



SAR Test Report

For

Applicant Name: Qingdao Hainergy Technology Corp., Ltd.
Address: Room 309 (A), Baotai Office Building, No. 45, Beijing Road,
Qianwan Bonded Port Area, Qingdao Zone, Pilot Free Trade
Zone, Shandong, China
EUT Name: 10.1inch tablet
Brand Name: Haitech
Model Number: T69-A
Series Model Number: Refer to section 2

Issued By

Company Name: BTF Testing Lab (Shenzhen) Co., Ltd.
Address: 101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou
Community, Songgang Subdistrict, Bao'an District, Shenzhen,
China

Report Number: BTF251011R00201
Test Standards: FCC 47 CFR§2.1093 IEEE Std. 1528-2013 IEEE C95.1-2019
FCC ID: 2BDQO-T69-A
Test Conclusion: Pass
Test Date: 2025-10-22 to 2025-11-10
Date of Issue: 2025-11-11

Tested By: Kris Li
Kris Li / Tester

Date: 2025-11-11

Prepared By: Amenda Zhong

Amenda Zhong / Project Engineer

Date: 2025-11-11

Approved By:

Ryan.CJ

Ryan.CJ / EMC Manager

Date: 2025-11-11



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Revision History		
Version	Issue Date	Revisions Content
R_V0	2025-11-11	Original
Note:		Once the revision has been made, then previous versions reports are invalid.

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1. Introduction

1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

1.2 Identification of the Responsible Testing Location

Test Location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Description:	All measurement facilities used to collect the measurement data are located at 101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
FCC Registration Number	518915
Designation Number	CN1409

1.3 Laboratory Condition

Ambient Temperature:	21°C to 25°C
Ambient Relative Humidity:	48% to 59%
Ambient Pressure:	100 kPa to 102 kPa

1.4 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2. Product Information

2.1 Application Information

Company Name:	Qingdao Hainergy Technology Corp., Ltd.
Address:	Room 309 (A), Baotai Office Building, No. 45, Beijing Road, Qianwan Bonded Port Area, Qingdao Zone, Pilot Free Trade Zone, Shandong, China

2.2 Manufacturer Information

Company Name:	Qingdao Hainergy Technology Corp., Ltd.
Address:	Room 309 (A), Baotai Office Building, No. 45, Beijing Road, Qianwan Bonded Port Area, Qingdao Zone, Pilot Free Trade Zone, Shandong, China

2.3 Factory Information

Company Name:	Shenzhen Geruibang Technology Com. LTD.
Address:	3-5F, C-building Sogood Technology Park Sanwei Village in Xixiang Baoan District Shen zhen, China

2.4 General Description of Equipment under Test (EUT)

EUT Name	10.1inch tablet
Under Test Model Name	T69-A
Series Model Name	T69 *****, H10 *****, HIP-T69*****
Description of Model name differentiation	"*" uses 0-9, A-Z, a-z, - "or blank, indicating different appearance colors, sales channels, and sales region codes, while others are completely the same and do not affect safety and electromagnetic compatibility
Sample No	BTFSN251011008

2.5 Equipment under Test Ancillary Equipment

Ancillary Equipment 1	Rechargeable Battery	
	Capacity	5000mAh
	Rated Voltage	3.8V

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS 850/1900 3G Network WCDMA/HSDPA Band 2/5 4G Network FDD LTE Band 2/4/5/12/13/17 TDD LTE Band 38/40/41 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) BT (EDR+BLE)
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	GSM, WCDMA, LTE, WLAN, Bluetooth		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 12	TX: 698 ~ 716 MHz	RX: 728 ~ 746 MHz
	LTE Band 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 MHz
	LTE Band 17	TX: 704 ~ 716 MHz	RX: 734 ~ 746 MHz
	LTE Band 38	2570 ~ 2620 MHz	
	LTE Band 40a	2307.5 ~ 2317.5 MHz	
	LTE Band 40b	2347.5 ~ 2357.5 MHz	
	LTE Band 41	2496 ~ 2690 MHz	
	802.11b/g/n(HT20)	2412 ~ 2462 MHz	
	802.11n(HT40)	2422 ~ 2452 MHz	
	802.11a /802.11n(HT20/40) /802.11ac(HT20/40/80)	U-NII-1: 5180 MHz ~ 5240 MHz, U-NII-2A: 5260 MHz ~ 5320 MHz, U-NII-2C: 5500 MHz ~ 5700 MHz, U-NII-3: 5745 MHz ~ 5825 MHz	
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN: Internal Antenna WLAN: Internal Antenna BT: Internal Antenna		
Hotspot Function	Support		
Power Reduction	Not Support		
Exposure Category	General Population/Uncontrolled exposure		
EUT Stage	Portable Device		
Product	Type		
	☐ Production unit	☒ Identical prototype	

3. Summary of Test Results

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	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
3	IEEE C95.1-2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz
4	KDB447498 D01	General RF Exposure Guidance v06
5	KDB865664 D01	SAR measurement 100MHz to 6GHz v01r04
6	KDB865664 D02	RF Exposure Reporting v01r02
7	KDB941225 D01	3G SAR Procedures v03r01
8	KDB941225 D05	SAR for LTE Devices v02r05
9	KDB248227 D01	802.11 Wi-Fi SAR v02r02
10	KDB941225 D06	Hotspot Mode v02r01
11	KDB648474 D04	Handset SAR v01r03
12	KDB690783 D01	SAR Listings on Grant v01r03

3.2 Device Category and SAR Limit

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user. Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

Body Position	SAR Value (W/Kg)	
	General Population/ Uncontrolled Exposure	Occupational/ Controlled Exposure
Whole-Body SAR (averaged over the entire body)	0.08	0.4
Partial-Body SAR (averaged over any 1 gram of tissue)	1.60	8.0
SAR for hands, wrists, feet and ankles (averaged over any 10 grams of tissue)	4.0	20.0

NOTE:

General Population/Uncontrolled Exposure: Locations where there is the exposure of individuals who have no knowledge or control of their exposure. General population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment- related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Occupational/Controlled Exposure: Locations where there is exposure that may be incurred by persons who are aware of the potential for exposure. In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

3.3 Test Result Summary

The maximum results of Specific Absorption Rate (SAR) found during test as follows:

<Highest Reported standalone SAR>

Exposure Position	Frequency Band	Reported SAR (W/kg)	Equipment Class	Highest Reported SAR (W/kg)
Hotspot(Body) 1-g SAR (0 mm Gap)	GSM 850	0.251	PCB	0.799
	GSM 1900	0.534		
	WCDMA Band II	0.790		
	WCDMA Band V	0.073		
	LTE Band 2	0.467		
	LTE Band 4	0.574		
	LTE Band 5	0.718		
	LTE Band 12	0.528		
	LTE Band 13	0.595		
	LTE Band 17	0.467		
	LTE Band 38	0.416		
	LTE Band 40a	0.473		
	LTE Band 40b	0.639		
	LTE Band 41	0.799		
	WLAN 2.4 GHz	0.451	DTS	
	WLAN 5.2 GHz	0.241	NII	
	WLAN 5.4 GHz	0.349		
	WLAN 5.6 GHz	0.462		
	WLAN 5.8 GHz	0.193		
	Bluetooth	0.003	DSS	

This device is in compliance with Specific Absorption Rate(SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC47 CFR part 2(2.1093) and ANSI/IEEE C95.1-2019, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std. 1528-2013.

<Highest Reported Simultaneous SAR>

Exposure Position	Simultaneous Configuration	Highest Reported Simultaneous Transmission SAR (W/kg)	Limit (W/kg)	Verdict
Hotspot(Body) 1-g SAR (0 mm Gap)	LTE Band 41 + 5.6G WIFI	1.261	1.6	Pass

3.4 Test Uncertainty

3.4.1 Measurement uncertainty evaluation for SAR test

Measurement uncertainty evaluation for SAR test (450MHz to 6GHz)

Uncertainty Component	Tol (+-%)	Prob. Dist.	Div.	Unc. $u(x_i)=a(x_i)/q_i$	Ci (1g)	Ci (10g)	1g U_i (+-%)	10 g U_i (+-%)	V_i v_{eff}
Measurement System									
Probe calibration	14	N (k = 2)	2	7.00	1	1	7.00	7.00	∞
Probe calibration drift	4	R	$\sqrt{3}$	2.31	1	1	2.31	2.31	∞
Probe linearity	4.7	R	$\sqrt{3}$	2.71	1	1	2.71	2.71	∞
detection limit	1	R	$\sqrt{3}$	0.58	1	1	0.58	0.58	∞
Probe isotropy	3.5	R	$\sqrt{3}$	2.02	0.71	0.71	1.43	1.43	∞
Hemispherical Isotropy	5.9	N	1	5.90	0.71	0.71	4.19	4.19	∞
Boundary effect	1	R	1.73	0.58	1	1	0.58	0.58	∞
Integration time	1.4	R	1.73	0.81	1	1	0.81	0.81	∞
Response time	0	R	1.73	0.00	1	1	0.00	0.00	∞
Readout electronics	0.5	N	1	0.50	1	1	0.50	0.50	∞
RF ambient and noise	3	R	$\sqrt{3}$	1.73	1	1	1.73	1.73	∞
Probe positioning errors	3.28	N	1	3.28	0.33	0.33	1.08	1.08	∞
Data processing errors	2.3	R	1	1.33	1	1	1.33	1.33	∞
Conductivity measurement	4.07	N	1	2.35	0.79	0.77	1.86	1.81	∞
Permittivity measurement	5.06	N	1	2.92	0.23	0.26	0.67	0.76	∞
Liquid Conductivity - Temperature Uncertainty	2.5	R	1	1.44	0.79	0.77	1.14	1.11	∞
Liquid Permittivity - Temperature Uncertainty	2.5	R	$\sqrt{3}$	1.44	0.23	0.26	0.33	0.38	∞
Shell permittivity	2.9	R	$\sqrt{3}$	1.67	0.25	0.25	0.42	0.42	∞
Repeatability of positioning the DUT or source against the phantom	2.7	N	1	2.70	2	2	5.40	5.40	∞
Uncertainty in accepted power	3	R	1	3.00	1	1	3.00	3.00	∞
Effect of operating mode on probe sensitivity	2.3	R	$\sqrt{3}$	1.33	1	1	1.33	1.33	∞
Variation in SAR due to drift in output of DUT	2.2	N	1	2.20	1	1	2.20	2.20	∞
Phantom deviation from target (ϵ' , σ)	1.9	N	1	1.90	1	1	1.90	1.90	∞
SAR scaling	0	R	$\sqrt{3}$	0.00	1	1	0.00	0.00	∞
Probe calibration	14	N (k = 2)	2	7.00	1	1	7.00	7.00	∞
Combined uncertainty	/						11.94	11.94	
Expanded Uncertainty (95% Confidence interval)	/						23.89	23.88	

* This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.4.2 Measurement uncertainty evaluation for system check

Uncertainty Component	Tol (+- %)	Prob. Dist.	Div.	Unc. $u(x_i)=a(x_i)/q_i$	Ci (1g)	Ci (10 g)	1g Ui (+- %)	10 g Ui (+- %)	Vi veff
Measurement System									
Probe calibration	14	N (k = 2)	2	7.00	1	1	7.00	7.00	∞
Probe calibration drift	4	R	1.73	2.31	1	1	2.31	2.31	∞
Probe linearity	4.7	R	1.73	2.72	1	1	2.72	2.72	∞
Detection limit	1	R	1.73	0.58	1	1	0.58	0.58	∞
Axial Isotropy	3.5	R	1.73	2.02	1	1	2.02	2.02	∞
Hemispherical Isotropy	5.9	R	1.73	3.41	0.71	0.71	2.42	2.42	∞
Boundary effect	1	R	1.73	0.58	0.71	0.71	0.41	0.41	∞
Integration time	1.4	R	1.73	0.81	1	1	0.81	0.81	∞
Response time	0	R	1.73	0.00	1	1	0.00	0.00	∞
Readout electronics	0.5	N	1	0.50	1	1	0.50	0.50	∞
Noise	3	R	1.73	1.73	1	1	1.73	1.73	∞
Reflections	3	R	1.73	1.73	1	1	1.73	1.73	∞
Positioner Mechanical Tolerance	3.28	R	1.73	1.90	0.33	0.33	0.63	0.63	∞
Positioning with respect to Phantom Shell	3.28	R	1.73	1.90	0.33	0.33	0.63	0.63	∞
Data processing errors	2.3	R	1.73	1.33	1	1	1.33	1.33	∞
Conductivity measurement	4.07	N	1	4.07	0.79	0.77	3.22	3.13	∞
Permittivity measurement	5.06	N	1	5.06	0.23	0.26	1.16	1.32	∞
Liquid Conductivity - Temperature Uncertainty	2.5	R	1.73	1.45	0.79	0.77	1.14	1.11	∞
Liquid Permittivity - Temperature Uncertainty	2.5	R	1.73	1.45	0.23	0.26	0.33	0.38	∞
Shell permittivity	2.9	R	1.73	1.68	0.25	0.25	0.42	0.42	∞
Distance between the radiating element of the DUT and the phantom medium	2.7	N	1	2.70	2	2	5.40	5.40	∞
Deviation of experimental antennas	4.5	N	1.73	2.60	1	1	2.60	2.60	∞
Other uncertainty contributions	2	R	1	2.00	1	1	2.00	2.00	∞
Uncertainty in accepted power	3	R	1.73	1.73	1	1	1.73	1.73	∞
Phantom deviation from target (ϵ' , σ)	1.9	N	1	1.90	1	0.87	1.90	1.65	∞
$u(\Delta SAR)$	/						11.89	11.85	
Expanded uncertainty (95% confidence interval)	/						23.79	23.70	

4. Measurement System

4.1 Specific Absorption Rate (SAR) Definition

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:

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

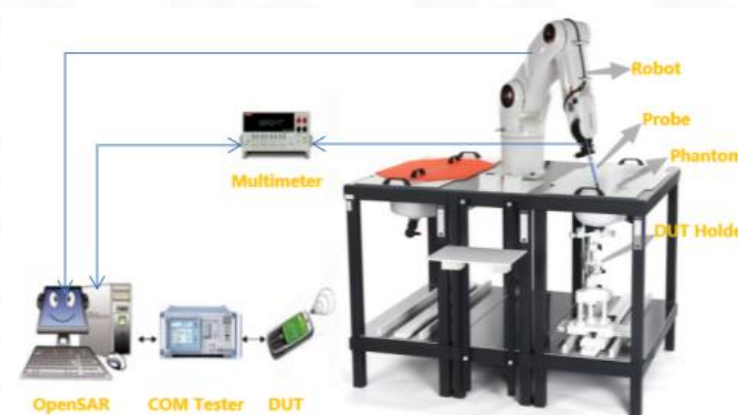
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

4.2 MVG SAR System

4.2.1 SAR system diagram



4.2.2 Robot



A standard high precision 6-axis robot (Denso) with teaches pendant with Scanning System

- It must be able to scan all the volume of the phantom to evaluate the tridimensional distribution of SAR.
- Must be able to set the probe orthogonal of the surface of the phantom ($\pm 30^\circ$).
- Detects stresses on the probe and stop itself if necessary to keep the integrity of the probe.

4.2.3 E-Field Probe

For the measurements, the Specific Dosimetric SSE2 E-Field Probe with following specifications is used:

- Dynamic range: 0.01-100 W/kg
- Tip diameter: 2mm for SSE2
- Distance between probe tip and sensor centre: 1mm for SSE2
- Distance between sensor centre and the inner phantom surface: 2mm for $f \geq 4\text{GHz}$.
- Probe linearity: $<0.25\text{dB}$.
- Axial Isotropy: $<0.25\text{dB}$.
- Spherical Isotropy: $<0.50\text{dB}$.
- Calibration range: 150 to 6000 MHz for head & body simulating liquid
- Angle between probe axis (evaluation axis) and surface normal line: less than 20° .



4.2.4 Phantoms

SAM Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The probe scanning of the E-Field is done in the 2 halves of the normalized head. The normalized shape of the phantom corresponds to the dimensions of 90% of an adult head size. It enables the dosimetric evaluation of left and right-hand phone usage and includes an additional flat phantom part for the simplified body performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



SAM Phantom

The thickness of the phantom amounts to $2\text{ mm} \pm 0.2\text{ mm}$. The materials for the phantom do not affect the radiation of the device under test (DUT) : $\epsilon_r' < 5$
The head is filled with tissue simulating liquid. The hand do not have to be modeled.

TWIN SAM phantom

	Mechanical	Electrical	
Overall thickness	$2 \pm 0.2\text{ mm}$ (except ear area)	Relative permittivity	3.4
Dimensions	1000 mm(L) x 500 mm(W) x 200 mm(H)	Loss tangent	0.02
Maximum volume	27 L		
Material	Fiberglass based		

ELLIPTICAL Phantom

The phantom is for Body performance check filled with tissue-equivalent liquid to a depth of at least 150 mm, whose shell material is resistant to damage or reaction with tissue-equivalent liquid chemicals.



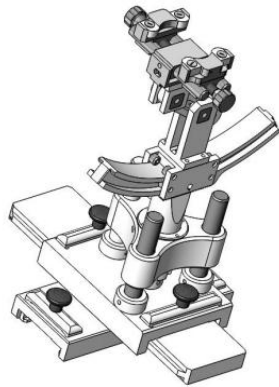
ELLI Phantom

The shape of the phantom is an ellipse with length $600\text{ mm} \pm 5\text{ mm}$ and width $400\text{ mm} \pm 5\text{ mm}$.
The phantom shell is made of low-loss and low-permittivity material, having loss tangent $\tan \delta \leq 0.05$ and relative permittivity:
 $\epsilon_r' \leq 5$ for $f \leq 3\text{ GHz}$
 $3 \leq \epsilon_r' \leq 5$ for $f > 3\text{ GHz}$
The thickness of the bottom-wall of the flat phantom is 2.0 mm with a tolerance of $\pm 0.2\text{ mm}$.

Technical & mechanical characteristics

Shell thickness	$2\text{ mm} \pm 0.2\text{ mm}$
Filling volume	25 L
Dimensions	600 mm x 400 mm x 200 mm
Permittivity	4.4
Loss tangent	0.017

4.2.5 Device Holder



System Material	Permittivity	Loss tangent
Delrin	3.7	0.005

(The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1°.)

System Material	Permittivity	Loss tangent
PMMA	2.9	0.028

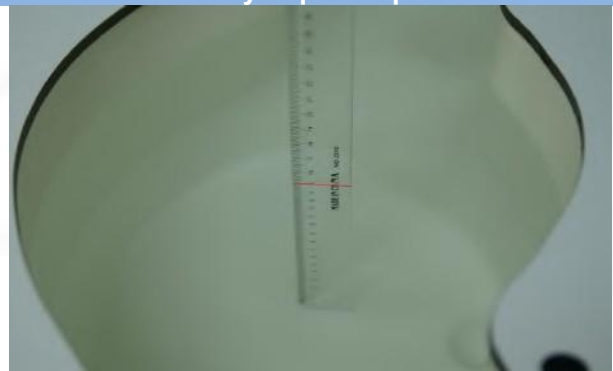
4.2.6 Simulating Liquid

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5%.

Head Liquid Depth



Body Liquid Depth



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

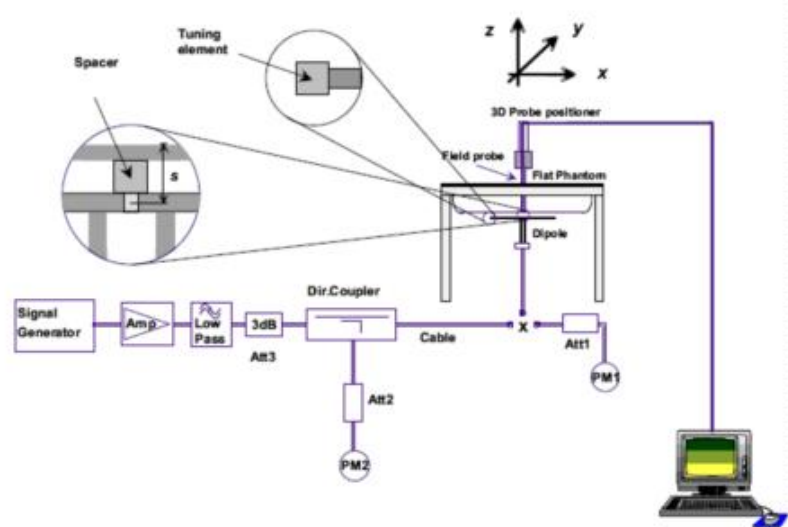
Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	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

5. System Verification

5.1 Purpose of System Check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. The setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

5.2 System Check Setup



6. TEST POSITION CONFIGURATIONS

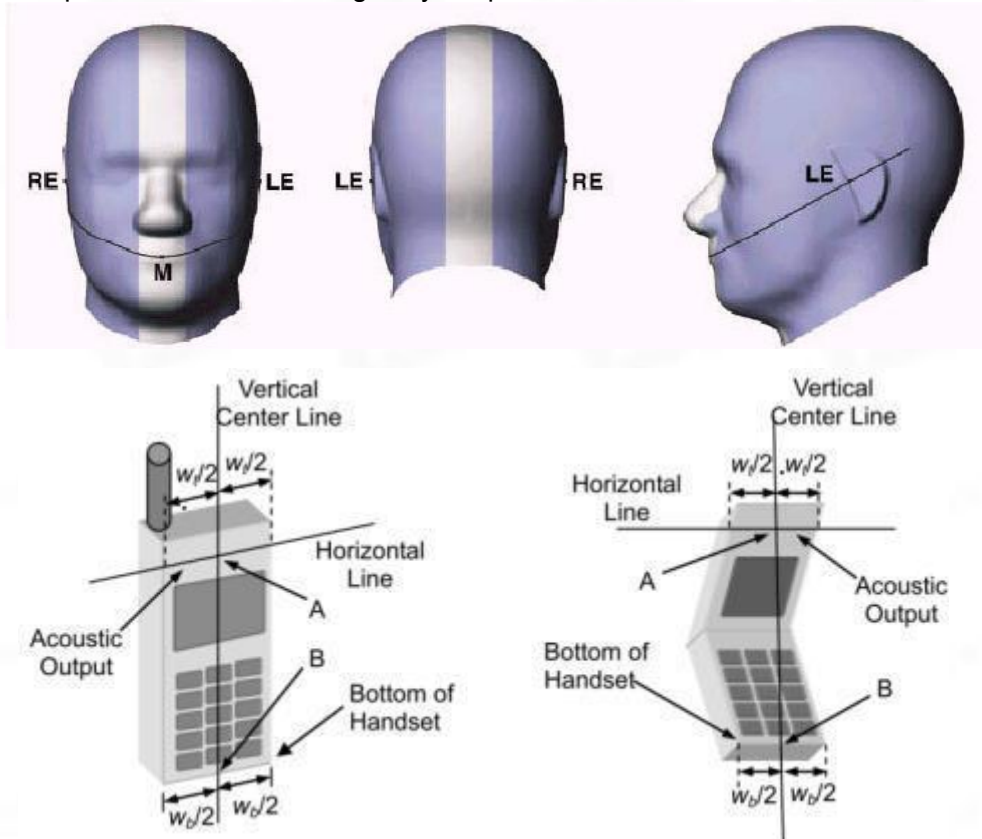
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Head Exposure Conditions

Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

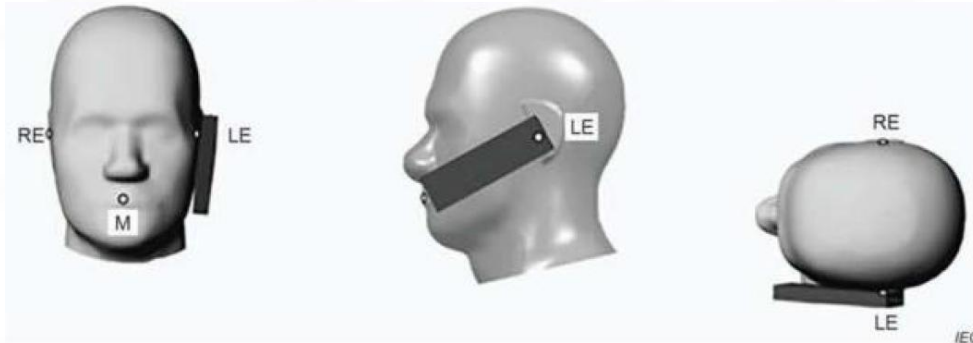
6.1.1 Two Imaginary Lines on the Handset

- The vertical center line 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 bottom of the handset.
- The horizontal line is perpendicular to the vertical center line and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- 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 center line is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



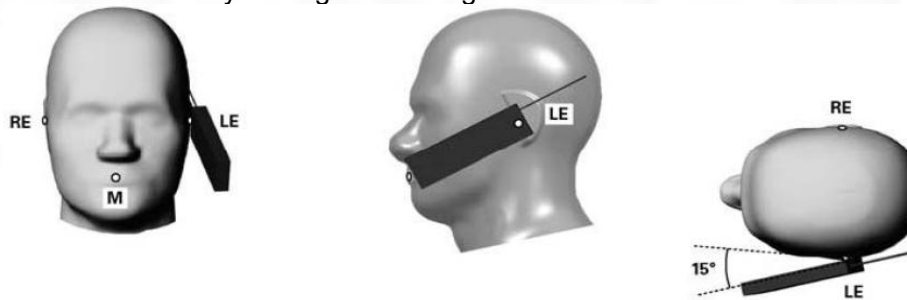
6.1.2 Two Imaginary Lines on the Handset

- 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 three 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.
- 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 the 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.



6.1.3 Titled Position

- To position the device in the “cheek” position described above.
- While maintaining the device 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 contact with the ear is lost.

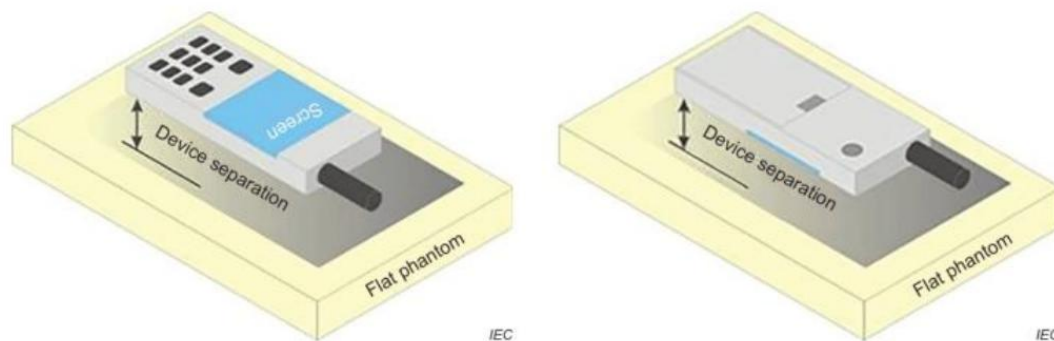


6.2 Body-worn Position Conditions

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 447498 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory.

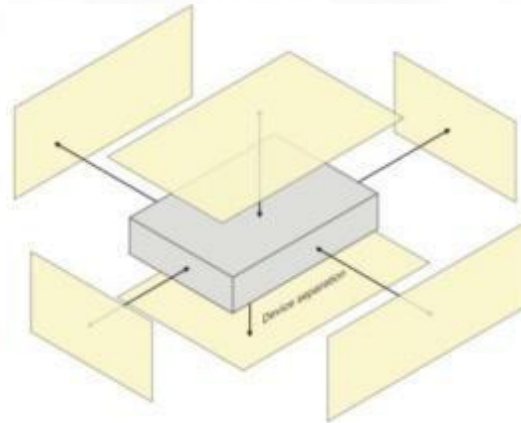
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance ≤ 5 mm to support compliance.



6.3 Hotspot Mode Exposure Position Conditions

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



6.4 Product Specific 10g Exposure Consideration

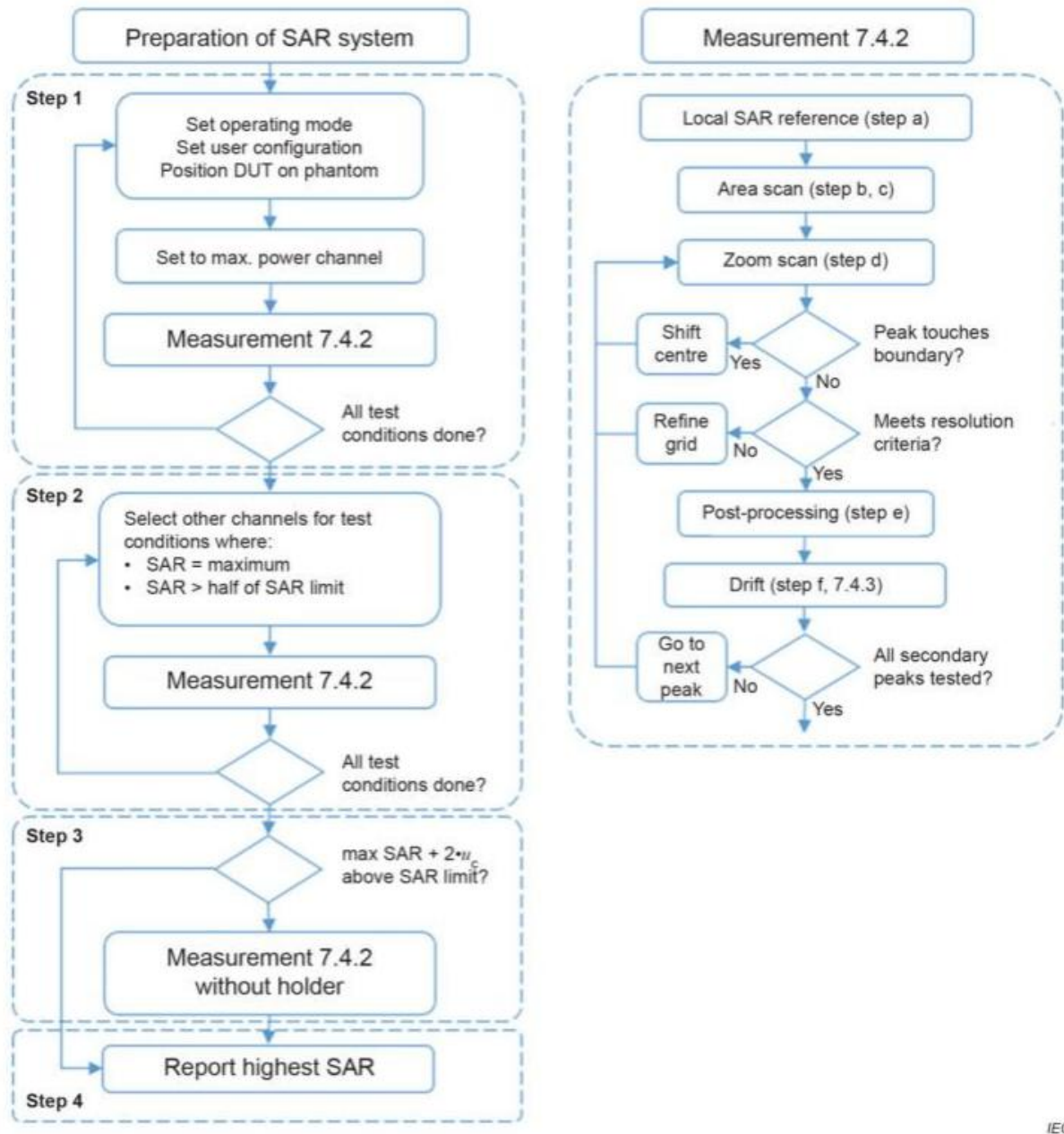
According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance;

The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

7. Measurement Procedure

7.1 Measurement Process Diagram

Body SAR



IEC

7.2 SAR Scan General Requirement

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1 g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013.

			≤3GHz	>3GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5±1 mm	½ ⋅ δ ⋅ ln(2)±0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30°±1°	20°±1°
Maximum area scan spatial resolution: Δx Area , Δy Area			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3–4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom			≤ 2 GHz: ≤ 8 mm 2 –3 GHz: ≤ 5 mm*	3–4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz Zoom (n)		≤ 5 mm	3–4 GHz: ≤ 4 mm
				4–5 GHz: ≤ 3 mm
				5–6 GHz: ≤ 2 mm
	graded grid	Δz Zoom (1): between 1st two points closest to phantom surface	≤ 4 mm	3–4 GHz: ≤ 3 mm
				4–5 GHz: ≤ 2.5 mm
				5–6 GHz: ≤ 2 mm
		Δz Zoom (n>1): between subsequent points		≤ 1.5⋅Δz Zoom (n-1)
Minimum zoom scan volume	x, y, z		≥30 mm	3–4 GHz: ≥ 28 mm
				4–5 GHz: ≥ 25 mm
				5–6 GHz: ≥ 22 mm
Note: 1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528- 2011 for details. 2. * When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

7.3 Measurement Procedure

The following steps are used for each test position

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

7.4 Area & Zoom Scan Procedure

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 D01v01r04 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.

8. Conducted RF Output Power

8.1 GSM

Mode: GSM850		Maximum Tune-up(dBm)	Burst Average Power (dBm)			Division Factors	Frame-Average Power (dBm)		
			CH128	CH190	CH251		CH128	CH190	CH251
			824.2MHz	836.6MHz	848.8MHz		824.2MHz	836.6MHz	848.8MHz
GSM		30.50	29.78	30.47	29.51	-9.03	20.75	21.44	20.48
GPRS (GMSK)	1Tx slot	30.00	29.78	29.76	29.53	-9.03	20.75	20.73	20.50
	2Tx slots	29.50	29.12	29.14	28.91	-6.02	23.10	23.12	22.89
	3Tx slots	28.00	27.57	27.63	27.37	-4.26	23.31	23.37	23.11
	4Tx slots	27.00	26.61	26.71	26.37	-3.01	23.60	23.70	23.36
Mode: GSM1900		Maximum Tune-up(dBm)	Burst Average Power (dBm)			Division Factors	Frame-Average Power (dBm)		
			CH512	CH661	CH810		CH512	CH661	CH810
			1850.2MHz	1880.0MHz	1909.8MHz		1850.2MHz	1880.0MHz	1909.8MHz
GSM		29.50	29.13	27.86	27.58	-9.03	20.10	18.83	18.55
GPRS (GMSK)	1Tx slot	29.00	28.82	27.49	26.96	-9.03	19.79	18.46	17.93
	2Tx slots	28.50	28.15	26.80	26.28	-6.02	22.13	20.78	20.26
	3Tx slots	27.00	26.53	25.16	24.65	-4.26	22.27	20.90	20.39
	4Tx slots	26.00	25.50	24.13	23.60	-3.01	22.49	21.12	20.59
Note: 1) Division Factors To average the power, the division factor is as follows: 1Tx-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB 2Tx-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB 3Tx-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB 4Tx-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB									

8.2 WCDMA

Mode		Maximum Tune-up(dBm)	WCDMA Band II		
			Conducted Power (dBm)		
			CH9262	CH9400	CH9538
			1852.4	1880.0	1907.6
RMC 12.2K		20.00	19.55	18.51	18.32
HSDPA	Subtest-1	19.00	18.59	17.50	17.34
	Subtest-2	18.50	18.00	17.04	16.84
	Subtest-3	18.50	18.10	16.98	16.84
	Subtest-4	18.50	18.08	17.02	16.87
Mode		Maximum Tune-up(dBm)	WCDMA Band V		
			Conducted Power (dBm)		
			CH4132	CH4183	CH4233
			826.4	836.6	846.6
RMC 12.2K		21.50	19.03	19.29	21.44
HSDPA	Subtest-1	19.50	17.99	18.22	19.09
	Subtest-2	19.00	17.43	17.71	18.56
	Subtest-3	18.50	17.43	17.73	18.49
	Subtest-4	19.00	17.46	17.74	18.53
Per KDB 941225 D01, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/2$ dB higher than the primary mode (RMC12.2kbps) or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.					

8.3 LTE

Band 2

LTE-FDD Band 2				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		18607	18900	19193
					1850.7MHz	1880.0MHz	1909.3MHz
1.4MHz	QPSK	1	0	21.00	20.44	19.12	20.91
			2	22.50	20.61	20.39	22.08
			5	21.00	20.43	20.50	20.91
		3	0	21.00	20.44	20.48	20.96
			2	21.50	20.48	20.56	21.10
			3	21.50	20.50	20.57	21.05
		6	0	21.00	19.44	20.59	20.07
	16QAM	1	0	20.00	19.23	19.49	19.76
			2	20.00	19.36	19.39	19.92
			5	20.00	19.18	19.23	19.75
		3	0	20.00	19.28	19.31	19.75
			2	20.00	19.29	19.30	19.83
			3	20.00	19.28	19.26	19.80
		6	0	19.50	18.32	18.54	19.01
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
3MHz	QPSK	1	0	21.00	20.38	20.44	20.77
			8	21.00	20.39	20.51	20.84
			14	21.00	20.36	20.51	20.91
		8	0	20.00	19.46	19.41	19.88
			4	20.00	19.45	19.43	19.86
			7	20.00	19.40	19.42	19.91
		15	0	20.00	19.38	19.45	19.88
	16QAM	1	0	20.00	19.49	19.30	19.89
			8	20.00	19.41	19.27	19.90
			14	20.00	19.40	19.32	19.99
		8	0	19.00	18.51	18.45	18.88
			4	19.00	18.50	18.49	18.90
			7	19.00	18.50	18.46	18.94
		15	0	19.00	18.48	18.45	18.87
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
5MHz	QPSK	1	0	21.00	20.29	20.21	20.59
			12	21.00	20.38	20.38	20.80
			24	21.00	20.23	20.30	20.81
		12	0	20.00	19.34	19.34	19.80
			6	20.00	19.31	19.38	19.77
			13	20.00	19.22	19.28	19.77
		25	0	20.00	19.30	19.34	19.78
	16QAM	1	0	20.00	19.24	19.27	19.53
			12	20.00	19.32	19.46	19.77
			24	20.00	19.14	19.38	19.72
		12	0	19.00	18.34	18.44	18.67
			6	19.00	18.33	18.43	18.75
			13	19.00	18.28	18.42	18.70
		25	0	19.00	18.35	18.41	18.78

LTE-FDD Band 2				Maximum Tune-up(dBm)	Conducted Power(dBm)					
Bandwidth	Modulation	RB allocation	RB offset		18650	18900	19150			
					1855.0MHz	1880.0MHz	1905.0MHz			
10MHz	QPSK	1	0	20.50	20.32	20.27	20.43			
			24	21.00	20.41	20.56	20.91			
			49	21.00	20.13	20.40	20.80			
		25	0	20.00	19.39	19.50	19.89			
			12	20.00	19.40	19.49	19.89			
			25	20.00	19.42	19.42	19.63			
		50	0	20.00	19.42	19.52	19.83			
			16QAM	1	0	19.50	19.35	19.11	19.46	
					24	20.00	19.44	19.40	19.79	
	49	20.00			19.17	19.24	19.85			
	25	0		19.00	18.43	18.65	18.86			
		12		19.00	18.45	18.61	18.86			
		25		19.00	18.47	18.49	18.62			
	50	0		19.00	18.46	18.60	18.84			
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18675	18900	19125
								1857.5MHz	1880.0MHz	1902.5MHz
	15MHz	QPSK	1	0	20.50	20.18	19.97	20.44		
				38	21.00	20.23	20.27	20.57		
74				21.00	19.96	20.19	20.66			
36			0	20.00	19.24	19.43	19.58			
			18	20.00	19.24	19.43	19.56			
			37	20.00	19.26	19.44	19.53			
75			0	20.00	19.23	19.45	19.51			
			16QAM	1	0	19.50	19.17	19.15	19.18	
					38	19.50	19.25	19.44	19.34	
74		19.50			18.95	19.32	19.41			
36		0		20.00	19.22	19.44	19.54			
		18		20.00	19.25	19.46	19.56			
		37		20.00	19.27	19.47	19.54			
75		0		19.00	18.21	18.47	18.54			
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18700	18900	19100
								1860.0MHz	1880.0MHz	1900.0MHz
20MHz		QPSK	1	0	20.50	20.01	19.92	20.36		
				49	21.00	20.15	20.50	20.57		
	99			21.00	19.82	20.19	20.54			
	50		0	20.00	19.01	19.60	19.26			
			25	20.00	19.10	19.58	19.27			
			50	19.50	19.28	19.41	19.11			
	100		0	19.50	19.13	19.47	19.24			
			16QAM	1	0	19.50	18.90	19.04	19.24	
					49	20.00	19.15	19.68	19.43	
	99	19.50			18.65	19.30	19.39			
	50	0		19.00	18.12	18.65	18.35			
		25		19.00	18.14	18.67	18.35			
		50		18.50	18.38	18.45	18.14			
	100	0		19.00	18.24	18.56	18.18			

Band 4

LTE-FDD Band 4				Maximum Tune-up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		19957	20175	20393	
					1710.7MHz	1732.5MHz	1754.3MHz	
1.4MHz	QPSK	1	0	20.50	19.92	20.08	19.94	
			2	20.50	20.13	20.22	20.02	
			5	20.50	19.95	20.11	19.86	
		3	0	20.50	20.09	20.11	20.06	
			1	20.50	20.10	20.03	20.06	
			3	20.50	20.07	20.16	20.06	
		6	0	19.50	19.00	19.08	18.98	
		16QAM	1	0	19.00	18.87	18.95	18.83
				2	19.50	19.06	18.94	19.02
	5			19.00	18.95	18.82	18.81	
	3		0	19.00	18.88	18.92	18.80	
			1	19.00	18.86	18.88	18.84	
			3	19.50	18.84	19.00	18.85	
	6	0	18.50	18.05	18.05	18.02		
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19965	20175	20385
1711.5MHz						1732.5MHz	1753.5MHz	
3MHz	QPSK	1	0	20.50	20.14	20.04	20.06	
			8	20.50	20.12	20.07	20.06	
			14	20.50	20.10	20.06	20.07	
		8	0	19.50	19.11	18.94	19.05	
			4	19.50	19.07	19.11	19.02	
			7	19.50	19.06	19.12	18.98	
		15	0	19.50	19.08	19.17	19.02	
		16QAM	1	0	19.50	19.09	19.03	18.76
				8	19.50	19.15	18.93	18.86
	14			19.50	19.14	18.91	18.75	
	8		0	18.50	18.20	18.13	18.09	
			4	18.50	18.19	18.21	18.08	
			7	18.50	18.15	18.13	18.04	
	15	0	18.50	18.19	18.10	18.03		
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19975	20175	20375
1712.5MHz						1732.5MHz	1752.5MHz	
5MHz	QPSK	1	0	20.50	20.09	20.14	19.99	
			12	20.50	20.23	20.24	20.13	
			24	20.50	20.12	20.05	20.07	
		12	0	19.50	19.10	19.25	18.98	
			6	19.50	19.07	19.22	19.01	
			13	19.50	19.09	19.18	18.99	
		25	0	19.50	19.10	19.18	19.06	
		16QAM	1	0	19.50	18.97	19.25	18.93
				12	19.50	19.16	19.30	19.04
	24			19.50	19.03	19.16	18.94	
	12		0	18.50	18.10	18.25	18.05	
			6	18.50	18.09	18.34	18.05	
			13	18.50	18.09	18.30	18.05	
	25	0	18.50	18.19	18.23	18.10		

LTE-FDD Band 4				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
10MHz	QPSK	1	0	19.50	19.11	19.27	19.07
			24	20.00	19.41	19.50	19.19
			49	19.50	19.27	19.12	19.08
		25	0	18.50	18.24	18.30	18.15
			12	18.50	18.25	18.29	18.17
			25	18.50	18.32	18.27	18.11
		50	0	18.50	18.22	18.24	18.10
	16QAM	1	0	18.50	18.19	18.15	17.80
			24	18.50	18.41	18.22	17.98
			49	18.50	18.30	18.04	17.85
		25	0	17.50	17.29	17.38	17.28
			12	17.50	17.28	17.41	17.25
			25	17.50	17.37	17.38	17.21
		50	0	17.50	17.31	17.40	17.22
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
15MHz	QPSK	1	0	19.50	19.00	19.13	18.97
			38	19.50	19.24	19.25	19.08
			74	19.50	19.18	18.84	18.88
		38	0	18.50	18.16	18.23	18.05
			18	18.50	18.22	18.23	18.01
			37	18.50	18.22	18.25	18.03
		75	0	18.50	18.26	18.25	18.02
	16QAM	1	0	18.50	18.06	18.28	17.96
			38	18.50	18.27	18.35	18.10
			74	18.50	18.21	18.06	17.89
		38	0	18.50	18.24	18.24	18.04
			18	18.50	18.23	18.24	18.03
			37	18.50	18.26	18.22	18.02
		75	0	17.50	17.28	17.29	17.08
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
20MHz	QPSK	1	0	19.50	18.76	19.06	18.89
			49	19.50	19.35	19.37	19.05
			99	19.50	19.00	18.76	18.77
		50	0	18.50	18.13	18.20	18.06
			25	18.50	18.13	18.16	18.05
			50	18.50	18.29	18.12	17.92
		100	0	18.50	18.20	18.14	18.00
	16QAM	1	0	18.50	17.71	18.20	17.70
			49	19.00	18.24	18.50	17.92
			99	18.00	17.91	17.95	17.58
		50	0	17.50	17.18	17.33	17.20
			25	17.50	17.16	17.30	17.18
			50	17.50	17.34	17.25	17.11
		100	0	17.50	17.27	17.21	17.02

Band 5

LTE-FDD Band 5				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20407	20525	20643
					824.7MHz	836.5MHz	848.3MHz
1.4MHz	QPSK	1	0	18.00	17.51	17.39	17.51
			2	18.00	17.59	17.53	17.75
			5	18.00	17.40	17.34	17.51
		3	0	18.00	17.56	17.40	17.61
			1	18.00	17.54	17.36	17.61
			3	18.00	17.48	17.43	17.63
		6	0	17.00	16.49	16.36	16.60
	16QAM	1	0	16.50	16.36	16.19	16.26
			2	17.00	16.56	16.27	16.41
			5	16.50	16.32	16.12	16.25
		3	0	16.50	16.35	16.21	16.34
			1	16.50	16.35	16.19	16.32
			3	16.50	16.27	16.19	16.33
		6	0	16.00	15.51	15.23	15.50
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
3MHz	QPSK	1	0	18.00	17.55	17.42	17.60
			8	18.00	17.47	17.39	17.58
			14	18.00	17.47	17.41	17.62
		8	0	17.00	16.46	16.36	16.60
			4	17.00	16.46	16.37	16.60
			7	17.00	16.45	16.33	16.58
		15	0	17.00	16.45	16.36	16.56
	16QAM	1	0	16.50	16.47	16.20	16.29
			8	16.50	16.42	16.16	16.39
			14	16.50	16.46	16.17	16.36
		8	0	16.00	15.52	15.31	15.57
			4	16.00	15.55	15.35	15.58
			7	16.00	15.50	15.37	15.59
		15	0	16.00	15.51	15.28	15.46

LTE-FDD Band 5				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20425	20525	20625
					826.5MHz	836.5MHz	846.5MHz
5MHz	QPSK	1	0	17.50	17.41	17.15	17.34
			12	18.00	17.49	17.31	17.52
			24	17.50	17.33	17.18	17.49
		12	0	16.50	16.31	16.24	16.43
			6	16.50	16.31	16.20	16.40
			13	16.50	16.31	16.18	16.40
		25	0	16.50	16.31	16.27	16.45
	16QAM	1	0	16.50	16.30	16.24	16.22
			12	16.50	16.39	16.36	16.45
			24	16.50	16.24	16.22	16.32
		12	0	15.50	15.31	15.29	15.41
			6	15.50	15.34	15.28	15.45
			13	15.50	15.29	15.23	15.39
		25	0	15.50	15.35	15.27	15.48

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20450	20525	20600
					829.0MHz	836.5MHz	844.0MHz
10MHz	QPSK	1	0	17.50	17.36	17.31	17.28
			25	17.50	17.48	17.40	17.46
			49	17.50	17.24	17.30	17.47
		25	0	16.50	16.37	16.36	16.44
			13	16.50	16.42	16.27	16.42
			25	16.50	16.29	16.34	16.46
		50	0	16.50	16.34	16.29	16.43
			0	16.50	16.37	16.10	15.99
			25	16.50	16.48	16.20	16.28
	16QAM	1	49	16.50	16.19	16.12	16.19
		25	0	16.00	15.44	15.38	15.52
			13	16.00	15.44	15.36	15.51
			25	15.50	15.31	15.37	15.48
		50	0	16.00	15.38	15.38	15.50

Band 12

LTE-FDD Band 12				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23017	23095	23173
					699.7MHz	707.5MHz	715.3MHz
1.4MHz	QPSK	1	0	18.00	17.87	17.96	17.52
			2	18.50	18.03	18.09	17.67
			5	18.00	17.85	17.95	17.59
		3	0	18.00	17.95	17.81	17.63
			1	18.00	17.93	17.81	17.61
			3	18.00	17.92	17.80	17.60
		6	0	17.50	17.01	17.01	16.71
	16QAM	1	0	17.00	16.80	16.62	16.34
			2	17.00	16.96	16.75	16.45
			5	17.00	16.74	16.58	16.31
		3	0	17.00	16.75	16.60	16.36
			1	17.00	16.74	16.63	16.37
			3	17.00	16.74	16.57	16.33
		6	0	16.00	15.95	15.72	15.57
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
3MHz	QPSK	1	0	18.50	17.99	18.13	17.79
			8	18.50	17.94	18.15	17.71
			14	18.50	17.95	18.02	17.74
		8	0	17.50	17.07	17.06	16.89
			4	17.50	17.01	17.05	16.90
			7	17.50	17.08	17.02	16.83
		15	0	17.00	16.99	16.98	16.74
	16QAM	1	0	17.50	17.03	16.80	16.55
			8	17.50	17.00	16.69	16.52
			14	17.50	17.00	16.70	16.51
		8	0	16.50	16.05	15.95	15.79
			4	16.50	16.06	15.90	15.82
			7	16.50	16.00	15.90	15.70
		15	0	16.50	16.01	15.80	15.62

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
5MHz	QPSK	1	0	18.00	17.84	17.77	17.63
			12	18.00	17.95	17.93	17.75
			24	18.00	17.87	17.74	17.66
		12	0	17.00	16.93	16.87	16.69
			6	17.00	16.92	16.84	16.68
			13	17.00	16.83	16.87	16.47
	16QAM	25	0	17.00	16.88	16.83	16.60
			0	17.00	16.76	16.77	16.48
			12	17.00	16.94	16.85	16.58
		1	24	17.00	16.78	16.72	16.47
			0	16.00	15.83	15.79	15.67
			6	16.00	15.86	15.75	15.64
		12	13	16.00	15.75	15.79	15.44
			0	16.00	15.91	15.73	15.61
			0	16.00			
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23060	23095	23130
					704.0MHz	707.5MHz	711.0MHz
10MHz	QPSK	1	0	18.00	17.80	17.86	17.82
			24	18.50	18.04	18.10	17.80
			49	18.00	17.84	17.76	17.61
		25	0	17.50	17.04	16.98	16.72
			12	17.50	17.06	16.93	16.71
			25	17.00	16.90	16.98	16.64
	16QAM	50	0	17.00	16.99	16.91	16.71
			0	17.00	16.85	16.63	16.53
			24	17.00	16.97	16.88	16.68
		1	49	17.00	16.77	16.51	16.42
			0	16.00	15.99	15.93	15.68
			12	16.50	16.03	15.92	15.69
		25	25	16.00	15.82	15.95	15.65
			0	16.00	15.92	15.90	15.65
			0	16.00			

Band 13

LTE-FDD Band 13				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23205	23230	23255
5MHz	QPSK	1	0	17.50	17.40	17.30	17.26
			12	17.50	17.43	17.39	17.34
			24	17.50	17.32	17.28	17.27
		12	0	16.50	16.25	16.17	16.37
			6	16.50	16.19	16.19	16.39
			13	16.50	16.41	16.22	16.22
	16QAM	25	0	16.50	16.34	16.22	16.38
			0	16.50	16.28	16.26	16.15
			12	16.50	16.33	16.43	16.25
		1	24	16.50	16.23	16.32	16.16
			0	15.50	15.21	15.25	15.48
			6	16.00	15.23	15.26	15.50
		12	13	15.50	15.47	15.39	15.33
			0	15.50	15.41	15.23	15.49
			0	15.50			

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23230
					782.0MHz
10MHz	QPSK	1	0	17.50	17.34
			24	17.50	17.44
			49	17.50	17.32
		25	0	16.50	16.12
			12	16.50	16.11
			25	16.50	16.23
		50	0	16.50	16.16
	16QAM	1	0	16.50	16.32
			24	16.50	16.44
			49	16.50	16.31
		25	0	15.50	15.12
			12	15.50	15.13
			25	15.50	15.22
		50	0	15.50	15.22

Band 17

LTE-FDD Band 17				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23755	23790	23825
					706.5MHz	710MHz	713.5MHz
5MHz	QPSK	1	0	18.00	17.83	17.74	17.63
			12	18.50	18.02	17.78	17.71
			24	18.00	17.81	17.59	17.66
		12	0	17.00	16.86	16.69	16.63
			6	17.00	16.82	16.65	16.70
			13	17.00	16.85	16.71	16.53
		25	0	17.00	16.83	16.73	16.59
	16QAM	1	0	17.00	16.76	16.69	16.48
			12	17.00	16.82	16.80	16.60
			24	17.00	16.66	16.65	16.42
		12	0	16.00	15.71	15.58	15.61
			6	16.00	15.73	15.63	15.60
			13	16.00	15.75	15.75	15.48
		25	0	16.00	15.75	15.67	15.64
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23780	23790	23800
					709MHz	710MHz	711MHz
10MHz	QPSK	1	0	18.00	17.79	17.87	17.81
			24	18.00	17.93	17.96	17.87
			49	18.00	17.66	17.73	17.67
		25	0	17.00	16.82	16.73	16.65
			12	17.00	16.84	16.76	16.70
			25	17.00	16.84	16.77	16.61
		50	0	17.00	16.85	16.71	16.68
	16QAM	1	0	17.00	16.81	16.54	16.53
			24	17.00	16.94	16.64	16.59
			49	17.00	16.67	16.46	16.40
		25	0	16.00	15.73	15.71	15.65
			12	16.00	15.74	15.71	15.67
			25	16.00	15.79	15.76	15.64
		50	0	16.00	15.79	15.74	15.66

Band 38

LTE-TDD Band 38				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		37775 2572.5MHz	38000 2595.0MHz	38225 2617.5MHz
5MHz	QPSK	1	0	17.50	16.73	16.89	17.24
			12	17.50	16.84	17.08	17.39
			24	17.50	16.73	17.00	17.33
		12	0	16.50	15.84	15.93	16.27
			6	16.50	15.80	15.92	16.28
			13	16.50	15.79	15.95	16.27
			25	16.50	15.79	15.96	16.23
		16QAM	1	0	16.50	16.07	15.87
				12	17.00	16.18	15.99
				24	16.50	16.09	15.92
			12	0	15.50	14.86	14.88
				6	15.50	14.86	14.90
				13	15.50	14.85	14.89
			25	15.50	14.85	14.93	15.27
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37800 2575.00MHz	38000 2595.00MHz	38200 2615.00MHz
10MHz	QPSK	1	0	17.50	16.59	16.77	17.12
			24	18.00	16.94	17.10	17.50
			49	17.50	16.66	16.97	17.25
		25	0	16.50	15.74	15.83	16.23
			12	16.50	15.79	15.83	16.19
			25	16.50	15.61	15.85	16.19
		50	0	16.50	15.73	15.88	16.16
	16QAM	1	0	16.00	15.81	15.31	15.95
			24	16.50	16.09	15.71	16.30
			49	16.50	15.82	15.51	16.06
		25	0	15.50	14.85	14.83	15.19
			12	15.50	14.88	14.87	15.18
			25	15.50	14.74	14.86	15.19
		50	0	15.50	14.82	14.90	15.18

LTE-TDD Band 38				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		37825 2577.5MHz	38000 2595.0MHz	38175 2612.5MHz
15MHz	QPSK	1	0	17.00	16.46	16.61	16.81
			38	17.50	16.63	16.93	17.19
			74	17.50	16.52	16.96	17.03
		38	0	16.50	15.62	15.89	16.19
			18	16.50	15.62	15.88	16.20
			37	16.50	15.61	15.86	16.21
		75	0	16.50	15.65	15.90	16.19
	16QAM	1	0	16.00	15.64	15.34	15.77
			38	16.50	15.79	15.61	16.03
			74	16.00	15.67	15.57	15.89
		38	0	16.50	15.62	15.89	16.23
			18	16.50	15.65	15.85	16.21
			37	16.50	15.61	15.86	16.21
		75	0	15.50	14.65	14.82	15.14

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37850	38000	38150
					2580.0MHz	2595.0MHz	2610.0MHz
20MHz	QPSK	1	0	17.00	16.29	16.28	16.72
			49	17.50	16.74	16.90	17.36
			99	17.50	16.46	16.67	17.04
		50	0	16.00	15.69	15.78	15.98
			25	16.00	15.68	15.76	15.96
			50	16.00	15.56	15.82	15.98
		100	0	16.50	15.60	15.78	16.04
	16QAM	1	0	17.00	16.29	16.28	16.72
			49	17.50	16.74	16.90	17.36
			99	17.50	16.46	16.67	17.04
		50	0	16.00	15.69	15.78	15.98
			25	16.00	15.68	15.76	15.96
			50	16.00	15.56	15.82	15.98
		100	0	16.50	15.60	15.78	16.04

Band 40a

LTE-TDD Band 40				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		38725	38775	38825
					2307.5MHz	2312.5MHz	2317.5MHz
5MHz	QPSK	1	0	19.50	19.43	19.42	19.46
			12	20.00	19.56	19.54	19.63
			24	19.50	19.48	19.44	19.46
		12	0	19.00	18.51	18.47	18.53
			6	19.00	18.52	18.49	18.55
			13	19.00	18.52	18.52	18.52
		25	0	19.00	18.51	18.58	18.52
	16QAM	1	0	19.00	18.81	18.56	18.52
			12	19.00	18.88	18.68	18.61
			24	19.00	18.80	18.56	18.51
		12	0	18.00	17.49	17.57	17.51
			6	18.00	17.50	17.57	17.49
			13	18.00	17.51	17.60	17.49
		25	0	18.00	17.55	17.59	17.54
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	38750	38775	38800
					2310.0MHz	2312.5MHz	2315.0Hz
10MHz	QPSK	1	0	20.00	19.57	19.58	19.56
			24	20.00	19.86	19.91	19.91
			49	20.00	19.67	19.67	19.61
		25	0	19.00	18.65	18.69	18.68
			12	19.00	18.62	18.71	18.71
			25	19.00	18.75	18.70	18.67
		50	0	19.00	18.66	18.70	18.67
	16QAM	1	0	19.00	18.23	18.50	18.79
			24	19.50	18.52	18.83	19.06
			49	19.00	18.32	18.62	18.79
		25	0	18.00	17.67	17.73	17.78
			12	18.00	17.70	17.73	17.81
			25	18.00	17.75	17.77	17.80
		50	0	18.00	17.74	17.74	17.76

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	38775
					2312.5MHz
15MHz	QPSK	1	0	19.50	19.24
			24	19.50	19.44
			49	19.50	19.30
		25	0	18.50	18.42
			12	18.50	18.39
			25	18.50	18.41
		50	0	18.50	18.45
	16QAM	1	0	19.50	19.24
			24	19.50	19.44
			49	19.50	19.30
		25	0	18.50	18.42
			12	18.50	18.39
			25	18.50	18.41
		50	0	18.50	18.45

Band 40b

LTE-TDD Band 40				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		39125	39175	39225
					2347.5MHz	2352.5MHz	2357.5MHz
5MHz	QPSK	1	0	20.50	20.04	20.03	20.14
			12	20.50	20.26	20.16	20.24
			24	20.50	20.34	20.10	20.11
		12	0	19.50	19.33	19.14	19.21
			6	19.50	19.12	19.19	19.22
			13	19.50	19.13	19.16	19.18
		25	0	19.50	19.14	19.17	19.26
	16QAM	1	0	19.50	19.42	19.15	19.45
			12	20.00	19.54	19.33	19.61
			24	20.00	19.71	19.24	19.48
		12	0	18.50	18.37	18.17	18.18
			6	18.50	18.08	18.20	18.17
			13	18.50	18.09	18.23	18.20
		25	0	18.50	18.16	18.21	18.23
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39150	39175	39200
					2350.0MHz	2352.5MHz	2355.0MHz
10MHz	QPSK	1	0	8.50	7.88	8.02	7.95
			25	8.50	8.25	8.09	8.07
			49	8.00	7.79	7.89	7.79
		25	0	7.50	7.03	7.06	6.90
			13	7.50	7.04	7.04	6.88
			25	7.00	6.94	6.95	6.94
		50	0	7.50	7.01	7.03	6.88
	16QAM	1	0	7.50	6.54	6.95	7.14
			25	7.50	6.87	7.02	7.27
			49	7.00	6.41	6.81	6.99
		25	0	6.50	5.99	6.01	5.95
			13	6.50	6.01	6.01	6.00
			25	6.50	5.94	5.96	6.02
		50	0	6.50	5.99	6.03	5.91

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39175
					2352.5MHz
15MHz	QPSK	1	0	20.00	19.67
			24	20.00	19.67
			49	19.50	19.39
		25	0	19.00	18.69
			12	19.00	18.69
			25	19.00	18.68
	16QAM	50	0	19.00	18.70
			0	19.00	18.88
			24	19.00	18.85
		1	49	19.00	18.57
			0	19.00	18.70
			12	19.00	18.70
		25	25	19.00	18.70
			0	18.00	17.69

Band 41

LTE-TDD Band 41				Maximum Tune-up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		39675	40620	41565	
					2498.5MHz	2593.0MHz	2687.5MHz	
5MHz	QPSK	1	0	17.00	16.96	15.64	16.37	
			13	17.50	17.13	15.79	16.50	
			24	17.50	17.04	15.67	16.42	
		12	0	16.50	16.13	14.81	15.57	
			6	16.50	16.16	14.79	15.55	
			13	16.50	16.15	14.77	15.49	
		25	0	16.50	16.18	14.80	15.51	
		16QAM	1	0	16.50	16.44	14.80	15.78
				13	17.00	16.58	14.97	15.89
	24			16.50	16.45	14.83	15.81	
	12		0	15.50	15.14	13.89	14.55	
			6	15.50	15.13	13.89	14.55	
			13	15.50	15.18	13.89	14.45	
	25		0	15.50	15.21	13.87	14.55	
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39700	40620	41540	
					2501.0MHz	2593.0MHz	2685.0MHz	
10MHz	QPSK	1	0	17.50	17.06	15.70	16.44	
			25	17.50	17.34	15.97	16.66	
			49	17.50	17.17	15.78	16.47	
		25	0	16.50	16.23	14.86	15.67	
			13	16.50	16.23	14.86	15.67	
			25	16.50	16.25	14.80	15.49	
		50	0	16.50	16.29	14.85	15.63	
		16QAM	1	0	16.50	16.32	14.39	15.69
				25	17.00	16.57	14.68	15.95
	49			16.50	16.40	14.45	15.73	
	25		0	15.50	15.34	13.92	14.76	
			13	15.50	15.36	13.91	14.74	
			25	15.50	15.36	13.88	14.56	
	50		0	15.50	15.33	13.95	14.65	

LTE-TDD Band 41				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		39725	40620	41515
					2503.5MHz	2593.0MHz	2682.5MHz
15MHz	QPSK	1	0	17.00	16.93	15.61	16.43
			38	17.50	17.16	15.82	16.58
			74	17.50	17.07	15.76	16.40
		36	0	16.50	16.20	14.72	15.60
			18	16.50	16.18	14.71	15.62
			39	16.50	16.18	14.71	15.58
		75	0	16.50	16.20	14.70	15.60
	16QAM	1	0	16.50	16.16	14.41	15.67
			38	16.50	16.40	14.63	15.84
			74	16.50	16.27	14.56	15.68
		36	0	16.50	16.18	14.71	15.61
			18	16.50	16.18	14.71	15.60
			39	16.50	16.19	14.72	15.61
		75	0	15.50	15.22	13.82	14.60
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39750	40620	41490
					2506.0MHz	2593.0MHz	2680.0MHz
20MHz	QPSK	1	0	17.00	16.84	15.39	16.41
			50	17.50	17.33	15.83	16.70
			99	17.50	17.02	15.58	16.32
		50	0	16.50	16.24	14.86	15.79
			25	16.50	16.28	14.87	15.79
			50	16.50	16.39	14.78	15.47
		100	0	16.50	16.32	14.85	15.66
	16QAM	1	0	16.00	15.91	14.00	15.44
			50	16.50	16.40	14.39	15.78
			99	16.50	16.06	14.16	15.43
		50	0	15.50	15.32	14.00	14.85
			25	15.50	15.33	14.02	14.86
			50	15.50	15.44	13.91	14.51
		100	0	15.50	15.38	13.95	14.66

8.4 Wi-Fi

2.4G

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
2.4g Wifi (2.4~2.4835)	802.11b	1	2412	15.46	15.50	No
		6	2437	15.59	16.00	Yes
		11	2462	14.83	15.00	No
	802.11g	1	2412	11.55	12.00	No
		6	2437	12.93	13.00	No
		11	2462	11.15	11.50	No
	802.11n(HT20)	1	2412	11.50	12.00	No
		6	2437	11.65	12.00	No
		11	2462	11.06	11.50	No
	802.11n(HT40)	3	2422	10.79	11.00	No
		6	2437	10.86	11.00	No
		9	2452	9.62	10.00	No

Note: SAR is not required for the following 2.4 GHz OFDM conditions as the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is $\leq 1.2\text{W/kg}$.

5G

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-1 (5.150~5.250)	802.11a	36	5180	15.89	16.00	Yes
		40	5200	13.93	14.00	No
		48	5240	14.17	14.50	No
	802.11n(HT20)	36	5180	13.25	13.50	No
		40	5200	13.13	13.50	No
		48	5240	13.70	14.00	No
	802.11ac(VHT20)	36	5180	13.40	13.50	No
		40	5200	13.18	13.50	No
		48	5240	13.78	14.00	No
	802.11n(HT40)	38	5190	13.08	13.50	No
		46	5230	14.10	14.50	No
	802.11ac(VHT40)	38	5190	12.84	13.00	No
		46	5230	13.40	13.50	No
	802.11ac(VHT80)	42	5210	11.88	12.00	No
Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-2a (5.250~5.350)	802.11a	52	5260	14.12	14.50	Yes
		56	5280	13.80	14.00	No
		64	5320	13.69	14.00	No
	802.11n(HT20)	52	5260	13.38	13.50	No
		56	5280	13.81	14.00	No
		64	5320	13.56	14.00	No
	802.11ac(VHT20)	52	5260	13.57	14.00	No
		56	5280	11.93	12.00	No
		64	5320	11.30	11.50	No
	802.11n(HT40)	54	5270	13.86	14.00	No
		62	5310	13.18	13.50	No
	802.11ac(VHT40)	54	5270	13.01	13.50	No
		62	5310	12.39	12.50	No
	802.11ac(VHT80)	58	5290	10.35	10.50	No
Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-2c (5.470~5.725)	802.11a	100	5500	13.62	14.00	Yes
		116	5580	13.05	13.50	No
		140	5700	12.25	12.50	No
	802.11n(HT20)	100	5500	13.58	14.00	No
		120	5580	12.86	13.00	No
		140	5700	12.04	12.50	No
	802.11ac(VHT20)	100	5500	11.63	12.00	No
		116	5580	12.15	12.50	No
		140	5700	11.34	11.50	No
	802.11n(HT40)	102	5510	13.31	13.50	No
		118	5550	13.09	13.50	No
		134	5670	11.66	12.00	No
	802.11ac(VHT40)	102	5510	12.47	12.50	No
		118	5550	12.30	12.50	No
		134	5670	11.26	11.50	No
	802.11ac(VHT80)	106	5530	10.88	11.00	No
		122	5610	11.70	12.00	No

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-3 (5.725~5.850)	802.11a	149	5745	11.79	12.00	No
		157	5785	12.13	12.50	No
		165	5825	12.57	13.00	Yes
	802.11n(HT20)	149	5745	10.93	11.00	No
		157	5785	11.37	11.50	No
		165	5825	11.84	12.00	No
	802.11ac(VHT20)	149	5745	10.76	11.00	No
		157	5785	10.96	11.00	No
		165	5825	11.19	11.50	No
	802.11n(HT40)	151	5755	11.03	11.50	No
		159	5795	11.42	11.50	No
	802.11ac(VHT40)	151	5755	10.80	11.00	No
		159	5795	11.01	11.50	No
	802.11ac(VHT80)	155	5775	10.71	11.00	No

8.5 Bluetooth

EDR	Mode	Maximum Tune-up(dBm)	Conducted Peak Power (dBm)		
			0	39	78
			2402MHz	2441MHz	2480MHz
	GFSK	4.50	3.22	4.30	3.44
	π/4QPSK	3.50	2.02	3.35	2.56
8DPSK	3.50	2.29	3.21	2.61	
BLE	Mode	Maximum Tune-up(dBm)	Conducted Peak Power (dBm)		
			0	20	39
			2402MHz	2440MHz	2480MHz
	1Mbps	2.00	0.52	1.93	1.19

Note

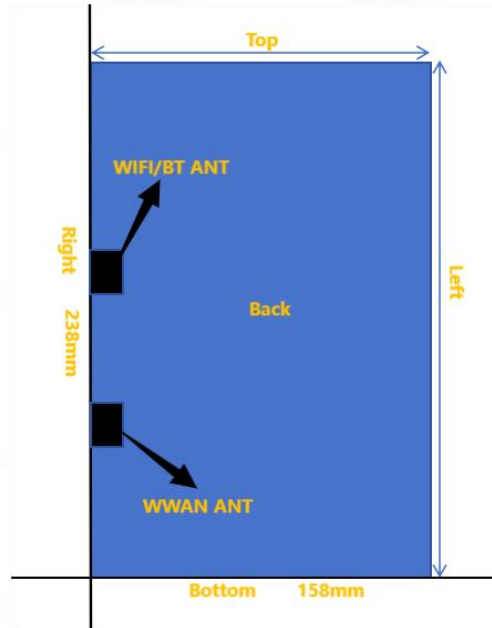
- Per KDB 447498 D01 General RF Exposure Guidance v06, the 1-g SAR test exclusion thresholds for 300 MHz to 6 GHz at *test separation distances* ≤ 40 cm are determined by:

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test Exclusion Threshold (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

*When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine estimated SAR. .
The output power of all data rate were prescan, just the worst case (the lowest data rate) of all mode were shown in report.

9. Test Exclusion Consideration

Antenna information:



WWAN Main Antenna	GSM/WCDMA/LTE TX/RX
WLAN/BT Antenna	WLAN/BT TX/RX
Note: 1. KDB 447498 D01v06, particular DUT edges were not required to be evaluated for SAR if the antenna-to-edge distance is greater than 2.5cm. 2. Per KDB648474 D04, 10-g extremity SAR is not required when Body-Worn mode 1-g reported SAR<1.2W/Kg. 3. KDB 616217 D04 SAR for laptop and tablets v01r02, it doesn't require SAR evaluation for the front surface of a tablet.	

Distance of The Antenna to the EUT surface and edge (mm)						
Antenna	Front Side (mm)	Back Side (mm)	Left Edge (mm)	Right Edge (mm)	Top Edge (mm)	Bottom Edge (mm)
WWAN	<25	<25	152	<25	181	53
BT/Wifi	<25	<25	152	<25	96	142
Positions for SAR tests: Hotspot mode						
Antenna	Front Side (mm)	Back Side (mm)	Left Edge (mm)	Right Edge (mm)	Top Edge (mm)	Bottom Edge (mm)
WWAN	No	Yes	No	Yes	No	No
BT/Wifi	No	Yes	No	Yes	No	No

9.1 SAR Test Exclusion Consideration Table

Per KDB 447498 requires when the standalone SAR test exclusion of section 4.3.1 is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following format to determine simultaneous transmission SAR test exclusion:

$$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x]$$

W/kg for test separation distances ≤ 50 mm;

where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.

0.4 W/Kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is > 50 mm

10. Test Result

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
GPRS 850+4slots	Back	190	836.6	0.650	0.249	100.00	1.000	30.47	30.50	1.007	0.251	1#
	Right	190	836.6	-2.840	0.202	100.00	1.000	30.47	30.50	1.007	0.203	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
GPRS 1900+4slots	Back	512	1850.2	-1.080	0.476	100.00	1.000	25.50	26.00	1.122	0.534	2#
	Right	512	1850.2	3.320	0.415	100.00	1.000	25.50	26.00	1.122	0.466	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
WCDMA Band 2 (RMC*)	Back	9262	1852.4	-0.700	0.712	100.00	1.000	19.55	20.00	1.109	0.790	3#
	Right	9262	1852.4	-1.620	0.645	100.00	1.000	19.55	20.00	1.109	0.715	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
WCDMA Band 5 (RMC*)	Back	4233	846.6	0.690	0.072	100.00	1.000	21.44	21.50	1.014	0.073	4#
	Right	4233	846.6	-1.360	0.061	100.00	1.000	21.44	21.50	1.014	0.062	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 2 (BW: 20MHz)	1RB	Back	19100	1900.0	2.330	0.423	100.00	1.000	20.57	21.00	1.104	0.467	5#
		Right	19100	1900.0	1.680	0.385	100.00	1.000	20.57	21.00	1.104	0.425	/
	50%RB	Back	19100	1900.0	-4.060	0.401	100.00	1.000	19.27	19.50	1.054	0.423	/
		Right	19100	1900.0	2.360	0.362	100.00	1.000	19.27	19.50	1.054	0.382	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 4 (BW: 20MHz)	1RB	Back	20175	1732.5	-3.470	0.557	100.00	1.000	19.37	19.50	1.030	0.574	6#
		Right	20175	1732.5	1.540	0.511	100.00	1.000	19.37	19.50	1.030	0.526	/
	50%RB	Back	20175	1732.5	0.950	0.520	100.00	1.000	18.20	18.50	1.072	0.557	/
		Right	20175	1732.5	-0.660	0.486	100.00	1.000	18.20	18.50	1.072	0.521	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 5 (BW: 10MHz)	1RB	Back	20450	829.0	-0.010	0.714	100.00	1.000	17.48	17.50	1.005	0.718	7#
		Right	20450	829.0	1.620	0.667	100.00	1.000	17.48	17.50	1.005	0.670	/
	50%RB	Back	20450	829.0	2.310	0.674	100.00	1.000	16.42	16.50	1.019	0.687	/
		Right	20450	829.0	4.820	0.623	100.00	1.000	16.42	16.50	1.019	0.635	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 12 (BW: 10MHz)	1RB	Back	23095	707.5	-0.960	0.482	100.00	1.000	18.10	18.50	1.096	0.528	8#
		Right	23095	707.5	1.490	0.425	100.00	1.000	18.10	18.50	1.096	0.466	/
	50%RB	Back	23095	707.5	-2.750	0.434	100.00	1.000	16.98	17.00	1.005	0.436	/
		Right	23095	707.5	3.640	0.378	100.00	1.000	16.98	17.00	1.005	0.380	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 13 (BW: 10MHz)	1RB	Back	23230	782.0	-1.240	0.587	100.00	1.000	17.44	17.50	1.014	0.595	9#
		Right	23230	782.0	2.480	0.532	100.00	1.000	17.44	17.50	1.014	0.539	/
	50%RB	Back	23230	782.0	-3.260	0.544	100.00	1.000	16.23	16.50	1.064	0.579	/
		Right	23230	782.0	-1.380	0.501	100.00	1.000	16.23	16.50	1.064	0.533	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 17 (BW: 10MHz)	1RB	Back	23800	711.0	2.600	0.463	100.00	1.000	17.96	18.00	1.009	0.467	10#
		Right	23800	711.0	2.080	0.423	100.00	1.000	17.96	18.00	1.009	0.427	/
	50%RB	Back	23800	711.0	-1.900	0.430	100.00	1.000	16.77	17.00	1.054	0.453	/
		Right	23800	711.0	0.080	0.392	100.00	1.000	16.77	17.00	1.054	0.413	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 38 (BW: 20MHz)	1RB	Back	38150	2610.0	-3.110	0.403	100.00	1.000	17.36	17.50	1.033	0.416	11#
		Right	38150	2610.0	-1.460	0.356	100.00	1.000	17.36	17.50	1.033	0.368	/
	50%RB	Back	38150	2610.0	2.330	0.350	100.00	1.000	15.98	16.00	1.005	0.352	/
		Right	38150	2610.0	-0.810	0.301	100.00	1.000	15.98	16.00	1.005	0.303	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 40a (BW: 15MHz)	1RB	Back	38775	2312.5	-2.360	0.466	100.00	1.000	19.44	19.50	1.014	0.473	12#
		Right	38775	2312.5	-1.550	0.422	100.00	1.000	19.44	19.50	1.014	0.428	/
	50%RB	Back	38775	2312.5	0.390	0.418	100.00	1.000	18.42	18.50	1.019	0.426	/
		Right	38775	2312.5	1.790	0.367	100.00	1.000	18.42	18.50	1.019	0.374	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 40b (BW: 15MHz)	1RB	Back	39175	2352.5	-3.290	0.592	100.00	1.000	19.67	20.00	1.079	0.639	13#
		Right	39175	2352.5	2.170	0.536	100.00	1.000	19.67	20.00	1.079	0.578	/
	50%RB	Back	39175	2352.5	0.680	0.540	100.00	1.000	18.69	19.00	1.074	0.580	/
		Right	39175	2352.5	-1.600	0.503	100.00	1.000	18.69	19.00	1.074	0.540	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 41 (BW: 20MHz)	1RB	Back	39750	2506.0	1.940	0.768	100.00	1.000	17.33	17.50	1.040	0.799	14#
		Right	39750	2506.0	3.210	0.723	100.00	1.000	17.33	17.50	1.040	0.752	/
	50%RB	Back	39750	2506.0	0.520	0.733	100.00	1.000	16.39	16.50	1.026	0.752	/
		Right	39750	2506.0	-3.120	0.685	100.00	1.000	16.39	16.50	1.026	0.703	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
2.4g (2.4~2.4835) 802.11b	Back	6	2437	-0.940	0.410	100.00	1.000	15.59	16.00	1.099	0.451	15#
	Right	6	2437	1.540	0.364	100.00	1.000	15.59	16.00	1.099	0.400	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-1 (5.150~5.250) 802.11a	Back	36	5180	-3.140	0.235	100.00	1.000	15.89	16.00	1.026	0.241	16#
	Right	36	5180	1.080	0.186	100.00	1.000	15.89	16.00	1.026	0.191	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-2a (5.250~5.350) 802.11a	Back	52	5260	3.570	0.340	100.00	1.000	14.12	14.50	1.091	0.349	17#
	Right	52	5260	2.790	0.305	100.00	1.000	14.12	14.50	1.091	0.313	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-2c (5.470~5.725) 802.11a	Back	100	5500	2.000	0.450	100.00	1.000	13.62	14.00	1.091	0.462	18#
	Right	100	5500	-1.920	0.412	100.00	1.000	13.62	14.00	1.091	0.423	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-3 (5.725~5.850) 802.11a	Back	165	5825	1.760	0.188	100.00	1.000	12.57	13.00	1.104	0.193	19#
	Right	165	5825	-2.130	0.145	100.00	1.000	12.57	13.00	1.104	0.149	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
EDR	Back	39	2441	2.060	0.003	100.00	1.000	4.30	4.50	1.047	0.003	20#
	Right	39	2441	-1.030	0.002	100.00	1.000	4.30	4.50	1.047	0.002	/

Note:

- The maximum SAR Value of each test band is marked bold.
- SAR plot is provided only for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
- Per KDB 447498 D01 v06, for each exposure position, if the highest output power channel Reported SAR $\leq 0.8\text{W/kg}$, other channels SAR testing is not necessary.
- Per KDB 447498 D01 v06, head/body-worn use is evaluated with the device positioned at 0mm from a flat phantom respectively filled with head tissue-equivalent medium.
- Per KDB 447498 D01 v06, the report SAR is measured SAR value adjusted for maximum tune-up tolerance. Scaling Factor = $10^{[(\text{tune-up limit power (dBm)} - \text{Ave. power power (dBm)})/10]}$, where tune-up limit is the maximum rated power among all production units.
Reported SAR(W/kg) = Measured SAR (W/kg) * Scaling Factor.

11. SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10 , the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 , or when the original or repeated measurement is ≥ 1.45 W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 , and the original, first or second repeated measurement is ≥ 1.5 W/kg, perform a third repeated measurement.

Note: For 1g SAR, the highest measured 1g SAR is $0.768 < 0.80$ W/kg, repeated measurement is not need.

12. Simultaneous Transmission

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 SAR to Peak Location Ratio (SPLSR).

12.1 Simultaneous Transmission Mode Considerations

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. The device has 2 Tx antennas, WWAN main antenna, Wifi/BT antenna supports 2.4G/5G Wi-Fi and BT. The 2 antennas can always transmit simultaneously. The work mode combination is showed as below table.

Application Simultaneous Transmission information:

NO.	Configuration	Head	Body-worn
1	WWAN+WIFI(2.4g)	Yes	Yes
2	WWAN+WIFI(5g)	Yes	Yes
3	WWAN+BT	Yes	Yes

12.2 Sum SAR of Simultaneous Transmission

Hotspot(body-worn)

Band	Test Position	Channel Type	Scaled				Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + WIFI 5G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
			WWAN	WIFI 2.4G	WIFI 5G	Bluetooth					
LTE Band 41	Back	1RB	0.799	0.451	0.462	0.003	1.250	1.261	0.802	N/A	N/A
	Right		0.752	0.400	0.423	0.002	1.152	1.175	0.754	N/A	N/A
	Back	50%RB	0.752	0.451	0.462	0.003	1.203	1.214	0.755	N/A	N/A
	Right		0.703	0.400	0.423	0.002	1.103	1.126	0.705	N/A	N/A

13. Test Equipment List

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
E-Field Probe	MVG	SSE2	0125-EPGO-445	2025/02/01	2026/01/31
6 1/2 Digital Multimeter	Keithley	DMM6500	4527164	2025/10/20	2026/10/19
Wideband Radio Communication Tester	ROHDE & SCHWARZ	CMW500	161997	2025/10/17	2026/10/16
MXG Vector Signal Generator	Agilent	N5182A	MY46240163	2025/10/17	2026/10/16
E-Series Avg. Power Sensor	KEYSIGHT	E9300A	MY55050017	2025/04/02	2026/04/01
EPM Series Power Meter	KEYSIGHT	E4418B	MY41293435	2025/04/02	2026/04/01
MXA Signal Analyzer	KEYSIGHT	N9020A	MY54410409	2025/10/17	2026/10/16
Low Noise Amplifier	Tongyue	N/A	N/A	2025/07/30	2026/07/29
Coupler	MERRIMAC	CWM-10R-10.8G	LOT-83391	N/A	N/A
750MHz Validation Dipole	MVG	SID750	07/22 DIP 0G750-655	2025/05/26	2028/05/25
835MHz Validation Dipole	MVG	SID835	07/22 DIP 0G835-656	2025/05/26	2028/05/25
1800MHz Validation Dipole	MVG	SID1800	07/22 DIP 1G800-657	2025/05/26	2028/05/25
1900MHz Validation Dipole	MVG	SID1900	07/22 DIP 1G900-658	2025/05/26	2028/05/25
2300MHz Validation Dipole	MVG	SID2300	07/22 DIP 2G300-661	2025/05/26	2028/05/25
2450MHz Validation Dipole	MVG	SID2450	07/22 DIP 2G450-662	2025/05/26	2028/05/25
2600MHz Validation Dipole	MVG	SID2600	07/22 DIP 2G600-663	2025/05/26	2028/05/25
5200MHz-5800MHz Validation Dipole	MVG	SID5000	07/22 DIP5G000-670	2025/05/26	2028/05/25
LIMESAR Dielectric Probe	MVG	SCLMP	06/22 OCPG88	2025/02/05	2026/02/04
ENA Series Network Analyzer	Agilent	E5071B	MY42301221	2025/10/17	2026/10/16
Thermometer	Riters	DT-232	21A11	2025/04/02	2026/04/01
Antenna network emulator	MVG	ANTA 74	07/22 ANTA 74	N/A	N/A
SAM Phantom	MVG	SAM	07/22 SAM149	N/A	N/A
Mobile Phone Positioning System	MVG	MSH 118	07/22 MSH 118	N/A	N/A
Mechanical Calibration Kit	PNA	N/A	N/A	2025/10/21	2026/10/20
Open SAR test software	MVG	N/A	V5.3.5	N/A	N/A

Note: For dipole antennas, BTF has adopted 3 years as calibration intervals, and on annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss in within 20% of calibrated measurement.
4. Impedance (real or imaginary parts) in within 5 Ohms of calibrated measurement.

ANNEX A Simulating Liquid Verification Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an SCLMP Dielectric Probe Kit.

Dielectric performance of tissue simulating liquid									
Frequency (MHz)	ϵ_r		σ (s/m)		Delta (ϵ_r)	Delta (σ)	Limit	Temp (°C)	Date
	Target	Measured	Target	Measured					
750	41.90	42.11	0.89	0.90	0.50%	1.12%	±5%	20.6	22/10/2025
835	41.50	41.68	0.90	0.92	0.43%	2.22%	±5%	20.1	24/10/2025
1800	40.00	40.07	1.40	1.41	0.18%	0.71%	±5%	21.0	25/10/2025
1900	40.00	39.88	1.40	1.44	-0.30%	2.86%	±5%	20.8	4/11/2025
2300	39.50	38.25	1.67	1.70	-3.16%	1.80%	±5%	21.5	28/10/2025
2450	39.20	37.64	1.80	1.79	-3.98%	-0.56%	±5%	21.5	28/10/2025
2600	39.00	38.59	1.96	1.93	-1.05%	-1.53%	±5%	21.5	28/10/2025
5200	36.00	35.68	4.66	4.53	-0.89%	-2.79%	±5%	22.3	5/11/2025
5400	35.80	35.99	4.86	4.96	0.53%	2.06%	±5%	22.6	6/11/2025
5600	35.50	35.97	5.07	5.06	1.32%	-0.20%	±5%	21.8	7/11/2025
5800	35.30	35.58	5.27	5.33	0.79%	1.14%	±5%	21.9	8/11/2025

NOTE: The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.

ANNEX B System Check Result

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

Frequency (MHz)	Input Power (mW)	10g SAR (W/Kg)	1g SAR (W/Kg)	10g SAR 1W input power normalized (W/Kg)	1g SAR 1W input power normalized (W/Kg)	10g SAR Standard target (1W) (W/Kg)	1g SAR Standard target (1W) (W/Kg)	10g SAR Deviation	1g SAR Deviation
750	100	0.531	0.799	5.31	7.99	5.55	8.41	-4.32%	-4.99%
835	100	0.643	0.970	6.43	9.70	6.12	9.46	5.07%	2.54%
1800	100	1.981	3.640	19.81	36.40	19.83	37.93	-0.10%	-4.03%
1900	100	2.193	4.088	21.93	40.88	20.82	40.29	5.33%	1.46%
2300	100	2.504	5.153	25.04	51.53	23.70	49.94	5.65%	3.18%
2450	100	2.647	5.558	26.47	55.58	24.55	52.72	7.82%	5.42%
2600	100	2.583	5.521	25.83	55.21	24.43	53.76	5.73%	2.70%
5200	100	2.310	7.702	23.10	77.02	22.78	78.16	1.40%	-1.46%
5400	100	2.369	7.973	23.69	79.73	22.55	78.64	5.06%	1.39%
5600	100	2.458	8.229	24.58	82.29	23.95	82.72	2.63%	-0.52%
5800	100	2.307	7.777	23.07	77.77	22.71	78.32	1.59%	-0.70%

System Performance Check Data (750 MHz)

System check at 750 MHz

Date of measurement: 22/10/2025

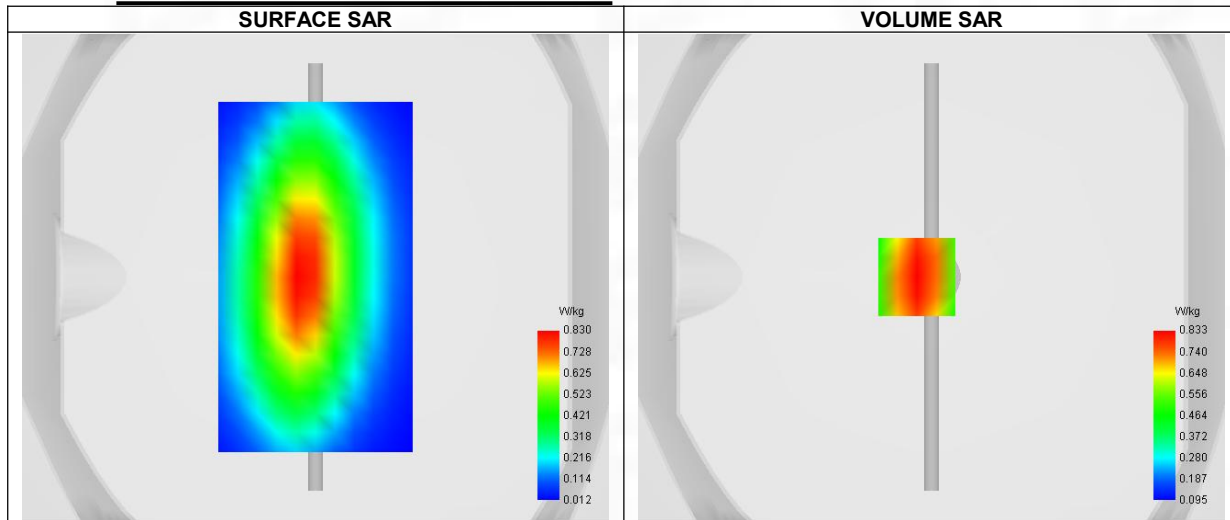
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	750.000
Relative permittivity (real part)	42.113
Relative permittivity (imaginary part)	21.345
Conductivity (S/m)	0.902

C. SAR Surface and Volume



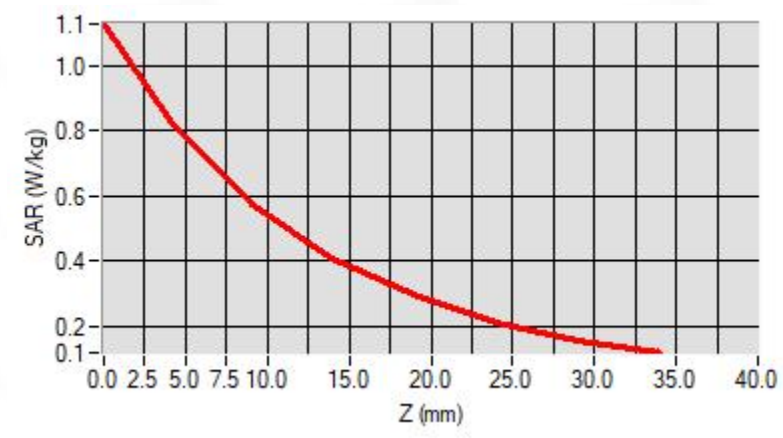
Maximum location: X=-6.00, Y=0.00 ; SAR Peak: 1.12 W/kg

D. SAR 1g & 10g

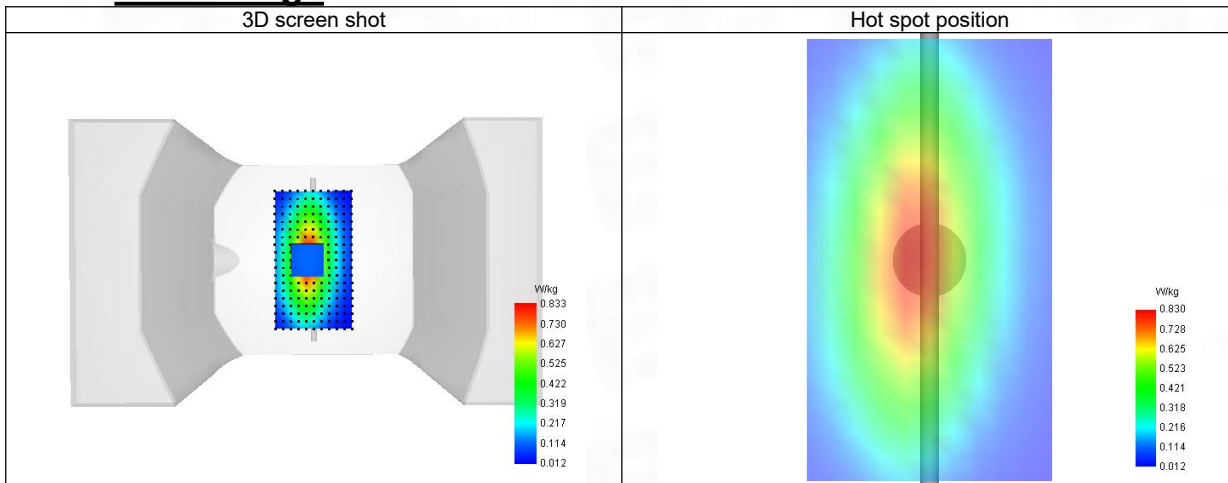
SAR 10g (W/Kg)	0.531
SAR 1g (W/Kg)	0.799
Variation (%)	-1.030
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	69.216120

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.128	0.833	0.576	0.409	0.295	0.214	0.157



F. 3D Image



System Performance Check Data (835 MHz)

System check at 835 MHz

Date of measurement: 24/10/2025

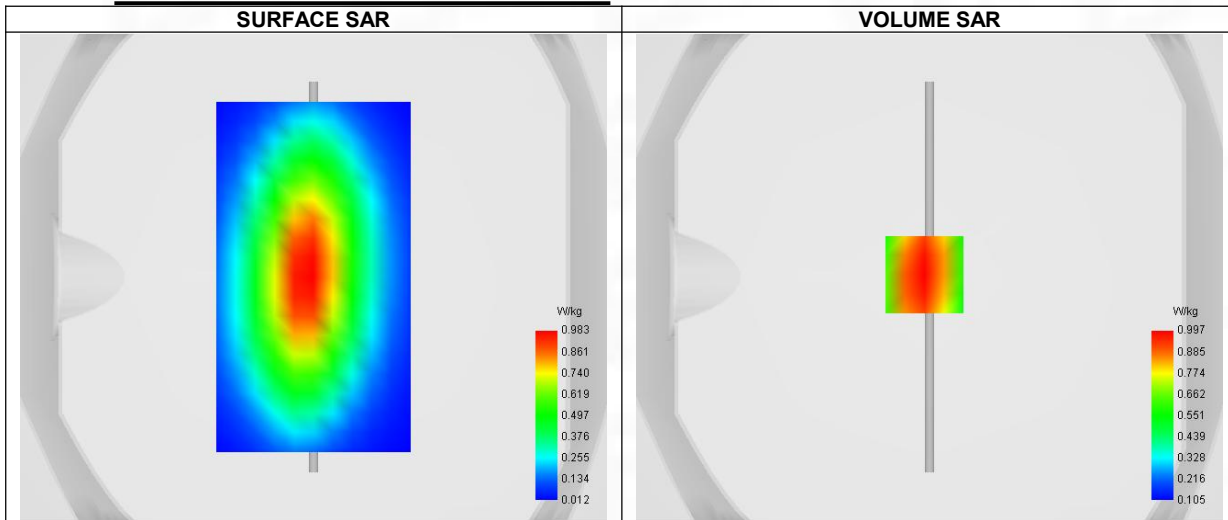
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	835.000
Relative permittivity (real part)	41.682
Relative permittivity (imaginary part)	19.452
Conductivity (S/m)	0.918

C. SAR Surface and Volume



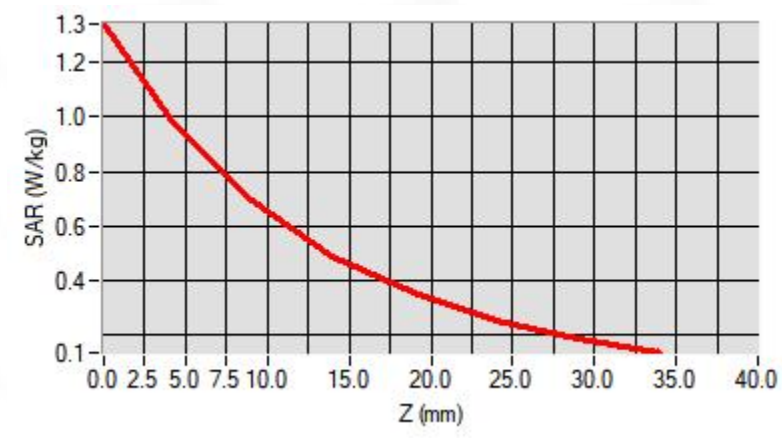
Maximum location: X=-2.00, Y=1.00 ; SAR Peak: 1.34 W/kg

D. SAR 1g & 10g

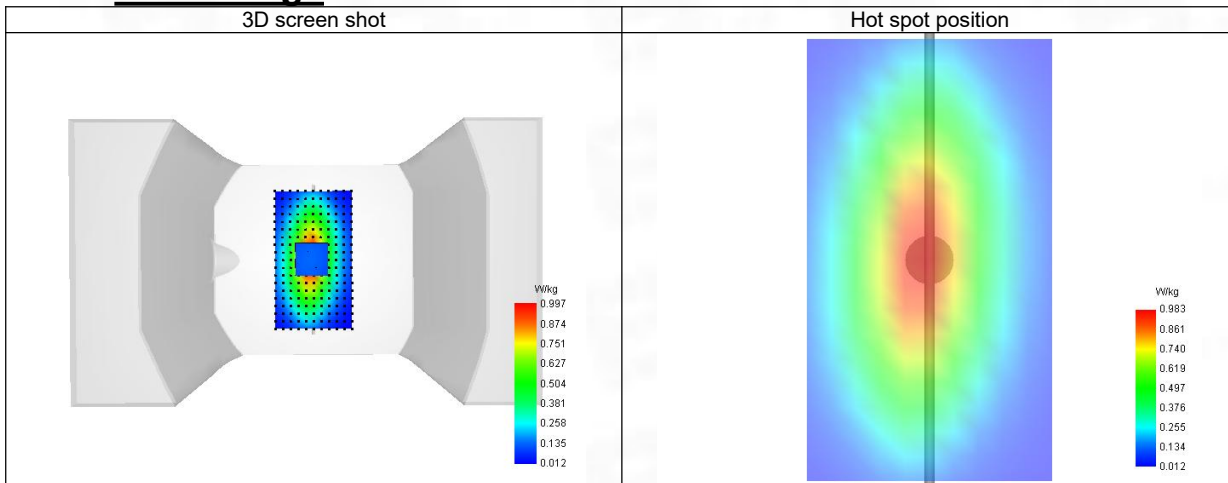
SAR 10g (W/Kg)	0.643
SAR 1g (W/Kg)	0.970
Variation (%)	-0.440
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	69.610586

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.339	0.997	0.694	0.492	0.354	0.253	0.186



F. 3D Image



System Performance Check Data (1800 MHz)

System check at 1800 MHz

Date of measurement: 25/10/2025

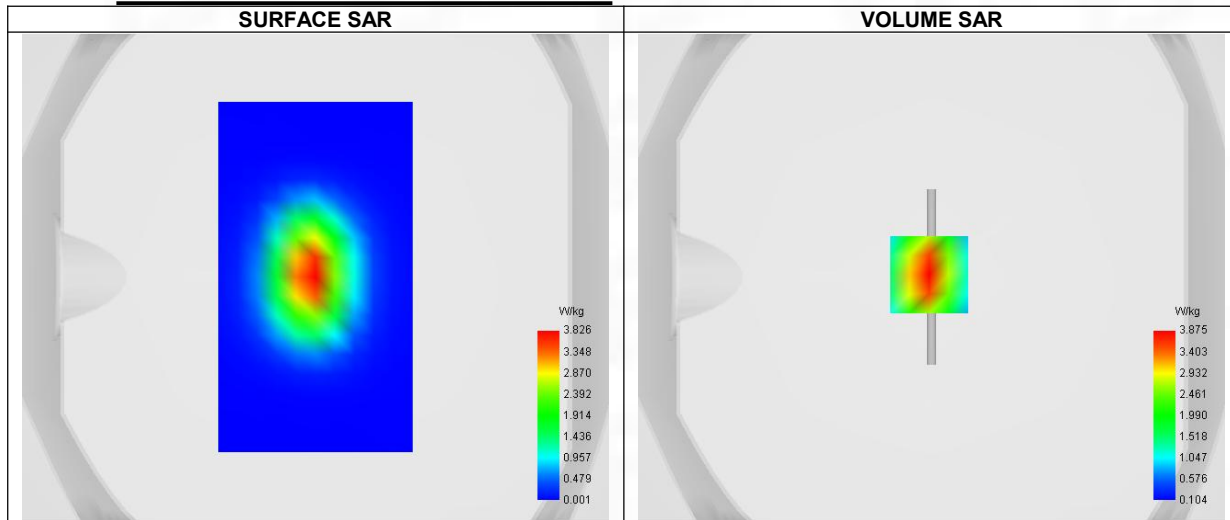
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	1800.000
Relative permittivity (real part)	40.073
Relative permittivity (imaginary part)	14.64
Conductivity (S/m)	1.411

C. SAR Surface and Volume



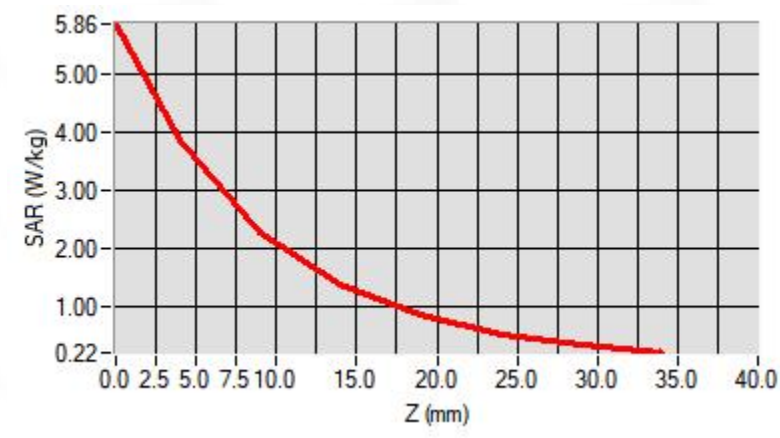
Maximum location: X=-1.00, Y=1.00 ; SAR Peak: 5.84 W/kg

D. SAR 1g & 10g

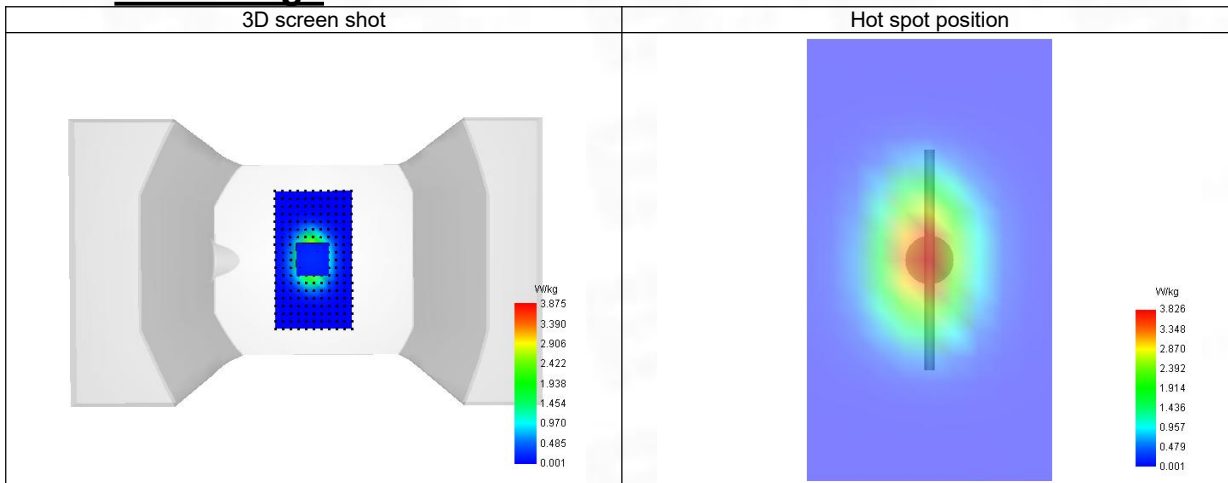
SAR 10g (W/Kg)	1.981
SAR 1g (W/Kg)	3.640
Variation (%)	-0.230
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.143280

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	5.855	3.875	2.292	1.402	0.868	0.544	0.342



F. 3D Image



System Performance Check Data (1900 MHz)

System check at 1900 MHz

Date of measurement: 4/11/2025

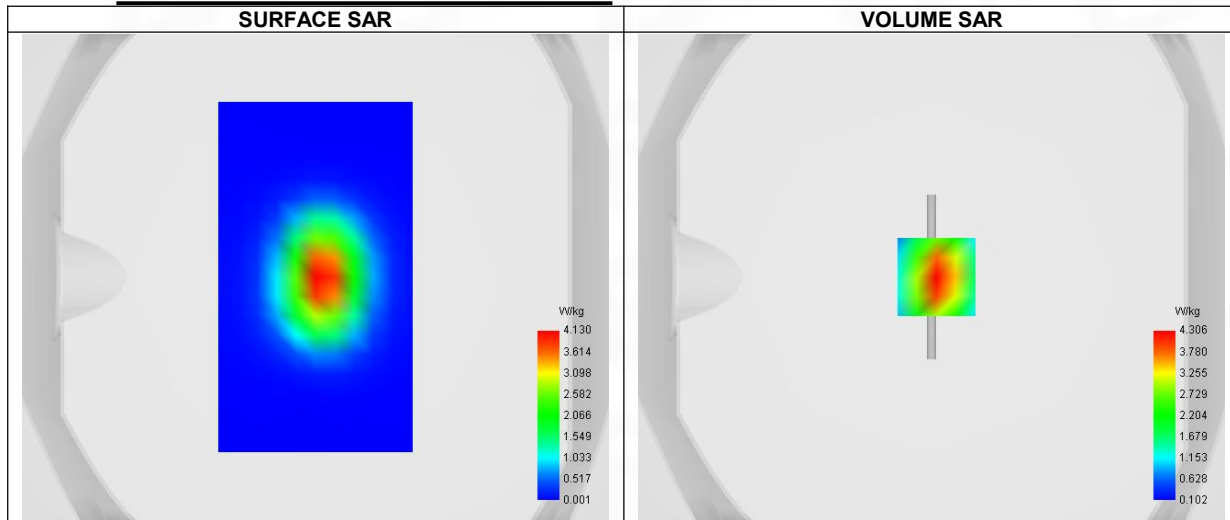
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.31
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	1900.000
Relative permittivity (real part)	39.881
Relative permittivity (imaginary part)	13.639
Conductivity (S/m)	1.438

C. SAR Surface and Volume



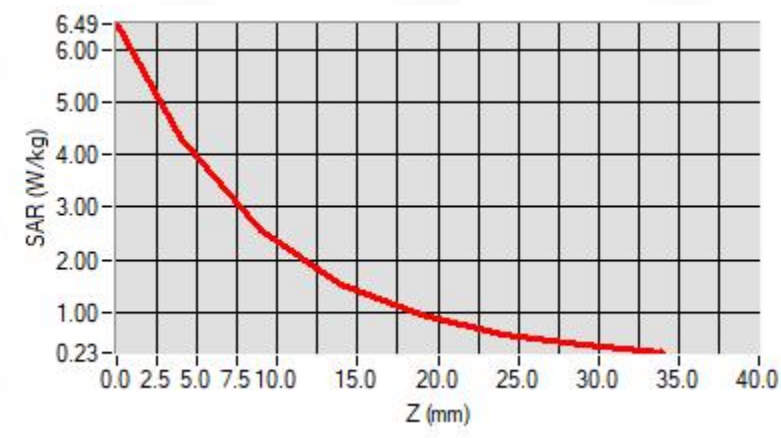
Maximum location: X=2.00, Y=0.00 ; SAR Peak: 6.50 W/kg

D. SAR 1g & 10g

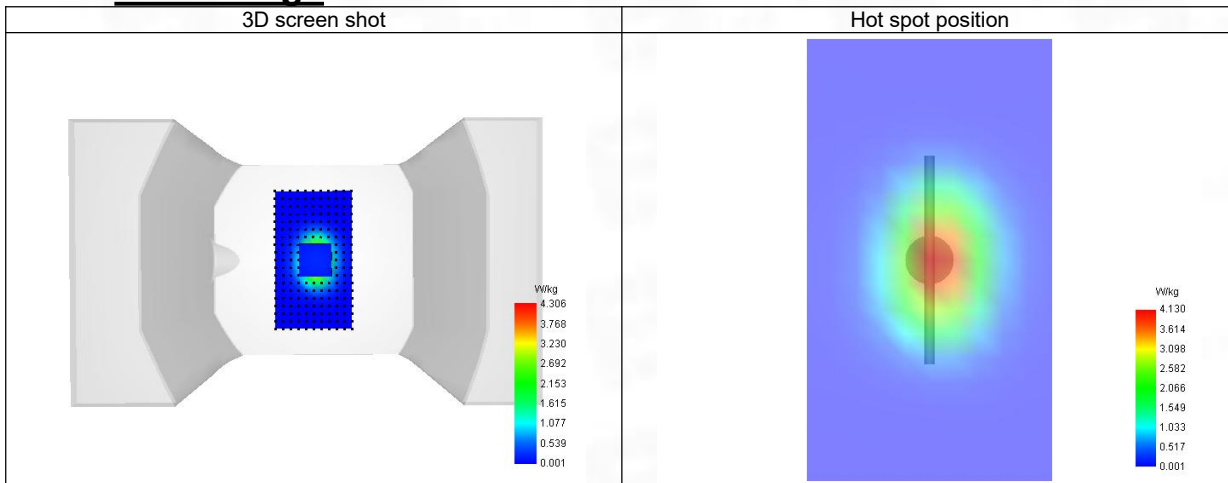
SAR 10g (W/Kg)	2.193
SAR 1g (W/Kg)	4.088
Variation (%)	-0.280
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.155216

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.489	4.306	2.547	1.549	0.951	0.590	0.372



F. 3D Image



System Performance Check Data (2300 MHz)

System check at 2300 MHz

Date of measurement: 28/10/2025

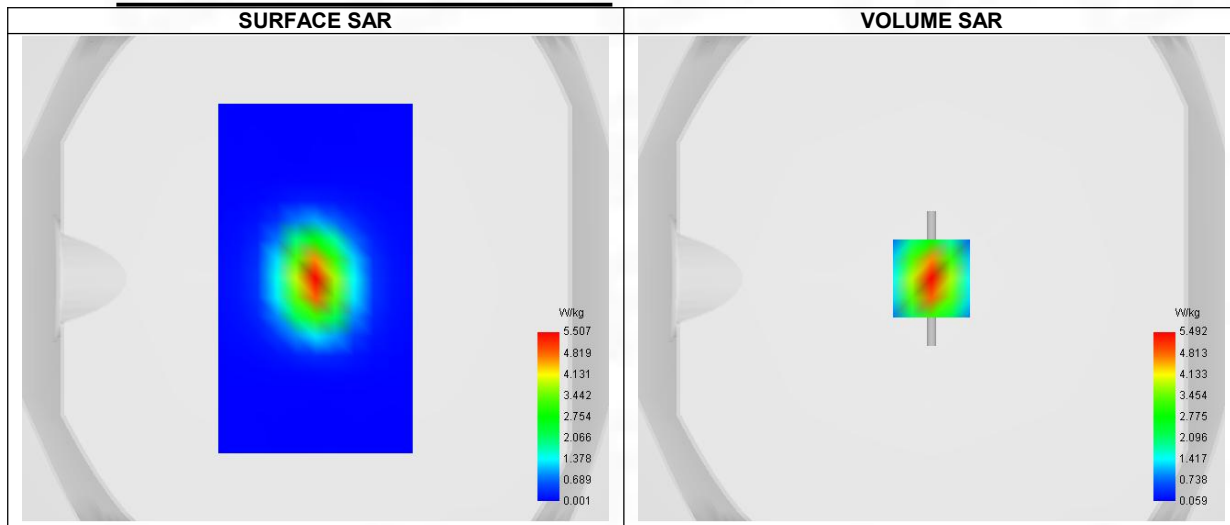
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.38
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2300
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	2300.000
Relative permittivity (real part)	38.253
Relative permittivity (imaginary part)	13.649
Conductivity (S/m)	1.697

C. SAR Surface and Volume



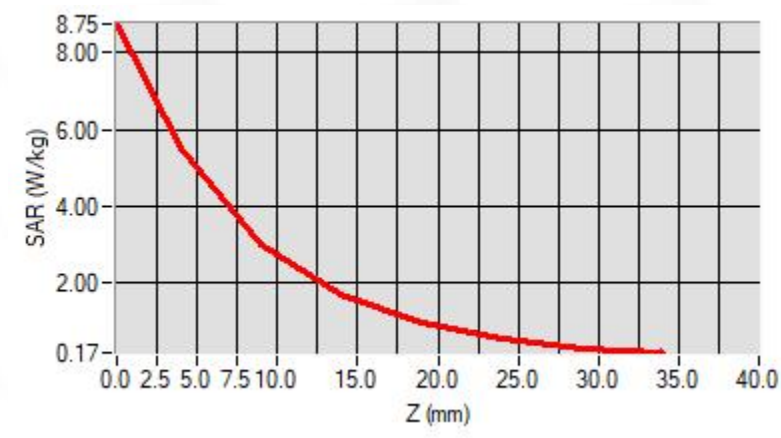
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 8.67 W/kg

D. SAR 1g & 10g

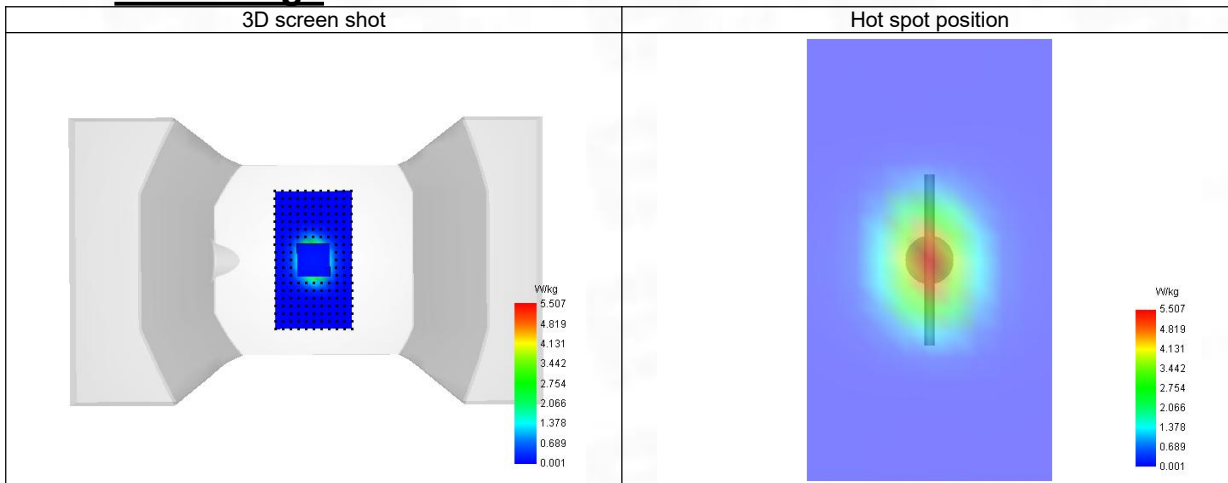
SAR 10g (W/Kg)	2.504
SAR 1g (W/Kg)	5.153
Variation (%)	-1.910
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.263052

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	8.747	5.492	2.980	1.666	0.934	0.522	0.296



F. 3D Image



System Performance Check Data (2450 MHz)

System check at 2450 MHz

Date of measurement: 28/10/2025

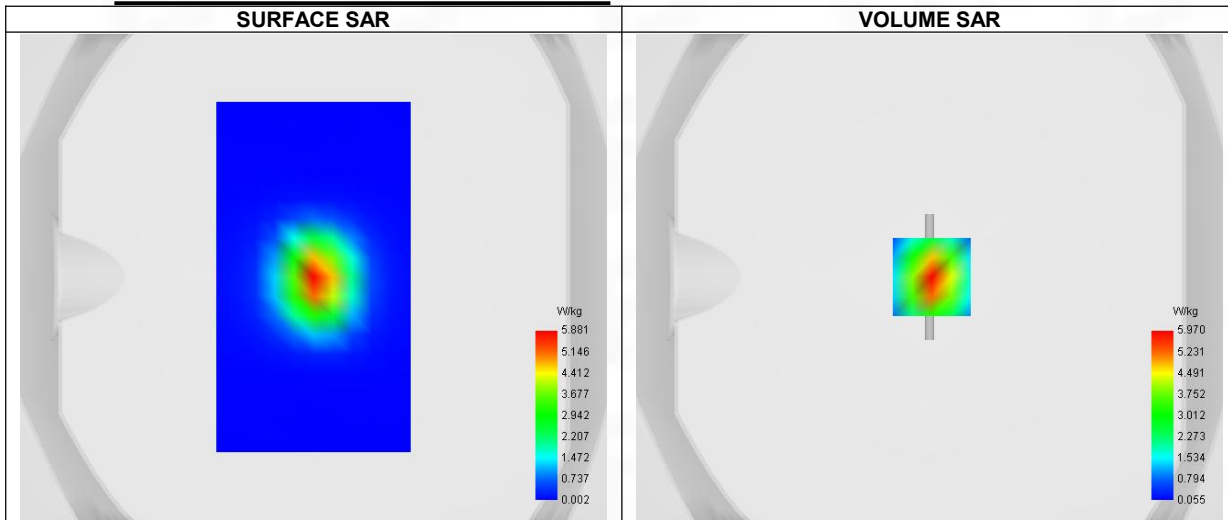
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	2450.000
Relative permittivity (real part)	37.642
Relative permittivity (imaginary part)	13.653
Conductivity (S/m)	1.794

C. SAR Surface and Volume



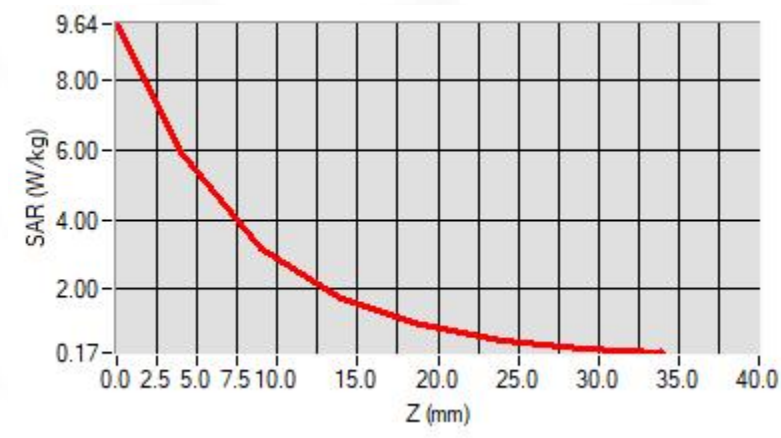
Maximum location: X=1.00, Y=0.00 ; SAR Peak: 9.58 W/kg

D. SAR 1g & 10g

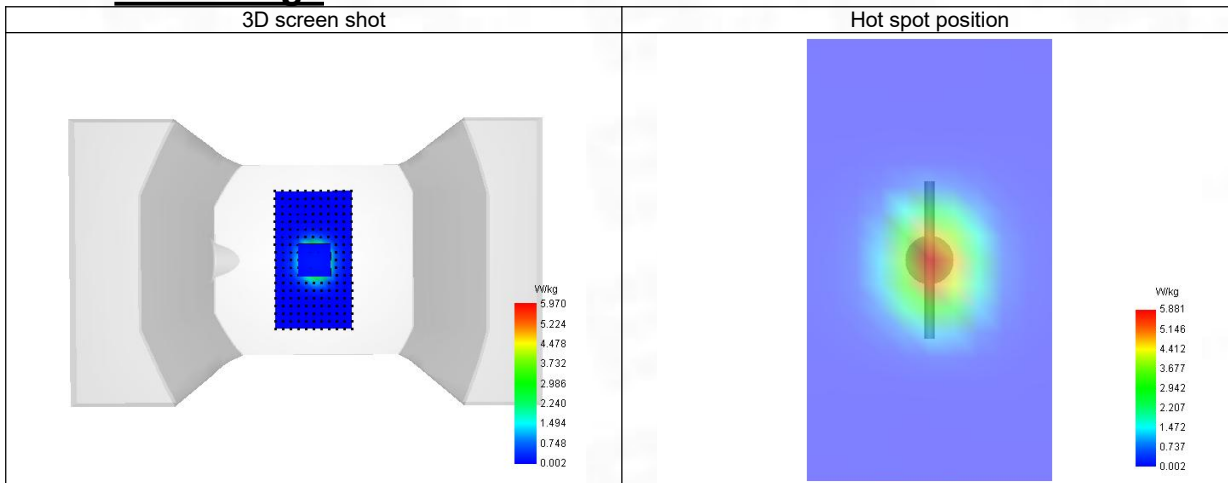
SAR 10g (W/Kg)	2.647
SAR 1g (W/Kg)	5.558
Variation (%)	-4.580
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	53.113142

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.644	5.970	3.171	1.743	0.961	0.531	0.297



F. 3D Image



System Performance Check Data (2600 MHz)

System check at 2600 MHz

Date of measurement: 28/10/2025

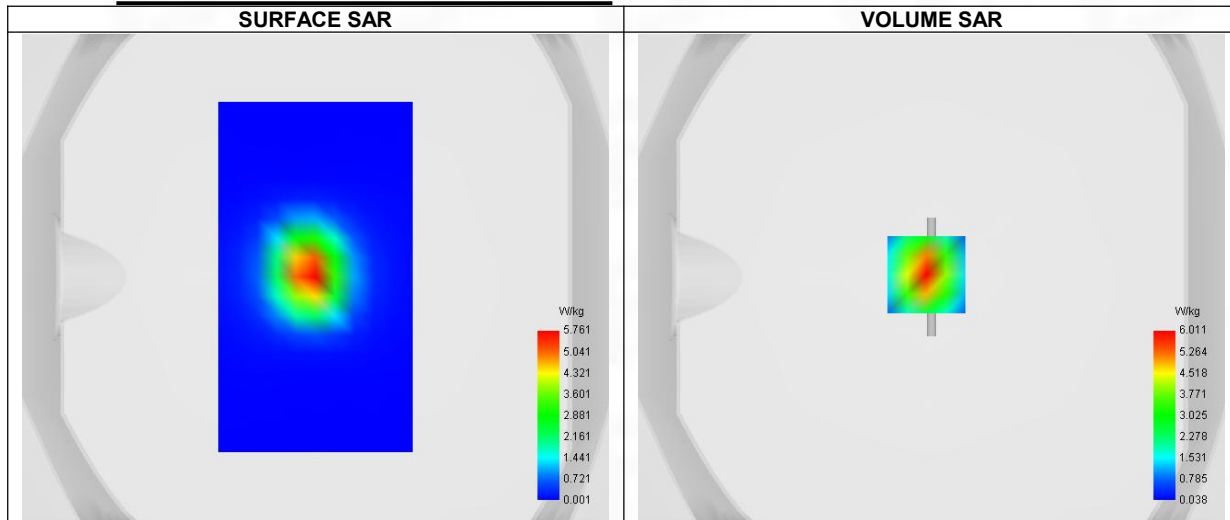
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.27
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels/Frequency	Higher
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	2600.000
Relative permittivity (real part)	41.635
Relative permittivity (imaginary part)	13.956
Conductivity (S/m)	2.016

C. SAR Surface and Volume



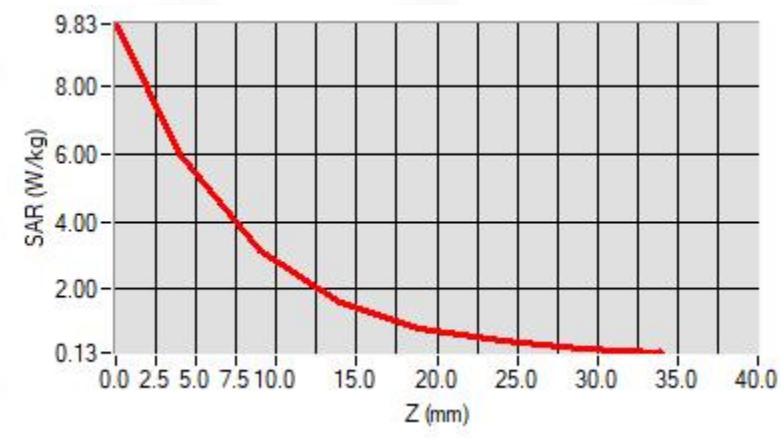
Maximum location: X=-2.00, Y=1.00 ; SAR Peak: 9.74 W/kg

D. SAR 1g & 10g

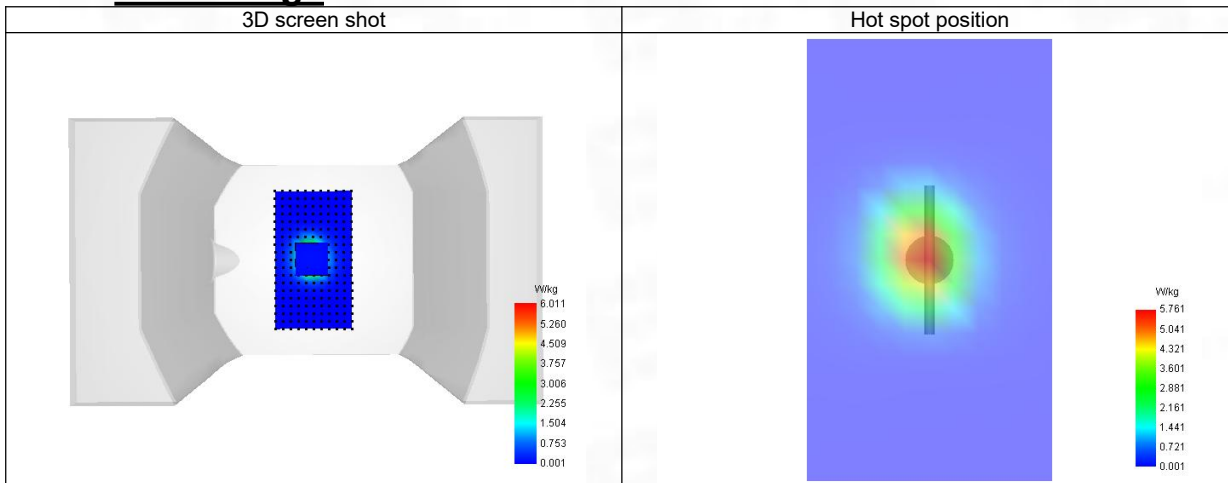
SAR 10g (W/Kg)	2.583
SAR 1g (W/Kg)	5.521
Variation (%)	-1.360
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	51.880323

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.825	6.011	3.118	1.633	0.866	0.459	0.243



F. 3D Image



System Performance Check Data (5200 MHz)

System check at 5200 MHz

Date of measurement: 5/11/2025

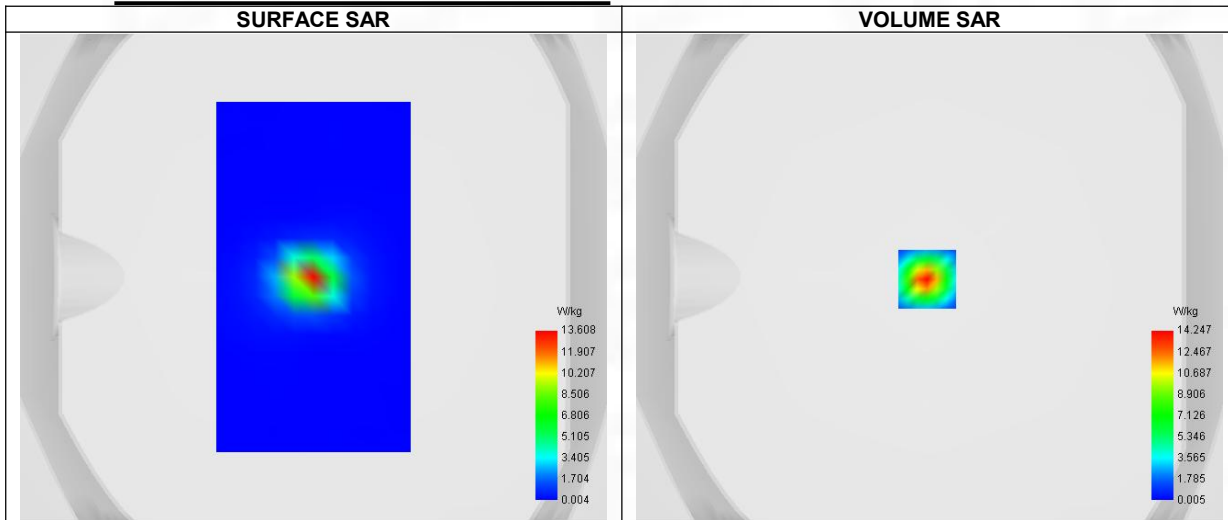
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.18
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	5200.000
Relative permittivity (real part)	35.683
Relative permittivity (imaginary part)	16.485
Conductivity (S/m)	4.534

C. SAR Surface and Volume

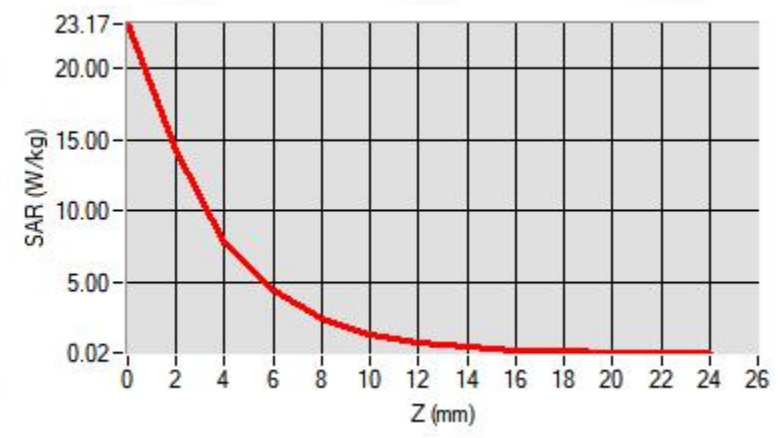


D. SAR 1g & 10g

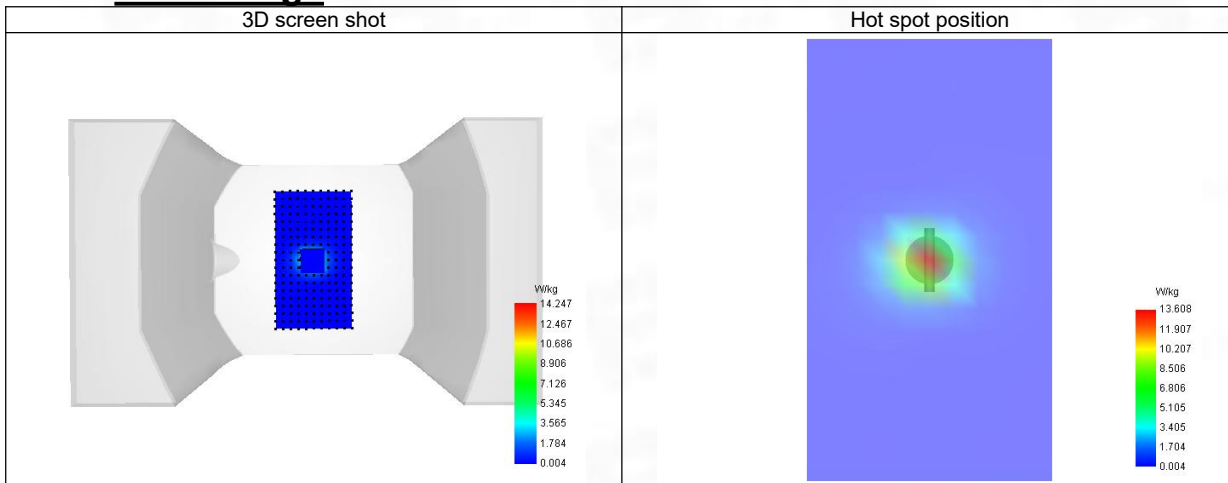
SAR 10g (W/Kg)	2.310
SAR 1g (W/Kg)	7.702
Variation (%)	0.090
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.177144

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)	23.171	14.247	7.719	4.355	2.432	1.343	0.751	0.419	0.230	0.124	0.074	0.037



F. 3D Image



System Performance Check Data (5400 MHz)

System check at 5400 MHz

Date of measurement: 6/11/2025

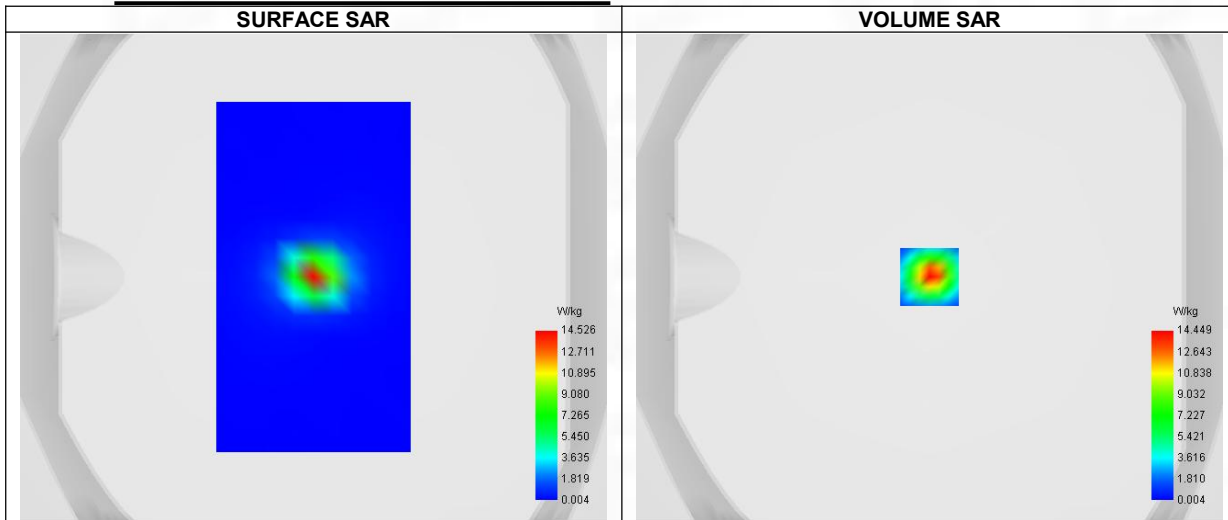
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.14
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5400
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	5400.000
Relative permittivity (real part)	35.988
Relative permittivity (imaginary part)	16.142
Conductivity (S/m)	4.863

C. SAR Surface and Volume



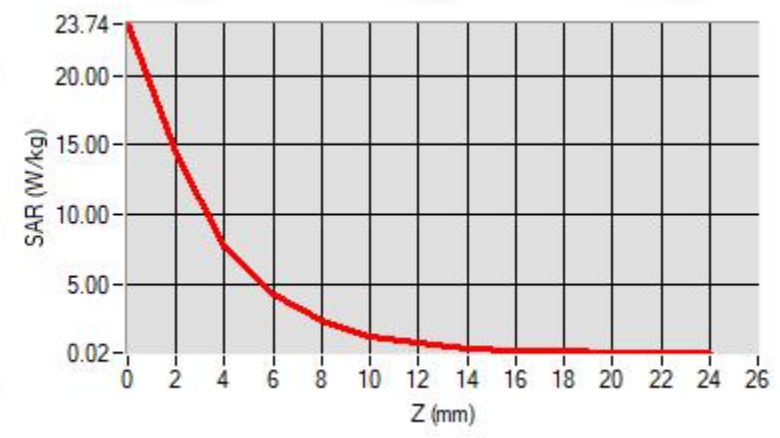
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 25.39 W/kg

D. SAR 1g & 10g

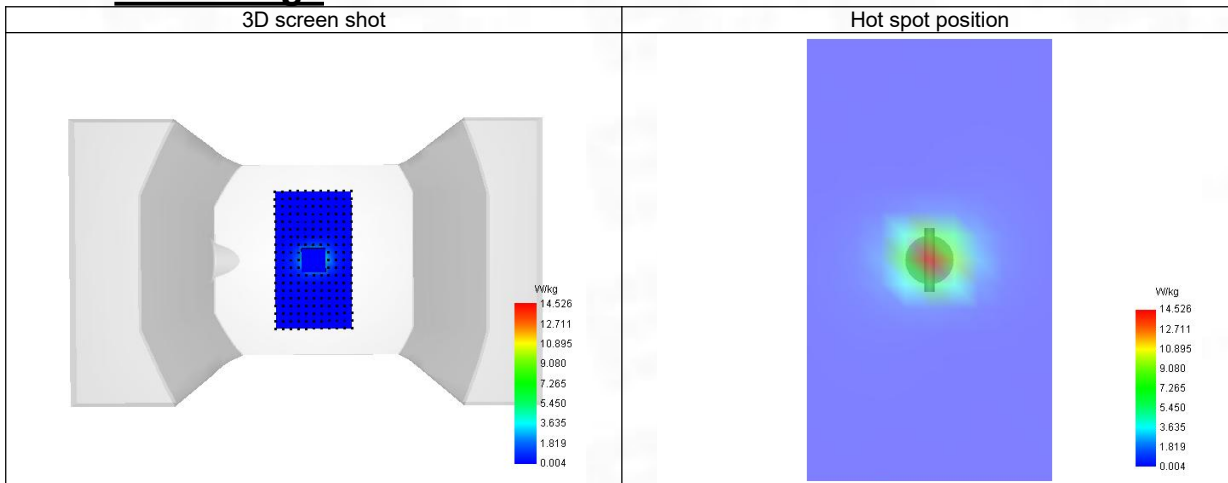
SAR 10g (W/Kg)	2.369
SAR 1g (W/Kg)	7.973
Variation (%)	0.540
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	53.347710

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)	23.739	14.449	7.708	4.232	2.301	1.244	0.694	0.370	0.189	0.110	0.067	0.033



F. 3D Image



System Performance Check Data (5600 MHz)

System check at 5600 MHz

Date of measurement: 7/11/2025

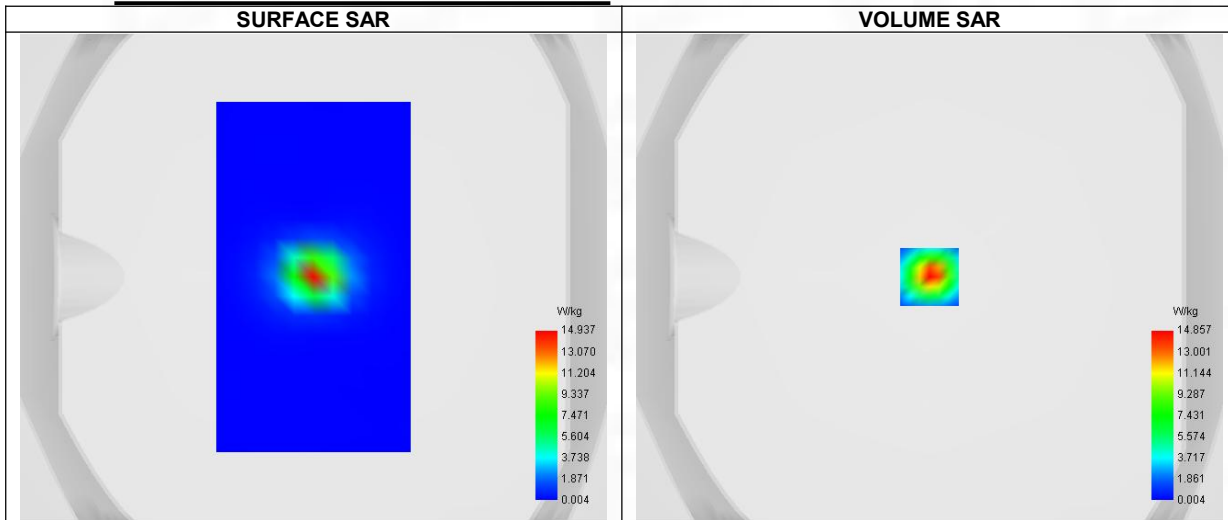
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.12
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5600
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	5600.000
Relative permittivity (real part)	35.973
Relative permittivity (imaginary part)	16.354
Conductivity (S/m)	5.064

C. SAR Surface and Volume



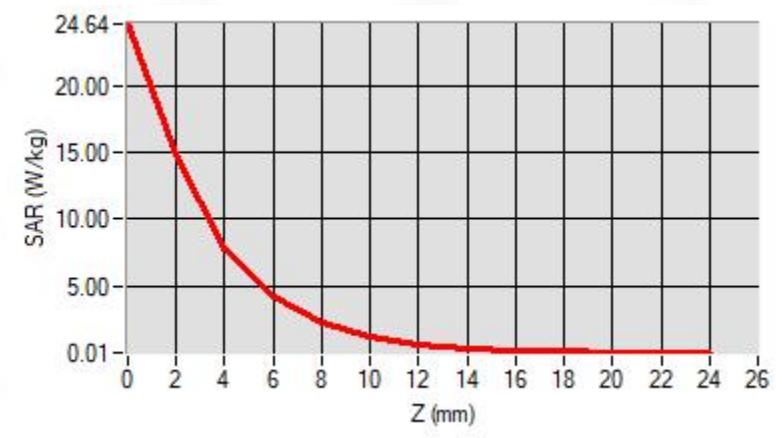
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 26.43 W/kg

D. SAR 1g & 10g

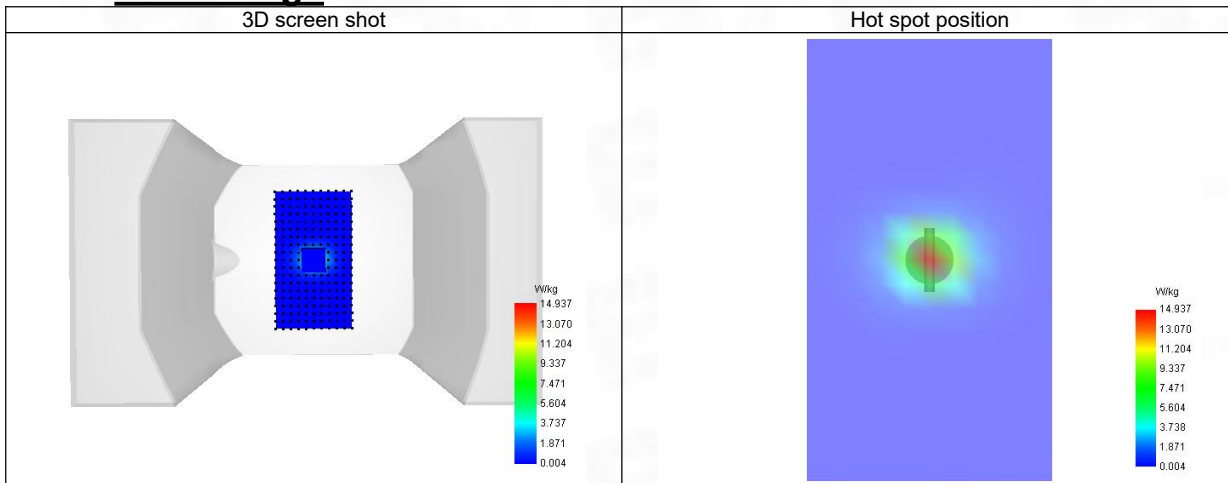
SAR 10g (W/Kg)	2.458
SAR 1g (W/Kg)	8.229
Variation (%)	3.210
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	52.464361

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)	24.638	14.857	7.795	4.172	2.225	1.173	0.617	0.324	0.176	0.091	0.055	0.022



F. 3D Image



System Performance Check Data (5800 MHz)

System check at 5800 MHz

Date of measurement: 8/11/2025

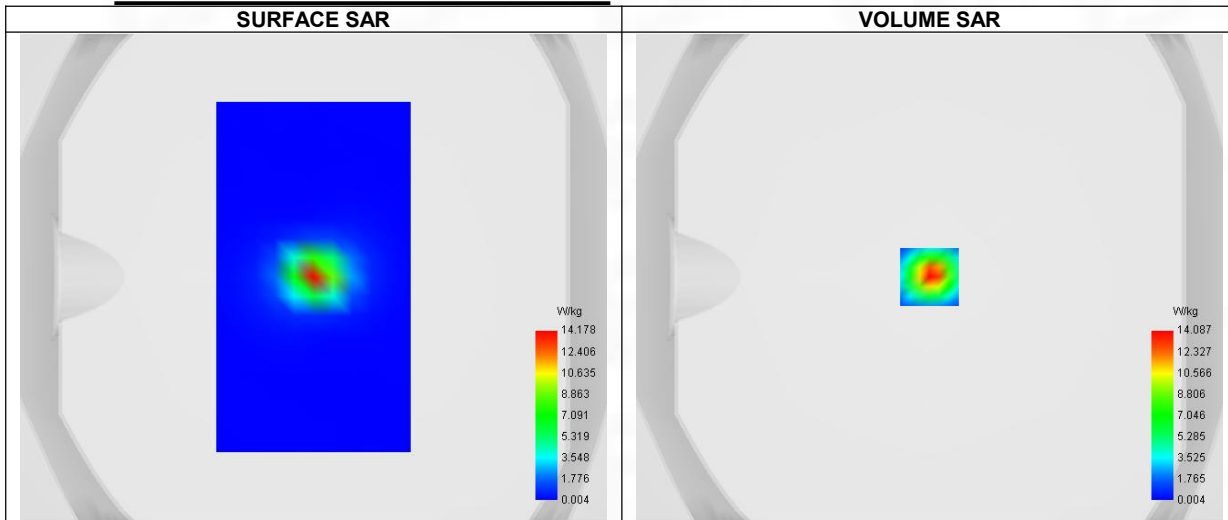
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.11
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	5800.000
Relative permittivity (real part)	35.581
Relative permittivity (imaginary part)	16.571
Conductivity (S/m)	5.331

C. SAR Surface and Volume



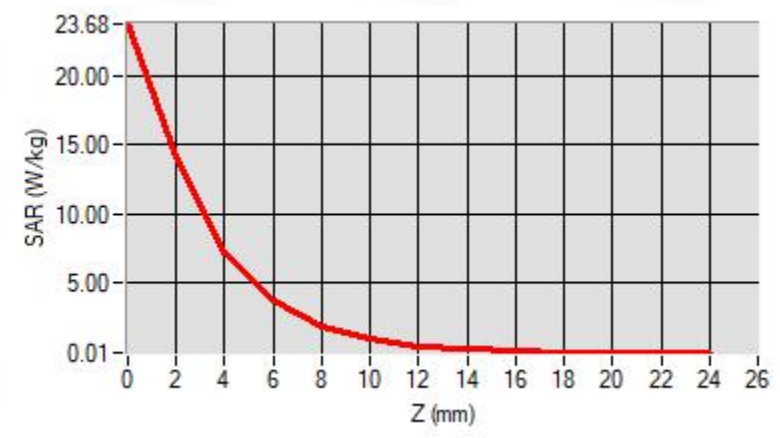
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 25.33 W/kg

D. SAR 1g & 10g

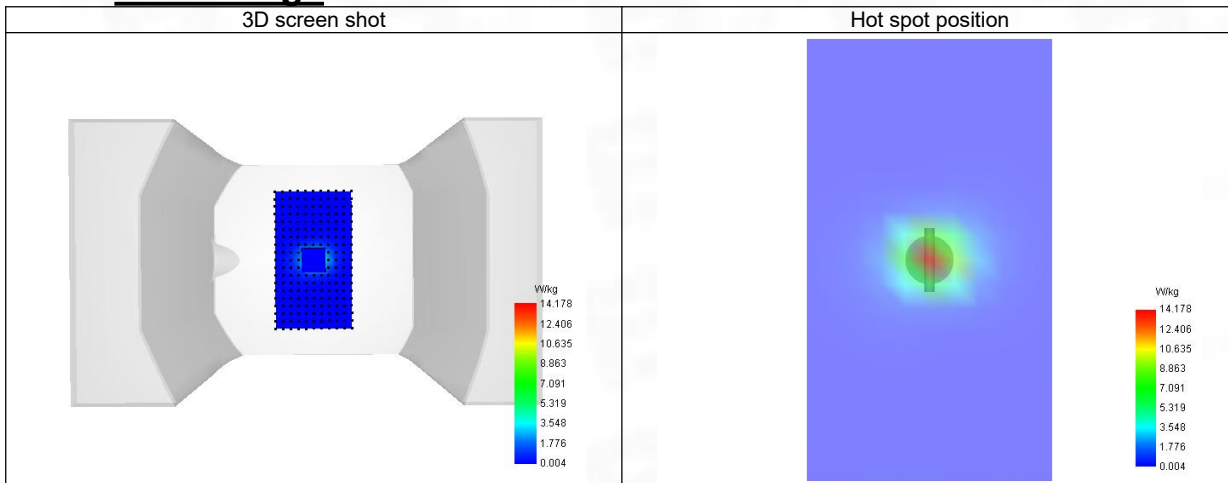
SAR 10g (W/Kg)	2.307
SAR 1g (W/Kg)	7.777
Variation (%)	3.080
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	51.410995

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)	23.682	14.087	7.242	3.701	1.927	0.995	0.502	0.255	0.130	0.061	0.029	0.022



F. 3D Image



ANNEX C Test Data

1-Body with left position in dist. 0mm on Channel 190 in GPRS 850+4slots

SAR Measurement at GPRS850 (Body, Validation Plane)

Date of measurement: 24/10/2025

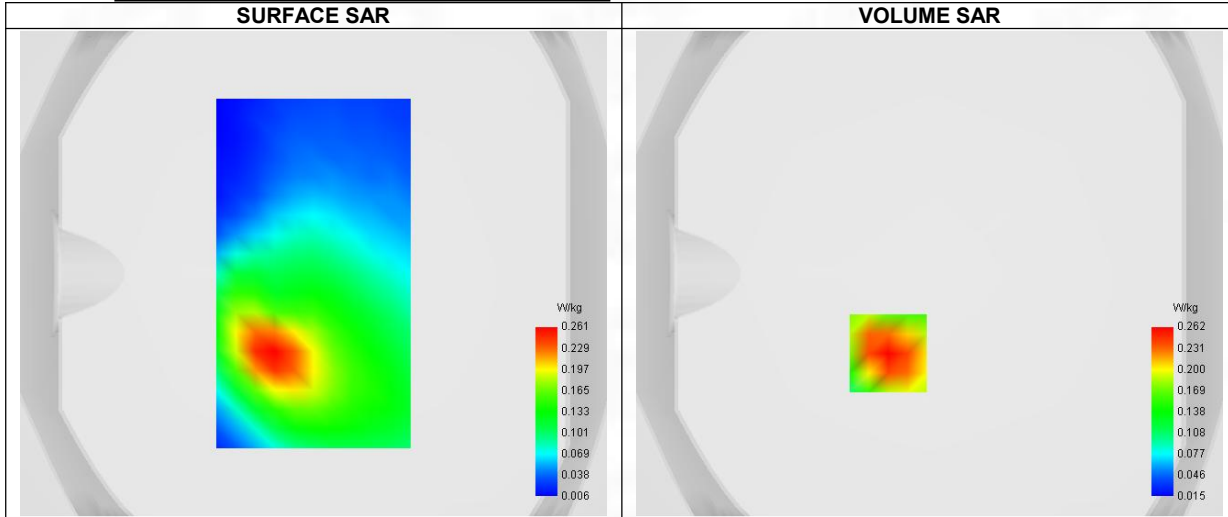
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS850
Channels/Frequency	Middle (190)/ frequency 836.600 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	4

B. Permittivity

Middle TX Frequency (MHz)	836.600
Relative permittivity (real part)	41.679
Relative permittivity (imaginary part)	19.444
Conductivity (S/m)	0.919

C. SAR Surface and Volume



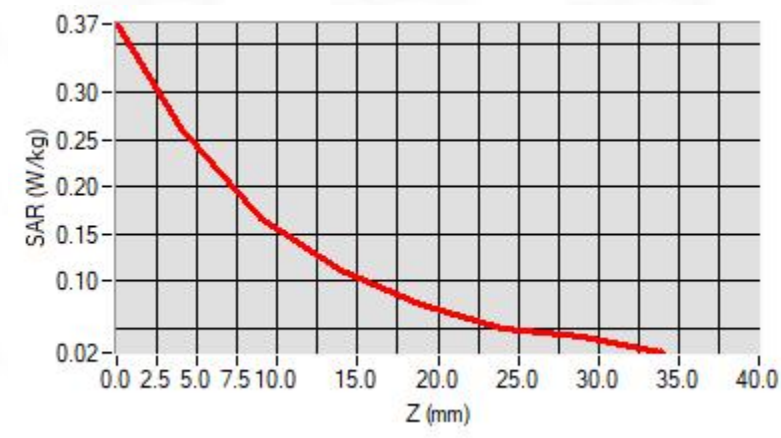
Maximum location: X=-17.00, Y=-33.00 ; SAR Peak: 0.38 W/kg

D. SAR 1g & 10g

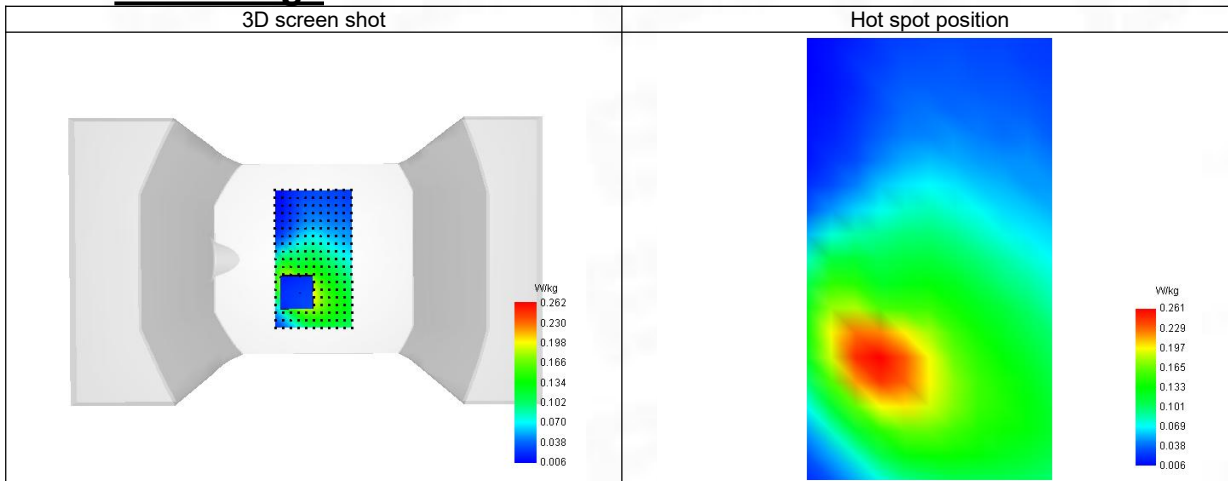
SAR 10g (W/Kg)	0.148
SAR 1g (W/Kg)	0.249
Variation (%)	0.650
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	63.279124

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.372	0.262	0.166	0.111	0.075	0.051	0.041



F. 3D Image



2-Body with back position in dist. 0mm on Channel 512 in GPRS 1900+2slots

SAR Measurement at GPRS1900 (Body, Validation Plane)

Date of measurement: 4/11/2025

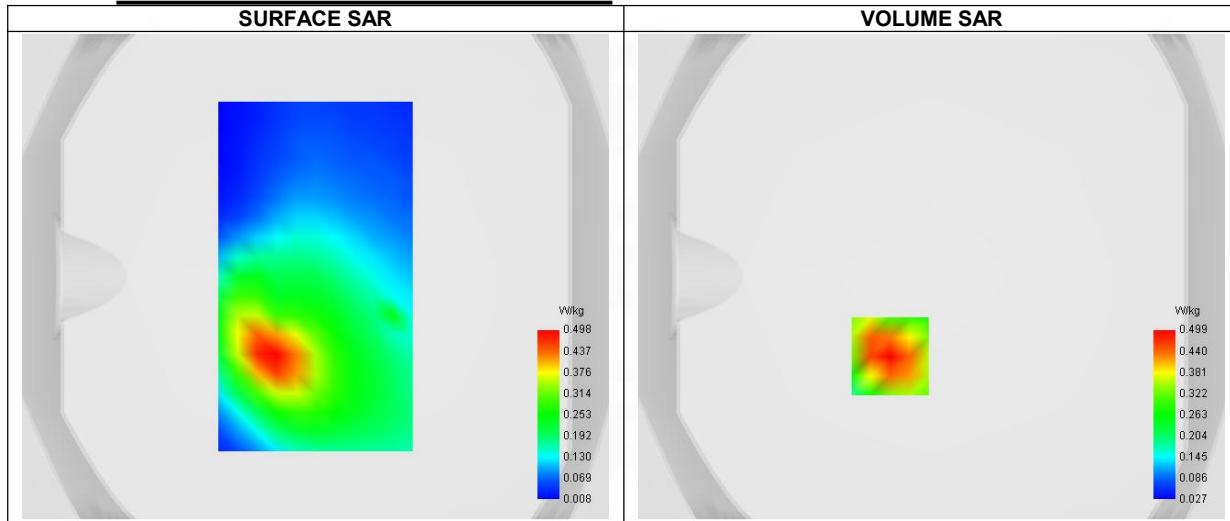
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.31
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS1900
Channels/Frequency	Lower (512)/ frequency 1850.200 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	4

B. Permittivity

Middle TX Frequency (MHz)	1850.200
Relative permittivity (real part)	39.977
Relative permittivity (imaginary part)	14.137
Conductivity (S/m)	1.425

C. SAR Surface and Volume



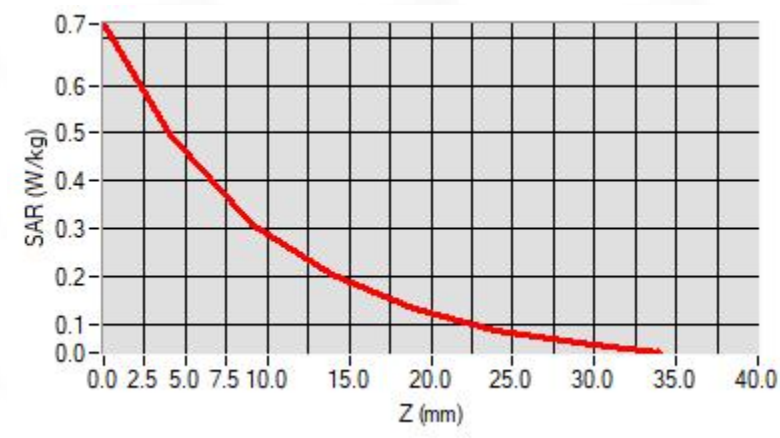
Maximum location: X=-17.00, Y=-33.00 ; SAR Peak: 0.73 W/kg

D. SAR 1g & 10g

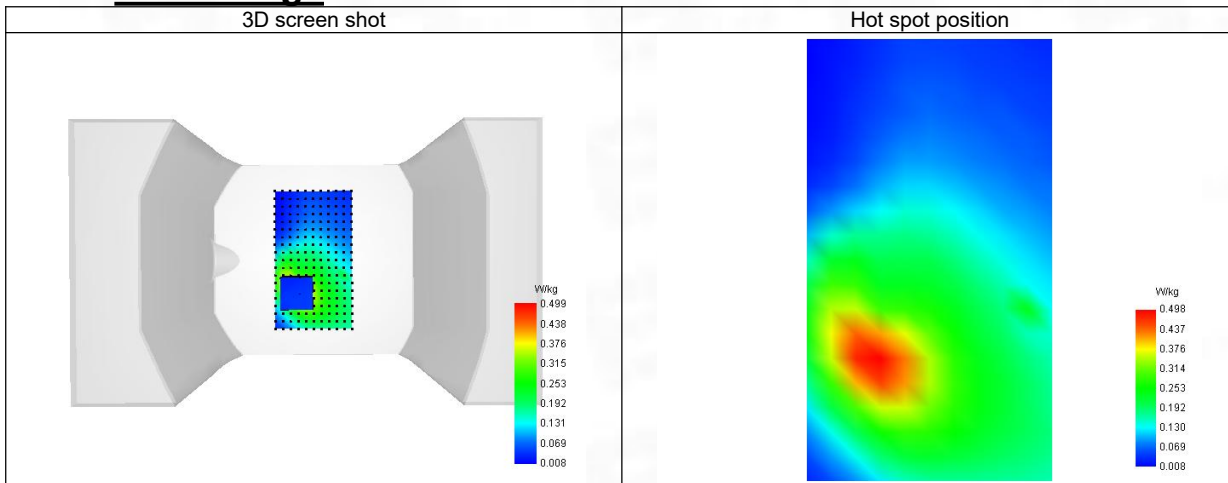
SAR 10g (W/Kg)	0.285
SAR 1g (W/Kg)	0.476
Variation (%)	-1.080
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	61.990449

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.728	0.499	0.309	0.203	0.132	0.087	0.061



F. 3D Image



3-Body with back position in dist. 0mm on Channel 9262 in WCDMA Band 2

SAR Measurement at Band 2 (1900) (Body, Validation Plane)

Date of measurement: 4/11/2025

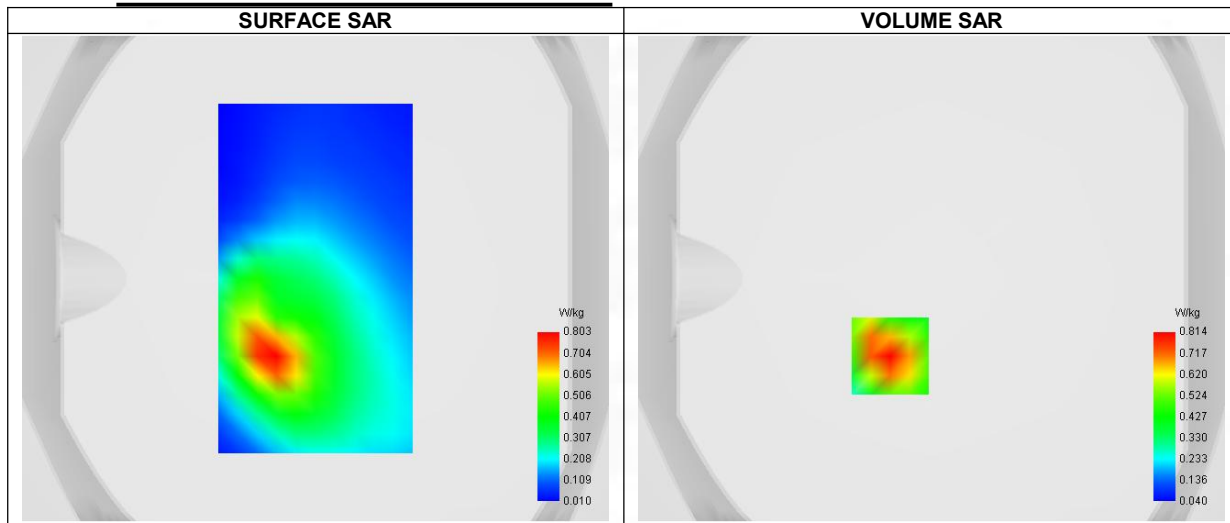
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.31
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 2 (1900)
Channels/Frequency	Lower (9262)/ frequency 1852.400 Mhz
Signal	WCDMA
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1852.400
Relative permittivity (real part)	39.972
Relative permittivity (imaginary part)	14.115
Conductivity (S/m)	1.425

C. SAR Surface and Volume



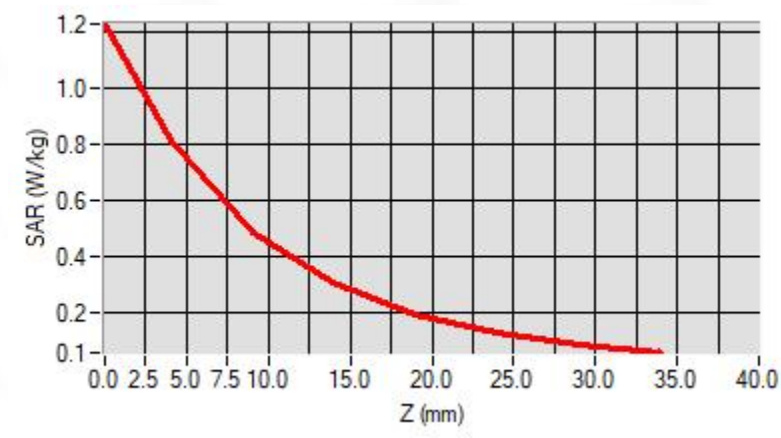
Maximum location: X=-17.00, Y=-32.00 ; SAR Peak: 1.24 W/kg

D. SAR 1g & 10g

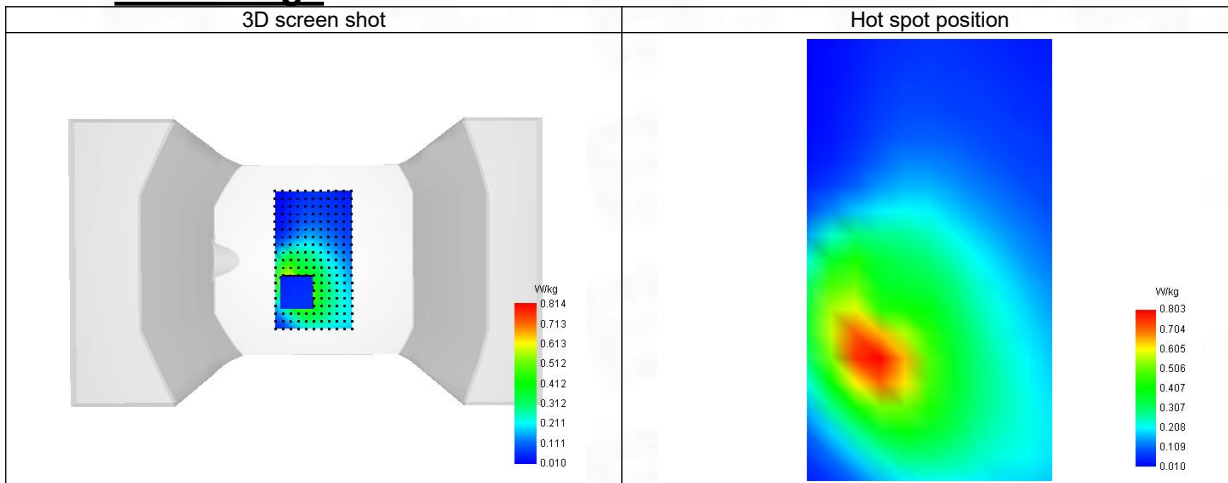
SAR 10g (W/Kg)	0.443
SAR 1g (W/Kg)	0.712
Variation (%)	-0.700
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	59.557459

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.232	0.814	0.485	0.306	0.198	0.130	0.088



F. 3D Image



4-Body with back position in dist. 0mm on Channel 4233 in WCDMA Band 5

SAR Measurement at Band 5 (850) (Body, Validation Plane)

Date of measurement: 24/10/2025

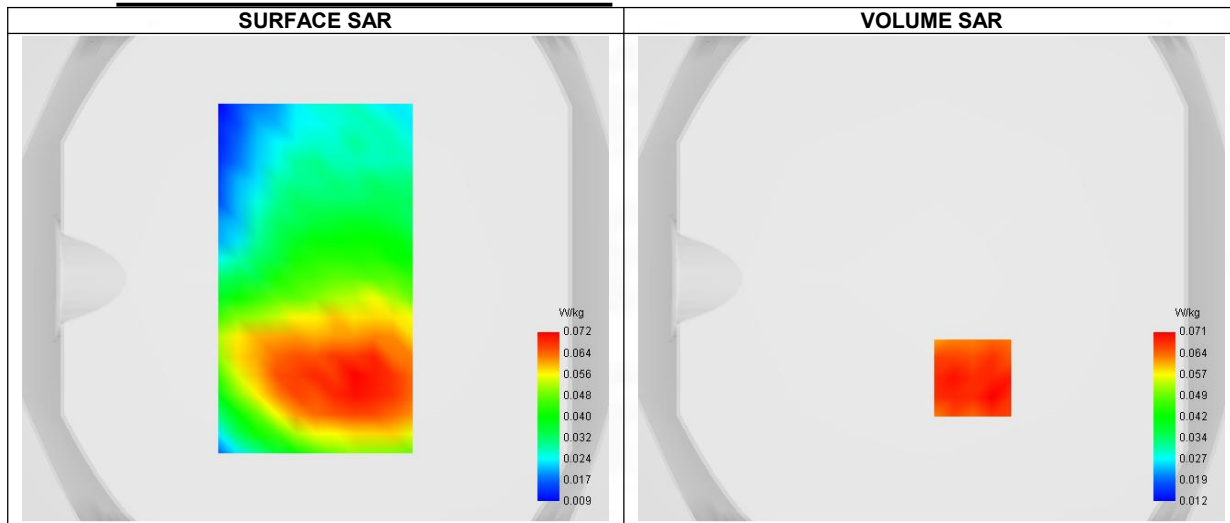
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 5 (850)
Channels/Frequency	Higher (4233)/ frequency 846.600 Mhz
Signal	WCDMA
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	846.600
Relative permittivity (real part)	41.663
Relative permittivity (imaginary part)	19.394
Conductivity (S/m)	0.924

C. SAR Surface and Volume



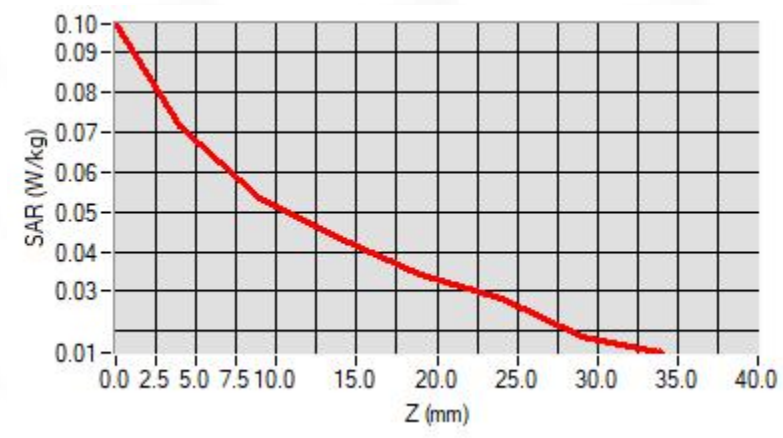
Maximum location: X=17.00, Y=-41.00 ; SAR Peak: 0.09 W/kg

D. SAR 1g & 10g

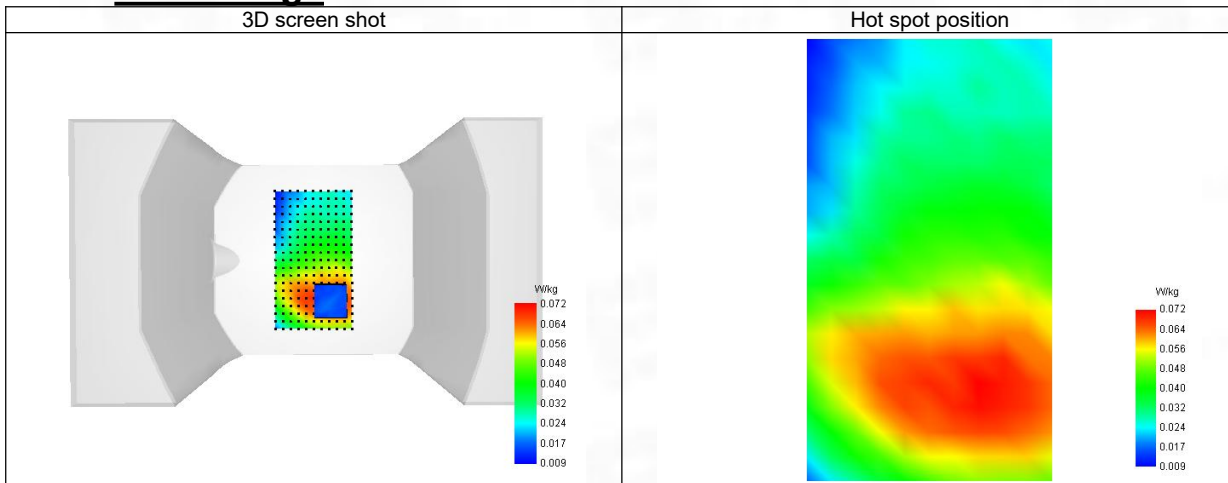
SAR 10g (W/Kg)	0.047
SAR 1g (W/Kg)	0.072
Variation (%)	0.690
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	77.577996

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.097	0.071	0.053	0.043	0.034	0.028	0.019



F. 3D Image



5-Body with back position in dist. 0mm on Channel 19100 in LTE band 2

SAR Measurement at LTE band 2 (Body, Validation Plane)

Date of measurement: 4/11/2025

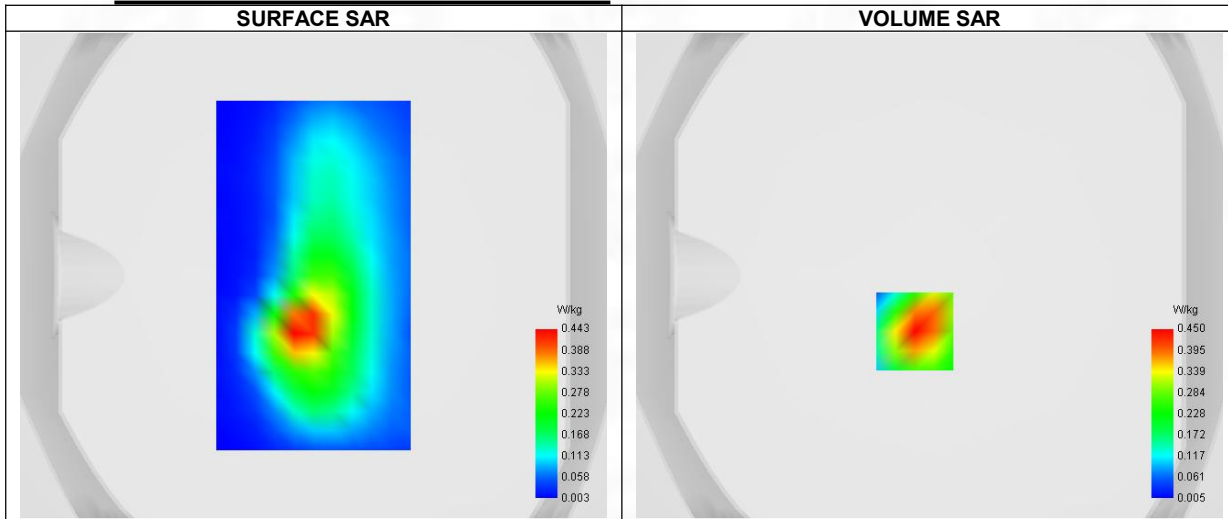
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.31
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 2
Channels/Frequency	Higher (19100)/ frequency 1900.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	49
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1899.910
Relative permittivity (real part)	39.881
Relative permittivity (imaginary part)	13.640
Conductivity (S/m)	1.438

C. SAR Surface and Volume



D. SAR 1g & 10g

SAR 10g (W/Kg)	0.229
SAR 1g (W/Kg)	0.423
Variation (%)	2.330
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	57.425729

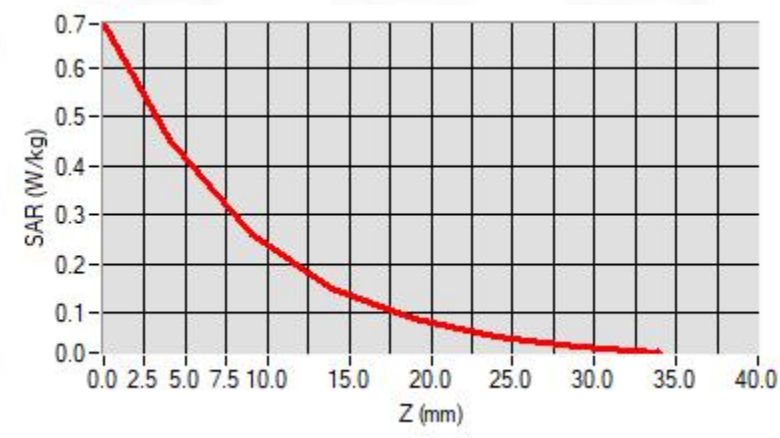
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.690	0.450	0.259	0.148	0.087	0.051	0.030

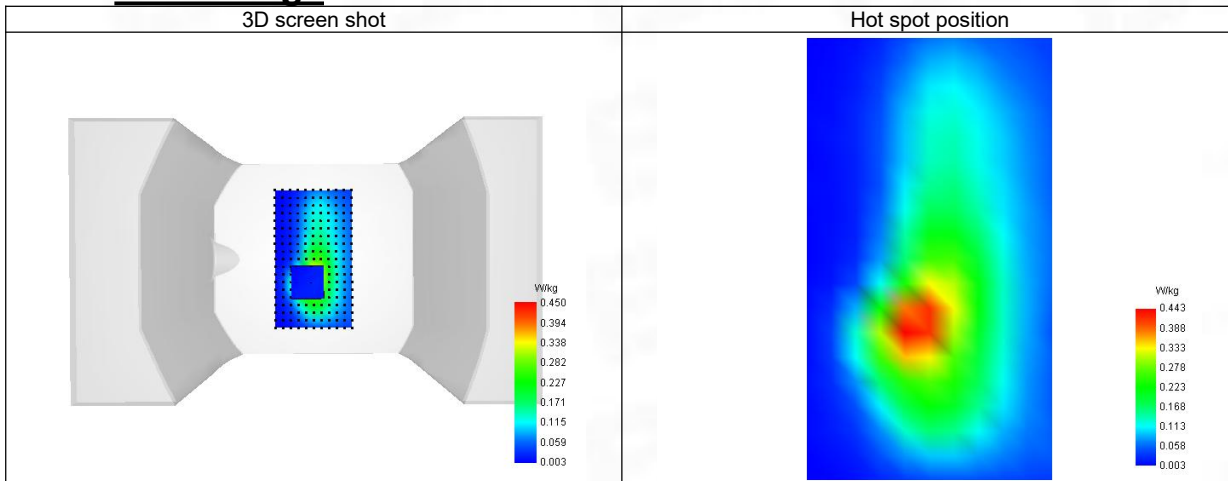
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F. 3D Image



6-Body with back position in dist. 0mm on Channel 20175 in LTE band 4

SAR Measurement at LTE band 4 (Body, Validation Plane)

Date of measurement: 25/10/2025

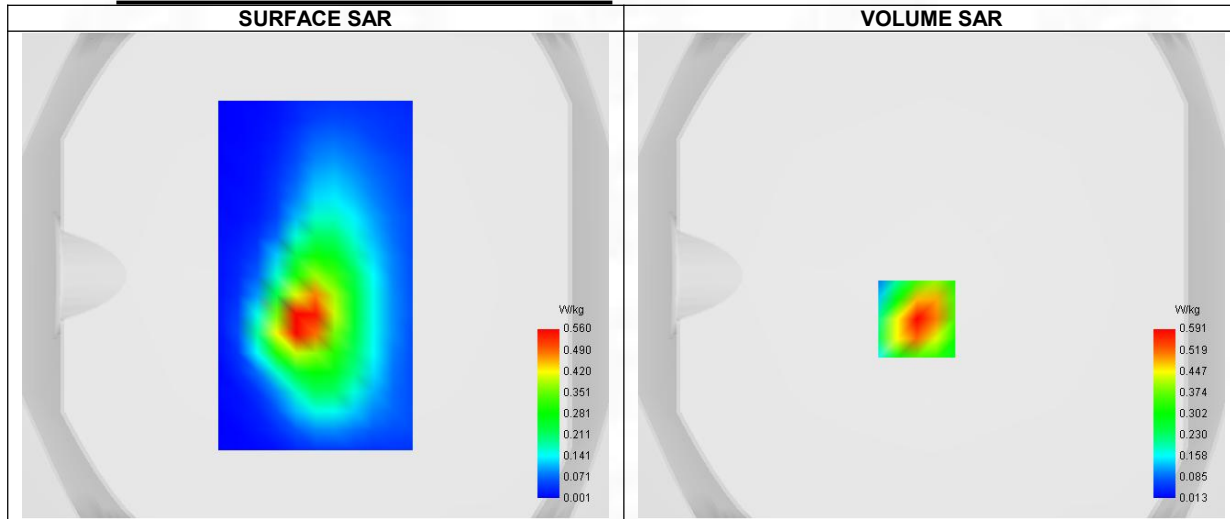
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Channels/Frequency	Higher (20300)/ frequency 1745.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	49
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1744.910
Relative permittivity (real part)	40.165
Relative permittivity (imaginary part)	14.915
Conductivity (S/m)	1.383

C. SAR Surface and Volume



Maximum location: X=-6.00, Y=-18.00 ; SAR Peak: 0.93 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.296
SAR 1g (W/Kg)	0.557
Variation (%)	-3.470
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.770461

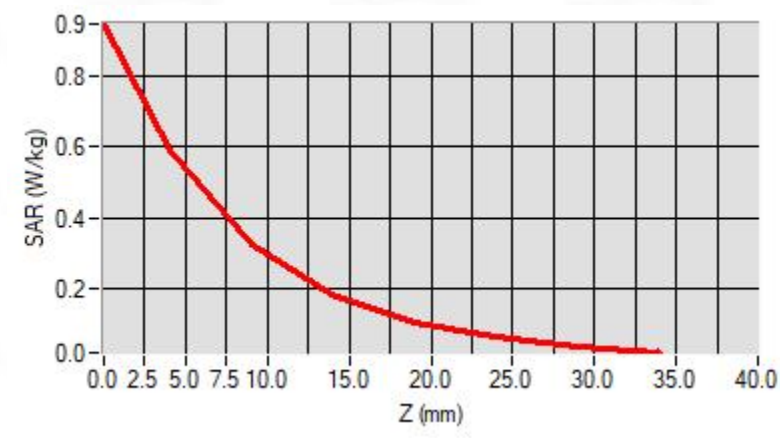
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.945	0.591	0.324	0.187	0.109	0.067	0.037

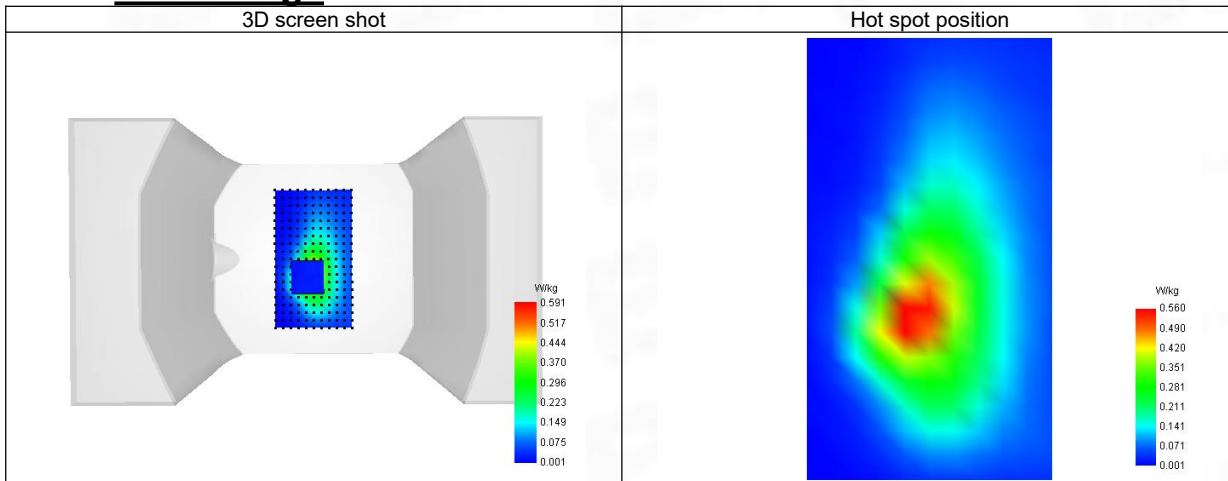
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F. 3D Image



7-Body with back position in dist. 0mm on Channel 20450 in LTE band 5

SAR Measurement at LTE band 5 (Body, Validation Plane)

Date of measurement: 24/10/2025

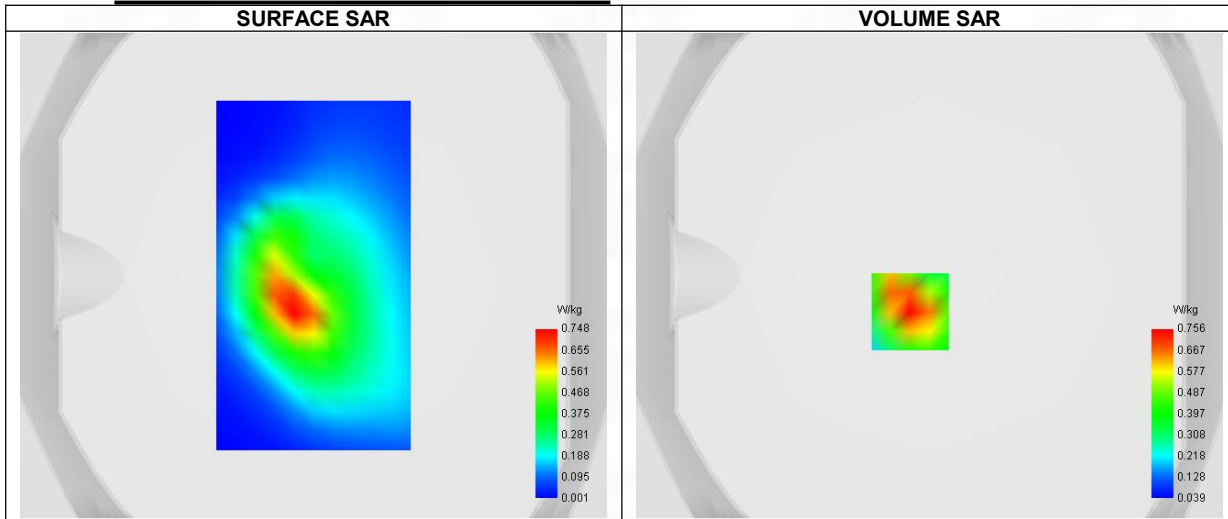
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Channels/Frequency	Lower (20450)/ frequency 829.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	29
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	829.810
Relative permittivity (real part)	41.708
Relative permittivity (imaginary part)	19.568
Conductivity (S/m)	0.917

C. SAR Surface and Volume



Maximum location: X=-8.00, Y=-15.00 ; SAR Peak: 1.15 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.405
SAR 1g (W/Kg)	0.714
Variation (%)	-0.010
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.541770

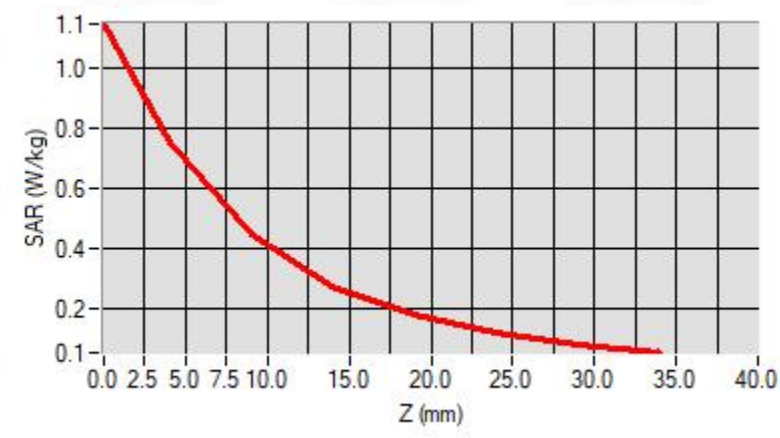
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.149	0.756	0.450	0.277	0.182	0.120	0.079

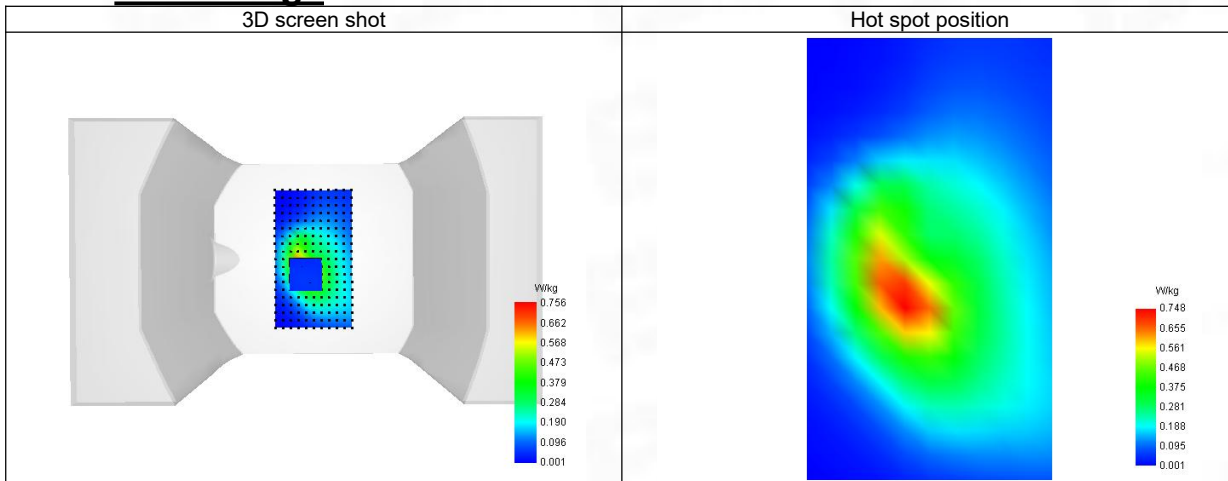
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F. 3D Image



8-Body with back position in dist. 0mm on Channel 23095 in LTE band 12

SAR Measurement at LTE band 12 (Body, Validation Plane)

Date of measurement: 22/10/2025

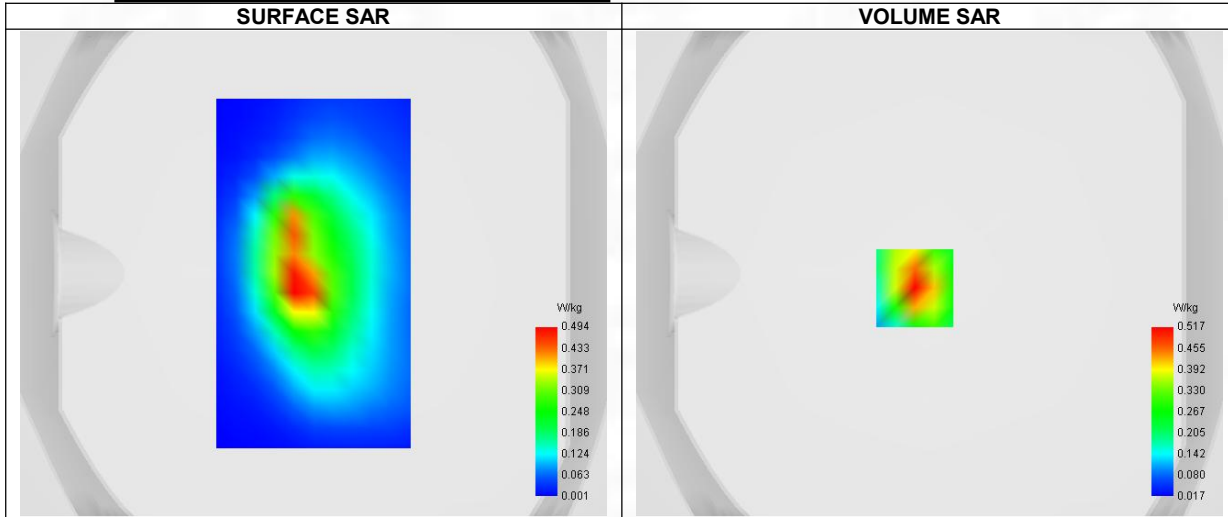
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Channels/Frequency	Middle (23095)/ frequency 707.500 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	5
RB size	20

B. Permittivity

Middle TX Frequency (MHz)	705.700
Relative permittivity (real part)	42.338
Relative permittivity (imaginary part)	22.332
Conductivity (S/m)	0.894

C. SAR Surface and Volume



D. SAR 1g & 10g

SAR 10g (W/Kg)	0.255
SAR 1g (W/Kg)	0.482
Variation (%)	-0.960
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.204202

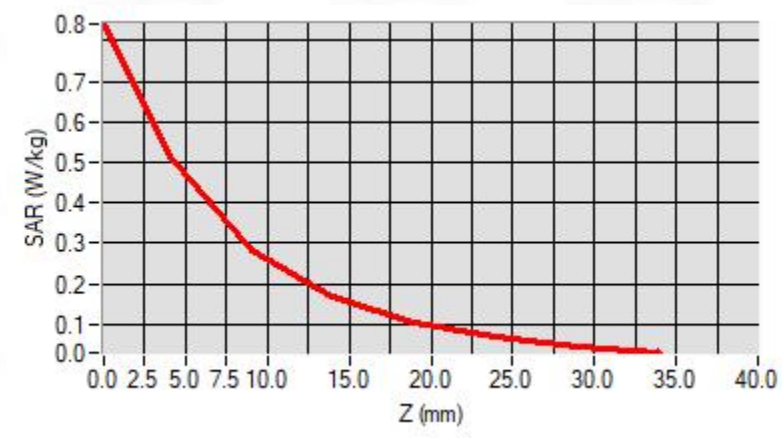
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.841	0.517	0.280	0.168	0.105	0.069	0.044

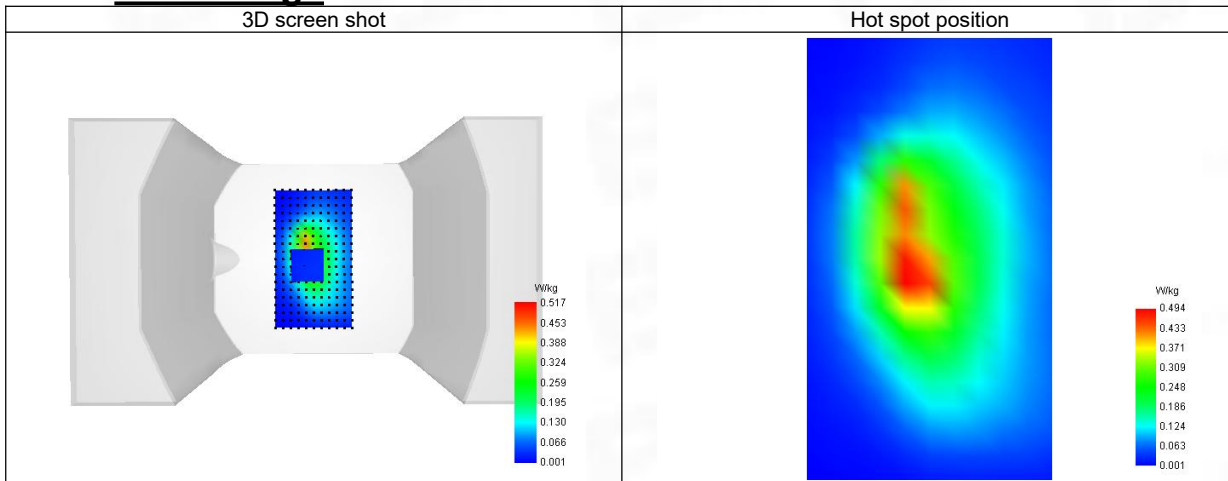
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F. 3D Image



9-Body with back position in dist. 0mm on Channel 23230 in LTE band 13

SAR Measurement at LTE band 13 (Body, Validation Plane)

Date of measurement: 22/10/2025

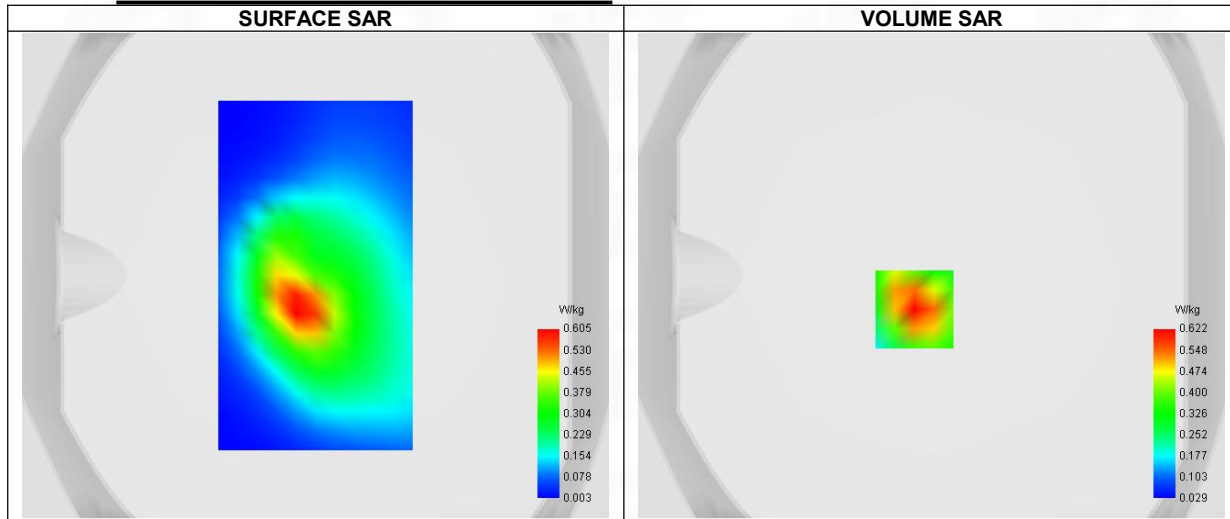
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Channels/Frequency	Middle (23230)/ frequency 782.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	24
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	781.910
Relative permittivity (real part)	41.951
Relative permittivity (imaginary part)	20.634
Conductivity (S/m)	0.908

C. SAR Surface and Volume



D. SAR 1g & 10g

SAR 10g (W/Kg)	0.337
SAR 1g (W/Kg)	0.587
Variation (%)	-1.240
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.888998

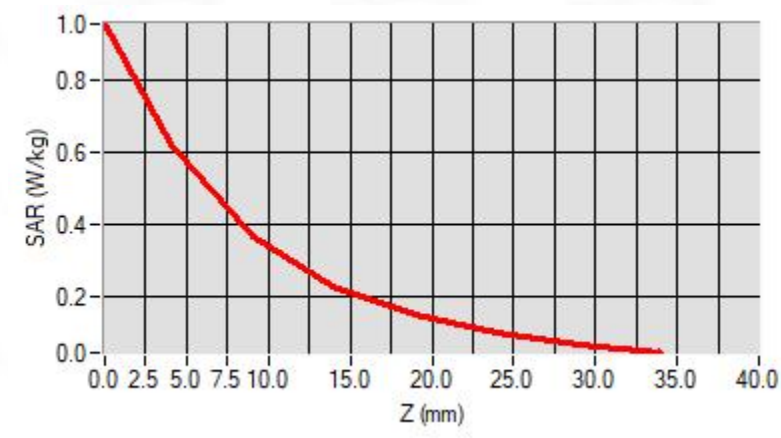
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.953	0.622	0.366	0.230	0.149	0.101	0.067

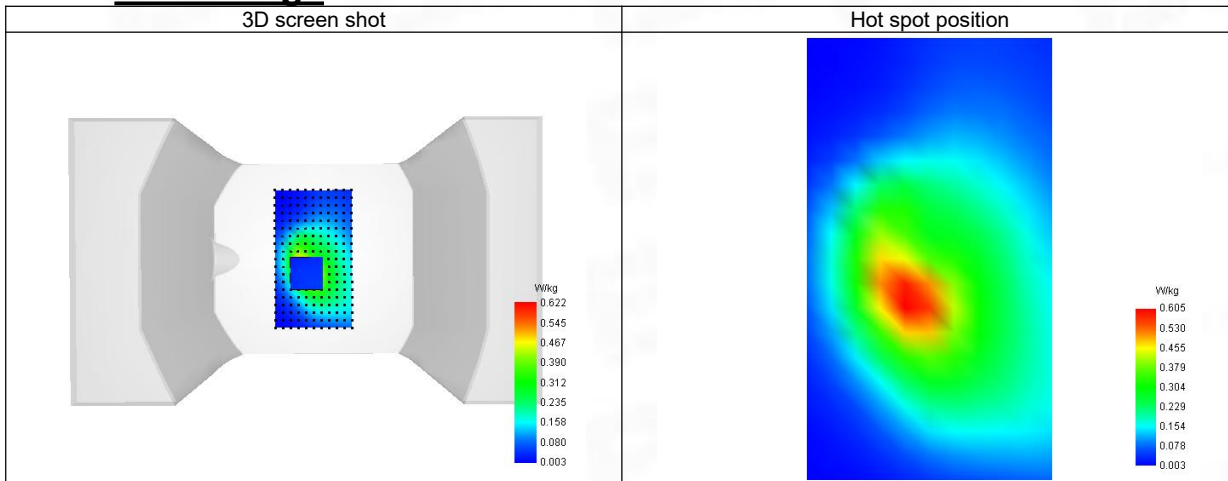
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F. 3D Image



10-Body with back position in dist. 0mm on Channel 23790 in LTE band 17

SAR Measurement at LTE band 17 (Body, Validation Plane)

Date of measurement: 22/10/2025

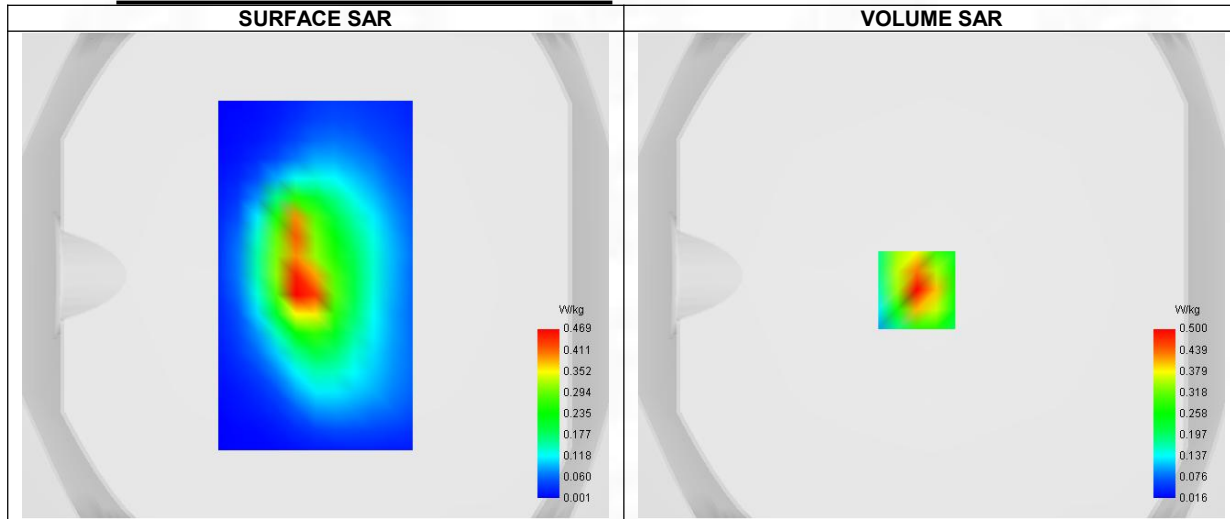
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 17
Channels/Frequency	Middle (23790)/ frequency 710.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	5
RB size	20

B. Permittivity

Middle TX Frequency (MHz)	708.200
Relative permittivity (real part)	42.325
Relative permittivity (imaginary part)	22.276
Conductivity (S/m)	0.894

C. SAR Surface and Volume



D. SAR 1g & 10g

SAR 10g (W/Kg)	0.244
SAR 1g (W/Kg)	0.463
Variation (%)	2.600
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	53.836652

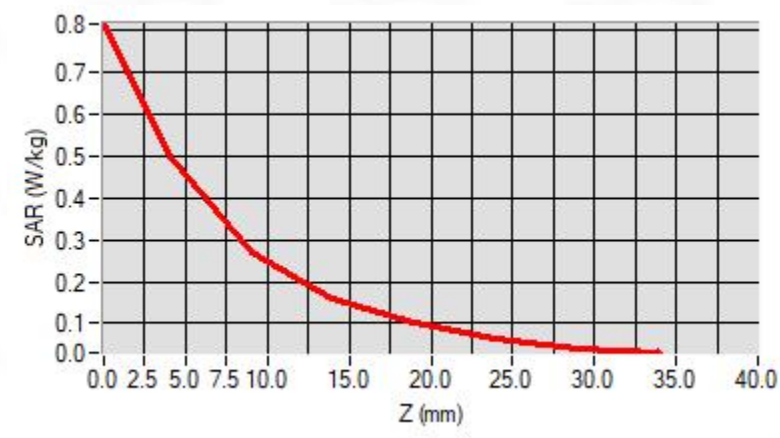
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.817	0.500	0.269	0.160	0.101	0.065	0.042

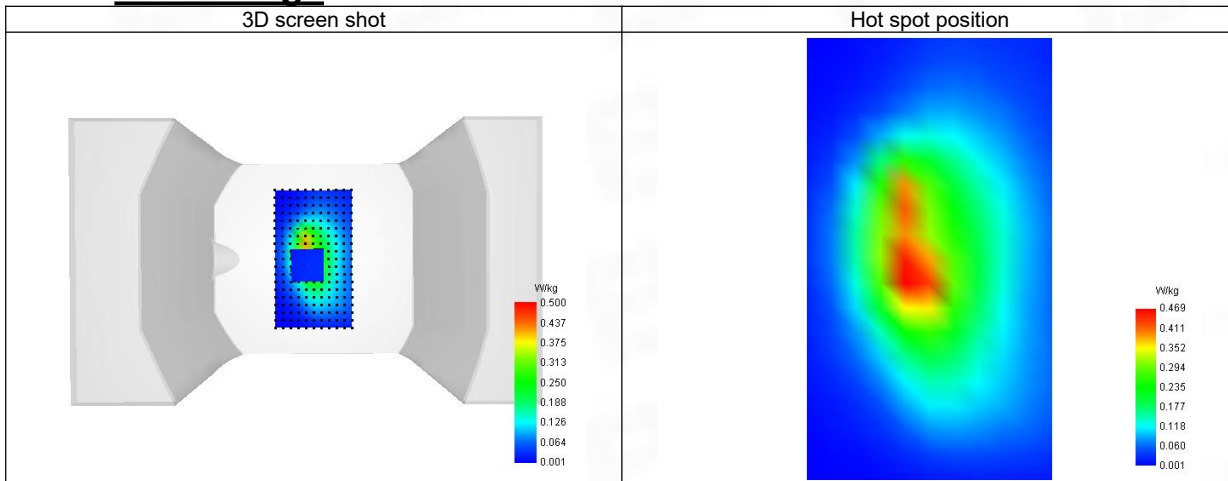
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F. 3D Image



11-Body with back position in dist. 0mm on Channel 38150 in LTE band 38

SAR Measurement at LTE band 38 (Body, Validation Plane)

Date of measurement: 28/10/2025

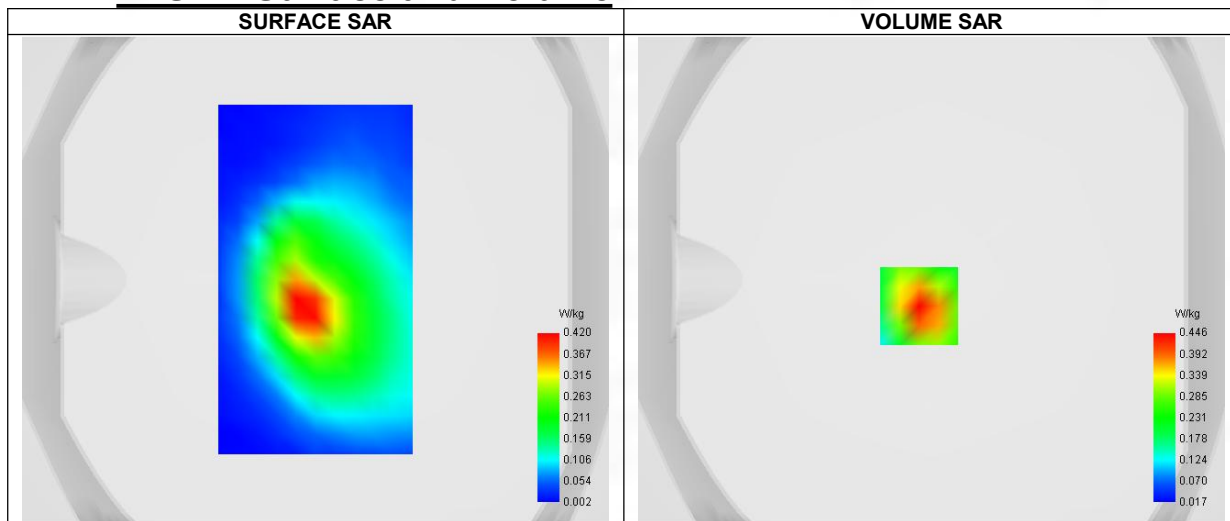
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.27
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 38
Channels/Frequency	Higher (38150)/ frequency 2610.000 Mhz
Signal	LTE TDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	49
RB size	1
Subframe configuration	0
Special subframe configuration	0
Cyclic prefix	Normal
Duty Cycle (%)	0.61

B. Permittivity

Middle TX Frequency (MHz)	2609.910
Relative permittivity (real part)	38.581
Relative permittivity (imaginary part)	12.696
Conductivity (S/m)	1.938

C. SAR Surface and Volume



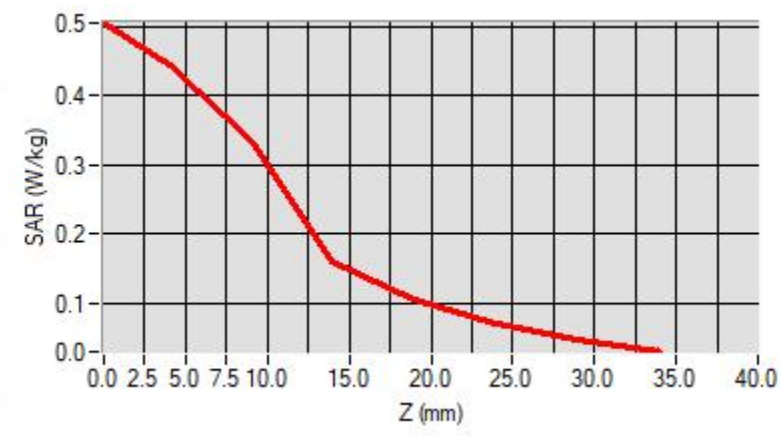
Maximum location: X=-5.00, Y=-11.00 ; SAR Peak: 0.64 W/kg

D. SAR 1g & 10g

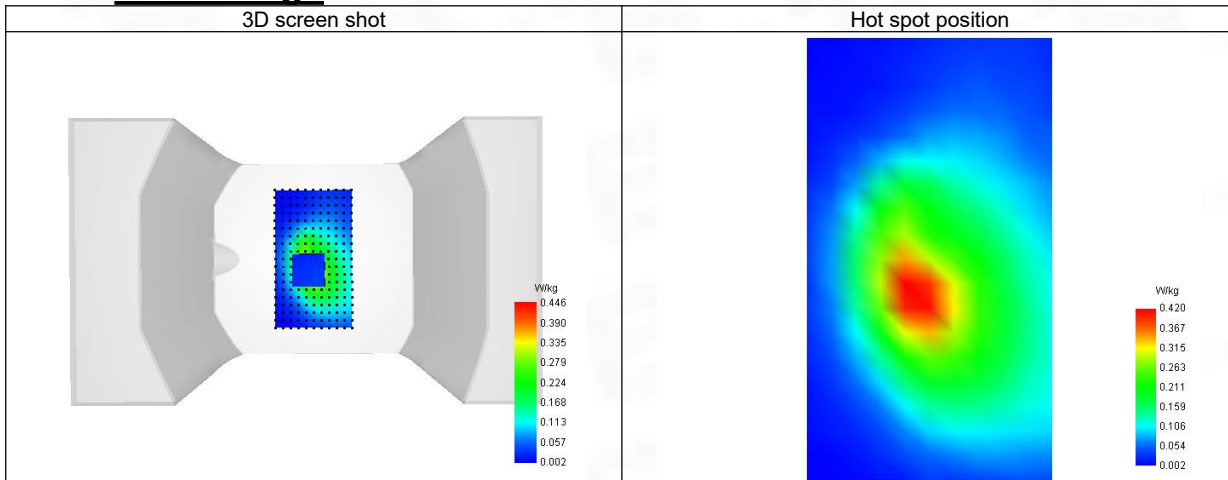
SAR 10g (W/Kg)	0.232
SAR 1g (W/Kg)	0.403
Variation (%)	-3.110
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	74.849172

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.505	0.446	0.334	0.160	0.105	0.071	0.047



F. 3D Image



12-Body with back position in dist. 0mm on Channel 38775 in LTE band 40a

SAR Measurement at LTE band 40 (Body, Validation Plane)

Date of measurement: 28/10/2025

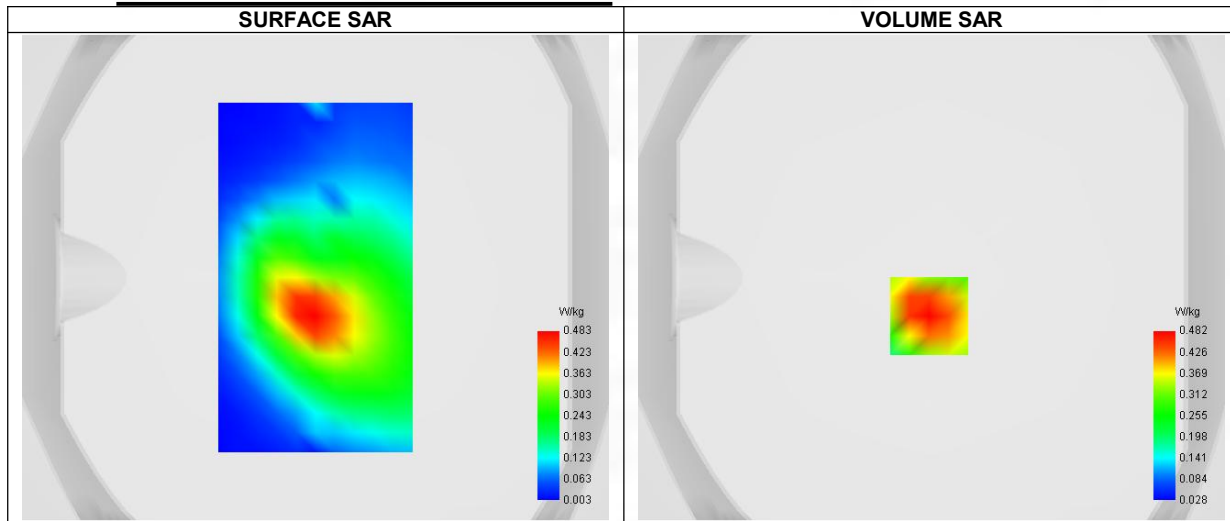
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.38
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 40
Channels/Frequency	Lower (38775)/ frequency 2312.500 Mhz
Signal	LTE TDD
Cell Bandwidth	15 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1
Subframe configuration	0
Special subframe configuration	0
Cyclic prefix	Normal
Duty Cycle (%)	0.61

B. Permittivity

Middle TX Frequency (MHz)	2305.840
Relative permittivity (real part)	38.229
Relative permittivity (imaginary part)	13.649
Conductivity (S/m)	1.701

C. SAR Surface and Volume



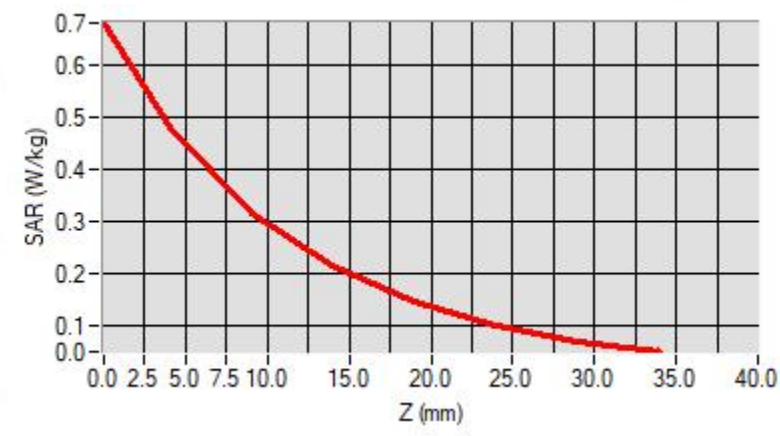
Maximum location: X=-1.00, Y=-16.00 ; SAR Peak: 0.70 W/kg

D. SAR 1g & 10g

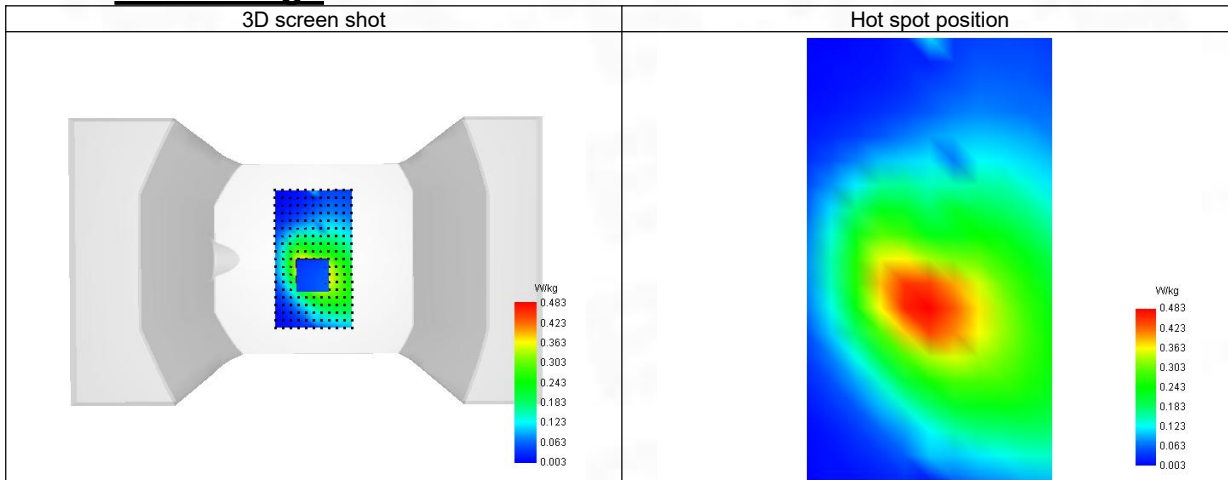
SAR 10g (W/Kg)	0.285
SAR 1g (W/Kg)	0.466
Variation (%)	-2.360
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	65.181568

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.682	0.482	0.314	0.214	0.144	0.100	0.069



F. 3D Image



13-Body with back position in dist. 0mm on Channel 39175 in LTE band 40b

SAR Measurement at LTE band 40 (Body, Validation Plane)

Date of measurement: 28/10/2025

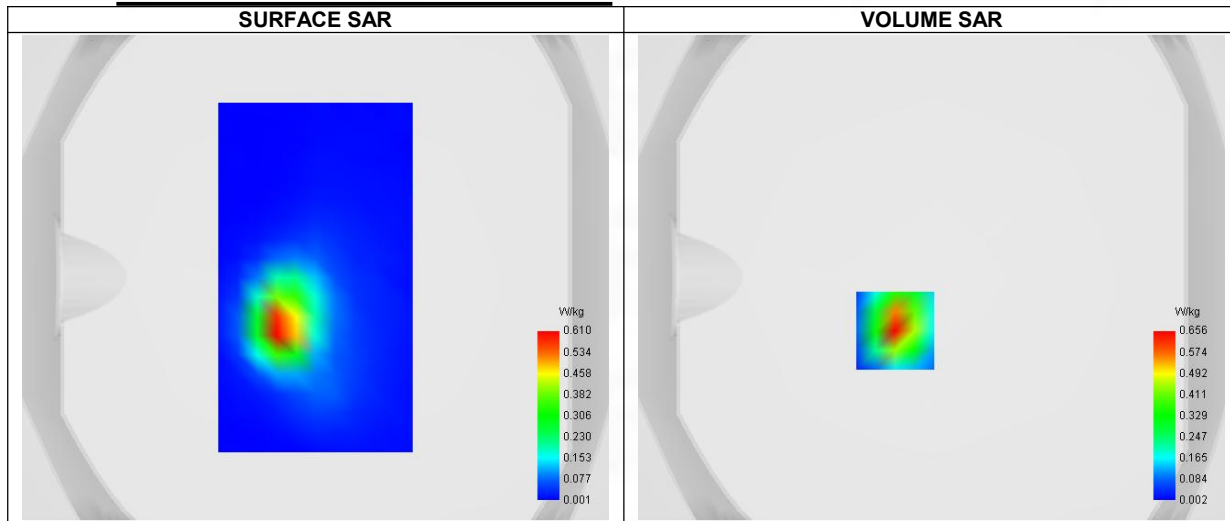
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.38
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 40
Channels/Frequency	Middle (39175)/ frequency 2352.500 Mhz
Signal	LTE TDD
Cell Bandwidth	15 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1
Subframe configuration	0
Special subframe configuration	0
Cyclic prefix	Normal
Duty Cycle (%)	0.61

B. Permittivity

Middle TX Frequency (MHz)	2352.160
Relative permittivity (real part)	38.040
Relative permittivity (imaginary part)	13.651
Conductivity (S/m)	1.731

C. SAR Surface and Volume



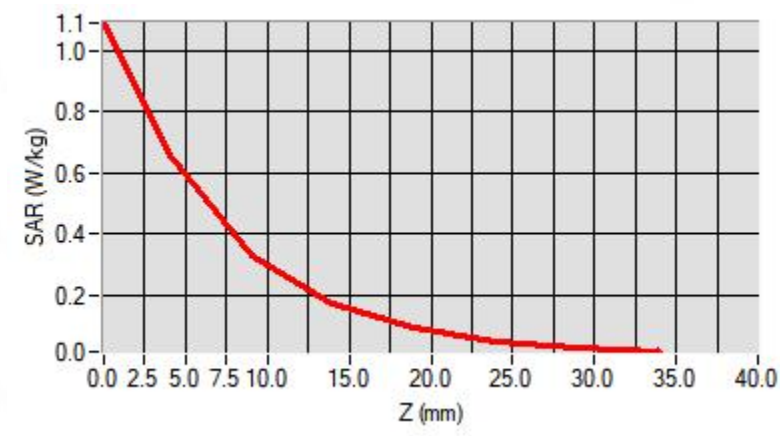
Maximum location: X=-15.00, Y=-22.00 ; SAR Peak: 1.10 W/kg

D. SAR 1g & 10g

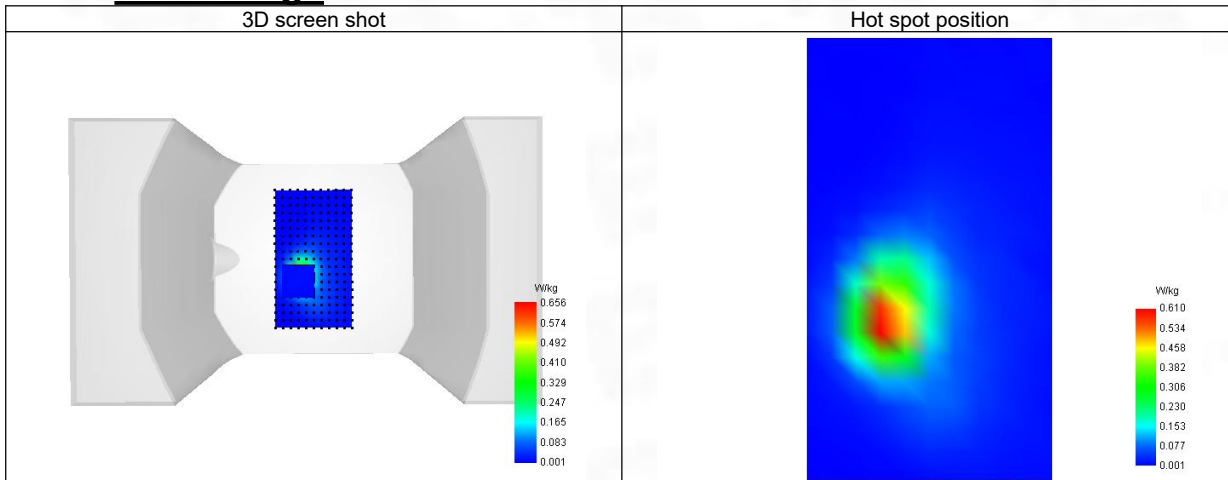
SAR 10g (W/Kg)	0.259
SAR 1g (W/Kg)	0.592
Variation (%)	-3.290
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	50.548052

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.090	0.656	0.332	0.172	0.090	0.050	0.027



F. 3D Image



14-Body with back position in dist. 0mm on Channel 39750 in LTE band 41

SAR Measurement at LTE band 41 (Body, Validation Plane)

Date of measurement: 28/10/2025

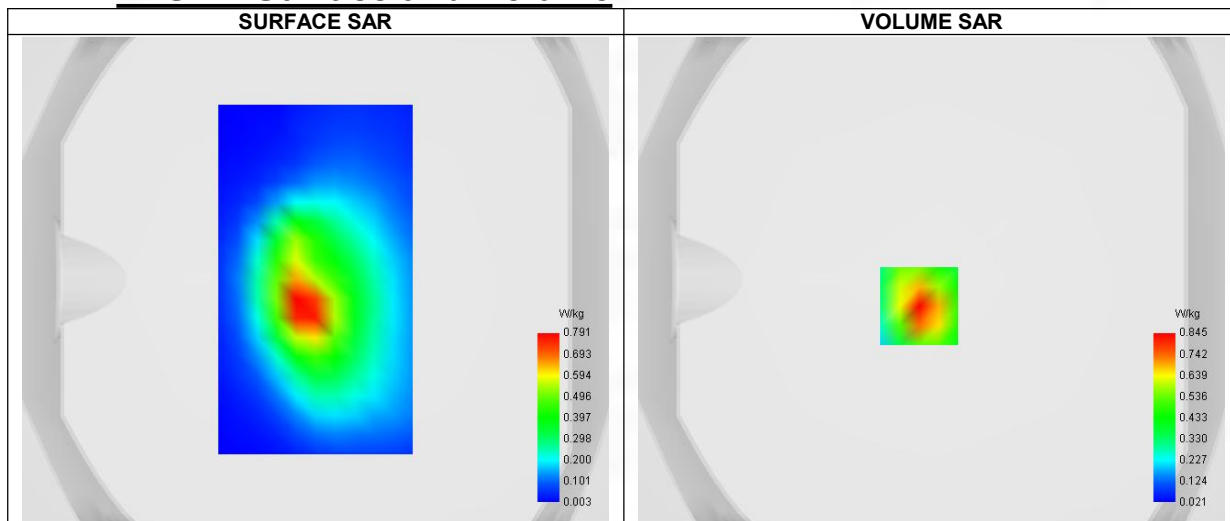
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.27
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Channels/Frequency	Lower (39750)/ frequency 2506.000 Mhz
Signal	LTE TDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	50
RB size	1
Subframe configuration	0
Special subframe configuration	0
Cyclic prefix	Normal
Duty Cycle (%)	0.61

B. Permittivity

Middle TX Frequency (MHz)	2506.090
Relative permittivity (real part)	37.997
Relative permittivity (imaginary part)	13.290
Conductivity (S/m)	1.844

C. SAR Surface and Volume



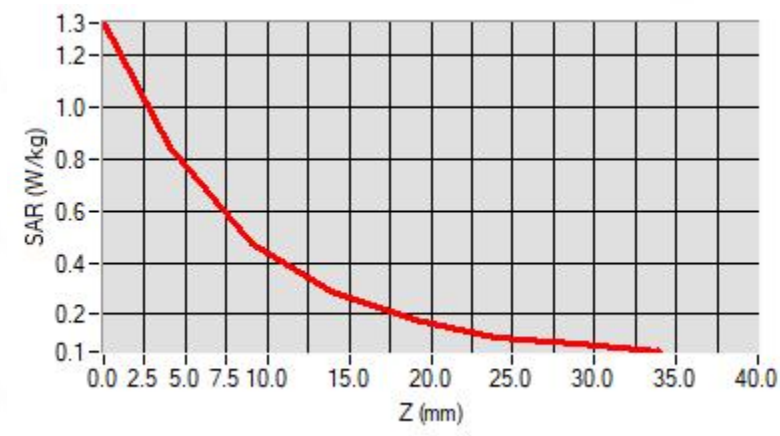
Maximum location: X=-5.00, Y=-11.00 ; SAR Peak: 1.32 W/kg

D. SAR 1g & 10g

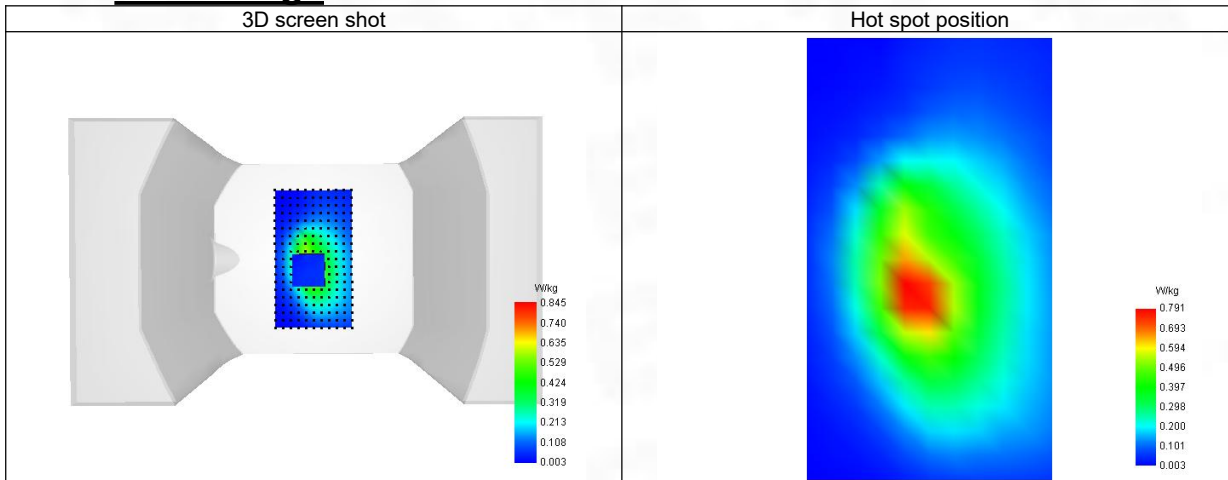
SAR 10g (W/Kg)	0.429
SAR 1g (W/Kg)	0.768
Variation (%)	1.940
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	55.734868

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.326	0.845	0.471	0.287	0.182	0.112	0.090



F. 3D Image



15-Body with back position in dist. 0mm on Channel 6 in IEEE 802.11b ISM

SAR Measurement at ISM (Body, Validation Plane)

Date of measurement: 28/10/2025

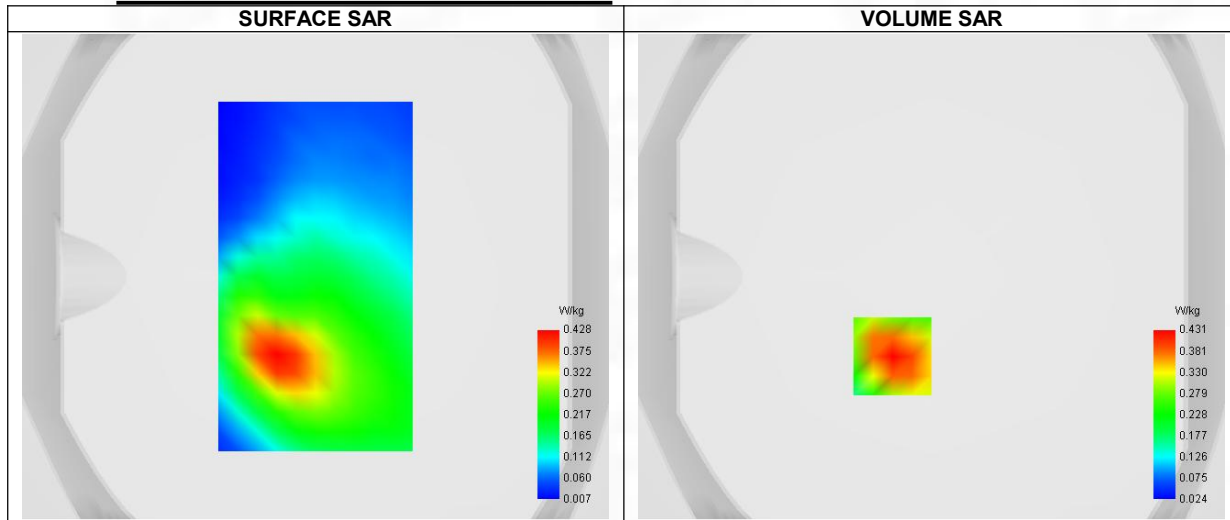
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	ISM
Channels/Frequency	Middle (6)/ frequency 2437.000 Mhz
Signal	IEEE 802.11 b

B. Permittivity

Middle TX Frequency (MHz)	2437.000
Relative permittivity (real part)	37.695
Relative permittivity (imaginary part)	13.653
Conductivity (S/m)	1.786

C. SAR Surface and Volume

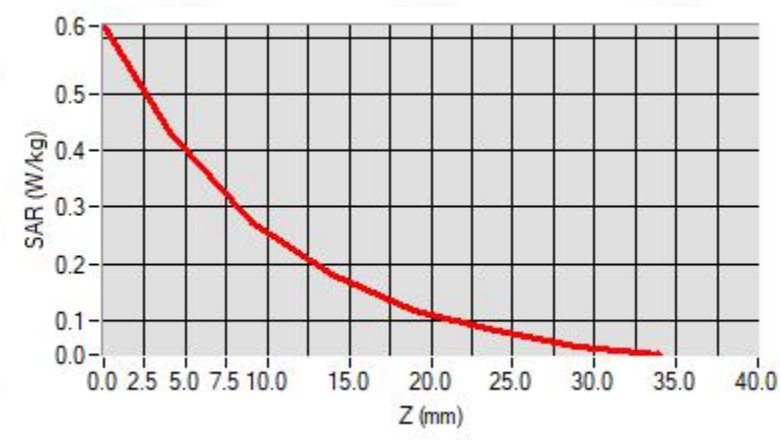


D. SAR 1g & 10g

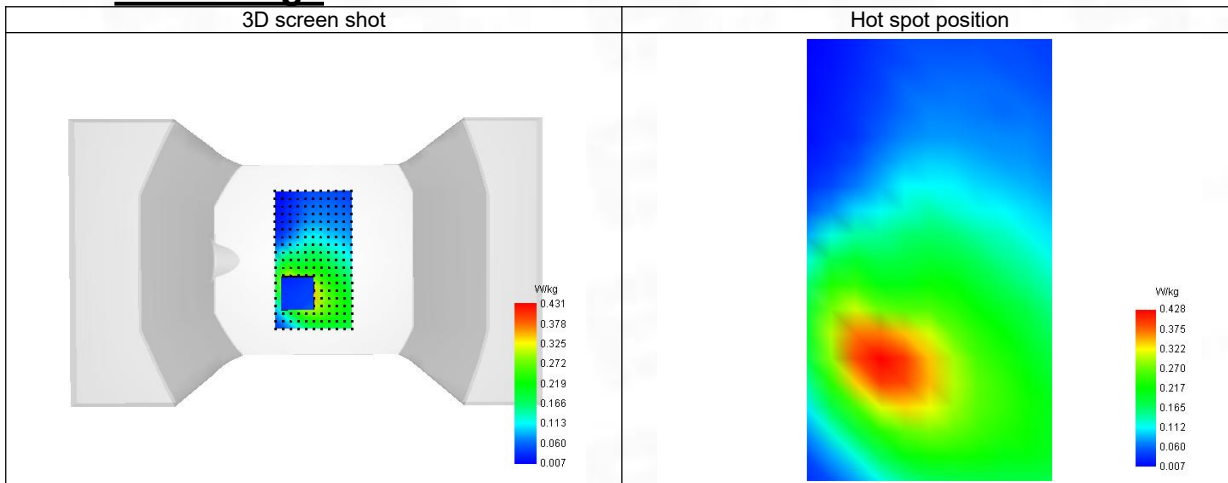
SAR 10g (W/Kg)	0.247
SAR 1g (W/Kg)	0.410
Variation (%)	-0.940
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	63.568056

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.620	0.431	0.274	0.181	0.118	0.081	0.055



F. 3D Image



16-Body with back position in dist. 0mm on Channel 36 in IEEE 802.11a U-NII

SAR Measurement at U-NII-1 (Body, Validation Plane)

Date of measurement: 5/11/2025

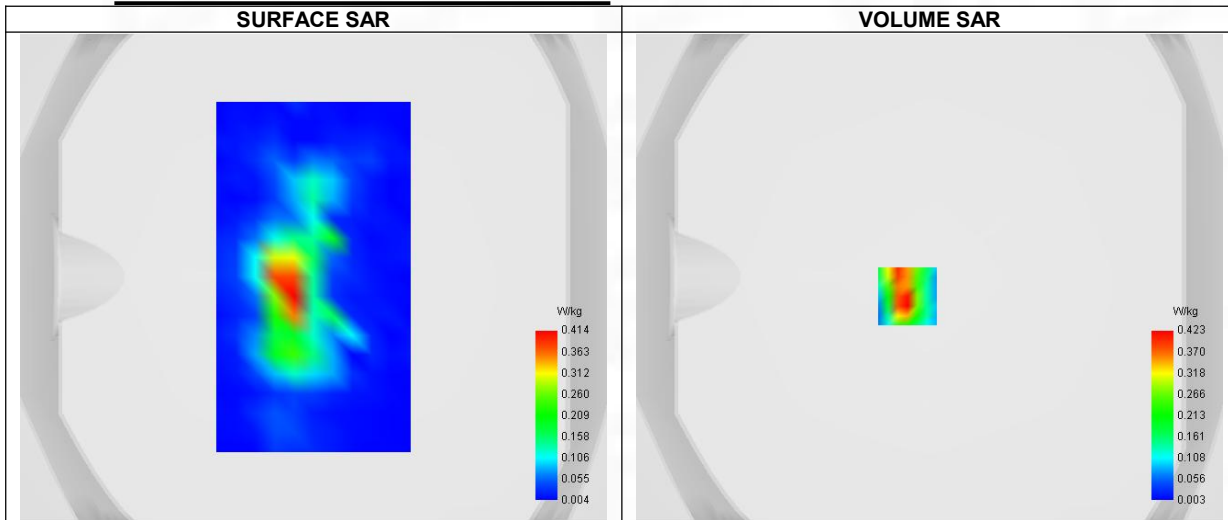
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.18
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-1
Channels/Frequency	Lower (36)/ frequency 5180.000 Mhz
Signal	IEEE 802.11 a

B. Permittivity

Middle TX Frequency (MHz)	5180.000
Relative permittivity (real part)	35.705
Relative permittivity (imaginary part)	16.456
Conductivity (S/m)	4.514

C. SAR Surface and Volume



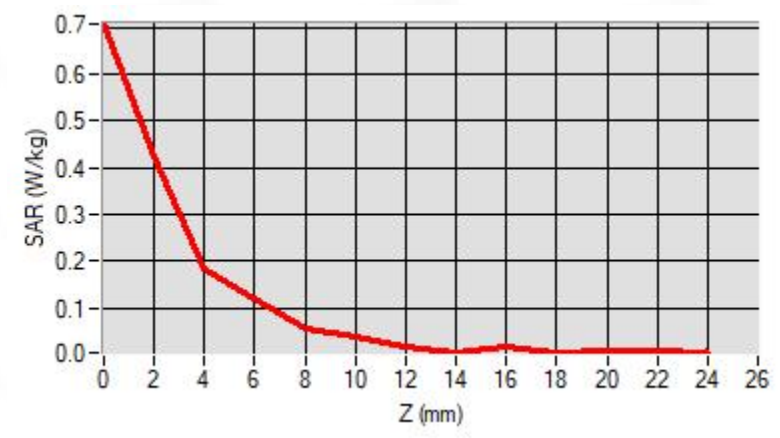
Maximum location: X=-9.00, Y=-8.00 ; SAR Peak: 0.87 W/kg

D. SAR 1g & 10g

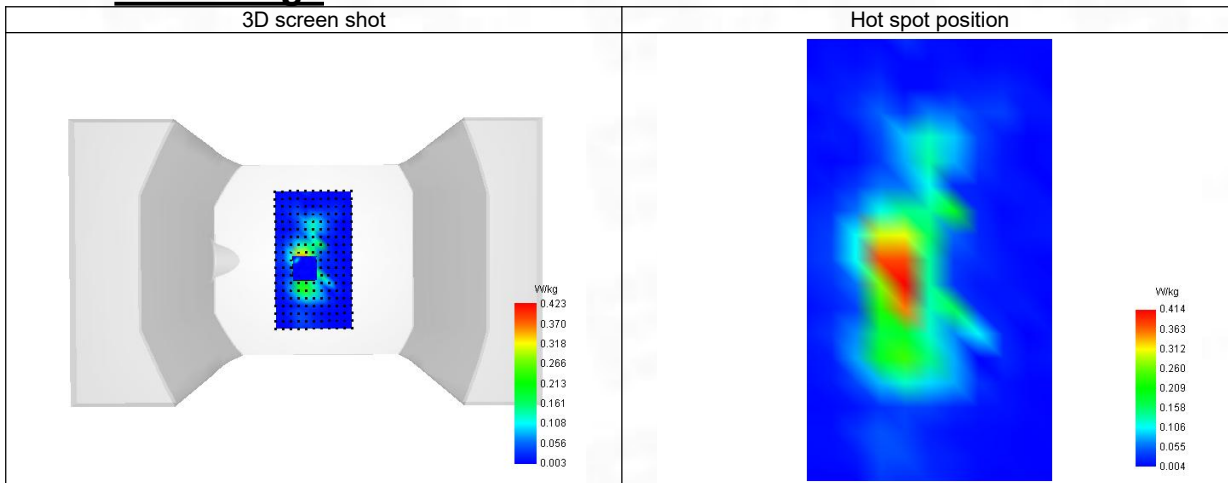
SAR 10g (W/Kg)	0.066
SAR 1g (W/Kg)	0.235
Variation (%)	-3.140
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.039137

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.708	0.423	0.186	0.121	0.057	0.037	0.018	0.005	0.015	0.005	0.007	0.006



F. 3D Image



17-Body with back position in dist. 0mm on Channel 52 in IEEE 802.11a U-NII

SAR Measurement at U-NII-2a (Body, Validation Plane)

Date of measurement: 6/11/2025

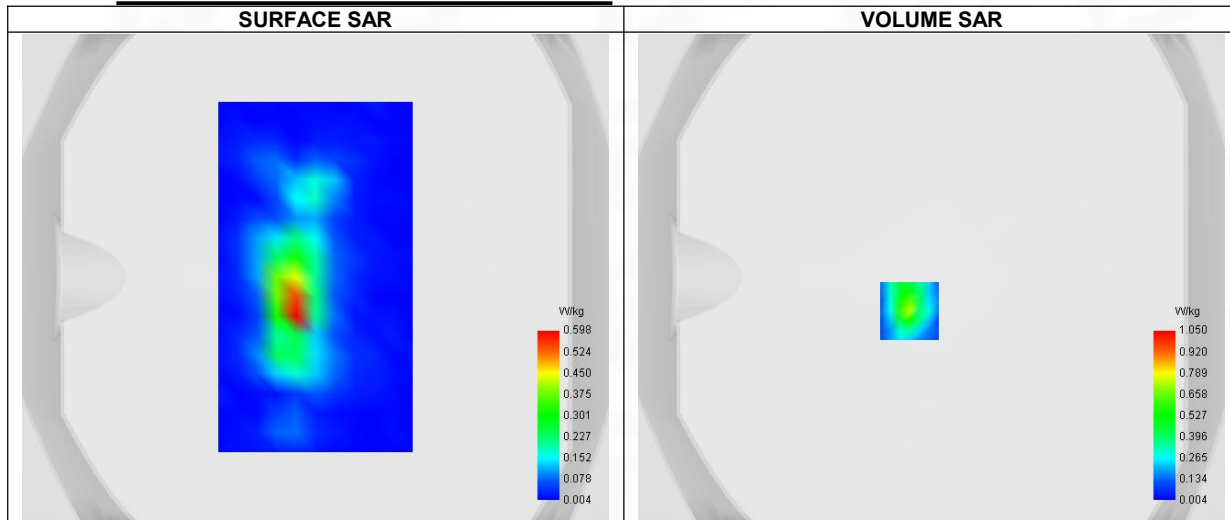
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.18
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-2a
Channels/Frequency	Lower (52)/ frequency 5260.000 Mhz
Signal	IEEE 802.11 a

B. Permittivity

Middle TX Frequency (MHz)	5260.000
Relative permittivity (real part)	35.775
Relative permittivity (imaginary part)	16.382
Conductivity (S/m)	4.633

C. SAR Surface and Volume

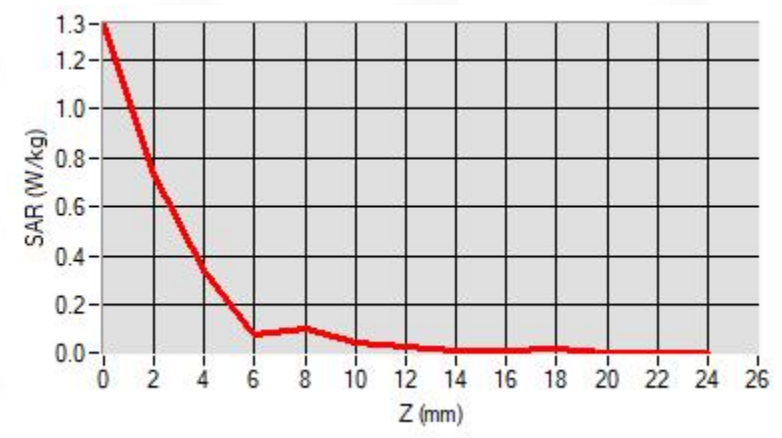


D. SAR 1g & 10g

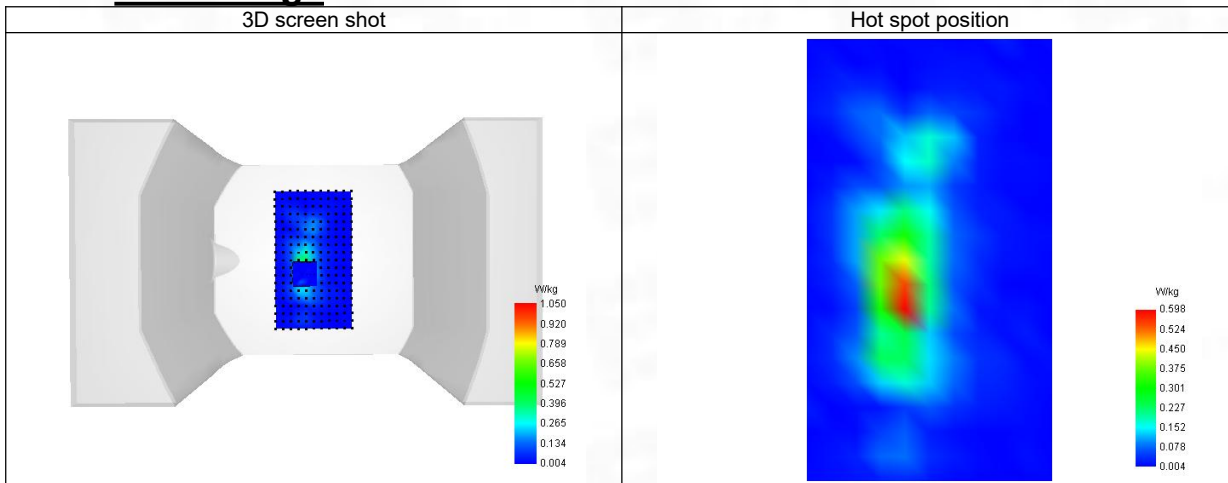
SAR 10g (W/Kg)	0.101
SAR 1g (W/Kg)	0.340
Variation (%)	3.570
Horizontal validation criteria: minimum distance (mm)	5.656854
Vertical validation criteria: SAR ratio M2/M1 (%)	46.691395

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)	1.348	0.737	0.344	0.080	0.100	0.049	0.028	0.016	0.012	0.023	0.004	0.008



F. 3D Image



18-Body with back position in dist. 0mm on Channel 100 in IEEE 802.11a U-NII

SAR Measurement at U-NII-2c (Body, Validation Plane)

Date of measurement: 7/11/2025

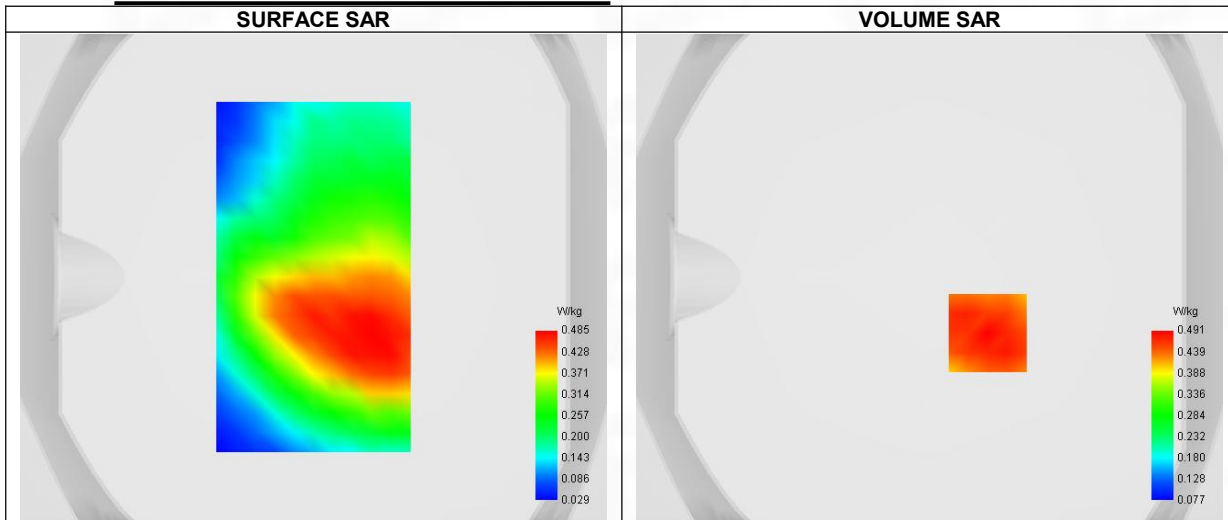
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.14
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-2c
Channels/Frequency	Lower (100)/ frequency 5500.000 Mhz
Signal	IEEE 802.11 a

B. Permittivity

Middle TX Frequency (MHz)	5500.000
Relative permittivity (real part)	35.981
Relative permittivity (imaginary part)	16.248
Conductivity (S/m)	4.964

C. SAR Surface and Volume



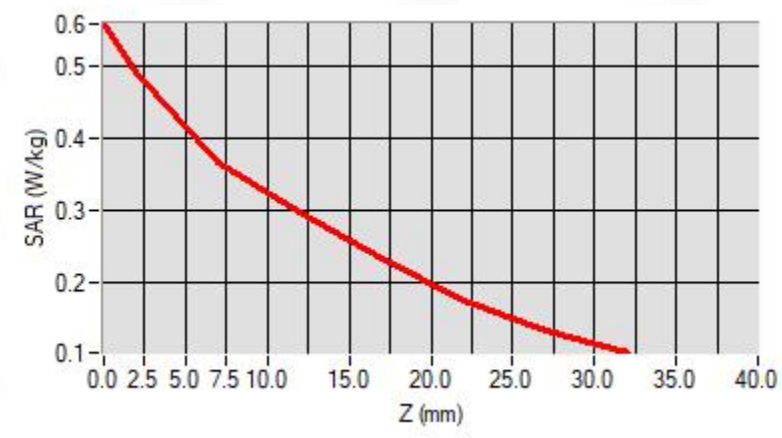
Maximum location: X=24.00, Y=-23.00 ; SAR Peak: 0.67 W/kg

D. SAR 1g & 10g

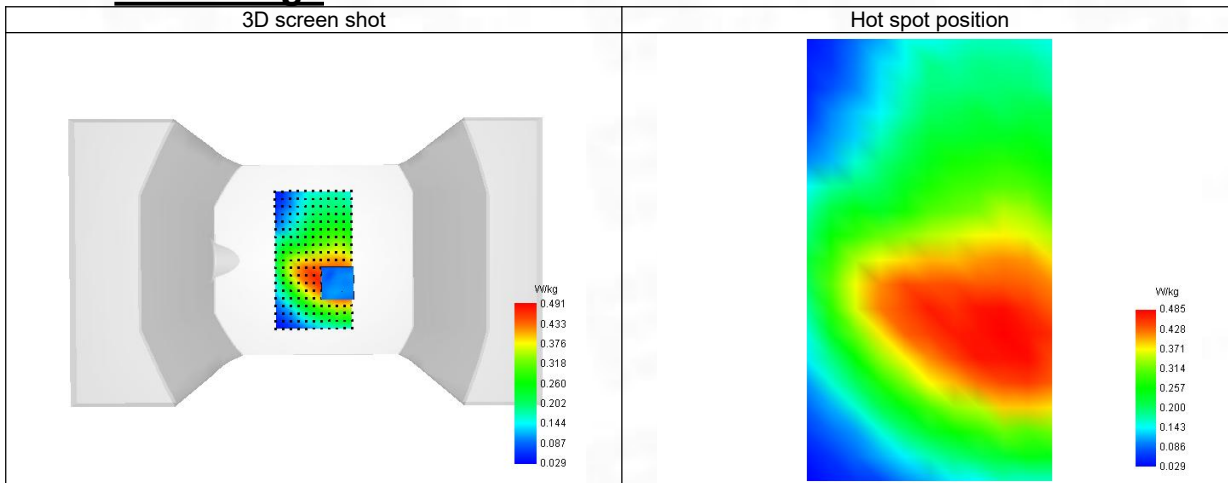
SAR 10g (W/Kg)	0.316
SAR 1g (W/Kg)	0.450
Variation (%)	2.000
Horizontal validation criteria: minimum distance (mm)	12.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	78.531073

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.602	0.531	0.417	0.358	0.284	0.214	0.183	0.152	0.121	0.095	0.083	0.072



F. 3D Image



19-Body with back position in dist. 0mm on Channel 165 in IEEE 802.11a U-NII

SAR Measurement at U-NII-3 (Body, Validation Plane)

Date of measurement: 8/11/2025

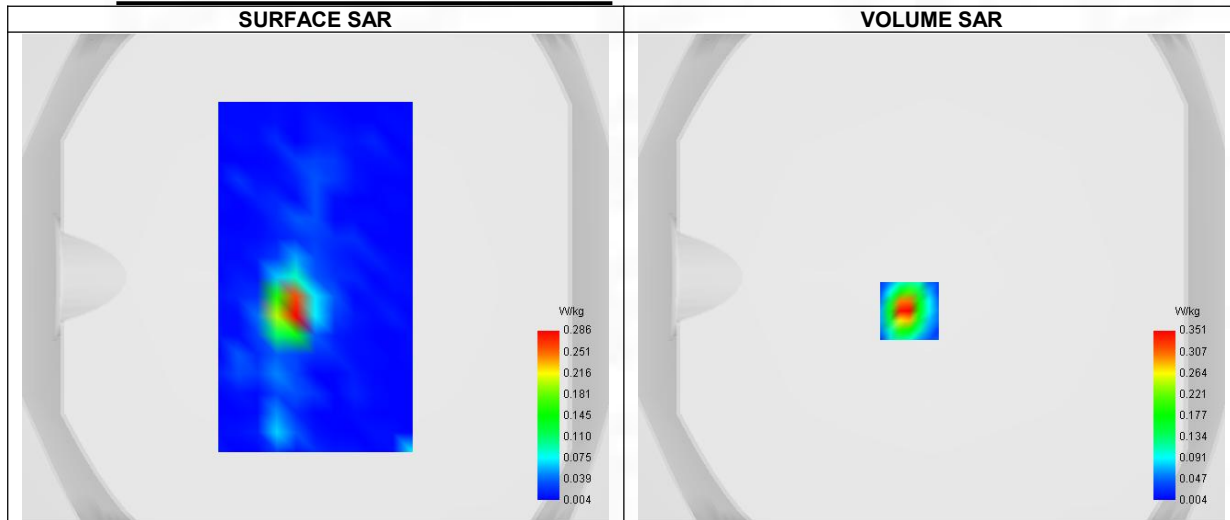
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.11
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-3
Channels/Frequency	Higher (165)/ frequency 5825.000 Mhz
Signal	IEEE 802.11 a

B. Permittivity

Middle TX Frequency (MHz)	5825.000
Relative permittivity (real part)	35.532
Relative permittivity (imaginary part)	16.598
Conductivity (S/m)	5.364

C. SAR Surface and Volume



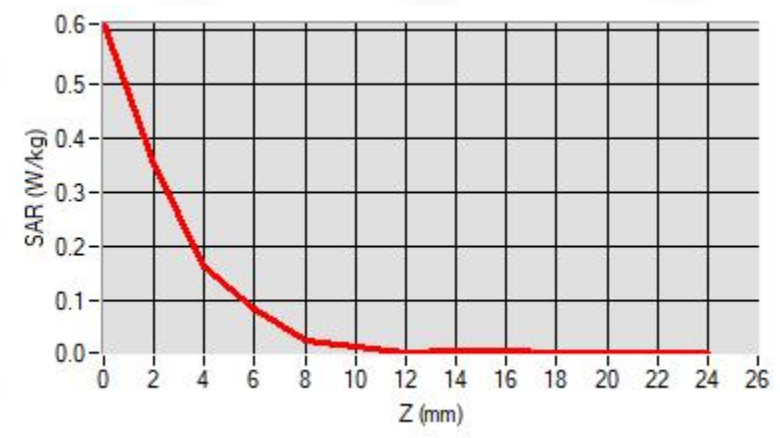
Maximum location: X=-9.00, Y=-14.00 ; SAR Peak: 0.69 W/kg

D. SAR 1g & 10g

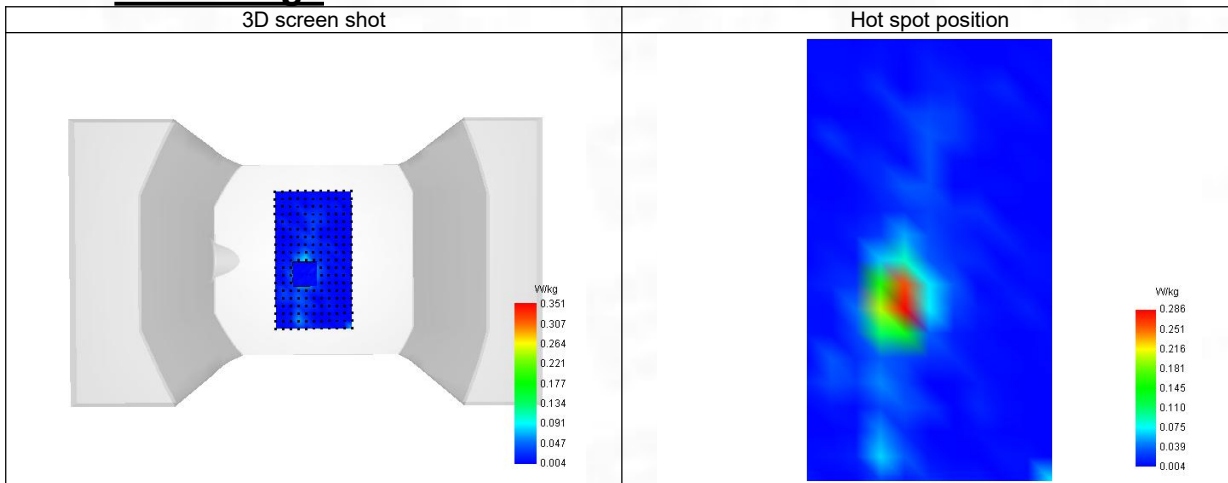
SAR 10g (W/Kg)	0.052
SAR 1g (W/Kg)	0.188
Variation (%)	1.760
Horizontal validation criteria: minimum distance (mm)	5.656854
Vertical validation criteria: SAR ratio M2/M1 (%)	47.134052

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.611	0.351	0.165	0.086	0.027	0.017	0.007	0.007	0.008	0.005	0.005	0.005



F. 3D Image



20-Body with back position in dist. 0mm on Channel 39 in Bluetooth

SAR Measurement at Bluetooth (Body, Validation Plane)

Date of measurement: 28/10/2025

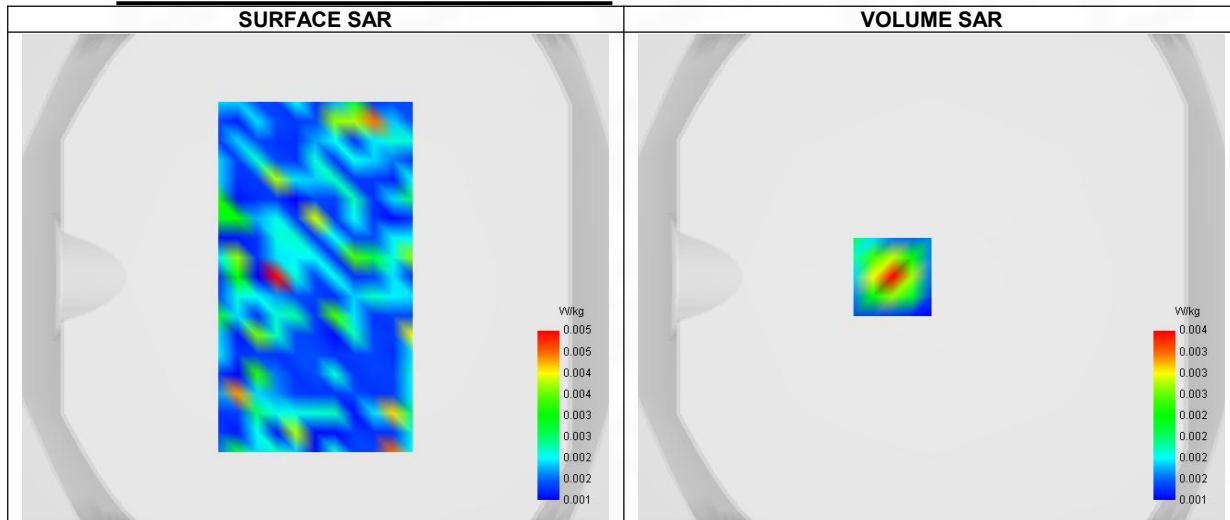
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Bluetooth
Channels/Frequency	Middle (39)/ frequency 2441.000 Mhz
Signal	Bluetooth

B. Permittivity

Middle TX Frequency (MHz)	2441.000
Relative permittivity (real part)	37.679
Relative permittivity (imaginary part)	13.653
Conductivity (S/m)	1.788

C. SAR Surface and Volume



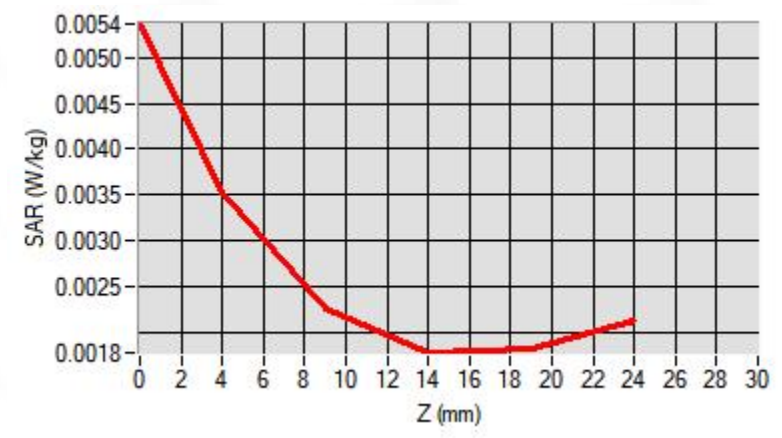
Maximum location: X=-16.00, Y=0.00 ; SAR Peak: 0.01 W/kg

D. SAR 1g & 10g

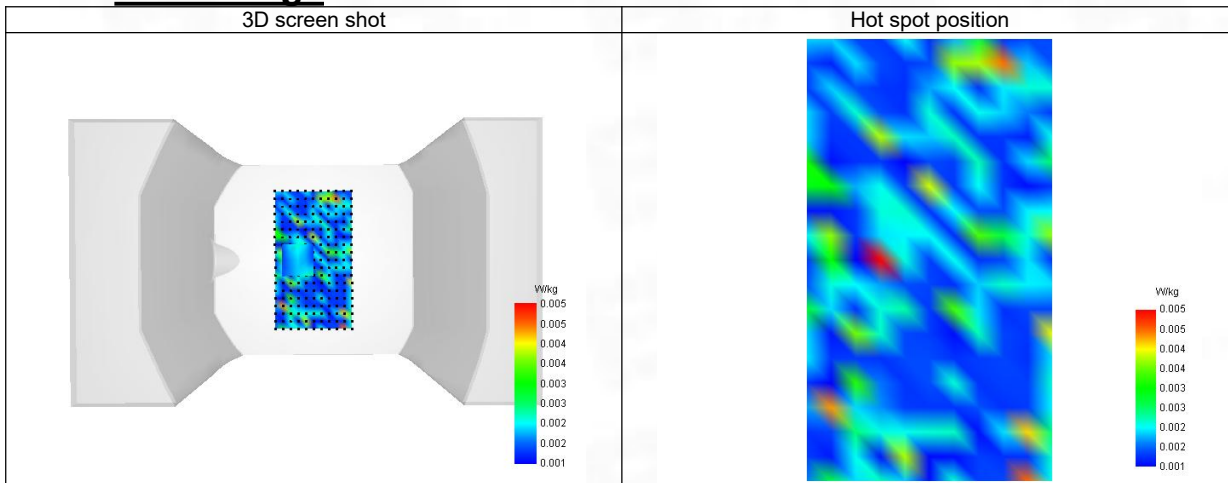
SAR 10g (W/Kg)	0.002
SAR 1g (W/Kg)	0.003
Variation (%)	2.060
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.000000

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.005	0.004	0.002	0.002	0.002	0.001	0.000



F. 3D Image



ANNEX D SAR Test Setup Photos

Reference Photo: simulation liquid depth 15.9cm



Please refer to the document “ANNEX D SAR Test Setup Photos”.

ANNEX E EUT External and Internal Photos

Please refer to RF Report.

ANNEX F Calibration Information

Please refer to the document “Calibration.pdf”.



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