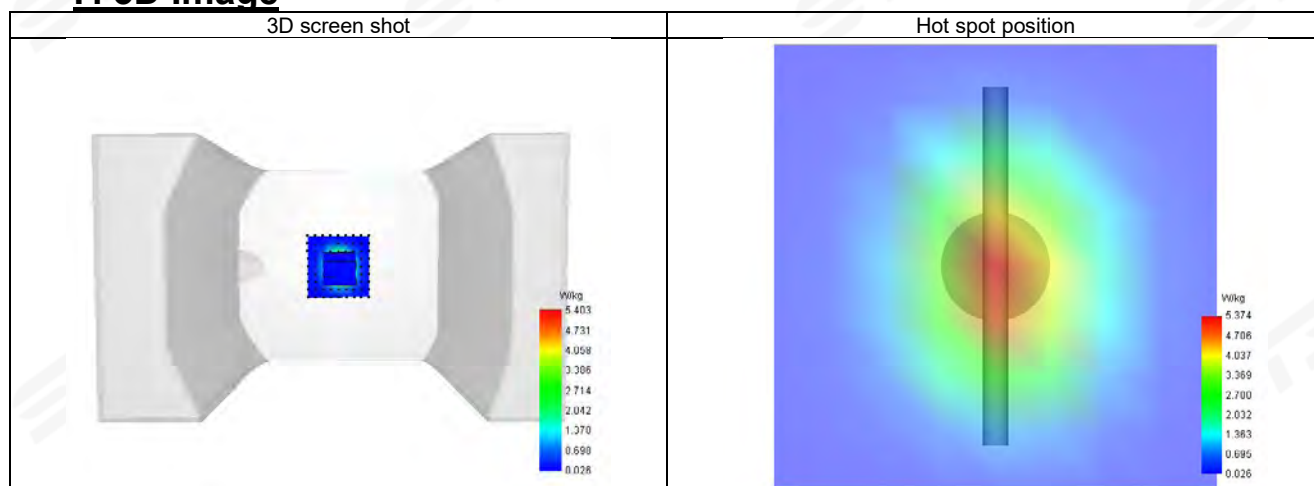
SAR 10g (W/Kg)	2.369
SAR 1g (W/Kg)	5.455
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	51.320765

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	8.904	5.403	2.773	1.485	0.781	0.411	0.216



F. 3D Image



**System Performance Check Data(2600MHz)**

Type: Phone measurement (Complete)

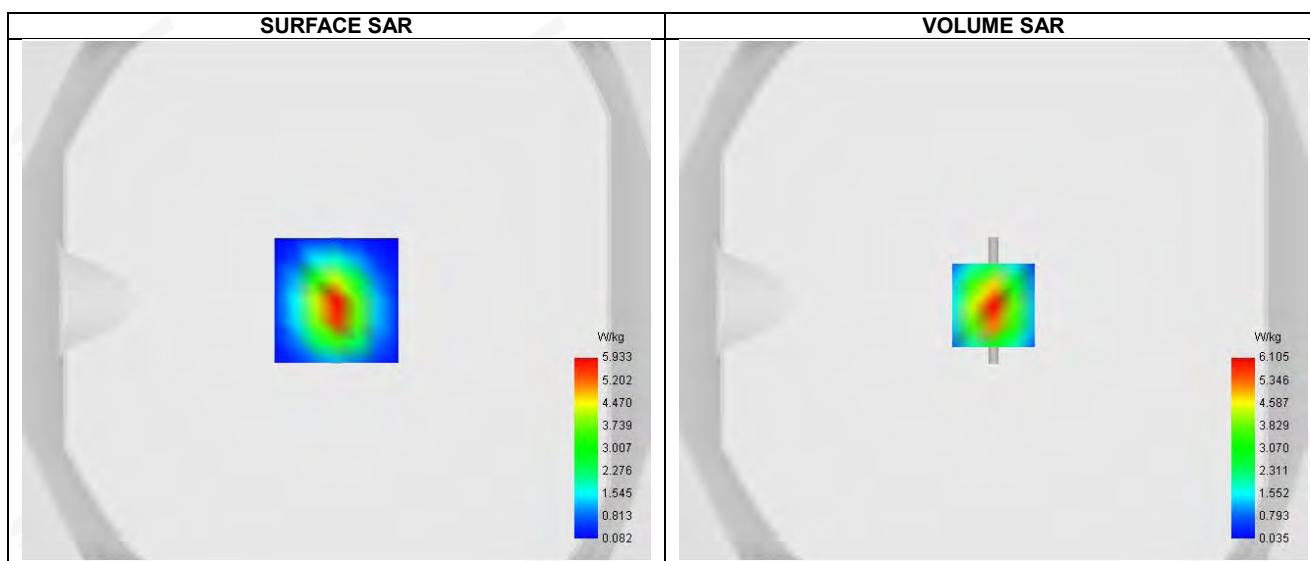
Area scan resolution: dx=8mm,dy=8mm

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

Date of measurement: 2025-07-11

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW
Frequency (MHz)	2600
Relative permittivity	39.81
Conductivity (S/m)	2.00
Probe	SN 08/21 EPGO352
ConvF	1.74
Crest factor:	1:1



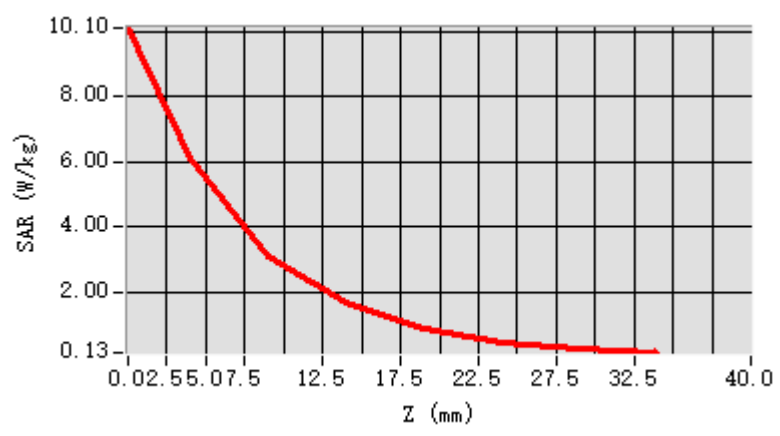
Maximum location: X=0.00, Y=-2.00 ; SAR Peak: 10.03 W/kg

D. SAR 1g & 10g

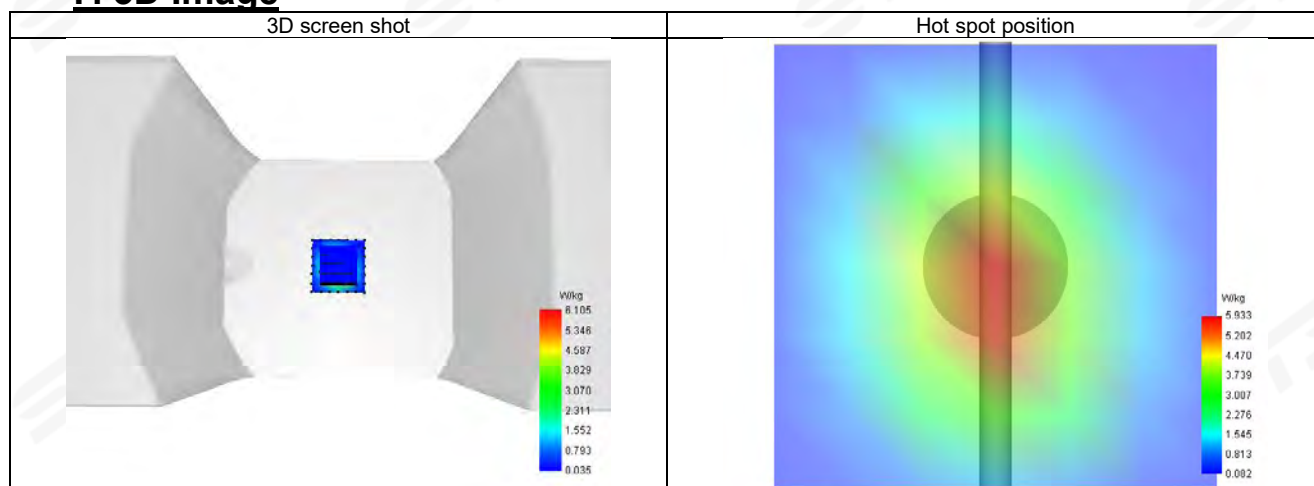
SAR 10g (W/Kg)	2.222
SAR 1g (W/Kg)	5.543
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	50.895398

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.095	6.105	3.107	1.639	0.853	0.450	0.241



F. 3D Image



**System Performance Check Data (5200MHz)**

Type: Dipole measurement (Complete)

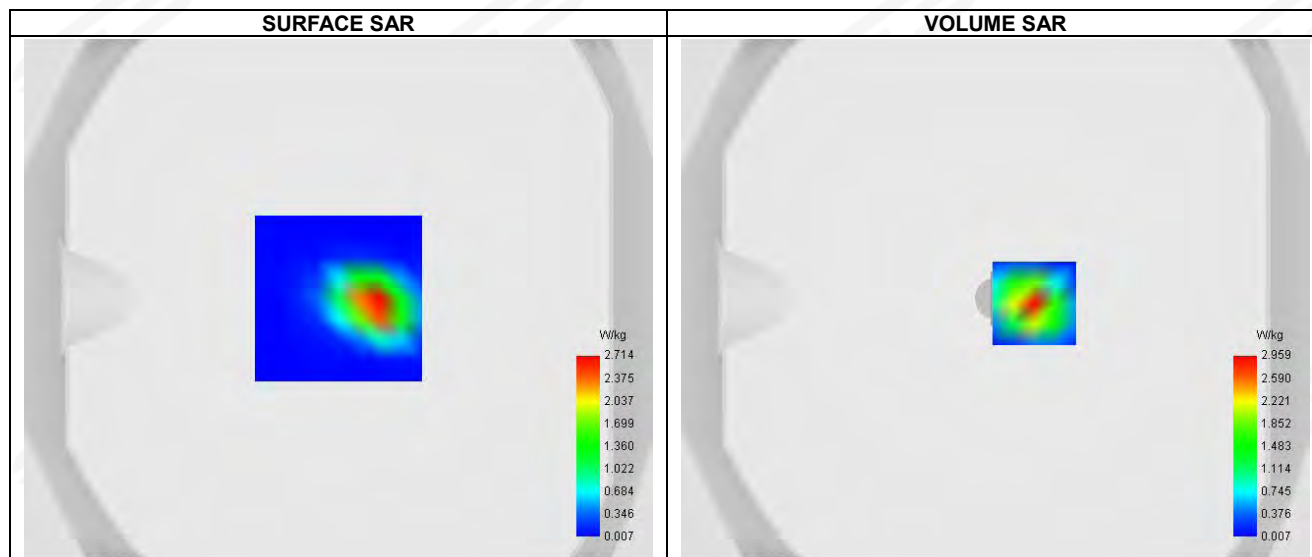
Area scan resolution: dx=8mm,dy=8mm

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

Date of measurement: 2025-07-12

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	5200MHz
Channels	Middle
Signal	CW
Frequency (MHz)	5200
Relative permittivity	36.78
Conductivity (S/m)	4.63
Probe	SN 08/21 EPGO352
ConvF	1.33
Crest factor:	1:1



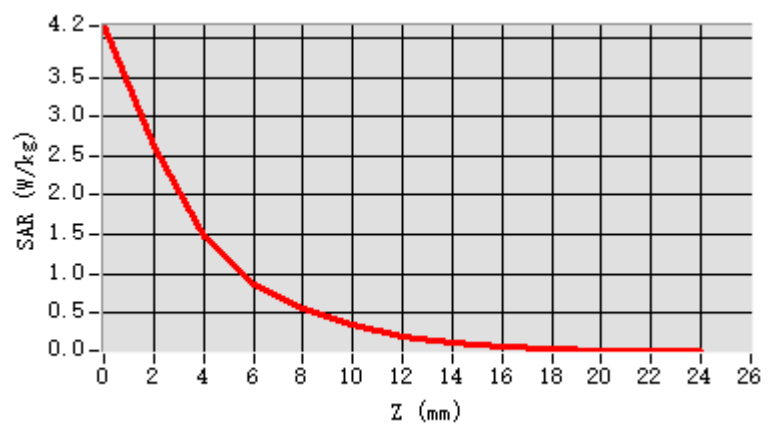
Maximum location: X=15.00, Y=-2.00 ; SAR Peak: 5.02 W/kg

D. SAR 1g & 10g

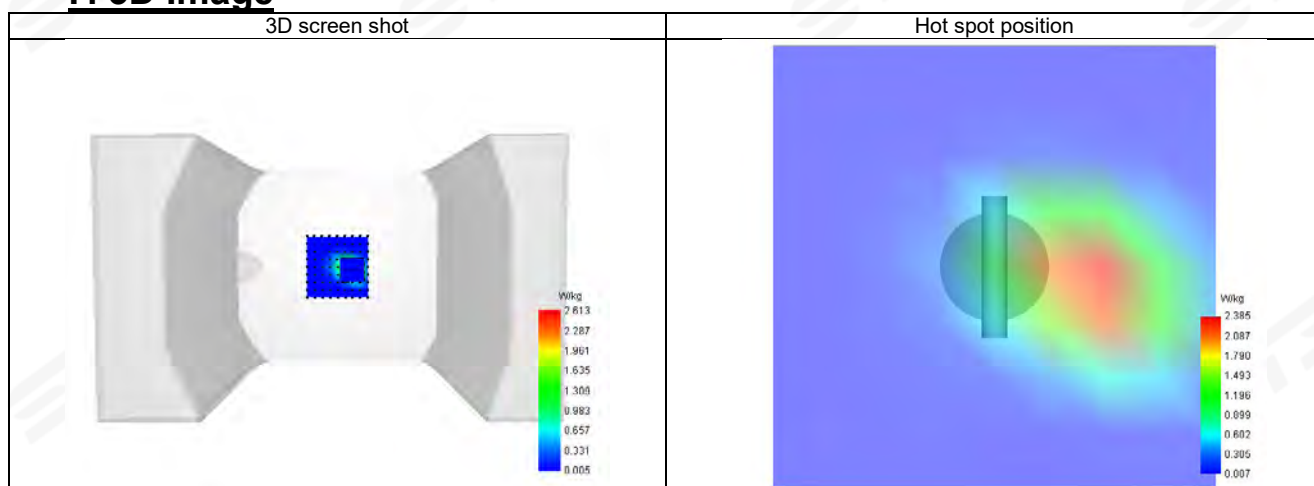
SAR 10g (W/Kg)	0.536
SAR 1g (W/Kg)	1.551
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	56.589366

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	24.00
SAR (W/Kg)	4.154	2.613	1.479	0.861	0.561	0.340	0.206	0.125	0.076	0.046	0.028	0.017	0.017



F. 3D Image



**System Performance Check Data (5400MHz)**

Type: Dipole measurement (Complete)

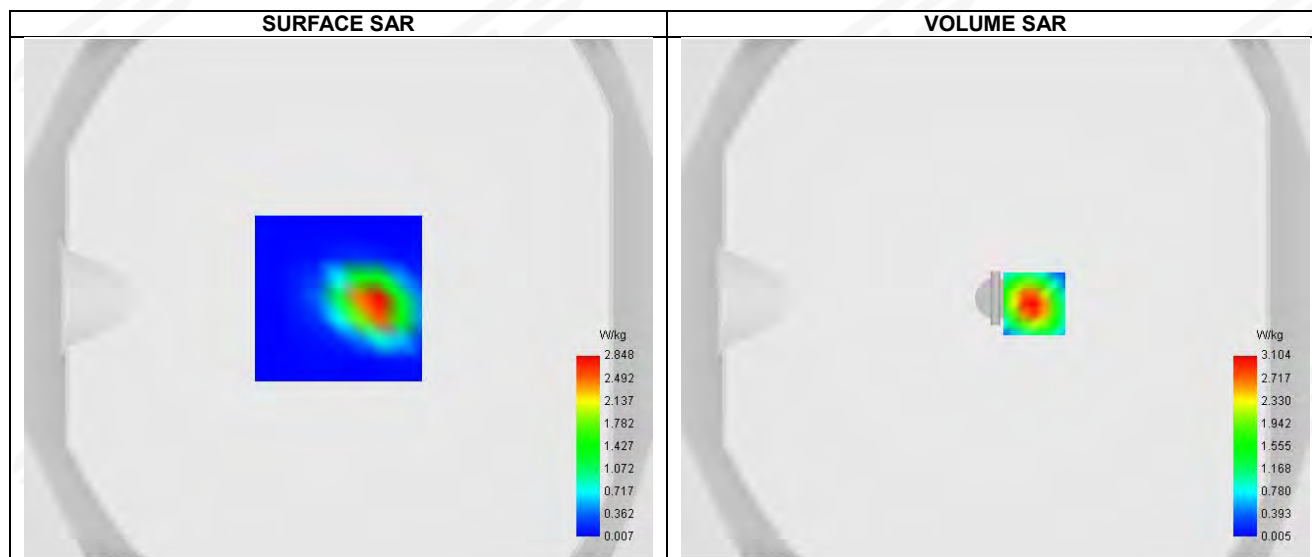
Area scan resolution: dx=8mm,dy=8mm

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

Date of measurement: 2025-07-12

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	5400MHz
Channels	Middle
Signal	CW
Frequency (MHz)	5400
Relative permittivity	37.06
Conductivity (S/m)	4.83
Probe	SN 08/21 EPGO352
ConvF	1.31
Crest factor:	1:1



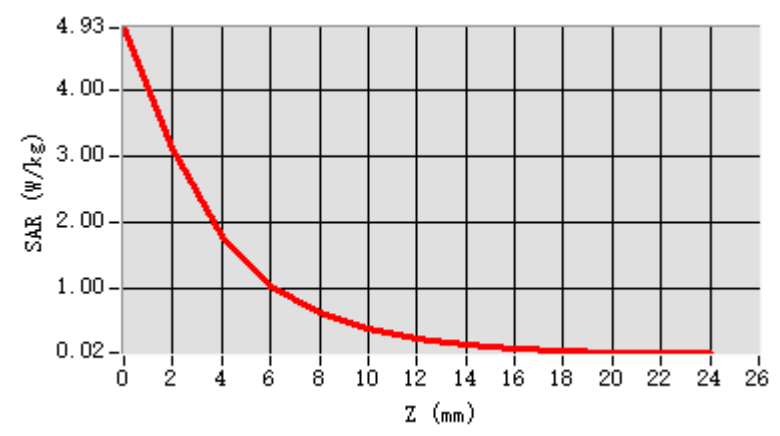
Maximum location: X=15.00, Y=-2.00 ; SAR Peak: 5.23 W/kg

D. SAR 1g & 10g

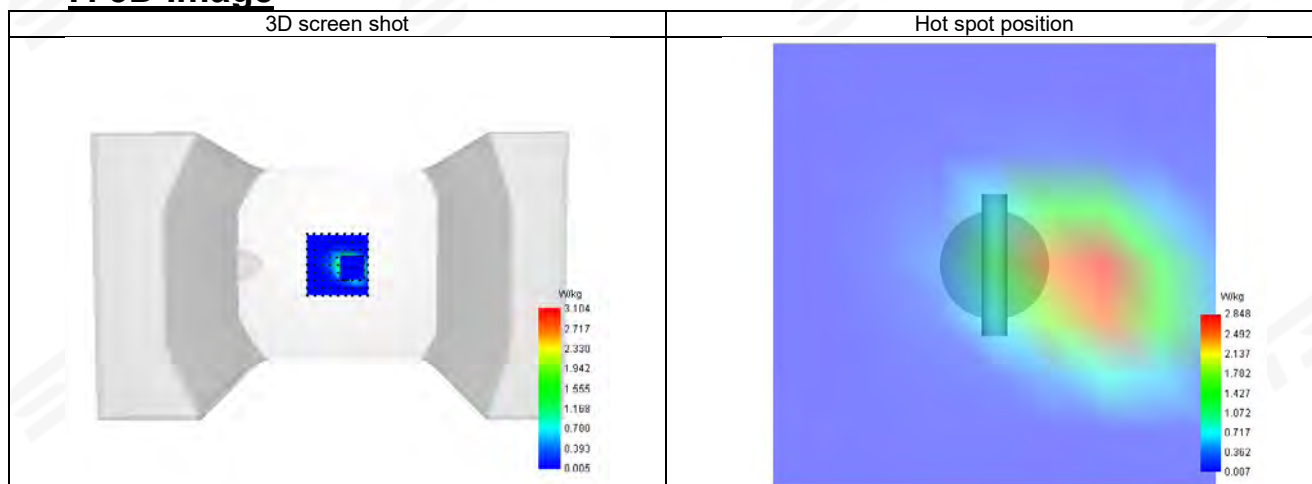
SAR 10g (W/Kg)	0.544
SAR 1g (W/Kg)	1.658
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	57.081503

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)	4.934	3.104	1.772	1.026	0.635	0.377	0.224	0.133	0.079	0.047	0.028	0.016



F. 3D Image



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

Type: Dipole measurement (Complete)

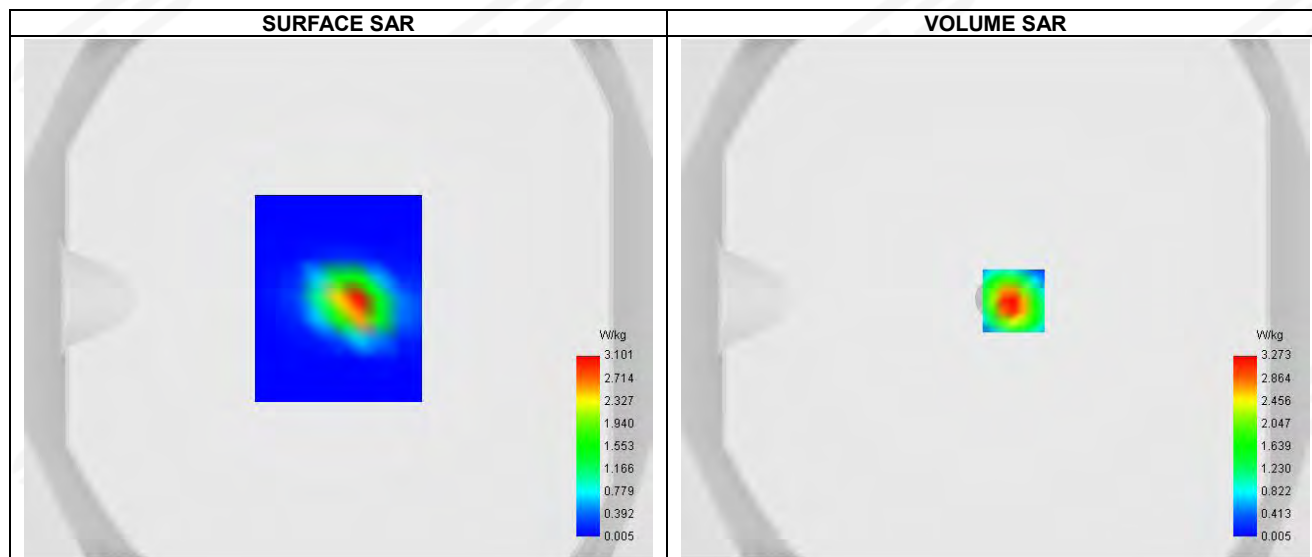
Area scan resolution: dx=8mm,dy=8mm

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

Date of measurement: 2025-07-12

Experimental conditions.

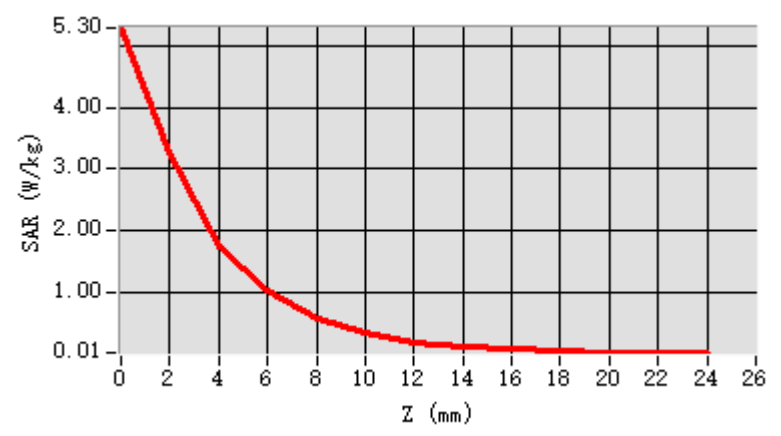
Phantom	Validation plane
Device Position	Dipole
Band	5800MHz
Channels	Middle
Signal	CW
Frequency (MHz)	5800
Relative permittivity	36.17
Conductivity (S/m)	5.27
Probe	SN 08/21 EPGO352
ConvF	1.35
Crest factor:	1:1

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

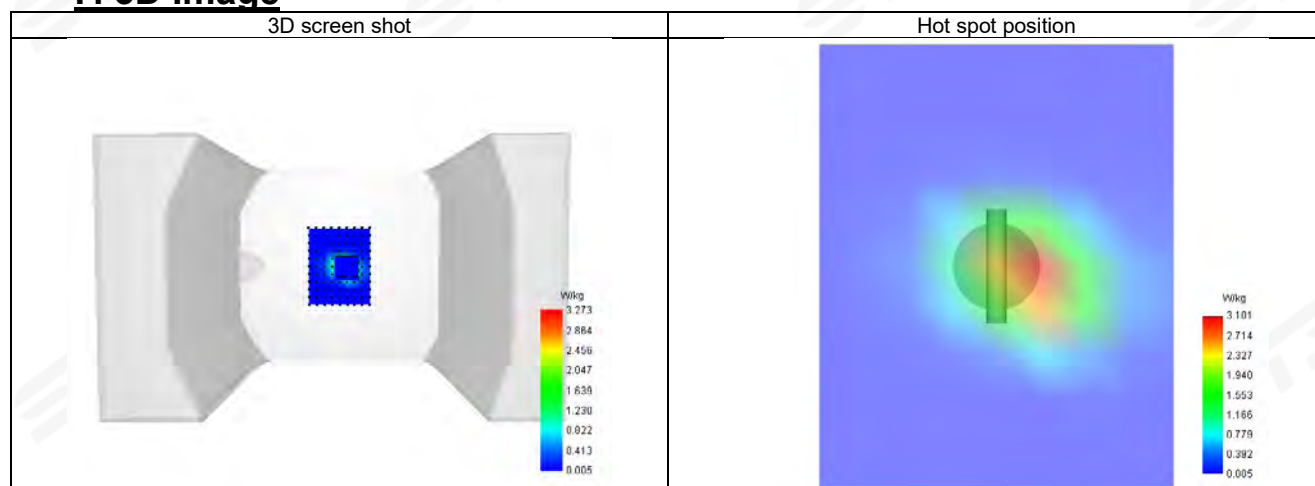
SAR 10g (W/Kg)	0.585
SAR 1g (W/Kg)	1.864
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	52.798926

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	24.00
SAR (W/Kg)	5.303	3.273	1.728	1.027	0.582	0.330	0.187	0.106	0.060	0.034	0.019	0.011	0.011



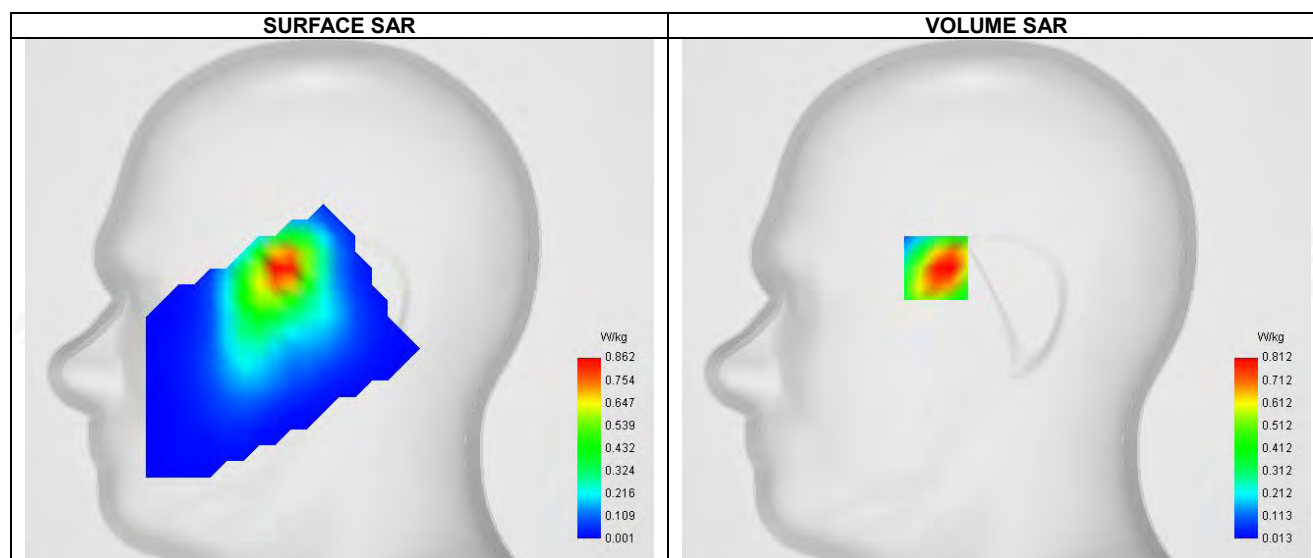
F. 3D Image



Appendix B. SAR Test Plots

Plot 1: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-09
ConvF	1.44
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	Right Cheek
Device Position	Cheek
Band	GSM 850
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	848.8
Relative permittivity (real part)	41.61
Conductivity (S/m)	0.91



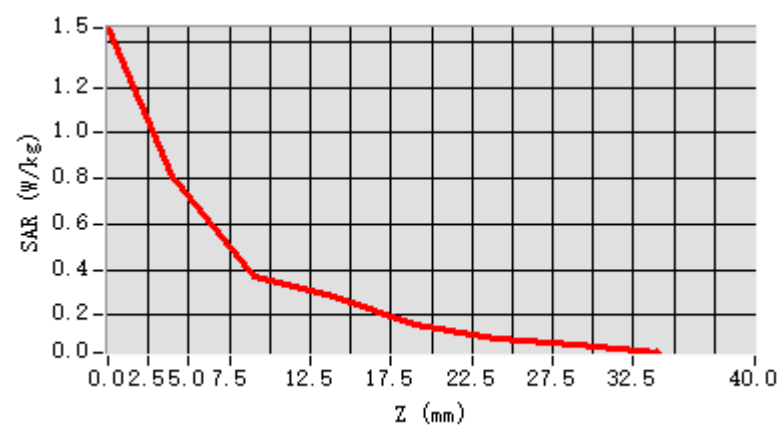
Maximum location: X=-30.00, Y=16.00 ; SAR Peak: 1.26 W/kg

D. SAR 1g & 10g

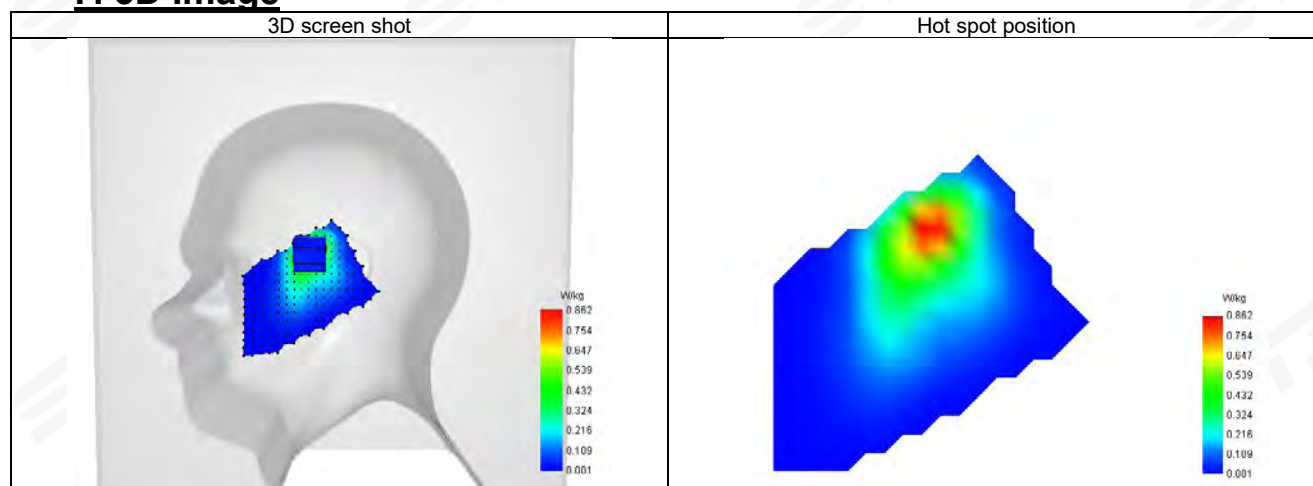
SAR 10g (W/Kg)	0.438
SAR 1g (W/Kg)	0.685
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	63.579407

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.461	0.812	0.371	0.282	0.159	0.099	0.068

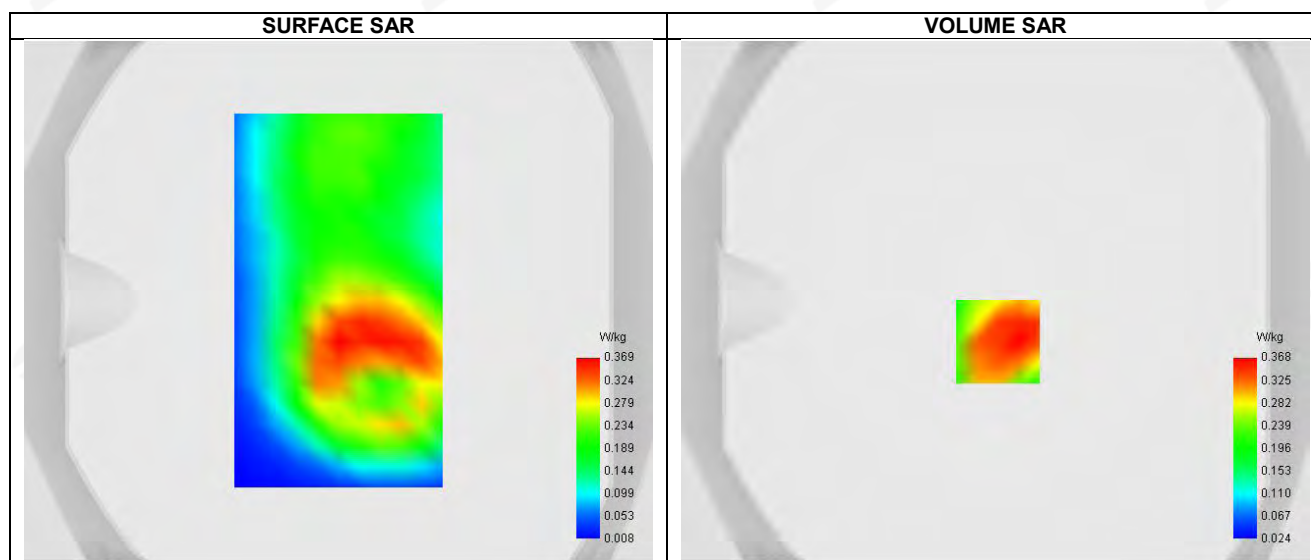


F. 3D Image



Plot 2: DUT: Smart Phone; EUT Model: RugKing 4 Pro

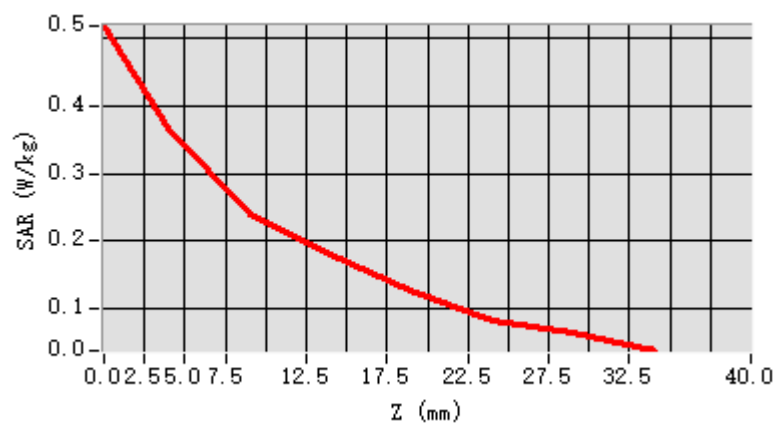
Test Date	2025-07-09
ConvF	1.44
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	GPRS 850
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	848.8
Relative permittivity (real part)	41.61
Conductivity (S/m)	0.91


D. SAR 1g & 10g

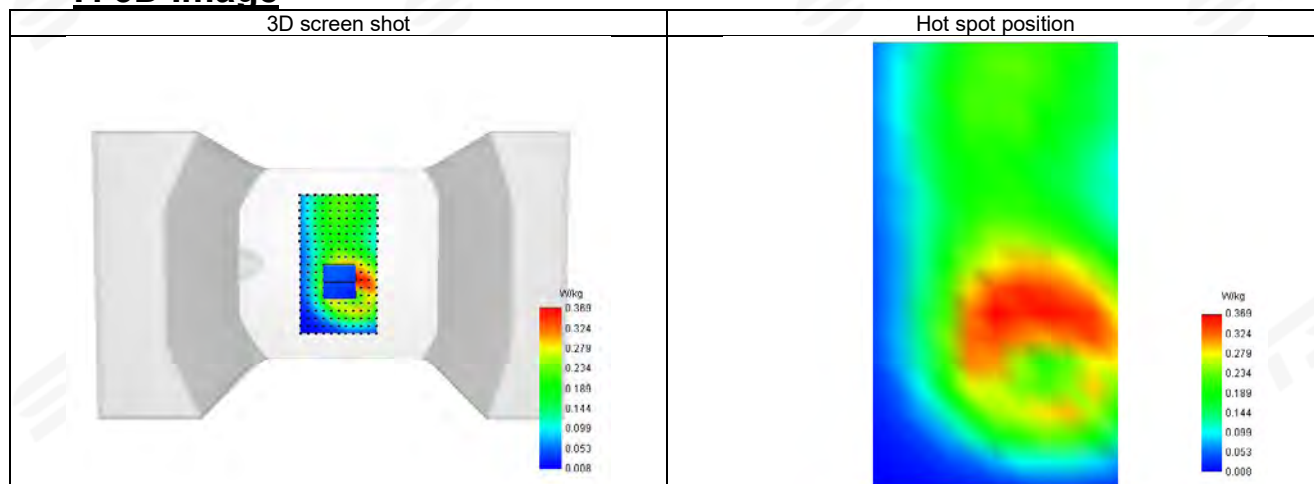
SAR 10g (W/Kg)	0.227
SAR 1g (W/Kg)	0.348
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	65.217391

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.519	0.368	0.240	0.179	0.125	0.083	0.065

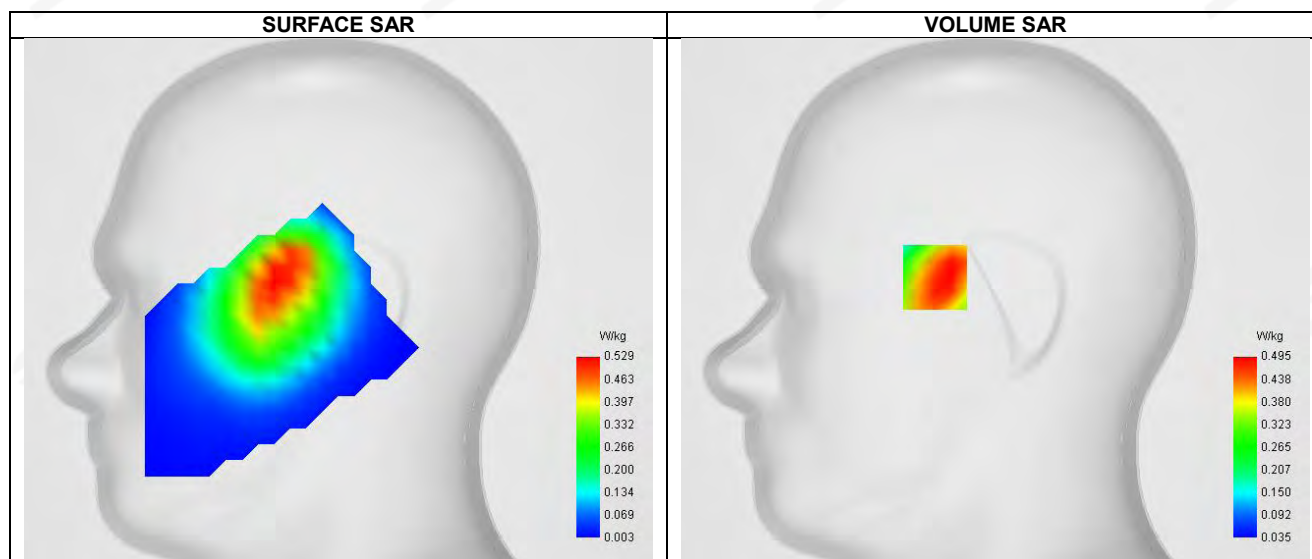


F. 3D Image



Plot 3: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.72
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	Right head
Device Position	Cheek
Band	GSM 1900
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	1880
Relative permittivity (real part)	40.90
Conductivity (S/m)	1.43



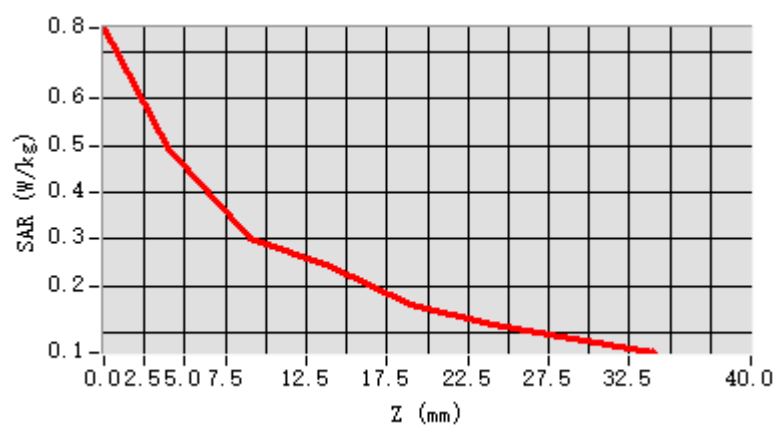
Maximum location: X=-30.00, Y=11.00 ; SAR Peak: 0.69 W/kg

D. SAR 1g & 10g

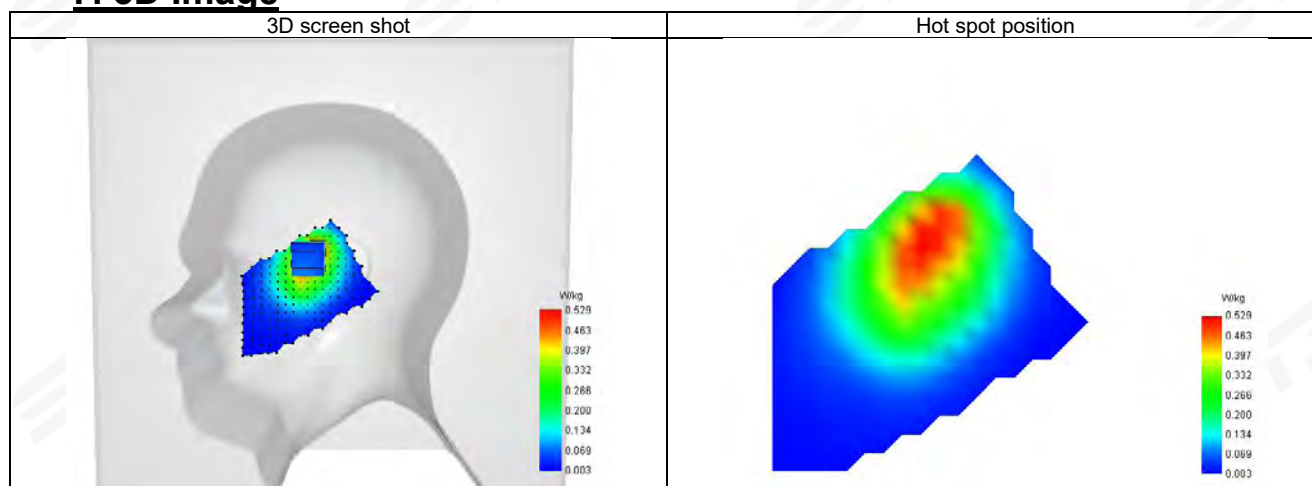
SAR 10g (W/Kg)	0.299
SAR 1g (W/Kg)	0.476
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	72.889862

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.750	0.495	0.302	0.243	0.162	0.120	0.088

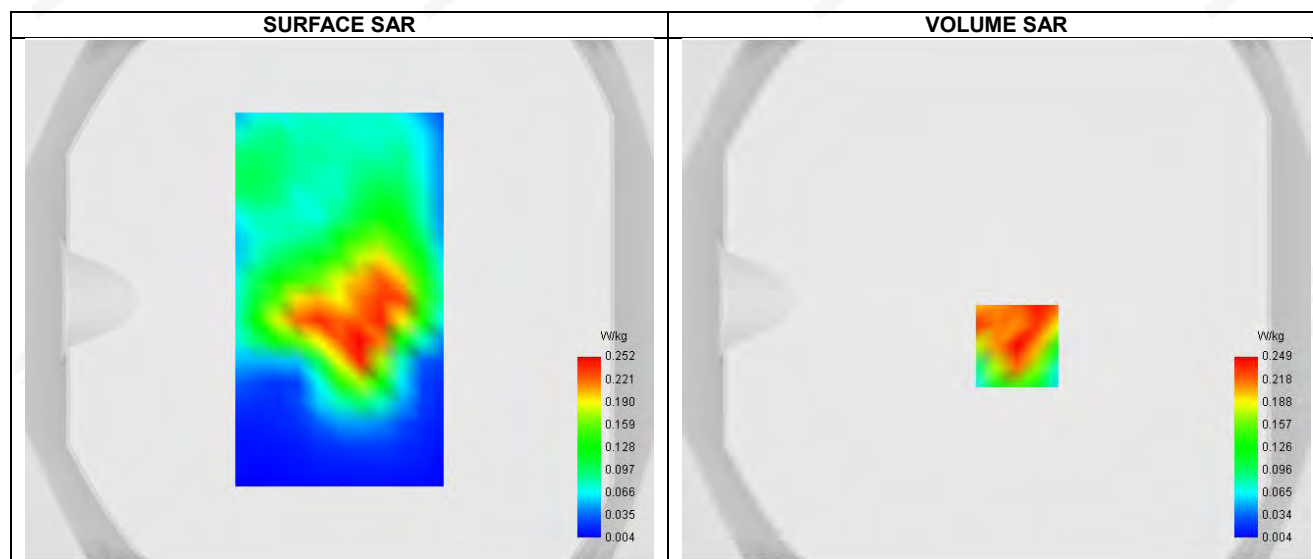


F. 3D Image



**Plot 4: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

Test Date	2025-07-10
ConvF	1.72
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	GPRS 1900
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	1880
Relative permittivity (real part)	40.90
Conductivity (S/m)	1.43



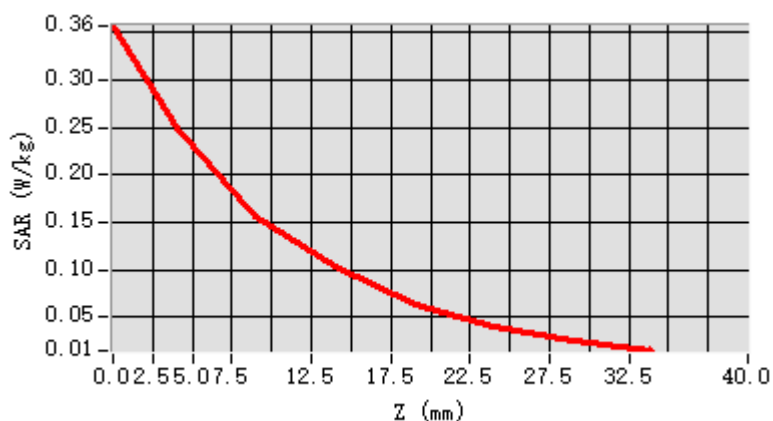
Maximum location: X=8.00, Y=-18.00 ; SAR Peak: 0.37 W/kg

D. SAR 1g & 10g

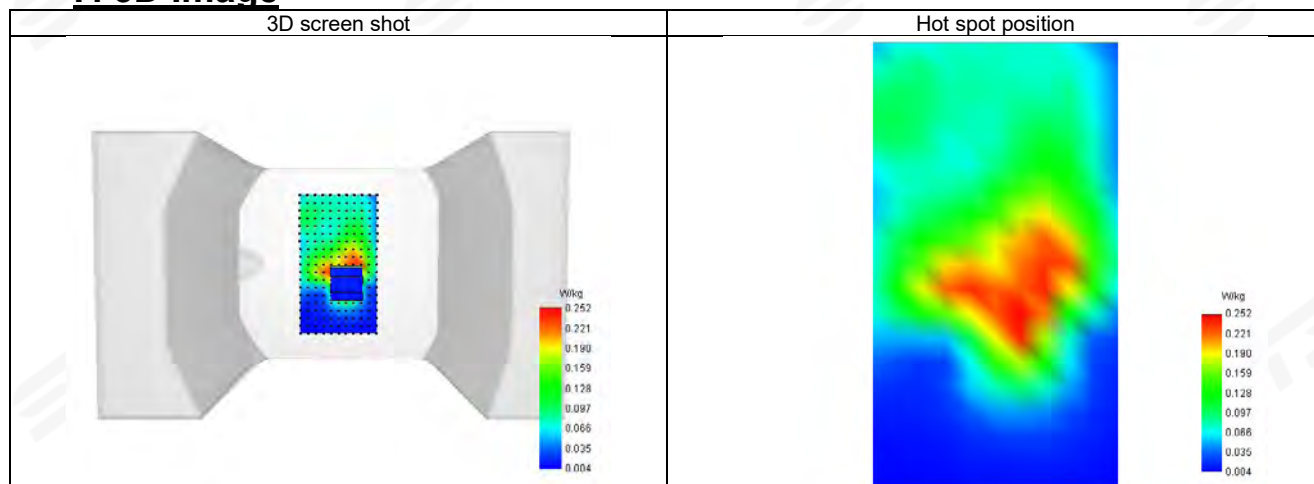
SAR 10g (W/Kg)	0.119
SAR 1g (W/Kg)	0.233
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	62.550240

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.357	0.249	0.156	0.103	0.063	0.039	0.025

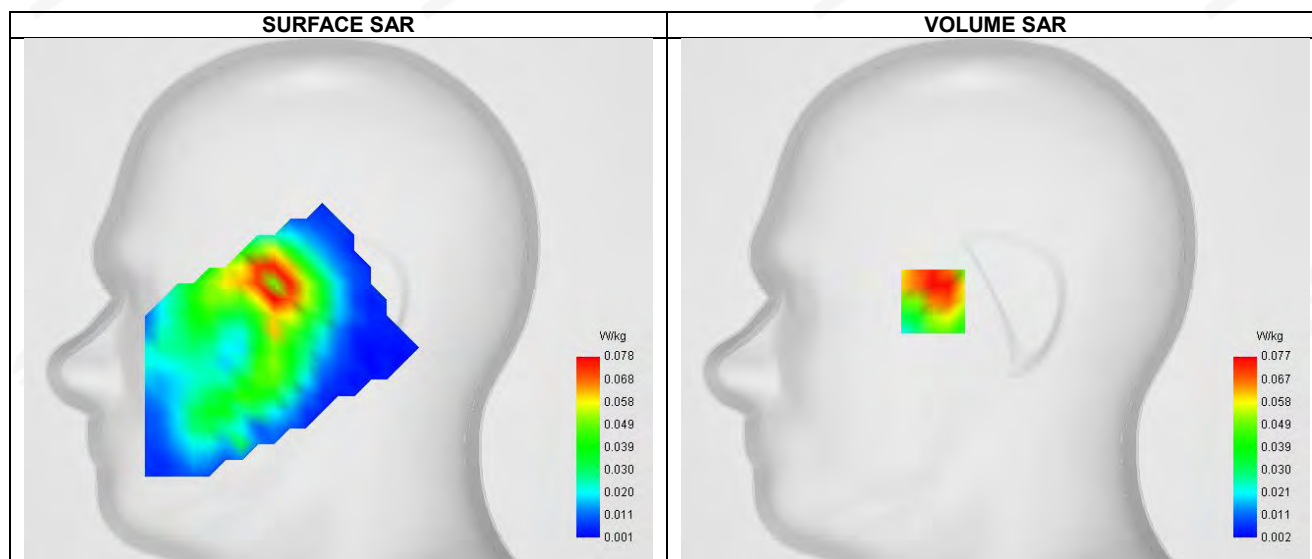


F. 3D Image



Plot 5: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.72
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	Right head
Device Position	Cheek
Band	WCDMA II
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1907.6
Relative permittivity (real part)	40.63
Conductivity (S/m)	1.41



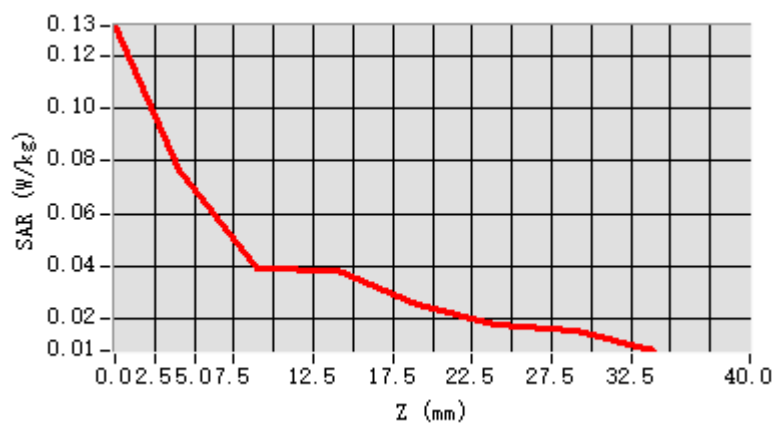
Maximum location: X=-31.00, Y=-1.00 ; SAR Peak: 0.10 W/kg

D. SAR 1g & 10g

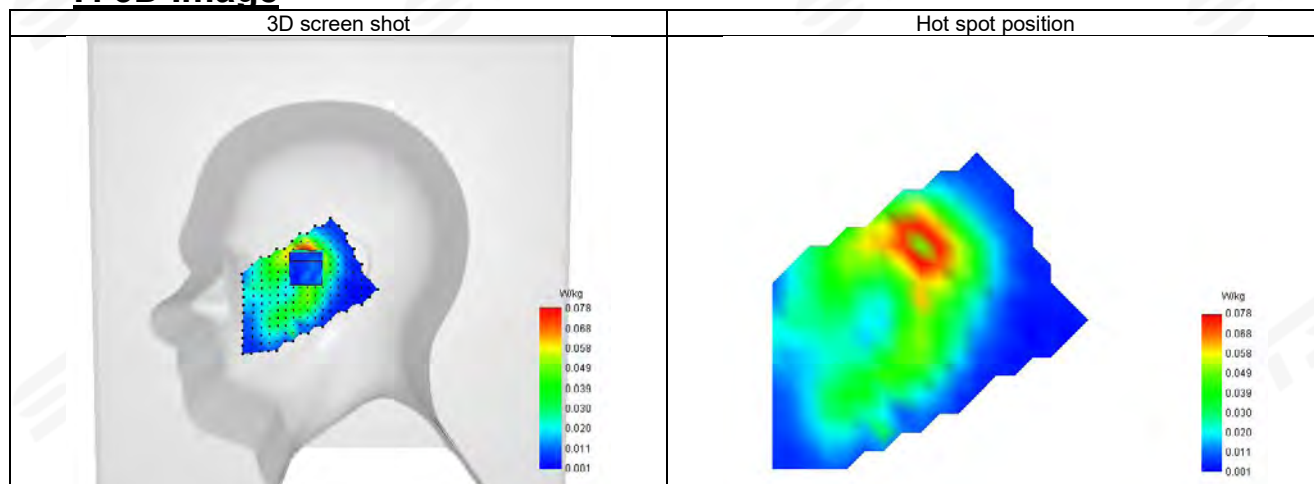
SAR 10g (W/Kg)	0.047
SAR 1g (W/Kg)	0.073
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	72.597867

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.131	0.077	0.039	0.039	0.025	0.018	0.016

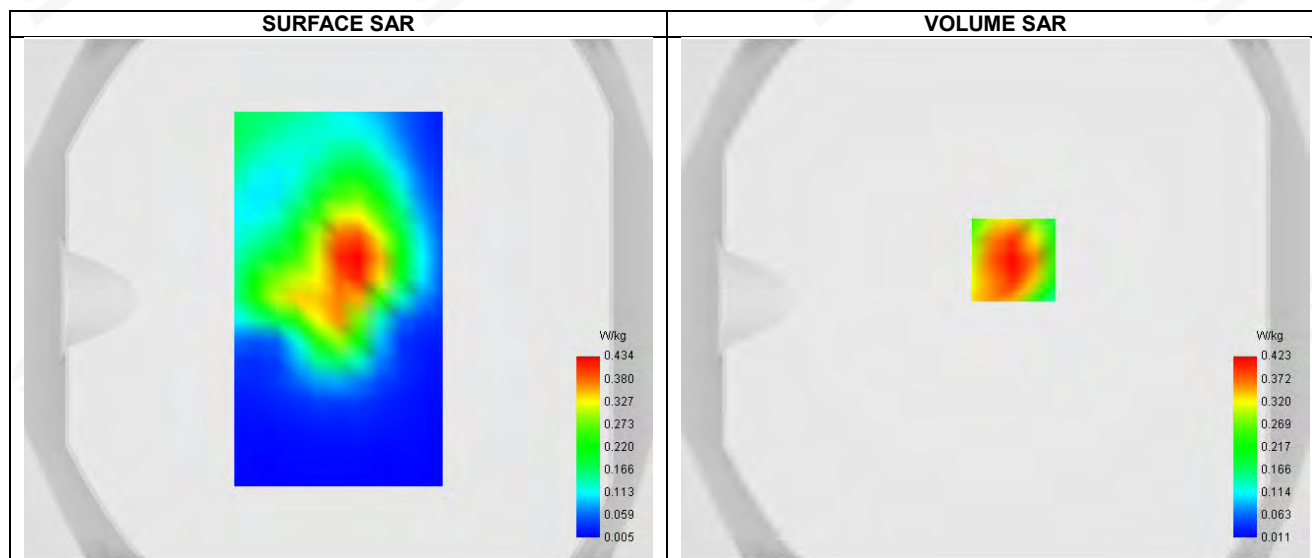


F. 3D Image



Plot 6: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.72
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	WCDMA II
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1907.6
Relative permittivity (real part)	40.63
Conductivity (S/m)	1.41



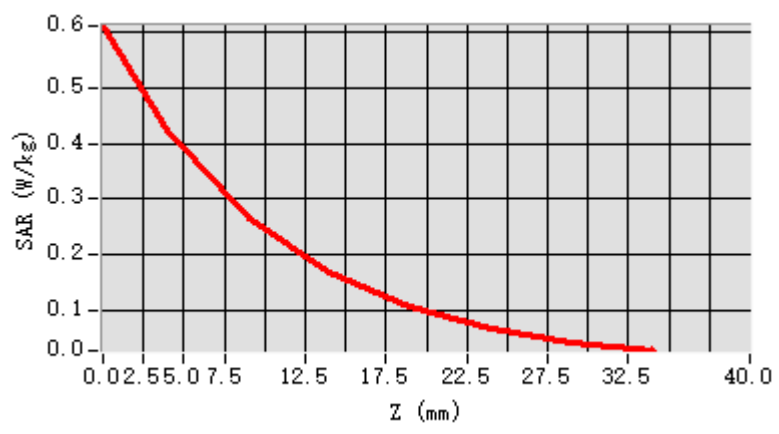
Maximum location: X=7.00, Y=15.00 ; SAR Peak: 0.62 W/kg

D. SAR 1g & 10g

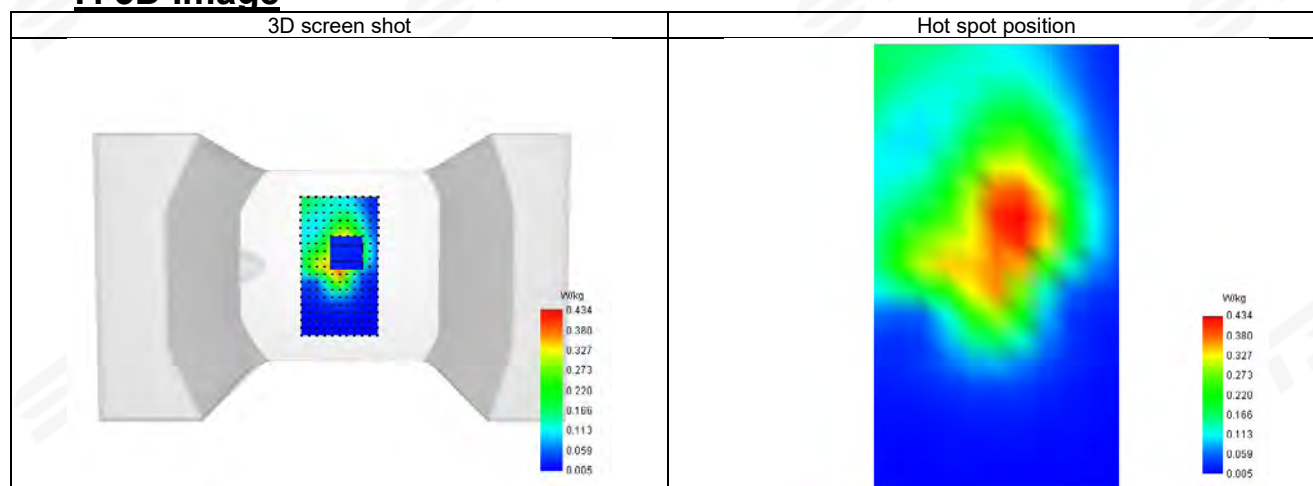
SAR 10g (W/Kg)	0.241
SAR 1g (W/Kg)	0.404
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	62.391652

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.612	0.423	0.264	0.168	0.106	0.067	0.042

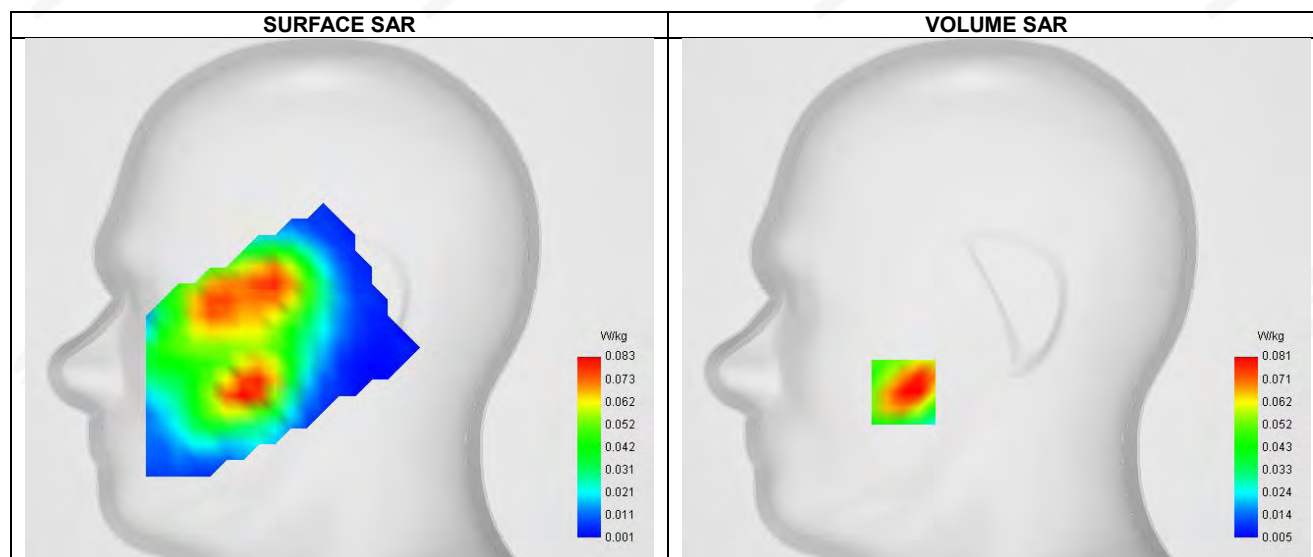


F. 3D Image



Plot 7: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.58
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	Right head
Device Position	Cheek
Band	WCDMA IV
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1740
Relative permittivity (real part)	40.54
Conductivity (S/m)	1.39



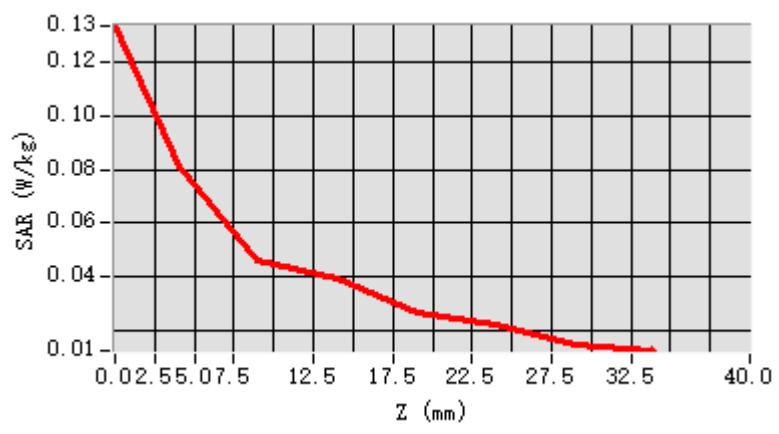
Maximum location: X=-46.00, Y=-46.00 ; SAR Peak: 0.12 W/kg

D. SAR 1g & 10g

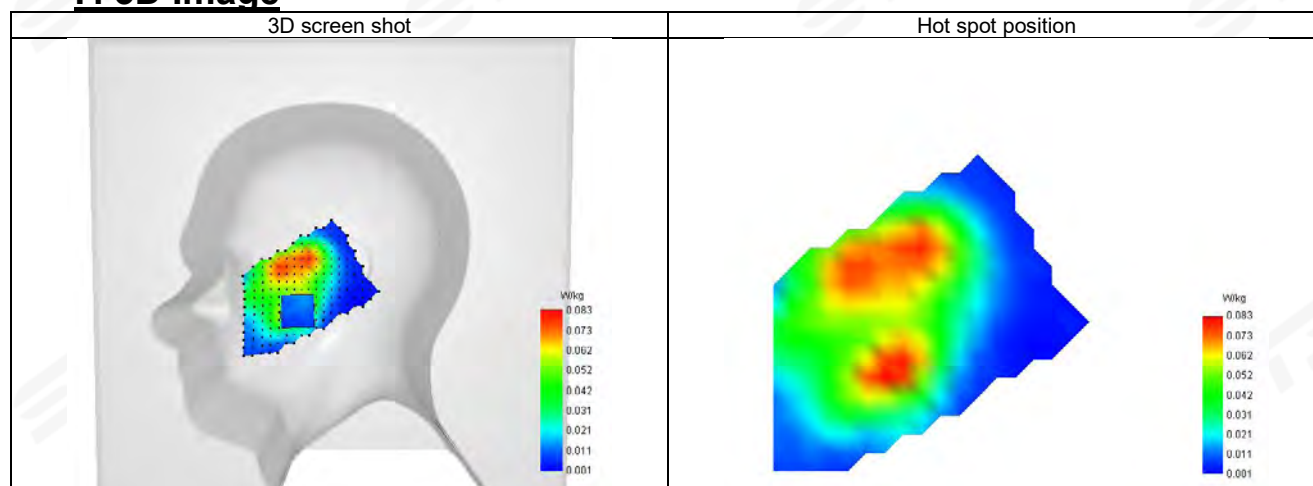
SAR 10g (W/Kg)	0.049
SAR 1g (W/Kg)	0.079
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	72.188548

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.134	0.081	0.046	0.039	0.027	0.022	0.015

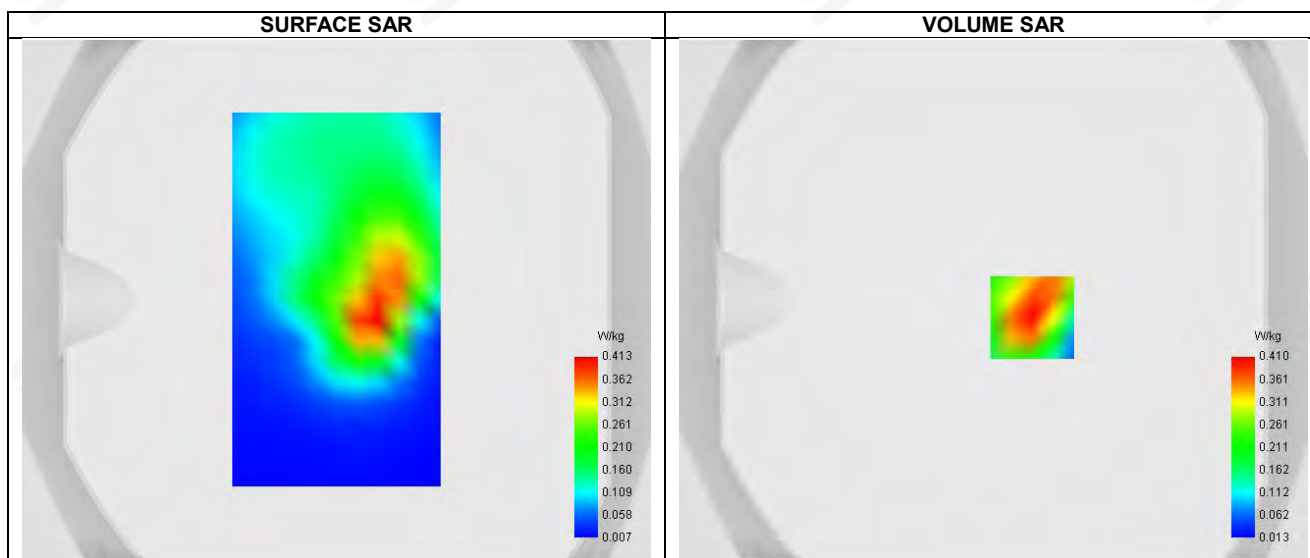


F. 3D Image



**Plot 8: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

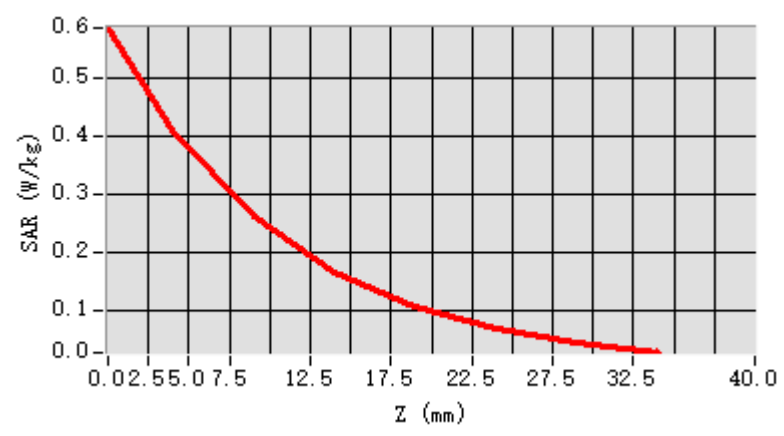
Test Date	2025-07-10
ConvF	1.58
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	WCDMA IV
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1740
Relative permittivity (real part)	40.54
Conductivity (S/m)	1.39

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

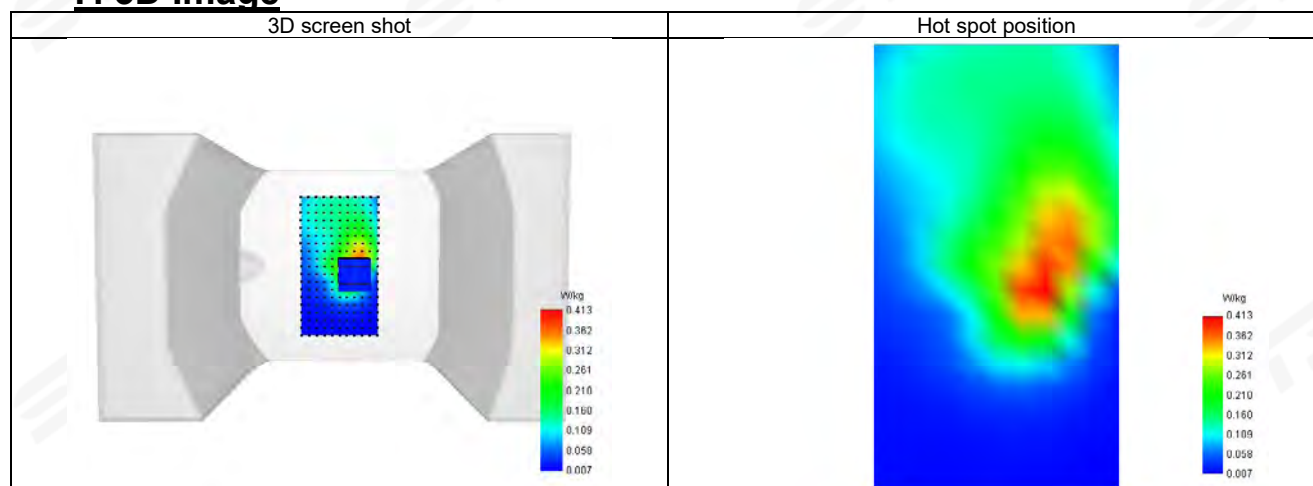
SAR 10g (W/Kg)	0.220
SAR 1g (W/Kg)	0.386
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.630149

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.585	0.410	0.261	0.167	0.107	0.069	0.044

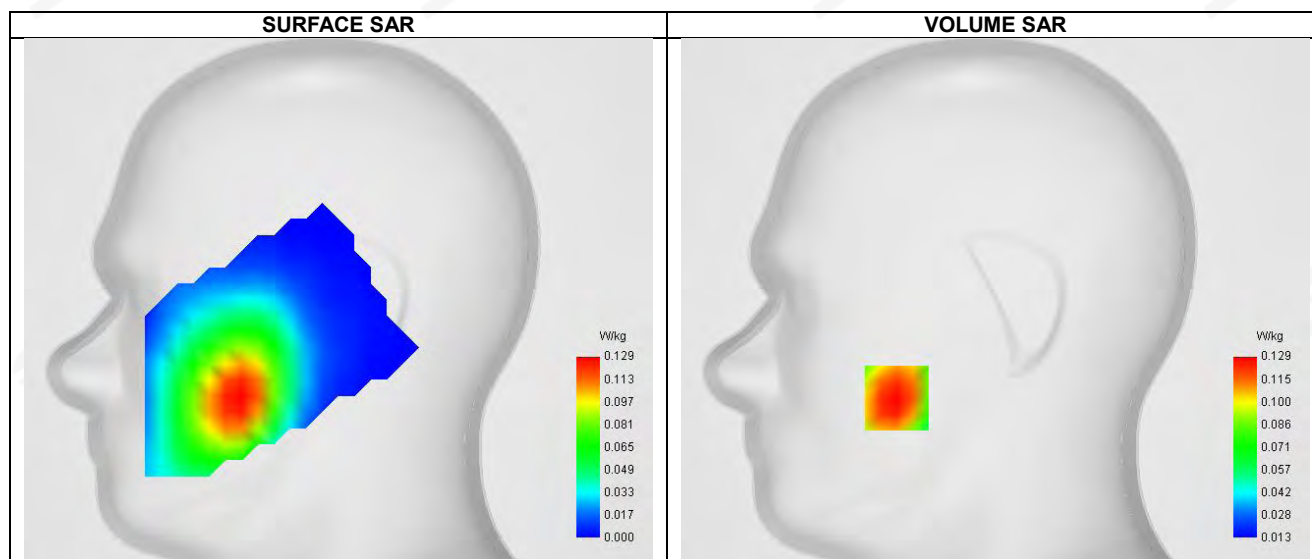


F. 3D Image



Plot 9: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-09
ConvF	1.44
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	Right Cheek
Device Position	Cheek
Band	WCDMA V
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	826.4
Relative permittivity (real part)	41.00
Conductivity (S/m)	0.90



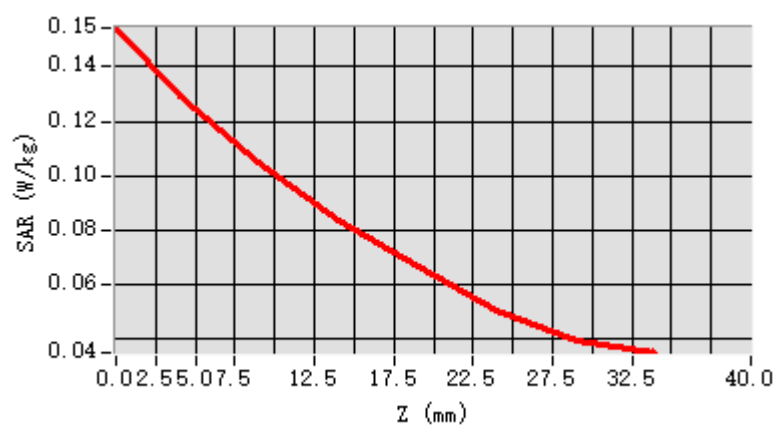
Maximum location: X=-49.00, Y=-49.00 ; SAR Peak: 0.16 W/kg

D. SAR 1g & 10g

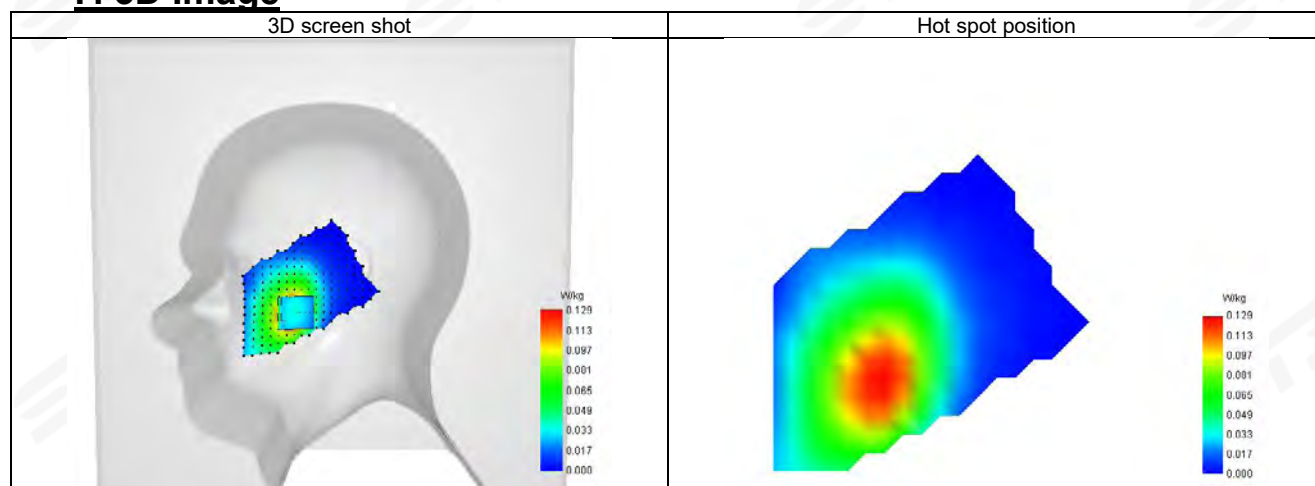
SAR 10g (W/Kg)	0.094
SAR 1g (W/Kg)	0.126
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	81.135131

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.154	0.129	0.105	0.084	0.067	0.051	0.039

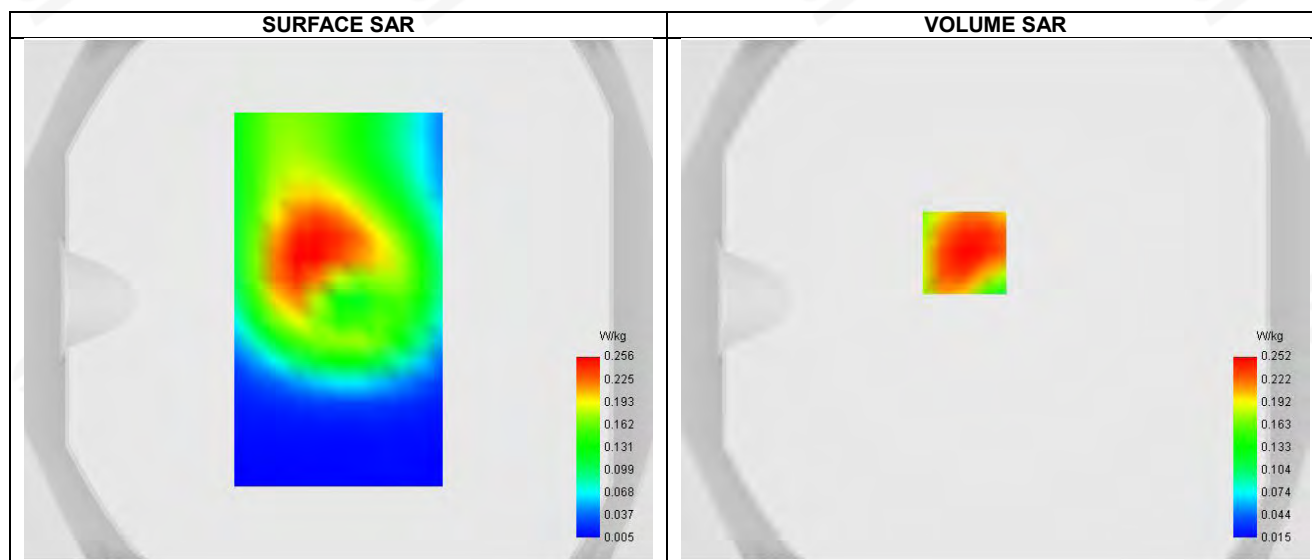


F. 3D Image



**Plot 10: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

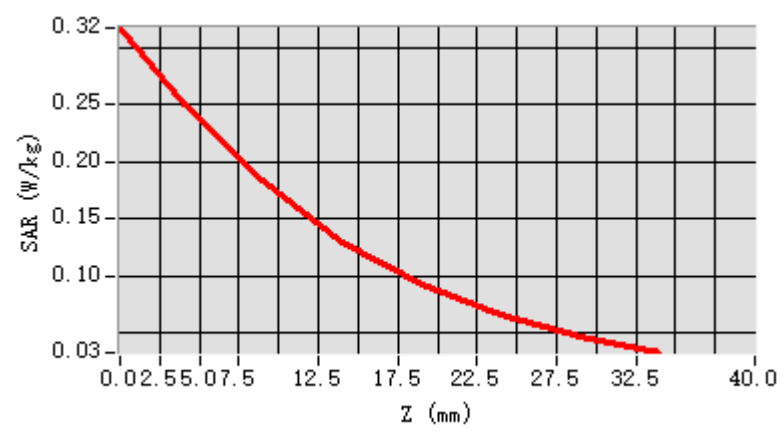
Test Date	2025-07-09
ConvF	1.44
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	WCDMA V
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	826.4
Relative permittivity (real part)	41.00
Conductivity (S/m)	0.90

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

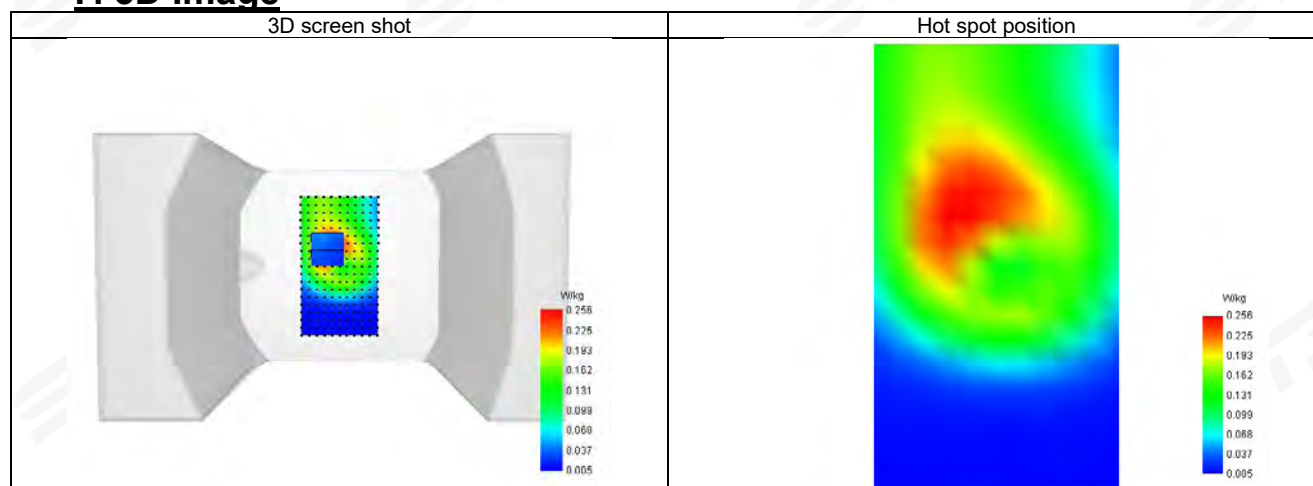
SAR 10g (W/Kg)	0.163
SAR 1g (W/Kg)	0.241
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	73.438164

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.318	0.252	0.183	0.130	0.092	0.065	0.046

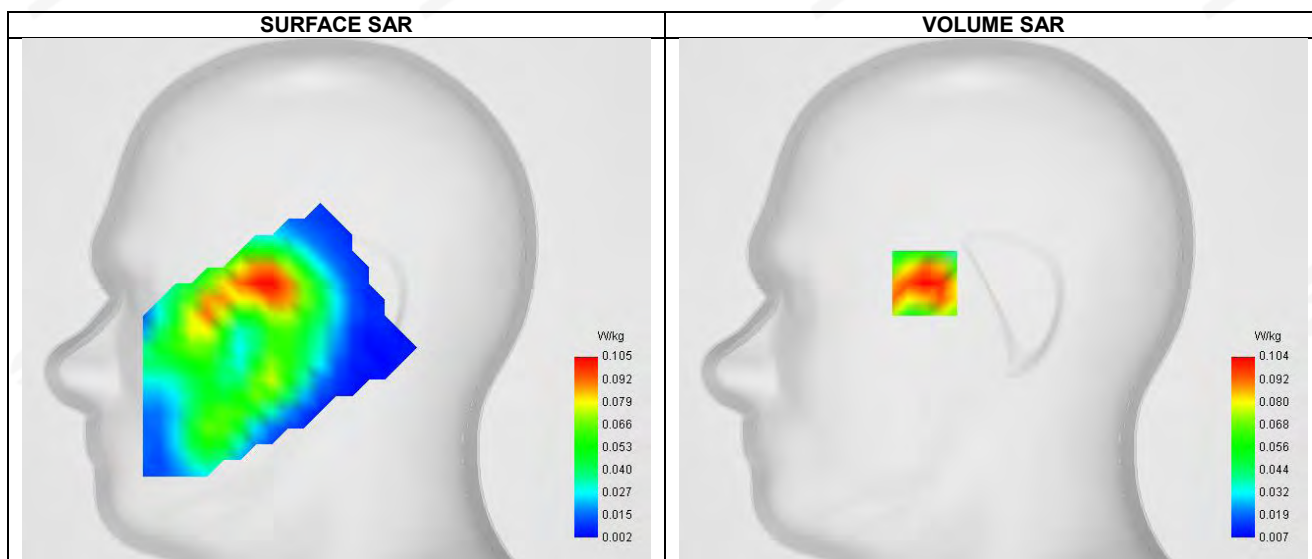


F. 3D Image



Plot 11: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.72
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	Right head
Device Position	Cheek
Band	LTE Band 2 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1880
Relative permittivity (real part)	40.90
Conductivity (S/m)	1.43



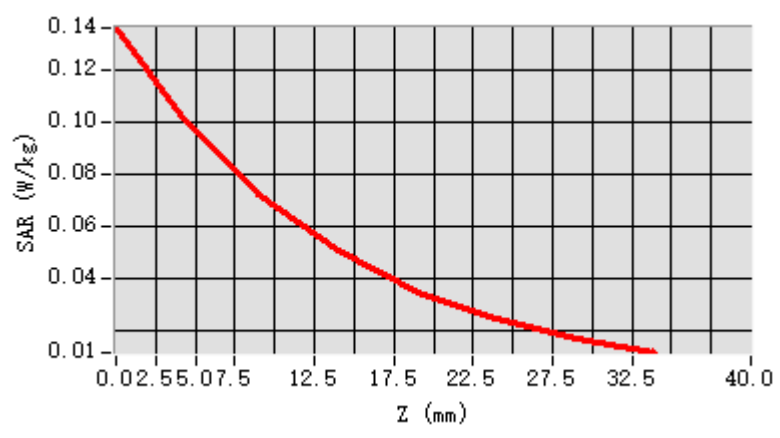
Maximum location: X=-34.00, Y=8.00 ; SAR Peak: 0.14 W/kg

D. SAR 1g & 10g

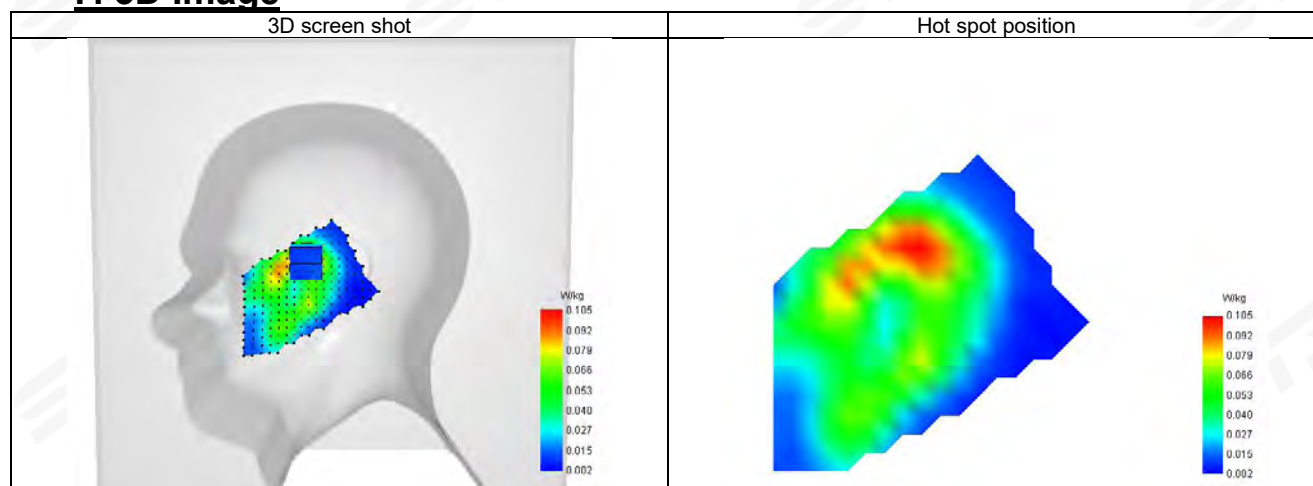
SAR 10g (W/Kg)	0.063
SAR 1g (W/Kg)	0.099
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	70.577827

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.137	0.104	0.073	0.051	0.035	0.024	0.017

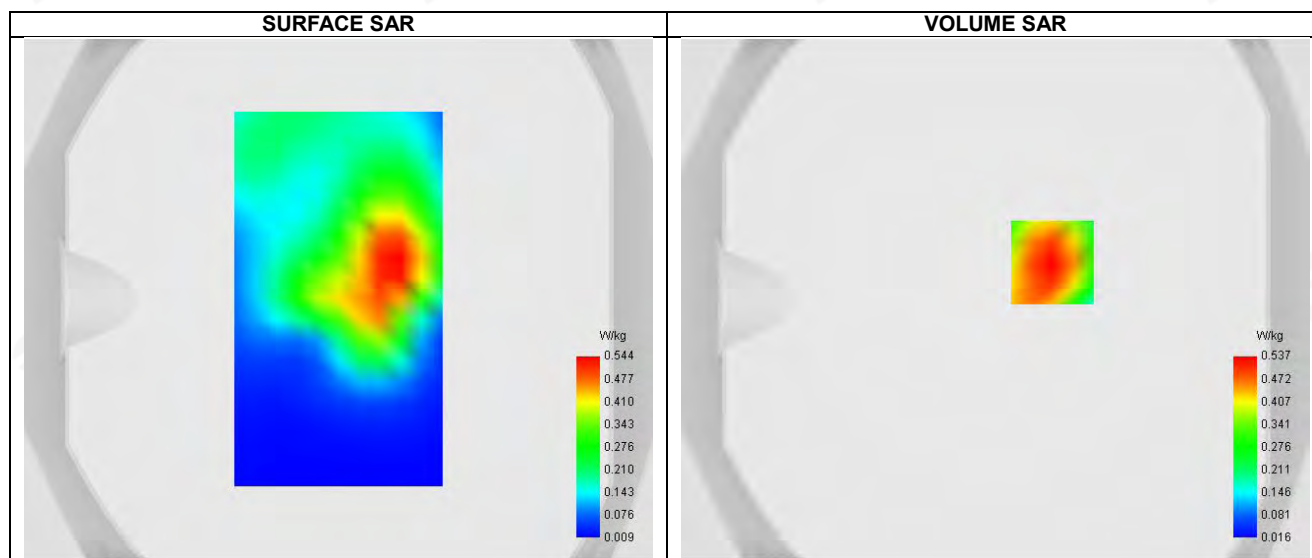


F. 3D Image



Plot 12: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.72
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	LTE Band 2(RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1880
Relative permittivity (real part)	40.90
Conductivity (S/m)	1.43



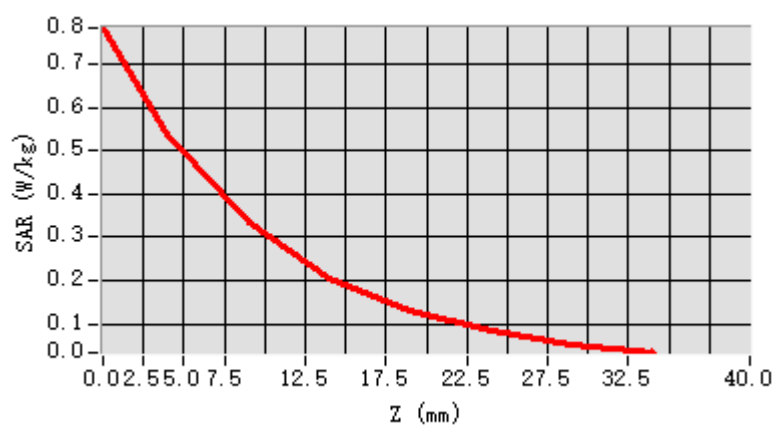
Maximum location: X=22.00, Y=14.00 ; SAR Peak: 0.79 W/kg

D. SAR 1g & 10g

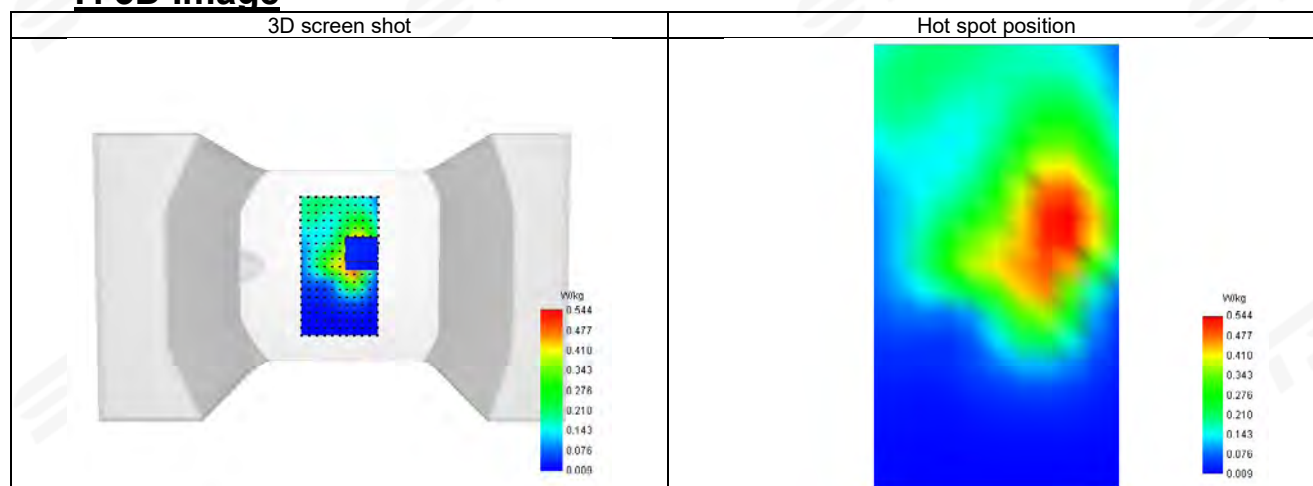
SAR 10g (W/Kg)	0.307
SAR 1g (W/Kg)	0.514
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	62.015667

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.783	0.537	0.333	0.207	0.132	0.083	0.052

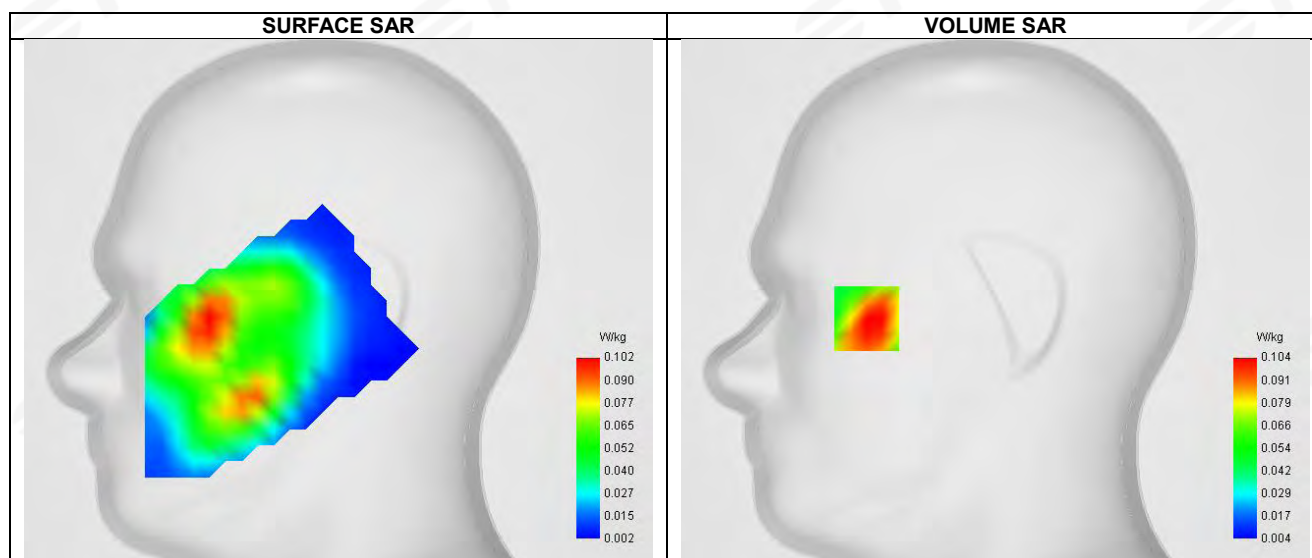


F. 3D Image



Plot 13: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.58
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	Right head
Band	LTE Band 4 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1720
Relative permittivity (real part)	40.03
Conductivity (S/m)	1.37



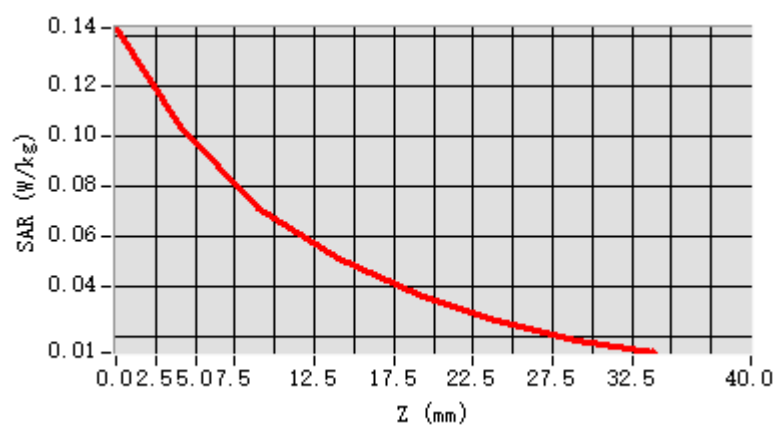
Maximum location: X=-64.00, Y=-9.00 ; SAR Peak: 0.15 W/kg

D. SAR 1g & 10g

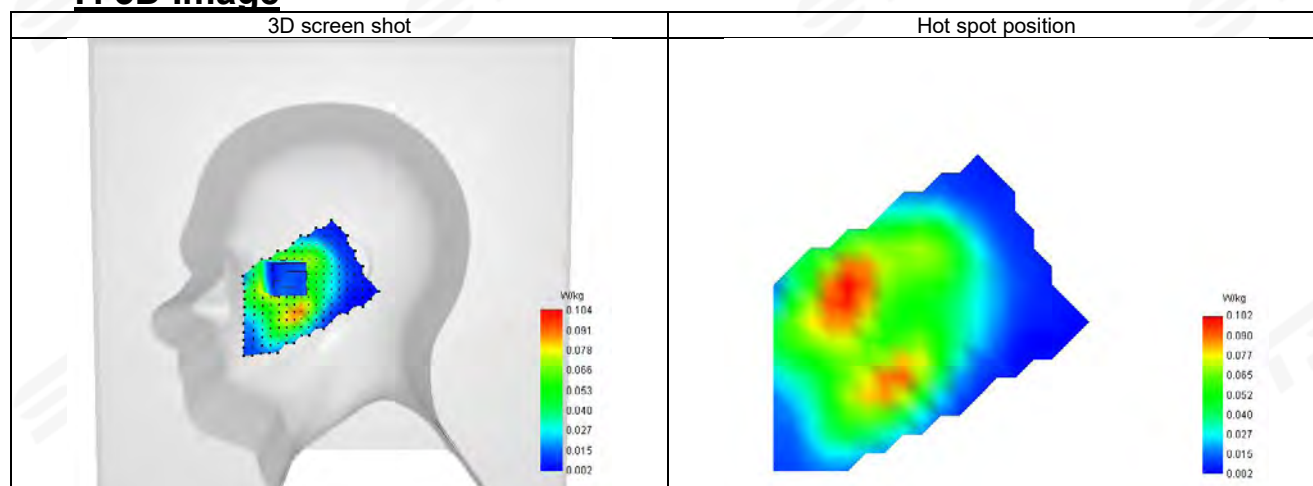
SAR 10g (W/Kg)	0.065
SAR 1g (W/Kg)	0.102
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	69.964897

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.143	0.104	0.071	0.051	0.037	0.026	0.019

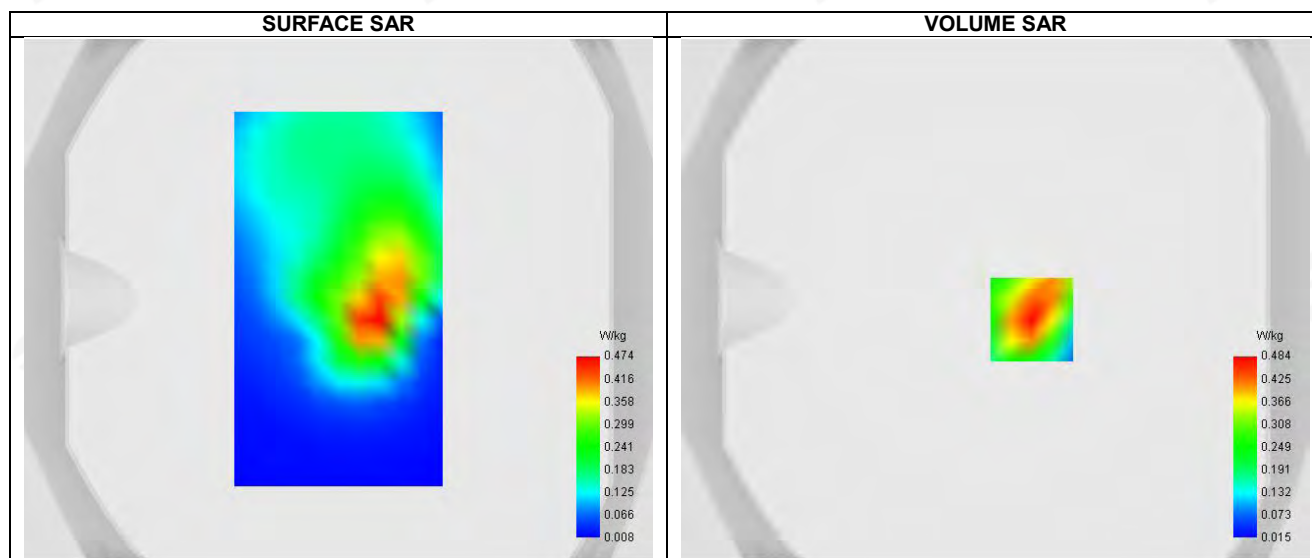


F. 3D Image



Plot 14: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.58
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	LTE Band 4 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1720
Relative permittivity (real part)	40.03
Conductivity (S/m)	1.37



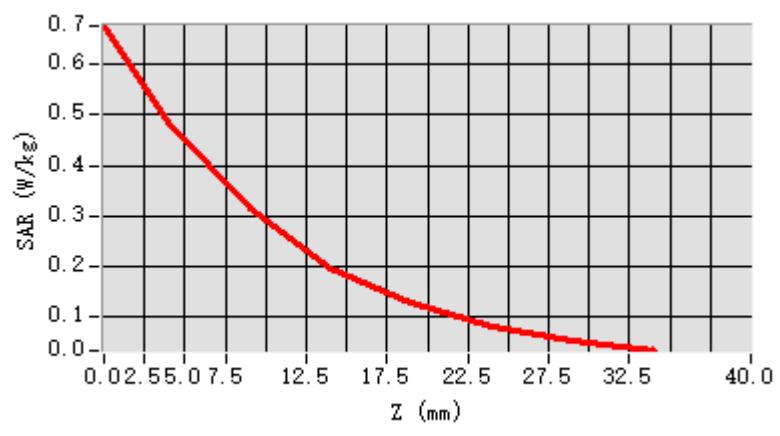
Maximum location: X=14.00, Y=-8.00 ; SAR Peak: 0.68 W/kg

D. SAR 1g & 10g

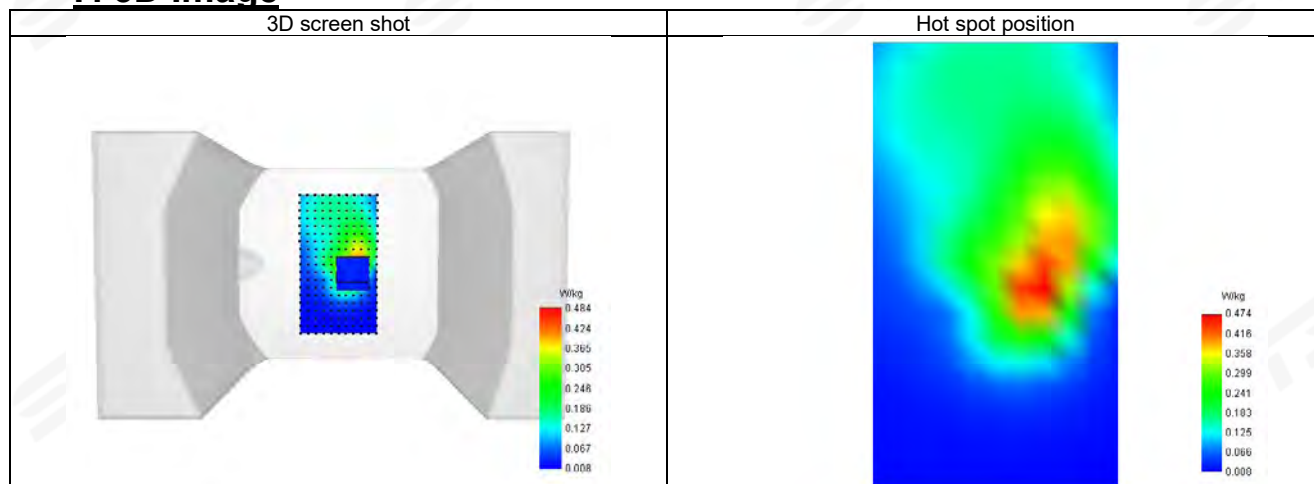
SAR 10g (W/Kg)	0.256
SAR 1g (W/Kg)	0.450
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	65.051094

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.675	0.484	0.315	0.197	0.129	0.083	0.053

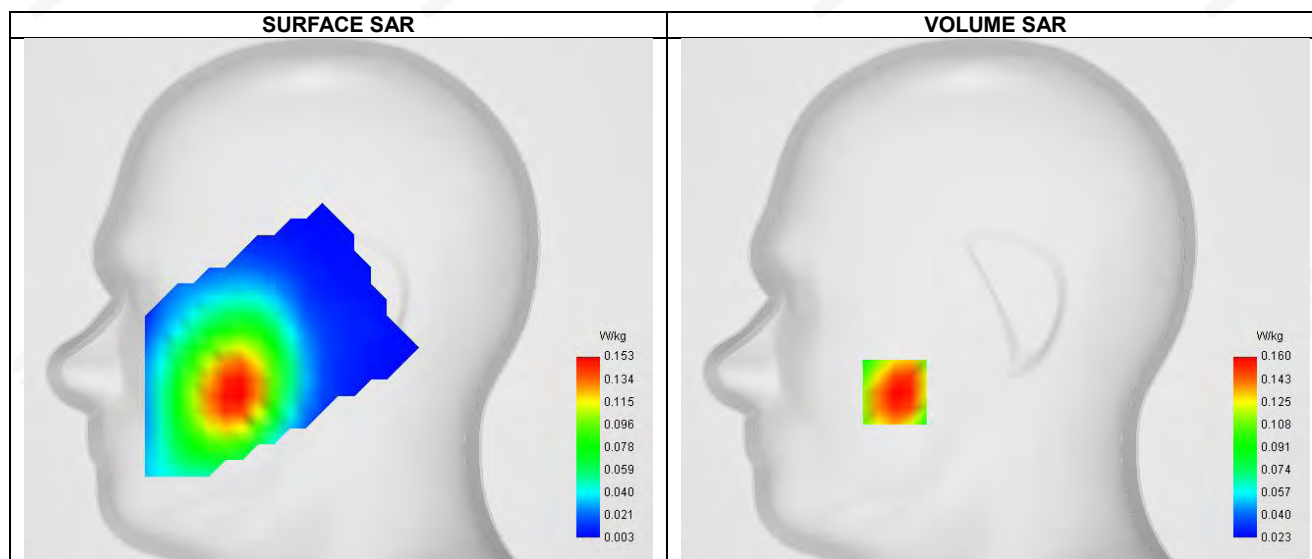


F. 3D Image



Plot 15: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-09
ConvF	1.44
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	Right Cheek
Device Position	Cheek
Band	LTE Band 5 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	829
Relative permittivity (real part)	41.68
Conductivity (S/m)	0.97



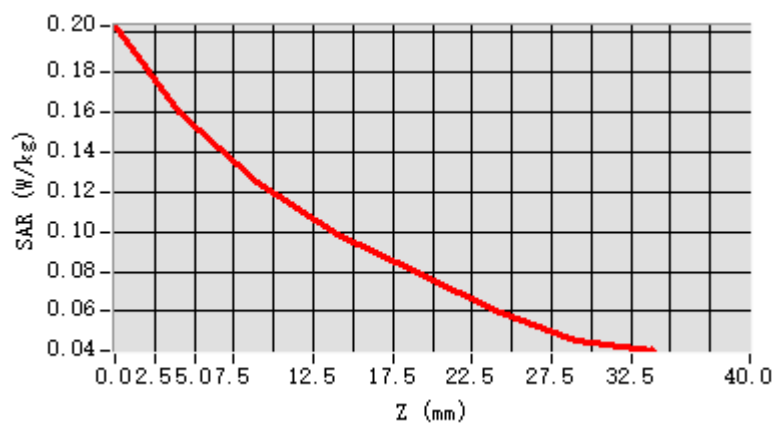
Maximum location: X=-50.00, Y=-46.00 ; SAR Peak: 0.21 W/kg

D. SAR 1g & 10g

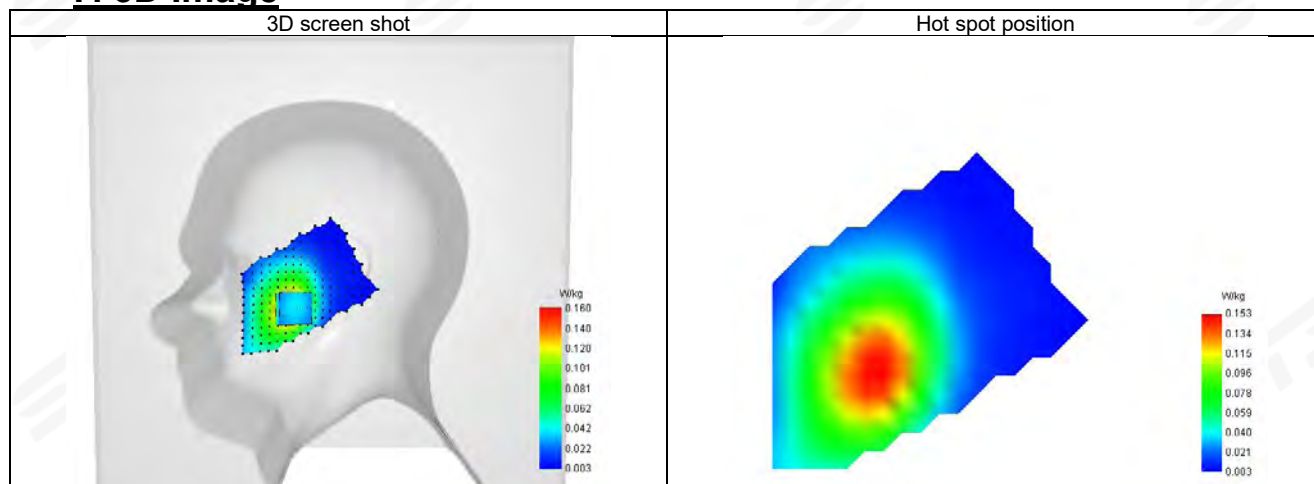
SAR 10g (W/Kg)	0.113
SAR 1g (W/Kg)	0.158
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	77.500000

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.203	0.160	0.124	0.099	0.080	0.060	0.046

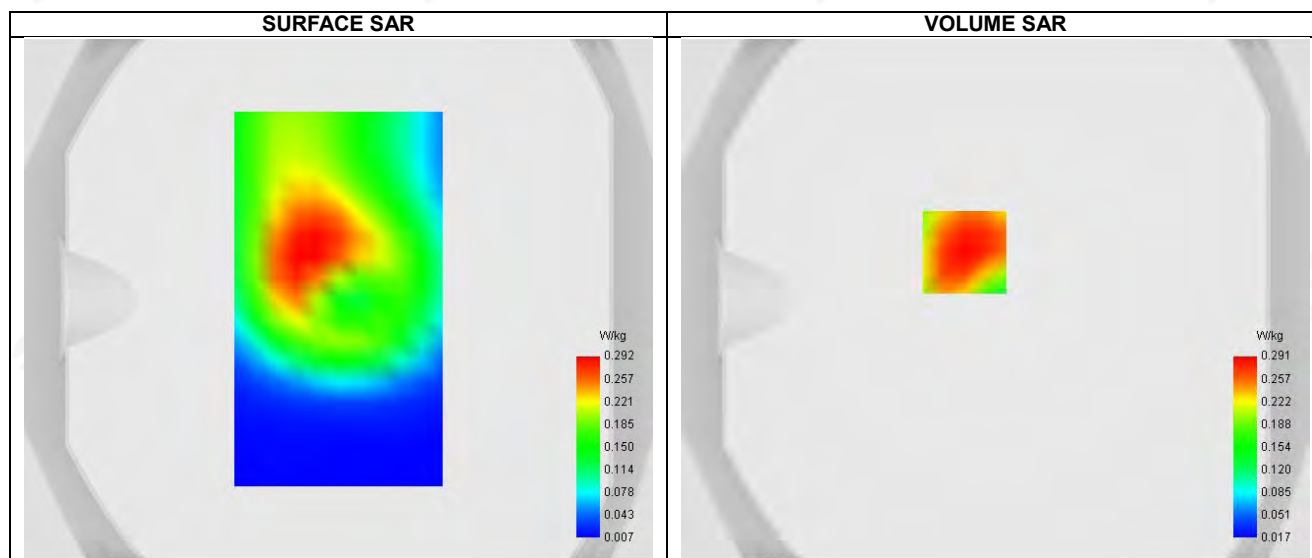


F. 3D Image



Plot 16: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-09
ConvF	1.44
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	LTE Band 5 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	829
Relative permittivity (real part)	41.68
Conductivity (S/m)	0.97



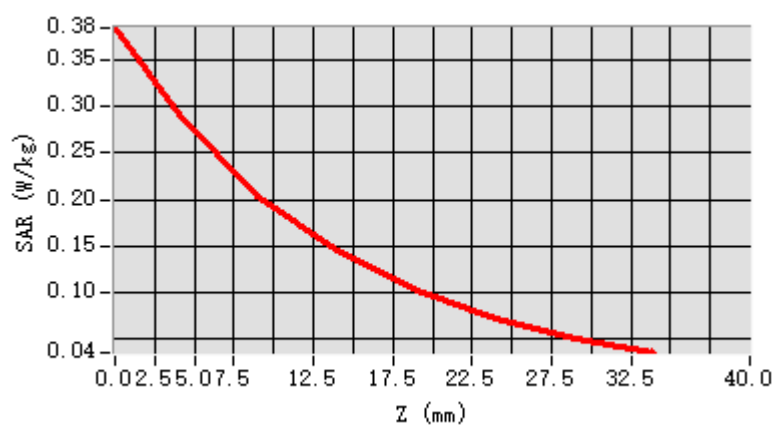
Maximum location: X=-12.00, Y=18.00 ; SAR Peak: 0.39 W/kg

D. SAR 1g & 10g

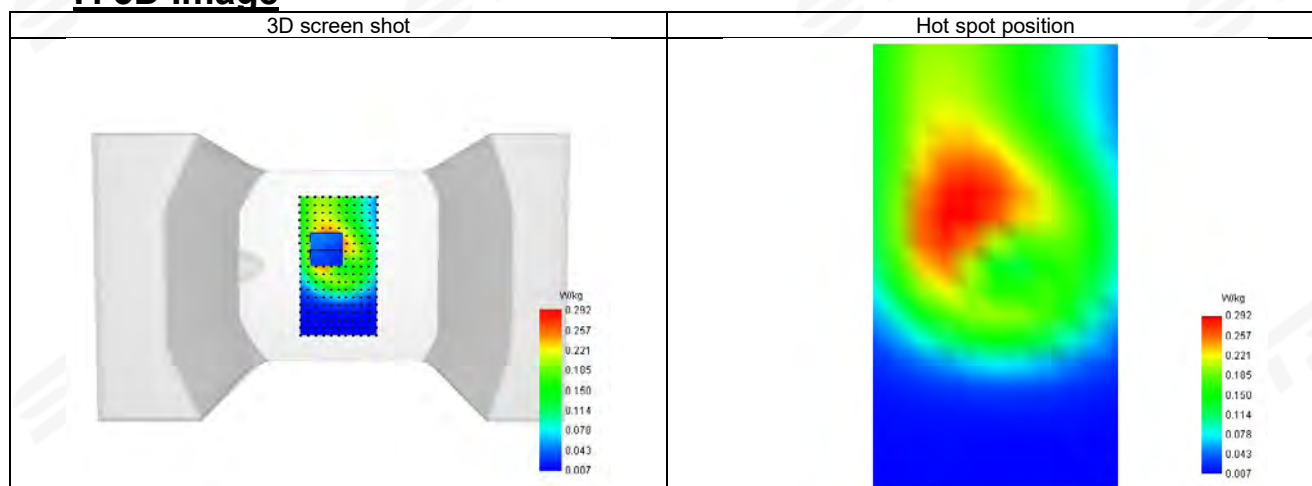
SAR 10g (W/Kg)	0.186
SAR 1g (W/Kg)	0.281
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	70.761614

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.385	0.291	0.204	0.146	0.102	0.072	0.051

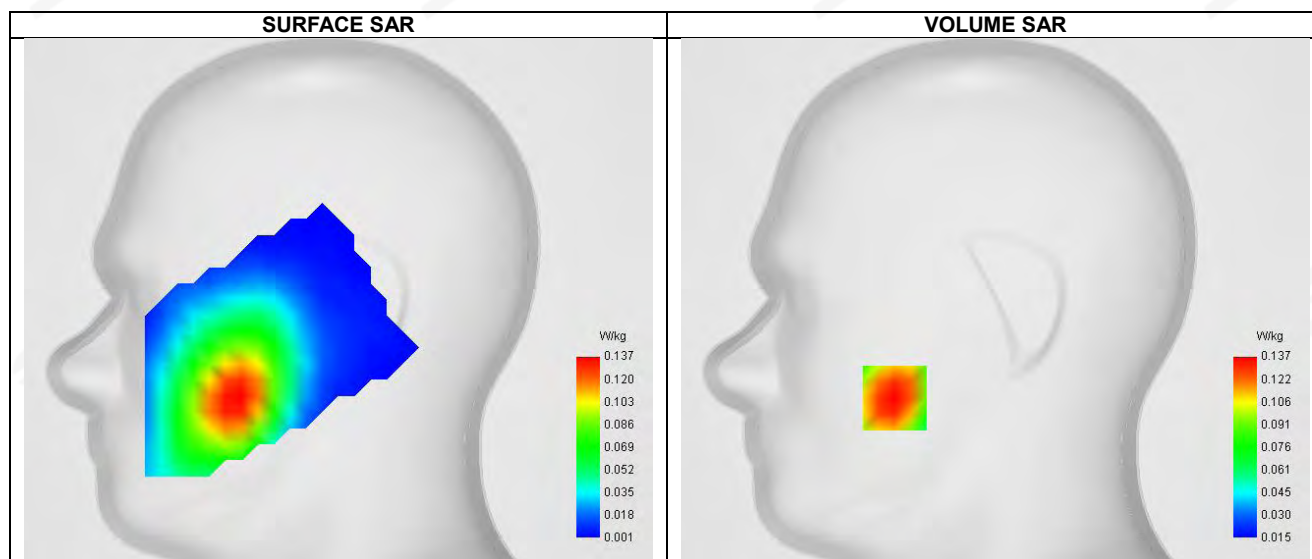


F. 3D Image



Plot 17: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-11
ConvF	1.74
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	Right Cheek
Device Position	Cheek
Band	LTE Band 7 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2560
Relative permittivity (real part)	39.55
Conductivity (S/m)	1.95



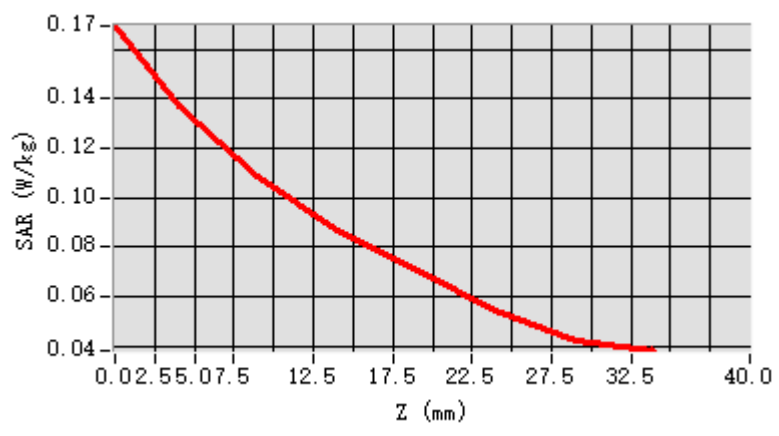
Maximum location: X=-50.00, Y=-49.00 ; SAR Peak: 0.17 W/kg

D. SAR 1g & 10g

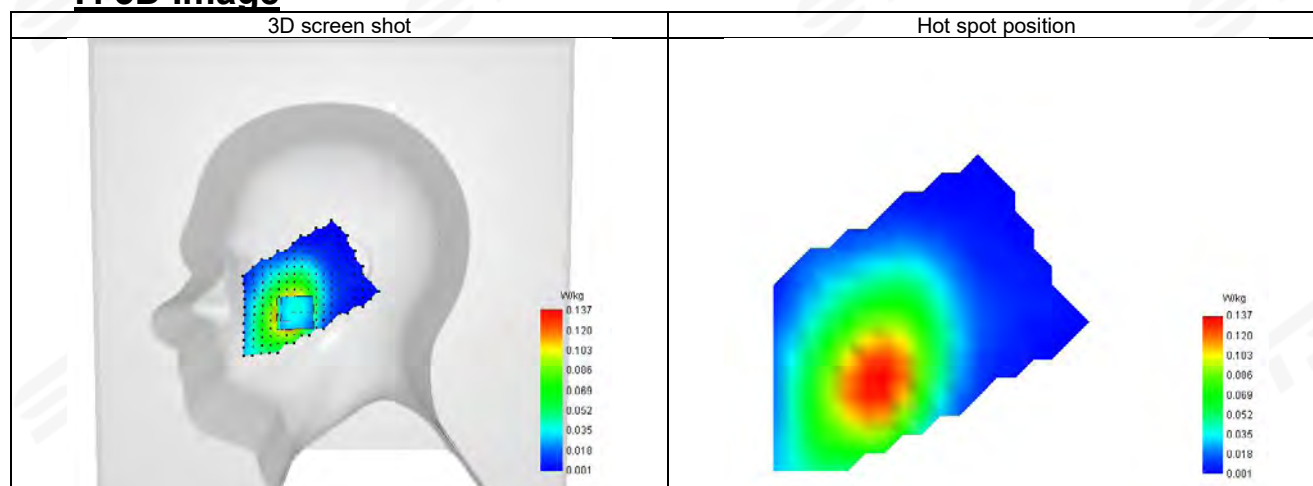
SAR 10g (W/Kg)	0.098
SAR 1g (W/Kg)	0.143
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	79.372477

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.169	0.137	0.109	0.087	0.070	0.054	0.043

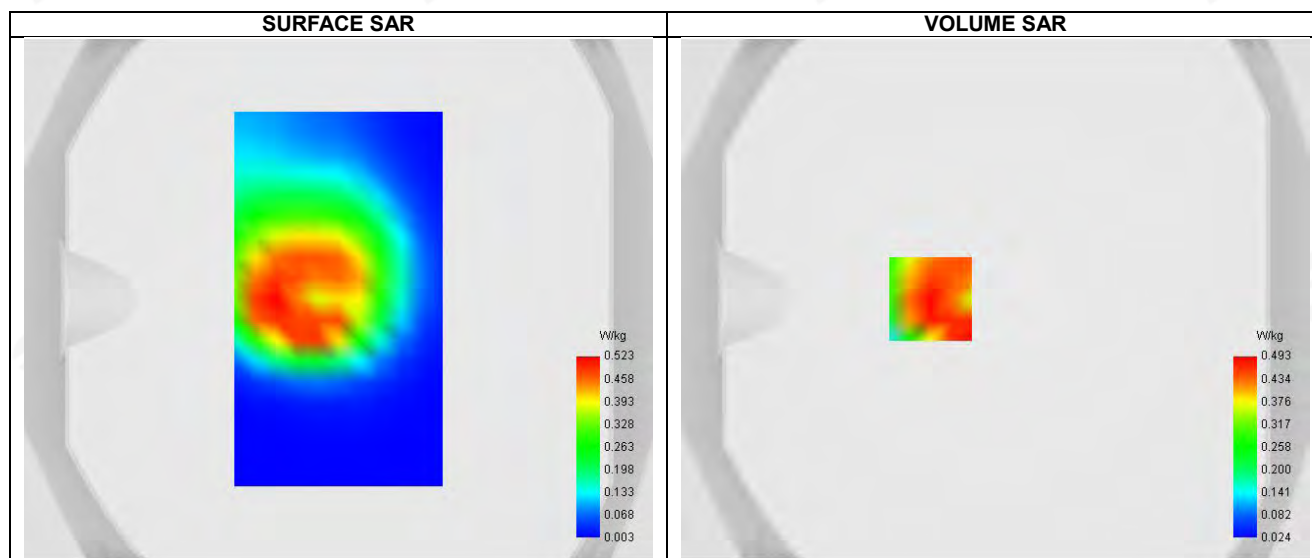


F. 3D Image



Plot 18: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-11
ConvF	1.74
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	LTE Band 7 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2560
Relative permittivity (real part)	39.55
Conductivity (S/m)	1.95



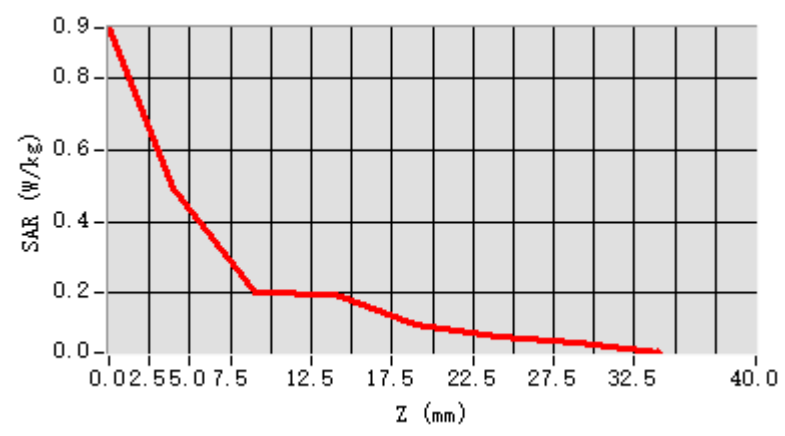
Maximum location: X=-25.00, Y=0.00 ; SAR Peak: 0.79 W/kg

D. SAR 1g & 10g

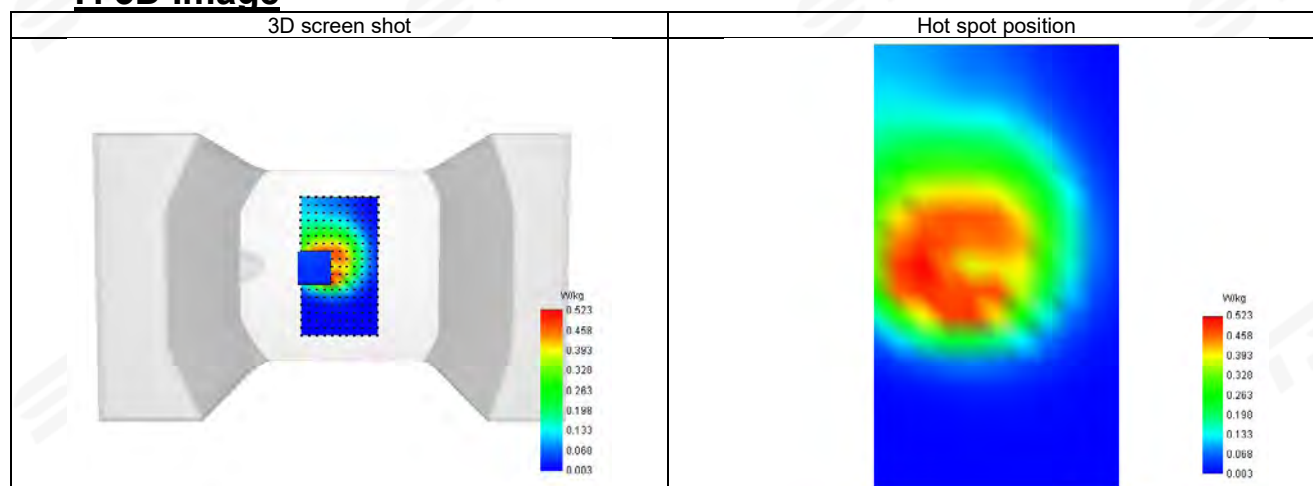
SAR 10g (W/Kg)	0.269
SAR 1g (W/Kg)	0.414
Horizontal validation criteria: minimum distance (mm)	32.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.815089

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.940	0.493	0.204	0.193	0.114	0.078	0.064

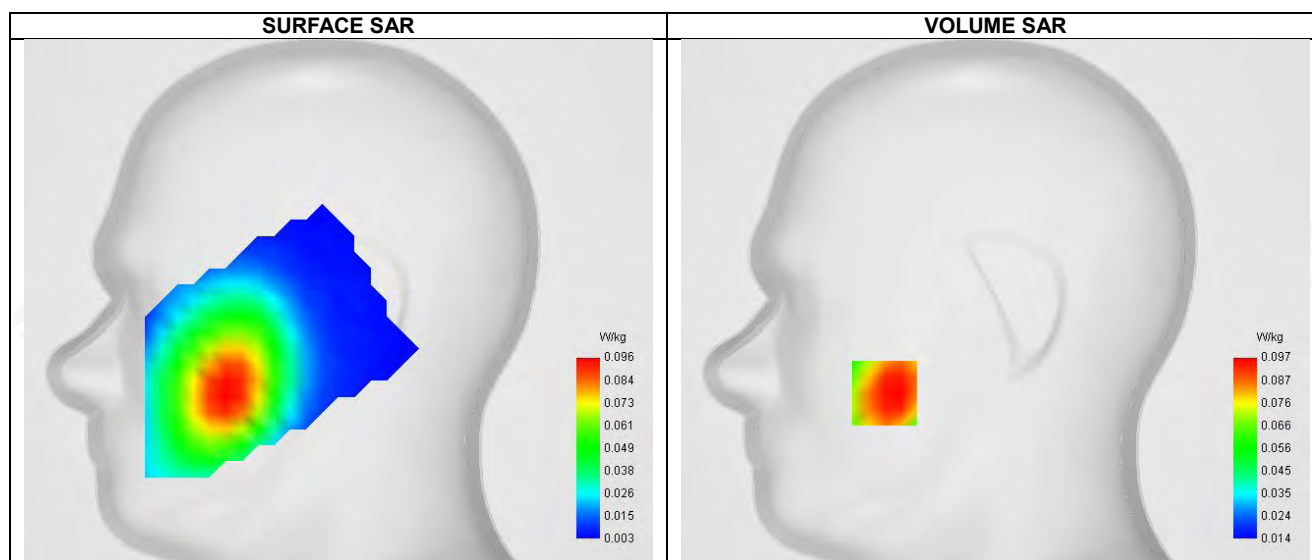


F. 3D Image



Plot 19: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-09
ConvF	1.56
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	Right Cheek
Device Position	Cheek
Band	LTE Band 12 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	704
Relative permittivity (real part)	43.35
Conductivity (S/m)	0.89



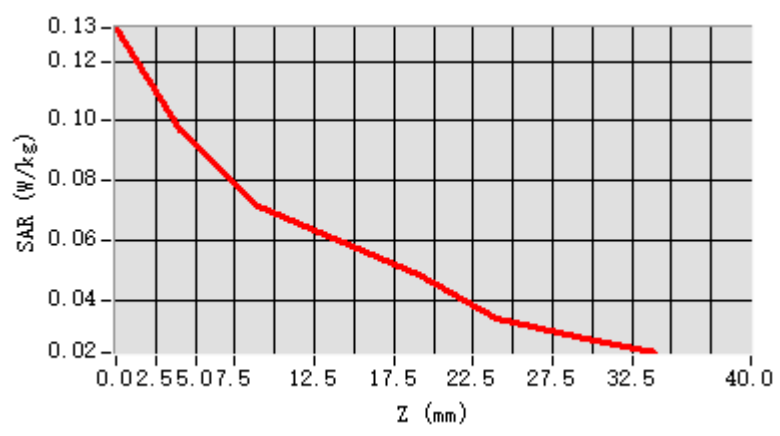
Maximum location: X=-55.00, Y=-46.00 ; SAR Peak: 0.12 W/kg

D. SAR 1g & 10g

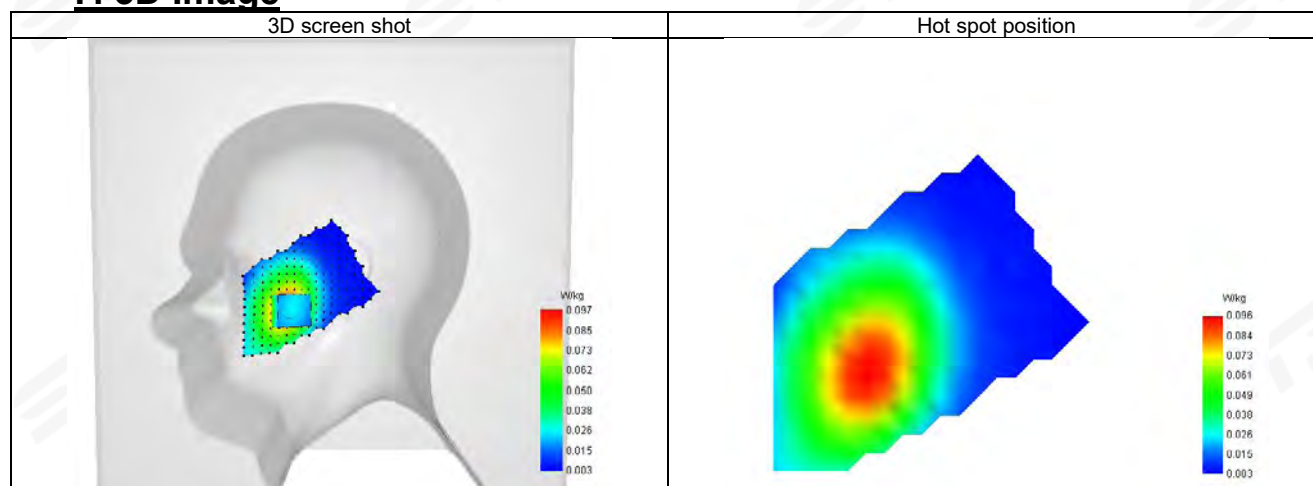
SAR 10g (W/Kg)	0.072
SAR 1g (W/Kg)	0.096
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	73.197876

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.131	0.097	0.071	0.060	0.048	0.034	0.028

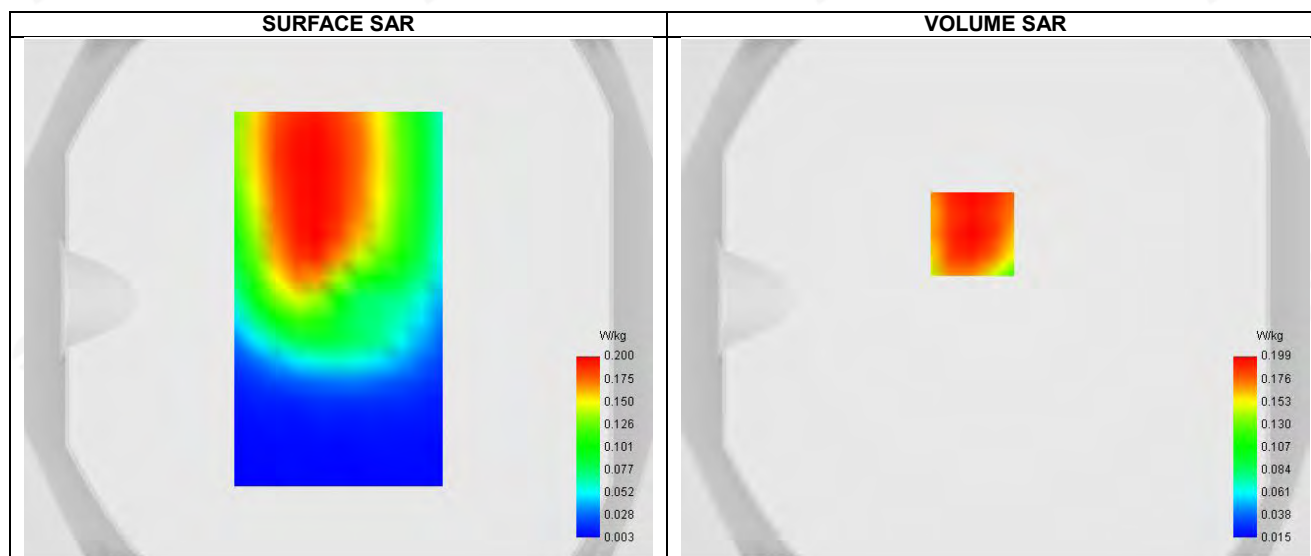


F. 3D Image



**Plot 20: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

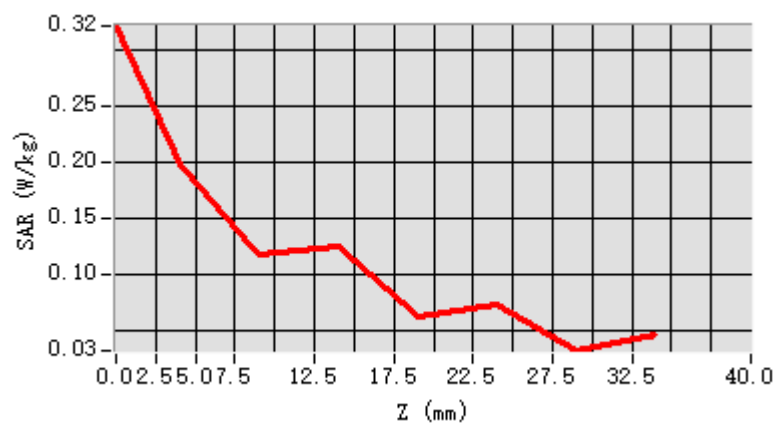
Test Date	2025-07-09
ConvF	1.56
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE Band 12 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	704
Relative permittivity (real part)	43.35
Conductivity (S/m)	0.89

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

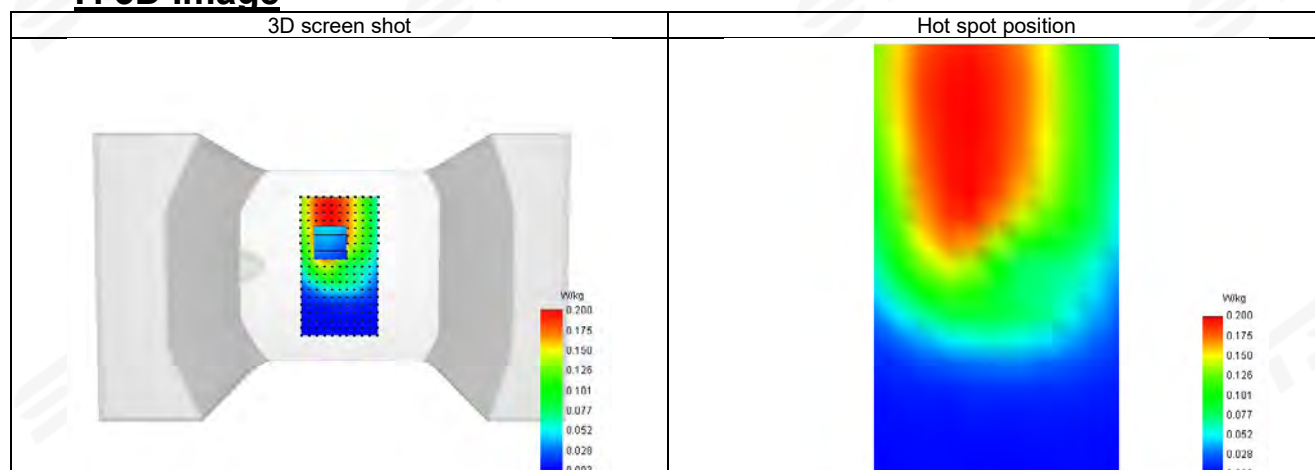
SAR 10g (W/Kg)	0.120
SAR 1g (W/Kg)	0.196
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.696282

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.322	0.199	0.118	0.126	0.062	0.074	0.032

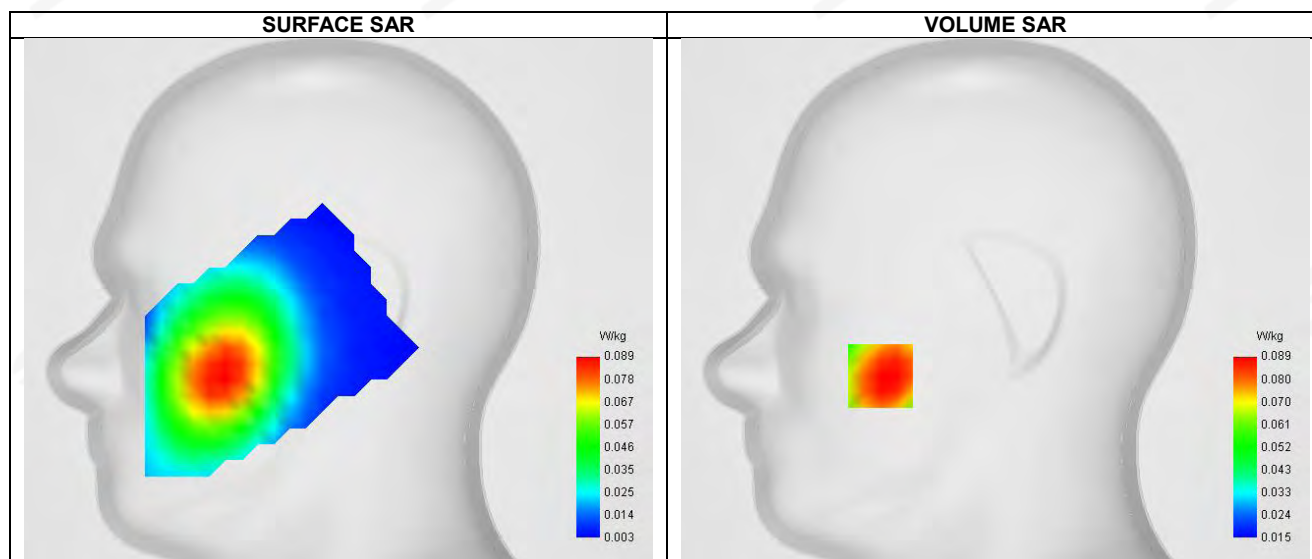


F. 3D Image



Plot 21: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-09
ConvF	1.56
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	Right Cheek
Device Position	Cheek
Band	LTE Band 17 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	711
Relative permittivity (real part)	42.36
Conductivity (S/m)	0.91



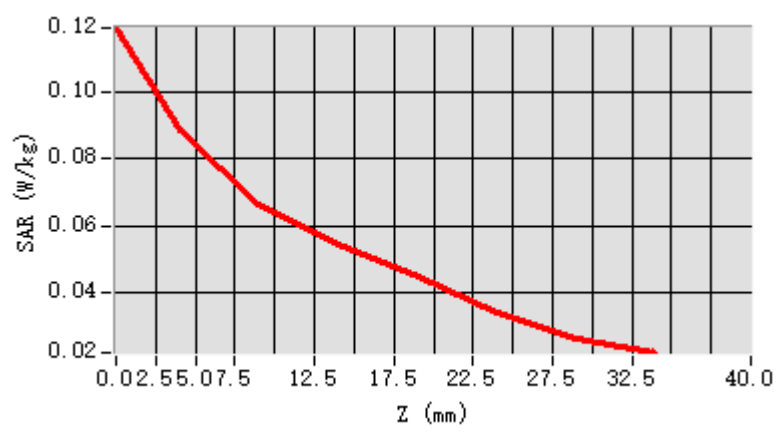
Maximum location: X=-57.00, Y=-38.00 ; SAR Peak: 0.11 W/kg

D. SAR 1g & 10g

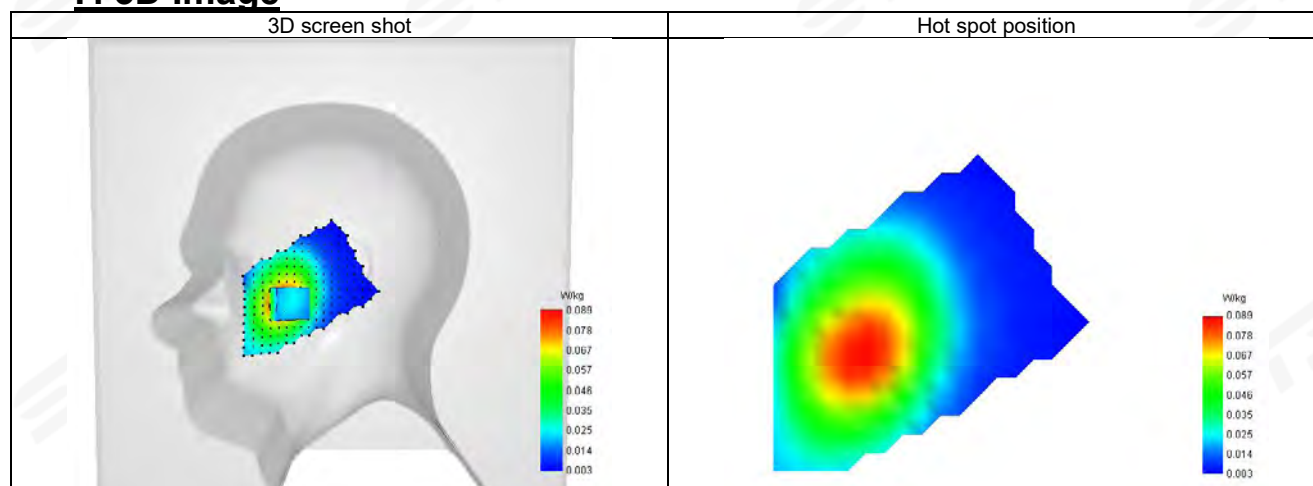
SAR 10g (W/Kg)	0.066
SAR 1g (W/Kg)	0.086
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	75.280898

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.119	0.089	0.067	0.055	0.045	0.034	0.026

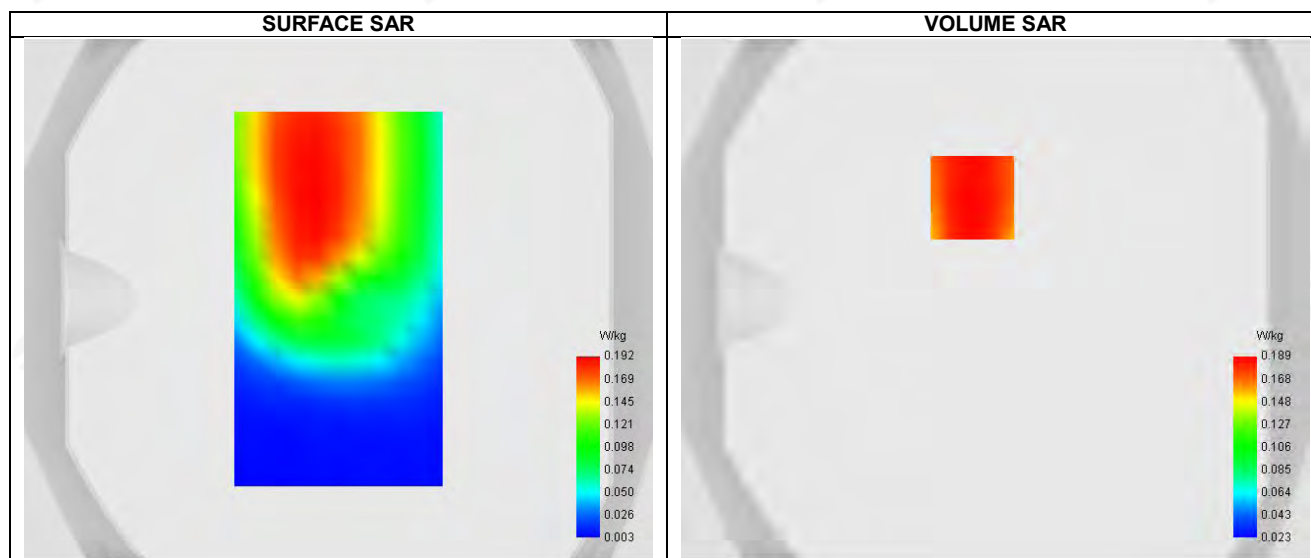


F. 3D Image



**Plot 22: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

Test Date	2025-07-09
ConvF	1.56
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	LTE Band 17 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	711
Relative permittivity (real part)	42.36
Conductivity (S/m)	0.91



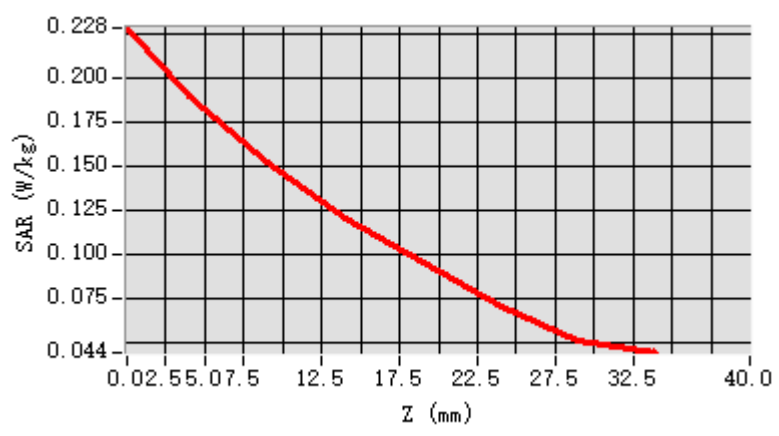
Maximum location: X=-9.00, Y=39.00 ; SAR Peak: 0.23 W/kg

D. SAR 1g & 10g

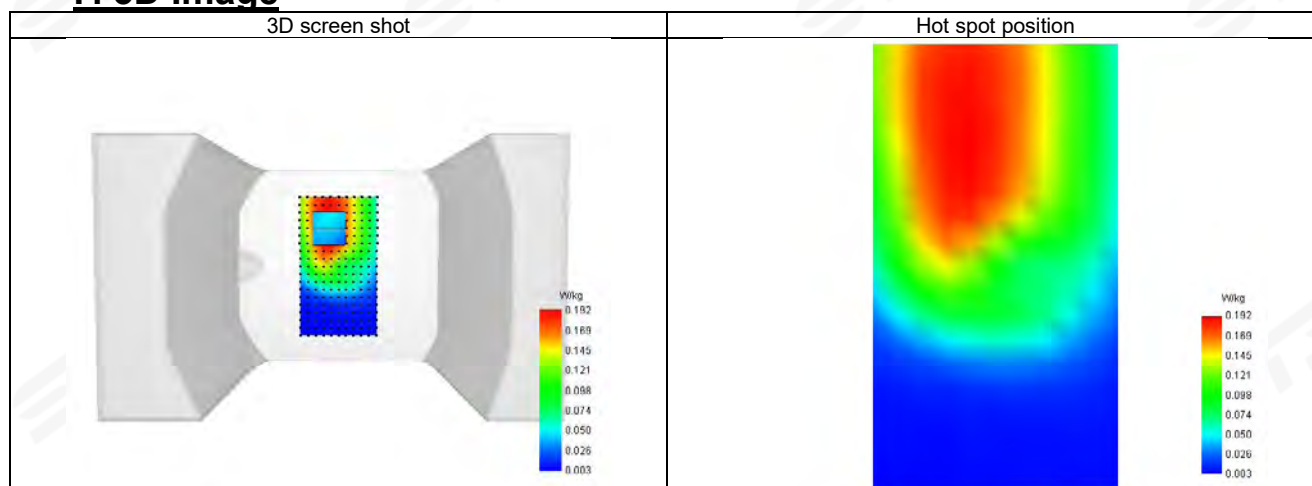
SAR 10g (W/Kg)	0.137
SAR 1g (W/Kg)	0.187
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	80.952382

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.228	0.189	0.153	0.120	0.095	0.070	0.051

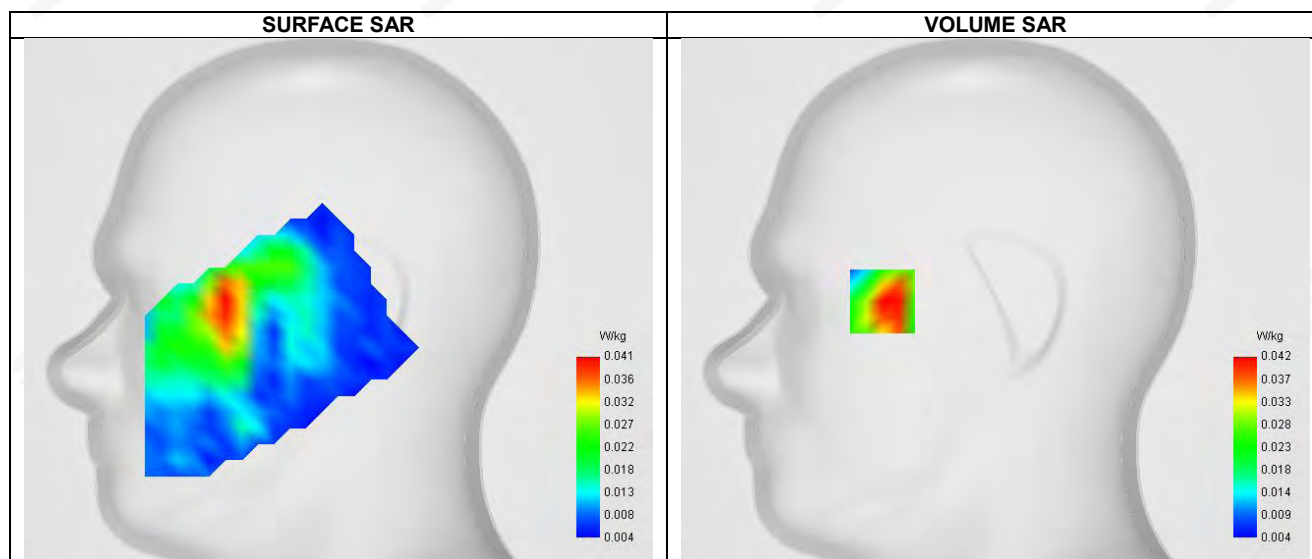


F. 3D Image



Plot 23: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-11
ConvF	1.74
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	Right head
Device Position	Cheek
Band	LTE Band 41 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2506
Relative permittivity (real part)	39.09
Conductivity (S/m)	1.90



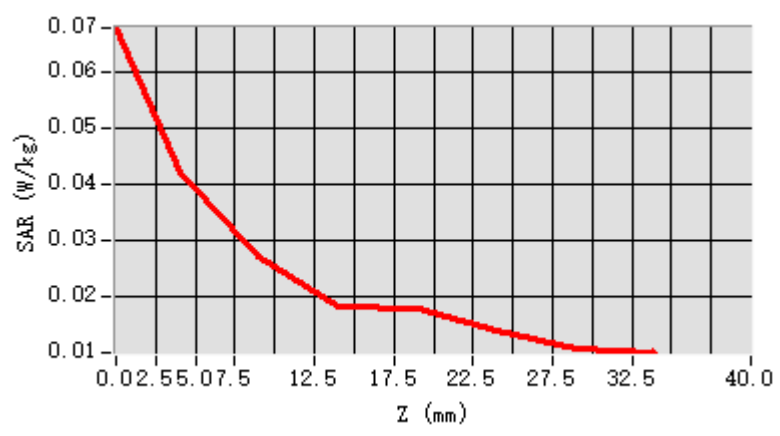
Maximum location: X=-56.00, Y=-1.00 ; SAR Peak: 0.07 W/kg

D. SAR 1g & 10g

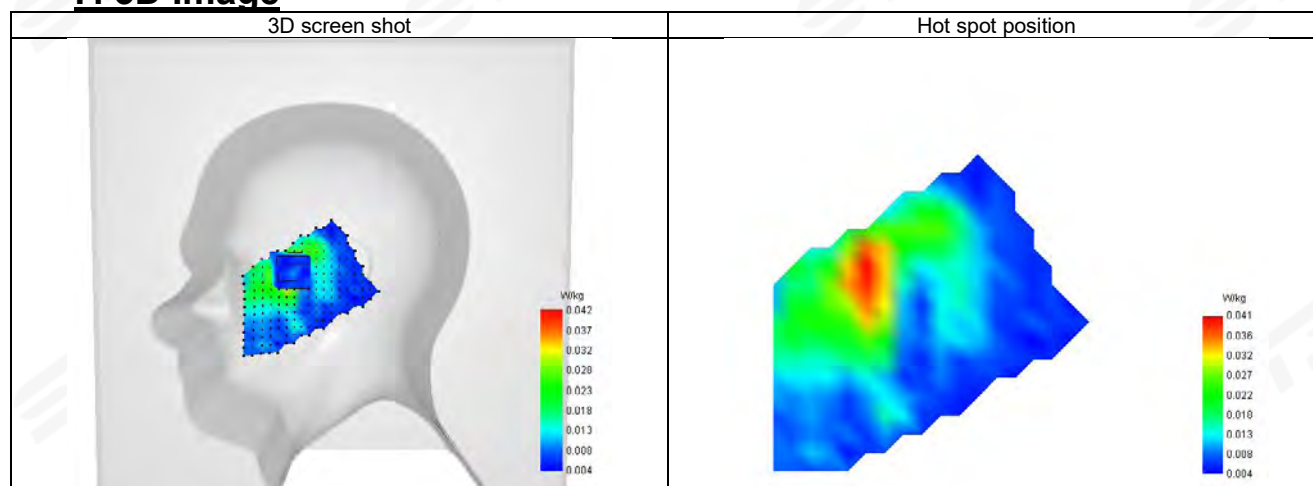
SAR 10g (W/Kg)	0.026
SAR 1g (W/Kg)	0.043
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	64.590547

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.068	0.042	0.027	0.018	0.018	0.014	0.011

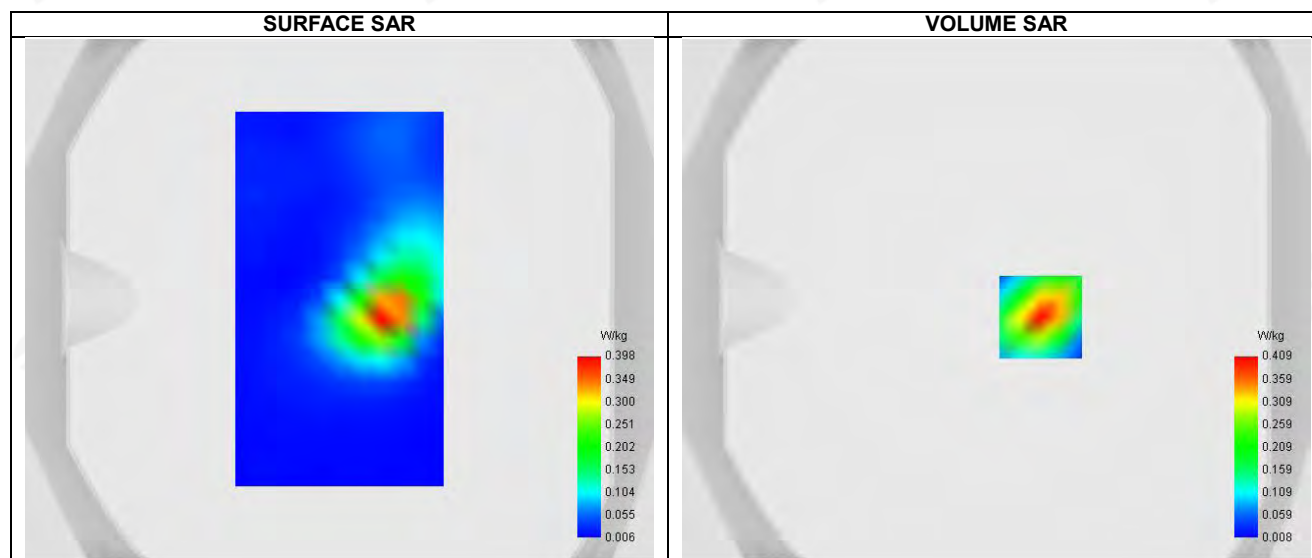


F. 3D Image



Plot 24: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-11
ConvF	1.74
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	LTE Band 41 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2506
Relative permittivity (real part)	39.09
Conductivity (S/m)	1.90



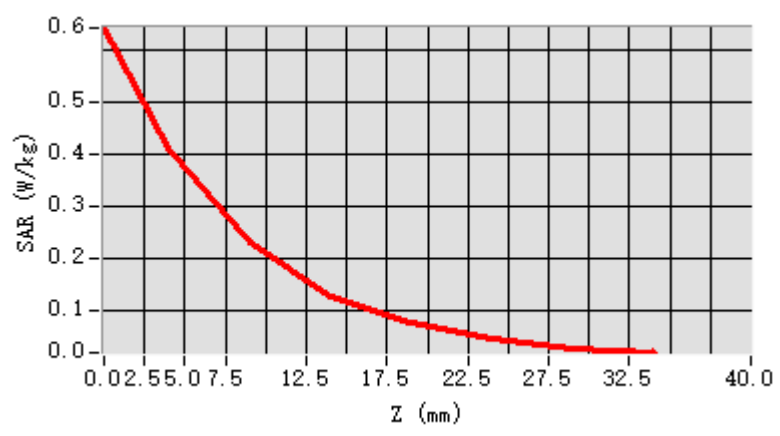
Maximum location: X=17.00, Y=-7.00 ; SAR Peak: 0.64 W/kg

D. SAR 1g & 10g

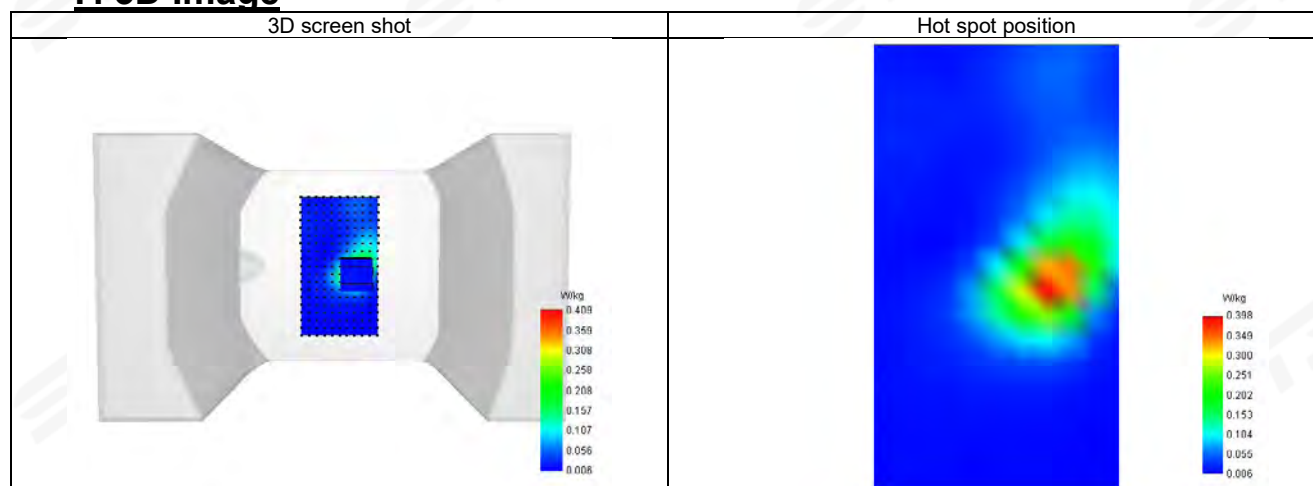
SAR 10g (W/Kg)	0.185
SAR 1g (W/Kg)	0.377
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	56.281784

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.642	0.409	0.230	0.126	0.077	0.044	0.025

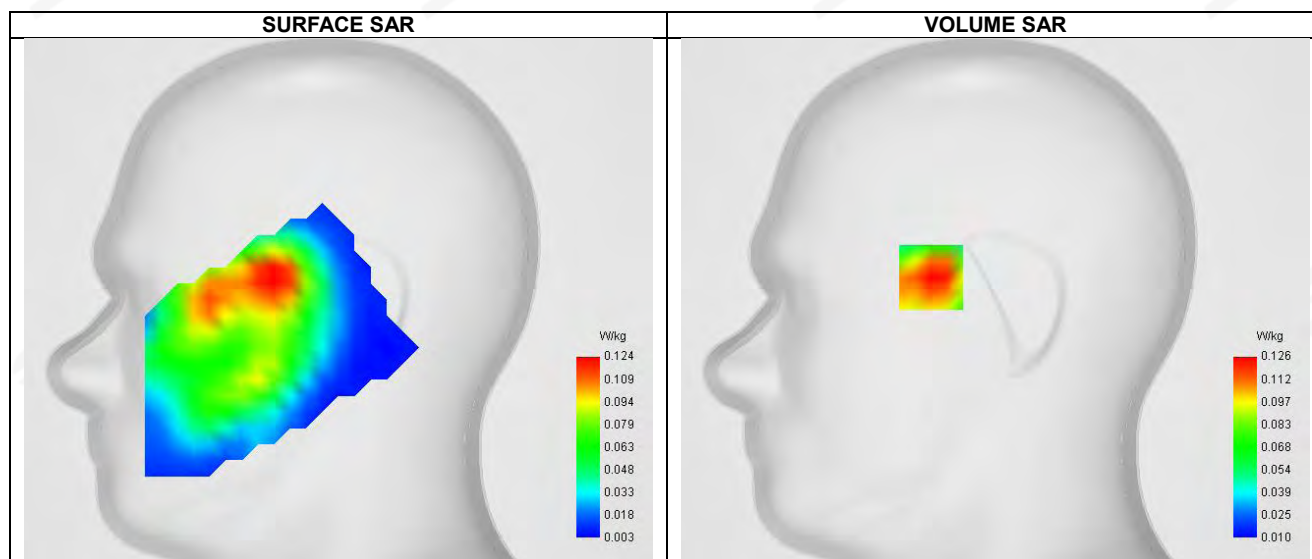


F. 3D Image



Plot 25: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.58
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	Right head
Device Position	Cheek
Band	LTE Band 66 (RB 1)
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1720
Relative permittivity (real part)	40.03
Conductivity (S/m)	1.37



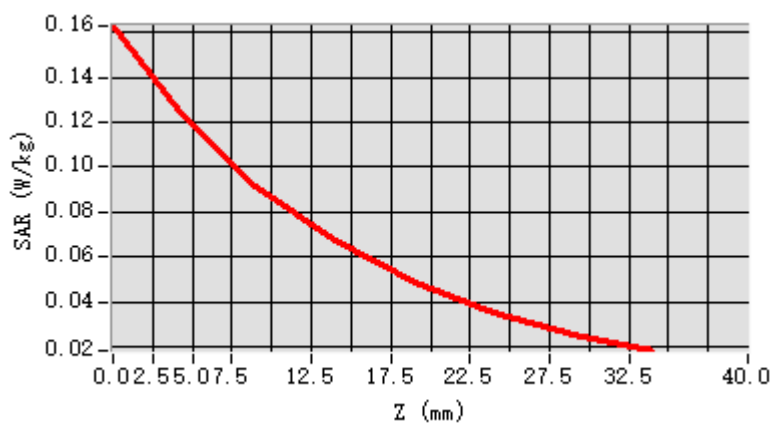
Maximum location: X=-32.00, Y=11.00 ; SAR Peak: 0.17 W/kg

D. SAR 1g & 10g

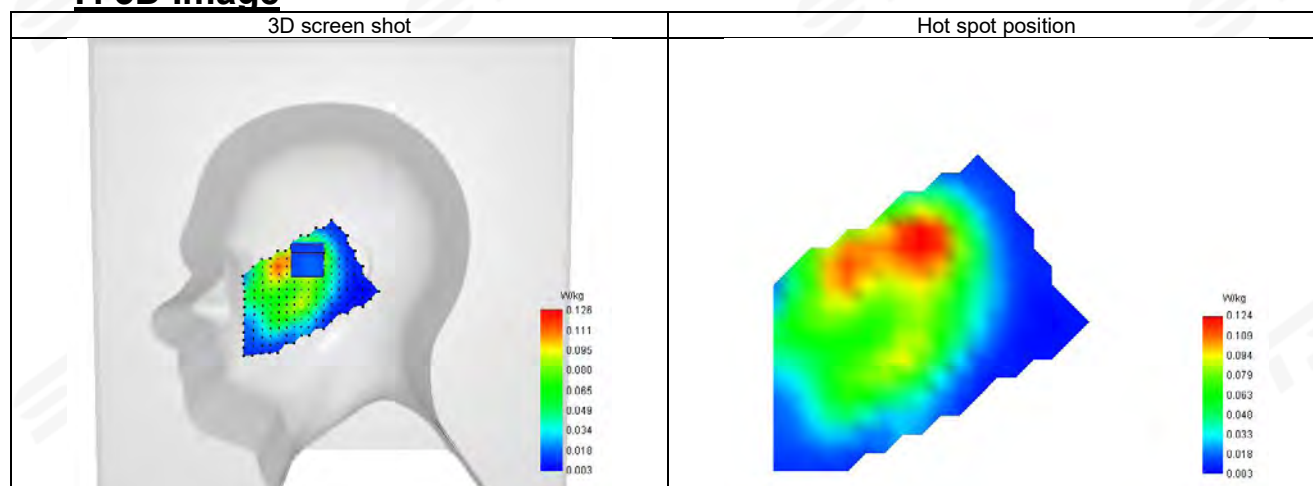
SAR 10g (W/Kg)	0.079
SAR 1g (W/Kg)	0.122
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	72.390921

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.163	0.126	0.092	0.067	0.048	0.035	0.025

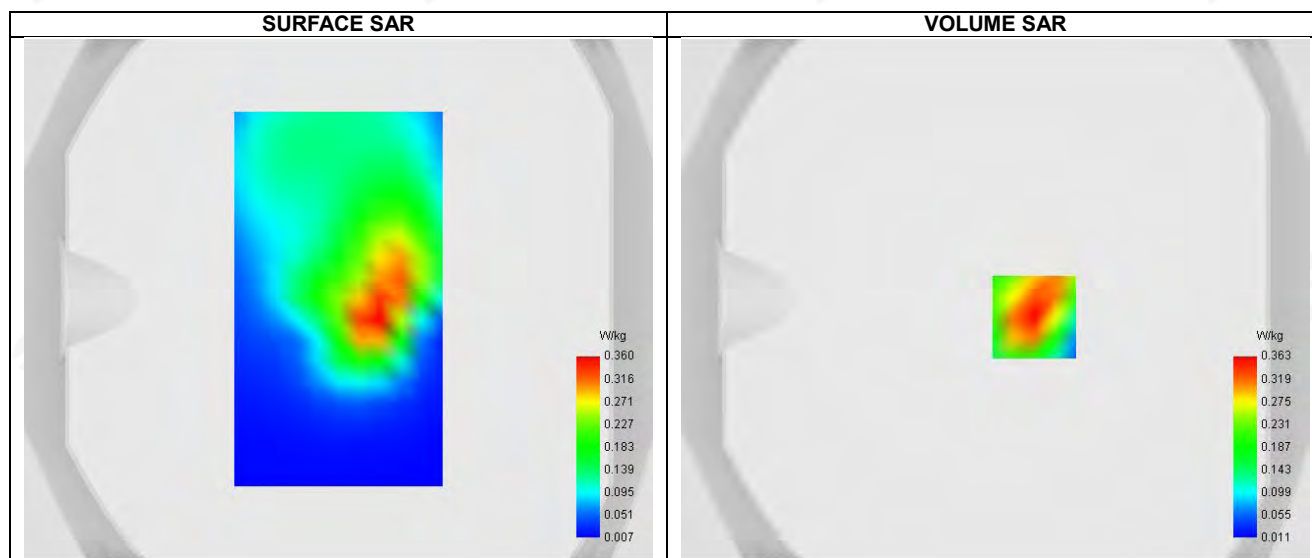


F. 3D Image



Plot 26: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
ConvF	1.58
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	LTE Band 66 (RB 1)
Signal	LTE (Cr est factor: 1.0)
Frequency (MHz)	1720
Relative permittivity (real part)	40.03
Conductivity (S/m)	1.37



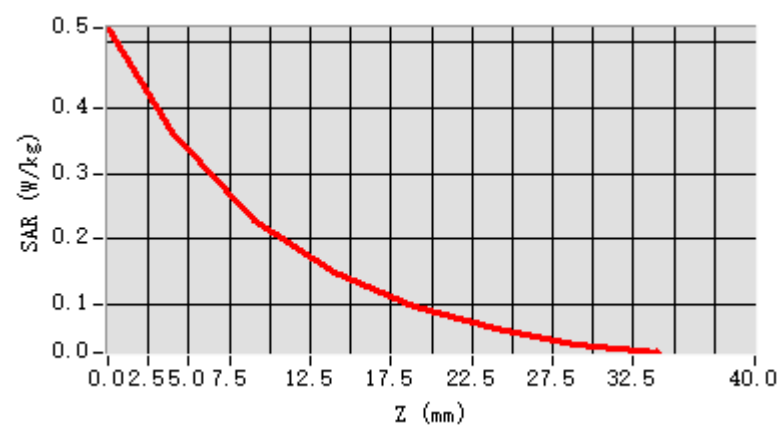
Maximum location: X=15.00, Y=-7.00 ; SAR Peak: 0.52 W/kg

D. SAR 1g & 10g

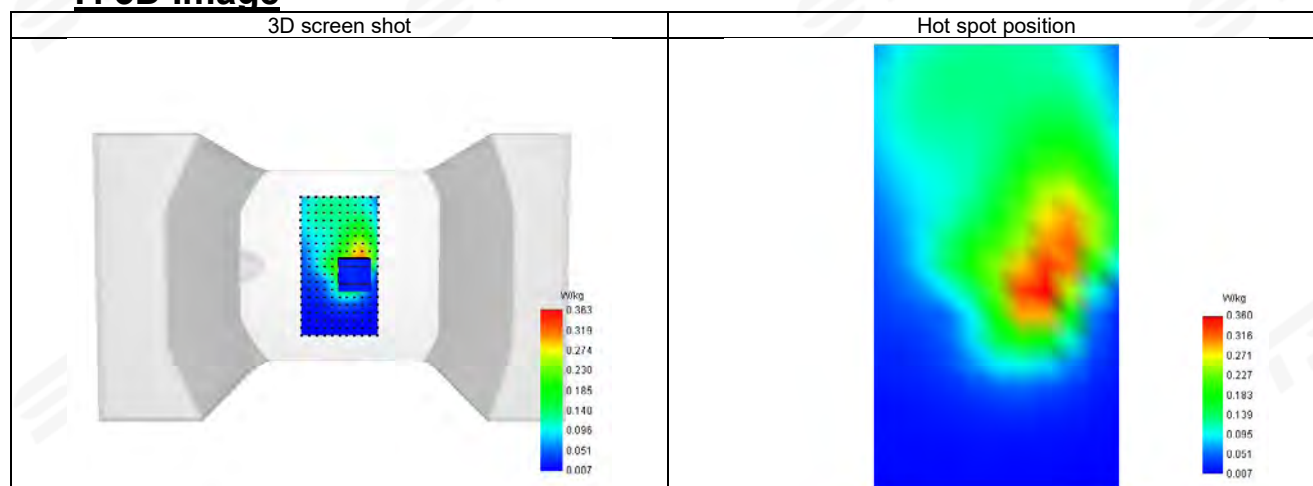
SAR 10g (W/Kg)	0.194
SAR 1g (W/Kg)	0.342
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.331306

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.523	0.363	0.230	0.149	0.097	0.062	0.040

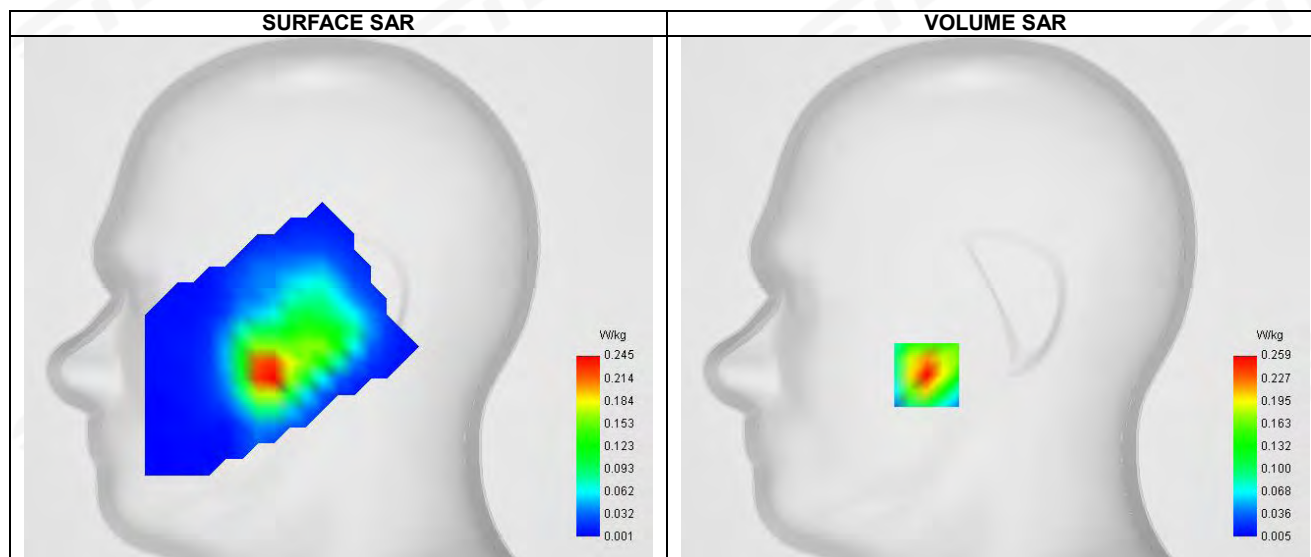


F. 3D Image



Plot 27: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-10
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	Right Cheek
Device Position	Cheek
Band	IEEE 802.11b ISM
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	40.41
Conductivity (S/m)	1.76



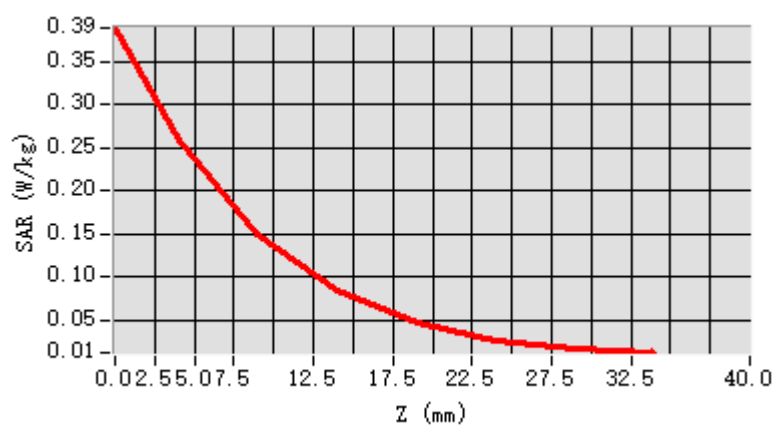
Maximum location: X=-34.00, Y=-38.00 ; SAR Peak: 0.39 W/kg

D. SAR 1g & 10g

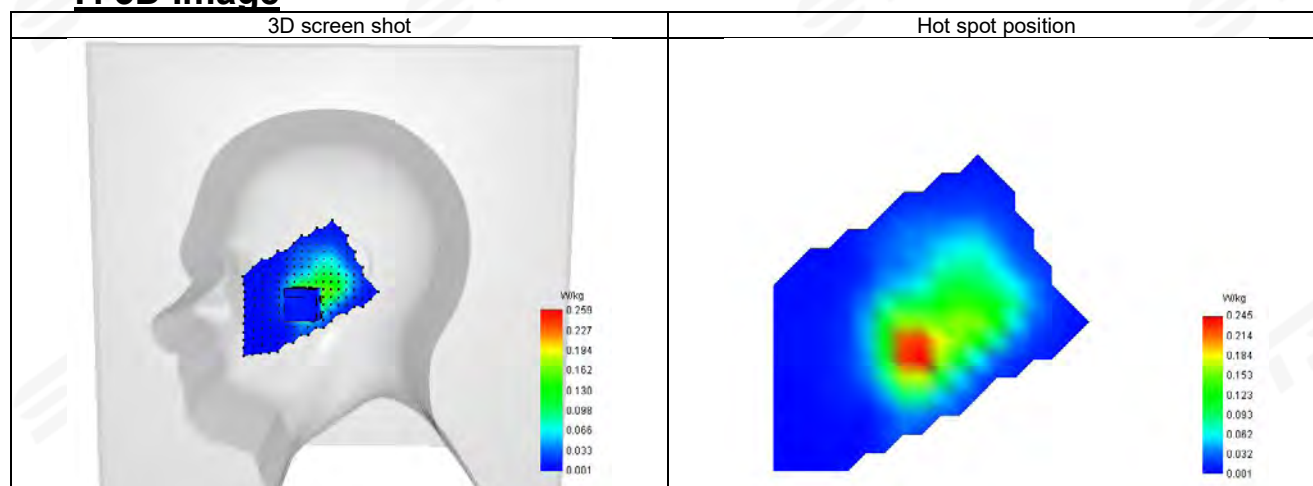
SAR 10g (W/Kg)	0.098
SAR 1g (W/Kg)	0.152
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	57.819098

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.388	0.259	0.150	0.085	0.047	0.027	0.017

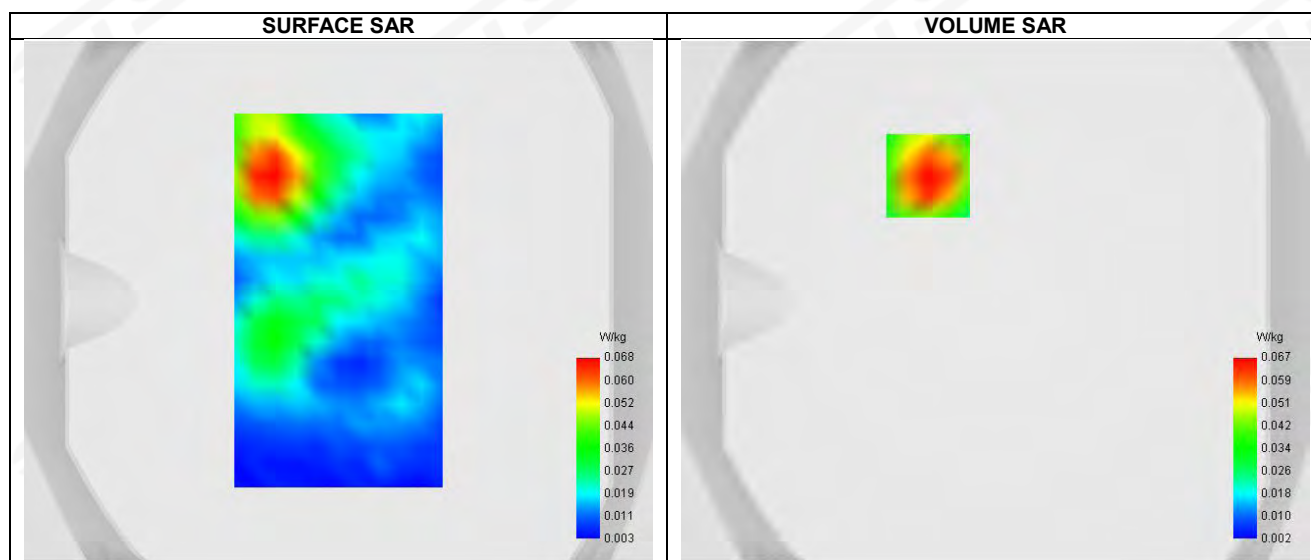


F. 3D Image



**Plot 28: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

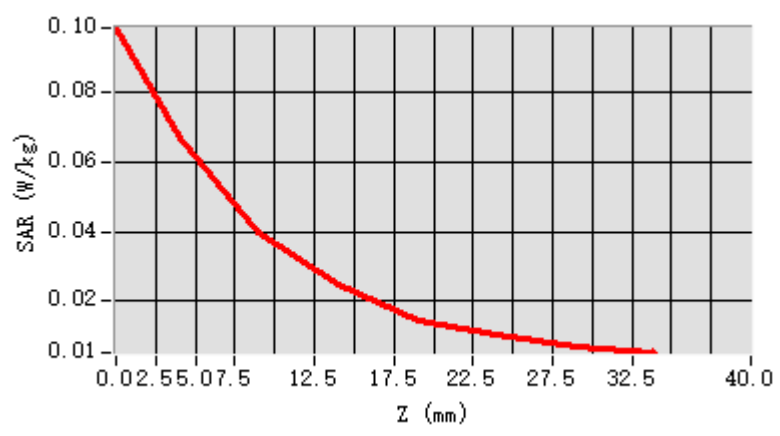
Test Date	2025-07-09
ConvF	1.80
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm
Phantom	Validation plane
Device Position	Back Side
Band	IEEE 802.11b ISM
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	40.41
Conductivity (S/m)	1.76

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

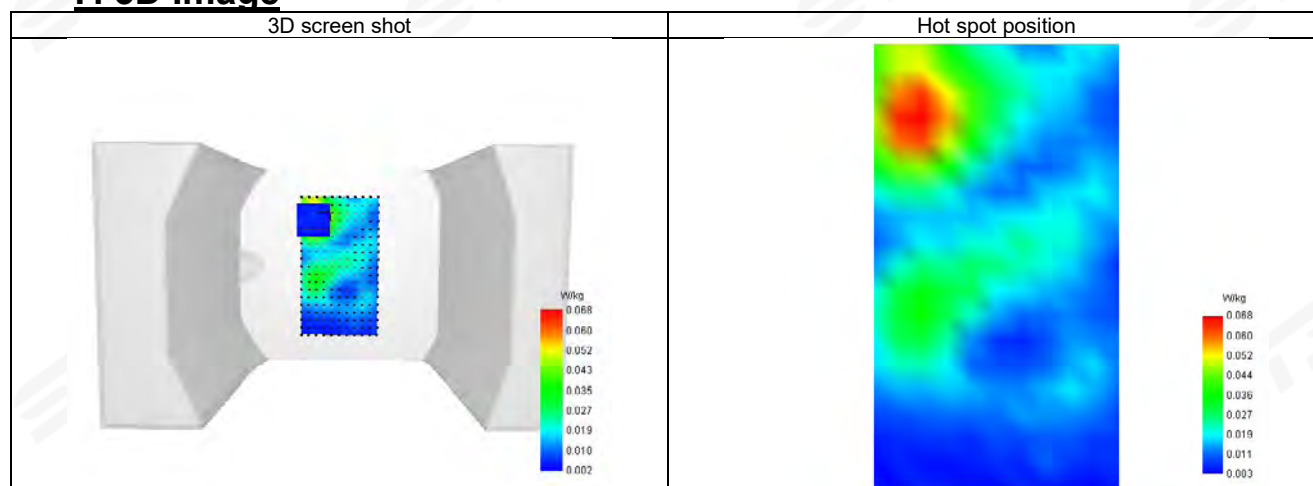
SAR 10g (W/Kg)	0.036
SAR 1g (W/Kg)	0.065
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	59.737018

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.099	0.067	0.040	0.025	0.014	0.011	0.007

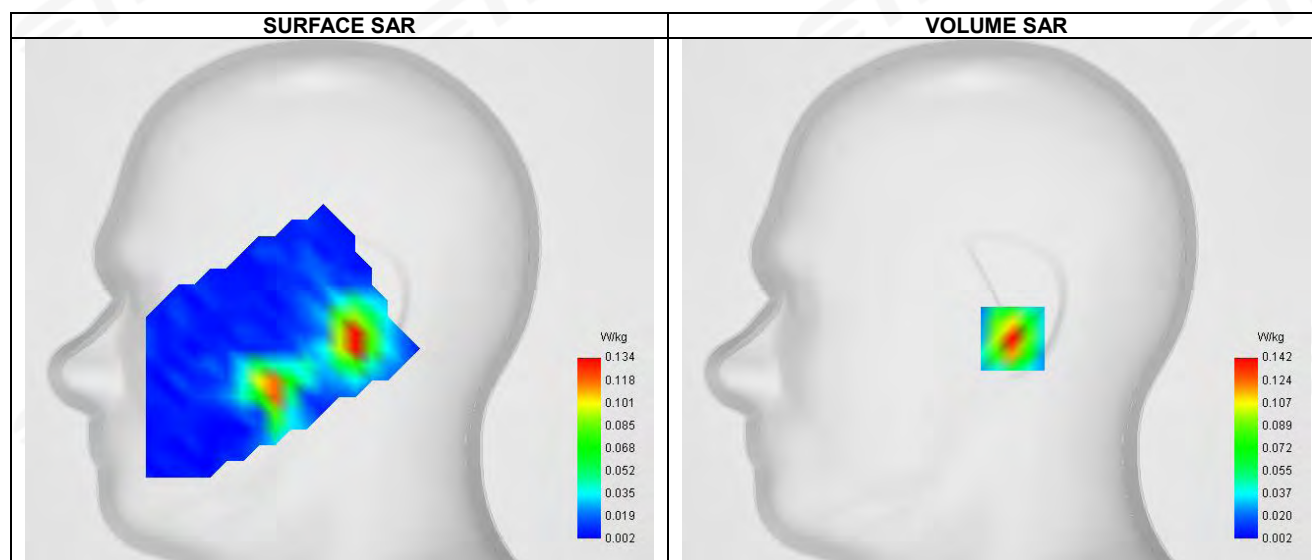


F. 3D Image



Plot 29: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-12
ConvF	1.33
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Right Cheek
Device Position	Cheek
Band	802.11 n-HT20 ISM
Signal	802.11 n-HT20 (Crest factor: 1.0)
Frequency (MHz)	5240
Relative permittivity (real part)	36.85
Conductivity (S/m)	4.65



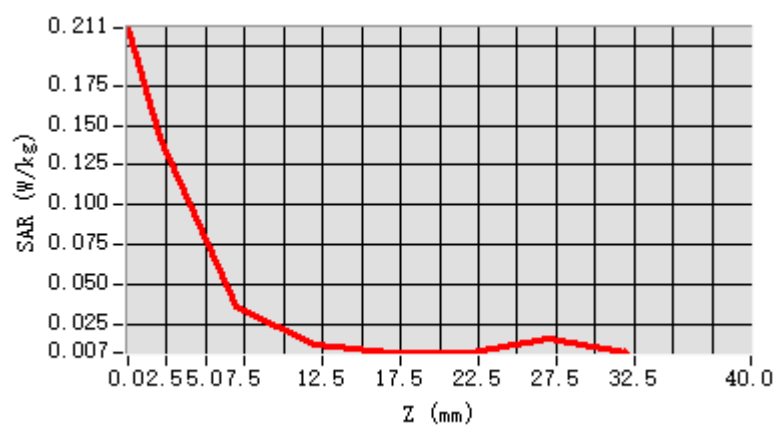
Maximum location: X=8.00, Y=-19.00 ; SAR Peak: 0.30 W/kg

D. SAR 1g & 10g

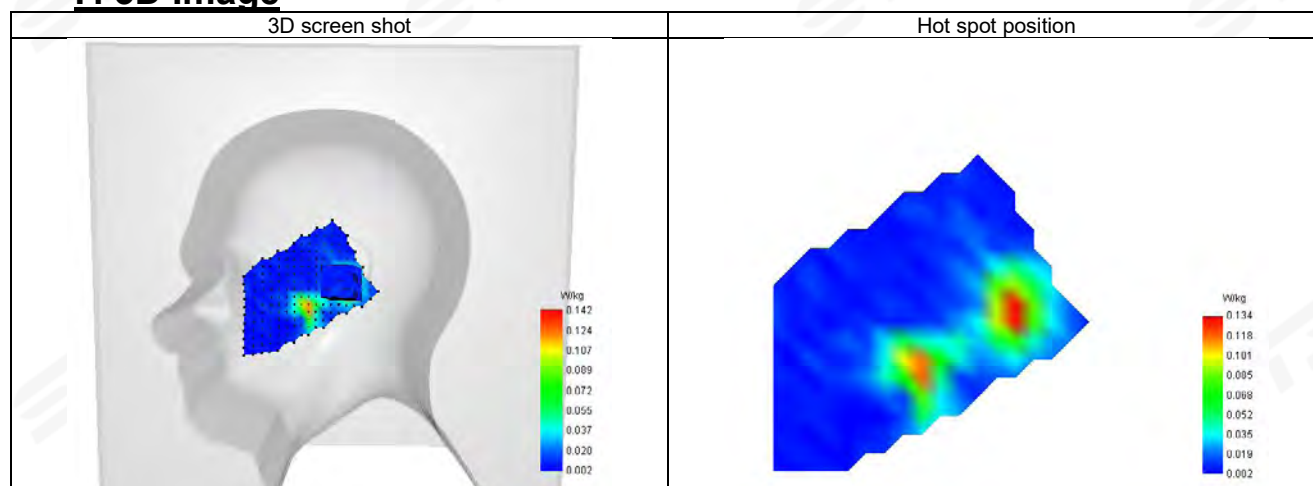
SAR 10g (W/Kg)	0.049
SAR 1g (W/Kg)	0.135
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	25.527874

E. Z Axis Scan

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.211	0.142	0.036	0.012	0.007	0.007	0.016

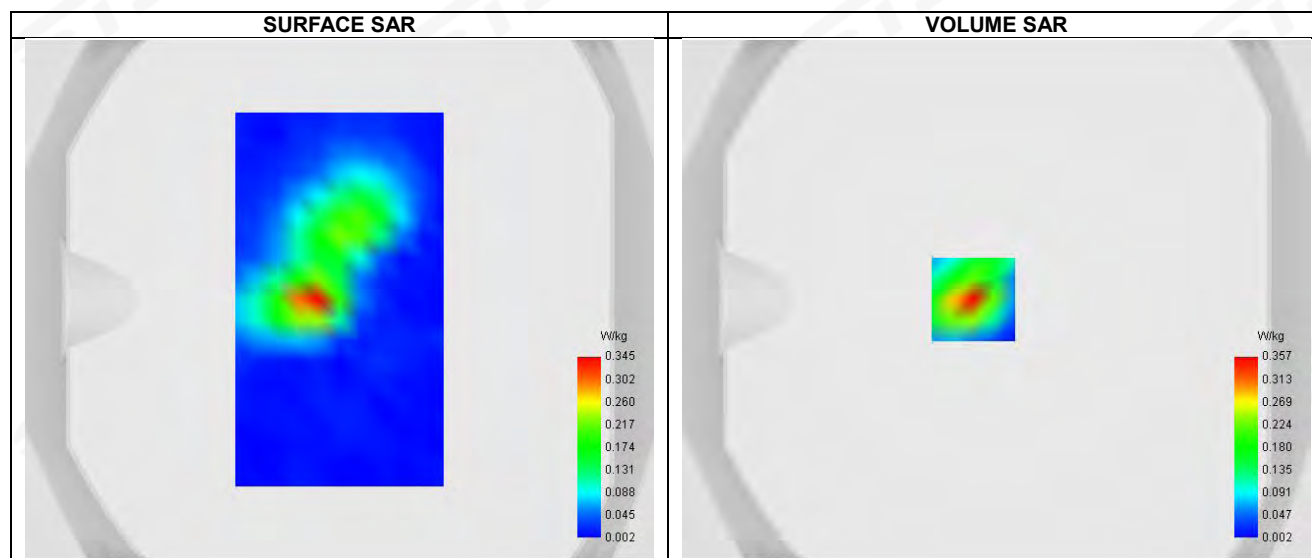


F. 3D Image



**Plot 30: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

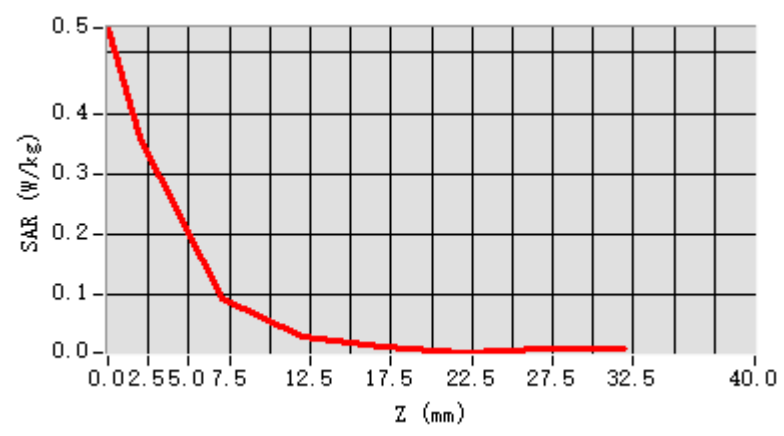
Test Date	2025-07-12
ConvF	1.33
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Validation plane
Device Position	Back Side
Band	802.11 n-HT20 ISM
Signal	802.11 n-HT20 (Crest factor: 1.0)
Frequency (MHz)	5240
Relative permittivity (real part)	36.85
Conductivity (S/m)	4.65

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

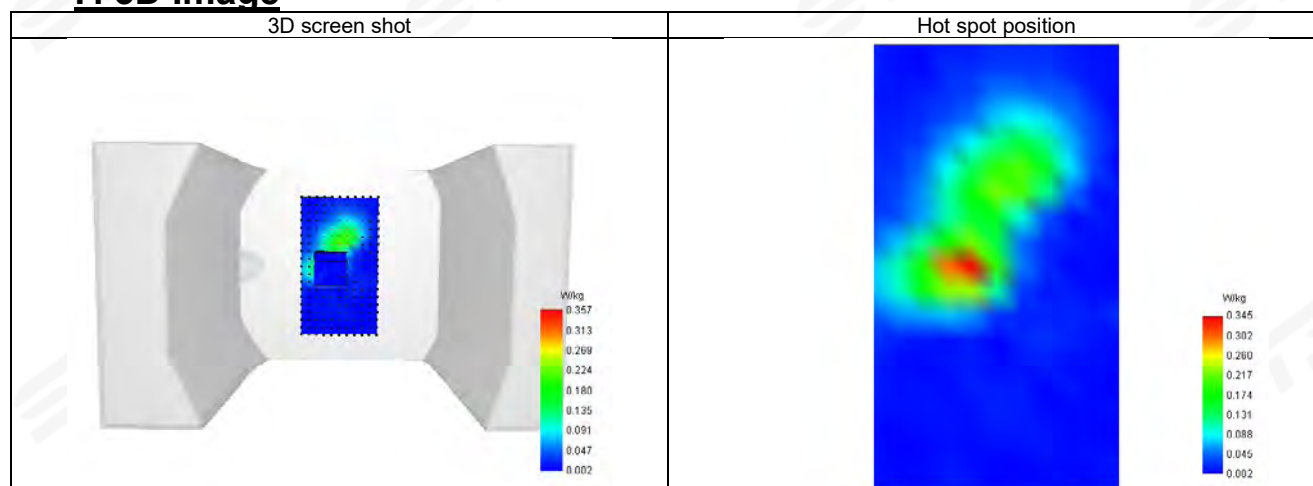
SAR 10g (W/Kg)	0.079
SAR 1g (W/Kg)	0.225
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	25.671511

E. Z Axis Scan

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.542	0.357	0.092	0.028	0.012	0.002	0.008

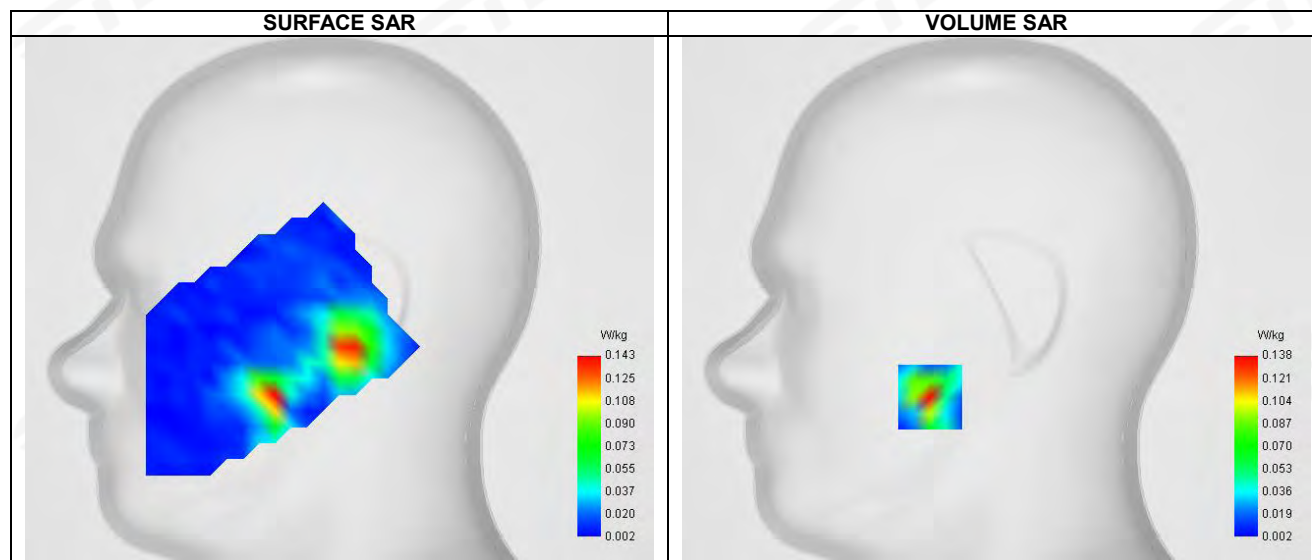


F. 3D Image



Plot 31: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-12
ConvF	1.31
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Right Cheek
Device Position	Cheek
Band	802.11ac-VHT20
Signal	802.11ac-VHT20 (Crest factor: 1.0)
Frequency (MHz)	5320
Relative permittivity (real part)	36.44
Conductivity (S/m)	4.76



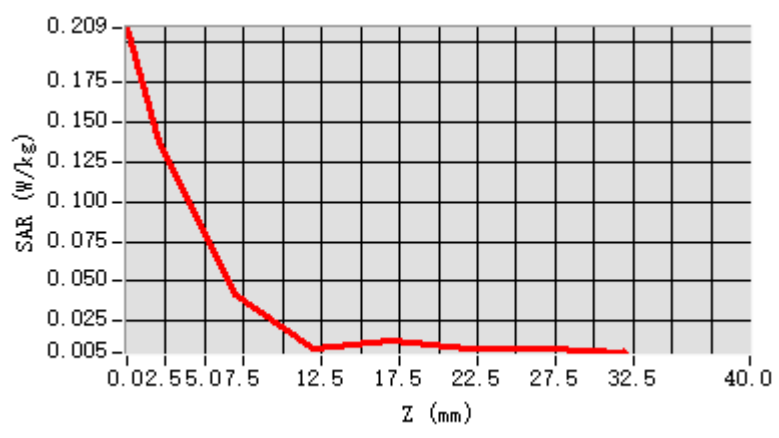
Maximum location: X=-33.00, Y=-49.00 ; SAR Peak: 0.24 W/kg

D. SAR 1g & 10g

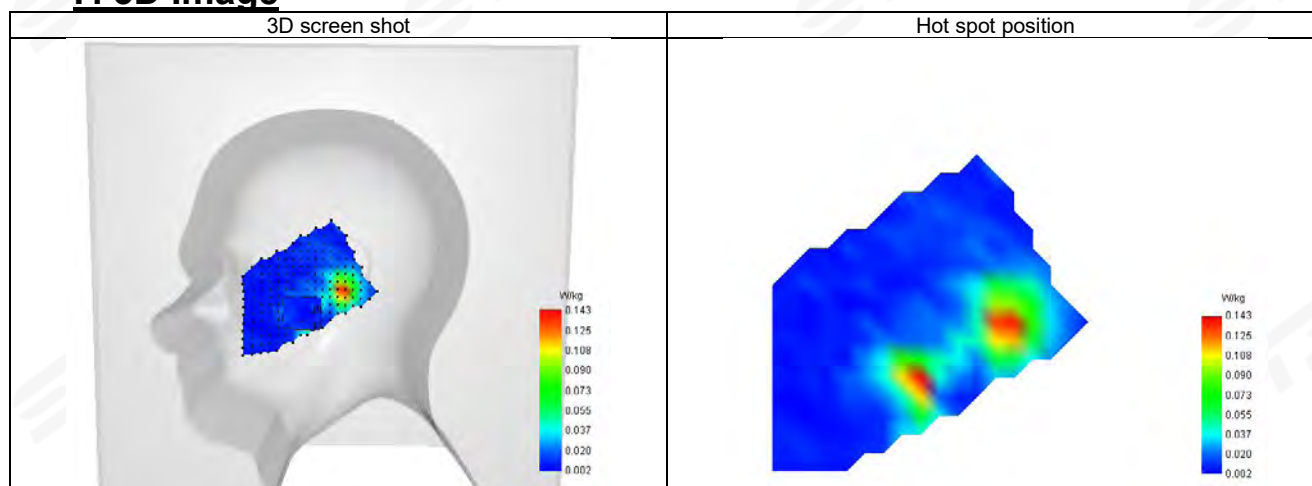
SAR 10g (W/Kg)	0.039
SAR 1g (W/Kg)	0.110
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	30.107006

E. Z Axis Scan

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.209	0.138	0.041	0.007	0.013	0.008	0.008

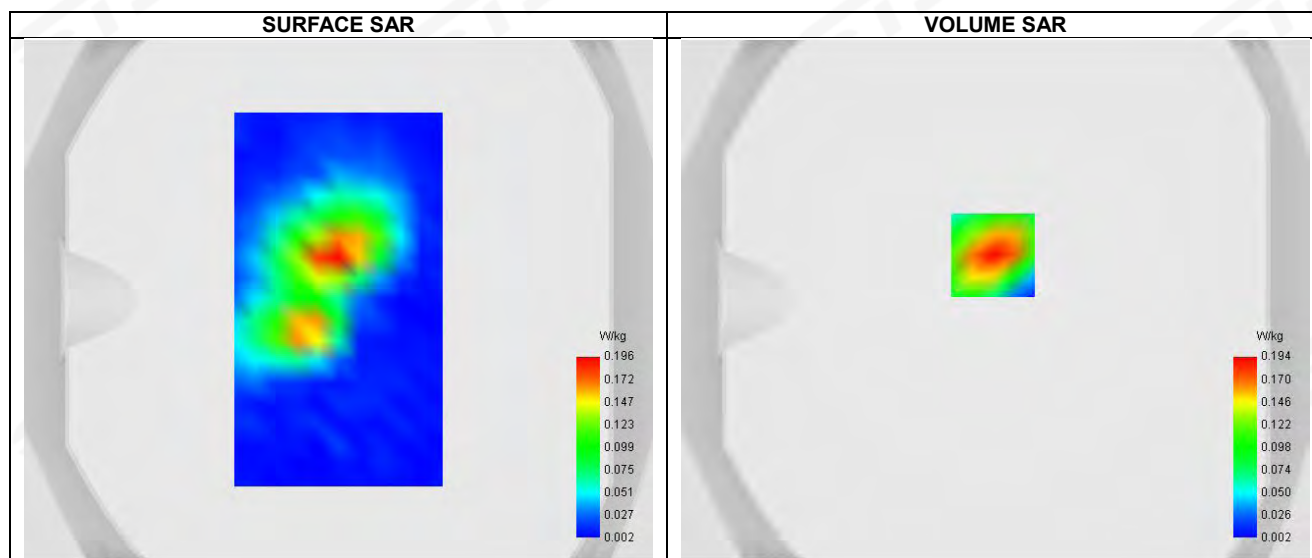


F. 3D Image



**Plot 32: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

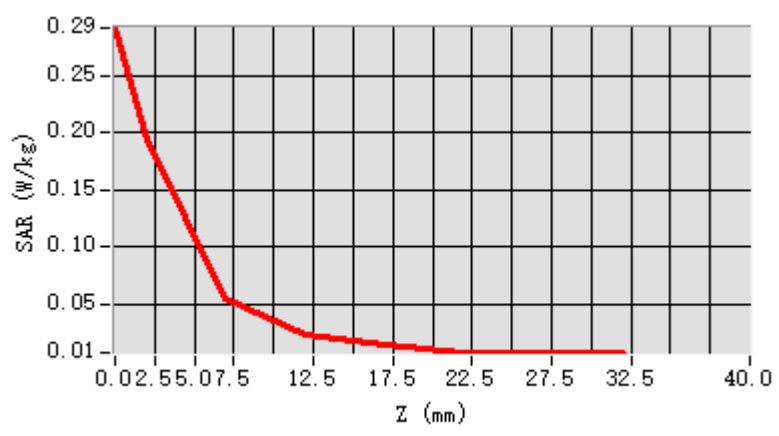
Test Date	2025-07-12
ConvF	1.31
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Validation plane
Device Position	Back Side
Band	802.11ac-VHT20
Signal	802.11ac-VHT20 (Crest factor: 1.0)
Frequency (MHz)	5320
Relative permittivity (real part)	36.44
Conductivity (S/m)	4.76

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

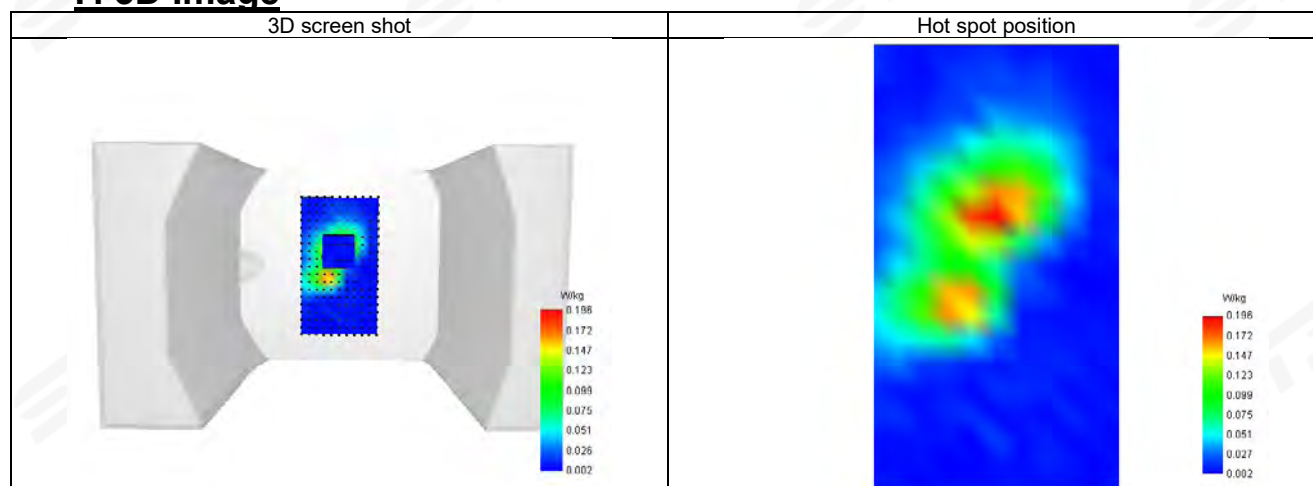
SAR 10g (W/Kg)	0.053
SAR 1g (W/Kg)	0.134
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	28.016578

E. Z Axis Scan

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.292	0.194	0.054	0.023	0.014	0.007	0.008

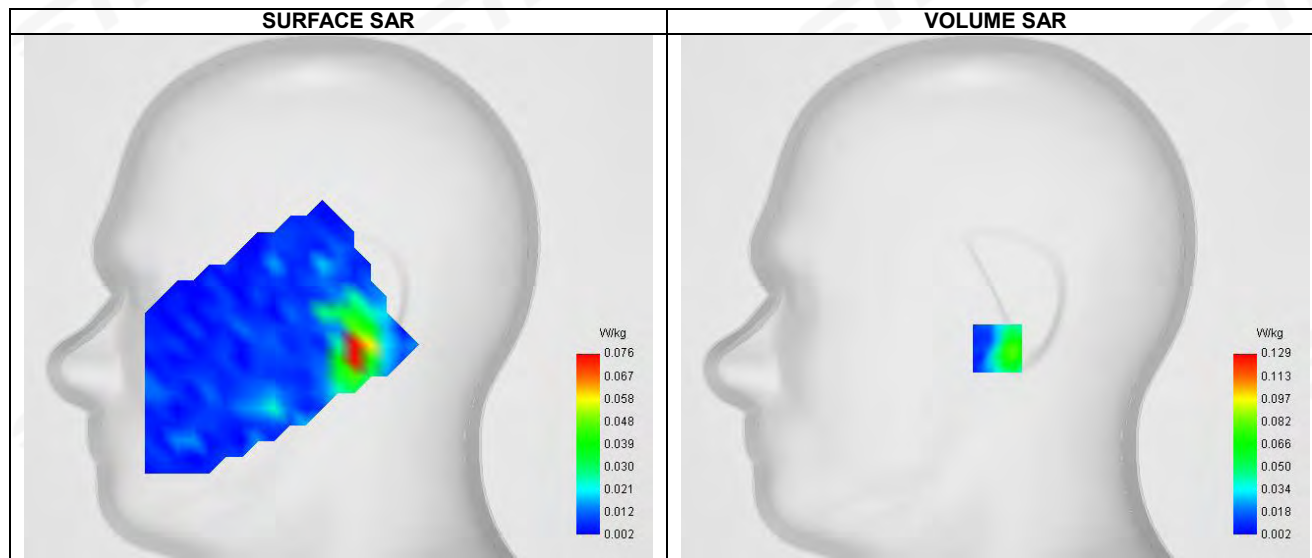


F. 3D Image



Plot 33: DUT: Smart Phone; EUT Model: RugKing 4 Pro

Test Date	2025-07-12
ConvF	1.35
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Right Cheek
Device Position	Cheek
Band	802.11 n-HT20
Signal	802.11 n-HT20 (Crest factor: 1.0)
Frequency (MHz)	5825
Relative permittivity (real part)	36.08
Conductivity (S/m)	5.32



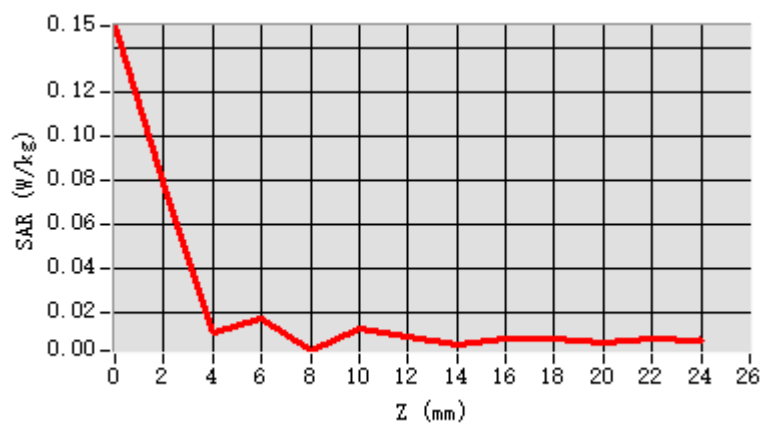
Maximum location: X=1.00, Y=-26.00 ; SAR Peak: 0.28 W/kg

D. SAR 1g & 10g

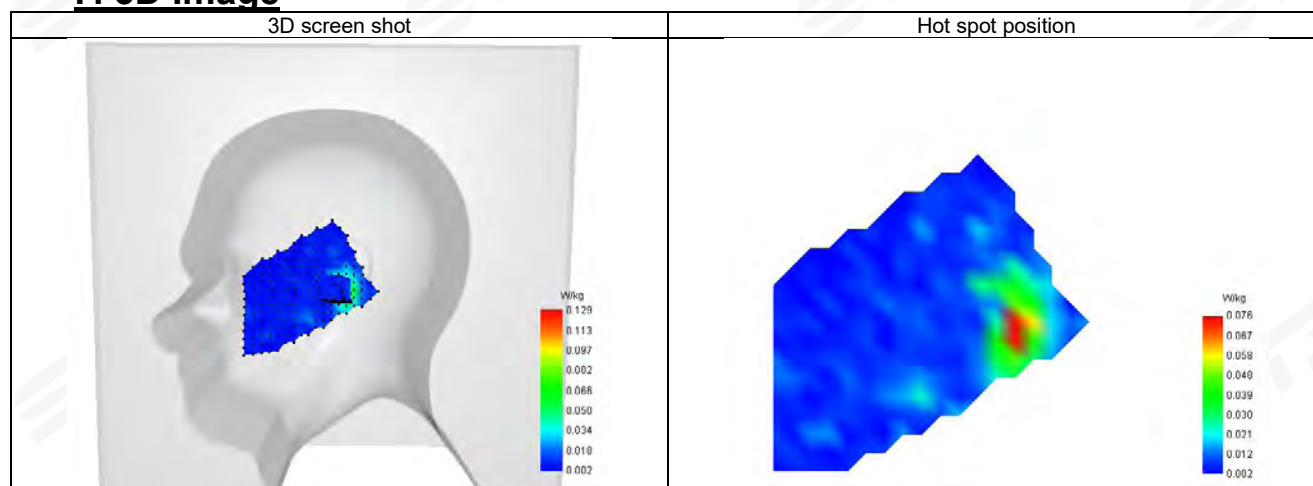
SAR 10g (W/Kg)	0.021
SAR 1g (W/Kg)	0.073
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	59.359284

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	24.00
SAR (W/Kg)	0.150	0.079	0.011	0.018	0.003	0.012	0.009	0.005	0.008	0.008	0.006	0.008	0.008

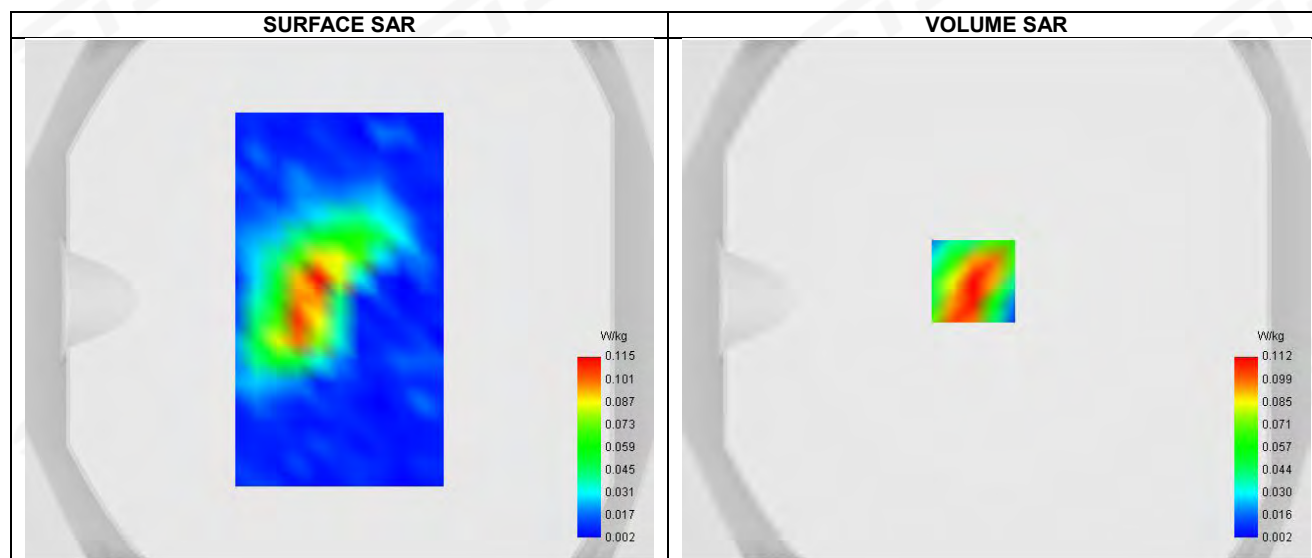


F. 3D Image



**Plot 34: DUT: Smart Phone; EUT Model: RugKing 4 Pro**

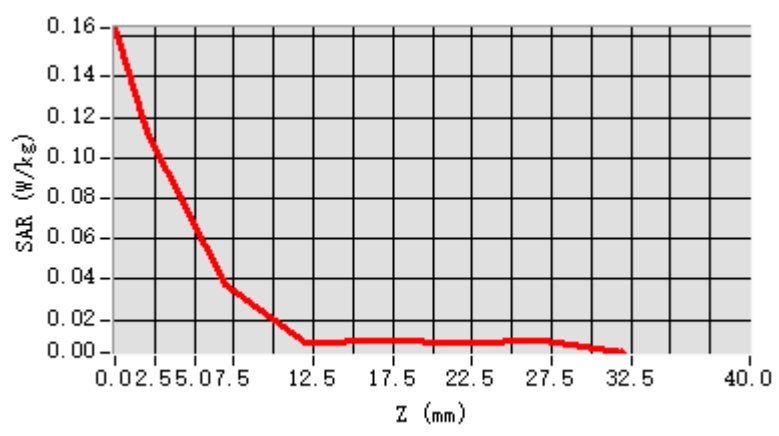
Test Date	2025-07-12
ConvF	1.35
Probe	SN 08/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm,
Phantom	Validation plane
Device Position	Back Side
Band	802.11 n-HT20 ISM
Signal	802.11 n-HT20 (Crest factor: 1.0)
Frequency (MHz)	5825
Relative permittivity (real part)	36.08
Conductivity (S/m)	5.32

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

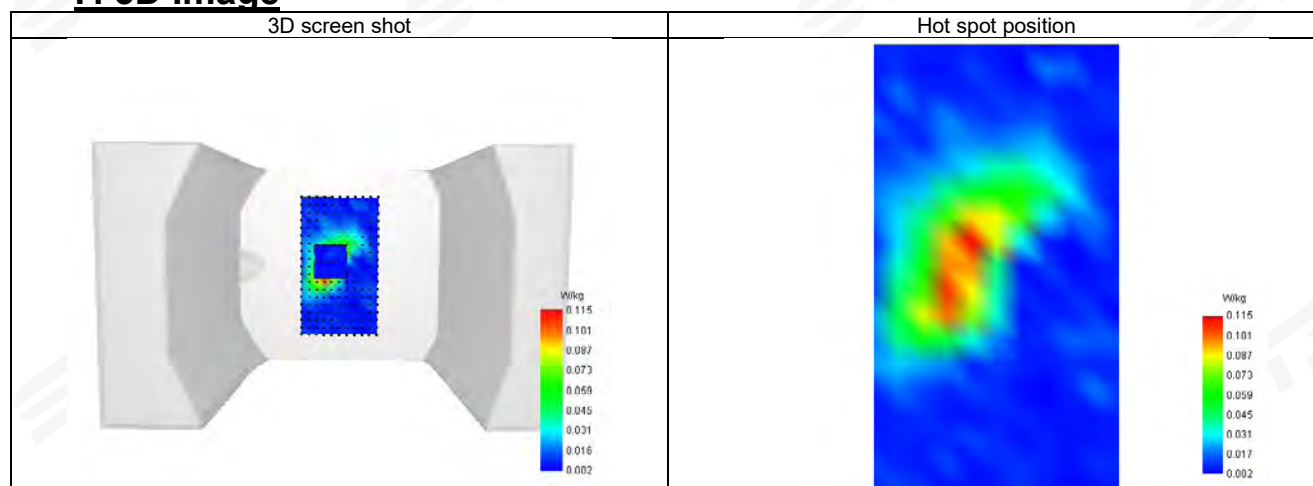
SAR 10g (W/Kg)	0.032
SAR 1g (W/Kg)	0.086
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	33.435358

E. Z Axis Scan

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	0.164	0.112	0.038	0.009	0.010	0.008	0.009



F. 3D Image





Appendix C. Probe Calibration and Dipole Calibration Report

Refer the appendix Calibration Report.

※※※※END OF THE REPORT※※※※