



SAR Test Report

For

Applicant Name: VL Wireless Inc
Address: 2970 E La Palma Ave Suite L, Anaheim, CALIFORNIA 92806
United States
EUT Name: Tablet PC
Brand Name: VL
Model Number: VL10

Issued By

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

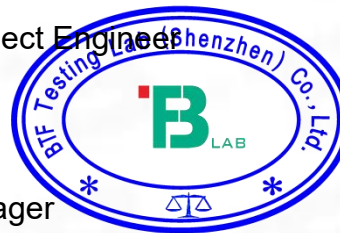
Report Number: BTF251114R00601
Test Standards: FCC 47 CFR§2.1093 IEEE Std. 1528-2013
IEEE C95.1-2019
FCC ID: 2BS4HVL10

Test Conclusion: Pass
Test Date: 2025-11-27 to 2025-12-08
Date of Issue: 2025-12-10

Tested By: Kris Li
Kris Li / Tester
Date: 2025-12-10

Prepared By: Amenda Zhong
Amenda Zhong / Project Engineer
Date: 2025-12-10

Approved By: Ryan.CJ
Ryan.CJ / EMC Manager
Date: 2025-12-10



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Revision History		
Version	Issue Date	Revisions Content
R_V0	2025-12-10	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:	Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, 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:	Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Description:	All measurement facilities used to collect the measurement data are located at Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, 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:	VL Wireless Inc
Address:	2970 E La Palma Ave Suite L, Anaheim, CALIFORNIA 92806 United States

2.2 Manufacturer Information

Company Name:	VL Wireless Inc
Address:	2970 E La Palma Ave Suite L, Anaheim, CALIFORNIA 92806 United States

2.3 Factory Information

Company Name:	ZTECH COMMUNICATION(SZ) CO LTD
Address:	FL 7 BLOCK D BAO'AN ZHIGU INNOVATION PARK YIN'TIAN ROAD NO.4 XI'XIANG STR' BAO'AN DISTRICT SZ CHINA

2.4 General Description of Equipment under Test (EUT)

EUT Name	Tablet PC
Under Test Model Name	VL10
Sample No	BTFSN251114007

2.5 Equipment under Test Ancillary Equipment

Ancillary Equipment 1	Rechargeable Battery	
	Capacity	4000mAh
	Rated Voltage	3.7V

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EGPRS 850/1900 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network FDD LTE Band 2/4/5/13/25/26/66/71 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 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 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 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 MHz
	LTE Band 25	TX: 1850 ~ 1915 MHz	RX: 1930 ~ 1995 MHz
	LTE Band 26 part 90	TX: 814 ~ 824 MHz	RX: 859 ~ 869 MHz
	LTE Band 26 part 22	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2200 MHz
	LTE Band 71	TX: 663 ~ 698 MHz	RX: 617 ~ 652 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: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA 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	1.093	PCB	1.197
	GSM 1900	1.197		
	WCDMA Band II	0.772		
	WCDMA Band IV	0.520		
	WCDMA Band V	0.680		
	LTE Band 2	0.766		
	LTE Band 4	0.433		
	LTE Band 5	0.205		
	LTE Band 13	0.196		
	LTE Band 25	0.774		
	LTE Band 26 Part 90	0.177		
	LTE Band 26 Part 22	0.185		
	LTE Band 66	0.497		
	LTE Band 71	0.227		
	WLAN 2.4 GHz	0.081	DTS	
	RLAN 5.2 GHz	0.150	NII	
	RLAN 5.4 GHz	0.200		
	RLAN 5.6 GHz	0.295		
	RLAN 5.8 GHz	0.195		
	Bluetooth	0.012	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)	GSM 1900 + 5.6G WIFI	1.492	1.6	Pass

3.4 Test Uncertainty

3.4.1 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 Ui (+-%)	10 g Ui (+-%)	Vi v _{eff}
Measurement System									
Probe calibration	14	N (k = 2)	2	7.00	1	1	7.00	7.00	∞
Probe calibration drift	4	R	√3	2.31	1	1	2.31	2.31	∞
Probe linearity	4.7	R	√3	2.71	1	1	2.71	2.71	∞
detection limit	1	R	√3	0.58	1	1	0.58	0.58	∞
Probe isotropy	3.5	R	√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	√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	√3	1.44	0.23	0.26	0.33	0.38	∞
Shell permittivity	2.9	R	√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	√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	√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	

4.2.2 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.



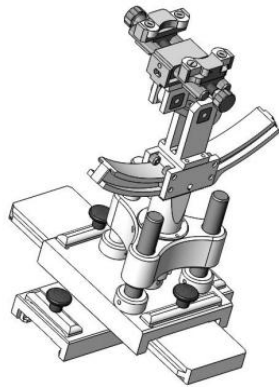
ELLI Phantom

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

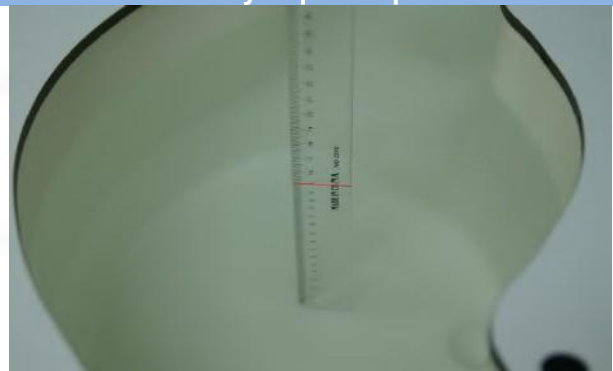
4.2.6 Simulating Liquid

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.

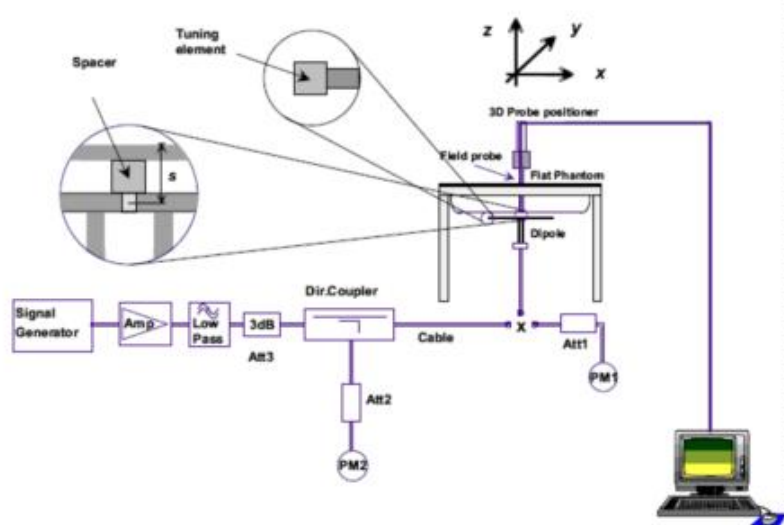
Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5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

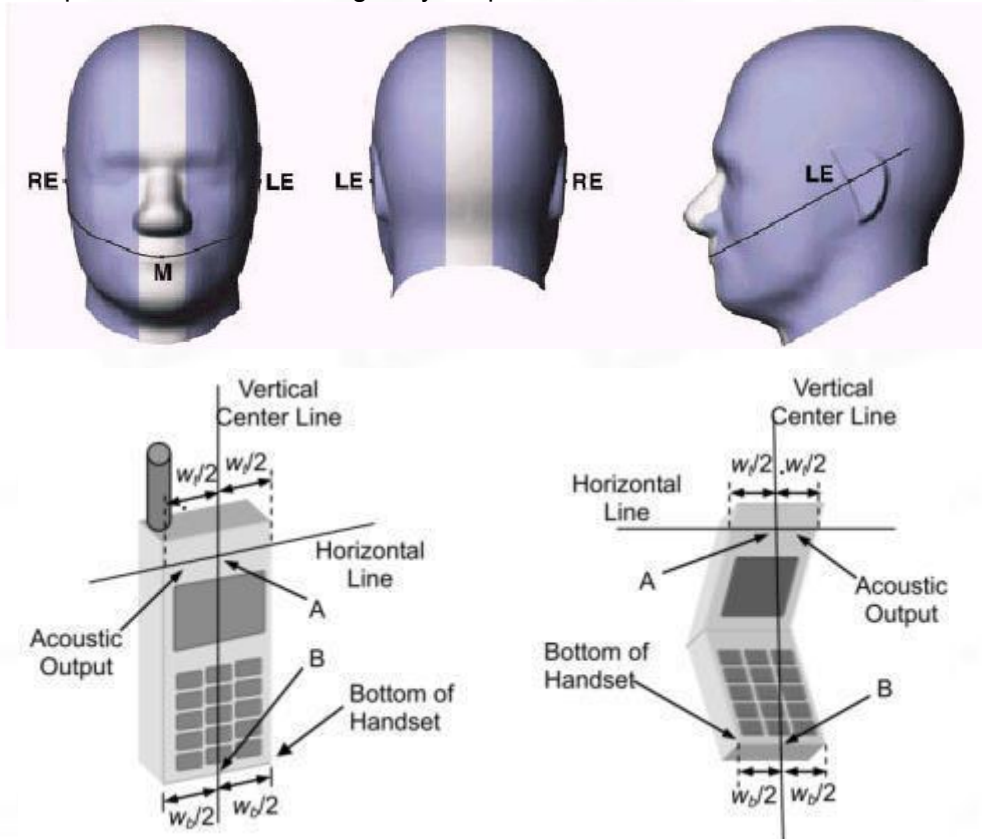
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

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.

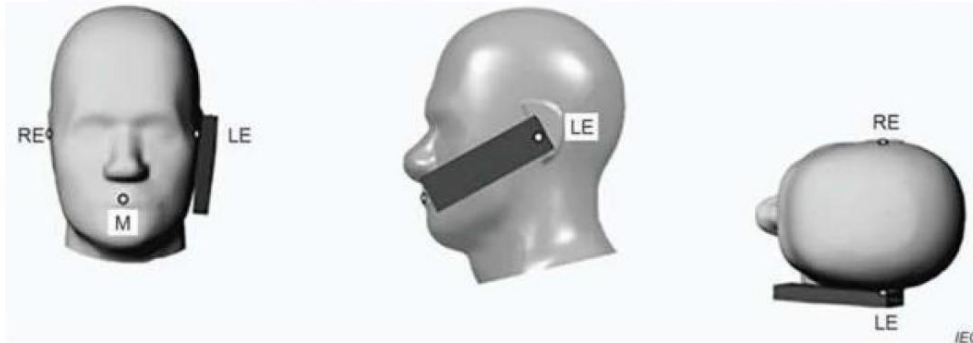
6.1.1 Two Imaginary Lines on the Handset

- 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.



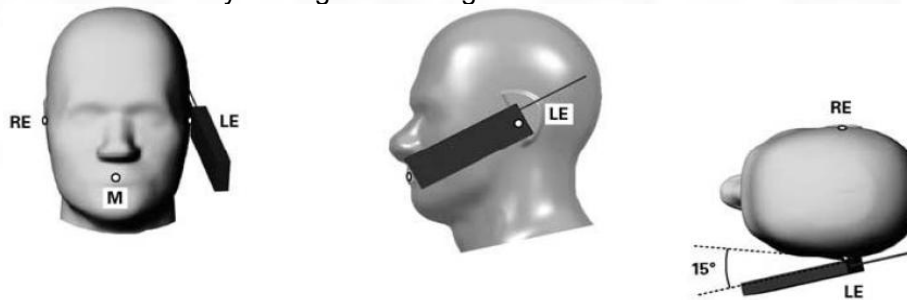
6.1.2 Two Imaginary Lines on the Handset

- 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.

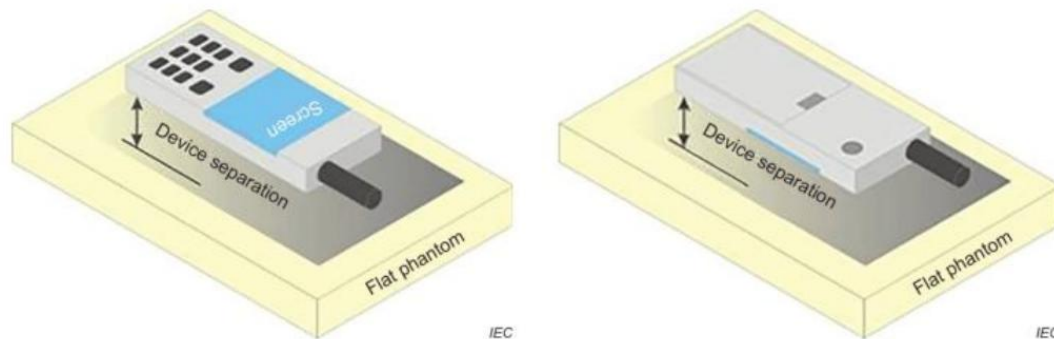


6.2 Body-worn Position Conditions

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.

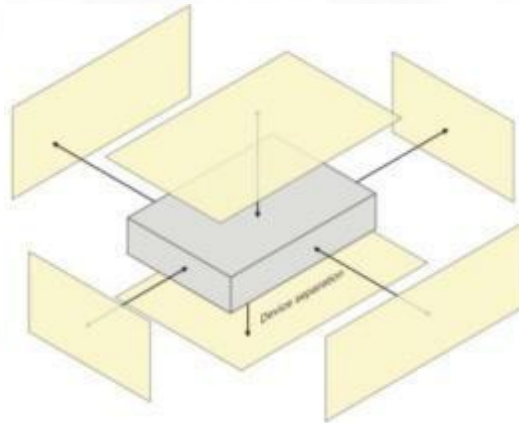
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.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

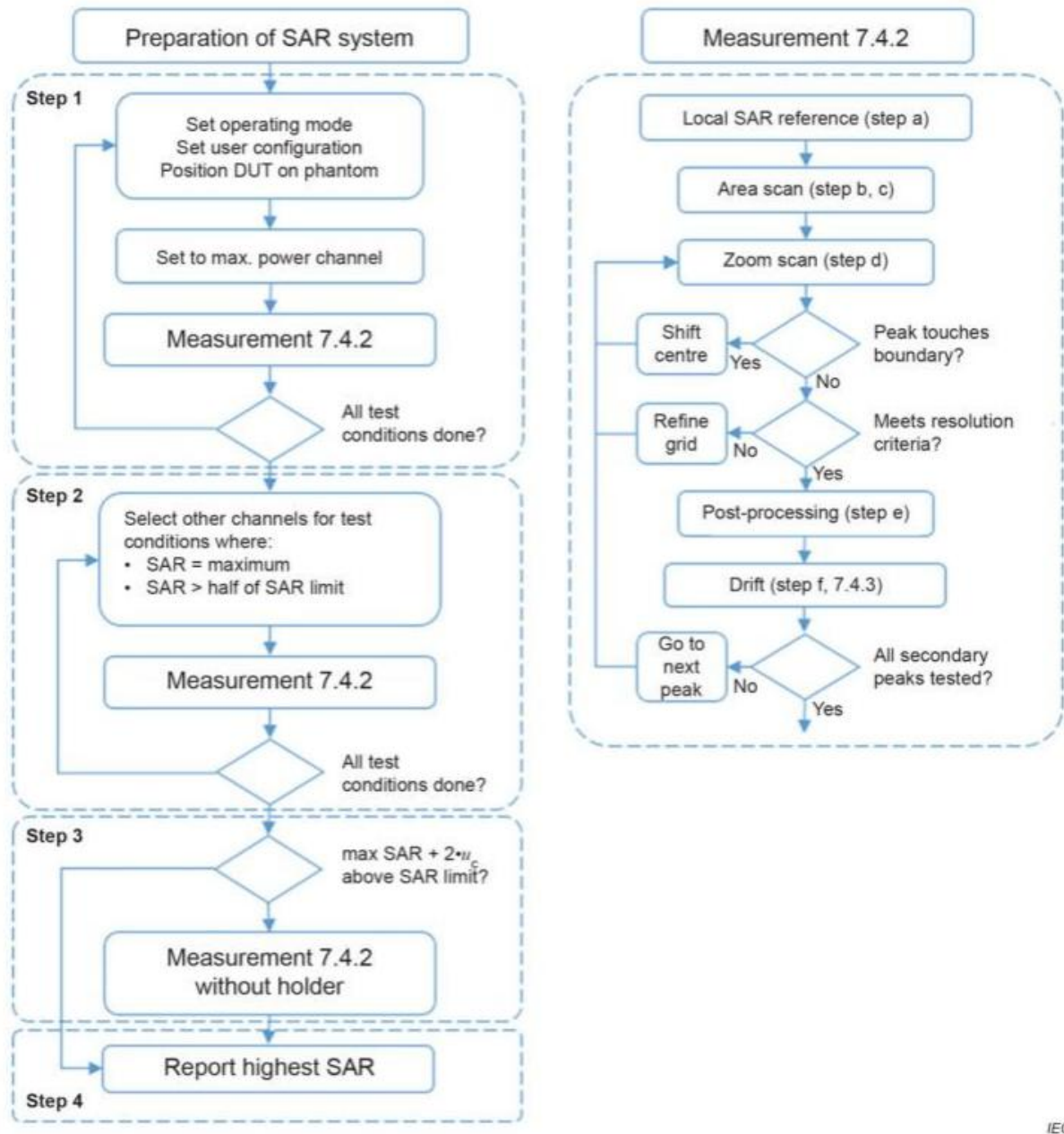
According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed 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		32.50	32.31	32.22	32.11	-9.03	23.28	23.19	23.08
GPRS (GMSK)	1Tx slot	32.50	32.25	32.13	32.02	-9.03	23.22	23.10	22.99
	2Tx slots	30.50	30.29	30.16	30.01	-6.02	24.27	24.14	23.99
	3Tx slots	28.50	28.44	28.29	28.10	-4.26	24.18	24.03	23.84
	4Tx slots	26.50	26.48	26.32	26.10	-3.01	23.47	23.31	23.09
EGPRS (8PSK)	1Tx slot	28.00	27.56	24.67	24.33	-9.03	18.53	15.64	15.30
	2Tx slots	24.00	23.59	23.63	23.28	-6.02	17.57	17.61	17.26
	3Tx slots	22.00	21.49	21.57	21.36	-4.26	17.23	17.31	17.10
	4Tx slots	19.50	19.13	19.24	18.91	-3.01	16.12	16.23	15.90
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		29.00	28.67	28.85	28.96	-9.03	19.64	19.82	19.93
GPRS (GMSK)	1Tx slot	29.00	28.67	28.83	28.95	-9.03	19.64	19.80	19.92
	2Tx slots	27.50	26.22	26.64	27.07	-6.02	20.20	20.62	21.05
	3Tx slots	26.00	24.76	25.19	25.63	-4.26	20.50	20.93	21.37
	4Tx slots	24.00	22.63	23.08	23.50	-3.01	19.62	20.07	20.49
EGPRS (8PSK)	1Tx slot	25.50	24.10	25.33	23.66	-9.03	15.07	16.30	14.63
	2Tx slots	23.00	22.54	22.28	22.69	-6.02	16.52	16.26	16.67
	3Tx slots	22.00	20.46	20.26	21.89	-4.26	16.20	16.00	17.63
	4Tx slots	18.50	18.21	18.44	17.94	-3.01	15.20	15.43	14.93
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		22.00	21.92	21.82	21.65
HSDPA	Subtest-1	21.00	20.86	20.74	20.76
	Subtest-2	21.00	20.82	20.78	20.76
	Subtest-3	21.00	20.78	20.77	20.76
	Subtest-4	21.00	20.76	20.73	20.71
HSUPA	Subtest-1	19.00	18.96	18.33	18.68
	Subtest-2	19.00	18.89	18.75	18.69
	Subtest-3	19.00	18.59	18.47	18.63
	Subtest-4	19.00	18.90	18.74	18.68
	Subtest-5	19.00	18.87	18.29	18.40
Mode		Maximum Tune-up(dBm)	WCDMA Band IV		
			Conducted Power (dBm)		
			CH1312	CH1413	CH1513
			1712.4	1732.6	1752.6
RMC 12.2K		22.50	22.36	22.48	22.42
HSDPA	Subtest-1	21.50	20.51	21.11	20.97
	Subtest-2	21.50	20.53	21.12	20.99
	Subtest-3	21.50	20.55	21.13	20.92
	Subtest-4	21.50	20.50	21.07	20.94
HSUPA	Subtest-1	19.00	18.53	18.97	18.83
	Subtest-2	19.00	18.18	18.97	18.83
	Subtest-3	19.00	18.44	18.69	18.39
	Subtest-4	19.00	18.16	18.50	18.55
	Subtest-5	19.00	17.98	18.68	18.83
Mode		Maximum Tune-up(dBm)	WCDMA Band V		
			Conducted Power (dBm)		
			CH4132	CH4183	CH4233
			826.4	836.6	846.6
RMC 12.2K		22.00	21.56	21.60	21.65
HSDPA	Subtest-1	21.00	20.80	20.86	20.62
	Subtest-2	21.00	20.82	20.87	20.62
	Subtest-3	21.00	20.76	20.88	20.63
	Subtest-4	21.00	20.81	20.84	20.59
HSUPA	Subtest-1	19.00	18.79	18.76	18.10
	Subtest-2	19.00	18.91	18.48	18.08
	Subtest-3	19.00	18.76	18.48	18.09
	Subtest-4	19.00	18.48	18.81	18.24
	Subtest-5	19.00	18.79	18.80	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	22.00	21.91	18.49	18.66
			2	22.00	21.95	18.66	18.76
			5	22.50	22.05	18.46	18.50
		3	0	19.00	18.62	18.60	18.67
			2	19.00	18.65	18.65	18.68
			3	19.00	18.59	18.58	18.69
		6	0	18.00	17.53	17.53	17.72
	16QAM	1	0	18.00	17.47	17.58	17.71
			2	18.00	17.60	17.75	17.87
			5	18.00	17.36	17.55	17.64
		3	0	18.00	17.60	17.55	17.88
			2	18.00	17.61	17.60	17.88
			3	18.00	17.53	17.54	17.80
		6	0	17.00	16.50	16.59	16.83
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
3MHz	QPSK	1	0	19.00	18.54	18.53	18.56
			7	19.00	18.58	18.63	18.71
			14	19.00	18.58	18.41	18.40
		8	0	18.00	17.54	17.64	17.75
			4	18.00	17.61	17.67	17.75
			7	18.00	17.63	17.60	17.68
		15	0	18.00	17.58	17.63	17.72
	16QAM	1	0	18.50	17.51	17.70	18.20
			7	18.50	17.59	17.83	18.35
			14	18.50	17.56	17.59	18.03
		8	0	17.50	16.64	16.62	17.01
			4	17.50	16.69	16.65	17.05
			7	17.00	16.70	16.59	16.97
		15	0	17.00	16.67	16.60	16.93
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
5MHz	QPSK	1	0	18.50	18.26	18.23	18.26
			13	19.00	18.78	18.62	18.89
			24	18.50	18.20	18.04	18.24
		12	0	18.00	17.42	17.56	17.67
			6	18.00	17.62	17.70	17.88
			13	18.00	17.50	17.53	17.72
		25	0	18.00	17.46	17.60	17.70
	16QAM	1	0	18.00	17.20	17.57	17.15
			13	18.00	17.77	17.99	17.81
			24	17.50	17.20	17.37	17.18
		12	0	17.00	16.42	16.68	16.83
			6	17.50	16.64	16.77	17.04
			13	17.00	16.54	16.58	16.87
		25	0	17.00	16.53	16.59	16.88

LTE-FDD Band 2				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		18650 1855.0MHz	18900 1880.0MHz	19150 1905.0MHz
10MHz	QPSK	1	0	19.00	18.67	18.47	18.33
			25	19.00	18.90	18.59	18.56
			49	19.00	18.96	18.78	18.91
		25	0	18.50	18.00	17.70	17.64
			13	18.50	18.03	17.70	17.77
			25	18.50	18.03	17.78	18.00
		50	0	18.50	18.00	17.75	17.82
			0	18.00	17.74	17.66	17.96
			25	18.50	17.94	17.79	18.21
	16QAM	1	49	19.00	17.95	17.97	18.55
			0	17.50	17.21	16.70	16.82
			13	17.50	17.26	16.73	16.96
		25	25	17.50	17.26	16.79	17.18
			0	17.50	17.17	16.74	16.97
			0	18.675	18900	19125	
			0	1857.5MHz	1880.0MHz	1902.5MHz	
15MHz	QPSK	1	0	19.00	18.93	18.62	18.61
			38	22.00	18.69	18.54	21.79
			74	22.00	18.72	18.43	21.73
		36	0	21.00	18.01	17.79	20.83
			18	21.00	17.78	17.63	20.73
			39	21.00	17.68	17.61	20.83
		75	0	19.00	17.83	17.69	18.79
			0	19.50	18.22	17.79	19.40
			38	19.50	18.04	17.74	19.41
	16QAM	1	74	19.50	18.05	17.61	19.37
			0	18.50	17.12	16.77	18.25
			18	18.00	16.91	16.64	17.66
		36	39	17.00	16.82	16.60	15.84
			0	17.00	16.96	16.68	15.81
			0	18.700	18900	19100	
			0	1860.0MHz	1880.0MHz	1900.0MHz	
20MHz	QPSK	1	0	19.00	18.33	18.07	18.58
			50	18.00	17.58	17.41	17.61
			99	18.50	18.25	17.64	18.19
		50	0	17.50	17.12	16.83	17.18
			25	17.00	16.75	16.52	16.84
			50	17.50	16.86	16.60	17.03
		100	0	17.50	16.96	16.69	17.07
			0	18.00	17.70	17.22	17.81
			50	17.50	17.04	16.53	16.89
	16QAM	1	99	18.00	17.55	16.78	17.46
			0	16.50	16.25	15.85	16.11
			25	16.00	15.87	15.56	15.81
		50	50	16.00	15.99	15.62	15.96
			0	16.50	16.10	15.71	16.03

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	17.50	16.33	16.83	17.04
			2	17.50	16.52	17.06	17.16
			5	17.00	16.32	16.95	16.89
		3	0	17.50	16.42	16.96	17.05
			2	17.50	16.48	17.08	17.06
			3	17.50	16.43	17.04	16.98
		6	0	16.50	15.45	16.03	16.00
	16QAM	1	0	16.50	15.32	16.00	15.91
			2	16.50	15.54	16.25	16.07
			5	16.50	15.37	16.12	15.84
		3	0	16.50	15.53	16.01	16.08
			2	16.50	15.60	16.12	16.09
			3	16.50	15.53	16.09	16.00
		6	0	15.50	14.40	15.01	14.88
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
3MHz	QPSK	1	0	17.00	16.31	16.82	16.98
			7	17.50	16.51	17.11	17.06
			14	17.50	16.36	17.11	16.64
		8	0	16.50	15.45	16.02	16.12
			4	16.50	15.51	16.14	16.10
			7	16.50	15.49	16.17	16.03
		15	0	16.50	15.45	16.10	16.09
	16QAM	1	0	17.00	15.28	16.00	16.62
			7	17.00	15.52	16.30	16.70
			14	16.50	15.41	16.29	16.39
		8	0	15.50	14.50	15.00	15.20
			4	15.50	14.59	15.11	15.19
			7	15.50	14.58	15.16	15.11
		15	0	15.50	14.60	15.07	15.08
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19976	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
5MHz	QPSK	1	0	17.00	15.87	16.46	16.65
			13	17.50	16.63	17.11	17.05
			24	17.00	16.17	16.81	16.26
		12	0	16.00	15.35	15.83	15.98
			6	16.50	15.53	16.06	16.06
			13	16.50	15.43	16.07	15.84
		25	0	16.00	15.38	15.97	15.92
	16QAM	1	0	16.00	15.04	15.73	15.59
			13	16.50	15.68	16.39	15.96
			24	16.50	15.21	16.11	15.29
		12	0	15.00	14.36	14.88	14.92
			6	15.50	14.56	15.09	15.00
			13	15.50	14.47	15.11	14.77
		25	0	15.00	14.46	14.97	14.87

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	17.00	16.31	16.54	16.90	
			25	17.00	16.71	16.96	16.98	
			49	17.50	17.08	17.42	16.93	
		25	0	16.50	15.53	15.84	16.18	
			13	16.50	15.72	16.09	16.15	
			25	16.50	15.89	16.41	16.22	
		50	0	16.50	15.70	16.14	16.20	
		16QAM	1	0	17.00	15.14	15.73	16.66
				25	17.00	15.65	16.14	16.62
	49			17.00	15.95	16.62	16.69	
	25		0	15.50	14.69	14.93	15.17	
			13	15.50	14.86	15.14	15.14	
			25	16.00	15.07	15.50	15.22	
	50		0	15.50	14.82	15.21	15.17	
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20025	20175	20325
						1717.5MHz	1732.5MHz	1747.5MHz
15MHz	QPSK	1	0	17.00	16.48	16.61	16.77	
			38	17.00	16.67	16.94	16.70	
			74	17.50	16.98	17.25	16.50	
		36	0	16.00	15.67	15.94	15.98	
			18	16.50	15.70	16.02	15.85	
			39	16.50	15.90	16.34	15.77	
		75	0	16.50	15.77	16.13	15.88	
		16QAM	1	0	16.50	15.75	15.83	16.38
				38	16.50	16.03	16.13	16.30
	74			16.50	16.31	16.49	16.10	
	36		0	15.00	14.65	14.94	14.92	
			18	15.50	14.70	15.04	14.81	
			39	15.50	14.89	15.36	14.71	
	75		0	15.50	14.77	15.16	14.79	
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20050	20175	20300
						1720.0MHz	1732.5MHz	1745.0MHz
20MHz	QPSK	1	0	17.50	16.94	16.90	17.26	
			50	17.00	16.78	16.90	16.88	
			99	18.00	17.58	17.64	17.08	
		50	0	16.50	15.95	16.04	16.14	
			25	16.50	15.94	16.12	15.99	
			50	17.00	16.30	16.51	16.11	
		100	0	16.50	16.10	16.28	16.12	
		16QAM	1	0	17.00	16.43	16.23	16.55
				50	16.50	16.35	16.15	16.18
	99			17.50	17.12	16.96	16.37	
	50		0	15.50	15.01	15.07	15.06	
			25	15.50	14.99	15.15	14.94	
			50	16.00	15.33	15.53	15.01	
	100		0	15.50	15.18	15.29	15.05	

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	21.50	16.64	21.38	17.46
			2	21.50	16.77	21.44	17.66
			5	19.50	16.61	19.41	17.47
		3	0	19.50	16.73	19.45	17.58
			2	19.50	16.78	19.48	17.66
			3	19.50	16.73	19.42	17.58
		6	0	18.50	15.68	18.34	16.60
	16QAM	1	0	17.00	15.59	16.39	16.61
			2	17.00	15.74	16.69	16.83
			5	17.00	15.59	16.56	16.64
		3	0	17.00	15.76	16.66	16.60
			2	17.00	15.81	16.76	16.69
			3	17.00	15.76	16.71	16.63
		6	0	16.00	14.66	15.51	15.65
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
3MHz	QPSK	1	0	20.00	17.57	19.94	19.55
			7	20.00	17.69	19.61	19.55
			14	20.00	17.23	19.63	19.47
		8	0	19.00	16.65	18.92	18.43
			4	19.00	16.63	18.45	18.53
			7	18.50	16.50	18.43	18.35
		15	0	19.00	16.57	18.37	18.58
	16QAM	1	0	19.50	16.69	19.39	19.08
			7	19.50	17.04	19.04	18.97
			14	19.50	16.59	18.94	19.05
		8	0	18.50	16.03	18.15	17.71
			4	18.00	17.40	17.77	17.71
			7	18.00	17.15	17.75	17.70
		15	0	18.00	17.22	17.68	17.57
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	20.00	19.37	19.75	19.82
			13	19.50	19.30	19.36	19.46
			24	19.50	19.20	19.25	19.43
		12	0	19.00	18.32	18.81	18.94
			6	18.50	18.29	18.32	18.43
			13	19.00	18.48	18.37	18.50
		25	0	18.50	18.39	18.31	18.47
	16QAM	1	0	19.50	18.79	19.37	18.54
			13	19.00	18.91	18.93	18.04
			24	19.00	18.96	18.91	17.94
		12	0	18.50	18.47	18.10	17.42
			6	18.00	17.41	17.77	17.59
			13	18.00	17.37	17.65	17.52
		25	0	18.00	17.61	17.56	17.50

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20450	20525	20600
					829.0MHz	836.5MHz	844.0MHz
10MHz	QPSK	1	0	19.50	19.24	19.35	19.38
			25	20.00	19.30	19.33	19.89
			49	20.00	19.43	19.80	19.50
		25	0	19.00	18.29	18.82	18.90
			13	19.00	18.26	18.37	18.96
			25	19.00	18.32	18.42	18.57
		50	0	19.00	18.34	18.36	18.90
			0	19.50	18.35	19.47	19.23
			25	20.00	18.34	19.45	19.78
	16QAM	1	49	20.50	18.28	20.01	19.29
		25	0	19.00	17.42	18.82	17.97
			13	18.00	17.31	17.64	17.81
			25	18.00	17.41	17.83	17.78
		50	0	18.00	17.36	17.61	17.88
			0	18.00	17.36	17.61	17.88

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	20.50	19.58	20.02	19.47
			13	20.50	20.04	19.45	20.04
			24	20.50	19.54	20.03	20.09
		12	0	19.50	18.61	19.02	19.12
			6	19.50	19.10	18.49	19.08
			13	19.50	19.12	19.10	19.20
		25	0	19.50	19.12	18.61	19.12
	16QAM	1	0	19.50	19.16	18.74	19.02
			13	20.00	19.67	18.15	19.60
			24	20.00	19.12	18.74	19.58
		12	0	19.50	17.48	17.92	19.08
			6	18.50	18.08	17.76	18.46
			13	18.50	18.18	17.84	18.25
		25	0	18.50	17.93	17.80	18.33
			0	18.50	17.93	17.80	18.33
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23230		
10MHz	QPSK	1	0	22.00	21.64		
			25	22.00	21.63		
			49	22.00	21.67		
		25	0	21.00	20.67		
			13	21.00	20.70		
			25	21.00	20.65		
		50	0	21.00	20.62		
	16QAM	1	0	22.00	21.54		
			25	22.00	21.51		
			49	22.00	21.46		
		25	0	20.50	20.11		
			13	20.00	19.59		
			25	20.50	20.16		
		50	0	19.50	19.49		
			0	19.50	19.49		

Band 25

LTE-FDD Band 25				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		26047	26365	26683
					1850.7MHz	1882.5MHz	1914.3MHz
1.4MHz	QPSK	1	0	22.50	22.00	21.60	21.42
			2	22.00	21.99	21.55	21.59
			5	22.50	22.03	21.60	21.60
		3	0	22.50	22.03	21.65	21.54
			2	22.50	22.02	21.67	21.48
			3	22.50	22.05	21.61	21.54
		6	0	21.50	21.06	20.76	20.55
	16QAM	1	0	21.50	21.03	20.82	21.26
			2	21.50	21.03	20.82	21.21
			5	21.50	21.03	20.82	21.26
		3	0	21.00	20.93	20.51	20.79
			2	21.00	20.94	20.55	20.77
			3	21.00	20.87	20.50	20.78
		6	0	20.50	20.16	19.66	19.90
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26055	26365	26675
					1851.5MHz	1882.5MHz	1913.5MHz
3MHz	QPSK	1	0	22.50	22.08	21.52	21.50
			7	22.50	22.05	21.54	21.53
			14	22.50	22.02	21.61	21.51
		8	0	21.00	20.99	20.68	20.52
			4	21.50	21.00	20.67	20.55
			7	21.50	21.00	20.65	20.57
		15	0	21.00	20.97	20.68	20.55
	16QAM	1	0	22.00	21.05	21.62	21.55
			7	22.00	21.06	21.62	21.51
			14	22.00	21.05	21.67	21.48
		8	0	20.50	20.37	19.88	19.90
			4	20.50	20.39	19.88	19.91
			7	20.50	20.38	19.86	19.90
		15	0	20.50	20.19	19.75	19.78
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26065	26365	26665
					1852.5MHz	1882.5MHz	1912.5MHz
5MHz	QPSK	1	0	22.50	22.17	21.73	21.45
			13	22.50	22.11	21.65	21.41
			24	22.50	22.08	21.84	21.41
		12	0	21.50	21.03	20.73	20.69
			6	21.50	21.09	20.79	20.65
			13	21.50	21.02	20.76	20.61
		25	0	21.50	21.08	20.81	20.63
	16QAM	1	0	22.00	21.51	20.36	21.20
			13	22.00	21.57	20.36	21.13
			24	22.00	21.51	20.32	21.21
		12	0	20.50	20.07	19.92	19.69
			6	20.00	19.98	19.80	19.73
			13	20.50	20.08	19.82	19.63
		25	0	20.50	20.11	19.91	19.84

LTE-FDD Band 25				Maximum Tune-up(dBm)	Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset		26090	26365	26640		
					1855.0MHz	1882.5MHz	1910.0MHz		
10MHz	QPSK	1	0	22.50	22.03	21.79	21.49		
			25	22.00	21.96	21.77	21.46		
			49	22.00	21.87	21.86	21.47		
		25	0	21.50	21.14	20.69	20.72		
			13	21.50	21.11	20.75	20.58		
			25	21.50	21.01	20.71	20.62		
		50	0	21.00	20.97	20.70	20.67		
			16QAM	1	0	21.50	21.39	21.33	21.41
					25	21.50	21.31	21.32	21.30
	49	21.50			21.35	21.40	21.30		
	25	0		20.50	20.32	19.90	19.71		
		13		20.50	20.24	19.86	19.71		
		25		20.50	20.31	19.93	19.76		
	50	0		20.50	20.17	19.91	19.77		
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26115	26365
1857.5MHz								1882.5MHz	1907.5MHz
15MHz	QPSK	1	0	22.00	21.86	21.70	21.49		
			38	22.00	21.81	21.72	21.54		
			74	22.00	21.79	21.70	21.44		
		36	0	21.50	21.03	20.77	20.68		
			18	21.50	21.07	20.74	20.66		
			39	21.50	21.03	20.86	20.60		
		75	0	21.50	21.07	20.76	20.68		
			16QAM	1	0	22.50	21.70	22.14	21.41
					38	22.50	21.69	22.01	21.42
	74	22.50			21.64	22.03	21.33		
	36	0		20.50	20.21	19.83	19.82		
		18		20.50	20.11	19.83	19.90		
		39		20.50	20.07	19.89	19.81		
	75	0	20.50	20.14	19.87	19.84			
		Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26140	26365	26590
1860.0MHz							1882.5MHz	1905.0MHz	
20MHz	QPSK	1	0	22.50	22.17	21.76	21.57		
			50	22.50	22.07	21.69	21.60		
			99	22.00	21.78	21.76	21.56		
		50	0	21.50	21.02	20.80	20.71		
			25	21.50	21.03	20.81	20.69		
			50	21.00	20.88	20.75	20.66		
		100	0	21.00	20.95	20.83	20.66		
			16QAM	1	0	22.50	22.30	21.20	21.29
					50	22.50	22.24	21.23	21.35
	99	22.50			22.15	21.18	21.21		
	50	0		20.50	20.05	19.89	19.72		
		25		20.50	20.08	19.82	19.79		
		50		20.00	19.96	19.94	19.88		
	100	0	20.50	20.13	19.77	19.74			

Band 26 Part 90

LTE-FDD Band 26 Part 90				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		26697	26740	26783
					814.7MHz	819.0MHz	823.3MHz
1.4MHz	QPSK	1	0	21.50	21.37	21.41	21.24
			2	21.50	21.49	21.44	21.28
			5	21.50	21.47	21.45	21.30
		3	0	22.00	21.54	21.35	21.34
			2	21.50	21.41	21.34	21.43
			3	21.50	21.42	21.42	21.39
	6	0	20.50	20.27	20.45	20.32	
	16QAM	1	0	21.50	20.43	21.26	20.86
			2	21.50	20.40	21.21	20.81
			5	21.50	20.43	21.29	20.79
		3	0	20.50	20.08	20.39	20.11
			2	20.50	20.09	20.36	20.06
			3	20.50	20.04	20.40	20.07
		6	0	20.50	19.97	20.04	19.35
Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26705	26740
	815.5MHz					819.0MHz	822.5MHz
3MHz	QPSK	1	0	22.00	21.63	21.47	21.35
			7	22.00	21.53	21.34	21.22
			14	21.50	21.25	21.44	21.19
		8	0	20.50	20.38	20.42	20.36
			4	20.50	20.35	20.32	20.35
			7	20.50	20.49	20.35	20.37
	15	0	20.50	20.29	20.40	20.31	
	16QAM	1	0	22.00	20.46	21.60	21.20
			7	22.00	20.42	21.65	21.13
			14	22.00	20.36	21.64	21.12
		8	0	20.50	20.01	19.97	19.65
			4	20.50	20.05	19.96	19.65
			7	20.50	20.10	19.94	19.68
		15	0	20.00	19.88	19.86	19.44
LTE-FDD Band 26 Part 90				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		26715	26740	26765
					816.5MHz	819.0MHz	821.5MHz
5MHz	QPSK	1	0	21.50	21.22	21.27	21.39
			13	21.50	21.27	21.24	21.34
			24	22.00	21.22	21.57	21.27
		12	0	20.50	20.36	20.36	20.41
			6	20.50	20.43	20.37	20.41
			13	20.50	20.38	20.36	20.39
	25	0	20.50	20.48	20.38	20.43	
	16QAM	1	0	21.00	20.80	20.96	19.93
			13	21.00	20.87	20.91	19.93
			24	21.00	20.86	20.92	19.81
		12	0	20.00	19.88	19.93	19.37
			6	20.00	19.84	19.85	19.34
			13	20.00	19.91	19.39	19.33
		25	0	20.00	19.92	19.86	19.44

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26740
					819.0MHz
10MHz	QPSK	1	0	20.00	19.79
			25	20.00	19.75
			49	19.50	19.32
		25	0	19.00	18.86
			13	19.00	18.85
			25	18.50	18.41
		50	0	19.00	18.93
	16QAM	1	0	19.50	19.36
			25	19.50	19.31
			49	19.00	18.86
		25	0	17.00	16.66
			13	18.00	17.83
			25	18.50	18.25
		50	0	18.00	17.75

Band 26 Part 22

LTE-FDD Band 26 Part 22				Maximum Tune-up(dBm)	Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset		26797	26915	27033		
					824.7MHz	836.5MHz	848.3MHz		
1.4MHz	QPSK	1	0	20.00	19.60	19.48	19.89		
			2	20.00	19.72	19.97	19.97		
			5	20.50	19.79	20.00	19.96		
		3	0	20.00	19.81	19.87	19.96		
			2	20.00	19.70	19.88	19.94		
			3	20.00	19.80	19.82	19.94		
		6	0	19.00	18.79	18.97	18.99		
	16QAM	1	0	19.00	18.84	18.95	18.93		
			2	19.50	18.75	19.46	18.91		
			5	19.50	18.85	19.48	18.99		
		3	0	19.00	18.58	18.90	18.62		
			2	19.00	18.58	18.93	18.59		
			3	19.00	18.55	18.89	18.56		
		6	0	18.00	17.14	17.64	17.44		
		Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26805	26915	27025
							825.5MHz	836.5MHz	847.5MHz
3MHz	QPSK	1	0	20.00	19.63	19.53	19.85		
			7	20.00	19.69	19.98	19.88		
			14	20.50	19.26	20.02	19.89		
		8	0	19.50	18.77	18.44	19.02		
			4	19.00	18.77	18.84	18.96		
			7	19.00	18.34	18.96	18.94		
		15	0	19.00	18.81	18.92	18.91		
	16QAM	1	0	20.00	18.93	18.88	19.54		
			7	20.00	18.91	19.47	19.56		
			14	20.00	18.61	19.48	19.55		
		8	0	18.50	17.83	18.18	18.09		
			4	18.50	17.65	17.65	18.06		
			7	18.50	17.61	17.63	18.05		
		15	0	18.00	17.34	17.55	17.93		

LTE-FDD Band 26 Part 22				Maximum Tune-up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		26815	26915	27015	
					826.5MHz	836.5MHz	846.5MHz	
5MHz	QPSK	1	0	20.00	19.76	19.35	19.49	
			13	20.00	19.33	19.85	19.90	
			24	20.00	19.70	19.90	19.85	
		12	0	19.00	18.83	18.39	18.49	
			6	19.50	18.29	18.93	19.02	
			13	19.00	18.57	18.93	18.92	
		25	0	19.00	18.50	18.89	18.97	
		16QAM	1	0	19.50	19.32	18.62	18.08
				13	19.50	18.83	19.28	18.49
	24			19.50	19.24	19.31	18.46	
	12		0	19.00	18.68	18.04	17.73	
			6	18.00	17.70	17.83	17.93	
			13	18.00	17.14	17.73	17.86	
	25	0	18.00	16.97	17.64	17.85		
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26840	26915	26990
829.0MHz						836.5MHz	844.0MHz	
10MHz	QPSK	1	0	20.00	19.75	19.78	19.92	
			25	20.00	19.75	19.80	19.42	
			49	20.00	19.81	19.89	19.94	
		25	0	19.00	18.59	18.11	18.95	
			13	19.00	18.78	18.93	18.40	
			25	19.50	18.77	18.92	19.06	
		50	0	19.00	18.76	18.93	18.35	
		16QAM	1	0	20.00	18.78	19.92	19.80
				25	20.00	18.79	19.97	19.38
	49			20.50	18.82	20.05	19.87	
	25		0	18.50	17.92	18.26	18.37	
			13	18.00	17.67	17.76	17.16	
			25	18.00	17.77	17.93	17.16	
	50	0	18.00	17.73	17.73	17.28		
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26865	26915	26965
831.5MHz						836.5MHz	841.5MHz	
15MHz	QPSK	1	0	20.00	19.61	19.73	19.25	
			38	20.00	19.73	19.88	19.78	
			74	20.00	19.74	19.38	19.81	
		36	0	19.00	18.78	18.86	18.91	
			18	19.00	18.83	18.96	18.95	
			39	19.00	18.11	18.99	18.52	
		75	0	19.00	18.86	18.93	18.87	
		16QAM	1	0	20.00	19.33	19.89	18.92
				38	20.00	19.40	19.96	19.49
	74			20.00	19.47	19.71	19.60	
	36		0	19.00	18.07	18.74	18.69	
			18	18.00	17.75	17.69	17.81	
			39	18.00	17.92	17.63	17.38	
	75	0	18.00	17.80	17.59	17.72		

Band 66

LTE-FDD Band 66				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		131979	132322	132665
					1710.7MHz	1745.0MHz	1779.3MHz
1.4MHz	QPSK	1	0	20.50	20.21	20.21	20.42
			2	20.50	20.35	20.20	20.40
			5	21.00	20.37	20.24	20.54
		3	0	21.00	20.39	20.32	20.55
			2	21.00	20.37	20.25	20.54
			3	21.00	20.30	20.29	20.57
		6	0	20.00	19.42	19.42	19.50
	16QAM	1	0	20.50	19.32	19.98	20.06
			2	20.50	19.41	20.02	20.09
			5	20.50	19.37	20.09	20.11
		3	0	19.50	19.26	19.21	19.38
			2	19.50	19.22	19.15	19.46
			3	19.50	19.28	19.21	19.41
		6	0	18.50	18.30	18.32	18.34
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131987	132322	132657
					1711.5MHz	1745.0MHz	1778.5MHz
3MHz	QPSK	1	0	20.50	20.28	20.24	20.34
			7	20.50	20.22	20.10	20.39
			14	20.50	20.28	20.16	20.42
		8	0	19.50	19.32	19.25	19.46
			4	19.50	19.39	19.27	19.49
			7	20.00	19.37	19.21	19.56
		15	0	20.00	19.32	19.36	19.61
	16QAM	1	0	20.50	19.60	20.49	20.19
			7	20.50	19.63	20.46	20.23
			14	20.50	19.62	20.36	20.25
		8	0	20.00	18.77	19.57	19.38
			4	19.00	18.50	18.36	18.69
			7	19.00	18.62	18.31	18.58
		15	0	19.00	18.58	18.23	18.63
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131997	132322	132647
					1712.5MHz	1745.0MHz	1777.5MHz
5MHz	QPSK	1	0	20.50	20.19	20.27	20.35
			13	20.50	20.18	20.17	20.37
			24	20.50	20.24	20.32	20.33
		12	0	19.50	19.33	19.34	19.44
			6	19.50	19.42	19.39	19.42
			13	20.00	19.31	19.25	19.51
		25	0	20.00	19.38	19.32	19.51
	16QAM	1	0	20.00	19.86	19.94	19.16
			13	20.00	19.92	19.90	19.07
			24	20.00	19.97	19.85	19.11
		12	0	19.50	19.16	19.32	19.21
			6	19.00	18.72	18.53	18.70
			13	18.50	18.45	18.20	18.36
		25	0	19.00	18.42	18.23	18.60

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132022	132322	132622
					1715.0MHz	1745.0MHz	1775.0MHz
10MHz	QPSK	1	0	20.50	20.26	20.33	20.43
			25	20.50	20.26	20.35	20.40
			49	20.50	20.32	20.39	20.43
		25	0	20.00	19.37	19.41	19.51
			13	20.00	19.39	19.27	19.52
			25	19.50	19.42	19.20	19.42
	50	0	19.50	19.43	19.31	19.44	
	25	20.50	19.66	20.15	20.35		
	49	20.50	19.66	20.08	20.38		
	25	0	20.00	18.14	18.97	19.80	
		13	19.00	18.37	18.29	18.62	
		25	19.00	18.63	18.36	18.28	
	50	0	18.50	18.36	18.30	18.48	
	LTE-FDD Band 66				Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132047	132322	132597
					1717.5MHz	1745.0MHz	1772.5MHz
15MHz	QPSK	1	0	20.50	20.18	20.30	20.26
			38	20.50	20.31	20.22	20.37
			74	21.00	20.34	20.33	20.52
		36	0	19.50	19.40	19.29	19.38
			18	19.50	19.42	19.34	19.44
			39	19.50	19.38	19.33	19.45
	75	0	20.00	19.51	19.38	19.48	
	38	21.00	20.22	20.64	20.34		
	74	21.00	20.18	20.61	20.46		
	36	0	20.50	18.30	19.87	20.41	
		18	19.00	18.27	18.31	18.65	
		39	19.00	18.53	18.29	18.12	
	75	0	19.00	18.29	18.27	18.50	
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132072	132322
1720.0MHz						1745.0MHz	1770.0MHz
20MHz	QPSK	1	0	21.00	20.42	20.51	20.19
			50	20.50	20.48	20.47	20.36
			99	21.00	20.52	20.47	20.41
		50	0	19.50	19.37	19.36	19.29
			25	19.50	19.40	19.30	19.42
			50	19.50	19.49	19.24	19.45
	100	0	20.00	19.51	19.30	19.34	
	50	21.00	20.74	19.65	20.02		
	99	21.00	20.68	19.65	20.15		
	50	0	21.00	18.33	18.60	20.68	
		25	19.00	18.15	18.17	18.51	
		50	19.00	18.65	18.26	18.24	
	100	0	19.00	18.29	18.28	18.61	

Band 71

LTE-FDD Band 71				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		133147	133297	133447
					665.5MHz	680.5MHz	695.5MHz
5MHz	QPSK	1	0	20.00	19.76	19.66	19.44
			13	20.00	19.69	19.52	19.94
			24	20.00	19.96	19.56	19.90
		12	0	19.00	18.75	18.51	18.67
			6	19.50	18.83	18.62	19.07
			13	19.50	18.72	18.79	19.02
		25	0	19.50	18.86	18.53	19.07
	16QAM	1	0	19.50	19.15	18.34	18.99
			13	19.50	19.15	18.14	19.47
			24	19.50	19.18	18.34	19.44
		12	0	19.00	18.22	18.17	18.52
			6	18.00	17.87	17.90	17.96
			13	18.00	17.75	17.75	17.91
		25	0	18.00	17.65	17.89	17.79
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	133172	133297	133422
					668.0MHz	680.5MHz	693.0MHz
10MHz	QPSK	1	0	20.50	19.81	20.30	19.44
			25	20.00	19.91	19.65	19.87
			49	20.50	20.27	19.77	19.87
		25	0	19.50	18.77	18.66	19.10
			13	19.50	18.73	18.56	19.01
			25	19.50	18.72	18.71	19.10
		50	0	19.50	18.81	18.64	19.07
	16QAM	1	0	20.00	18.78	19.71	19.06
			25	20.00	18.78	19.14	19.53
			49	20.00	19.30	19.20	19.58
		25	0	19.00	17.14	17.90	18.69
			13	18.00	17.56	17.64	17.73
			25	18.00	17.99	17.94	17.37
		50	0	18.00	17.60	17.94	17.83
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	133197	133297	133397
					670.5MHz	680.5MHz	690.5MHz
15MHz	QPSK	1	0	20.00	19.70	19.59	19.45
			38	20.00	19.80	19.46	19.91
			74	20.00	19.70	19.63	19.89
		36	0	19.00	18.87	18.60	18.57
			18	19.50	18.62	18.55	19.09
			39	19.00	18.73	18.72	18.63
		75	0	19.50	18.57	18.63	19.05
	16QAM	1	0	20.00	19.42	19.95	19.05
			38	20.00	19.38	19.78	19.57
			74	20.00	19.41	19.85	19.54
		36	0	19.00	18.77	18.40	18.44
			18	19.00	17.58	17.26	18.56
			39	18.00	17.52	17.82	17.85
		75	0	18.00	17.43	17.95	17.87

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	133222	133322	133372
					673.0MHz	683.0MHz	688.0MHz
20MHz	QPSK	1	0	20.00	19.78	19.76	19.66
			50	20.50	20.24	19.83	19.55
			99	20.50	19.70	20.15	19.88
		50	0	19.00	18.73	18.59	18.76
			25	19.50	19.21	18.71	18.50
			50	19.50	18.60	18.58	19.05
		100	0	19.50	19.23	18.72	18.58
	16QAM	1	0	20.00	19.83	19.44	18.72
			50	20.50	20.26	19.42	18.67
			99	20.00	19.84	19.74	19.09
		50	0	20.00	19.70	16.63	16.89
			25	18.50	18.49	16.57	17.90
			50	18.50	17.44	18.14	18.16
		100	0	18.00	17.95	17.53	17.51

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	15.23	15.50	Yes
		6	2437	14.26	14.50	No
		11	2462	14.72	15.00	No
	802.11g	1	2412	14.77	15.00	No
		6	2437	13.80	14.00	No
		11	2462	14.24	14.50	No
	802.11n(HT20)	1	2412	15.69	16.00	No
		6	2437	13.66	14.00	No
		11	2462	14.66	15.00	No
	802.11n(HT40)	3	2422	15.03	15.50	No
		6	2437	15.01	15.50	No
		9	2452	14.81	15.00	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	11.89	12.00	Yes
		40	5200	11.66	12.00	No
		48	5240	11.00	11.50	No
	802.11n(HT20)	36	5180	11.73	12.00	No
		40	5200	11.60	12.00	No
		48	5240	11.09	11.50	No
	802.11ac(VHT20)	36	5180	11.60	12.00	No
		40	5200	11.43	11.50	No
		48	5240	10.84	11.00	No
	802.11n(HT40)	38	5190	11.68	12.00	No
		46	5230	11.12	11.50	No
	802.11ac(VHT40)	38	5190	11.69	12.00	No
		46	5230	11.16	11.50	No
	802.11ac(VHT80)	42	5210	11.81	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	10.50	11.00	No
		56	5280	9.90	10.00	No
		64	5320	9.65	10.00	No
	802.11n(HT20)	52	5260	10.56	11.00	No
		56	5300	9.91	10.00	No
		64	5320	9.75	10.00	No
	802.11ac(VHT20)	52	5260	10.33	10.50	No
		56	5300	9.74	10.00	No
		64	5320	9.63	10.00	No
	802.11n(HT40)	54	5270	10.32	10.50	No
		62	5310	9.83	10.00	No
	802.11ac(VHT40)	54	5270	10.40	10.50	No
		62	5310	9.84	10.00	No
	802.11ac(VHT80)	58	5290	10.69	11.00	Yes
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	11.19	11.50	No
		116	5580	11.52	12.00	No
		140	5700	11.85	12.00	No
	802.11n(HT20)	100	5500	11.12	11.50	No
		120	5580	11.75	12.00	No
		140	5700	12.25	12.50	Yes
	802.11ac(VHT20)	100	5500	11.09	11.50	No
		116	5580	11.64	12.00	No
		140	5700	12.04	12.50	No
	802.11n(HT40)	102	5510	11.29	11.50	No
		118	5550	11.22	11.50	No
		134	5670	12.08	12.50	No
	802.11ac(VHT40)	102	5510	11.26	11.50	No
		118	5550	11.20	11.50	No
		134	5670	12.09	12.50	No
	802.11ac(VHT80)	106	5530	11.16	11.50	No
		122	5610	11.63	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	12.90	13.00	No
		157	5785	12.55	13.00	No
		165	5825	12.58	13.00	No
	802.11n(HT20)	149	5745	12.86	13.00	No
		157	5785	12.68	13.00	No
		165	5825	12.93	13.00	No
	802.11ac(VHT20)	149	5745	12.77	13.00	No
		157	5785	12.74	13.00	No
		165	5825	12.87	13.00	No
	802.11n(HT40)	151	5755	13.14	13.50	No
		159	5795	13.02	13.50	No
	802.11ac(VHT40)	151	5755	13.22	13.50	No
		159	5795	13.04	13.50	No
	802.11ac(VHT80)	155	5775	13.89	14.00	Yes

8.5 Bluetooth

EDR	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	39	78
			2402MHz	2441MHz	2480MHz
			1.82	3.44	3.80
	GFSK	4.00	1.82	3.44	3.80
	$\pi/4$ QPSK	6.00	3.92	5.33	5.54
	8DPSK	6.00	4.26	5.58	5.73
BLE	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	20	39
			2402MHz	2440MHz	2480MHz
			4.96	5.11	5.80
	1Mbps	6.00	4.96	5.11	5.80
	2Mbps	6.00	4.99	5.15	5.84

Note

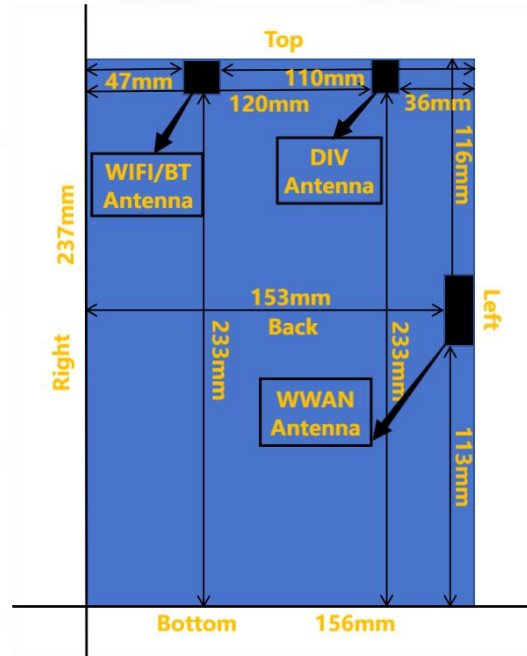
- Per KDB 447498 D01 General RF Exposure Guidance v06, the 1-g SAR test exclusion thresholds for 300 MHz to 6 GHz at *test separation distances* ≤ 40 cm are determined by:

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
DIV Antenna	DIV 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 Side (mm)	Right Side (mm)	Top Side (mm)	Bottom Side (mm)
WWAN	<25	<25	<25	153	116	113
BT/Wifi	<25	<25	110	47	<25	233
DIV	<25	<25	36	120	<25	233
Positions for SAR tests: Hotspot mode						
Antenna	Front Side (mm)	Back Side (mm)	Left Side (mm)	Right Side (mm)	Top Side (mm)	Bottom Side (mm)
WWAN	No	Yes	Yes	No	No	No
BT/Wifi	No	Yes	No	No	Yes	No
DIV	No	Yes	No	No	Yes	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.
GSM850	Back	128	824.2	2.810	0.842	100.00	1.000	32.31	32.50	1.045	0.880	/
	Left	128	824.2	-3.420	0.665	100.00	1.000	32.31	32.50	1.045	0.695	/
GPRS 850+2slots	Back	128	824.2	2.150	1.041	100.00	1.000	30.29	30.50	1.050	1.093	1#
	Back-repeat	128	824.2	-1.280	1.036	100.00	1.000	30.29	30.50	1.050	1.088	/
	Back	190	836.6	4.030	0.984	100.00	1.000	30.16	30.50	1.081	1.064	/
	Back	251	848.8	1.030	0.953	100.00	1.000	30.01	30.50	1.119	1.066	/
	Left	128	824.2	0.740	0.746	100.00	1.000	30.29	30.50	1.050	0.783	/

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.
GSM1900	Back	810	1909.8	2.370	0.823	100.00	1.000	28.96	29.00	1.009	0.830	/
	Left	810	1909.8	-1.630	0.636	100.00	1.000	28.96	29.00	1.009	0.642	/
GPRS 1900+3slots	Back	512	1850.2	1.260	0.868	100.00	1.000	24.76	25.00	1.057	0.917	/
	Back	661	1880.0	0.260	0.925	100.00	1.000	25.19	25.50	1.074	0.993	/
	Back	810	1909.8	1.500	1.099	100.00	1.000	25.63	26.00	1.089	1.197	2#
	Back-repeat	810	1909.8	-2.320	1.092	100.00	1.000	25.63	26.00	1.089	1.189	/
	Left	810	1909.8	3.080	0.712	100.00	1.000	25.63	26.00	1.089	0.775	/

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	1.170	0.758	100.00	1.000	21.92	22.00	1.019	0.772	3#
	Left	9262	1852.4	-2.650	0.569	100.00	1.000	21.92	22.00	1.019	0.580	/

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 4 (RMC*)	Back	1413	1732.6	3.500	0.517	100.00	1.000	22.48	22.50	1.005	0.520	4#
	Left	1413	1732.6	-0.070	0.378	100.00	1.000	22.48	22.50	1.005	0.380	/

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	-4.110	0.627	100.00	1.000	21.65	22.00	1.084	0.680	5#
	Left	4233	846.6	-3.590	0.448	100.00	1.000	21.65	22.00	1.084	0.486	/

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	-2.640	0.695	100.00	1.000	18.58	19.00	1.102	0.766	6#
		Left	19100	1900.0	3.570	0.465	100.00	1.000	18.58	19.00	1.102	0.512	/
	50%RB	Back	19100	1900.0	-1.290	0.612	100.00	1.000	17.18	17.50	1.076	0.659	/
		Left	19100	1900.0	-3.240	0.428	100.00	1.000	17.18	17.50	1.076	0.461	/

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	1.640	0.399	100.00	1.000	17.64	18.00	1.086	0.433	7#
		Left	20175	1732.5	0.230	0.312	100.00	1.000	17.64	18.00	1.086	0.339	/
	50%RB	Back	20175	1732.5	2.450	0.322	100.00	1.000	16.51	17.00	1.119	0.360	/
		Left	20175	1732.5	-4.120	0.265	100.00	1.000	16.51	17.00	1.119	0.297	/

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	20600	844.0	3.280	0.200	100.00	1.000	19.89	20.00	1.026	0.205	8#
		Left	20600	844.0	2.700	0.142	100.00	1.000	19.89	20.00	1.026	0.146	/
	50%RB	Back	20600	844.0	3.400	0.150	100.00	1.000	18.96	19.00	1.009	0.151	/
		Left	20600	844.0	-1.230	0.108	100.00	1.000	18.96	19.00	1.009	0.109	/

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	-1.430	0.182	100.00	1.000	21.67	22.00	1.079	0.196	9#
		Left	23230	782.0	2.800	0.123	100.00	1.000	21.67	22.00	1.079	0.133	/
	50%RB	Back	23230	782.0	2.900	0.135	100.00	1.000	20.70	21.00	1.072	0.145	/
		Left	23230	782.0	-0.800	0.089	100.00	1.000	20.70	21.00	1.072	0.095	/

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 25 (BW: 20MHz)	1RB	Back	26140	1860.0	-0.580	0.717	100.00	1.000	22.17	22.50	1.079	0.774	10#
		Left	26140	1860.0	-2.340	0.528	100.00	1.000	22.17	22.50	1.079	0.570	/
	50%RB	Back	26140	1860.0	1.230	0.664	100.00	1.000	21.03	21.50	1.114	0.740	/
		Left	26140	1860.0	2.000	0.471	100.00	1.000	21.03	21.50	1.114	0.525	/

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 26 part 90 (BW: 10MHz)	1RB	Back	26740	819.0	2.560	0.169	100.00	1.000	19.79	20.00	1.050	0.177	11#
		Left	26740	819.0	-3.020	0.126	100.00	1.000	19.79	20.00	1.050	0.132	/
	50%RB	Back	26740	819.0	-4.340	0.130	100.00	1.000	18.86	19.00	1.033	0.134	/
		Left	26740	819.0	-1.670	0.088	100.00	1.000	18.86	19.00	1.033	0.091	/

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 26 part 22 (BW: 15MHz)	1RB	Back	26915	836.5	-4.970	0.180	100.00	1.000	19.88	20.00	1.028	0.185	12#
		Left	26915	836.5	1.120	0.152	100.00	1.000	19.88	20.00	1.028	0.156	/
	50%RB	Back	26915	836.5	0.690	0.142	100.00	1.000	18.99	19.00	1.002	0.142	/
		Left	26915	836.5	-2.110	0.110	100.00	1.000	18.99	19.00	1.002	0.110	/

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 66 (BW: 20MHz)	1RB	Back	132572	1770.0	-3.070	0.445	100.00	1.000	20.52	21.00	1.117	0.497	13#
		Left	132572	1770.0	-2.690	0.369	100.00	1.000	20.52	21.00	1.117	0.412	/
	50%RB	Back	132572	1770.0	-2.320	0.408	100.00	1.000	19.49	19.50	1.002	0.409	/
		Left	132572	1770.0	-0.680	0.323	100.00	1.000	19.49	19.50	1.002	0.324	/

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 71 (BW: 20MHz)	1RB	Back	133222	673.0	0.360	0.214	100.00	1.000	20.24	20.50	1.062	0.227	14#
		Left	133222	673.0	-1.730	0.143	100.00	1.000	20.24	20.50	1.062	0.152	/
	50%RB	Back	133222	673.0	-3.530	0.153	100.00	1.000	19.21	19.50	1.069	0.164	/
		Left	133222	673.0	1.330	0.112	100.00	1.000	19.21	19.50	1.069	0.120	/

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	1	2412	3.070	0.076	100.00	1.000	15.23	15.50	1.064	0.081	15#
	Top	1	2412	4.450	0.053	100.00	1.000	15.23	15.50	1.064	0.056	/

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 (5.150~5.350) 802.11a	Back	36	5180	-0.410	0.146	100.00	1.000	11.89	12.00	1.026	0.150	16#
	Top	36	5180	-2.680	0.105	100.00	1.000	11.89	12.00	1.026	0.108	/

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) 802.11ac(VHT80)	Back	58	5290	4.050	0.186	100.00	1.000	10.69	11.00	1.074	0.200	17#
	Top	58	5290	-3.520	0.130	100.00	1.000	10.69	11.00	1.074	0.140	/

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) 802.11n(HT20)	Back	140	5700	-1.630	0.279	100.00	1.000	12.25	12.50	1.059	0.295	18#
	Top	140	5700	-1.920	0.237	100.00	1.000	12.25	12.50	1.059	0.251	/

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) 802.11ac(VHT80)	Back	155	5775	-1.330	0.190	100.00	1.000	13.89	14.00	1.026	0.195	19#
	Top	155	5775	-2.130	0.127	100.00	1.000	13.89	14.00	1.026	0.130	/

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	78	2480	0.500	0.011	100.00	1.000	5.73	6.00	1.064	0.012	20#
	Top	78	2480	-3.860	0.006	100.00	1.000	5.73	6.00	1.064	0.006	/

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 $\leq 0.8W/kg$, 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 $1.099 > 0.80$ W/kg, repeated measurement is as below.

Mode	Position	Ch.	Freq. (MHz)	1g Meas SAR (W/kg)	the ratio of largest to smallest SAR for the original and first repeated measurements
GPRS 850+2slots	Back	128	824.2	1.041	1.005
	Back-repeat	128	824.2	1.036	
GPRS 1900+3slots	Back	810	1909.8	1.099	1.006
	Back-repeat	810	1909.8	1.092	

According to the above ratio result, we don't need to perform a second repeated measurement for these bands.

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	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					
GSM 1900	Back	1.197	0.081	0.295	0.012	1.278	1.492	1.209	N/A	N/A
	Left	0.775	/	/	/	0.775	0.775	0.775	N/A	N/A
	Top	/	0.056	0.251	0.006	0.056	0.251	0.006	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	2025/10/17	2026/10/16
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
3dB Attenuator	MIDWEST MICROWAVE	263-3dB	N/A	2025/04/02	2026/04/01
Coupler	MERRIMAC	CWM-10R-10.8G	LOT-83391	2025/10/17	2026/10/16
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
2450MHz Validation Dipole	MVG	SID2450	07/22 DIP 2G450-662	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	2025/02/02	2026/02/01
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	2025/10/17	2026/10/16
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	42.36	0.89	0.88	1.10%	-1.12%	±5%	23.2	27/11/2025
835	41.50	41.85	0.90	0.89	0.84%	-1.11%	±5%	23.5	29/11/2025
1800	40.00	40.28	1.40	1.38	0.70%	-1.43%	±5%	23.3	1/12/2025
1900	40.00	40.22	1.40	1.41	0.55%	0.71%	±5%	22.8	3/12/2025
2450	39.20	38.89	1.80	1.82	-0.79%	1.11%	±5%	23.7	5/12/2025
5200	36.00	36.17	4.66	4.58	0.47%	-1.72%	±5%	23.1	6/12/2025
5400	35.80	35.90	4.86	4.92	0.28%	1.23%	±5%	23.1	6/12/2025
5600	35.50	35.38	5.07	5.10	-0.34%	0.59%	±5%	22.7	7/12/2025
5800	35.30	35.21	5.27	5.23	-0.25%	-0.76%	±5%	22.7	7/12/2025

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	0.521	0.785	5.21	7.85	5.55	8.41	-6.13%	-6.66%
835	100	0.661	0.996	6.61	9.96	6.12	9.46	8.01%	5.29%
1800	100	1.981	3.744	19.81	37.44	19.83	37.93	-0.10%	-1.29%
1900	100	2.145	4.354	21.45	43.54	20.82	40.29	3.03%	8.07%
2450	100	2.469	5.159	24.69	51.59	24.55	52.72	0.57%	-2.14%
5200	100	2.349	8.026	23.49	80.26	22.78	78.16	3.12%	2.69%
5400	100	2.451	8.345	24.51	83.45	22.55	78.64	8.69%	6.12%
5600	100	2.360	8.003	23.60	80.03	23.95	82.72	-1.46%	-3.25%
5800	100	2.222	7.474	22.22	74.74	22.71	78.32	-2.16%	-4.57%

System Performance Check Data (750 MHz)

System check at 750 MHz

Date of measurement: 27/11/2025

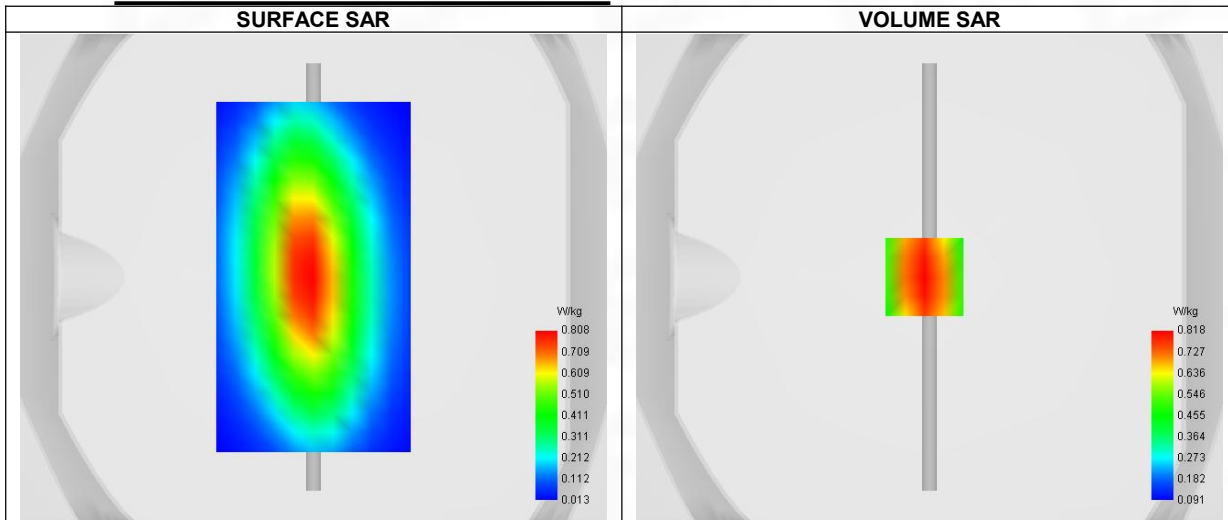
A. Experimental conditions.

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	Higher
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	750.000
Relative permittivity (real part)	42.357
Relative permittivity (imaginary part)	21.254
Conductivity (S/m)	0.877

C. SAR Surface and Volume



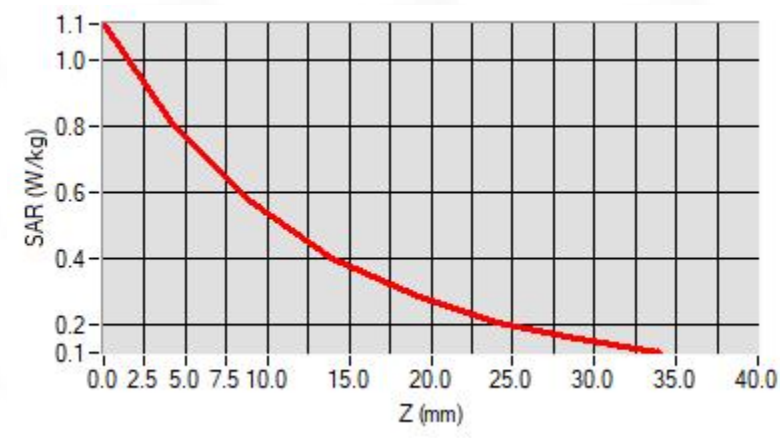
Maximum location: X=-2.00, Y=0.00 ; SAR Peak: 1.10 W/kg

D. SAR 1g & 10g

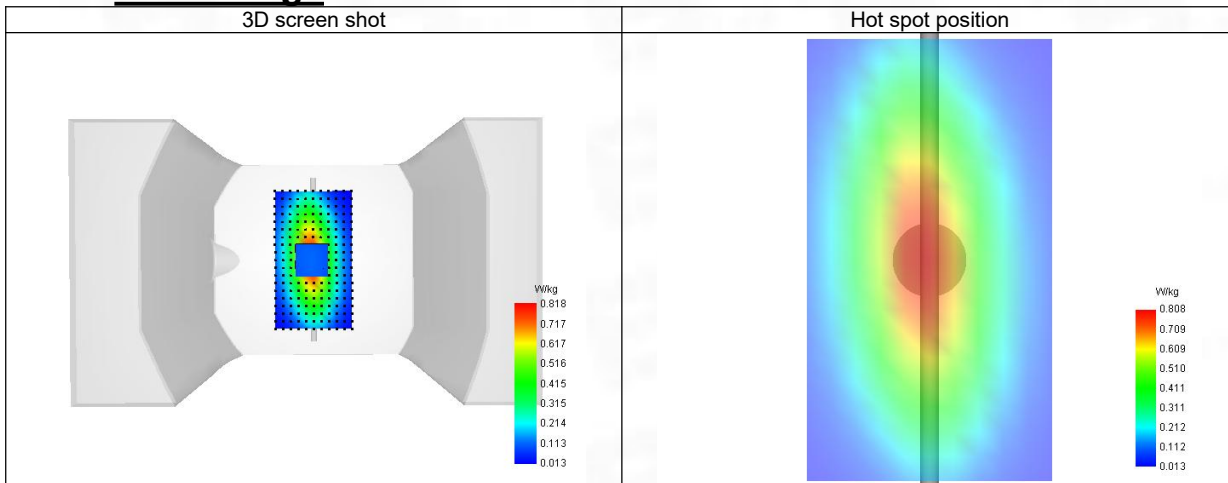
SAR 10g (W/Kg)	0.521
SAR 1g (W/Kg)	0.785
Variation (%)	-0.260
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	69.271685

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.106	0.818	0.567	0.402	0.291	0.210	0.155



F. 3D Image



System Performance Check Data (835 MHz)

System check at 835 MHz

Date of measurement: 29/11/2025

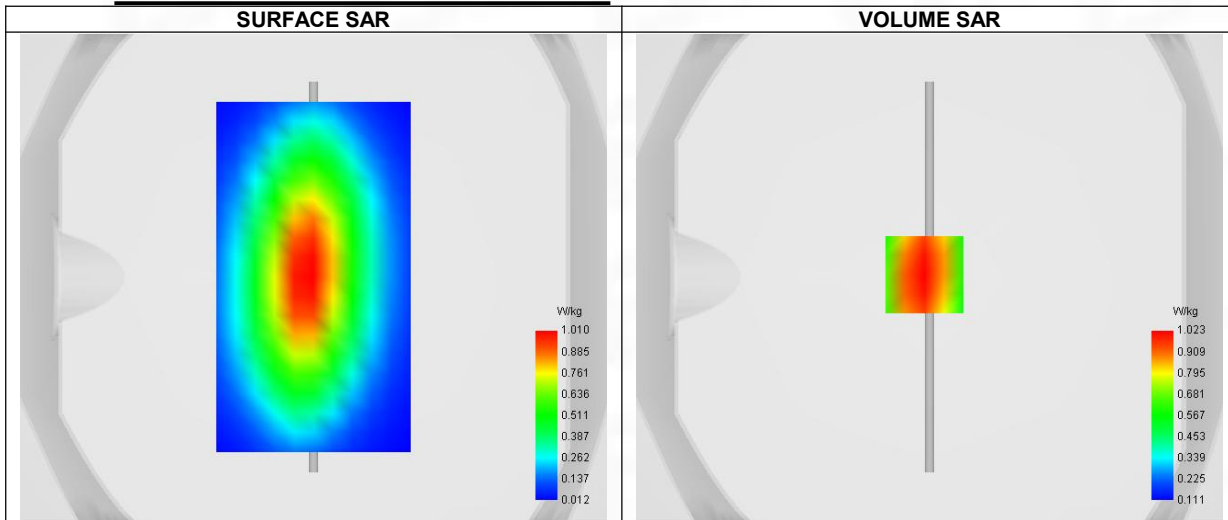
A. Experimental conditions.

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)	41.853
Relative permittivity (imaginary part)	19.687
Conductivity (S/m)	0.892

C. SAR Surface and Volume



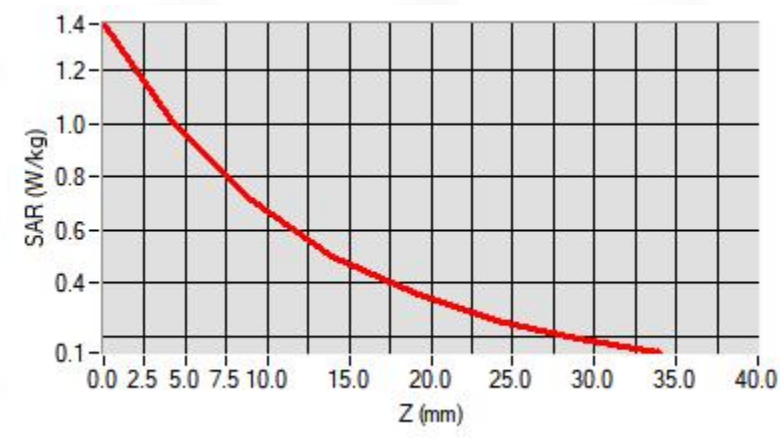
Maximum location: X=-2.00, Y=1.00 ; SAR Peak: 1.38 W/kg

D. SAR 1g & 10g

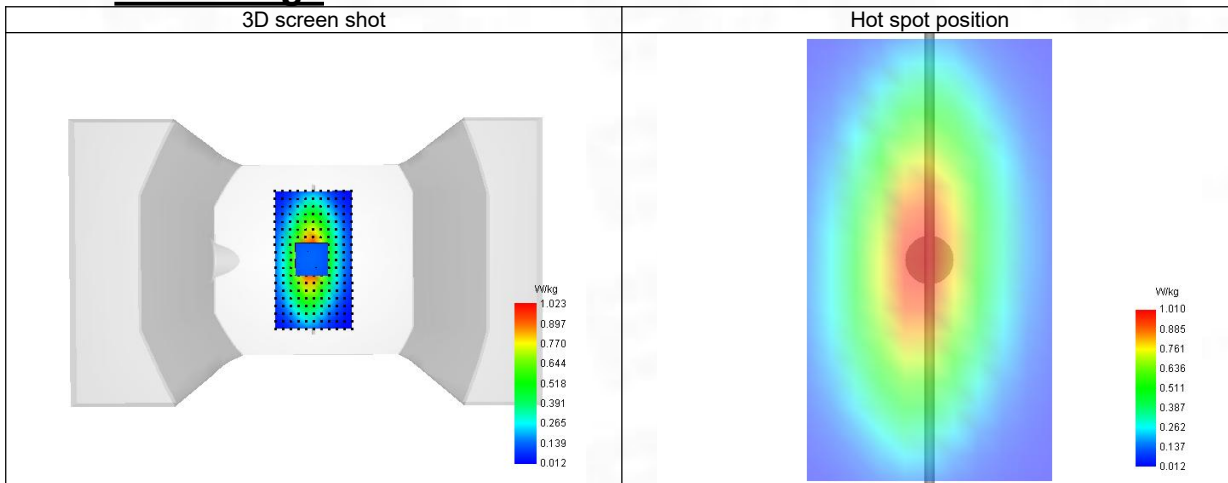
SAR 10g (W/Kg)	0.661
SAR 1g (W/Kg)	0.996
Variation (%)	-0.320
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	69.524721

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.377	1.023	0.711	0.505	0.363	0.261	0.190



F. 3D Image



System Performance Check Data (1800 MHz)

System check at 1800 MHz

Date of measurement: 1/12/2025

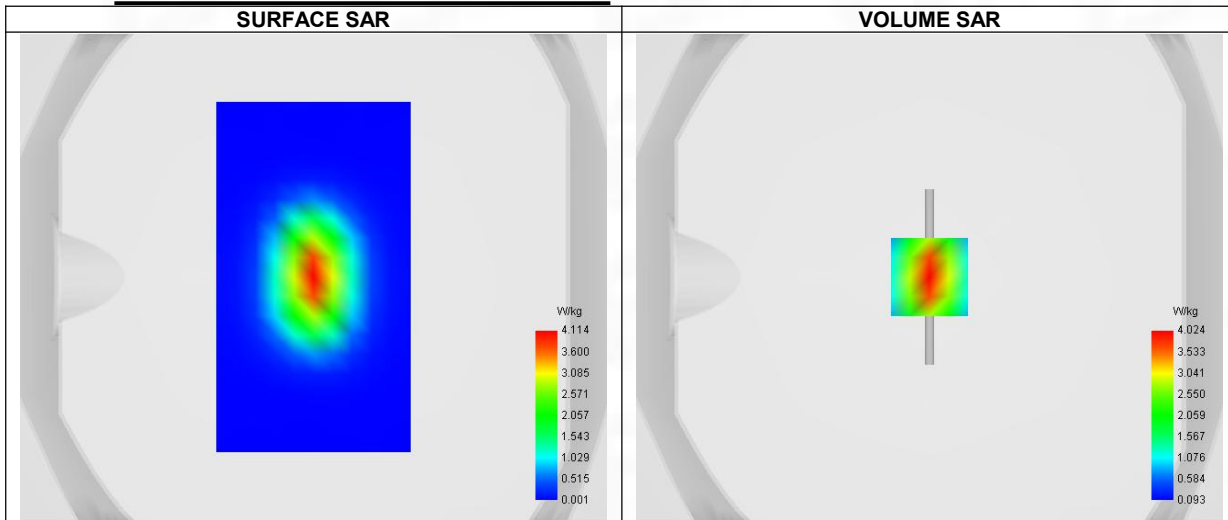
A. Experimental conditions.

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)	40.283
Relative permittivity (imaginary part)	15.457
Conductivity (S/m)	1.378

C. SAR Surface and Volume

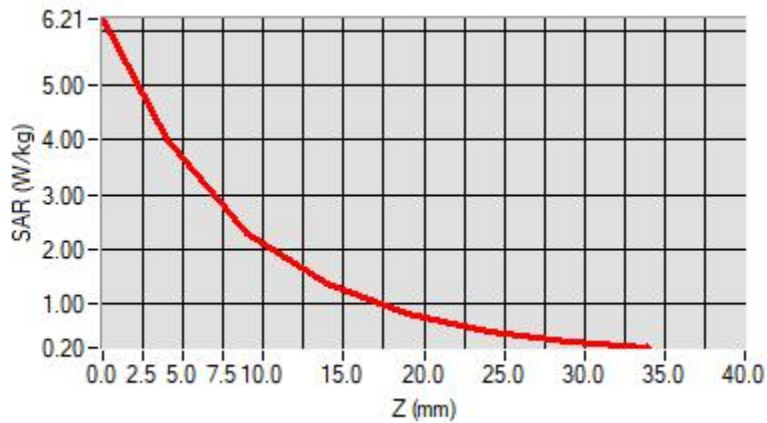


D. SAR 1g & 10g

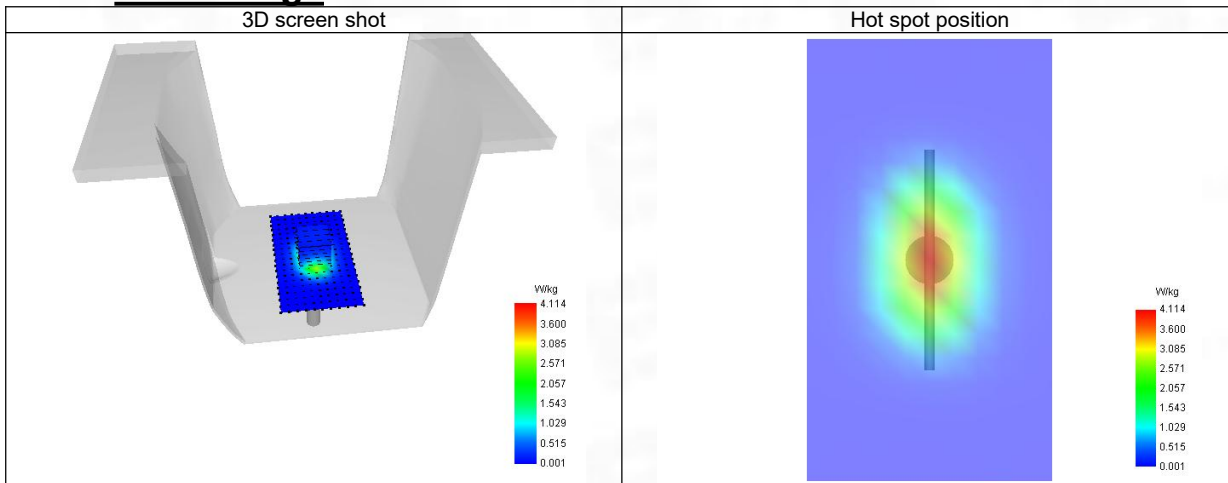
SAR 10g (W/Kg)	1.981
SAR 1g (W/Kg)	3.744
Variation (%)	-2.550
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	57.359517

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.212	4.024	2.308	1.375	0.834	0.511	0.317



F. 3D Image



System Performance Check Data (1900 MHz)

System check at 1900 MHz

Date of measurement: 3/12/2025

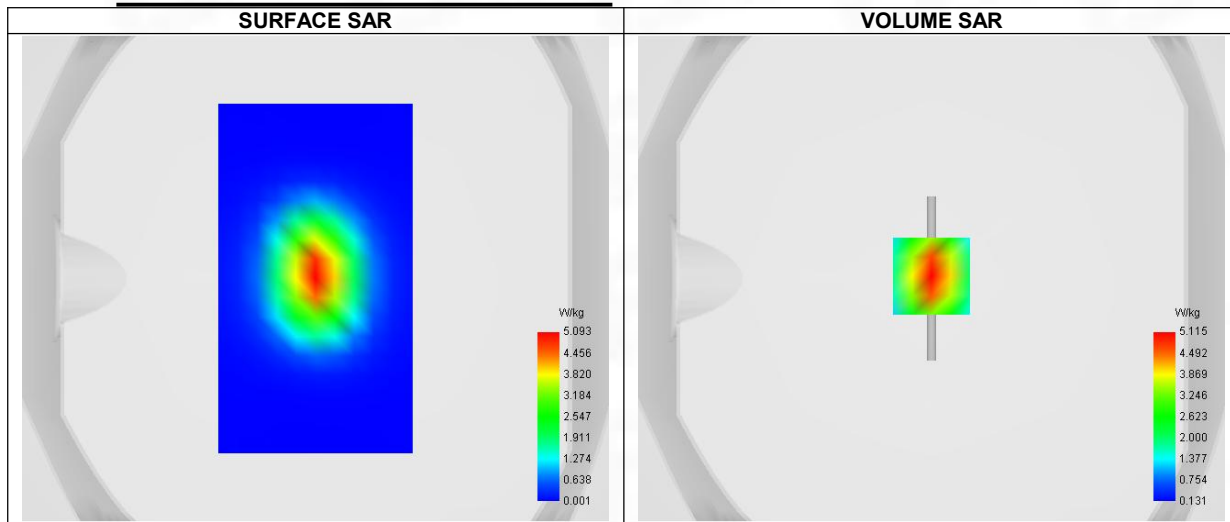
A. Experimental conditions.

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)	40.223
Relative permittivity (imaginary part)	14.753
Conductivity (S/m)	1.412

C. SAR Surface and Volume



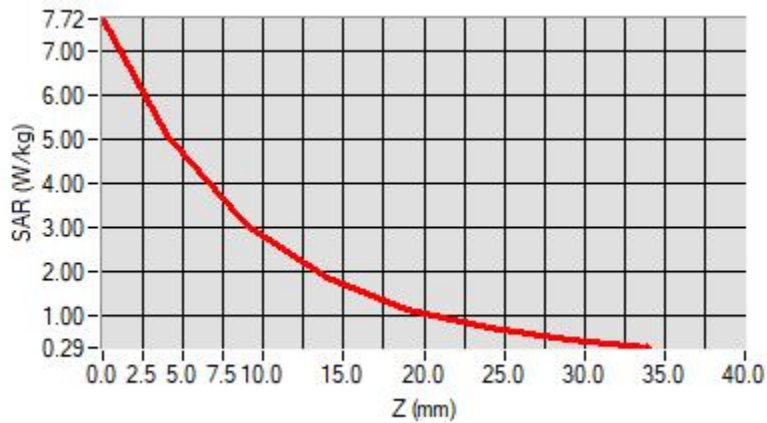
Maximum location: X=0.00, Y=1.00 ; SAR Peak: 7.66 W/kg

D. SAR 1g & 10g

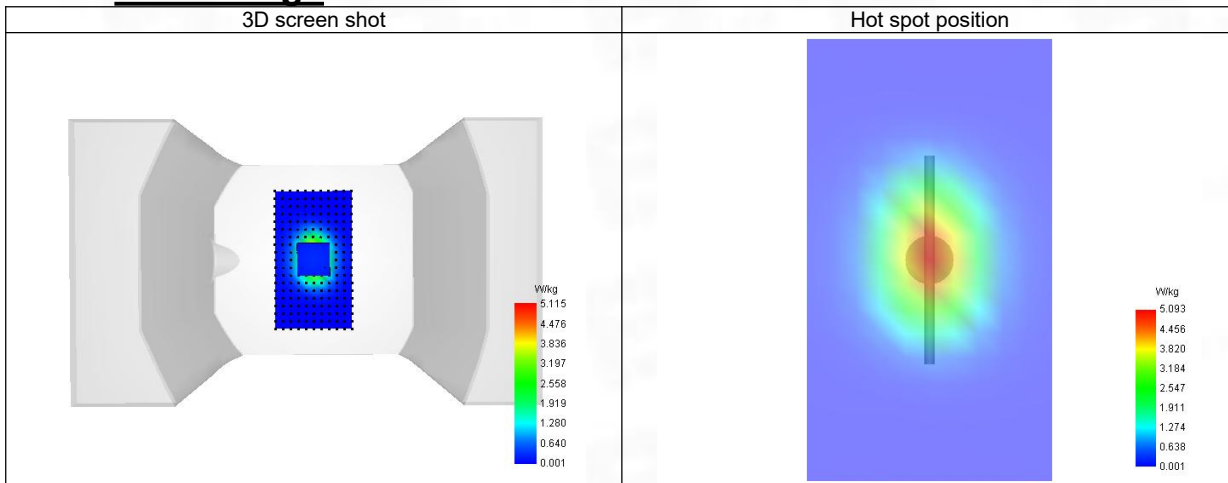
SAR 10g (W/Kg)	2.145
SAR 1g (W/Kg)	4.354
Variation (%)	-0.050
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.286554

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	7.724	5.115	3.032	1.869	1.162	0.730	0.457



F. 3D Image



System Performance Check Data (2450 MHz)

System check at 2450 MHz

Date of measurement: 5/12/2025

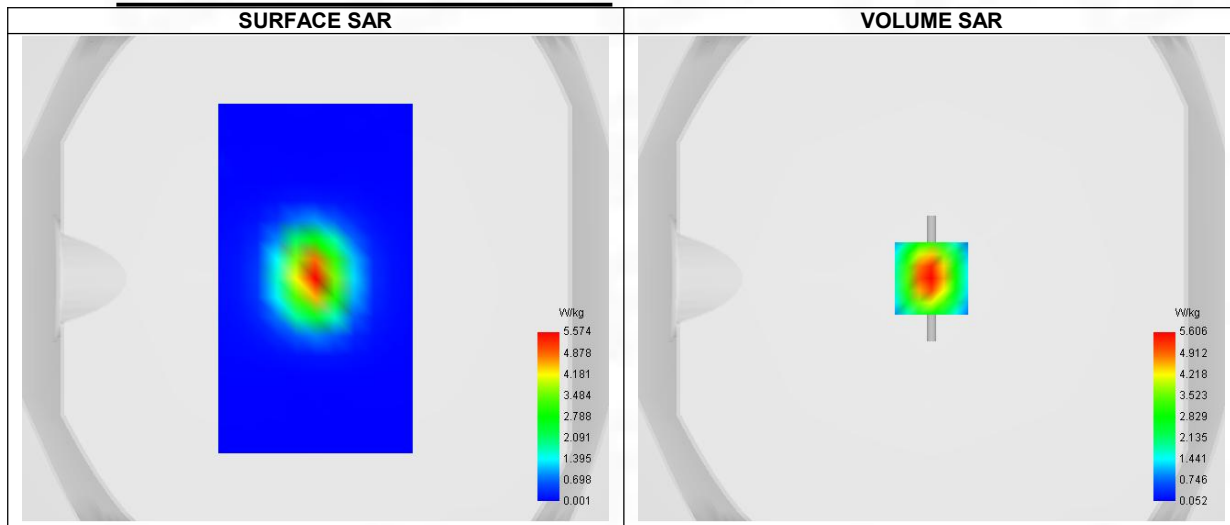
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm 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)	38.888
Relative permittivity (imaginary part)	13.788
Conductivity (S/m)	1.823

C. SAR Surface and Volume



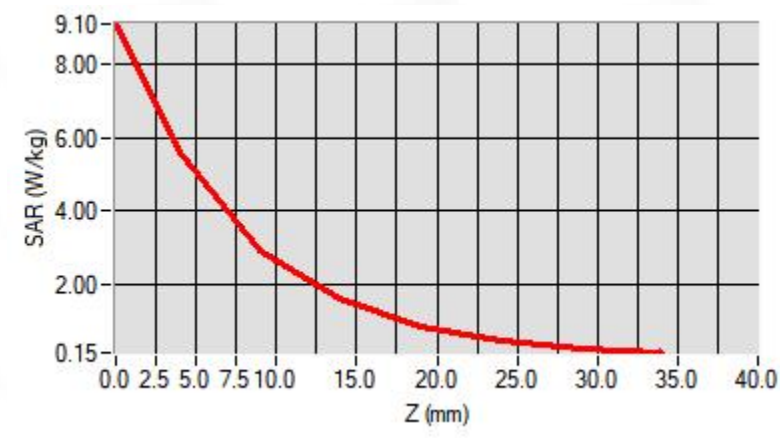
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 9.03 W/kg

D. SAR 1g & 10g

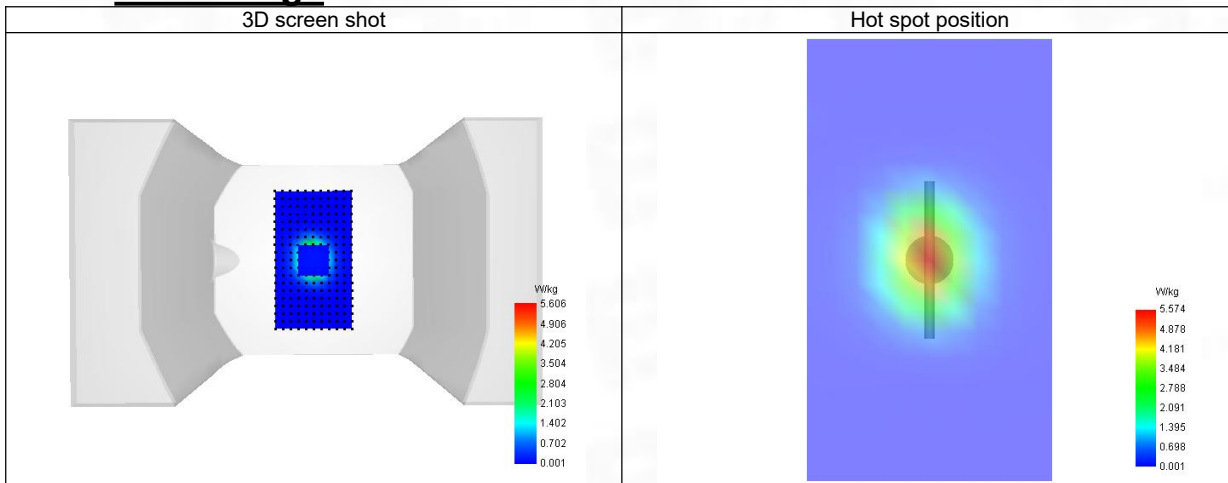
SAR 10g (W/Kg)	2.469
SAR 1g (W/Kg)	5.159
Variation (%)	1.100
Horizontal validation criteria: minimum distance (mm)	11.180340
Vertical validation criteria: SAR ratio M2/M1 (%)	52.605908

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.102	5.606	2.949	1.596	0.870	0.477	0.265



F. 3D Image



System Performance Check Data (5200 MHz)

System check at 5200 MHz

Date of measurement: 6/12/2025

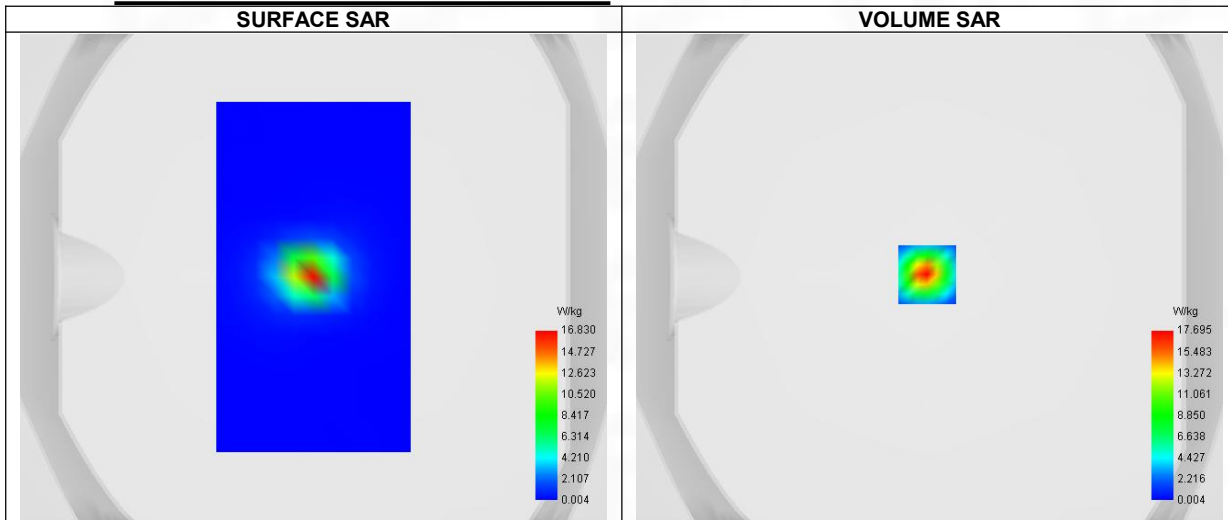
A. Experimental conditions.

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)	36.173
Relative permittivity (imaginary part)	16.455
Conductivity (S/m)	4.584

C. SAR Surface and Volume



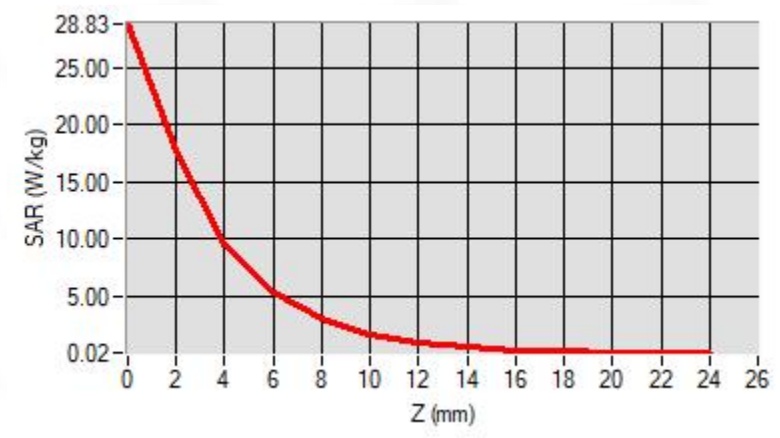
Maximum location: X=-1.00, Y=1.00 ; SAR Peak: 30.47 W/kg

D. SAR 1g & 10g

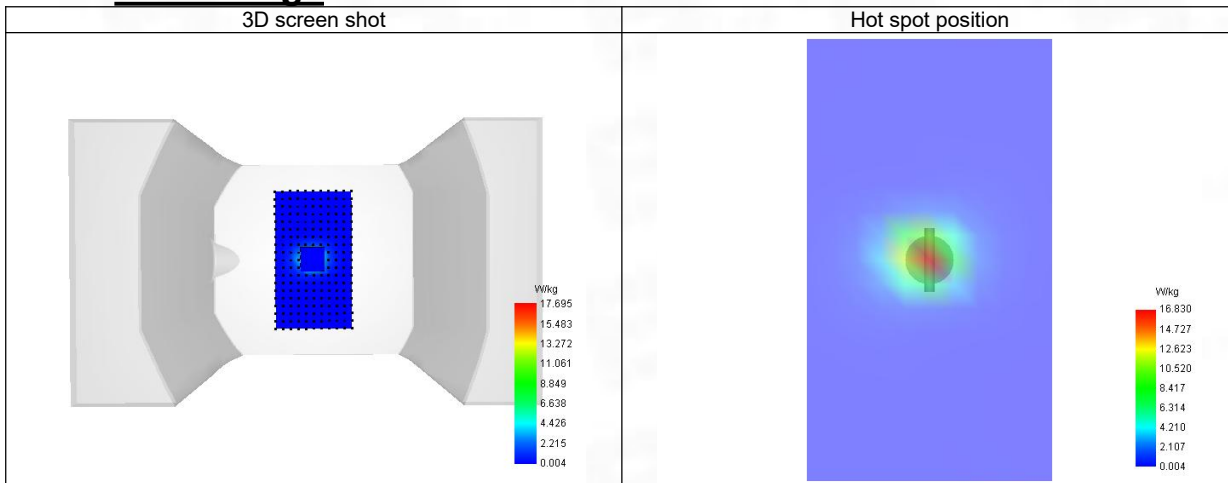
SAR 10g (W/Kg)	2.349
SAR 1g (W/Kg)	8.026
Variation (%)	-3.810
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.128365

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)	28.832	17.695	9.578	5.371	2.967	1.656	0.914	0.506	0.278	0.156	0.079	0.046



F. 3D Image



System Performance Check Data (5400 MHz)

System check at 5400 MHz

Date of measurement: 6/12/2025

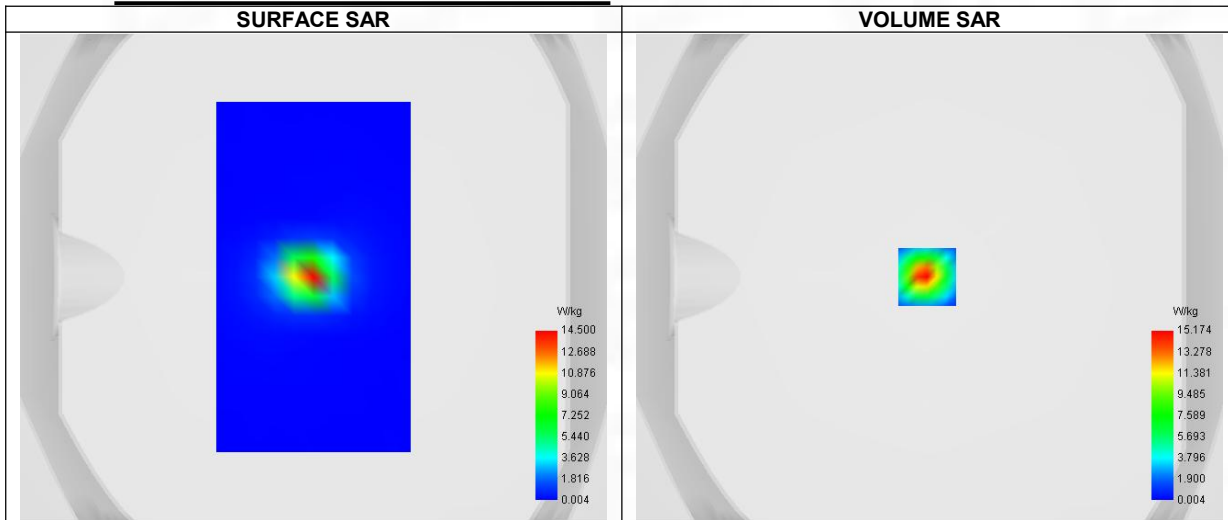
A. Experimental conditions.

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)	35.898
Relative permittivity (imaginary part)	16.142
Conductivity (S/m)	4.916

C. SAR Surface and Volume



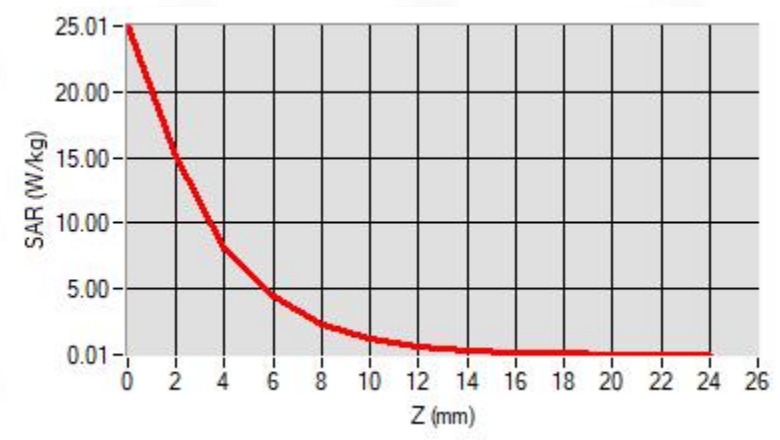
Maximum location: X=-1.00, Y=0.00 ; SAR Peak: 26.72 W/kg

D. SAR 1g & 10g

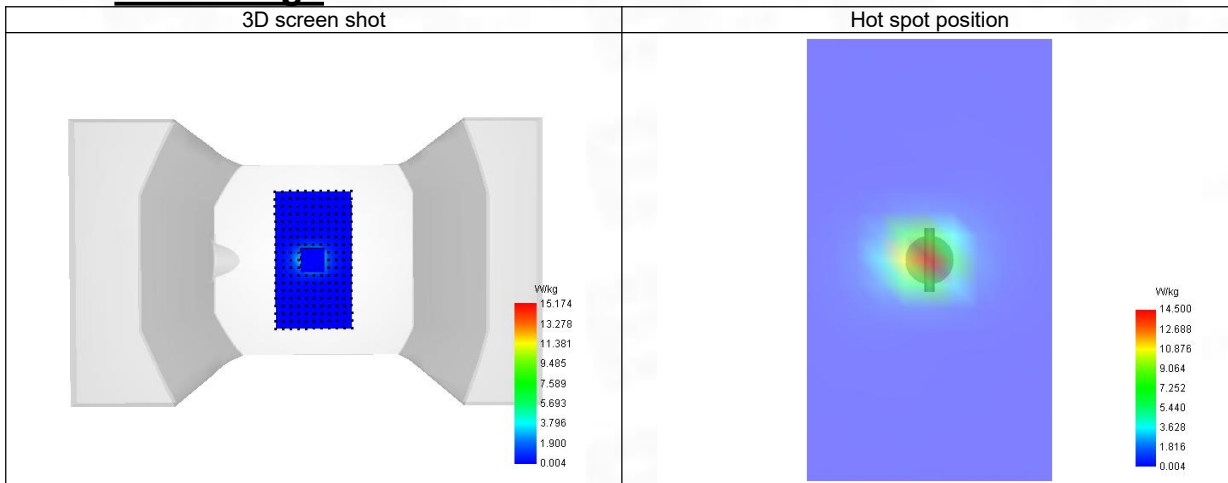
SAR 10g (W/Kg)	2.451
SAR 1g (W/Kg)	8.345
Variation (%)	3.090
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	52.964365

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)	25.014	15.174	8.037	4.381	2.356	1.266	0.685	0.359	0.191	0.096	0.054	0.031



F. 3D Image



System Performance Check Data (5600 MHz)

System check at 5600 MHz

Date of measurement: 7/12/2025

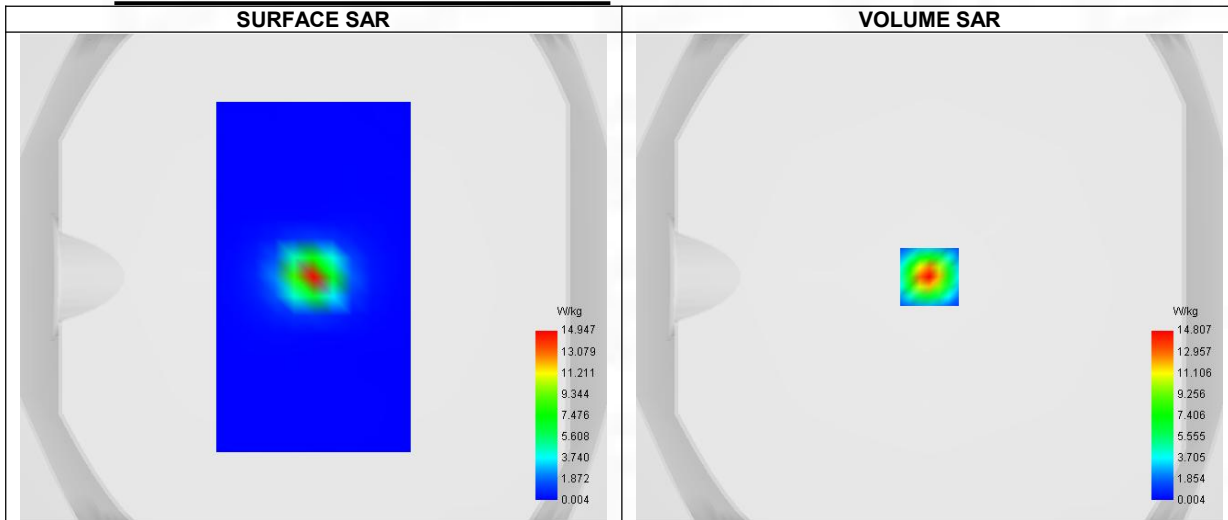
A. Experimental conditions.

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)	35.383
Relative permittivity (imaginary part)	16.354
Conductivity (S/m)	5.104

C. SAR Surface and Volume



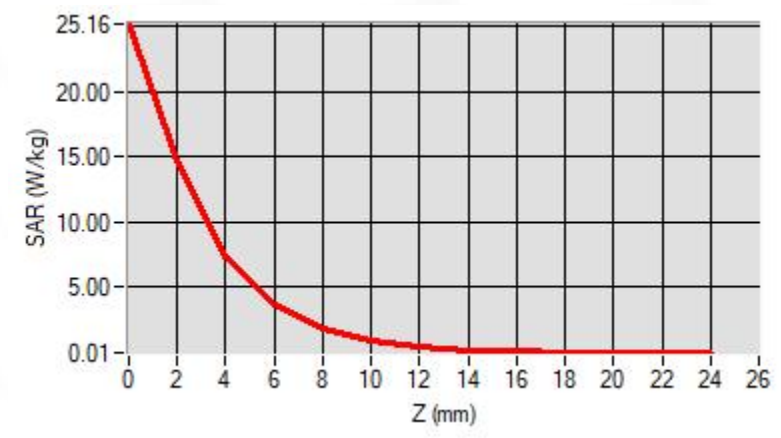
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 27.01 W/kg

D. SAR 1g & 10g

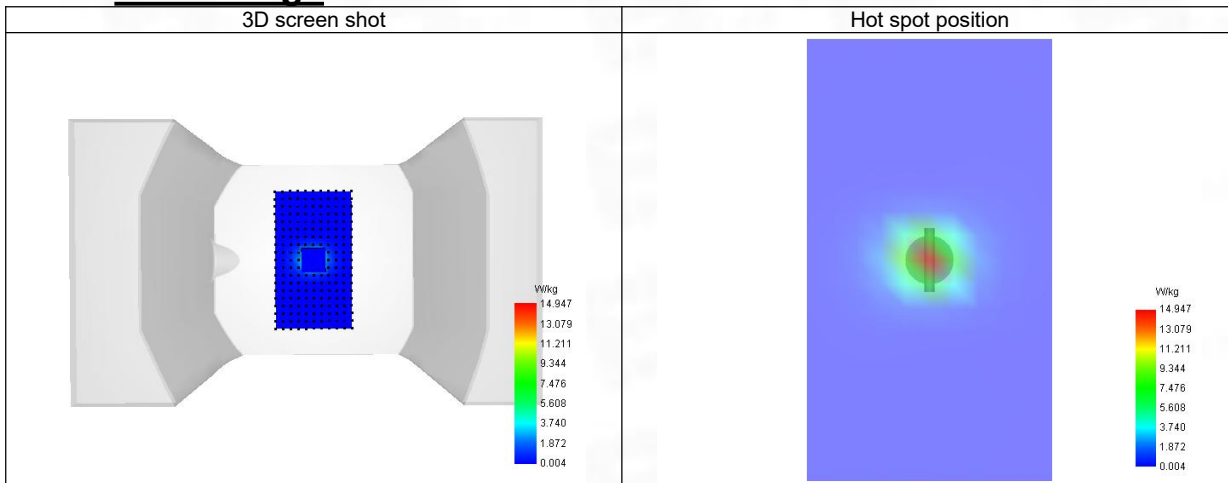
SAR 10g (W/Kg)	2.360
SAR 1g (W/Kg)	8.003
Variation (%)	3.330
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	49.352705

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)	25.157	14.807	7.308	3.740	1.881	0.964	0.487	0.232	0.123	0.054	0.025	0.019



F. 3D Image



System Performance Check Data (5800 MHz)

System check at 5800 MHz

Date of measurement: 7/12/2025

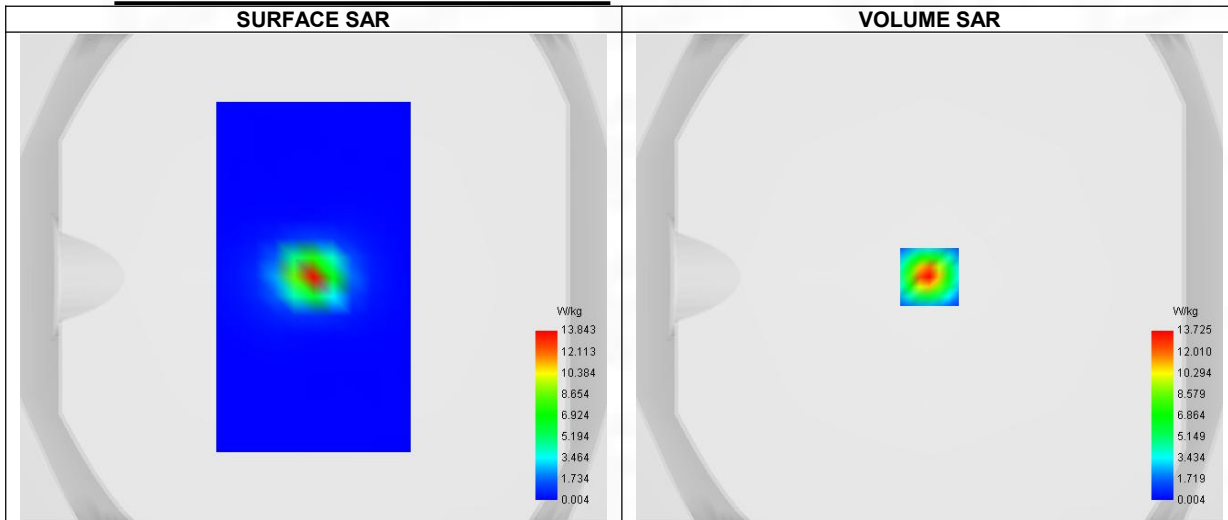
A. Experimental conditions.

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	CW5800
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	5800.000
Relative permittivity (real part)	35.206
Relative permittivity (imaginary part)	16.571
Conductivity (S/m)	5.232

C. SAR Surface and Volume



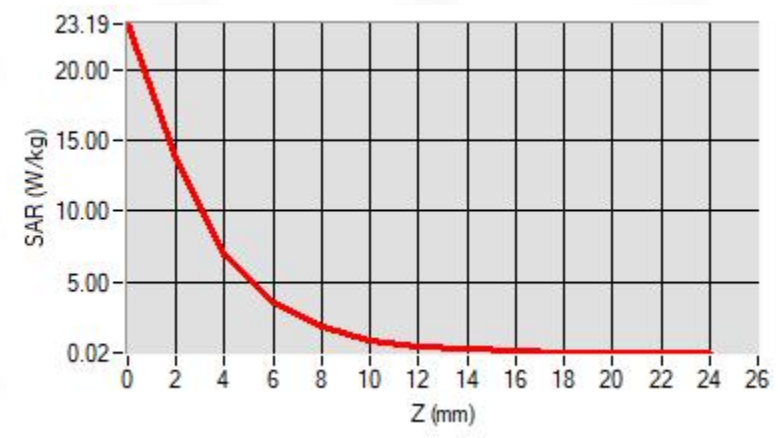
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 24.50 W/kg

D. SAR 1g & 10g

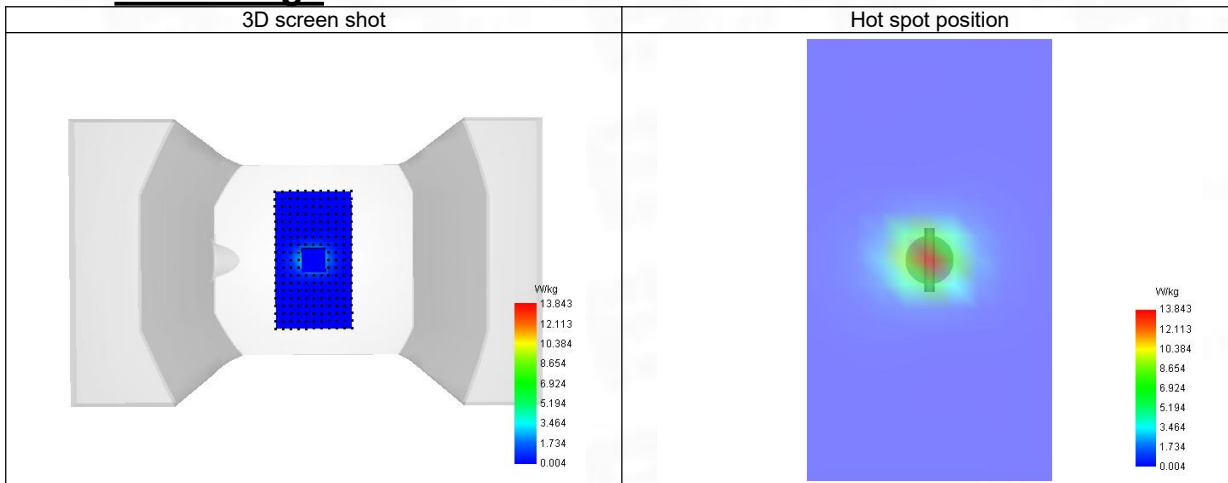
SAR 10g (W/Kg)	2.222
SAR 1g (W/Kg)	7.474
Variation (%)	-0.440
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.855477

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)	23.192	13.725	6.980	3.540	1.799	0.907	0.481	0.233	0.121	0.058	0.034	0.024



F. 3D Image



ANNEX C Test Data

1-Body with back position in dist. 0mm on Channel 128 in GPRS 850+2slots

SAR Measurement at GPRS850 (Body, Validation Plane)

Date of measurement: 29/12/2025

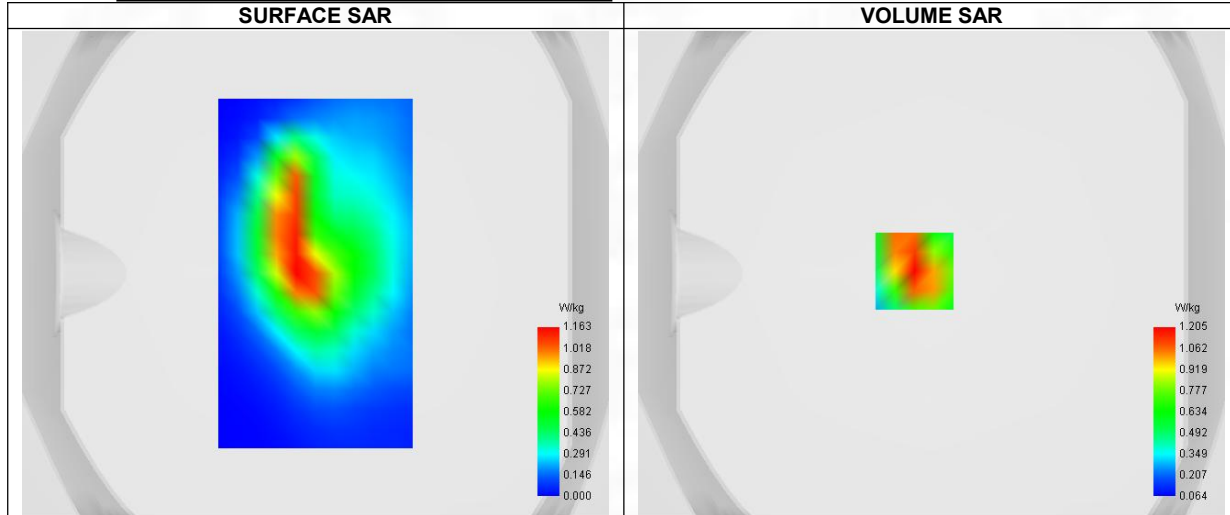
A. Experimental conditions.

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	Lower (128)/ frequency 824.200 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	2

B. Permittivity

Middle TX Frequency (MHz)	824.200
Relative permittivity (real part)	41.917
Relative permittivity (imaginary part)	19.886
Conductivity (S/m)	0.890

C. SAR Surface and Volume



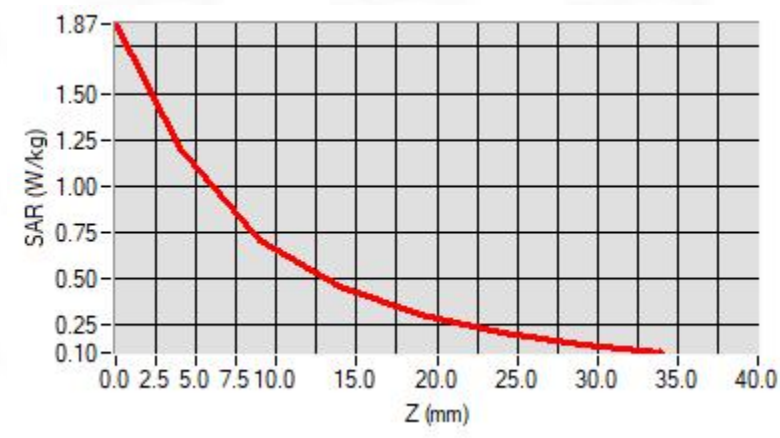
Maximum location: X=-7.00, Y=1.00 ; SAR Peak: 1.86 W/kg

D. SAR 1g & 10g

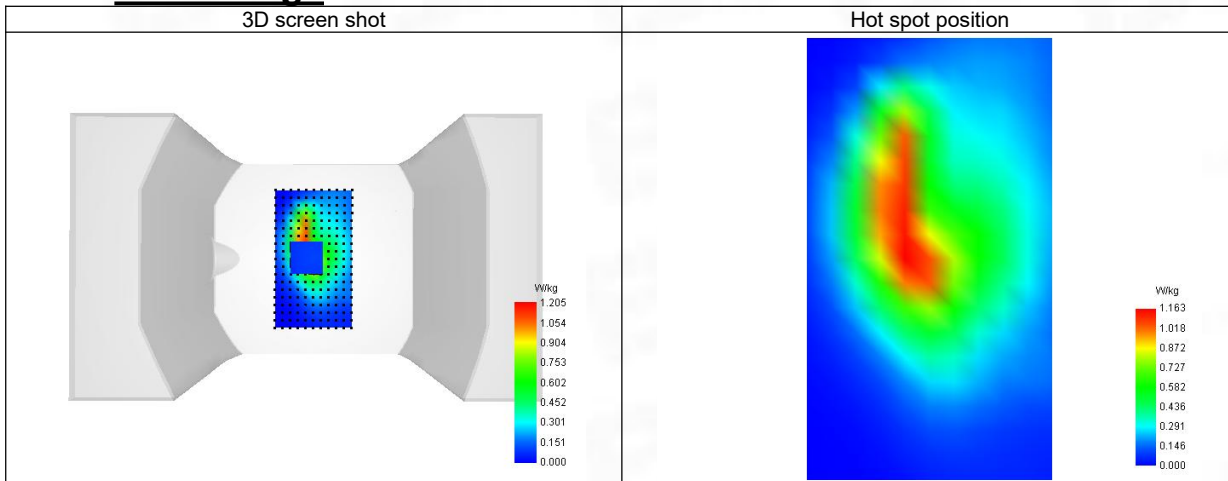
SAR 10g (W/Kg)	0.647
SAR 1g (W/Kg)	1.041
Variation (%)	2.150
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.395581

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.874	1.205	0.703	0.452	0.306	0.204	0.142



F. 3D Image



2-Body with back position in dist. 0mm on Channel 810 in GPRS 1900+3slots

SAR Measurement at GPRS1900 (Body, Validation Plane)

Date of measurement: 3/12/2025

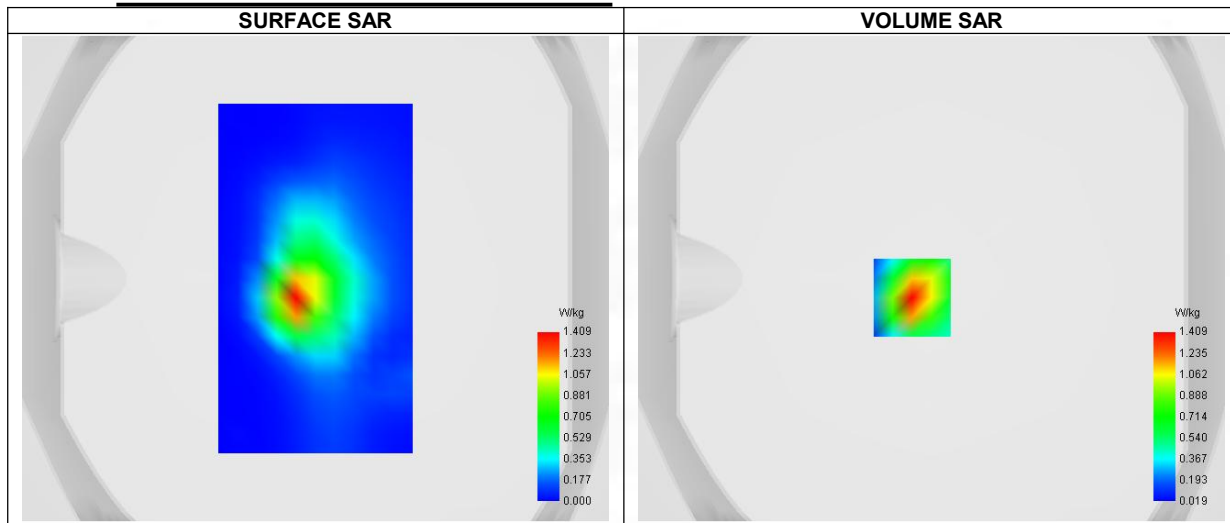
A. Experimental conditions.

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	Higher (810)/ frequency 1909.800 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	3

B. Permittivity

Middle TX Frequency (MHz)	1909.800
Relative permittivity (real part)	40.199
Relative permittivity (imaginary part)	14.736
Conductivity (S/m)	1.419

C. SAR Surface and Volume



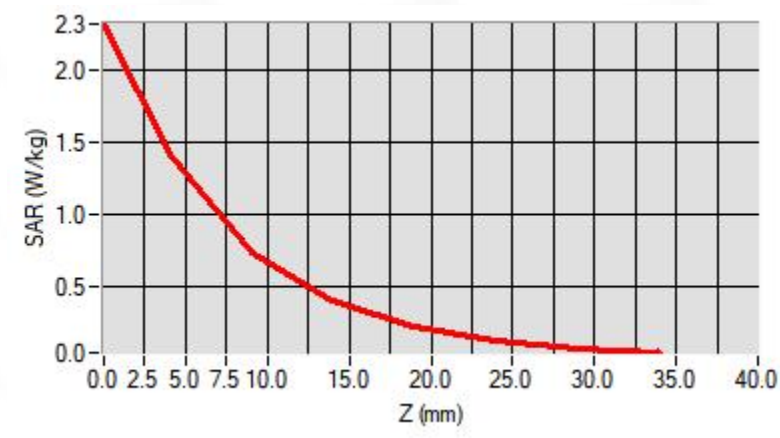
Maximum location: X=-8.00, Y=-8.00 ; SAR Peak: 2.30 W/kg

D. SAR 1g & 10g

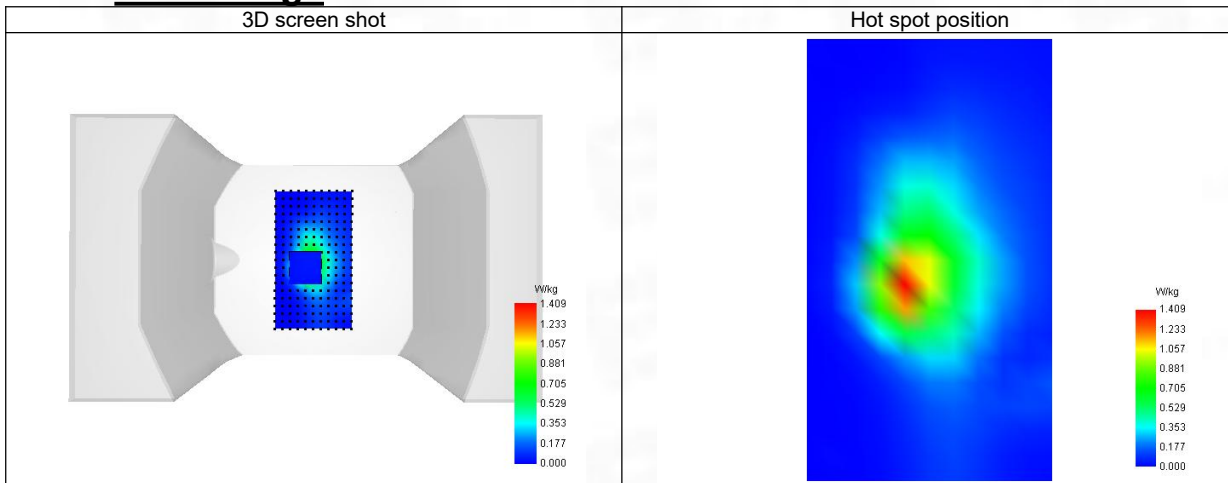
SAR 10g (W/Kg)	0.615
SAR 1g (W/Kg)	1.099
Variation (%)	1.500
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	52.073560

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	2.318	1.409	0.734	0.406	0.228	0.130	0.074



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: 3/12/2025

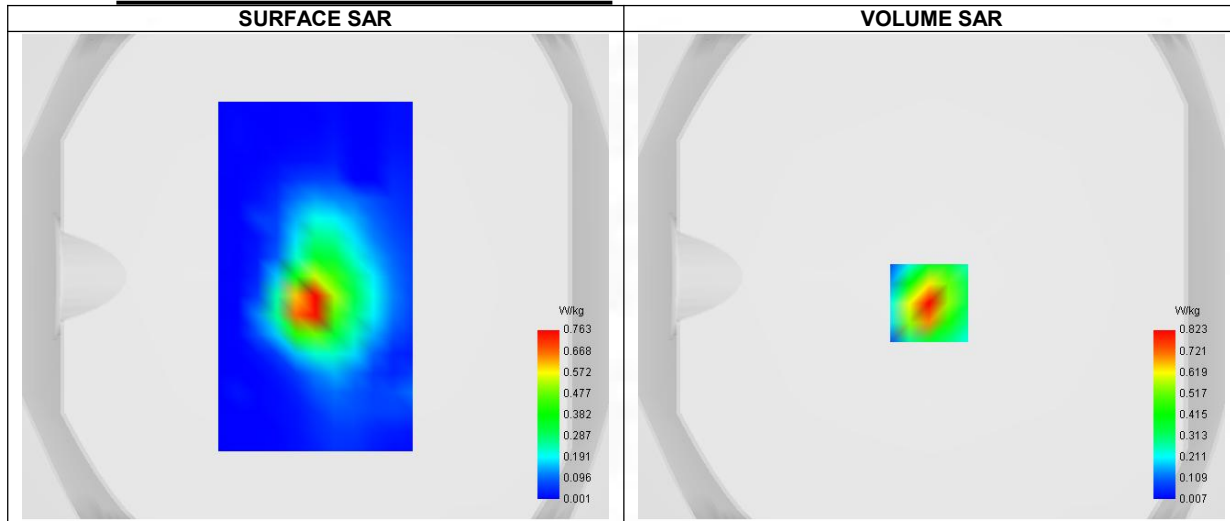
A. Experimental conditions.

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)	40.252
Relative permittivity (imaginary part)	15.088
Conductivity (S/m)	1.396

C. SAR Surface and Volume



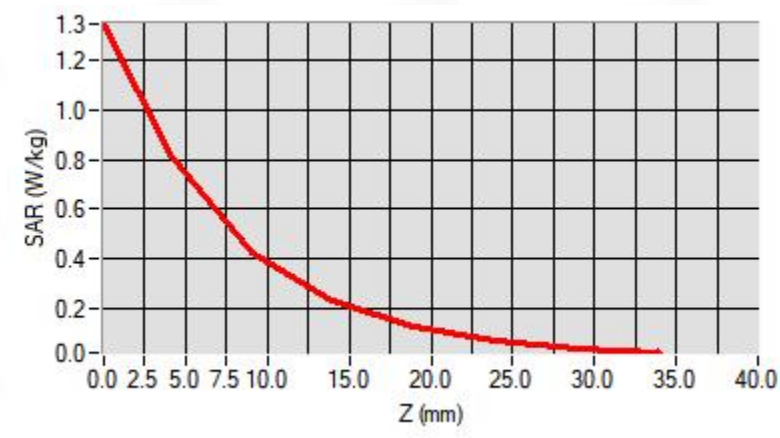
Maximum location: X=-1.00, Y=-11.00 ; SAR Peak: 1.35 W/kg

D. SAR 1g & 10g

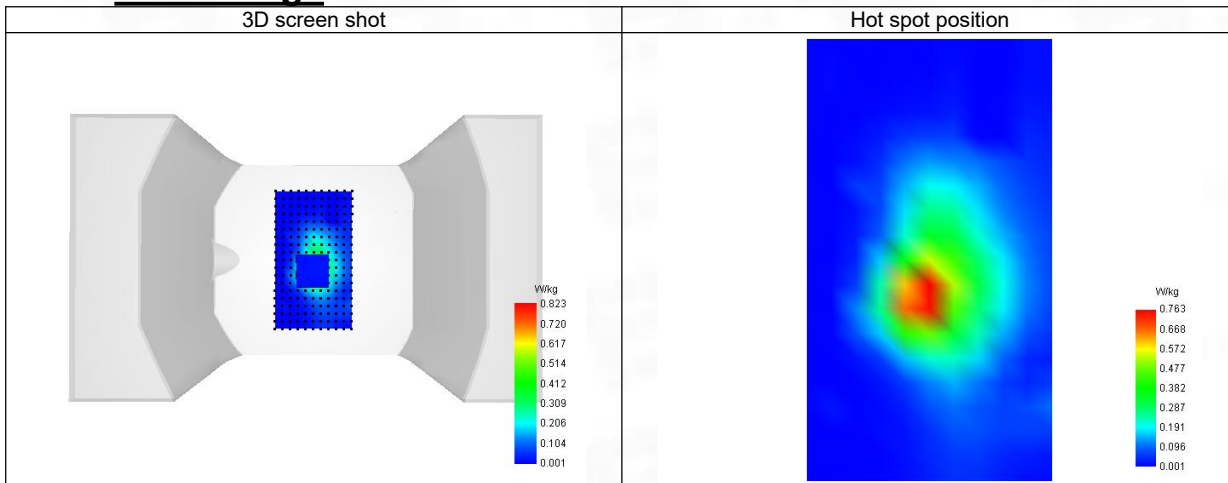
SAR 10g (W/Kg)	0.355
SAR 1g (W/Kg)	0.758
Variation (%)	1.170
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	52.125085

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.345	0.823	0.429	0.231	0.129	0.072	0.043



F. 3D Image



4-Body with back position in dist. 0mm on Channel 1413 in WCDMA Band 4

SAR Measurement at Band 4 (1700) (Body, Validation Plane)

Date of measurement: 1/12/2025

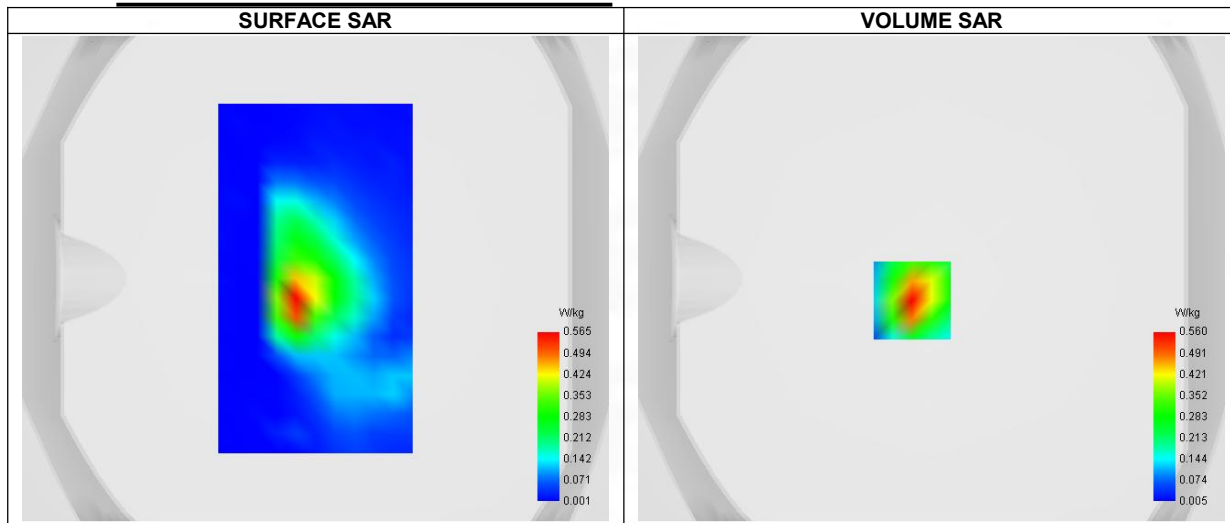
A. Experimental conditions.

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	Band 4 (1700)
Channels/Frequency	Middle (1413)/ frequency 1732.600 Mhz
Signal	WCDMA
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1732.600
Relative permittivity (real part)	40.393
Relative permittivity (imaginary part)	15.752
Conductivity (S/m)	1.344

C. SAR Surface and Volume



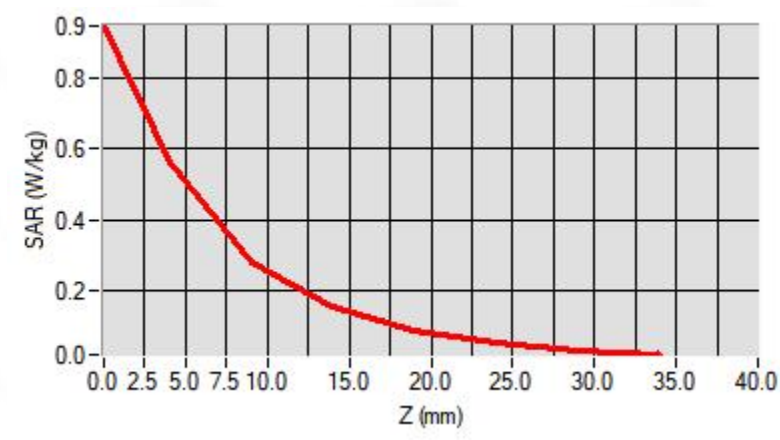
Maximum location: X=-8.00, Y=-9.00 ; SAR Peak: 0.94 W/kg

D. SAR 1g & 10g

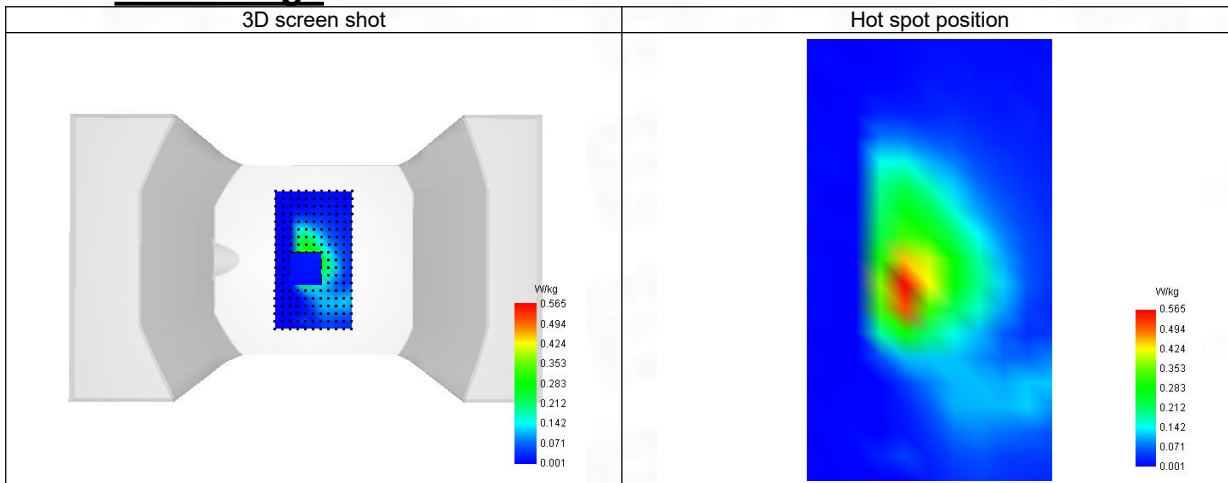
SAR 10g (W/Kg)	0.244
SAR 1g (W/Kg)	0.517
Variation (%)	3.500
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	49.903973

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.950	0.560	0.280	0.154	0.084	0.050	0.026



F. 3D Image



5-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: 29/11/2025

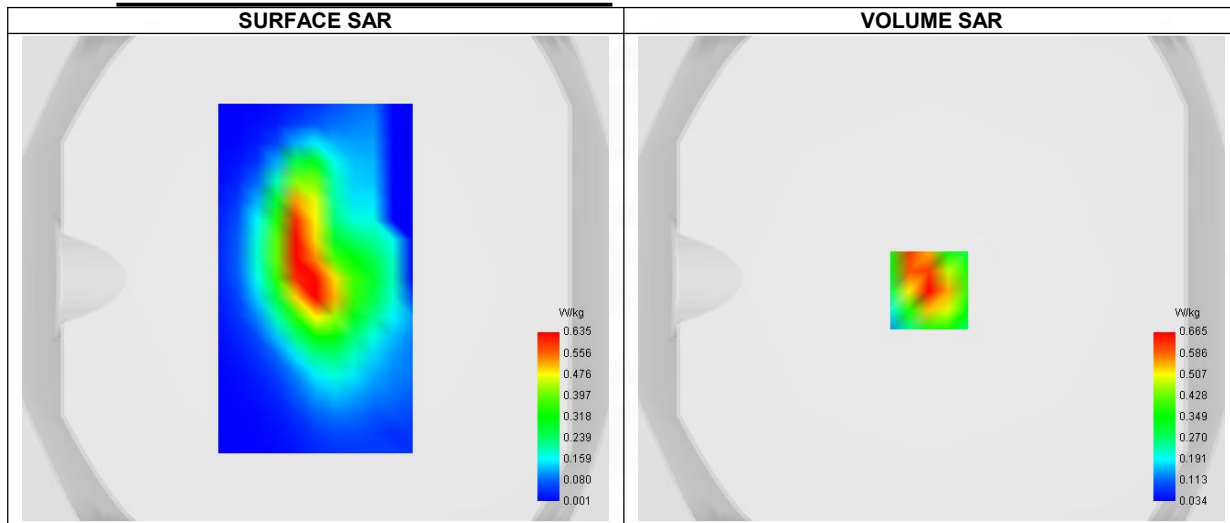
A. Experimental conditions.

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)	41.834
Relative permittivity (imaginary part)	19.636
Conductivity (S/m)	0.898

C. SAR Surface and Volume



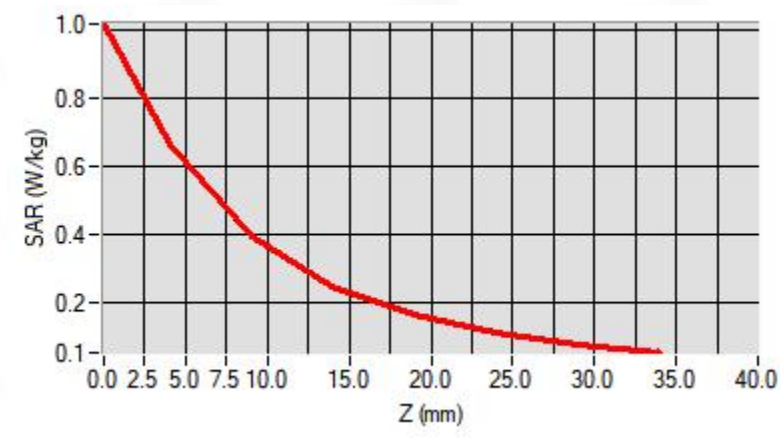
Maximum location: X=-1.00, Y=-5.00 ; SAR Peak: 1.01 W/kg

D. SAR 1g & 10g

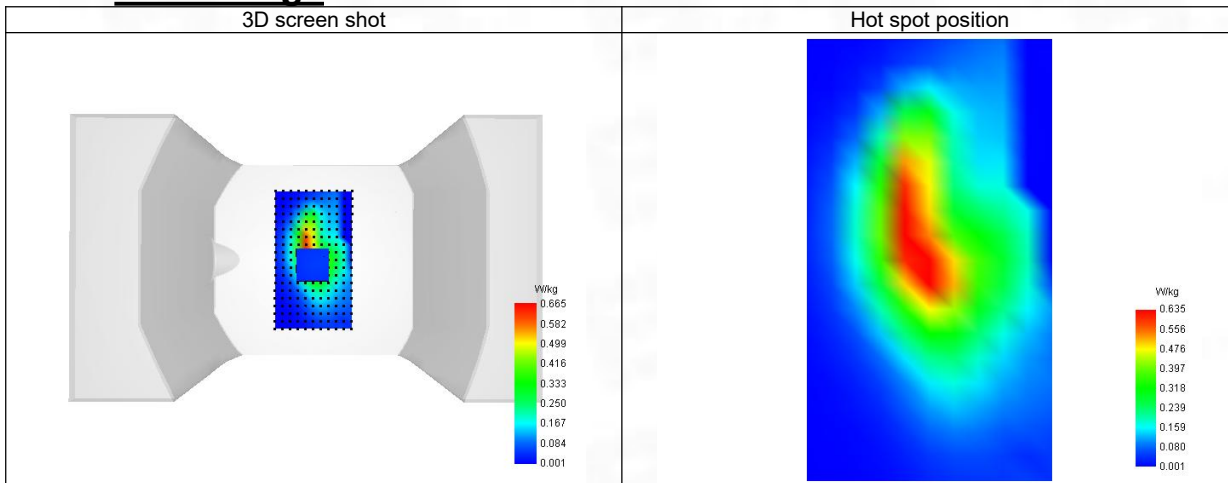
SAR 10g (W/Kg)	0.359
SAR 1g (W/Kg)	0.627
Variation (%)	-4.110
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.085742

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.019	0.665	0.393	0.247	0.165	0.109	0.075



F. 3D Image



6-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: 3/12/2025

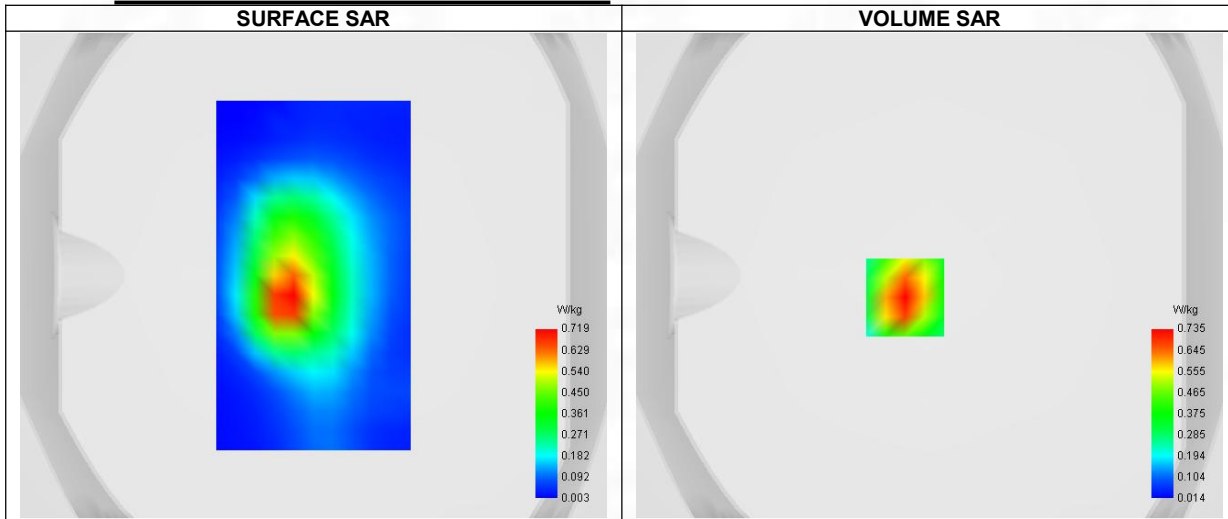
A. Experimental conditions.

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	0
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1891.090
Relative permittivity (real part)	40.245
Relative permittivity (imaginary part)	14.769
Conductivity (S/m)	1.405

C. SAR Surface and Volume



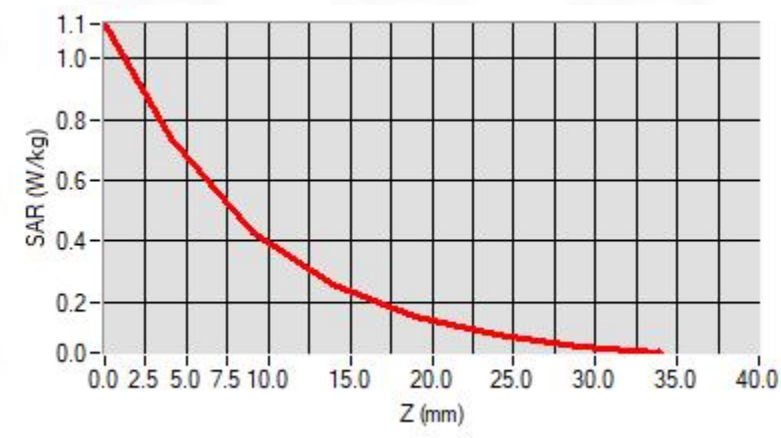
Maximum location: X=-10.00, Y=-9.00 ; SAR Peak: 1.13 W/kg

D. SAR 1g & 10g

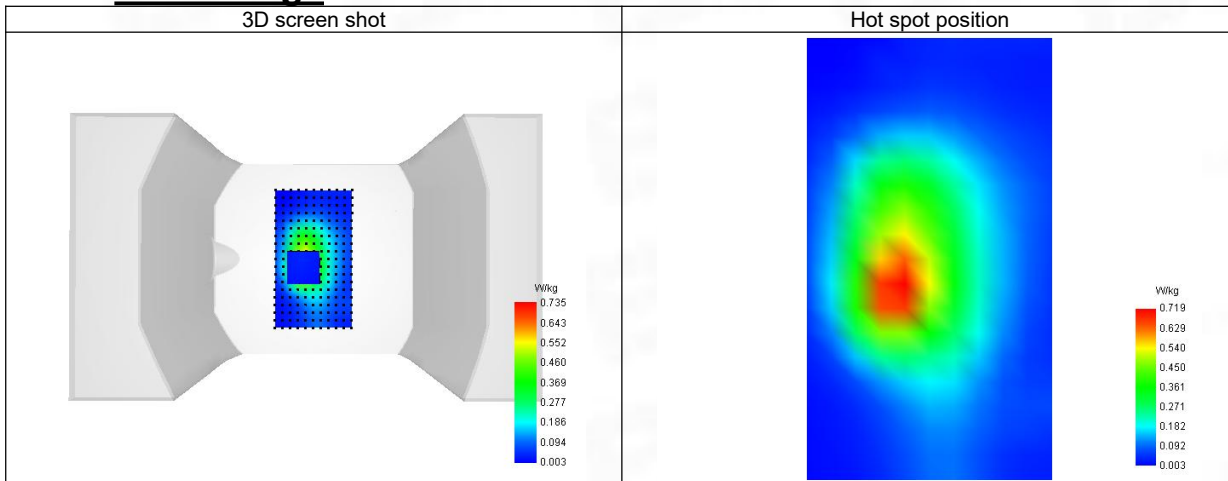
SAR 10g (W/Kg)	0.374
SAR 1g (W/Kg)	0.695
Variation (%)	-2.640
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.138090

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.114	0.735	0.427	0.254	0.149	0.089	0.053



F. 3D Image



7-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: 1/12/2025

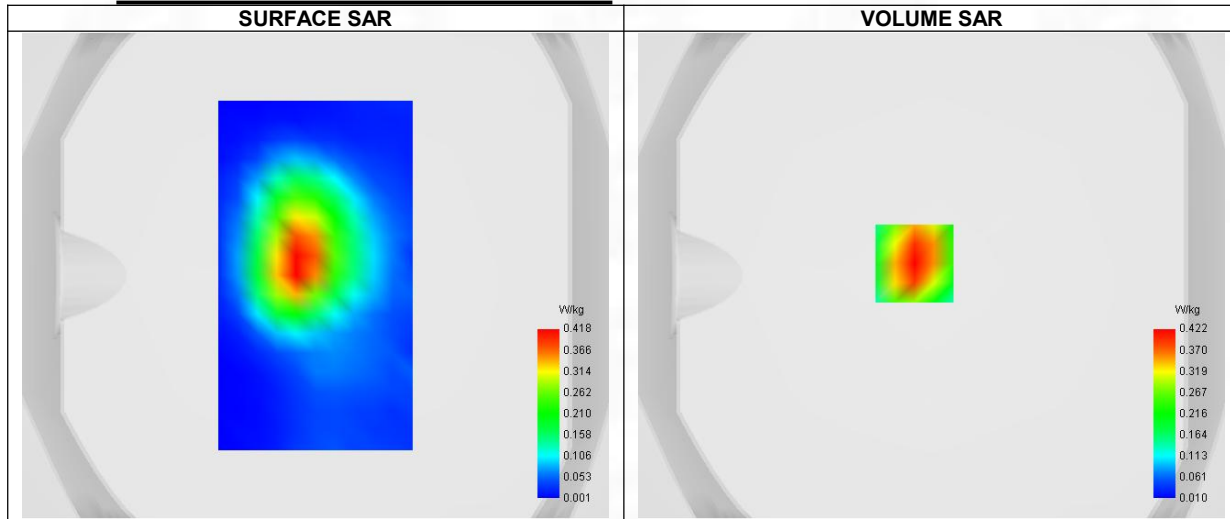
A. Experimental conditions.

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	Middle (20175)/ frequency 1732.500 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	99
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1741.410
Relative permittivity (real part)	42.474
Relative permittivity (imaginary part)	14.071
Conductivity (S/m)	1.361

C. SAR Surface and Volume

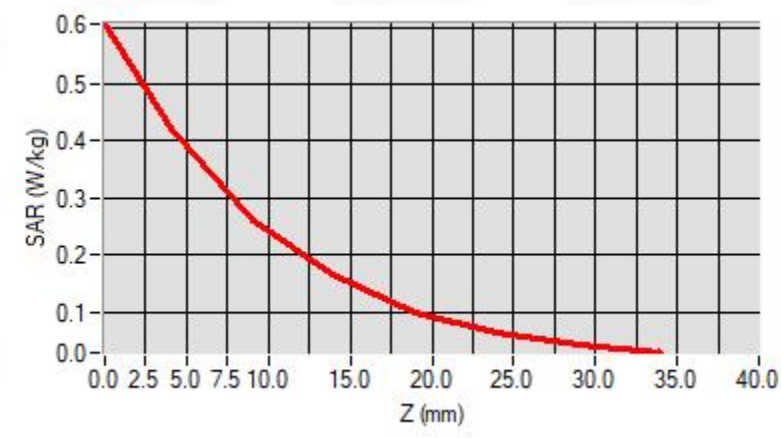


D. SAR 1g & 10g

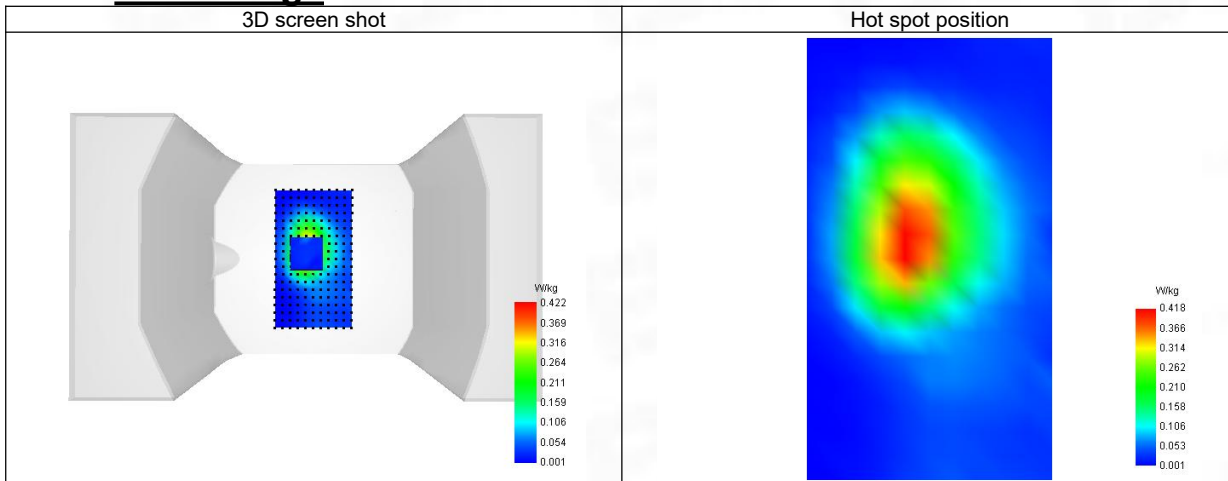
SAR 10g (W/Kg)	0.230
SAR 1g (W/Kg)	0.399
Variation (%)	1.640
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	61.851570

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.606	0.422	0.261	0.166	0.099	0.063	0.042



F. 3D Image



8-Body with back position in dist. 0mm on Channel 20600 in LTE band 5

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

Date of measurement: 29/12/2025

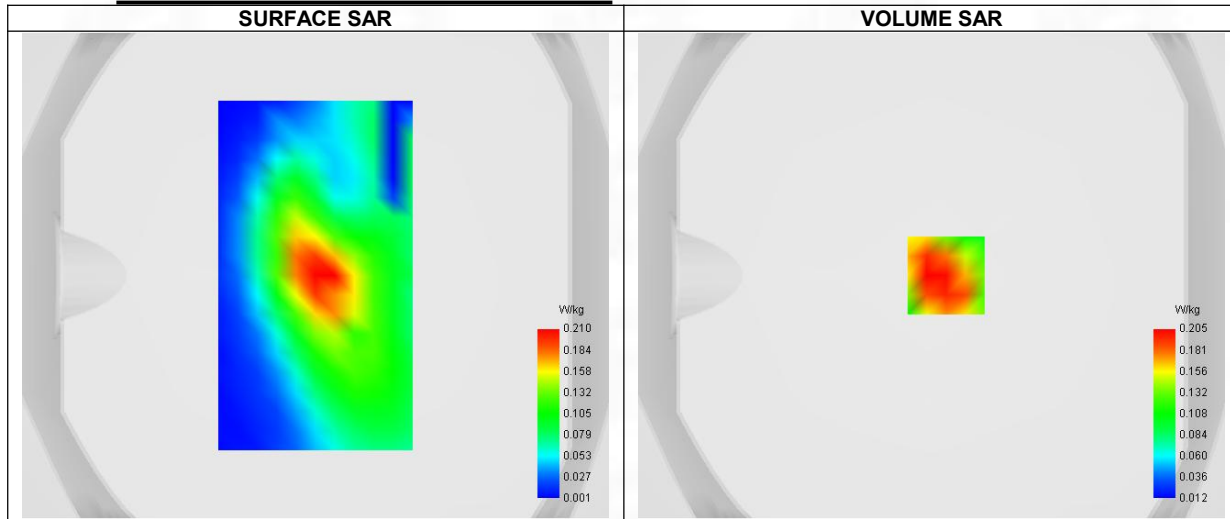
A. Experimental conditions.

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	Higher (20600)/ frequency 844.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	25
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	844.090
Relative permittivity (real part)	41.838
Relative permittivity (imaginary part)	19.647
Conductivity (S/m)	0.897

C. SAR Surface and Volume

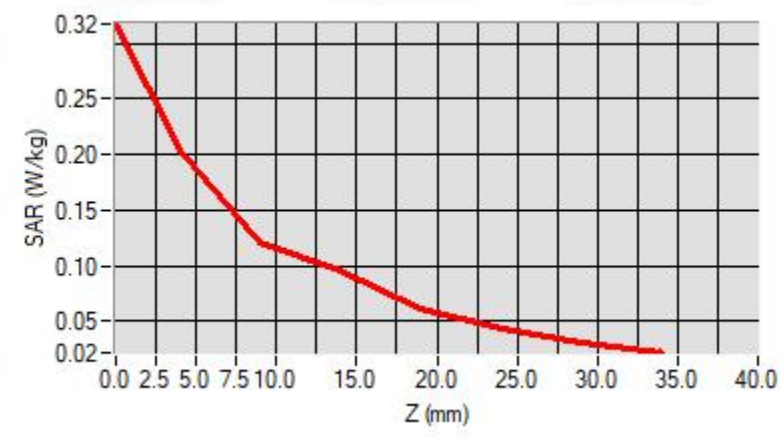


D. SAR 1g & 10g

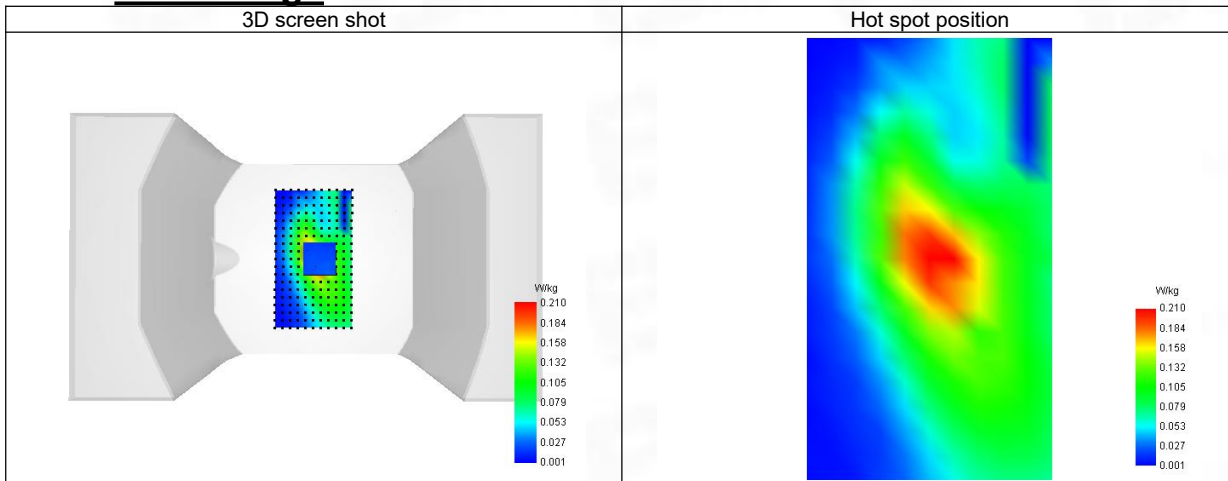
SAR 10g (W/Kg)	0.127
SAR 1g (W/Kg)	0.200
Variation (%)	3.280
Horizontal validation criteria: minimum distance (mm)	28.844410
Vertical validation criteria: SAR ratio M2/M1 (%)	67.568391

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.317	0.205	0.121	0.095	0.061	0.044	0.031



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: 27/11/2025

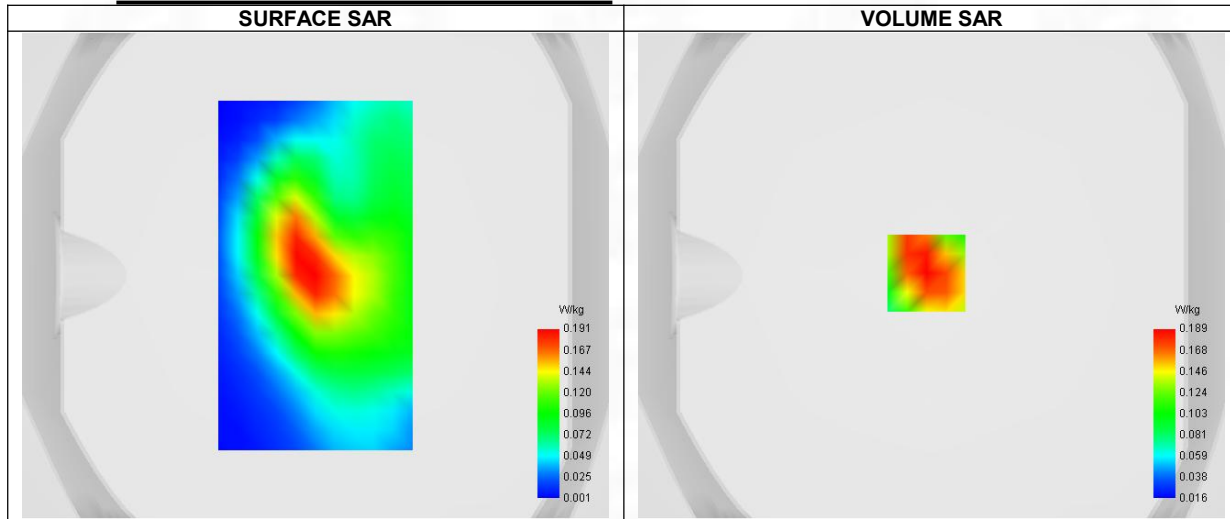
A. Experimental conditions.

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	Higher (23230)/ frequency 782.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	49
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	786.410
Relative permittivity (real part)	42.141
Relative permittivity (imaginary part)	20.583
Conductivity (S/m)	0.883

C. SAR Surface and Volume

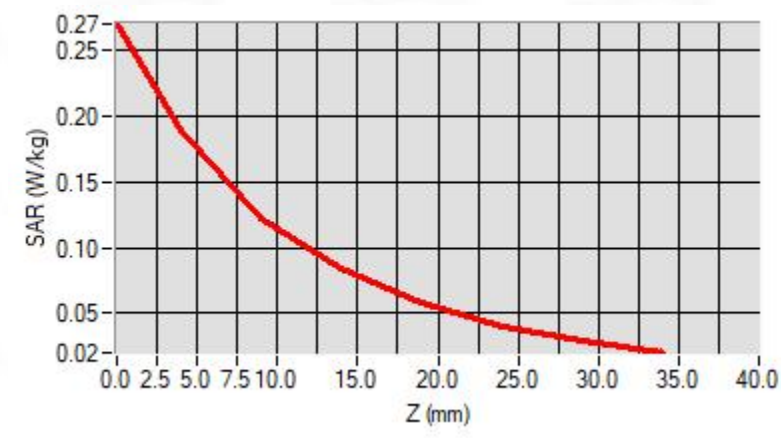


D. SAR 1g & 10g

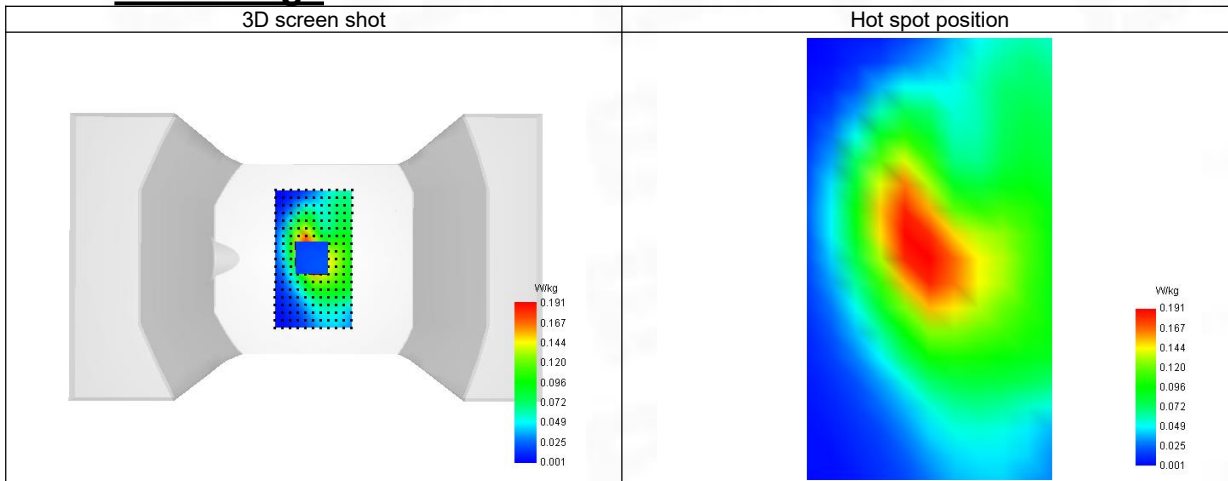
SAR 10g (W/Kg)	0.113
SAR 1g (W/Kg)	0.182
Variation (%)	-1.430
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	64.901066

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.269	0.189	0.123	0.085	0.058	0.040	0.029



F. 3D Image



10-Body with back position in dist. 0mm on Channel 26140 in LTE band 25

SAR Measurement at LTE band 25 (Body, Validation Plane)

Date of measurement: 3/12/2025

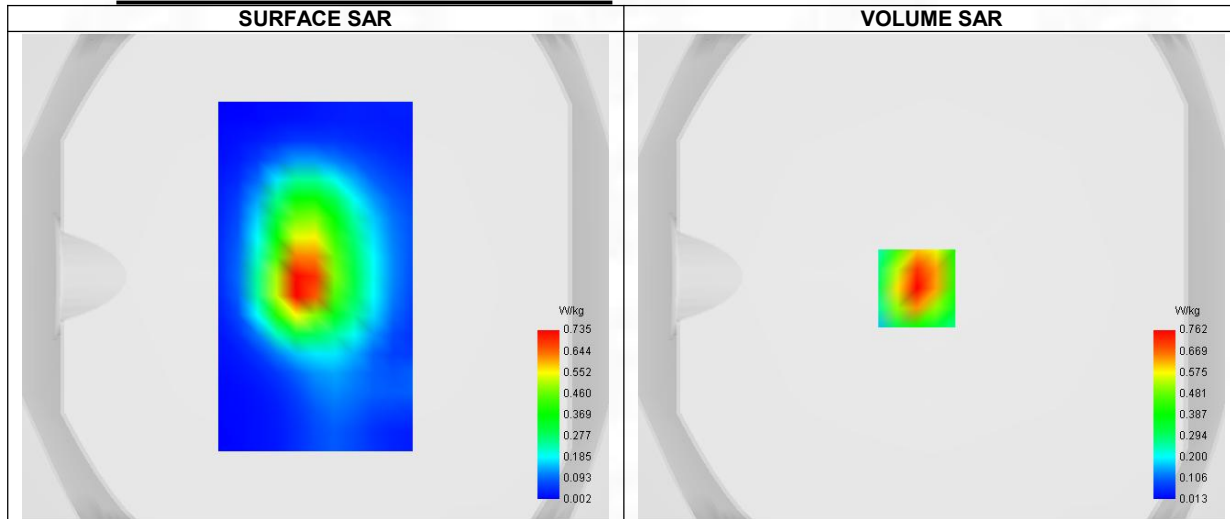
A. Experimental conditions.

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 25
Channels/Frequency	Lower (26140)/ frequency 1860.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1851.090
Relative permittivity (real part)	40.252
Relative permittivity (imaginary part)	15.097
Conductivity (S/m)	1.395

C. SAR Surface and Volume



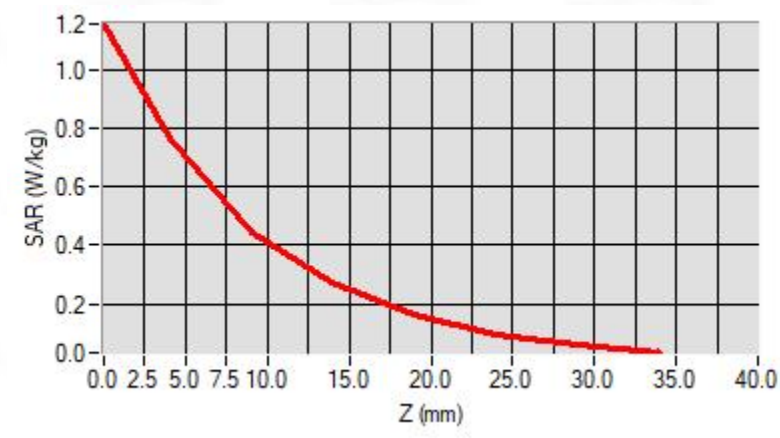
Maximum location: X=-6.00, Y=-5.00 ; SAR Peak: 1.15 W/kg

D. SAR 1g & 10g

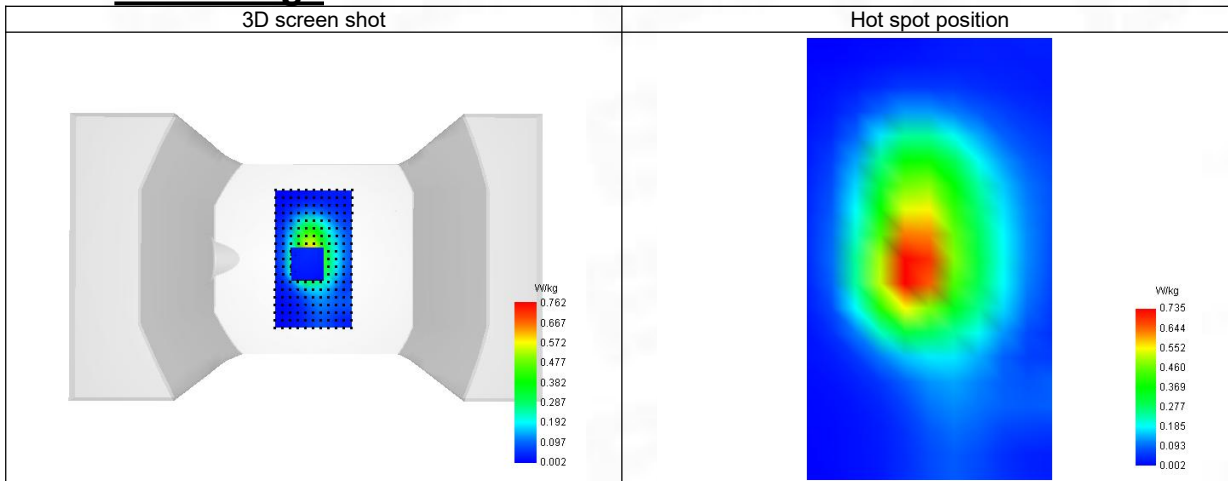
SAR 10g (W/Kg)	0.394
SAR 1g (W/Kg)	0.717
Variation (%)	-0.580
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.398489

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.154	0.762	0.445	0.269	0.160	0.096	0.059



F. 3D Image



11-Body with back position in dist. 0mm on Channel 26740 in LTE band 26 part 90

SAR Measurement at LTE band 26 (Body, Validation Plane)

Date of measurement: 29/11/2025

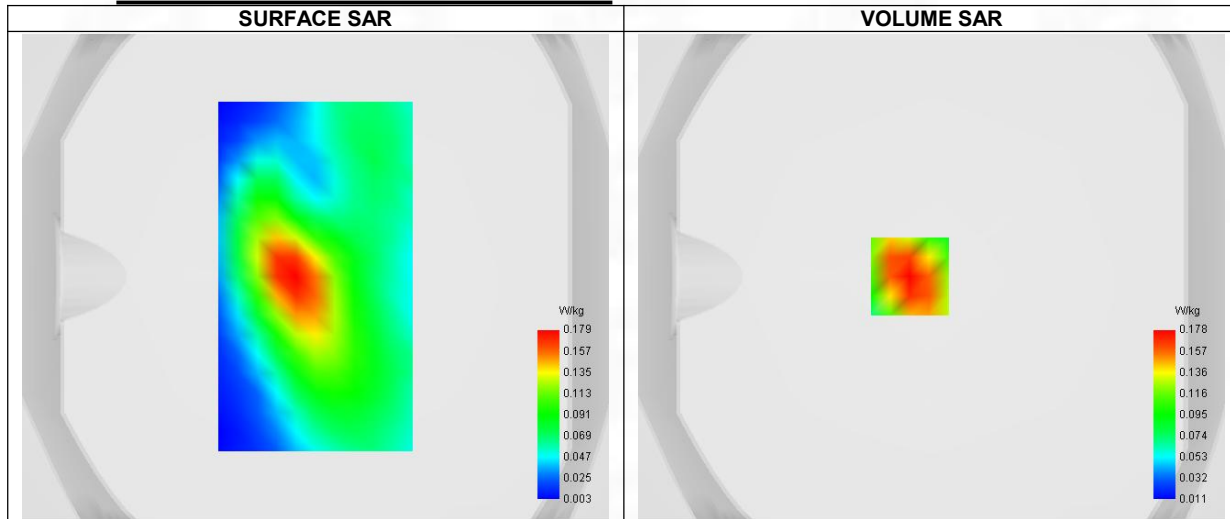
A. Experimental conditions.

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 26
Channels/Frequency	Lower (26740)/ frequency 819.000 Mhz
Signal	LTE FDD
Cell Bandwidth	15 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	812.340
Relative permittivity (real part)	41.987
Relative permittivity (imaginary part)	20.105
Conductivity (S/m)	0.888

C. SAR Surface and Volume

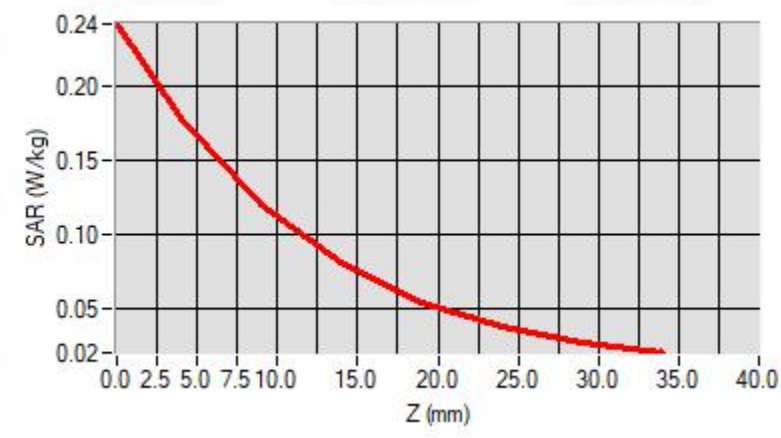


D. SAR 1g & 10g

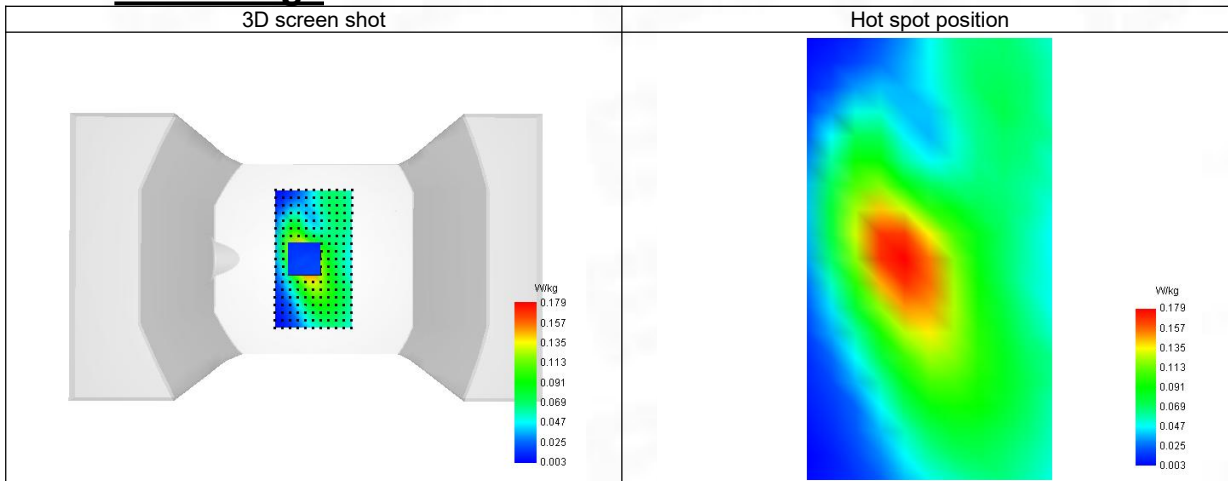
SAR 10g (W/Kg)	0.107
SAR 1g (W/Kg)	0.169
Variation (%)	2.560
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	67.154896

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.242	0.178	0.120	0.081	0.054	0.037	0.026



F. 3D Image



12-Body with back position in dist. 0mm on Channel 26915 in LTE band 26 part 22

SAR Measurement at LTE band 26 (Body, Validation Plane)

Date of measurement: 29/12/2025

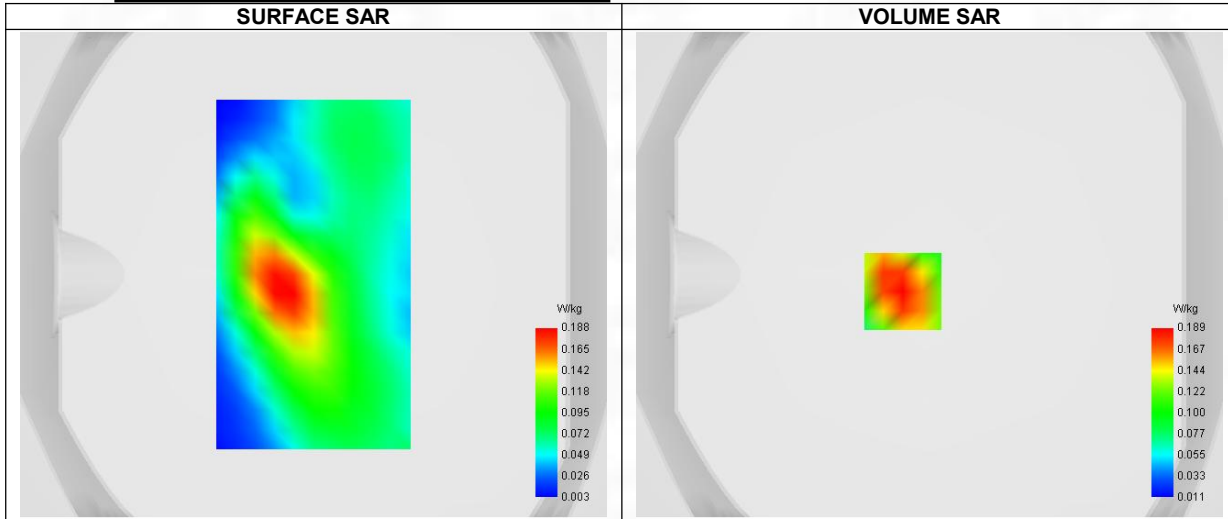
A. Experimental conditions.

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 26
Channels/Frequency	Middle (26915)/ frequency 836.500 Mhz
Signal	LTE FDD
Cell Bandwidth	15 Mhz
Modulation	SC-OFDM - QPSK
RB offset	38
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	836.340
Relative permittivity (real part)	41.851
Relative permittivity (imaginary part)	19.681
Conductivity (S/m)	0.893

C. SAR Surface and Volume

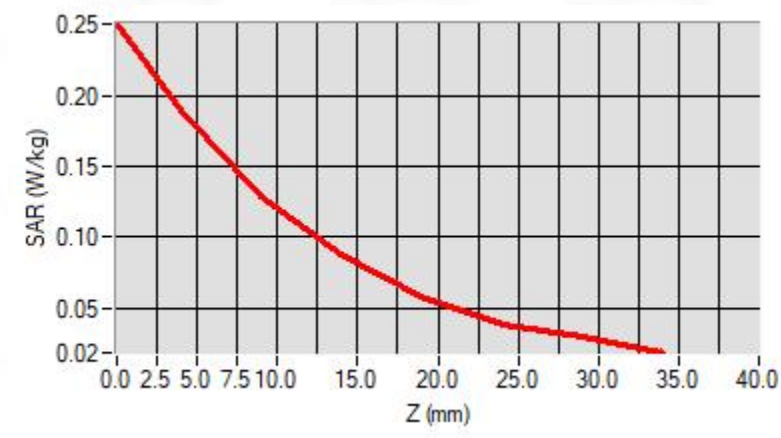


D. SAR 1g & 10g

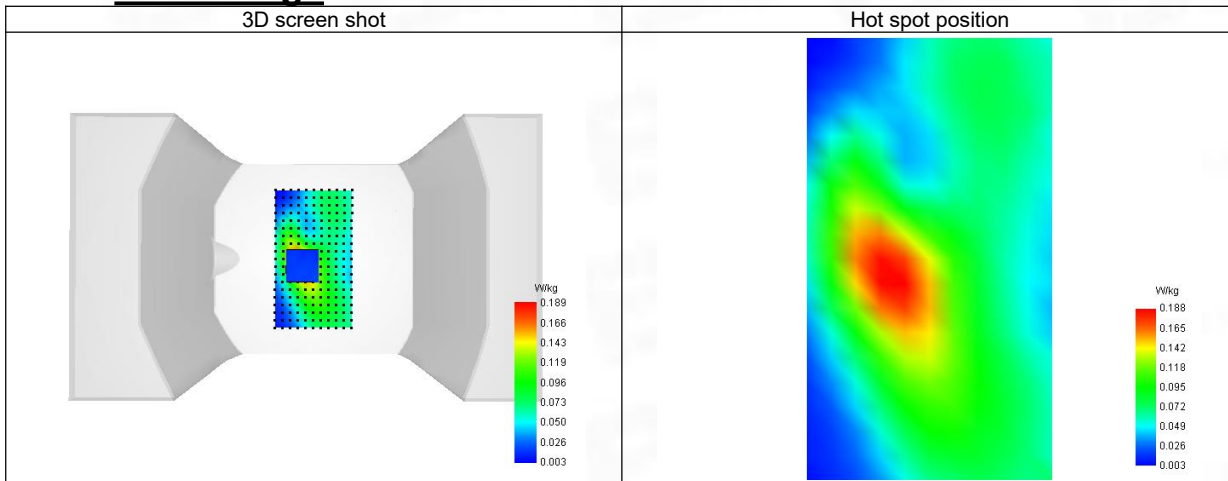
SAR 10g (W/Kg)	0.113
SAR 1g (W/Kg)	0.180
Variation (%)	-4.970
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	67.784239

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.251	0.189	0.128	0.088	0.059	0.039	0.030



F. 3D Image



13-Body with back position in dist. 0mm on Channel 132072 in LTE band 66

SAR Measurement at LTE band 66 (Body, Validation Plane)

Date of measurement: 1/11/2025

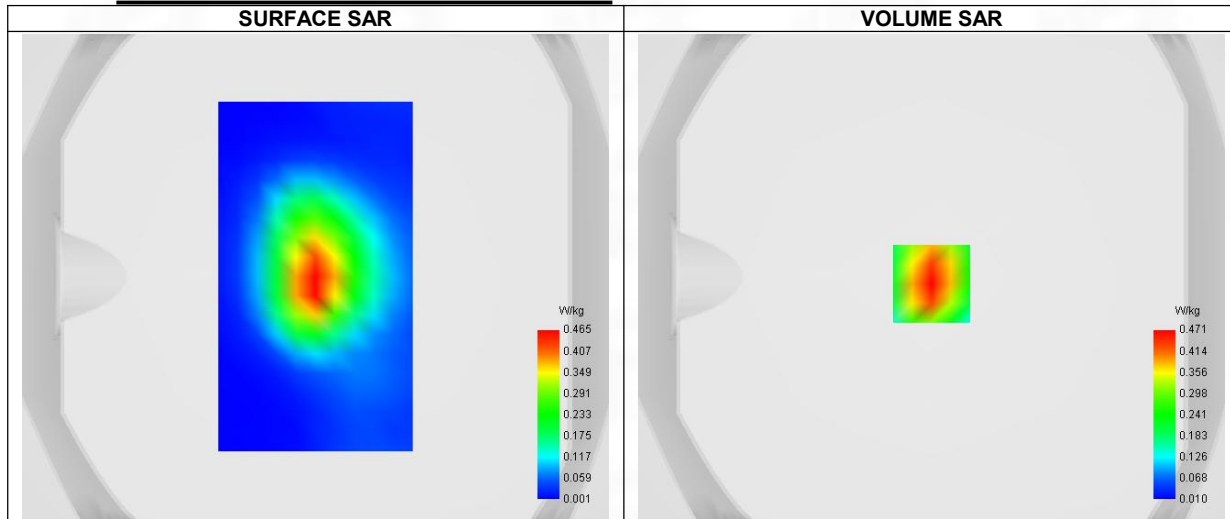
A. Experimental conditions.

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 66
Channels/Frequency	Lower (132072)/ frequency 1720.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	99
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1728.910
Relative permittivity (real part)	40.399
Relative permittivity (imaginary part)	15.769
Conductivity (S/m)	1.342

C. SAR Surface and Volume

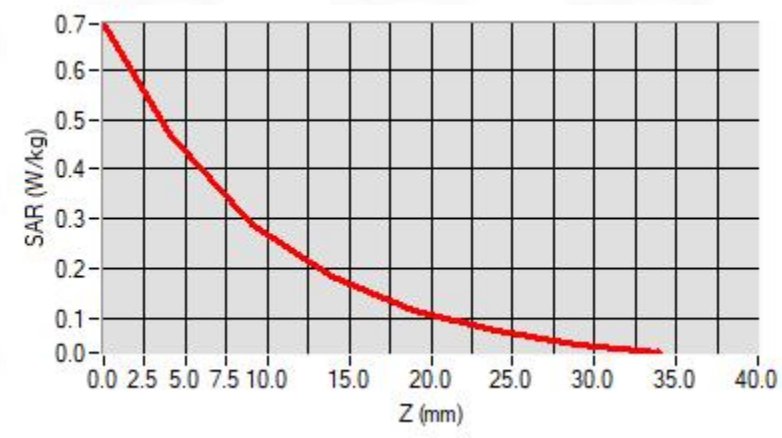


D. SAR 1g & 10g

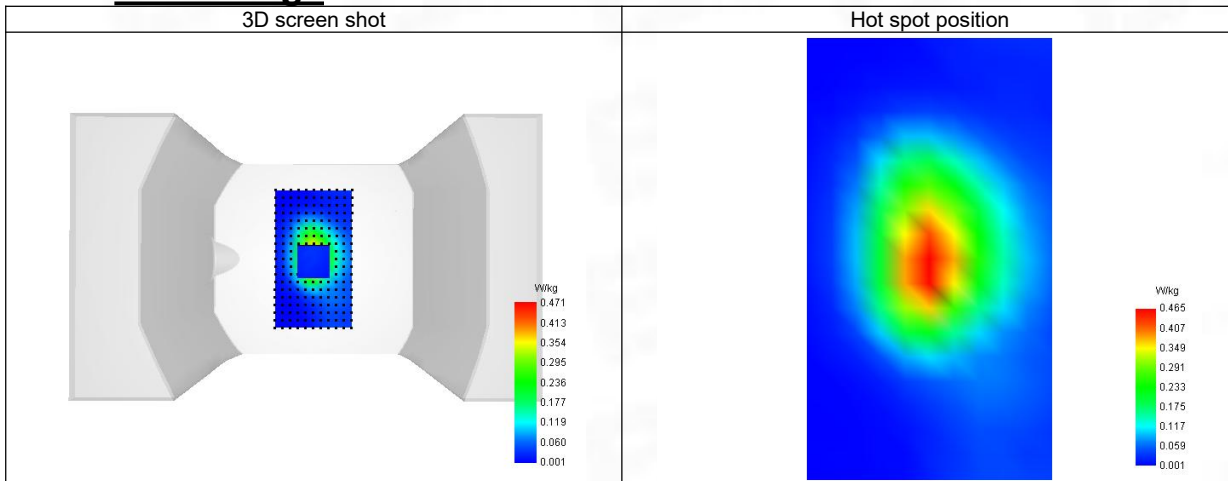
SAR 10g (W/Kg)	0.256
SAR 1g (W/Kg)	0.445
Variation (%)	-3.070
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	61.300126

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.692	0.471	0.289	0.183	0.115	0.074	0.047



F. 3D Image



14-Body with back position in dist. 0mm on Channel 133222 in LTE band 71

SAR Measurement at LTE band 71 (Body, Validation Plane)

Date of measurement: 27/11/2025

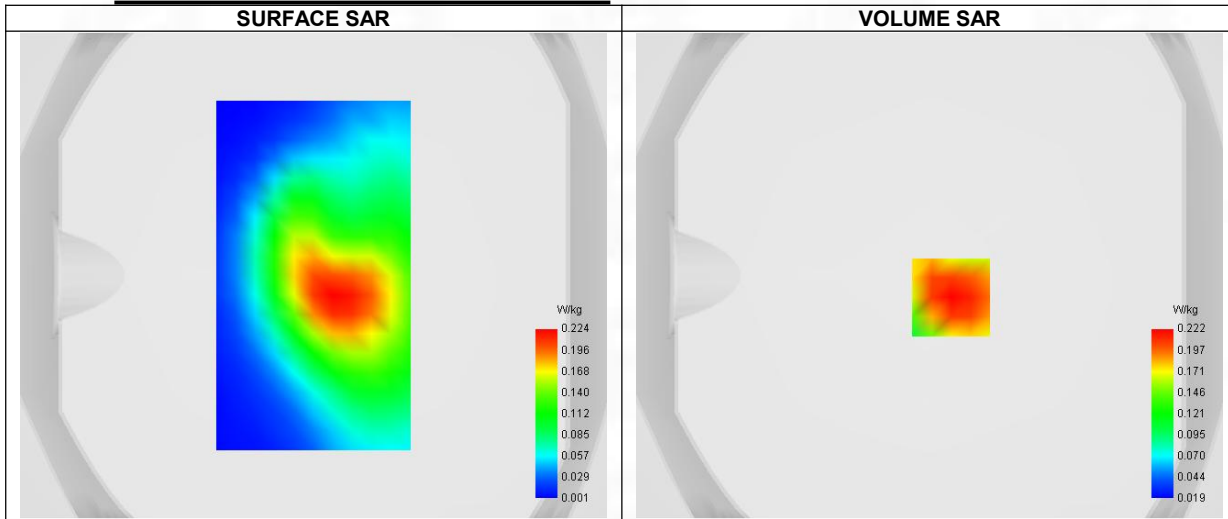
A. Experimental conditions.

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 71
Channels/Frequency	Lower (133222)/ frequency 673.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	50
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	673.090
Relative permittivity (real part)	42.813
Relative permittivity (imaginary part)	22.672
Conductivity (S/m)	0.863

C. SAR Surface and Volume



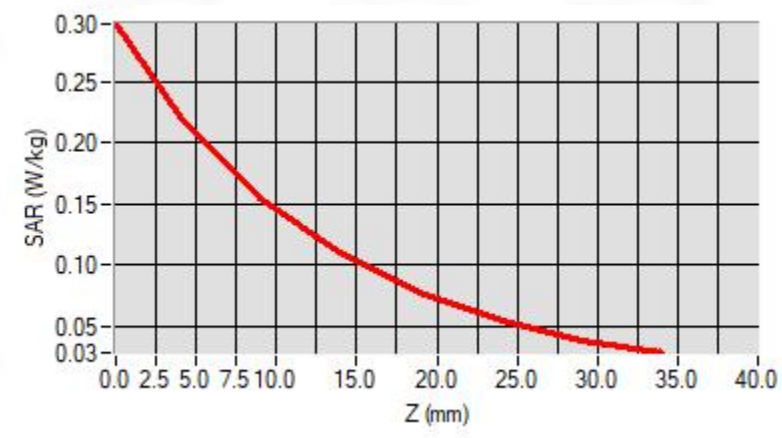
Maximum location: X=9.00, Y=-9.00 ; SAR Peak: 0.30 W/kg

D. SAR 1g & 10g

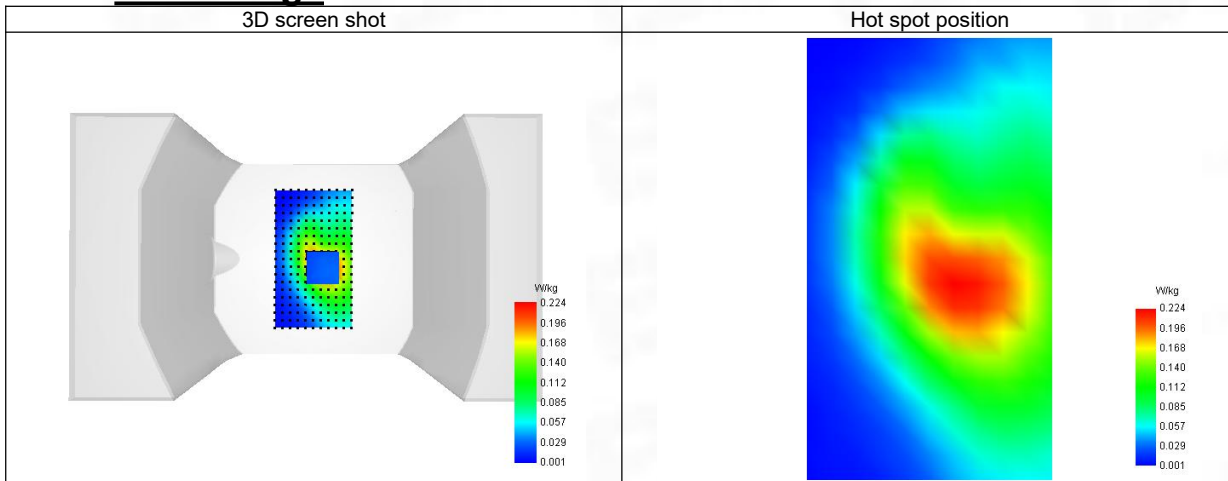
SAR 10g (W/Kg)	0.143
SAR 1g (W/Kg)	0.214
Variation (%)	0.360
Horizontal validation criteria: minimum distance (mm)	22.627417
Vertical validation criteria: SAR ratio M2/M1 (%)	69.790416

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.297	0.222	0.155	0.110	0.078	0.055	0.039



F. 3D Image



15-Body with back position in dist. 0mm on Channel 1 in IEEE 802.11b ISM

SAR Measurement at ISM (Body, Validation Plane)

Date of measurement: 5/12/2025

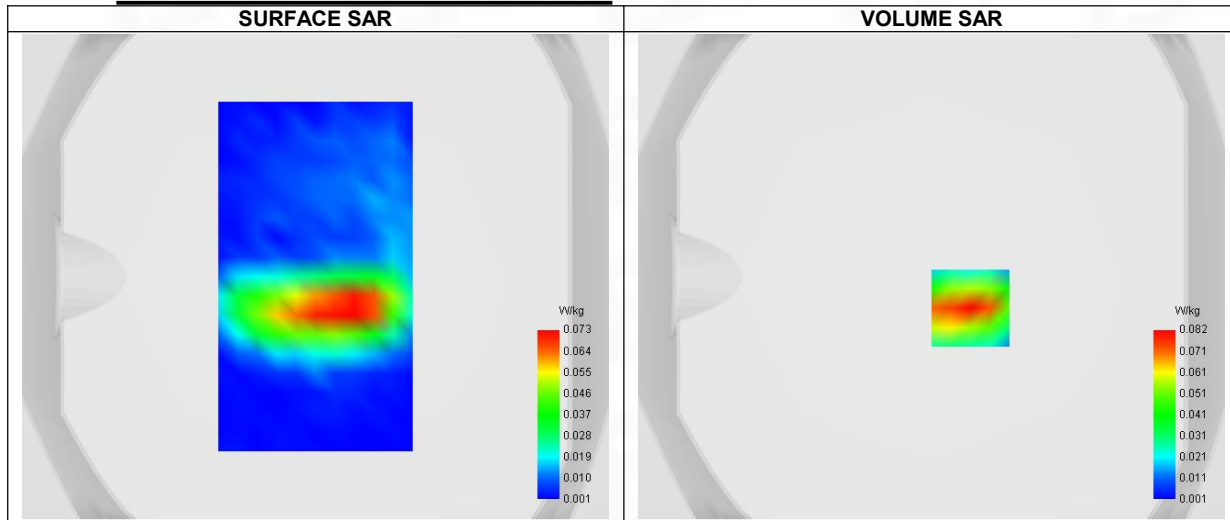
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x7, dx=5mm dy=5mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	ISM
Channels/Frequency	Lower (1)/ frequency 2412.000 Mhz
Signal	IEEE 802.11 b

B. Permittivity

Middle TX Frequency (MHz)	2412.000
Relative permittivity (real part)	38.980
Relative permittivity (imaginary part)	13.855
Conductivity (S/m)	1.795

C. SAR Surface and Volume

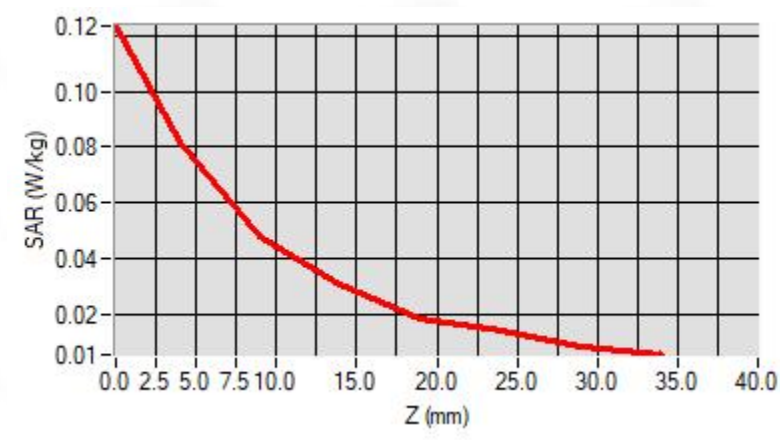


D. SAR 1g & 10g

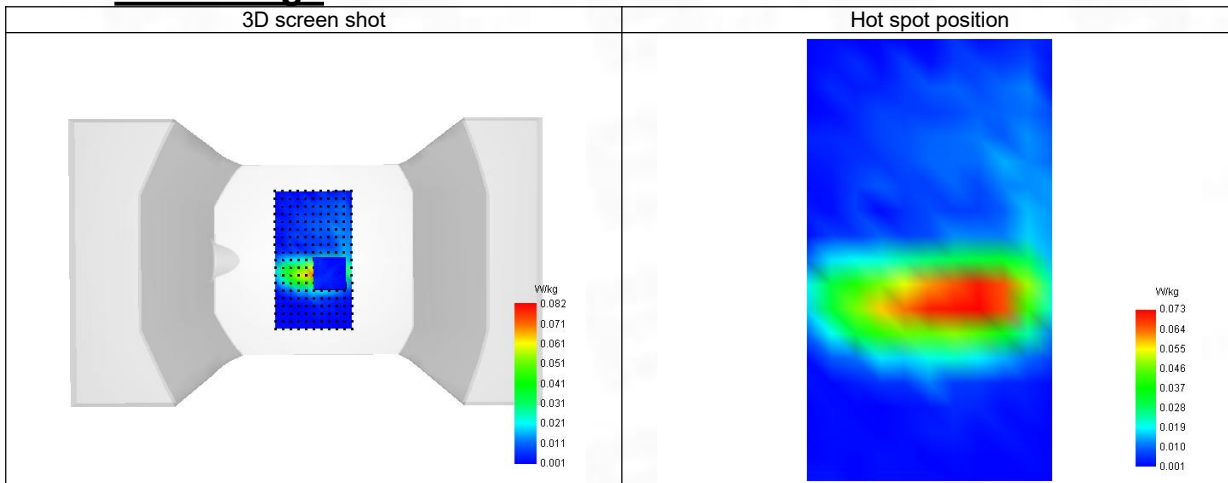
SAR 10g (W/Kg)	0.041
SAR 1g (W/Kg)	0.076
Variation (%)	3.070
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.146591

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.124	0.082	0.048	0.031	0.018	0.014	0.008



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: 6/12/2025

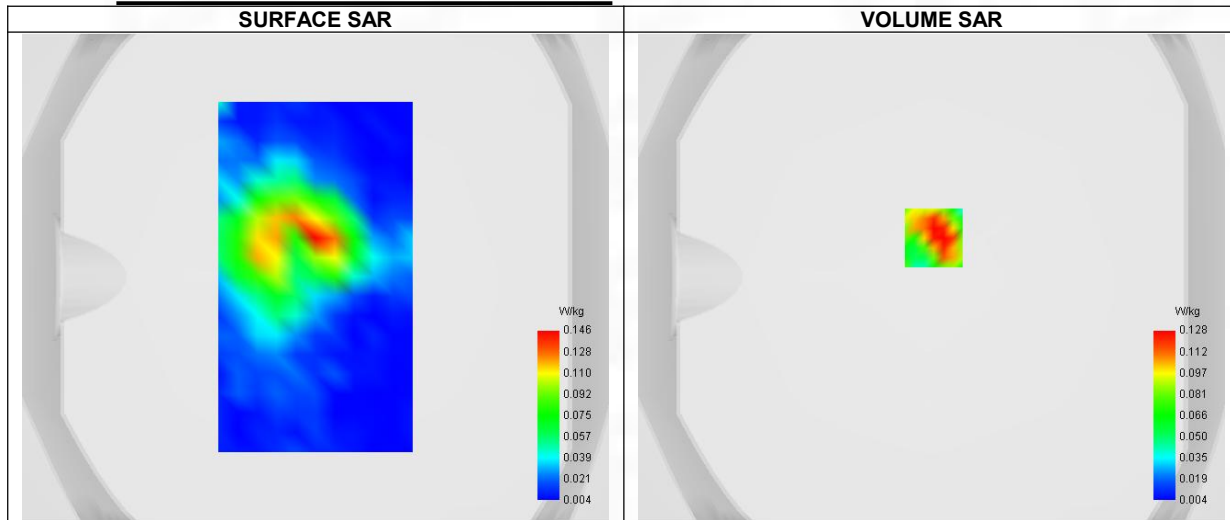
A. Experimental conditions.

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)	36.192
Relative permittivity (imaginary part)	16.427
Conductivity (S/m)	4.564

C. SAR Surface and Volume



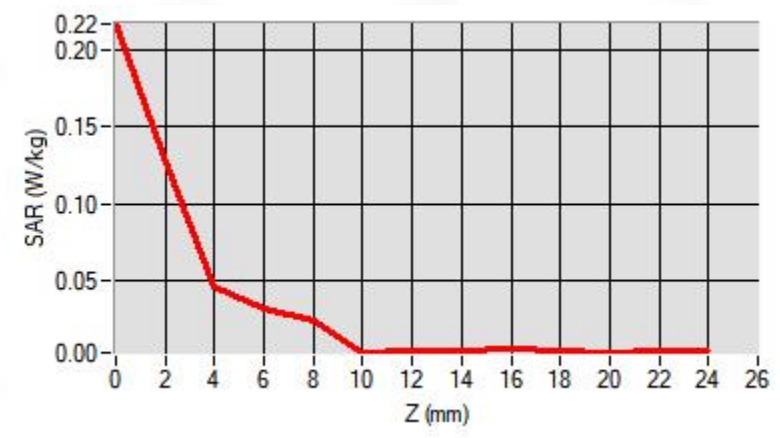
Maximum location: X=1.00, Y=16.00 ; SAR Peak: 0.27 W/kg

D. SAR 1g & 10g

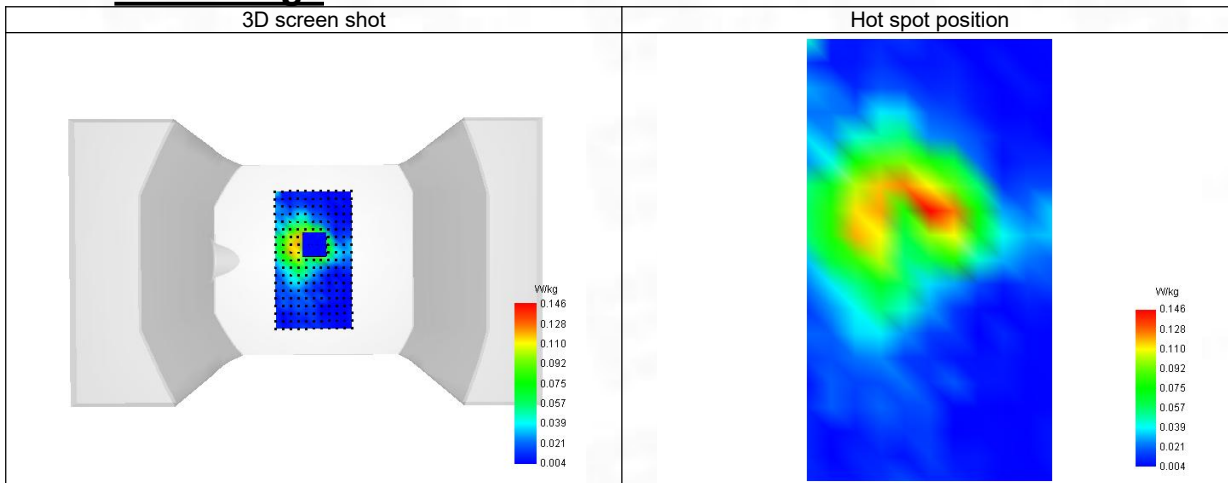
SAR 10g (W/Kg)	0.086
SAR 1g (W/Kg)	0.146
Variation (%)	-0.410
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	50.203463

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)	0.217	0.128	0.046	0.032	0.025	0.004	0.004	0.004	0.006	0.004	0.004	0.004



F. 3D Image



17-Body with back position in dist. 0mm on Channel 58 in IEEE 802.11ac U-NII

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

Date of measurement: 6/12/2025

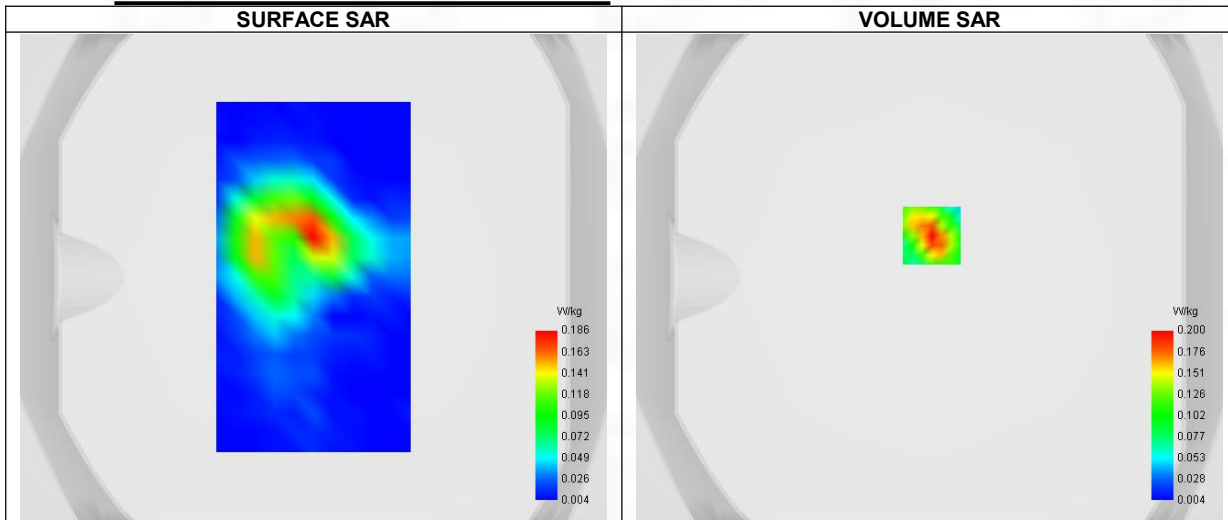
A. Experimental conditions.

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	Middle (58)/ frequency 5290.000 Mhz
Signal	IEEE 802.11 ac

B. Permittivity

Middle TX Frequency (MHz)	5290.000
Relative permittivity (real part)	36.049
Relative permittivity (imaginary part)	16.314
Conductivity (S/m)	4.733

C. SAR Surface and Volume



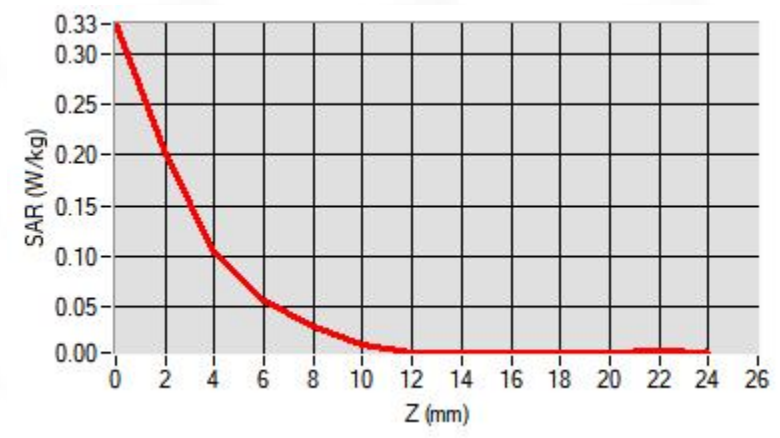
Maximum location: X=1.00, Y=17.00 ; SAR Peak: 0.36 W/kg

D. SAR 1g & 10g

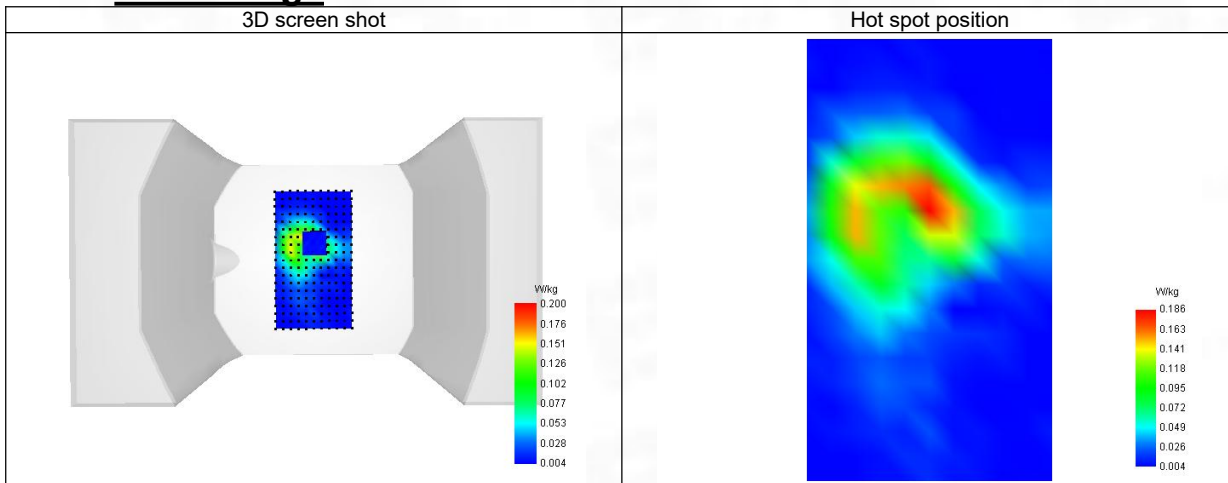
SAR 10g (W/Kg)	0.092
SAR 1g (W/Kg)	0.186
Variation (%)	4.050
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	51.419520

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)	0.330	0.200	0.103	0.056	0.030	0.011	0.004	0.004	0.004	0.005	0.004	0.005



F. 3D Image



18-Body with back position in dist. 0mm on Channel 140 in IEEE 802.11n U-NII

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

Date of measurement: 7/12/2025

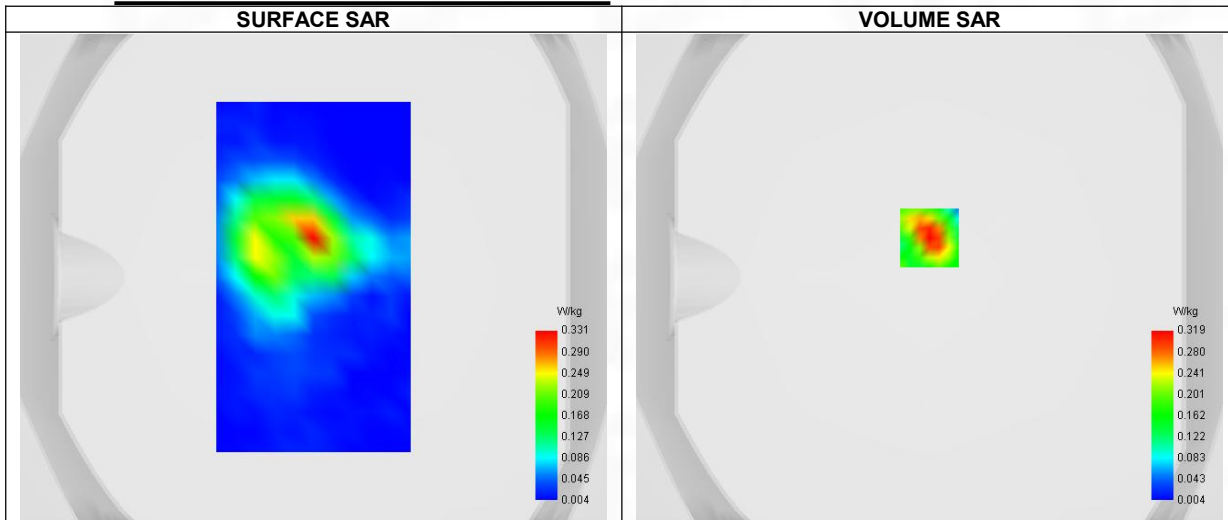
A. Experimental conditions.

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	Body
Band	U-NII-2c
Channels/Frequency	Higher (140)/ frequency 5700.000 Mhz
Signal	IEEE 802.11 ac

B. Permittivity

Middle TX Frequency (MHz)	5700.000
Relative permittivity (real part)	35.295
Relative permittivity (imaginary part)	16.463
Conductivity (S/m)	5.168

C. SAR Surface and Volume



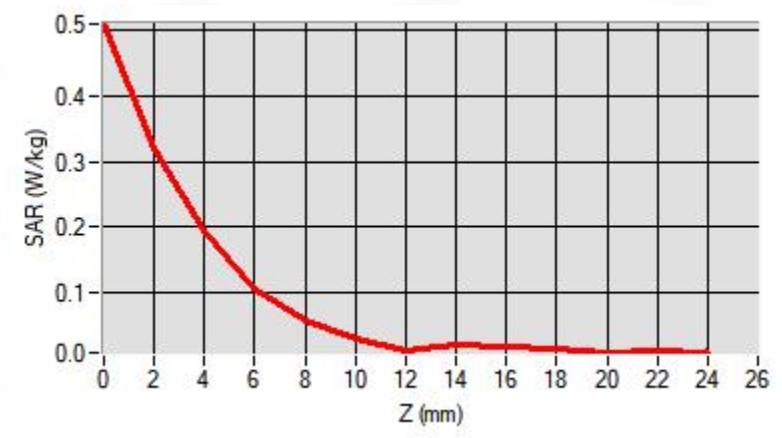
Maximum location: X=0.00, Y=16.00 ; SAR Peak: 0.51 W/kg

D. SAR 1g & 10g

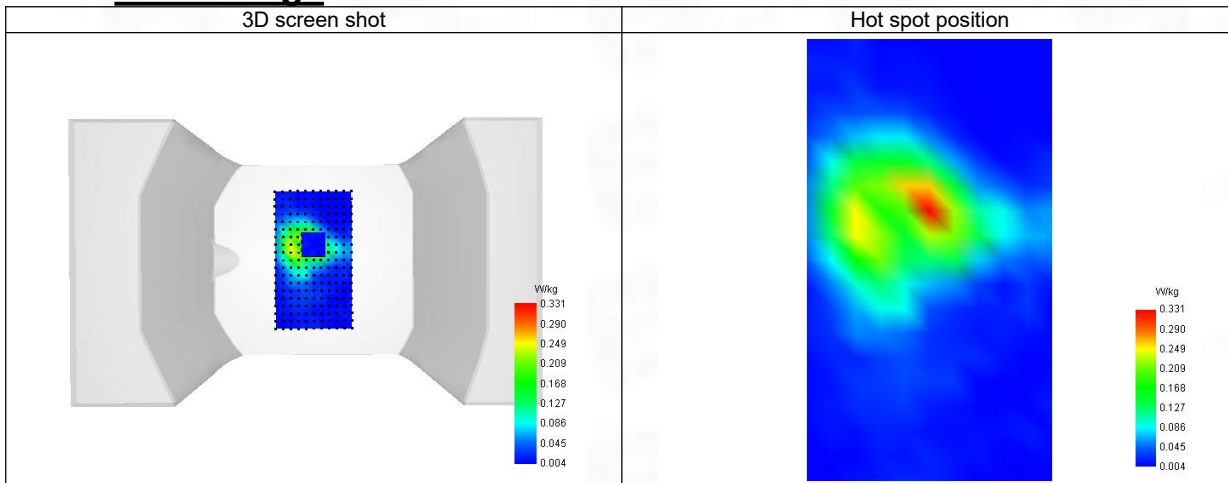
SAR 10g (W/Kg)	0.127
SAR 1g (W/Kg)	0.279
Variation (%)	-1.630
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	60.415607

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)	0.510	0.320	0.193	0.106	0.055	0.028	0.010	0.018	0.015	0.013	0.007	0.011



F. 3D Image



19-Body with back position in dist. 0mm on Channel 155 in IEEE 802.11ac U-NII

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

Date of measurement: 7/12/2025

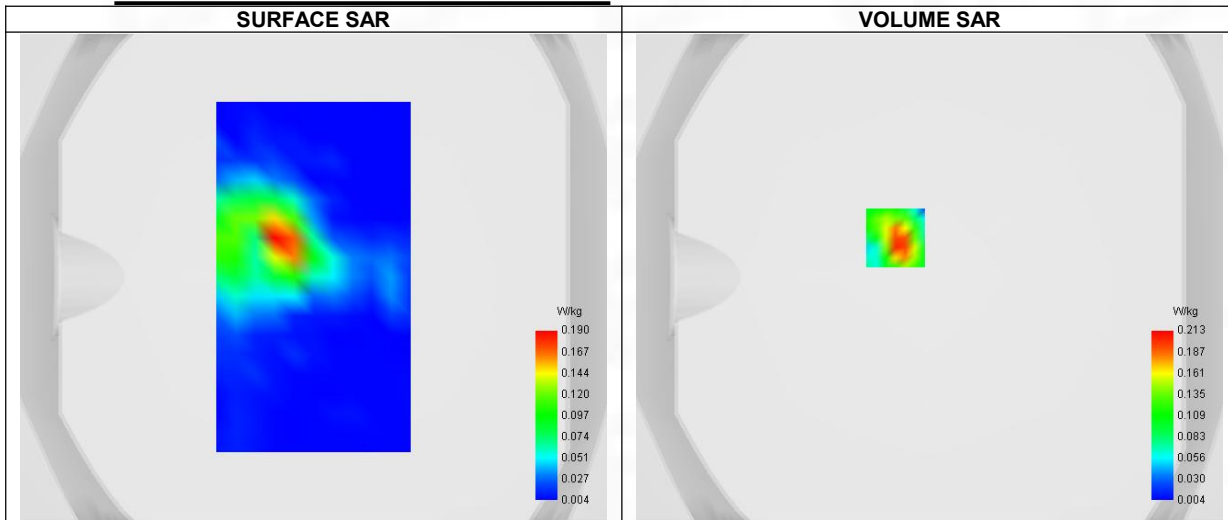
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	0.00
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-2
Channels/Frequency	Middle (155)/ frequency 5775.000 Mhz
Signal	IEEE 802.11 ac

B. Permittivity

Middle TX Frequency (MHz)	5775.000
Relative permittivity (real part)	35.228
Relative permittivity (imaginary part)	16.544
Conductivity (S/m)	5.216

C. SAR Surface and Volume



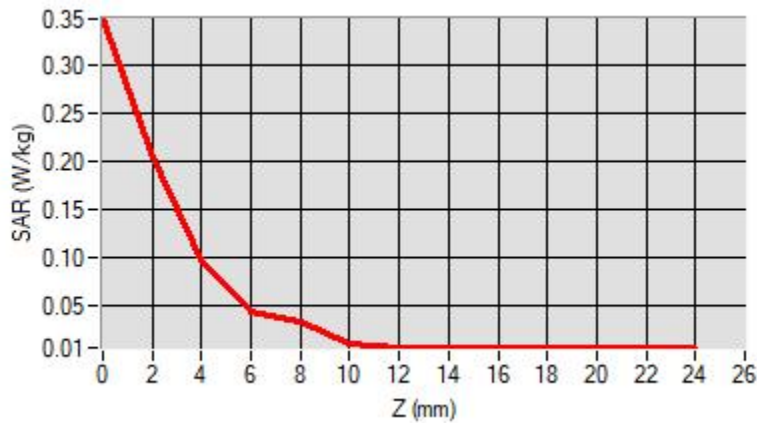
Maximum location: X=-14.00, Y=16.00 ; SAR Peak: 0.41 W/kg

D. SAR 1g & 10g

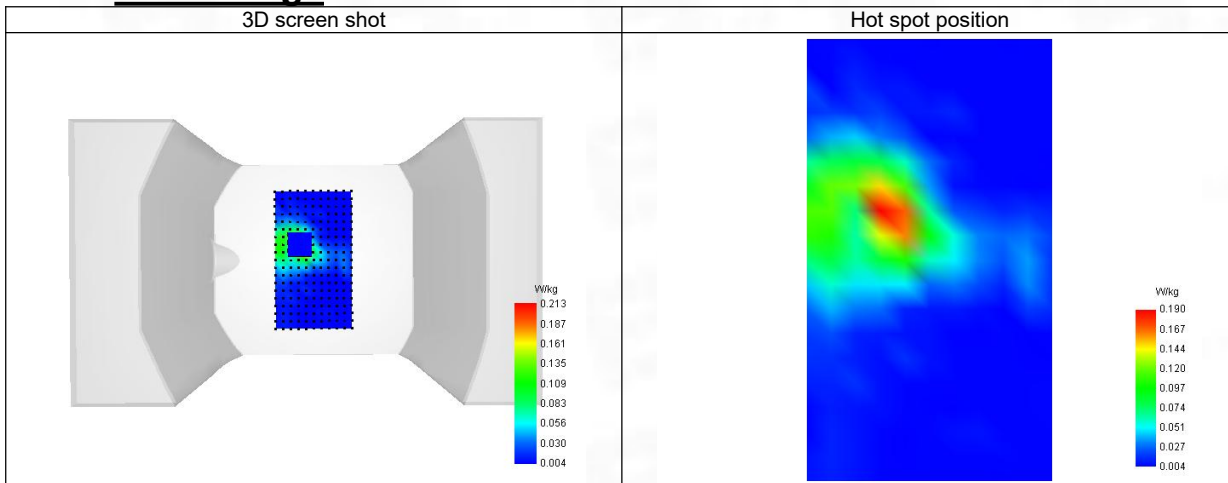
SAR 10g (W/Kg)	0.087
SAR 1g (W/Kg)	0.190
Variation (%)	-1.330
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	48.491583

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)	0.348	0.203	0.097	0.043	0.033	0.009	0.005	0.005	0.005	0.005	0.005	0.005



F. 3D Image



20-Body with back position in dist. 0mm on Channel 78 in Bluetooth

SAR Measurement at Bluetooth (Body, Validation Plane)

Date of measurement: 5/12/2025

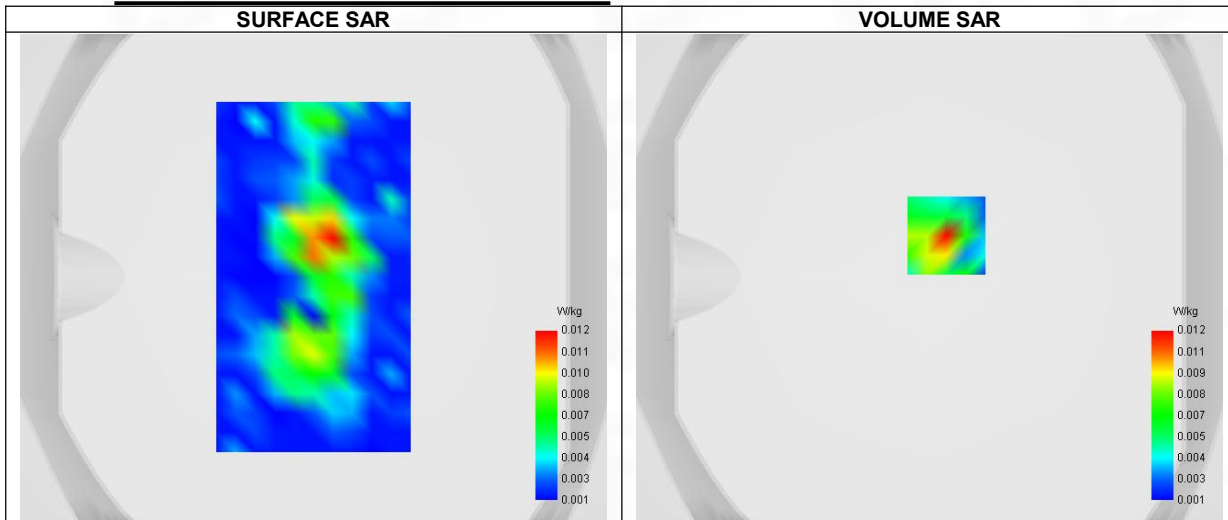
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x7, dx=5mm dy=5mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Bluetooth
Channels/Frequency	Higher (78)/ frequency 2480.000 Mhz
Signal	Bluetooth

B. Permittivity

Middle TX Frequency (MHz)	2480.000
Relative permittivity (real part)	38.835
Relative permittivity (imaginary part)	13.600
Conductivity (S/m)	1.845

C. SAR Surface and Volume



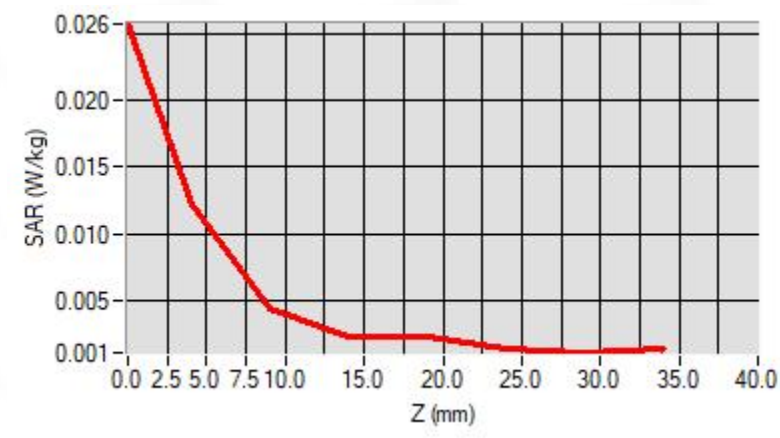
Maximum location: X=7.00, Y=17.00 ; SAR Peak: 0.02 W/kg

D. SAR 1g & 10g

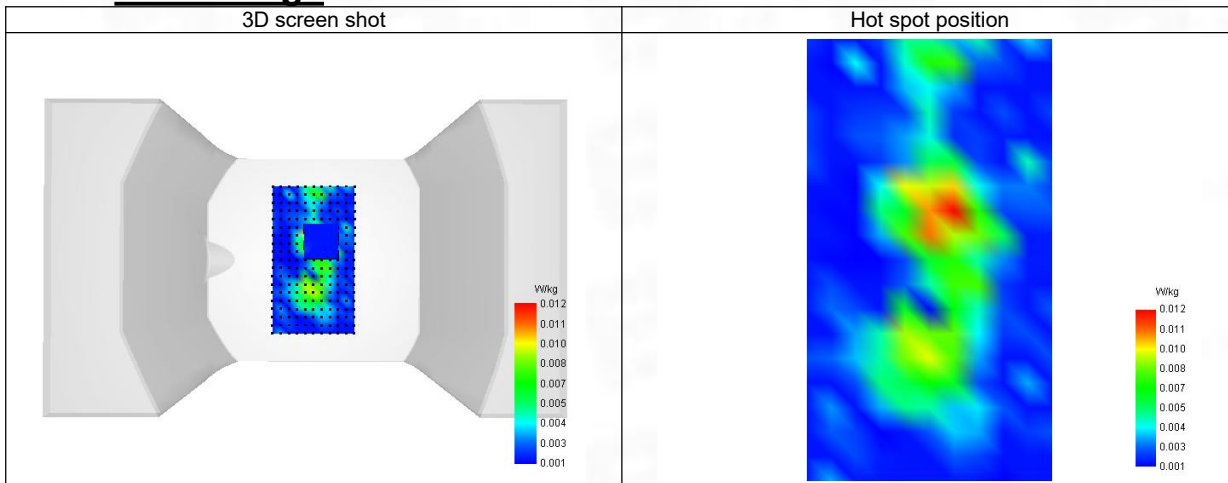
SAR 10g (W/Kg)	0.005
SAR 1g (W/Kg)	0.011
Variation (%)	0.500
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	37.138456

E. Z Axis Scan

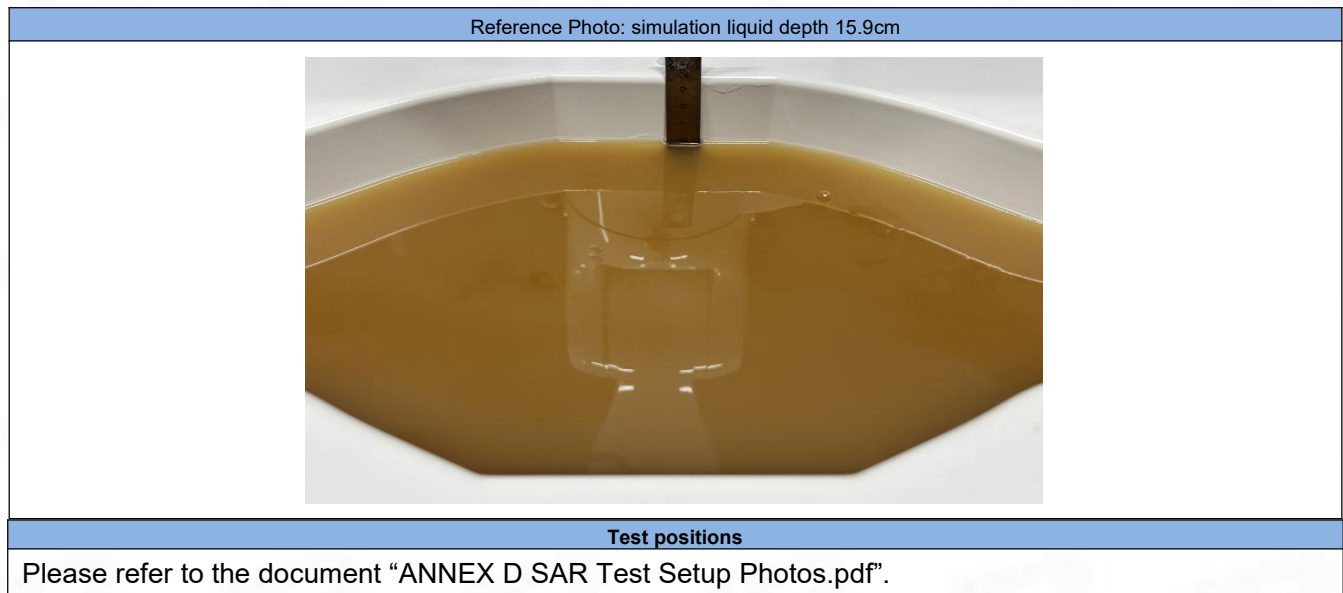
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.026	0.012	0.005	0.002	0.002	0.001	0.001



F. 3D Image



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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--END OF REPORT--