



SAR Test Report

For

Applicant Name: Rogue mobile Inc
Address: 6358 Oak Shore Drive, Saint Cloud, FL 34771, USA
EUT Name: Mobile Phone
Brand Name: Rogue Mobile
Model Number: R55S

Issued By

Company Name: BTF Testing Lab (Shenzhen) Co., Ltd.
Address: 101/201/301, Building 1, Block 2, Tantou Industrial Park,
Tantou Community, Songgang Subdistrict, Bao'an District,
Shenzhen, China
Report Number: BTF250910R00601
Test Standards: FCC 47 CFR§2.1093 IEEE Std. 1528-2013
IEEE C95.1-2019
FCC ID: 2BQCFR55S
Test Conclusion: Pass
Test Date: 2025-10-09 to 2025-10-21
Date of Issue: 2025-10-24
Tested By: Kris . Li
Kris Li / Tester
Date: 2025-10-24
Prepared By: Amenda Zhong
Amenda Zhong / Project Engineer
Date: 2025-10-24
Approved By: Ryan.CJ
Ryan.CJ / EMC Manager
Date: 2025-10-24



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Revision History		
Version	Issue Date	Revisions Content
R_V0	2025-10-24	Original
Note:		Once the revision has been made, then previous versions reports are invalid.

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1. Introduction

1.1 Identification of Testing Laboratory

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

1.2 Identification of the Responsible Testing Location

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

1.3 Laboratory Condition

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

1.4 Announcement

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

2. Product Information

2.1 Application Information

Company Name:	Rogue mobile Inc
Address:	6358 Oak Shore Drive, Saint Cloud, FL 34771, USA

2.2 Manufacturer Information

Company Name:	Rogue mobile Inc
Address:	6358 Oak Shore Drive, Saint Cloud, FL 34771, USA

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	Mobile Phone
Under Test Model Name	R55S
Sample No.	BTFSN250910003

2.5 Equipment under Test Ancillary Equipment

Ancillary Equipment 1	Rechargeable Battery	
	Capacity	2300mAh
	Nominal Voltage	3.8V

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 2/4/5/12/13/25/66/71 TDD LTE Band 41 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) 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 12	TX: 698 ~ 716 MHz	RX: 728 ~ 746 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 41	2496 ~ 2690 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	
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN: Internal Antenna WLAN: Internal Antenna BT: Internal Antenna		
Hotspot Function	Support		
Power Reduction	Not Support		
Exposure Category	General Population/Uncontrolled exposure		
EUT Stage	Portable Device		
Product	Type		
	☐ Production unit	☒ Identical prototype	

3. Summary of Test Results

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
3	IEEE C95.1-2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz
4	KDB447498 D04	Interim General RF Exposure Guidance v01
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 Summary>

Exposure Position	Frequency Band	Reported SAR (W/kg)	Equipment Class	Highest Reported SAR (W/kg)
Head 1-g SAR (0 mm Gap)	GSM 850	0.045	PCE	0.581
	GSM 1900	0.038		
	WCDMA Band II	0.413		
	WCDMA Band IV	0.435		
	WCDMA Band V	0.339		
	LTE Band 2	0.339		
	LTE Band 4	0.358		
	LTE Band 5	0.288		
	LTE Band 12	0.157		
	LTE Band 14	0.132		
	LTE Band 17	0.168		
	LTE Band 41	0.069		
	LTE Band 66	0.425		
	LTE Band 71	0.116		
	WLAN 2.4 GHz	0.581	DTS	
	Bluetooth	0.005	DSS	
Exposure Position	Frequency Band	Reported SAR (W/kg)	Equipment Class	Highest Reported SAR (W/kg)
Hotspot(Body) 1-g SAR (10 mm Gap)	GSM 850	0.497	PCE	0.891
	GSM 1900	0.237		
	WCDMA Band II	0.648		
	WCDMA Band IV	0.891		
	WCDMA Band V	0.313		
	LTE Band 2	0.459		
	LTE Band 4	0.818		
	LTE Band 5	0.236		
	LTE Band 12	0.222		
	LTE Band 14	0.189		
	LTE Band 17	0.232		
	LTE Band 41	0.718		
	LTE Band 66	0.739		
	LTE Band 71	0.197		
	WLAN 2.4 GHz	0.120	DTS	
	Bluetooth	0.008	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
Head 1-g SAR (0 mm Gap)	WCDMA Band IV + 2.4G WIFI	1.016	1.6	Pass
Hotspot(Body) 1-g SAR (10 mm Gap)	WCDMA Band IV + 2.4G WIFI	1.011	1.6	Pass

3.4 Test Uncertainty

3.4.1 Measurement uncertainty evaluation for SAR test

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

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

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

3.4.2 Measurement uncertainty evaluation for system check

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

4. Measurement System

4.1 Specific Absorption Rate (SAR) Definition

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

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

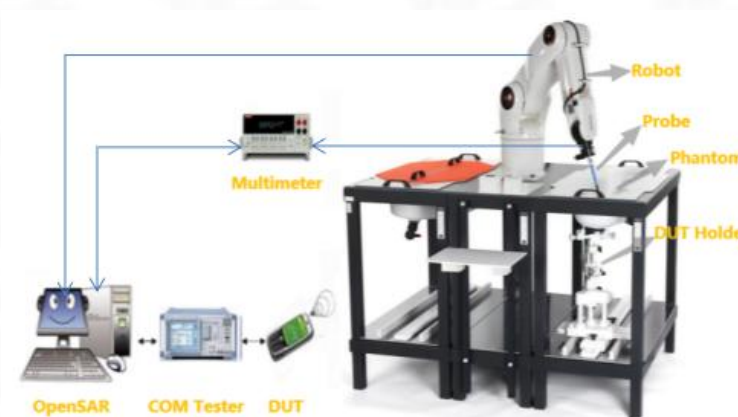
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

4.2 MVG SAR System

4.2.1 SAR system diagram



4.2.2 Robot



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

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

4.2.3 E-Field Probe

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

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



4.2.4 Phantoms

SAM Phantom

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



SAM Phantom

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

TWIN SAM phantom

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

ELLIPTICAL Phantom

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



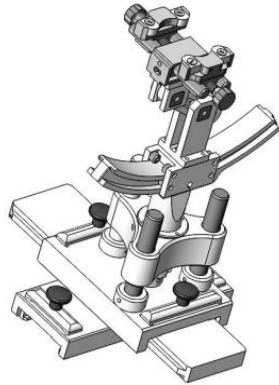
ELLI Phantom

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

Technical & mechanical characteristics

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

4.2.5 Device Holder



System Material	Permittivity	Loss tangent
Delrin	3.7	0.005

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

System Material	Permittivity	Loss tangent
PMMA	2.9	0.028

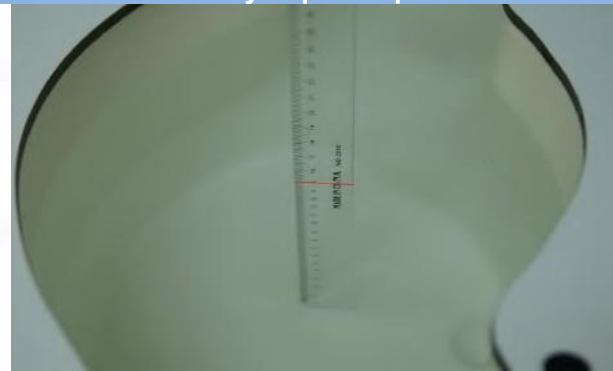
4.2.6 Simulating Liquid

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

Head Liquid Depth



Body Liquid Depth



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

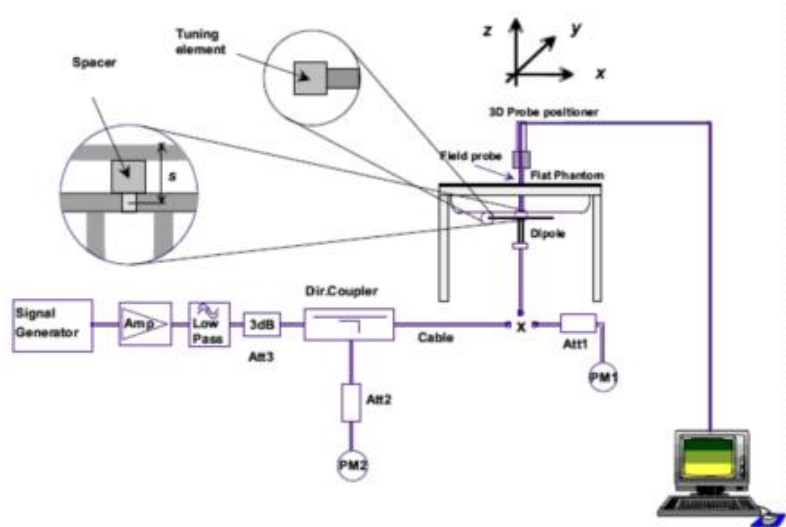
Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ε
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5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

5. System Verification

5.1 Purpose of System Check

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

5.2 System Check Setup



6. TEST POSITION CONFIGURATIONS

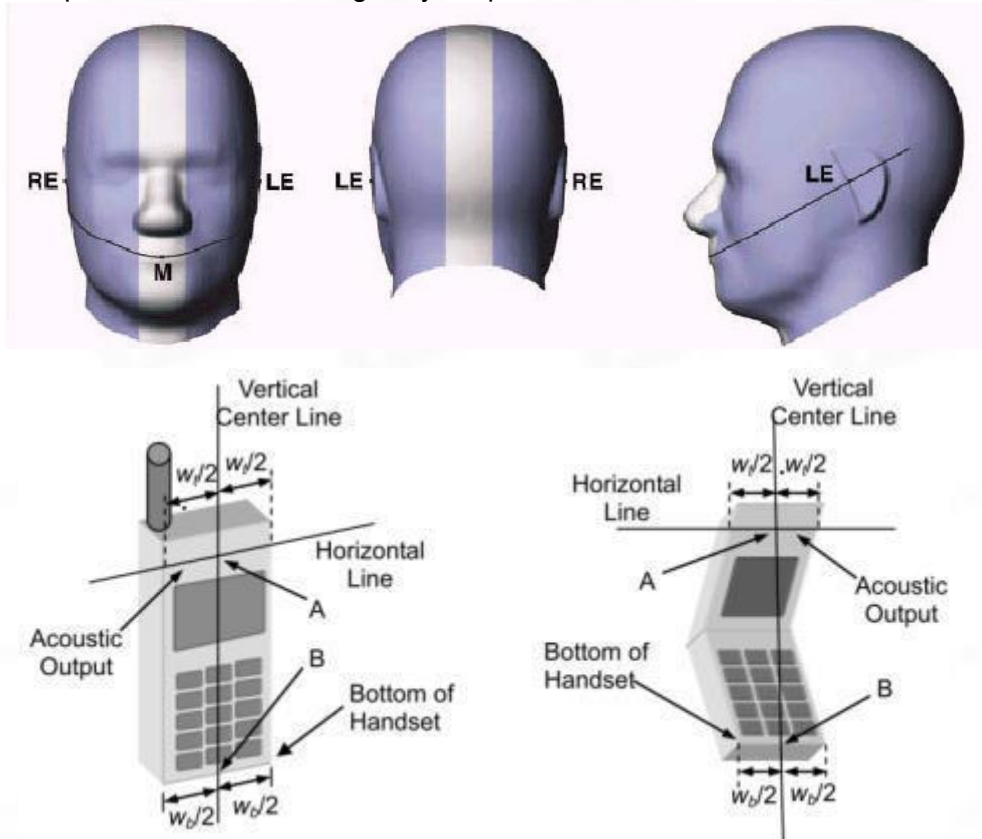
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Head Exposure Conditions

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

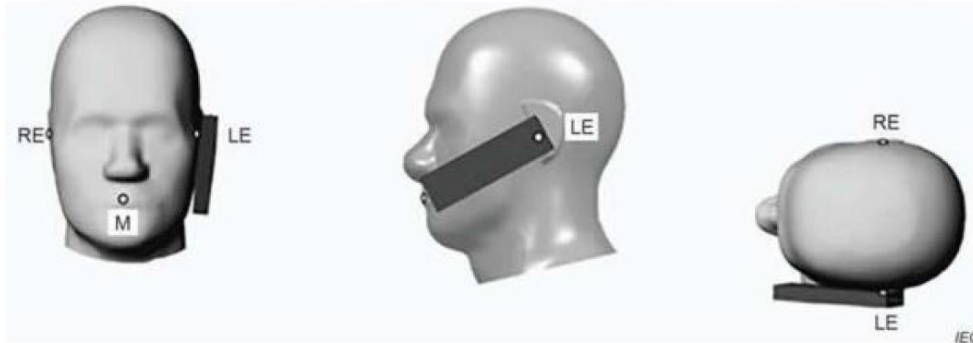
6.1.1 Two Imaginary Lines on the Handset

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



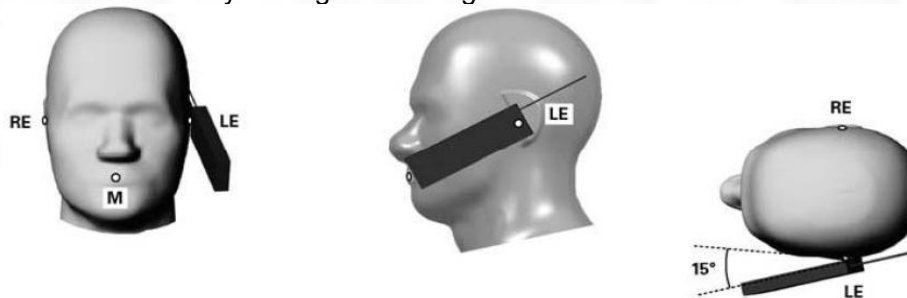
6.1.2 Two Imaginary Lines on the Handset

- (a) 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.
- (b) 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

- (a) To position the device in the “cheek” position described above.
- (b) 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.

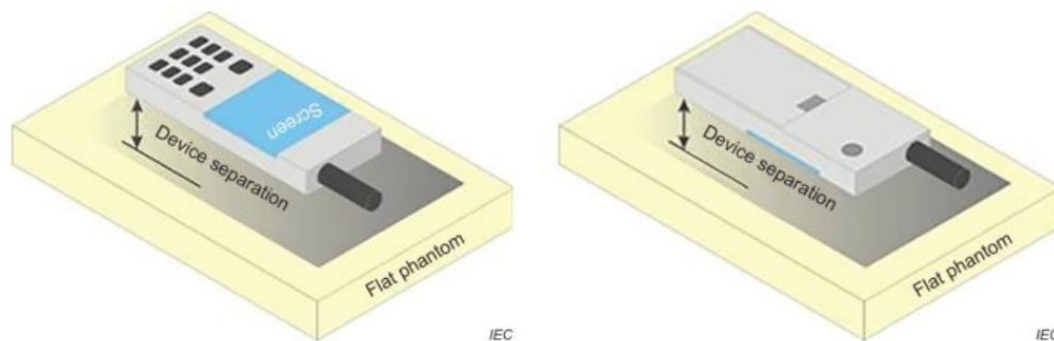


6.2 Body-worn Position Conditions

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.

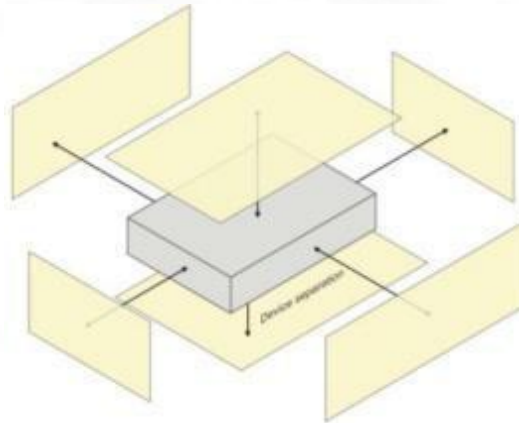
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.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

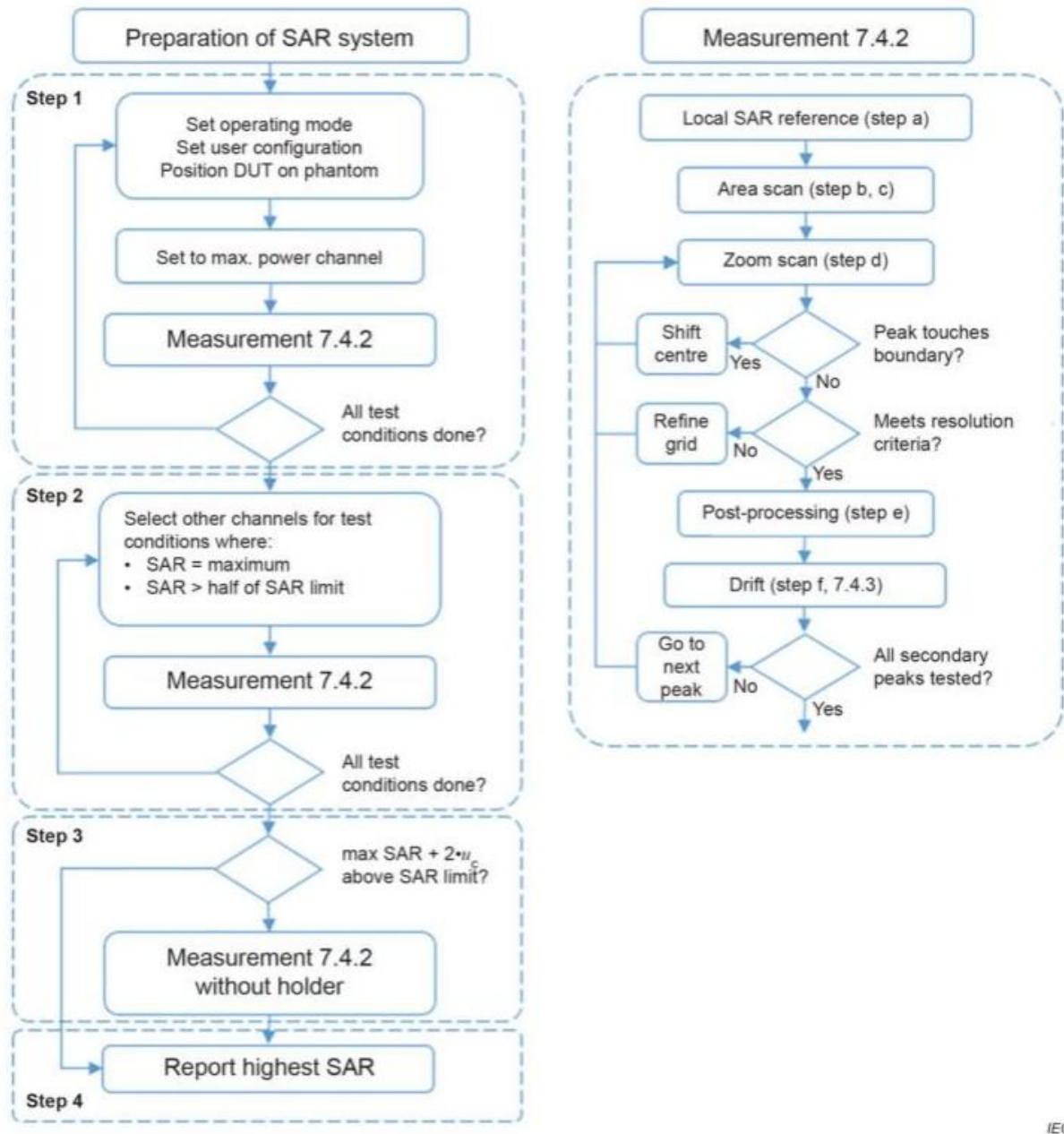
According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed 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
		≤ 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.

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		31.50	31.29	31.42	31.38	-9.03	22.26	22.39	22.35
GPRS (GMSK)	1Tx slot	31.50	31.29	31.38	31.33	-9.03	22.26	22.35	22.30
	2Tx slots	29.50	29.26	29.27	29.18	-6.02	23.24	23.25	23.16
	3Tx slots	27.50	27.27	27.35	27.28	-4.26	23.01	23.09	23.02
	4Tx slots	25.50	25.18	25.21	25.16	-3.01	22.17	22.20	22.15
EGPRS (8PSK)	1Tx slot	27.00	24.46	26.84	26.81	-9.03	15.43	17.81	17.78
	2Tx slots	24.50	23.95	23.99	24.13	-6.02	17.93	17.97	18.11
	3Tx slots	23.00	22.14	22.37	22.54	-4.26	17.88	18.11	18.28
	4Tx slots	20.50	19.86	20.04	20.19	-3.01	16.85	17.03	17.18
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	28.92	28.78	28.23	-9.03	19.89	19.75	19.20
GPRS (GMSK)	1Tx slot	29.00	28.90	28.78	28.22	-9.03	19.87	19.75	19.19
	2Tx slots	27.00	26.81	26.56	26.05	-6.02	20.79	20.54	20.03
	3Tx slots	25.50	25.21	24.96	24.41	-4.26	20.95	20.70	20.15
	4Tx slots	23.50	23.05	22.81	22.28	-3.01	20.04	19.80	19.27
EGPRS (8PSK)	1Tx slot	25.50	24.87	25.19	23.86	-9.03	15.84	16.16	14.83
	2Tx slots	25.00	24.41	24.72	23.49	-6.02	18.39	18.70	17.47
	3Tx slots	23.00	22.84	22.58	21.97	-4.26	18.58	18.32	17.71
	4Tx slots	20.50	20.29	20.01	19.88	-3.01	17.28	17.00	16.87
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		22.50	22.35	22.26	21.84
HSDPA	Subtest-1	21.50	20.86	20.82	21.34
	Subtest-2	21.50	20.80	20.77	21.22
	Subtest-3	21.50	20.83	20.75	21.23
	Subtest-4	21.50	20.79	20.77	21.30
HSUPA	Subtest-1	19.00	18.22	18.45	18.71
	Subtest-2	19.00	18.17	18.70	18.99
	Subtest-3	19.00	18.44	18.42	18.79
	Subtest-4	19.00	18.42	18.70	18.76
	Subtest-5	19.00	18.41	18.22	18.73
Mode		Maximum Tune-up(dBm)	WCDMA Band IV		
			Conducted Power (dBm)		
			CH1312	CH1413	CH1513
			1712.4	1732.6	1752.6
RMC 12.2K		22.00	21.34	21.69	21.85
HSDPA	Subtest-1	21.50	21.27	20.50	20.80
	Subtest-2	21.50	21.22	20.52	20.82
	Subtest-3	21.50	21.23	20.53	20.86
	Subtest-4	21.50	21.19	20.49	20.82
HSUPA	Subtest-1	19.00	18.77	18.09	18.84
	Subtest-2	19.00	18.55	18.13	18.43
	Subtest-3	19.50	19.06	18.57	18.43
	Subtest-4	19.50	19.16	18.33	18.84
	Subtest-5	19.00	18.70	18.55	18.58
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	21.68	21.65	21.69
HSDPA	Subtest-1	21.50	21.47	21.41	21.12
	Subtest-2	21.50	21.35	21.42	21.13
	Subtest-3	21.50	21.35	21.44	21.07
	Subtest-4	21.50	21.32	21.41	21.11
HSUPA	Subtest-1	19.50	19.40	18.74	18.62
	Subtest-2	19.00	18.93	18.73	18.91
	Subtest-3	19.50	19.21	18.73	18.62
	Subtest-4	19.50	19.20	18.73	18.91
	Subtest-5	19.00	18.90	18.73	18.61
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	21.93	21.87	21.28
			2	22.50	22.12	21.78	21.39
			5	22.50	22.23	21.90	21.43
		3	0	22.00	21.99	21.75	21.46
			2	22.50	22.04	21.77	21.41
			3	22.50	22.03	21.85	21.37
		6	0	21.50	21.10	20.83	20.46
	16QAM	1	0	22.00	21.75	21.33	20.52
			2	22.00	21.73	21.39	20.42
			5	22.00	21.80	21.28	20.41
		3	0	21.50	21.28	20.79	20.25
			2	21.50	21.27	20.78	20.27
			3	21.50	21.29	20.75	20.23
		6	0	20.50	20.32	19.85	19.84
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
3MHz	QPSK	1	0	22.50	22.03	21.61	21.48
			7	22.50	22.02	21.70	21.42
			14	22.00	21.99	21.70	21.43
		8	0	21.50	21.01	20.88	20.46
			4	21.50	21.04	20.77	20.45
			7	21.00	20.91	20.84	20.47
		15	0	21.50	21.04	20.82	20.40
	16QAM	1	0	22.00	21.05	21.72	21.13
			7	22.00	21.02	21.75	21.09
			14	22.00	20.93	21.70	21.05
		8	0	20.50	20.34	19.97	20.11
			4	20.50	20.34	19.89	20.10
			7	20.50	20.29	19.86	20.12
		15	0	20.50	20.16	19.82	19.91
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
5MHz	QPSK	1	0	22.00	21.97	21.87	21.53
			13	22.00	21.86	21.84	21.50
			24	22.00	21.94	21.78	21.43
		12	0	21.50	21.06	20.96	20.51
			6	21.00	20.96	20.95	20.47
			13	21.50	21.00	20.79	20.58
		25	0	21.50	21.06	20.94	20.50
	16QAM	1	0	22.00	21.64	21.51	20.13
			13	22.00	21.54	21.42	20.06
			24	22.00	21.60	21.43	20.05
		12	0	20.50	20.19	19.93	19.91
			6	20.50	20.11	19.93	19.89
			13	20.50	20.09	19.92	19.88
		25	0	20.50	20.18	19.92	19.99

LTE-FDD Band 2				Maximum Tune-up(dBm)	Conducted Power(dBm)					
Bandwidth	Modulation	RB allocation	RB offset		18650	18900	19150			
					1855.0MHz	1880.0MHz	1905.0MHz			
10MHz	QPSK	1	0	22.00	21.99	21.76	21.62			
			25	22.00	21.99	21.67	21.63			
			49	22.50	22.01	21.56	21.58			
		25	0	21.50	21.00	20.85	20.48			
			13	21.50	21.05	20.85	20.56			
			25	21.00	20.96	20.72	20.54			
		50	0	21.50	21.00	20.92	20.53			
			16QAM	1	0	22.50	22.28	21.10	21.25	
					25	22.50	22.28	21.05	21.25	
	49	22.50			22.22	21.01	21.16			
	25	0		20.50	20.10	20.15	20.05			
		13		21.00	20.52	20.07	19.71			
		25		20.50	20.41	20.37	20.02			
	50	0		20.50	20.48	19.93	19.63			
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18675	18900	19125
								1857.5MHz	1880.0MHz	1902.5MHz
	15MHz	QPSK	1	0	22.00	21.93	21.89	21.51		
				38	22.00	21.89	21.77	21.41		
74				22.00	21.83	21.66	21.36			
36			0	21.50	21.01	20.97	20.59			
			18	21.50	21.00	20.84	20.51			
			39	21.00	20.95	20.77	20.58			
75			0	21.00	20.95	20.86	20.49			
			16QAM	1	0	22.00	21.64	21.52	21.41	
					38	22.00	21.63	21.40	21.26	
74		22.00			21.62	21.29	21.21			
36		0		20.50	20.44	20.12	19.72			
		18		20.50	20.40	20.04	20.00			
		39		20.50	20.15	20.28	19.93			
75		0		20.50	20.48	20.04	20.05			
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18700	18900	19100
								1860.0MHz	1880.0MHz	1900.0MHz
20MHz		QPSK	1	0	22.50	22.04	21.95	21.68		
				50	22.50	22.01	21.80	21.62		
	99			22.50	22.02	21.76	21.42			
	50		0	21.50	21.03	21.02	20.61			
			25	21.50	21.05	20.84	20.69			
			50	21.50	21.03	20.87	20.57			
	100		0	21.50	21.08	20.83	20.68			
			16QAM	1	0	22.50	22.36	21.36	21.20	
					50	22.50	22.29	21.24	21.11	
	99	22.50			22.21	21.14	20.92			
	50	0		20.50	20.44	20.42	19.86			
		25		20.50	20.07	19.91	19.77			
		50		20.50	20.42	19.72	19.67			
	100	0		20.50	20.12	19.88	19.78			

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	22.50	21.49	21.92	22.05
			2	22.50	21.53	22.08	22.17
			5	22.50	21.54	22.03	22.21
		3	0	22.50	21.55	22.05	22.31
			2	22.50	21.63	22.00	22.28
			3	22.50	21.57	22.06	22.23
		6	0	21.50	20.43	21.06	21.34
	16QAM	1	0	22.00	21.04	21.03	21.96
			2	22.50	21.08	21.08	22.07
			5	22.50	21.05	21.07	22.09
		3	0	21.00	20.34	20.84	20.97
			2	21.50	20.43	20.81	21.12
			3	21.50	20.41	20.86	21.11
		6	0	20.50	19.57	20.10	20.45
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
3MHz	QPSK	1	0	22.50	21.48	21.90	22.11
			7	22.50	21.53	21.97	22.16
			14	22.50	21.55	21.97	22.22
		8	0	21.50	20.46	21.03	21.11
			4	21.50	20.41	21.03	21.14
			7	21.50	20.64	21.03	21.29
		15	0	21.50	20.52	20.97	21.14
	16QAM	1	0	22.50	20.50	22.22	21.77
			7	22.50	20.53	22.23	21.77
			14	22.50	20.62	22.23	21.93
		8	0	21.00	19.72	20.12	20.65
			4	21.00	19.76	20.17	20.71
			7	20.50	19.83	20.18	20.47
		15	0	21.00	19.60	20.09	20.53
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19976	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
5MHz	QPSK	1	0	22.50	21.35	21.93	22.13
			13	22.50	21.50	21.97	22.08
			24	22.50	21.51	22.00	22.20
		12	0	21.50	20.53	21.00	21.23
			6	21.50	20.69	21.04	21.06
			13	21.50	20.67	20.98	21.12
		25	0	21.50	20.65	21.07	21.04
	16QAM	1	0	21.50	21.05	21.45	21.47
			13	22.00	21.19	21.50	21.44
			24	22.00	21.20	21.43	21.58
		12	0	20.50	19.55	19.98	20.10
			6	20.50	19.65	19.98	20.33
			13	20.50	19.68	19.94	20.33
		25	0	20.50	19.71	20.03	20.30

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	22.50	21.50	21.99	22.04
			25	22.50	21.64	22.07	22.26
			49	22.50	21.69	22.11	22.18
		25	0	21.50	20.69	20.98	21.10
			13	21.50	20.70	20.99	21.33
			25	21.50	20.68	21.02	21.00
		50	0	21.50	20.67	21.04	21.39
	16QAM	1	0	22.50	20.50	22.28	21.79
			25	22.50	20.64	22.28	21.90
			49	22.50	20.74	22.30	21.95
		25	0	20.50	19.81	20.10	20.24
			13	21.00	20.13	20.14	20.54
			25	20.50	19.83	20.15	20.41
		50	0	21.00	19.97	20.14	20.58
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
15MHz	QPSK	1	0	22.50	21.38	21.99	22.05
			38	22.50	21.53	22.10	22.18
			74	22.50	21.72	22.17	22.21
		36	0	21.50	20.55	20.99	21.01
			18	21.50	20.67	21.02	21.11
			39	21.50	20.77	20.96	21.27
		75	0	21.50	20.64	21.03	21.20
	16QAM	1	0	22.00	21.12	21.57	21.79
			38	22.00	21.37	21.70	21.88
			74	22.00	21.52	21.76	21.92
		36	0	20.50	19.95	20.45	20.25
			18	20.50	19.74	20.16	20.34
			39	21.00	19.92	20.59	20.28
		75	0	20.50	19.68	20.14	20.30
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
20MHz	QPSK	1	0	22.50	21.50	21.79	22.05
			50	22.50	21.77	22.00	22.17
			99	22.50	21.94	22.16	22.27
		50	0	21.50	20.65	20.93	21.15
			25	21.50	20.74	20.94	21.09
			50	21.50	20.88	21.00	21.24
		100	0	21.50	20.72	21.03	21.17
	16QAM	1	0	22.50	21.72	21.30	22.06
			50	22.50	21.94	21.45	22.07
			99	22.50	22.19	21.54	22.08
		50	0	20.50	20.02	20.07	20.37
			25	20.50	20.18	20.10	20.23
			50	21.00	19.96	20.53	20.60
		100	0	20.50	19.99	20.10	20.30

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	22.50	21.49	21.74	22.10
			2	22.50	21.47	21.82	22.11
			5	22.50	21.47	21.86	22.13
		3	0	22.50	21.55	21.78	22.08
			2	22.50	21.44	21.70	22.09
			3	22.50	21.43	21.75	22.11
		6	0	21.50	20.45	20.75	21.08
	16QAM	1	0	22.00	20.55	21.40	21.64
			2	22.00	20.42	21.40	21.64
			5	22.00	20.44	21.46	21.64
		3	0	21.00	20.20	20.76	20.94
			2	21.00	20.17	20.78	20.93
			3	21.00	20.16	20.71	20.97
		6	0	20.50	19.48	20.42	20.15
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
3MHz	QPSK	1	0	22.50	21.55	21.73	22.03
			7	22.50	21.57	21.81	22.02
			14	22.50	21.43	21.83	22.07
		8	0	21.50	20.53	20.76	21.10
			4	21.50	20.52	20.81	21.08
			7	21.50	20.59	20.80	21.12
		15	0	21.50	20.56	20.75	21.12
	16QAM	1	0	22.00	20.68	21.38	21.93
			7	22.00	20.70	21.42	21.85
			14	22.00	20.64	21.40	21.87
		8	0	21.00	19.66	20.25	20.84
			4	21.00	19.70	20.33	20.82
			7	20.50	19.67	20.32	20.27
		15	0	21.00	19.51	20.32	20.60

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	22.50	21.44	21.68	22.03
			13	22.50	21.47	21.71	22.12
			24	22.50	21.49	21.83	22.10
		12	0	21.50	20.54	20.77	21.07
			6	21.50	20.50	20.70	21.15
			13	21.50	20.54	20.67	21.10
		25	0	21.50	20.48	20.72	21.06
	16QAM	1	0	21.50	21.07	21.32	20.61
			13	21.50	20.99	21.37	20.66
			24	21.50	21.16	21.40	20.68
		12	0	21.00	19.51	20.17	20.56
			6	21.00	19.46	20.30	20.53
			13	21.00	19.52	20.32	20.50
		25	0	21.00	19.62	20.24	20.66

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20450	20525	20600
					829.0MHz	836.5MHz	844.0MHz
10MHz	QPSK	1	0	22.00	21.61	21.67	21.82
			25	22.00	21.74	21.83	21.91
			49	22.50	21.90	21.97	22.09
		25	0	21.50	20.54	20.83	21.03
			13	21.00	20.73	20.69	20.92
			25	21.50	20.58	20.89	21.11
		50	0	21.00	20.72	20.78	20.91
			0	22.00	21.29	21.56	20.87
			25	22.00	21.30	21.77	20.88
	16QAM	1	49	22.00	21.41	21.90	21.16
		25	0	21.00	19.71	20.23	20.58
			13	21.00	19.79	20.27	20.58
			25	21.00	19.86	19.89	20.76
		50	0	20.50	19.85	20.24	20.47
			0	20.50	19.85	20.24	20.47

Band 12

LTE-FDD Band 12				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23017	23095	23173
1.4MHz	QPSK	1	0	22.00	21.82	21.45	21.45
			2	22.00	21.79	21.70	21.60
			5	22.00	21.79	21.67	21.52
		3	0	22.00	21.81	21.61	21.60
			2	22.00	21.75	21.63	21.59
			3	22.00	21.72	21.53	21.53
		6	0	21.00	20.77	20.61	20.59
	16QAM	1	0	21.50	20.77	21.49	21.24
			2	21.50	20.83	21.25	21.21
			5	21.50	20.84	21.28	21.24
		3	0	21.00	20.52	20.60	20.45
			2	21.00	20.54	20.53	20.39
			3	21.00	20.49	20.65	20.45
		6	0	20.50	20.15	19.90	19.69
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
3MHz	QPSK	1	0	22.00	21.80	21.43	21.63
			7	22.00	21.73	21.52	21.67
			14	22.00	21.69	21.44	21.65
		8	0	21.00	20.74	20.85	20.55
			4	21.00	20.71	20.57	20.54
			7	21.00	20.52	20.59	20.69
		15	0	21.00	20.72	20.65	20.54
	16QAM	1	0	22.00	21.54	21.01	21.35
			7	22.00	21.58	20.66	21.29
			14	21.50	21.37	20.65	21.32
		8	0	20.50	20.21	20.11	19.76
			4	20.50	20.19	19.72	19.64
			7	20.50	20.22	19.66	19.82
		15	0	20.50	20.16	19.63	19.55

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
5MHz	QPSK	1	0	22.00	21.67	21.60	21.37
			13	22.00	21.68	21.61	21.42
			24	22.00	21.57	21.59	21.40
		12	0	21.00	20.80	20.98	20.40
			6	21.00	20.53	20.60	20.57
			13	21.00	20.45	20.52	20.57
		25	0	21.00	20.53	20.57	20.60
	16QAM	1	0	21.50	21.06	20.52	20.98
			13	21.50	20.98	20.15	21.06
			24	21.50	21.08	20.09	21.13
		12	0	20.50	19.95	20.01	20.00
			6	20.50	20.04	19.46	19.47
			13	20.00	19.98	19.44	19.43
		25	0	20.50	20.04	19.59	19.50
		25	0	20.50	20.04	19.59	19.50
			0	20.50	20.04	19.59	19.50
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23060	23095	23130
					704.0MHz	707.5MHz	711.0MHz
10MHz	QPSK	1	0	22.00	21.59	21.38	21.55
			25	22.00	21.53	21.49	21.48
			49	22.00	21.49	21.53	21.56
		25	0	21.50	20.42	21.01	20.45
			13	21.00	20.59	20.58	20.52
			25	21.00	20.87	20.51	20.52
		50	0	21.00	20.57	20.54	20.52
	16QAM	1	0	22.00	21.85	21.06	20.87
			25	22.00	21.82	21.11	20.57
			49	22.00	21.70	21.03	20.65
		25	0	20.50	20.11	20.04	19.57
			13	20.50	19.51	19.66	20.09
			25	20.50	20.02	19.98	19.65
		50	0	20.00	19.51	19.65	19.96
		50	0	20.00	19.51	19.65	19.96
			0	20.00	19.51	19.65	19.96

Band 14

LTE-FDD Band 14				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23305	23330	23355
5MHz	QPSK	1	0	22.50	22.38	22.43	22.39
			12	22.50	22.38	22.35	22.34
			24	22.50	22.39	22.37	22.19
		12	0	21.50	21.43	21.39	21.37
			6	21.50	21.35	21.38	21.44
			13	21.50	21.42	21.36	21.37
		25	0	21.50	21.38	21.30	21.34
	16QAM	1	0	21.50	21.46	20.51	21.31
			12	21.50	21.44	20.47	21.38
			24	21.50	21.45	20.54	21.42
		12	0	21.00	20.91	20.30	20.39
			6	20.50	20.34	20.45	20.41
			13	21.00	20.39	20.31	20.50
		25	0	21.00	20.32	20.52	20.45
		25	0	21.00	20.32	20.52	20.45
			0	21.00	20.32	20.52	20.45

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23330
					793.0MHz
10MHz	QPSK	1	0	22.50	22.41
			25	22.50	22.42
			49	22.50	22.39
		25	0	21.50	21.33
			13	21.50	21.45
			25	21.50	21.47
		50	0	21.50	21.40
	16QAM	1	0	21.50	21.04
			25	21.00	20.94
			49	21.50	21.07
		25	0	20.50	20.47
			13	21.00	20.57
			25	21.00	20.52
		50	0	20.50	20.46

Band 17

LTE-FDD Band 17				Maximum Tune-up(dBm)	Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset		23755	23790	23825		
					706.5MHz	710MHz	713.5MHz		
5MHz	QPSK	1	0	22.00	21.55	21.48	21.54		
			13	22.00	21.39	21.48	21.55		
			24	22.00	21.52	21.47	21.57		
		12	0	21.50	21.04	20.57	20.55		
			6	21.50	21.03	20.62	20.52		
			13	21.00	20.64	20.54	20.62		
		25	0	21.50	21.06	20.54	20.70		
	16QAM	1	0	21.50	20.27	21.09	21.03		
			13	21.50	20.62	21.07	21.12		
			24	21.50	20.30	21.08	21.25		
		12	0	20.00	19.99	19.66	19.94		
			6	20.50	20.01	19.97	19.44		
			13	20.50	19.68	20.03	19.51		
		25	0	20.50	20.10	20.07	19.56		
		Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23780	23790	23800
							709MHz	710MHz	711MHz
10MHz	QPSK	1	0	22.00	21.46	21.66	21.42		
			25	22.00	21.52	21.49	21.48		
			49	22.00	21.69	21.60	21.61		
		25	0	21.00	20.95	20.64	20.56		
			13	21.00	20.56	20.58	20.61		
			25	21.00	20.62	20.53	20.51		
		50	0	21.00	20.66	20.63	20.54		
	16QAM	1	0	22.50	20.64	22.20	21.77		
			25	22.00	20.57	21.81	21.39		
			49	22.00	20.61	21.90	21.55		
		25	0	20.50	20.08	19.77	19.67		
			13	20.50	19.72	20.13	20.00		
			25	20.50	20.11	20.10	19.63		
		50	0	20.50	19.67	20.11	20.07		

Band 41

LTE-TDD Band 41				Maximum Tune-up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		39675	40620	41565	
					2498.5MHz	2593.0MHz	2687.5MHz	
5MHz	QPSK	1	0	21.50	21.28	21.19	20.94	
			13	21.50	21.28	21.15	21.05	
			24	21.50	21.22	21.11	21.02	
		12	0	20.50	20.45	19.98	19.97	
			6	20.50	20.25	20.03	19.87	
			13	20.50	20.29	20.20	20.06	
		25	0	20.50	20.27	19.97	19.92	
		16QAM	1	0	21.00	20.63	19.82	19.31
				13	21.00	20.92	19.84	19.08
	24			21.00	20.58	19.59	19.14	
	12		0	19.50	19.20	18.84	18.63	
			6	19.50	19.29	18.86	18.56	
			13	19.50	19.15	19.10	18.82	
	25		0	19.50	19.48	18.97	18.75	
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39700	40620	41540	
					2501.0MHz	2593.0MHz	2685.0MHz	
10MHz	QPSK	1	0	21.50	21.40	21.17	20.91	
			25	21.50	21.17	21.20	20.99	
			49	21.50	21.21	21.23	20.96	
		25	0	20.50	20.34	20.18	19.85	
			13	20.50	20.39	20.04	19.86	
			25	20.50	20.30	20.03	19.97	
		50	0	20.50	20.27	20.07	19.86	
		16QAM	1	0	21.00	19.97	20.57	19.61
				25	21.00	19.62	20.59	19.51
	49			21.00	19.89	20.62	19.57	
	25		0	20.00	19.66	19.26	18.98	
			13	19.50	19.34	19.18	18.77	
			25	20.00	19.56	18.99	18.74	
	50		0	19.50	19.03	19.08	18.77	

LTE-TDD Band 41				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		39725	40620	41515
					2503.5MHz	2593.0MHz	2682.5MHz
15MHz	QPSK	1	0	21.50	21.39	21.21	v
			38	21.50	21.37	21.29	21.09
			74	21.50	21.26	21.15	21.17
		36	0	20.50	20.41	20.24	20.07
			18	20.50	20.38	20.18	20.07
			39	20.50	20.39	20.20	20.05
		75	0	20.50	20.31	20.24	20.11
	16QAM	1	0	21.00	19.73	20.62	19.71
			38	21.00	19.73	20.64	19.68
			74	21.00	20.13	20.72	19.65
		36	0	19.50	19.13	19.23	19.03
			18	19.50	19.39	18.95	19.00
			39	19.50	19.37	18.96	18.72
		75	0	20.00	19.50	18.98	19.09

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40140	40640	41140
					2545.0MHz	2595.0MHz	2645.0MHz
20MHz	QPSK	1	0	22.00	21.51	21.20	20.67
			50	21.50	21.37	21.19	20.70
			99	21.50	21.37	21.18	20.74
		50	0	20.50	20.28	20.13	19.76
			25	20.50	20.25	20.17	19.80
			50	20.50	20.21	20.07	19.83
		100	0	20.50	20.25	20.25	19.84
			0	21.00	20.81	19.78	20.07
			50	20.50	20.11	19.17	20.01
	16QAM	1	99	20.50	20.19	19.31	19.88
			0	19.50	19.28	18.94	19.00
			25	19.50	19.21	18.80	19.08
		50	50	19.50	19.47	18.94	18.84
			0	19.50	19.25	18.77	18.96
			0	19.50	19.25	18.77	18.96
		100	0	19.50	19.25	18.77	18.96

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	22.50	21.66	22.37	21.93
			2	22.50	21.71	22.30	21.96
			5	22.50	21.68	22.28	22.04
		3	0	22.50	21.53	22.29	22.03
			2	22.50	21.59	22.26	22.09
			3	22.50	21.57	22.28	22.02
		6	0	21.50	20.66	21.16	21.16
	16QAM	1	0	22.50	20.89	22.08	21.27
			2	22.50	21.08	22.11	21.25
			5	22.50	21.03	22.10	21.24
		3	0	21.00	20.63	20.60	20.77
			2	21.00	20.63	20.59	20.79
			3	21.00	20.61	20.61	20.73
		6	0	20.50	20.19	20.37	20.10
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131987	132322	132657
					1711.5MHz	1745.0MHz	1778.5MHz
3MHz	QPSK	1	0	22.50	21.57	22.08	22.11
			7	22.50	21.53	22.13	22.09
			14	22.50	21.57	22.16	22.11
		8	0	21.50	20.66	21.19	21.27
			4	21.50	20.65	21.20	21.13
			7	21.50	20.66	21.16	21.22
		15	0	21.50	20.70	21.15	21.22
	16QAM	1	0	22.00	20.75	21.84	21.47
			7	22.00	20.75	21.77	21.44
			14	22.00	20.78	21.93	21.47
		8	0	20.50	20.09	20.41	20.41
			4	20.50	20.04	20.44	20.31
			7	20.50	19.83	20.41	20.39
		15	0	20.50	19.88	20.29	20.37

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131997	132322	132647
					1712.5MHz	1745.0MHz	1777.5MHz
5MHz	QPSK	1	0	22.50	21.46	22.24	22.11
			13	22.50	21.59	22.34	22.05
			24	22.50	21.60	22.36	22.08
		12	0	21.50	20.68	21.24	21.23
			6	21.50	20.73	21.21	21.10
			13	21.50	20.66	21.42	21.12
		25	0	21.50	20.67	21.20	21.17
	16QAM	1	0	22.00	21.31	21.63	21.00
			13	22.00	21.35	21.67	21.07
			24	22.00	21.41	21.77	20.98
		12	0	20.50	20.08	20.22	20.18
			6	20.50	19.80	20.23	20.17
			13	20.50	19.78	20.34	20.16
		25	0	20.50	19.73	20.31	20.24
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132022	132322	132622
					1715.0MHz	1745.0MHz	1775.0MHz
10MHz	QPSK	1	0	22.50	21.54	22.19	22.02
			25	22.50	21.63	22.23	21.98
			49	22.50	21.77	22.29	21.95
		25	0	21.50	20.71	21.27	21.07
			13	21.50	20.70	21.23	21.12
			25	21.50	20.84	21.42	21.11
		50	0	21.50	20.75	21.13	21.04
	16QAM	1	0	22.00	20.82	21.92	21.43
			25	22.00	20.94	21.88	21.65
			49	22.50	21.01	22.08	21.61
		25	0	20.50	19.78	20.40	20.40
			13	20.50	20.18	20.39	20.19
			25	21.00	20.02	20.52	20.20
		50	0	20.50	20.14	20.40	20.14

LTE-FDD Band 66				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		132047	132322	132597
15MHz	QPSK	1	0	22.50	21.46	22.19	22.13
			38	22.50	21.67	22.24	22.04
			74	22.50	21.79	22.27	21.99
		36	0	21.50	20.73	21.15	21.24
			18	21.50	20.83	21.22	21.16
			39	21.50	20.91	21.28	21.15
		75	0	21.50	20.78	21.20	21.19
	16QAM	1	0	22.50	21.18	22.18	21.76
			38	22.00	21.38	21.97	21.70
			74	22.50	21.49	22.11	21.63
		36	0	21.00	20.16	20.55	20.17
			18	20.50	19.98	20.35	20.45
			39	20.50	20.33	20.37	20.17
		75	0	20.50	19.93	20.26	20.48

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132072	132322	132572
					1720.0MHz	1745.0MHz	1770.0MHz
20MHz	QPSK	1	0	22.50	21.71	22.18	22.22
			50	22.50	22.01	22.33	22.19
			99	22.50	22.19	22.35	22.05
		50	0	21.50	20.76	21.09	21.16
			25	21.50	20.86	21.21	21.17
			50	21.50	20.98	21.32	21.06
		100	0	21.50	20.87	21.23	20.98
			0	22.00	21.33	21.30	21.75
			50	22.00	21.68	21.39	21.76
	16QAM	1	99	22.00	21.93	21.47	21.72
			0	21.00	20.10	20.58	20.13
			25	20.50	19.97	20.30	20.12
		50	50	20.50	20.13	20.35	20.11
			0	20.50	20.00	20.27	20.14

Band 71

LTE-FDD Band 71				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		133147	133297	133447
5MHz	QPSK	1	0	22.50	22.09	21.96	21.56
			13	22.00	21.98	21.96	21.60
			24	22.50	22.10	21.95	21.63
		12	0	21.50	21.06	20.94	20.56
			6	21.50	21.03	20.91	20.65
			13	21.50	21.14	20.96	20.61
		25	0	21.50	21.06	20.88	20.58
			0	22.00	21.56	20.85	21.22
			13	22.00	21.66	20.72	21.20
	16QAM	1	24	22.00	21.61	20.75	21.29
			0	20.50	20.05	20.36	19.79
			6	20.50	20.14	20.32	19.73
		12	13	20.50	20.19	19.91	19.72
			0	20.50	20.30	20.47	19.71
			0	22.00	21.56	20.85	21.22
		25	13	22.00	21.66	20.72	21.20
			24	22.00	21.61	20.75	21.29
			0	20.50	20.05	20.36	19.79
		12	6	20.50	20.14	20.32	19.73
			13	20.50	20.19	19.91	19.72
			0	20.50	20.30	20.47	19.71
		25	0	20.50	20.30	20.47	19.71

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	133197	133297	133397
					670.5MHz	680.5MHz	690.5MHz
15MHz	QPSK	1	0	22.50	21.91	22.05	22.12
			38	22.00	21.91	21.89	21.97
			74	22.00	21.87	21.87	21.91
		36	0	21.50	20.91	21.05	20.83
			18	21.00	20.93	20.87	20.60
			39	21.00	20.94	20.88	20.60
		75	0	21.00	20.98	20.78	20.70
			0	22.00	21.43	21.62	21.14
			38	22.00	21.34	21.57	21.14
	16QAM	1	74	22.00	21.51	21.64	21.18
			0	20.50	20.44	20.05	20.36
			18	20.50	20.03	20.46	20.32
		36	39	20.50	20.46	20.45	19.78
			0	20.50	19.89	20.42	20.26
			0	22.00	21.57	21.70	21.04
			50	22.00	21.55	21.66	20.99
			99	22.00	21.50	21.67	20.80
20MHz	QPSK	1	0	22.00	21.99	21.88	21.92
			50	22.50	22.03	21.90	21.87
			99	22.00	21.93	21.86	21.75
		50	0	21.00	20.84	20.91	20.91
			25	21.00	20.93	20.87	20.95
			50	21.50	21.05	21.00	20.85
		100	0	21.00	20.91	20.84	20.99
			0	22.00	21.57	21.70	21.04
			50	22.00	21.55	21.66	20.99
	16QAM	1	99	22.00	21.50	21.67	20.80
			0	20.50	20.42	20.11	20.46
			25	20.50	20.43	20.03	20.36
		50	50	20.50	20.00	20.46	20.09
			0	21.00	20.52	19.88	20.38
			0	21.00	20.52	19.88	20.38
			0	21.00	20.52	19.88	20.38

8.4 Wi-Fi

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	15.13	15.50	No
		6	2437	14.97	15.00	No
		11	2462	15.86	16.00	Yes
	802.11g	1	2412	13.84	14.00	No
		6	2437	14.71	15.00	No
		11	2462	15.46	15.50	No
	802.11n(HT20)	1	2412	14.28	14.50	No
		6	2437	14.08	14.50	No
		11	2462	14.97	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 $\leq 1.2\text{W/kg}$.

8.5 Bluetooth

EDR	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	39	78
			2402MHz	2441MHz	2480MHz
	GFSK	5.00	3.83	4.95	3.92
	π/4QPSK	5.00	4.72	4.77	4.21
	8DPSK	5.50	5.18	5.18	4.57
BLE	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	20	39
			2402MHz	2440MHz	2480MHz
	1Mbps	-4.50	-4.98	-3.93	-5.04

Note

- Per KDB 447498 D04 Interim General RF Exposure Guidance v01, the 1-g SAR test exclusion thresholds for 300 MHz to 6 GHz at *test separation distances* ≤ 40 cm are determined by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

where

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B. 1})$$

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

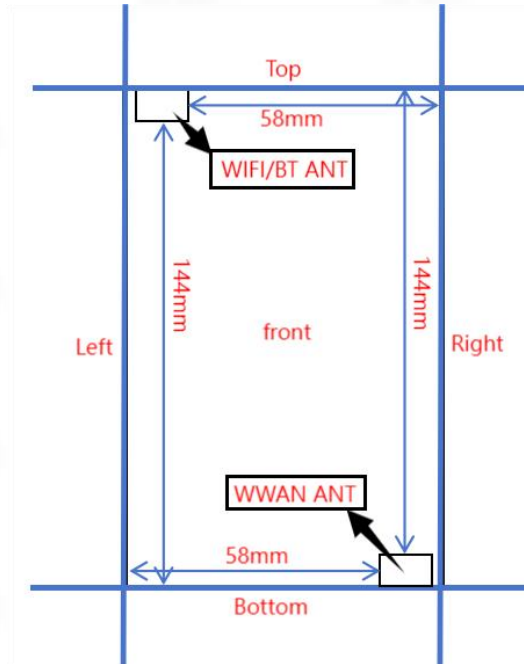
and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

*When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine estimated SAR.

- Per KDB 248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
- 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 Antenna	GSM/WCDMA/LTE TX/RX
WLAN/BT Antenna	WLAN/BT TX/RX
Note: 1. KDB 447498 D04v01, 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.	

Distance of The Antenna to the EUT surface and edge (mm)						
Antenna	Front Side (mm)	Back Side (mm)	Left Edge (mm)	Right Edge (mm)	Top Edge (mm)	Bottom Edge (mm)
WWAN	<25	<25	58	<25	144	<25
BT/Wifi	<25	<25	<25	58	<25	144
Positions for SAR tests: Hotspot mode						
Antenna	Front Side (mm)	Back Side (mm)	Left Edge (mm)	Right Edge (mm)	Top Edge (mm)	Bottom Edge (mm)
WWAN	Yes	Yes	No	Yes	No	Yes
BT/Wifi	Yes	Yes	Yes	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

Head(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.
GSM 850 (voice)	Left Cheek	190	836.6	1.190	0.032	100.00	1.000	31.42	31.50	1.019	0.033	/
	Left Tilt	190	836.6	-2.940	0.016	100.00	1.000	31.42	31.50	1.019	0.016	/
	Right Cheek	190	836.6	4.230	0.044	100.00	1.000	31.42	31.50	1.019	0.045	1#
	Right Tilt	190	836.6	0.080	0.023	100.00	1.000	31.42	31.50	1.019	0.023	/
Body(10mm 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.
GSM 850 (voice)	Front	190	836.6	0.170	0.356	100.00	1.000	31.42	31.50	1.019	0.363	/
	Back	190	836.6	-3.120	0.274	100.00	1.000	31.42	31.50	1.019	0.279	/
	Right	190	836.6	2.880	0.203	100.00	1.000	31.42	31.50	1.019	0.207	/
	Bottom	190	836.6	1.720	0.151	100.00	1.000	31.42	31.50	1.019	0.154	/
Body(hotspot open, 10mm 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.
GPRS 850+2slots	Front	190	836.6	2.370	0.472	100.00	1.000	29.27	29.50	1.054	0.497	2#
	Back	190	836.6	-1.200	0.328	100.00	1.000	29.27	29.50	1.054	0.346	/
	Right	190	836.6	-2.050	0.259	100.00	1.000	29.27	29.50	1.054	0.273	/
	Bottom	190	836.6	-4.830	0.216	100.00	1.000	29.27	29.50	1.054	0.228	/
Head(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.
GSM 1900 (voice)	Left Cheek	512	1850.2	1.210	0.029	100.00	1.000	28.92	29.00	1.019	0.030	/
	Left Tilt	512	1850.2	-0.120	0.015	100.00	1.000	28.92	29.00	1.019	0.015	/
	Right Cheek	512	1850.2	2.650	0.037	100.00	1.000	28.92	29.00	1.019	0.038	3#
	Right Tilt	512	1850.2	3.250	0.018	100.00	1.000	28.92	29.00	1.019	0.018	/
Body(hotspot open, 10mm 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.
GSM 1900 (voice)	Front	512	1850.2	-1.350	0.161	100.00	1.000	28.92	29.00	1.019	0.164	/
	Back	512	1850.2	0.650	0.211	100.00	1.000	28.92	29.00	1.019	0.215	/
	Right	512	1850.2	2.420	0.126	100.00	1.000	28.92	29.00	1.019	0.128	/
	Bottom	512	1850.2	3.080	0.194	100.00	1.000	28.92	29.00	1.019	0.198	/
Body(hotspot open, 10mm 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.
GPRS 1900+3slots	Front	512	1850.2	-0.310	0.184	100.00	1.000	25.21	25.50	1.069	0.197	/
	Back	512	1850.2	3.840	0.222	100.00	1.000	25.21	25.50	1.069	0.237	4#
	Right	512	1850.2	-0.350	0.143	100.00	1.000	25.21	25.50	1.069	0.153	/
	Bottom	512	1850.2	-1.710	0.209	100.00	1.000	25.21	25.50	1.069	0.223	/
Head(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.
WCDMA Band 2 (RMC*)	Left Cheek	9262	1852.4	1.570	0.315	100.00	1.000	22.35	22.50	1.035	0.326	/
	Left Tilt	9262	1852.4	-0.100	0.157	100.00	1.000	22.35	22.50	1.035	0.162	/
	Right Cheek	9262	1852.4	-2.180	0.399	100.00	1.000	22.35	22.50	1.035	0.413	5#
	Right Tilt	9262	1852.4	-0.360	0.198	100.00	1.000	22.35	22.50	1.035	0.205	/
Body(hotspot open, 10mm 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.
WCDMA Band 2 (RMC*)	Front	9262	1852.4	-2.550	0.320	100.00	1.000	22.35	22.50	1.035	0.331	/
	Back	9262	1852.4	0.220	0.626	100.00	1.000	22.35	22.50	1.035	0.648	6#
	Right	9262	1852.4	-0.520	0.199	100.00	1.000	22.35	22.50	1.035	0.206	/
	Bottom	9262	1852.4	-2.880	0.519	100.00	1.000	22.35	22.50	1.035	0.537	/

Head(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.
WCDMA Band 4 (RMC*)	Left Cheek	1513	1752.6	-2.880	0.387	100.00	1.000	21.85	22.00	1.035	0.401	/
	Left Tilt	1513	1752.6	3.220	0.193	100.00	1.000	21.85	22.00	1.035	0.200	/
	Right Cheek	1513	1752.6	-0.590	0.420	100.00	1.000	21.85	22.00	1.035	0.435	7#
	Right Tilt	1513	1752.6	-2.740	0.211	100.00	1.000	21.85	22.00	1.035	0.218	/
Body(hotspot open, 10mm 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.
WCDMA Band 4 (RMC*)	Front	1513	1752.6	-0.170	0.430	100.00	1.000	21.85	22.00	1.035	0.445	/
	Back	1312	1712.4	1.670	0.757	100.00	1.000	21.34	21.50	1.038	0.786	/
	Back	1413	1732.6	0.350	0.813	100.00	1.000	21.69	22.00	1.074	0.873	/
	Back	1513	1752.6	-3.640	0.861	100.00	1.000	21.85	22.00	1.035	0.891	8#
	Back-repeat	1513	1752.6	2.320	0.857	100.00	1.000	21.85	22.00	1.035	0.887	/
	Right	1513	1752.6	3.480	0.233	100.00	1.000	21.85	22.00	1.035	0.241	/
	Bottom	1513	1752.6	0.780	0.613	100.00	1.000	21.85	22.00	1.035	0.634	/

Head(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.
WCDMA Band 5 (RMC*)	Left Cheek	4233	846.6	2.190	0.247	100.00	1.000	21.69	22.00	1.074	0.265	/
	Left Tilt	4233	846.6	4.760	0.123	100.00	1.000	21.69	22.00	1.074	0.132	/
	Right Cheek	4233	846.6	-1.570	0.316	100.00	1.000	21.69	22.00	1.074	0.339	9#
	Right Tilt	4233	846.6	-3.410	0.159	100.00	1.000	21.69	22.00	1.074	0.171	/
Body(hotspot open, 10mm 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.
WCDMA Band 5 (RMC*)	Front	4233	846.6	-0.290	0.291	100.00	1.000	21.69	22.00	1.074	0.313	10#
	Back	4233	846.6	0.340	0.215	100.00	1.000	21.69	22.00	1.074	0.231	/
	Right	4233	846.6	-1.320	0.176	100.00	1.000	21.69	22.00	1.074	0.189	/
	Bottom	4233	846.6	-0.930	0.150	100.00	1.000	21.69	22.00	1.074	0.161	/

Head(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	Left Cheek	18700	1860.0	-0.100	0.271	100.00	1.000	22.04	22.50	1.112	0.301	/
		Left Tilt	18700	1860.0	0.050	0.135	100.00	1.000	22.04	22.50	1.112	0.150	/
		Right Cheek	18700	1860.0	-1.390	0.305	100.00	1.000	22.04	22.50	1.112	0.339	11#
		Right Tilt	18700	1860.0	0.290	0.152	100.00	1.000	22.04	22.50	1.112	0.169	/
	50%RB	Left Cheek	18700	1860.0	-2.080	0.229	100.00	1.000	21.05	21.50	1.109	0.254	/
		Left Tilt	18700	1860.0	-0.940	0.115	100.00	1.000	21.05	21.50	1.109	0.128	/
		Right Cheek	18700	1860.0	-0.170	0.276	100.00	1.000	21.05	21.50	1.109	0.306	/
		Right Tilt	18700	1860.0	2.140	0.138	100.00	1.000	21.05	21.50	1.109	0.153	/
Body(hotspot open, 10mm 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	Front	18700	1860.0	1.020	0.342	100.00	1.000	22.04	22.50	1.112	0.380	/
		Back	18700	1860.0	-3.720	0.413	100.00	1.000	22.04	22.50	1.112	0.459	12#
		Right	18700	1860.0	-2.360	0.294	100.00	1.000	22.04	22.50	1.112	0.327	/
		Bottom	18700	1860.0	-2.010	0.397	100.00	1.000	22.04	22.50	1.112	0.441	/
	50%RB	Front	18700	1860.0	4.430	0.299	100.00	1.000	21.05	21.50	1.109	0.332	/
		Back	18700	1860.0	4.980	0.375	100.00	1.000	21.05	21.50	1.109	0.416	/
		Right	18700	1860.0	-2.910	0.257	100.00	1.000	21.05	21.50	1.109	0.285	/
		Bottom	18700	1860.0	-4.160	0.319	100.00	1.000	21.05	21.50	1.109	0.354	/

Head(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	Left Cheek	20300	1745.0	3.390	0.319	100.00	1.000	22.27	22.50	1.054	0.336	/
		Left Tilt	20300	1745.0	3.560	0.160	100.00	1.000	22.27	22.50	1.054	0.169	/
		Right Cheek	20300	1745.0	2.310	0.340	100.00	1.000	22.27	22.50	1.054	0.358	13#
		Right Tilt	20300	1745.0	0.630	0.171	100.00	1.000	22.27	22.50	1.054	0.180	/
	50%RB	Left Cheek	20300	1745.0	-0.520	0.276	100.00	1.000	21.24	21.50	1.062	0.293	/
		Left Tilt	20300	1745.0	-1.570	0.138	100.00	1.000	21.24	21.50	1.062	0.147	/
		Right Cheek	20300	1745.0	3.280	0.318	100.00	1.000	21.24	21.50	1.062	0.338	/
		Right Tilt	20300	1745.0	2.210	0.159	100.00	1.000	21.24	21.50	1.062	0.169	/

Body(hotspot open, 10mm 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	Front	20300	1745.0	1.890	0.555	100.00	1.000	22.27	22.50	1.054	0.585	/
		Back	20050	1720.0	1.230	0.701	100.00	1.000	21.94	22.00	1.014	0.711	/
		Back	20175	1732.5	0.220	0.732	100.00	1.000	22.16	22.50	1.081	0.791	/
		Back	20300	1745.0	-1.130	0.776	100.00	1.000	22.27	22.50	1.054	0.818	14#
		Back-repeat	20300	1745.0	-3.540	0.773	100.00	1.000	22.27	22.50	1.054	0.815	/
		Right	20300	1745.0	0.710	0.389	100.00	1.000	22.27	22.50	1.054	0.410	/
		Bottom	20300	1745.0	-2.540	0.697	100.00	1.000	22.27	22.50	1.054	0.735	/
	50%RB	Front	20300	1745.0	0.840	0.309	100.00	1.000	21.24	21.50	1.062	0.328	/
		Back	20300	1745.0	3.620	0.713	100.00	1.000	21.24	21.50	1.062	0.757	/
		Right	20300	1745.0	3.810	0.218	100.00	1.000	21.24	21.50	1.062	0.232	/
		Bottom	20300	1745.0	3.210	0.584	100.00	1.000	21.24	21.50	1.062	0.620	/

Head(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	Left Cheek	20600	844.0	2.520	0.244	100.00	1.000	22.09	22.50	1.099	0.268	/
		Left Tilt	20600	844.0	0.020	0.123	100.00	1.000	22.09	22.50	1.099	0.135	/
		Right Cheek	20600	844.0	0.360	0.262	100.00	1.000	22.09	22.50	1.099	0.288	15#
		Right Tilt	20600	844.0	-0.410	0.131	100.00	1.000	22.09	22.50	1.099	0.144	/
	50%RB	Left Cheek	20600	844.0	0.740	0.185	100.00	1.000	21.11	21.50	1.094	0.202	/
		Left Tilt	20600	844.0	2.730	0.092	100.00	1.000	21.11	21.50	1.094	0.101	/
		Right Cheek	20600	844.0	-4.580	0.216	100.00	1.000	21.11	21.50	1.094	0.236	/
		Right Tilt	20600	844.0	0.300	0.108	100.00	1.000	21.11	21.50	1.094	0.118	/

Body(hotspot open, 10mm 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	Front	20600	844.0	-2.790	0.215	100.00	1.000	22.09	22.50	1.099	0.236	16#
		Back	20600	844.0	-1.270	0.194	100.00	1.000	22.09	22.50	1.099	0.213	/
		Right	20600	844.0	4.000	0.152	100.00	1.000	22.09	22.50	1.099	0.167	/
		Bottom	20600	844.0	-3.200	0.139	100.00	1.000	22.09	22.50	1.099	0.153	/
	50%RB	Front	20600	844.0	4.370	0.199	100.00	1.000	21.11	21.50	1.094	0.218	/
		Back	20600	844.0	0.020	0.181	100.00	1.000	21.11	21.50	1.094	0.198	/
		Right	20600	844.0	2.600	0.132	100.00	1.000	21.11	21.50	1.094	0.144	/
		Bottom	20600	844.0	3.720	0.110	100.00	1.000	21.11	21.50	1.094	0.120	/

Head(0mm gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 12 (BW: 10MHz)	1RB	Left Cheek	23060	704.0	-3.580	0.119	100.00	1.000	21.59	22.00	1.099	0.131	/
		Left Tilt	23060	704.0	2.780	0.059	100.00	1.000	21.59	22.00	1.099	0.065	/
		Right Cheek	23060	704.0	-1.950	0.143	100.00	1.000	21.59	22.00	1.099	0.157	17#
		Right Tilt	23060	704.0	2.160	0.071	100.00	1.000	21.59	22.00	1.099	0.078	/
	50%RB	Left Cheek	23060	704.0	-3.430	0.101	100.00	1.000	20.87	21.00	1.030	0.104	/
		Left Tilt	23060	704.0	-0.740	0.050	100.00	1.000	20.87	21.00	1.030	0.052	/
		Right Cheek	23060	704.0	-0.450	0.127	100.00	1.000	20.87	21.00	1.030	0.131	/

		Right Tilt	23060	704.0	-3.180	0.064	100.00	1.000	20.87	21.00	1.030	0.066	/
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Body(hotspot open, 10mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 12 (BW: 10MHz)	1RB	Front	23060	704.0	-1.520	0.202	100.00	1.000	21.59	22.00	1.099	0.222	18#
		Back	23060	704.0	-2.420	0.186	100.00	1.000	21.59	22.00	1.099	0.204	/
		Right	23060	704.0	-2.470	0.169	100.00	1.000	21.59	22.00	1.099	0.186	/
		Bottom	23060	704.0	1.360	0.133	100.00	1.000	21.59	22.00	1.099	0.146	/
	50%RB	Front	23060	704.0	-1.400	0.181	100.00	1.000	20.87	21.00	1.030	0.186	/
		Back	23060	704.0	1.310	0.164	100.00	1.000	20.87	21.00	1.030	0.169	/
		Right	23060	704.0	-1.330	0.143	100.00	1.000	20.87	21.00	1.030	0.147	/
		Bottom	23060	704.0	2.260	0.117	100.00	1.000	20.87	21.00	1.030	0.121	/

Head(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 14 (BW: 10MHz)	1RB	Left Cheek	23330	793.0	0.300	0.119	100.00	1.000	22.42	22.50	1.019	0.121	/
		Left Tilt	23330	793.0	2.420	0.060	100.00	1.000	22.42	22.50	1.019	0.061	/
		Right Cheek	23330	793.0	-2.370	0.130	100.00	1.000	22.42	22.50	1.019	0.132	19#
		Right Tilt	23330	793.0	-0.300	0.065	100.00	1.000	22.42	22.50	1.019	0.066	/
	50%RB	Left Cheek	23330	793.0	-4.330	0.097	100.00	1.000	21.47	21.50	1.007	0.098	/
		Left Tilt	23330	793.0	4.900	0.048	100.00	1.000	21.47	21.50	1.007	0.048	/
		Right Cheek	23330	793.0	-2.110	0.116	100.00	1.000	21.47	21.50	1.007	0.117	/
		Right Tilt	23330	793.0	2.060	0.058	100.00	1.000	21.47	21.50	1.007	0.058	/

Body(hotspot open, 10mm 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 14 (BW: 10MHz)	1RB	Front	23330	793.0	-2.810	0.185	100.00	1.000	22.42	22.50	1.019	0.189	20#
		Back	23330	793.0	-0.020	0.163	100.00	1.000	22.42	22.50	1.019	0.166	/
		Right	23330	793.0	-4.370	0.159	100.00	1.000	22.42	22.50	1.019	0.162	/
		Bottom	23330	793.0	-0.250	0.137	100.00	1.000	22.42	22.50	1.019	0.140	/
	50%RB	Front	23330	793.0	0.230	0.171	100.00	1.000	21.47	21.50	1.007	0.172	/
		Back	23330	793.0	3.220	0.150	100.00	1.000	21.47	21.50	1.007	0.151	/
		Right	23330	793.0	-4.620	0.136	100.00	1.000	21.47	21.50	1.007	0.137	/
		Bottom	23330	793.0	-1.400	0.111	100.00	1.000	21.47	21.50	1.007	0.112	/

Head(0mm gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 17 (BW:10MHz)	1RB	Left Cheek	23780	709.0	0.800	0.122	100.00	1.000	21.69	22.00	1.074	0.131	/
		Left Tilt	23780	709.0	2.160	0.061	100.00	1.000	21.69	22.00	1.074	0.066	/
		Right Cheek	23780	709.0	-0.260	0.156	100.00	1.000	21.69	22.00	1.074	0.168	21#
		Right Tilt	23780	709.0	-2.170	0.078	100.00	1.000	21.69	22.00	1.074	0.084	/
	50%RB	Left Cheek	23780	709.0	3.920	0.103	100.00	1.000	20.95	21.00	1.012	0.104	/
		Left Tilt	23780	709.0	1.370	0.051	100.00	1.000	20.95	21.00	1.012	0.052	/
		Right Cheek	23780	709.0	-4.820	0.142	100.00	1.000	20.95	21.00	1.012	0.144	/
		Right Tilt	23780	709.0	0.850	0.071	100.00	1.000	20.95	21.00	1.012	0.072	/

Body(hotspot open, 10mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 17 (BW: 10MHz)	1RB	Front	23780	709.0	-1.290	0.216	100.00	1.000	21.69	22.00	1.074	0.232	22#
		Back	23780	709.0	0.740	0.185	100.00	1.000	21.69	22.00	1.074	0.199	/
		Right	23780	709.0	0.140	0.163	100.00	1.000	21.69	22.00	1.074	0.175	/
		Bottom	23780	709.0	-1.450	0.139	100.00	1.000	21.69	22.00	1.074	0.149	/
	50%RB	Front	23780	709.0	2.920	0.200	100.00	1.000	20.95	21.00	1.012	0.202	/
		Back	23780	709.0	2.050	0.164	100.00	1.000	20.95	21.00	1.012	0.166	/
		Right	23780	709.0	-2.360	0.148	100.00	1.000	20.95	21.00	1.012	0.150	/
		Bottom	23780	709.0	2.200	0.119	100.00	1.000	20.95	21.00	1.012	0.120	/

Head(0mm gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 41 (BW:20MHz)	1RB	Left Cheek	40140	2545.0	2.810	0.047	100.00	1.000	21.51	22.00	1.119	0.053	/
		Left Tilt	40140	2545.0	1.650	0.023	100.00	1.000	21.51	22.00	1.119	0.026	/
		Right Cheek	40140	2545.0	2.310	0.062	100.00	1.000	21.51	22.00	1.119	0.069	23#
		Right Tilt	40140	2545.0	0.100	0.031	100.00	1.000	21.51	22.00	1.119	0.035	/
	50%RB	Left Cheek	40140	2545.0	3.570	0.020	100.00	1.000	20.28	20.50	1.052	0.021	/
		Left Tilt	40140	2545.0	-1.720	0.013	100.00	1.000	20.28	20.50	1.052	0.014	/
		Right Cheek	40140	2545.0	0.900	0.037	100.00	1.000	20.28	20.50	1.052	0.039	/
		Right Tilt	40140	2545.0	-2.020	0.018	100.00	1.000	20.28	20.50	1.052	0.019	/

Body(hotspot open, 10mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 41 (BW: 20MHz)	1RB	Front	40140	2545.0	-2.850	0.401	100.00	1.000	21.51	22.00	1.119	0.449	/
		Back	40140	2545.0	-2.980	0.642	100.00	1.000	21.51	22.00	1.119	0.718	24#
		Right	40140	2545.0	-1.260	0.287	100.00	1.000	21.51	22.00	1.119	0.321	/
		Bottom	40140	2545.0	2.390	0.449	100.00	1.000	21.51	22.00	1.119	0.502	/
	50%RB	Front	40140	2545.0	-1.030	0.219	100.00	1.000	20.28	20.50	1.052	0.230	/
		Back	40140	2545.0	-0.650	0.317	100.00	1.000	20.28	20.50	1.052	0.333	/
		Right	40140	2545.0	-0.410	0.199	100.00	1.000	20.28	20.50	1.052	0.209	/
		Bottom	40140	2545.0	-2.060	0.254	100.00	1.000	20.28	20.50	1.052	0.267	/

Head(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	Left Cheek	132322	1745.0	4.160	0.338	100.00	1.000	22.35	22.50	1.035	0.350	/
		Left Tilt	132322	1745.0	-3.940	0.169	100.00	1.000	22.35	22.50	1.035	0.175	/
		Right Cheek	132322	1745.0	0.420	0.411	100.00	1.000	22.35	22.50	1.035	0.425	25#
		Right Tilt	132322	1745.0	3.910	0.205	100.00	1.000	22.35	22.50	1.035	0.212	/
	50%RB	Left Cheek	132322	1745.0	-4.920	0.257	100.00	1.000	21.32	21.50	1.042	0.268	/
		Left Tilt	132322	1745.0	4.210	0.128	100.00	1.000	21.32	21.50	1.042	0.133	/
		Right Cheek	132322	1745.0	3.230	0.329	100.00	1.000	21.32	21.50	1.042	0.343	/
		Right Tilt	132322	1745.0	-2.720	0.164	100.00	1.000	21.32	21.50	1.042	0.171	/

Body(hotspot open, 10mm 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	Front	132322	1745.0	1.020	0.437	100.00	1.000	22.35	22.50	1.035	0.452	/
		Back	132322	1745.0	-4.920	0.714	100.00	1.000	22.35	22.50	1.035	0.739	26#
		Right	132322	1745.0	2.800	0.333	100.00	1.000	22.35	22.50	1.035	0.345	/
		Bottom	132322	1745.0	-0.150	0.642	100.00	1.000	22.35	22.50	1.035	0.664	/
	50%RB	Front	132322	1745.0	1.760	0.312	100.00	1.000	21.32	21.50	1.042	0.325	/
		Back	132322	1745.0	-1.970	0.601	100.00	1.000	21.32	21.50	1.042	0.626	/
		Right	132322	1745.0	4.490	0.208	100.00	1.000	21.32	21.50	1.042	0.217	/
		Bottom	132322	1745.0	-1.560	0.439	100.00	1.000	21.32	21.50	1.042	0.457	/

Head(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	Left Cheek	133222	673.0	2.570	0.087	100.00	1.000	22.03	22.50	1.114	0.097	/
		Left Tilt	133222	673.0	-1.410	0.043	100.00	1.000	22.03	22.50	1.114	0.048	/
		Right Cheek	133222	673.0	-1.340	0.104	100.00	1.000	22.03	22.50	1.114	0.116	27#
		Right Tilt	133222	673.0	-0.230	0.052	100.00	1.000	22.03	22.50	1.114	0.058	/
	50%RB	Left Cheek	133222	673.0	4.380	0.055	100.00	1.000	21.05	21.50	1.109	0.061	/
		Left Tilt	133222	673.0	0.650	0.028	100.00	1.000	21.05	21.50	1.109	0.031	/
		Right Cheek	133222	673.0	-1.270	0.069	100.00	1.000	21.05	21.50	1.109	0.077	/
		Right Tilt	133222	673.0	-3.860	0.034	100.00	1.000	21.05	21.50	1.109	0.038	/

Body(hotspot open, 10mm 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	Front	133222	673.0	-2.830	0.177	100.00	1.000	22.03	22.50	1.114	0.197	28#
		Back	133222	673.0	3.250	0.152	100.00	1.000	22.03	22.50	1.114	0.169	/
		Right	133222	673.0	3.870	0.119	100.00	1.000	22.03	22.50	1.114	0.133	/
		Bottom	133222	673.0	-3.820	0.101	100.00	1.000	22.03	22.50	1.114	0.113	/
	50%RB	Front	133222	673.0	1.770	0.158	100.00	1.000	21.05	21.50	1.109	0.175	/
		Back	133222	673.0	0.880	0.139	100.00	1.000	21.05	21.50	1.109	0.154	/
		Right	133222	673.0	-4.260	0.107	100.00	1.000	21.05	21.50	1.109	0.119	/
		Bottom	133222	673.0	-2.510	0.089	100.00	1.000	21.05	21.50	1.109	0.099	/

Head(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	Left Cheek	11	2462	0.420	0.432	100.00	1.000	15.86	16.00	1.033	0.446	/
	Left Tilt	11	2462	2.960	0.216	100.00	1.000	15.86	16.00	1.033	0.223	/
	Right Cheek	11	2462	2.290	0.562	100.00	1.000	15.86	16.00	1.033	0.581	29#
	Right Tilt	11	2462	-0.240	0.281	100.00	1.000	15.86	16.00	1.033	0.290	/

Body(hotspot open, 10mm 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	Front	11	2462	-1.950	0.102	100.00	1.000	15.86	16.00	1.033	0.105	/
	Back	11	2462	4.860	0.116	100.00	1.000	15.86	16.00	1.033	0.120	30#
	Left	11	2462	1.520	0.081	100.00	1.000	15.86	16.00	1.033	0.084	/
	Top	11	2462	2.250	0.094	100.00	1.000	15.86	16.00	1.033	0.097	/

Head(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.
Bluetooth	Left Cheek	39	2441	-1.320	0.003	100.00	1.000	5.18	5.50	1.076	0.003	/
	Left Tilt	39	2441	-3.970	0.002	100.00	1.000	5.18	5.50	1.076	0.002	/
	Right Cheek	39	2441	-1.220	0.005	100.00	1.000	5.18	5.50	1.076	0.005	31#
	Right Tilt	39	2441	-3.610	0.003	100.00	1.000	5.18	5.50	1.076	0.003	/

Body(hotspot open, 10mm 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.
Bluetooth	Front	39	2441	-3.530	0.005	100.00	1.000	5.18	5.50	1.076	0.005	/
	Back	39	2441	3.600	0.007	100.00	1.000	5.18	5.50	1.076	0.008	32#
	Left	39	2441	1.070	0.002	100.00	1.000	5.18	5.50	1.076	0.002	/
	Top	39	2441	2.890	0.004	100.00	1.000	5.18	5.50	1.076	0.004	/

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 D04 v01, for each exposure position, if the highest output power channel Reported SAR $\leq 0.8\text{W/kg}$, other channels SAR testing is not necessary.
- Per KDB 447498 D04 v01, head/body-worn use is evaluated with the device positioned at 0mm/10 mm from a head/flat phantom respectively filled with head tissue-equivalent medium.
- Per KDB Publication 941225 D06 where SAR test considerations for handsets ($L \times W \geq 9\text{ cm} \times 5\text{ cm}$) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.
- Per KDB 447498 D04 v01, the report SAR is measured SAR value adjusted for maximum tune-up tolerance. Scaling Factor = $10^{[(\text{tune-up limit power (dBm)} - \text{Ave. power power (dBm)})/10]}$, where tune-up limit is the maximum rated power among all production units.
Reported SAR(W/kg) = Measured SAR (W/kg) * Scaling Factor.

11. SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Note: For 1g SAR, the highest measured 1g SAR is $0.861 > 0.80$ 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
WCDMA Band 4	Back	1513	1752.6	0.861	1.005
	Back-repeat	1513	1752.6	0.857	
LTE Band 4	Back	20300	1745.0	0.776	1.004
	Back-repeat	20300	1745.0	0.773	

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 WIFI 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+BT	Yes	Yes

12.2 Sum SAR of Simultaneous Transmission

Head

Band	Test Position	Scaled			Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
		WWAN	WIFI 2.4G	Bluetooth				
WCDMA Band 4	Left Cheek	0.401	0.446	0.003	0.847	0.404	N/A	N/A
	Left Tilt	0.200	0.223	0.002	0.423	0.202	N/A	N/A
	Right Cheek	0.435	0.581	0.005	1.016	0.440	N/A	N/A
	Right Tilt	0.218	0.290	0.003	0.508	0.221	N/A	N/A

Hotspot(body-worn)

Band	Test Position	Scaled			Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
		WWAN	WIFI 2.4G	Bluetooth				
WCDMA Band 4	Front	0.445	0.105	0.005	0.550	0.450	N/A	N/A
	Back	0.891	0.120	0.008	1.011	0.899	N/A	N/A
	Left	/	0.084	0.002	0.084	0.002	N/A	N/A
	Right	0.241	/	/	0.241	0.241	N/A	N/A
	Top	/	0.097	0.004	0.097	0.004	N/A	N/A
	Bottom	0.634	/	/	0.634	0.634	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	2024/10/25	2025/10/24
Wideband Radio Communication Tester	ROHDE & SCHWARZ	CMW500	161997	2024/10/25	2025/10/24
MXG Vector Signal Generator	Agilent	N5182A	MY46240163	2024/10/25	2025/10/24
E-Series Avg. Power Sensor	KEYSIGHT	E9300A	MY55050017	2025/04/02	2026/04/01
EPM Series Power Meter	KEYSIGHT	E4418B	MY41293435	2025/04/02	2026/04/01
MXA Signal Analyzer	KEYSIGHT	N9020A	MY54410409	2024/10/25	2025/10/24
Broadband Preamplifier	Schwarzbeck	BBV9718D	00008	2024/10/25	2025/10/24
Coupler	MERRIMAC	CWM-10R-10.8G	LOT-83391	N/A	N/A
750MHz Validation Dipole	MVG	SID750	07/22 DIP 0G750-655	2025/05/26	2028/05/25
835MHz Validation Dipole	MVG	SID835	07/22 DIP 0G835-656	2025/05/26	2028/05/25
1800MHz Validation Dipole	MVG	SID1800	07/22 DIP 1G800-657	2025/05/26	2028/05/25
1900MHz Validation Dipole	MVG	SID1900	07/22 DIP 1G900-658	2025/05/26	2028/05/25
2450MHz Validation Dipole	MVG	SID2450	07/22 DIP 2G450-662	2025/05/26	2028/05/25
2600MHz Validation Dipole	MVG	SID2600	07/22 DIP 2G600-663	2025/05/26	2028/05/25
LIMESAR Dielectric Probe	MVG	SCLMP	06/22 OCPG88	2025/02/05	2026/02/04
ENA Series Network Analyzer	Agilent	E5071B	MY42301221	2024/10/25	2025/10/24
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	2024/10/25	2025/10/24
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	42.34	0.89	0.88	1.05%	-1.12%	±5%	21.5	11/10/2025
835	41.50	41.92	0.90	0.89	1.01%	-1.11%	±5%	21.3	13/10/2025
1800	40.00	40.24	1.40	1.38	0.60%	-1.43%	±5%	20.9	15/10/2025
1900	40.00	40.08	1.40	1.40	0.20%	0.00%	±5%	21.1	17/10/2025
2450	39.20	39.32	1.80	1.82	0.31%	1.11%	±5%	20.8	20/10/2025
2600	39.00	39.24	1.96	1.94	0.62%	-1.02%	±5%	21.4	21/10/2025
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	0.511	0.921	5.11	9.21	5.55	8.41	-7.93%	9.51%
835	100	0.619	1.028	6.19	10.28	6.12	9.46	1.14%	8.67%
1800	100	2.051	4.109	20.51	41.09	19.83	37.93	3.43%	8.33%
1900	100	2.165	4.239	21.65	42.39	20.82	40.29	3.99%	5.21%
2450	100	2.366	5.455	23.66	54.55	24.55	52.72	-3.63%	3.47%
2600	100	2.421	5.490	24.21	54.90	24.43	53.76	-0.90%	2.12%

System Performance Check Data (750 MHz)

System check at 750 MHz

Date of measurement: 11/10/2025

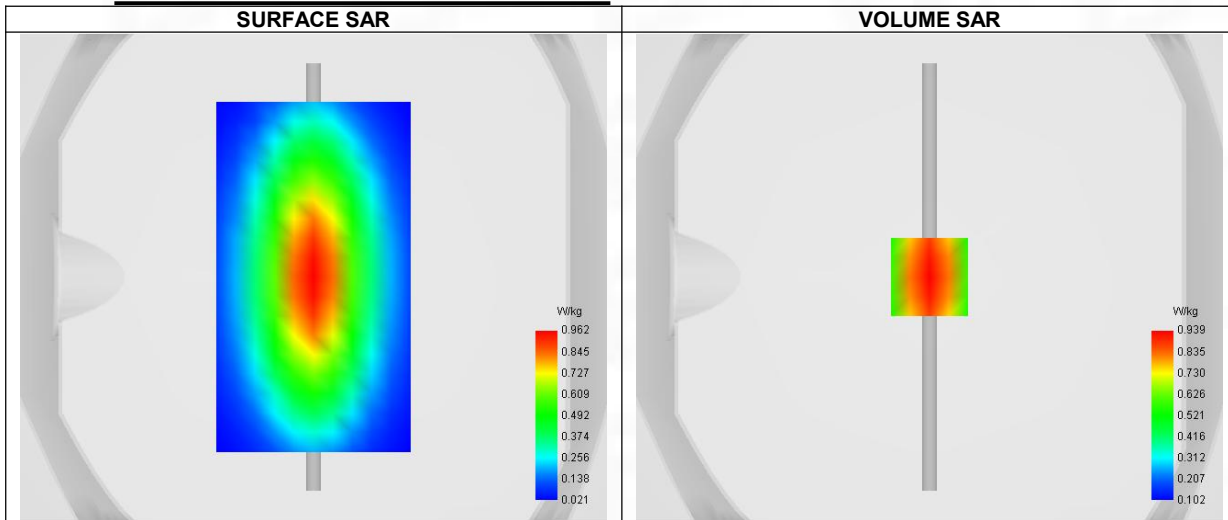
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	750.000
Relative permittivity (real part)	42.342
Relative permittivity (imaginary part)	21.428
Conductivity (S/m)	0.882

C. SAR Surface and Volume



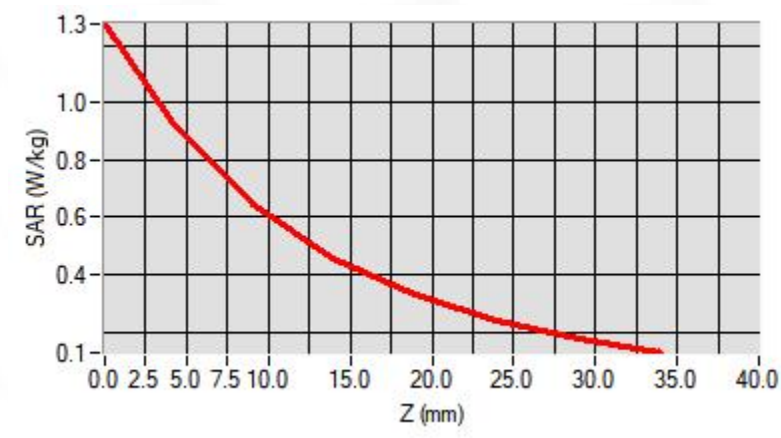
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 1.34 W/kg

D. SAR 1g & 10g

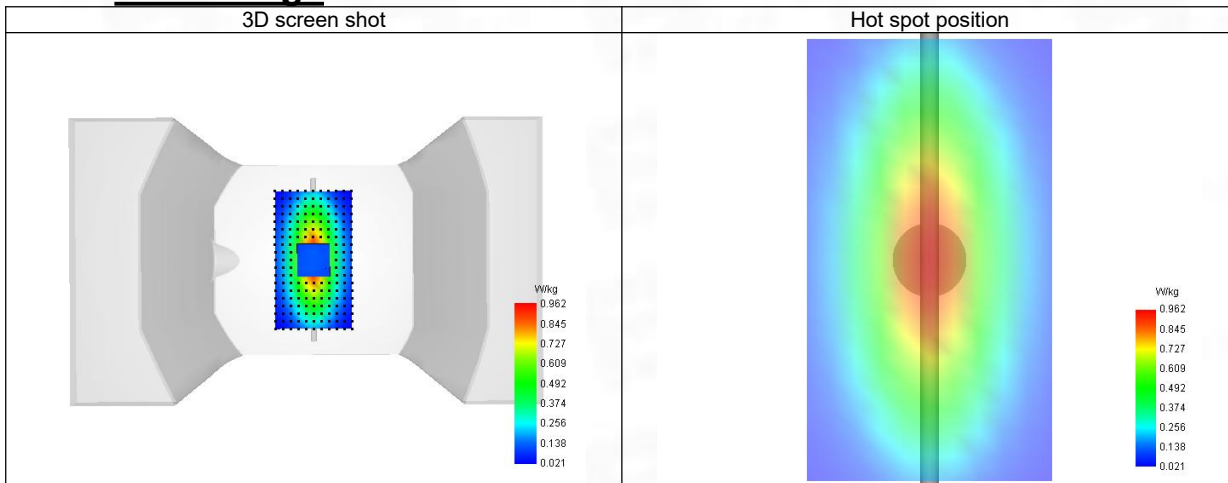
SAR 10g (W/Kg)	0.511
SAR 1g (W/Kg)	0.921
Variation (%)	-1.570
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	68.796592

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.276	0.939	0.646	0.459	0.329	0.240	0.177



F. 3D Image



System Performance Check Data (835 MHz)

System check at 835 MHz

Date of measurement: 13/10/2025

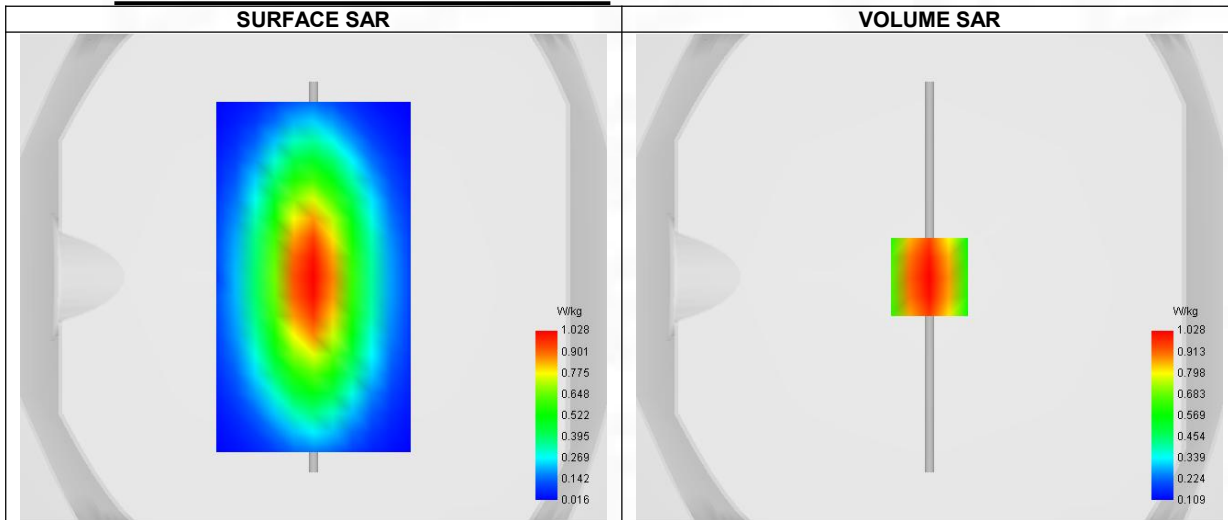
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	835.000
Relative permittivity (real part)	41.924
Relative permittivity (imaginary part)	19.585
Conductivity (S/m)	0.893

C. SAR Surface and Volume



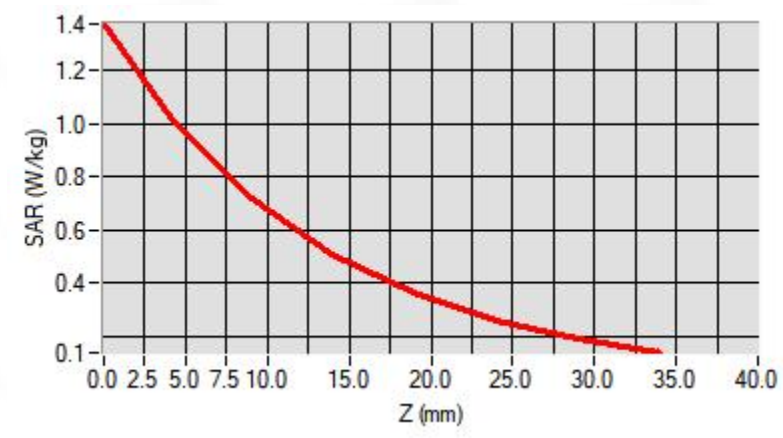
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 1.38 W/kg

D. SAR 1g & 10g

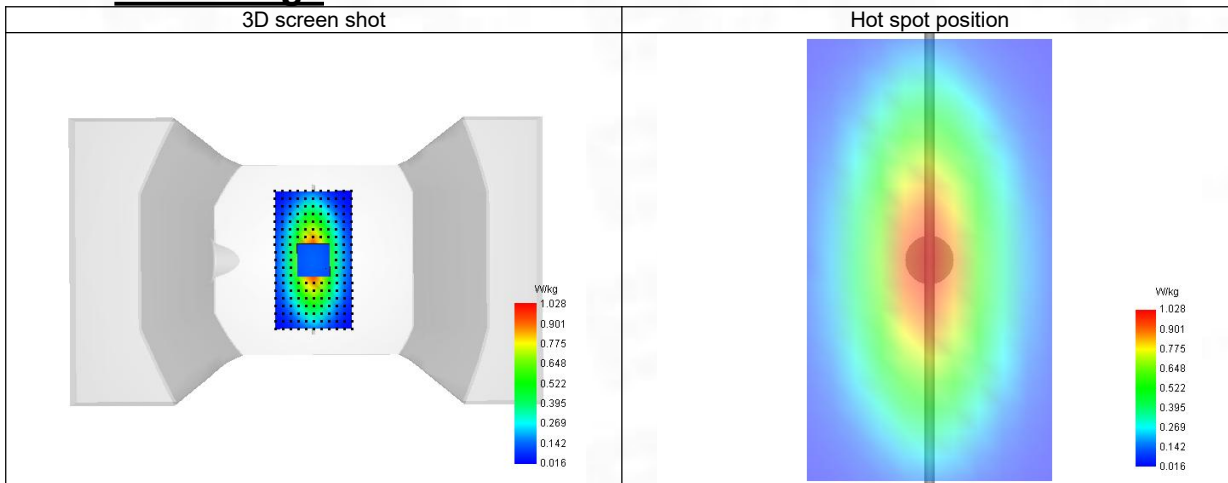
SAR 10g (W/Kg)	0.619
SAR 1g (W/Kg)	1.028
Variation (%)	3.580
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	69.747082

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.373	1.028	0.717	0.507	0.362	0.262	0.190



F. 3D Image



System Performance Check Data (1800 MHz)

System check at 1800 MHz

Date of measurement: 15/10/2025

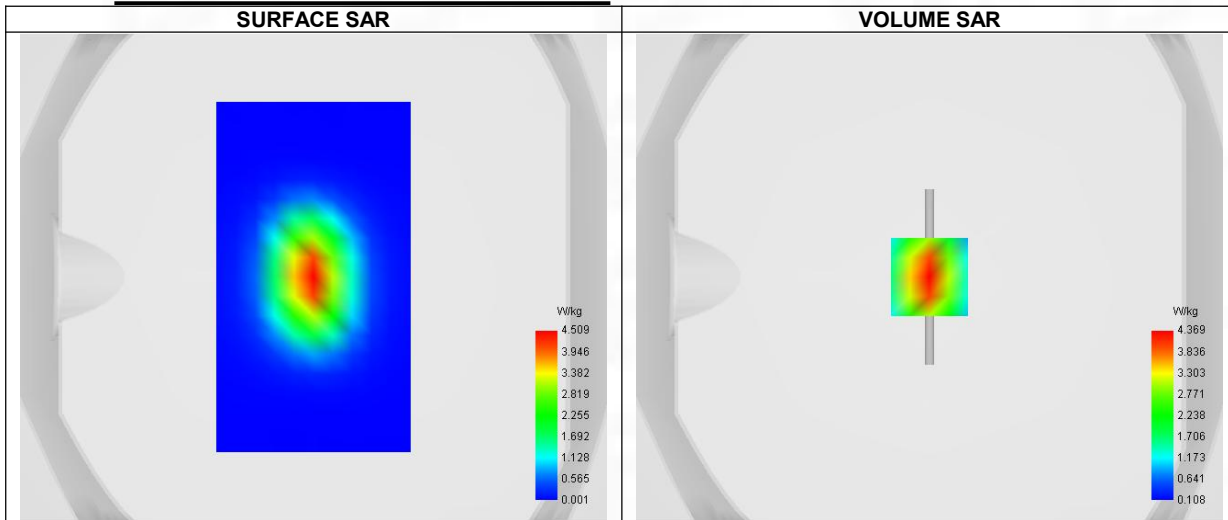
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	1800.000
Relative permittivity (real part)	40.238
Relative permittivity (imaginary part)	14.615
Conductivity (S/m)	1.379

C. SAR Surface and Volume



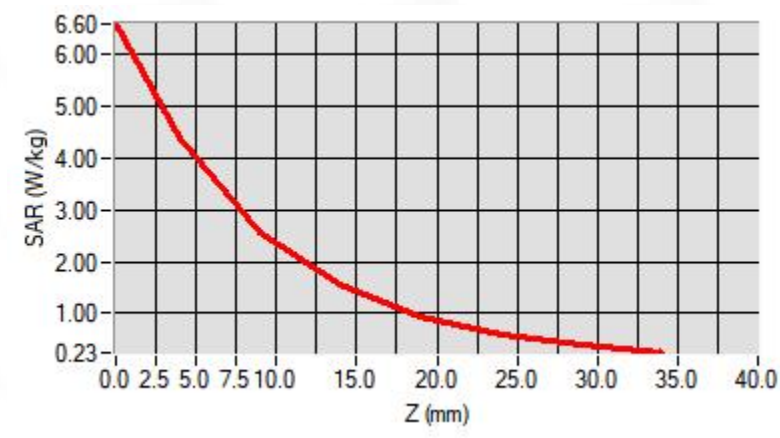
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 6.58 W/kg

D. SAR 1g & 10g

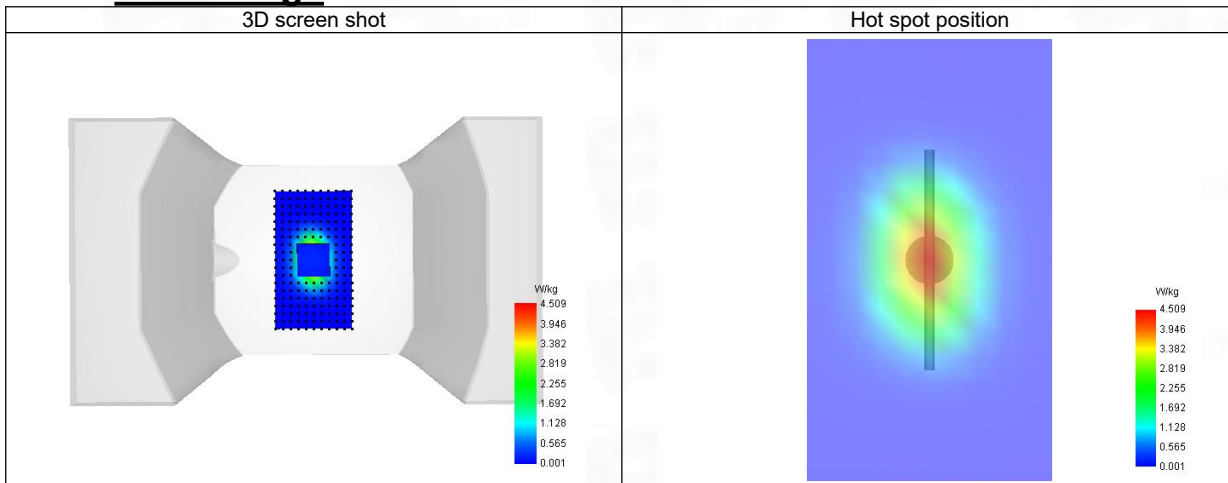
SAR 10g (W/Kg)	2.051
SAR 1g (W/Kg)	4.109
Variation (%)	-2.650
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.823529

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.600	4.369	2.570	1.559	0.948	0.595	0.375



F. 3D Image



System Performance Check Data (1900MHz)

System check at 1900 MHz

Date of measurement: 17/10/2025

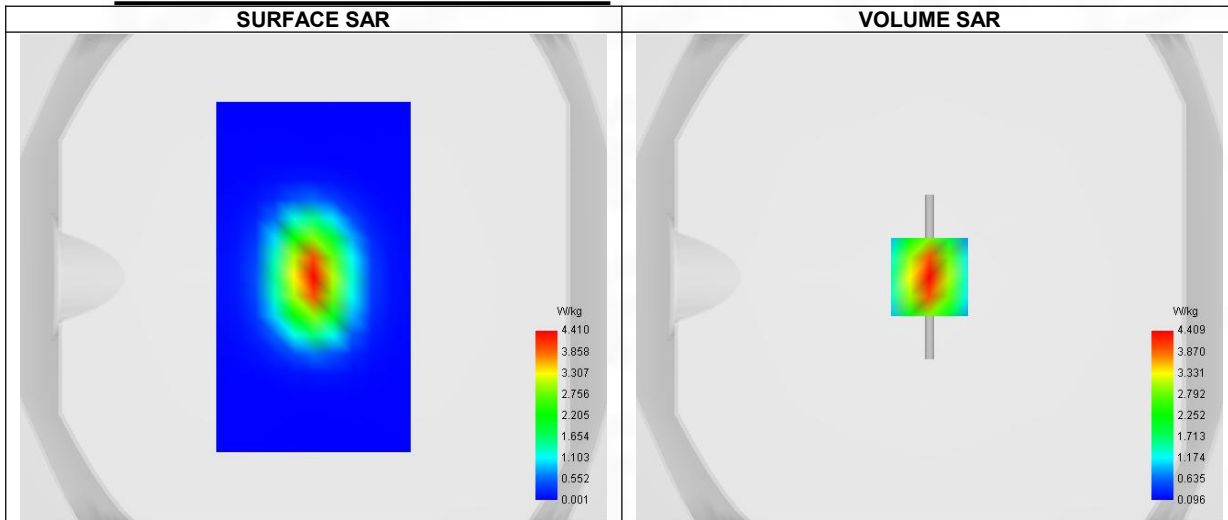
A. Experimental conditions.

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)	40.083
Relative permittivity (imaginary part)	13.854
Conductivity (S/m)	1.403

C. SAR Surface and Volume



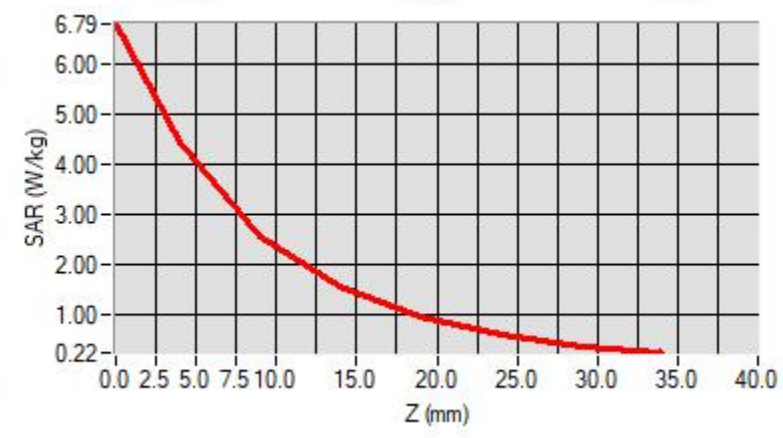
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 6.73 W/kg

D. SAR 1g & 10g

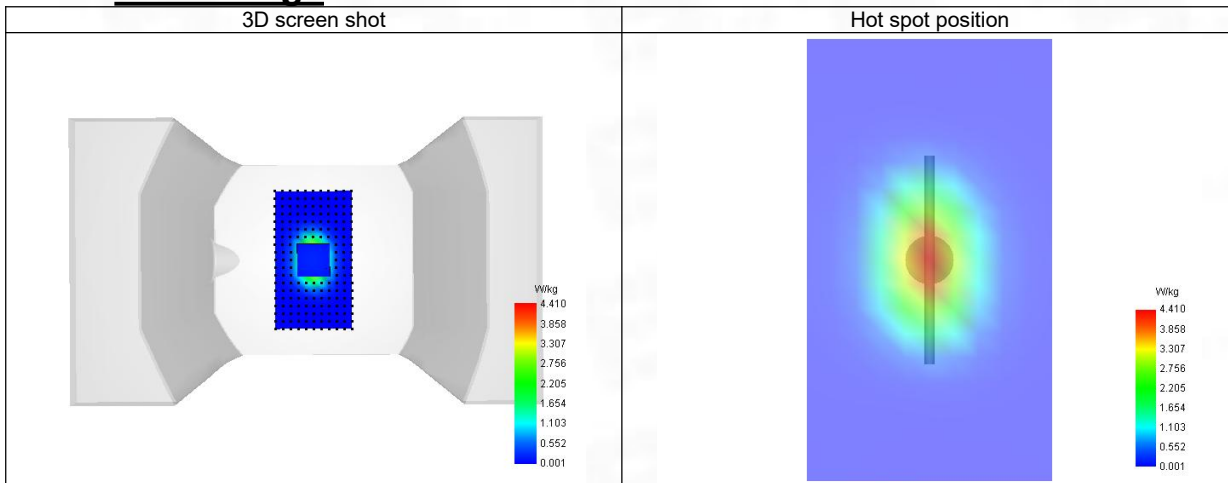
SAR 10g (W/Kg)	2.165
SAR 1g (W/Kg)	4.239
Variation (%)	-3.640
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	57.632116

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.787	4.409	2.541	1.528	0.930	0.570	0.352



F. 3D Image



System Performance Check Data (2450 MHz)

System check at 2450 MHz

Date of measurement: 20/10/2025

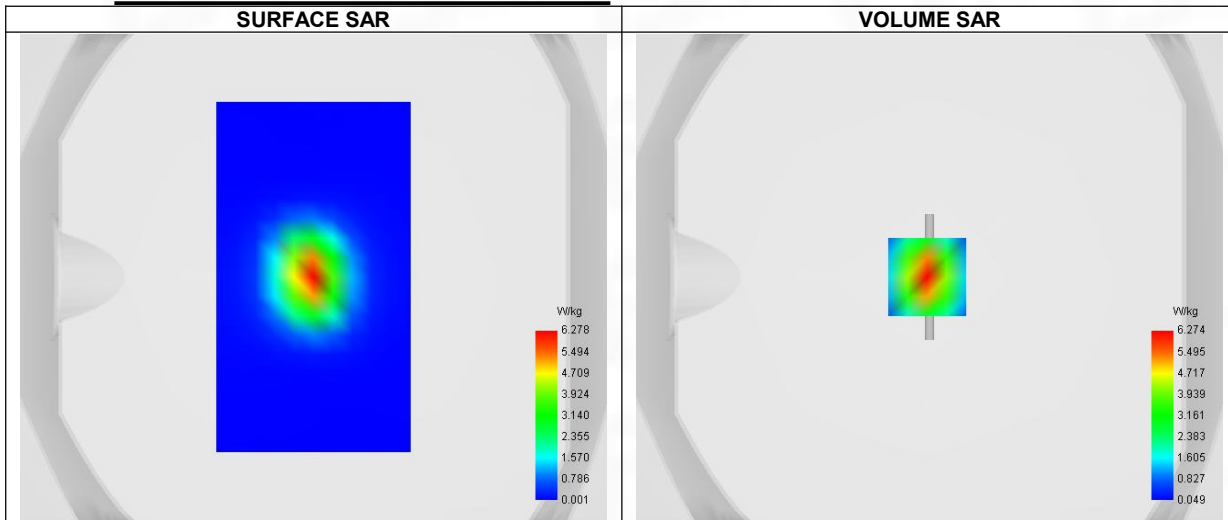
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	2450.000
Relative permittivity (real part)	39.323
Relative permittivity (imaginary part)	13.548
Conductivity (S/m)	1.822

C. SAR Surface and Volume



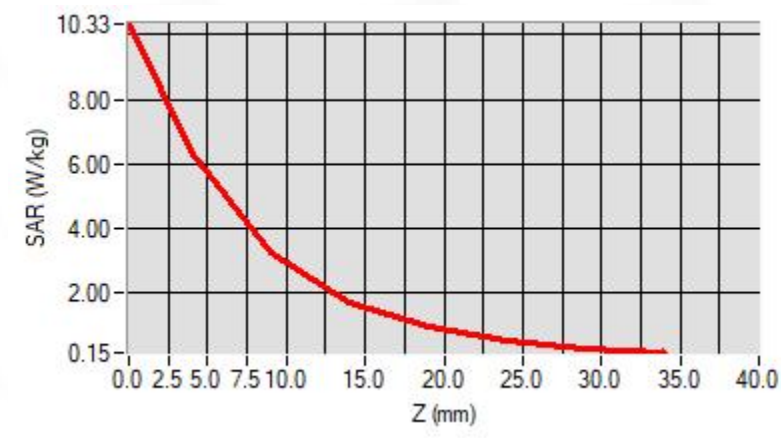
Maximum location: X=-1.00, Y=0.00 ; SAR Peak: 10.22 W/kg

D. SAR 1g & 10g

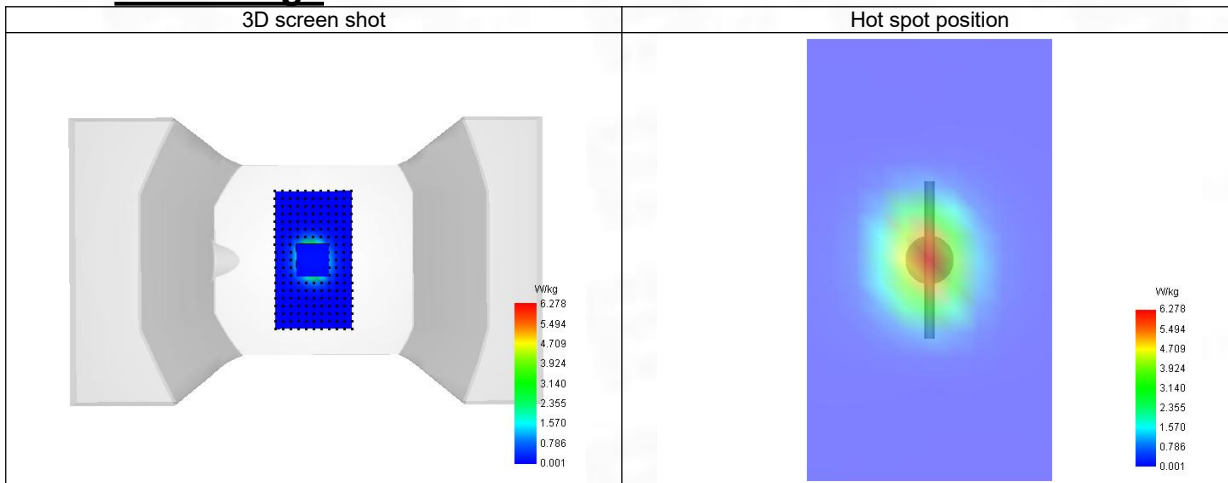
SAR 10g (W/Kg)	2.366
SAR 1g (W/Kg)	5.455
Variation (%)	-1.780
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	51.562002

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.329	6.274	3.235	1.727	0.935	0.499	0.273



F. 3D Image



System Performance Check Data (2600 MHz)

System check at 2600 MHz

Date of measurement: 21/10/2025

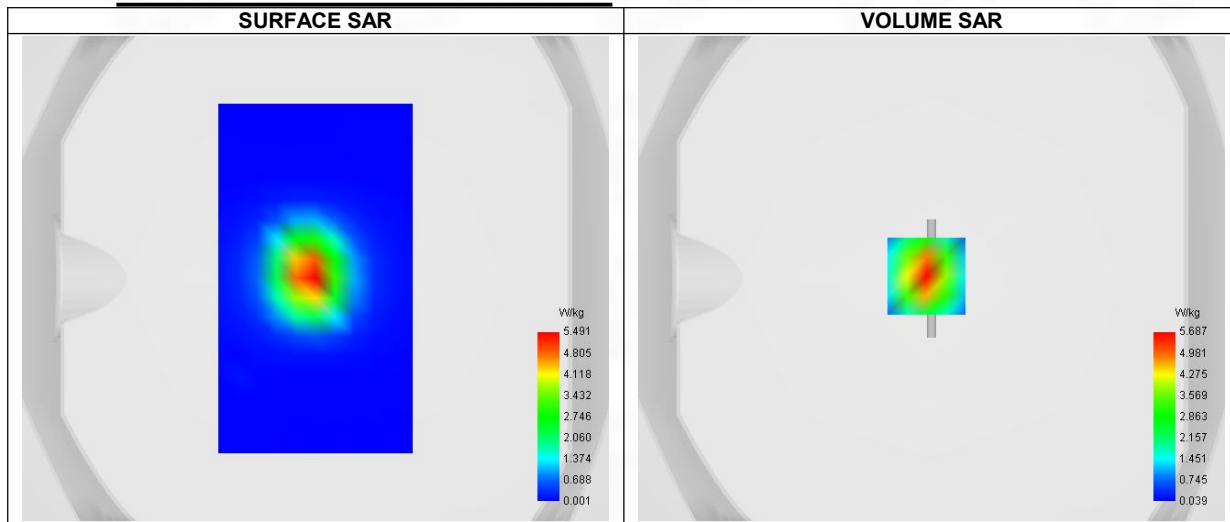
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	2600.000
Relative permittivity (real part)	39.242
Relative permittivity (imaginary part)	12.862
Conductivity (S/m)	1.941

C. SAR Surface and Volume



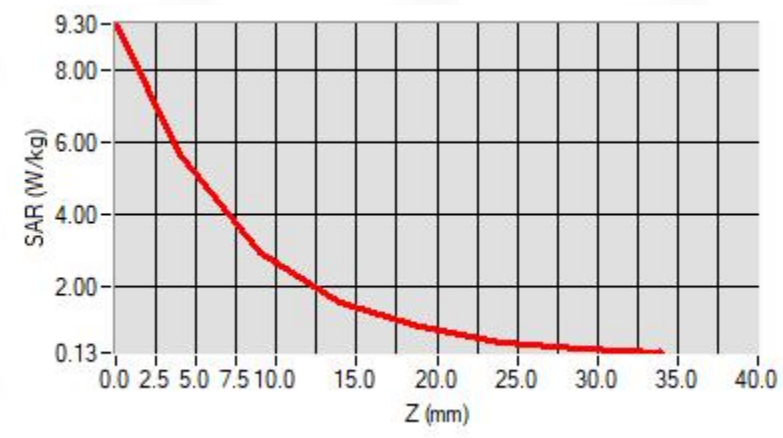
Maximum location: X=-2.00, Y=1.00 ; SAR Peak: 9.22 W/kg

D. SAR 1g & 10g

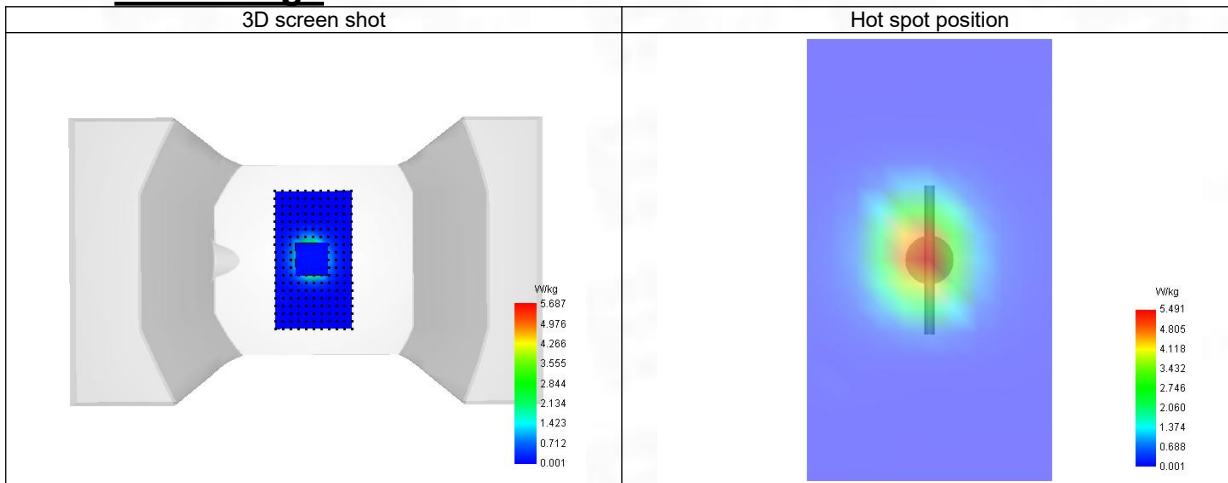
SAR 10g (W/Kg)	2.421
SAR 1g (W/Kg)	5.490
Variation (%)	2.450
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	51.960612

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.300	5.687	2.955	1.555	0.834	0.432	0.231



F. 3D Image



ANNEX C Test Data

1-Head with front position in dist. 0mm on Channel 190 in GSM850 voice

SAR Measurement at GSM850 (Cheek, Right)

Date of measurement: 13/10/2025

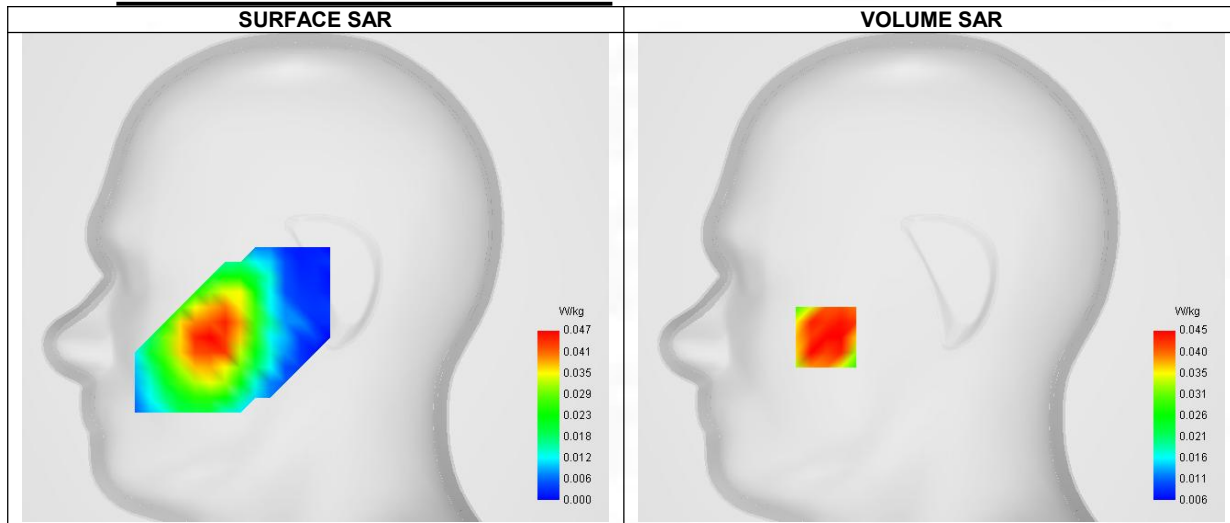
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels/Frequency	Middle (190)/ frequency 836.600 Mhz
Signal	TDMA (GSM)
Modulation	GMSK

B. Permittivity

Middle TX Frequency (MHz)	836.600
Relative permittivity (real part)	41.921
Relative permittivity (imaginary part)	19.577
Conductivity (S/m)	0.894

C. SAR Surface and Volume



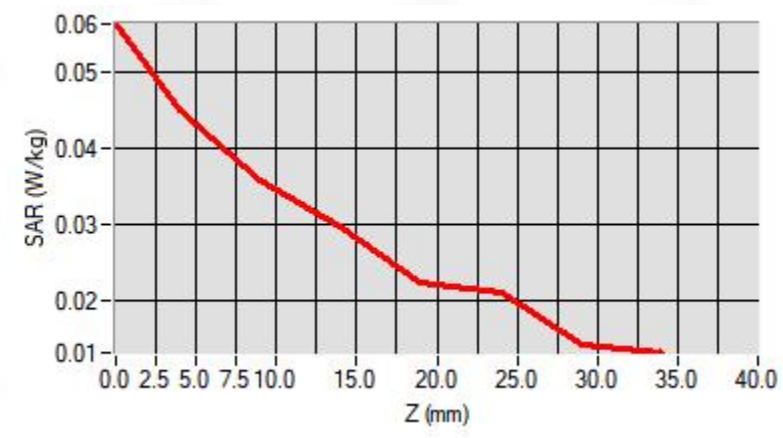
Maximum location: X=-56.00, Y=-32.00 ; SAR Peak: 0.06 W/kg

D. SAR 1g & 10g

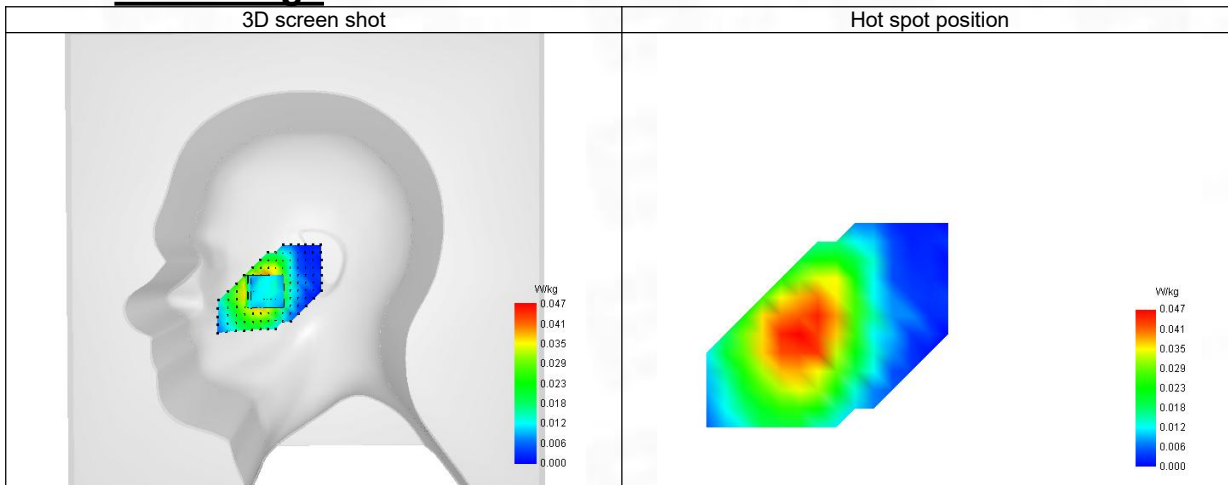
SAR 10g (W/Kg)	0.033
SAR 1g (W/Kg)	0.044
Variation (%)	4.230
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	77.672551

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.056	0.045	0.036	0.030	0.022	0.021	0.014



F. 3D Image



2-Body with front position in dist. 10mm on Channel 190 in GPRS850+2slots

SAR Measurement at GPRS850 (Body, Validation Plane)

Date of measurement: 13/10/2025

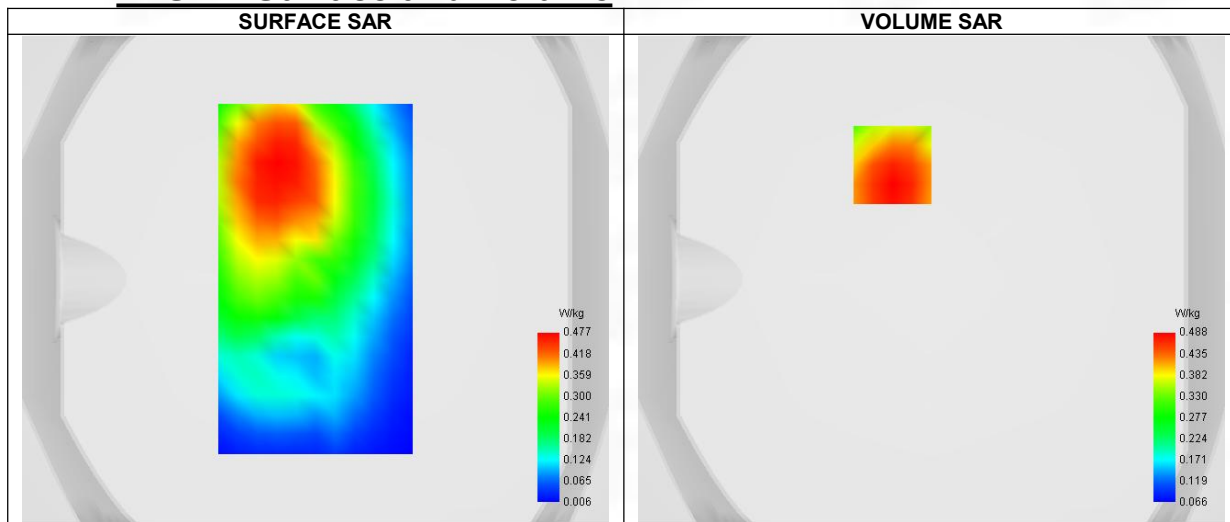
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS850
Channels/Frequency	Middle (190)/ frequency 836.600 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	2

B. Permittivity

Middle TX Frequency (MHz)	836.600
Relative permittivity (real part)	41.921
Relative permittivity (imaginary part)	19.577
Conductivity (S/m)	0.894

C. SAR Surface and Volume

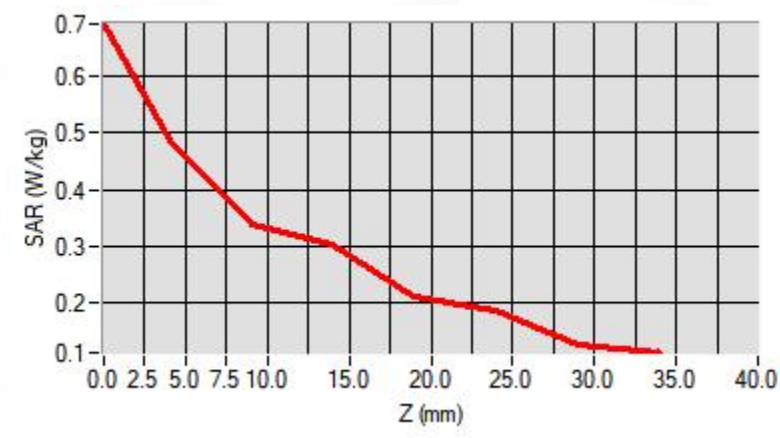


D. SAR 1g & 10g

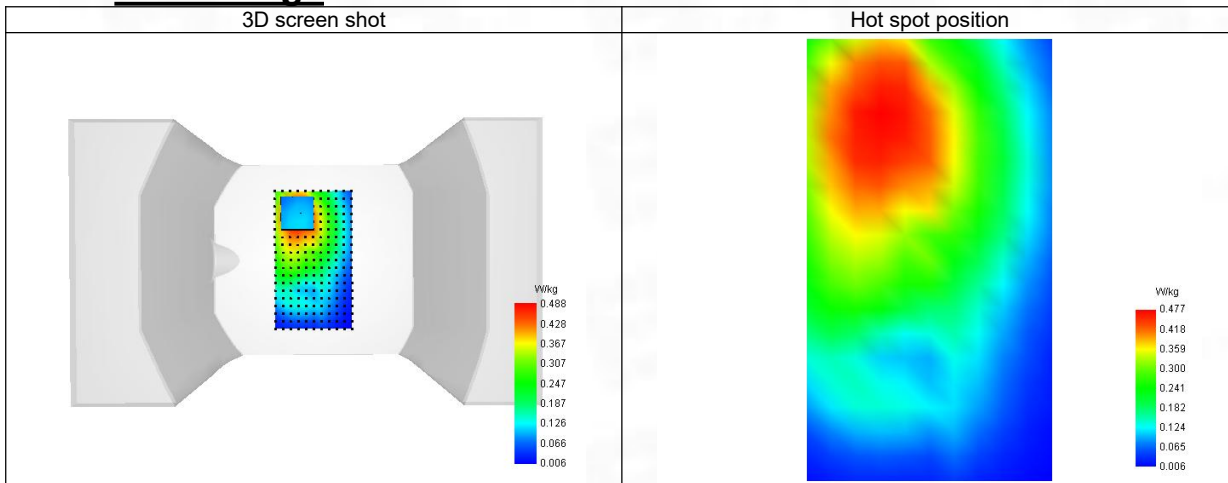
SAR 10g (W/Kg)	0.312
SAR 1g (W/Kg)	0.472
Variation (%)	2.370
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	78.222211

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.691	0.488	0.340	0.303	0.212	0.187	0.127



F. 3D Image



3-Head with front position in dist. 0mm on Channel 512 in GSM1900 voice

SAR Measurement at GSM1900 (Cheek, Right)

Date of measurement: 17/10/2025

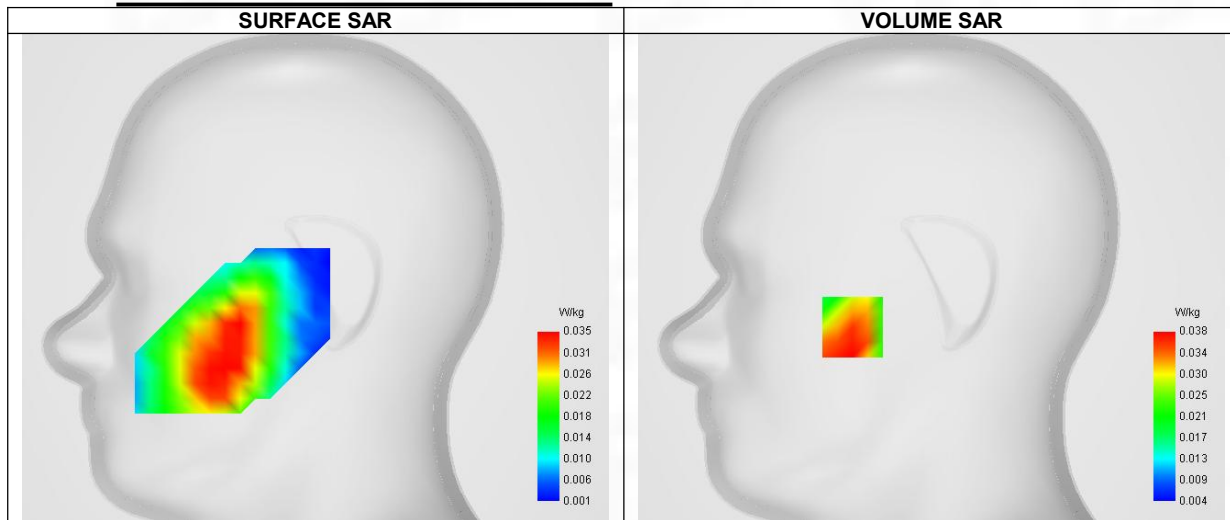
A. Experimental conditions.

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	Right head
Device Position	Cheek
Band	GSM1900
Channels/Frequency	Lower (512) frequency 1850.200 Mhz
Signal	TDMA (GSM)
Modulation	GMSK

B. Permittivity

Middle TX Frequency (MHz)	1850.200
Relative permittivity (real part)	40.160
Relative permittivity (imaginary part)	14.233
Conductivity (S/m)	1.391

C. SAR Surface and Volume



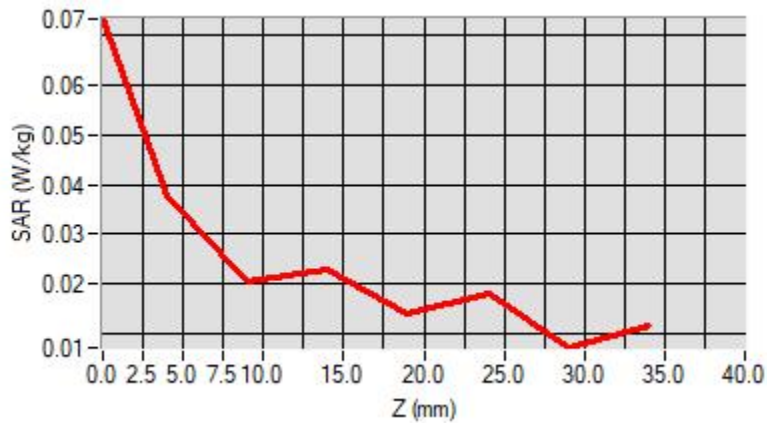
Maximum location: X=-42.00, Y=-26.00 ; SAR Peak: 0.05 W/kg

D. SAR 1g & 10g

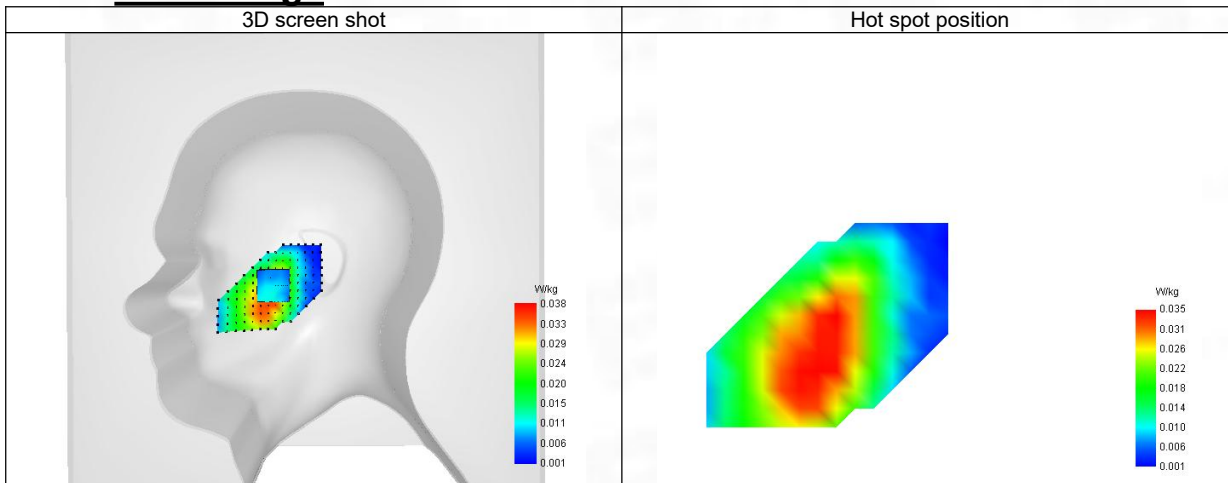
SAR 10g (W/Kg)	0.022
SAR 1g (W/Kg)	0.037
Variation (%)	2.650
Horizontal validation criteria: minimum distance (mm)	35.777088
Vertical validation criteria: SAR ratio M2/M1 (%)	75.190218

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.073	0.038	0.020	0.023	0.014	0.018	0.007



F. 3D Image



4-Body with back position in dist. 10mm on Channel 512 in GPRS1900+3slots

SAR Measurement at GPRS1900 (Body, Validation Plane)

Date of measurement: 17/10/2025

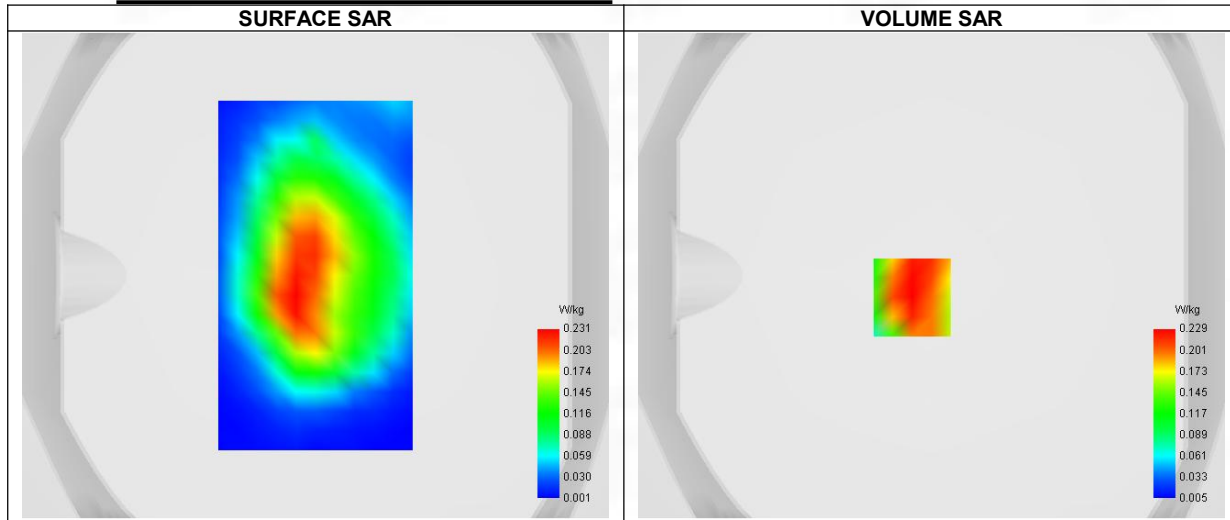
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.31
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS1900
Channels/Frequency	Lower (512)/ frequency 1850.200 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	3

B. Permittivity

Middle TX Frequency (MHz)	1850.200
Relative permittivity (real part)	40.160
Relative permittivity (imaginary part)	14.233
Conductivity (S/m)	1.391

C. SAR Surface and Volume

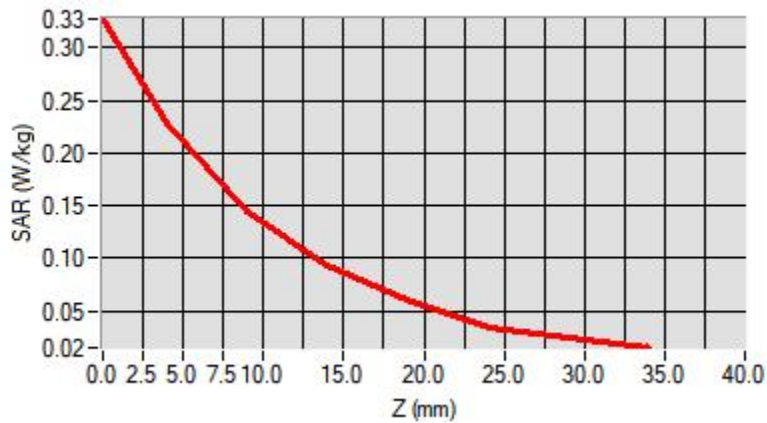


D. SAR 1g & 10g

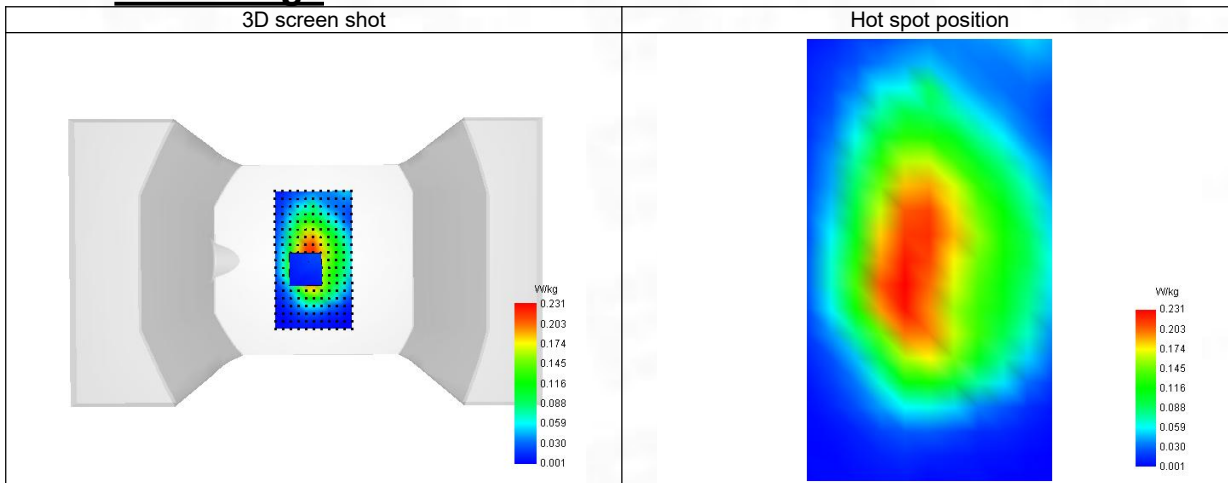
SAR 10g (W/Kg)	0.127
SAR 1g (W/Kg)	0.222
Variation (%)	3.840
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	63.409570

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.327	0.229	0.145	0.094	0.062	0.035	0.024



F. 3D Image



5-Head with front position in dist. 0mm on Channel 9262 in WCDMA Band 2

SAR Measurement at Band 2 (1900) (Cheek, Right)

Date of measurement: 17/10/2025

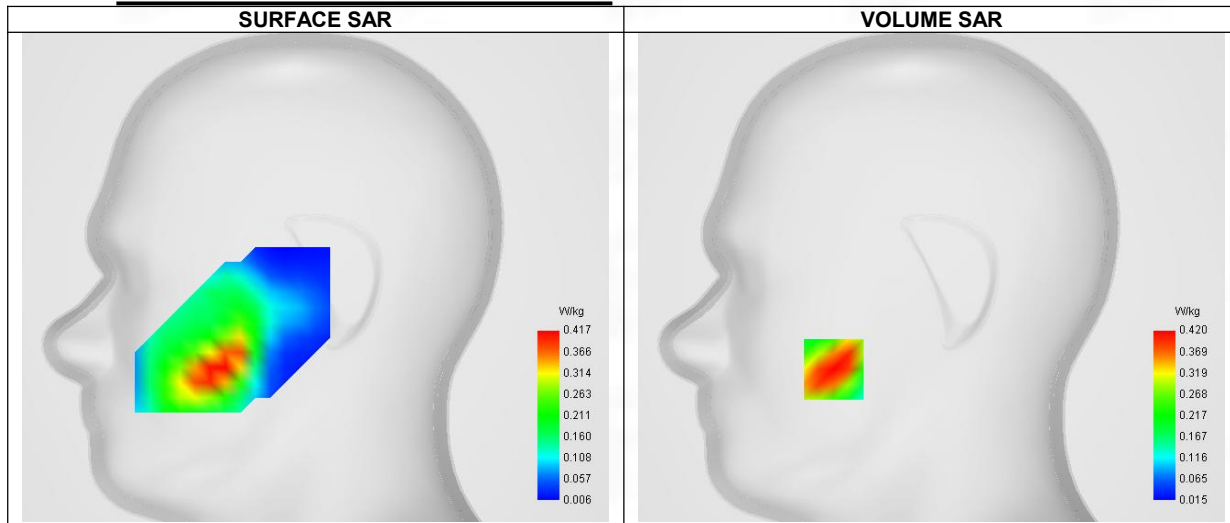
A. Experimental conditions.

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	Right head
Device Position	Cheek
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)	40.157
Relative permittivity (imaginary part)	14.216
Conductivity (S/m)	1.392

C. SAR Surface and Volume



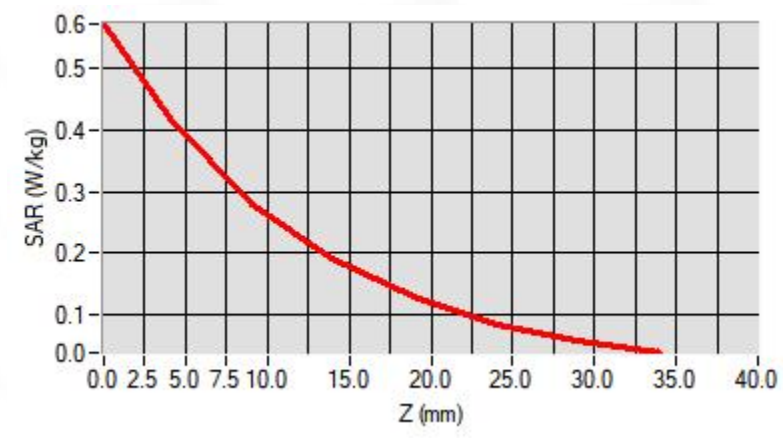
Maximum location: X=-52.00, Y=-49.00 ; SAR Peak: 0.59 W/kg

D. SAR 1g & 10g

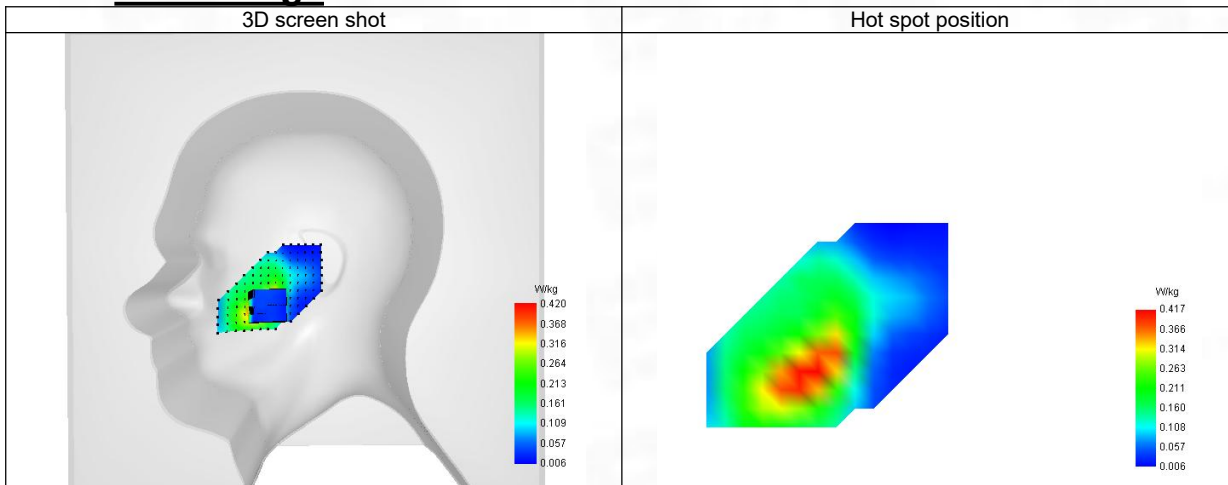
SAR 10g (W/Kg)	0.240
SAR 1g (W/Kg)	0.399
Variation (%)	-2.180
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	66.925490

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.572	0.420	0.281	0.193	0.128	0.084	0.059



F. 3D Image



6-Body with back position in dist. 10mm on Channel 9262 in WCDMA Band 2

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

Date of measurement: 17/10/2025

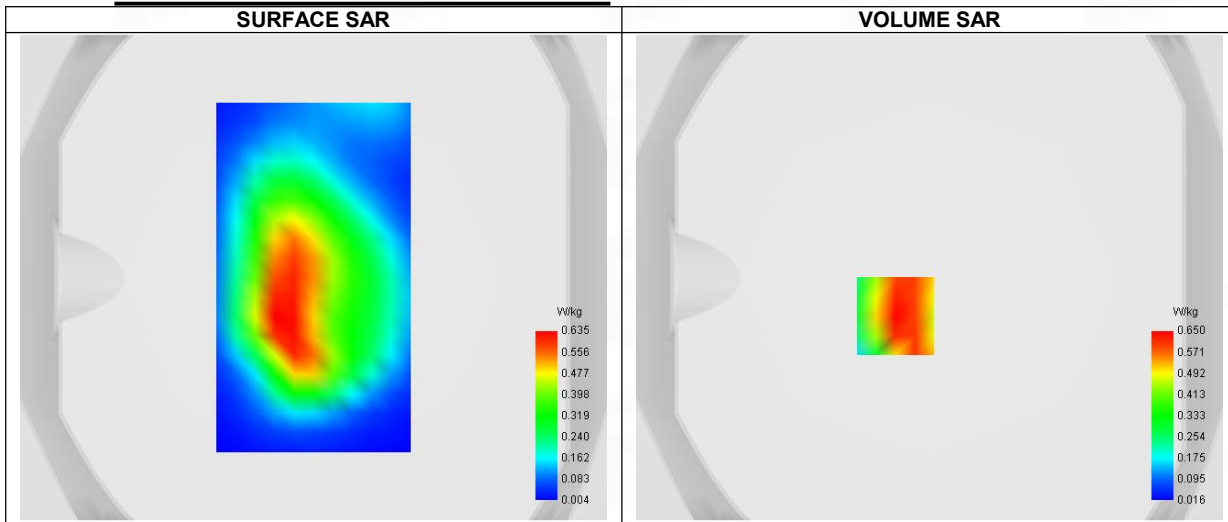
A. Experimental conditions.

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)	40.157
Relative permittivity (imaginary part)	14.216
Conductivity (S/m)	1.392

C. SAR Surface and Volume



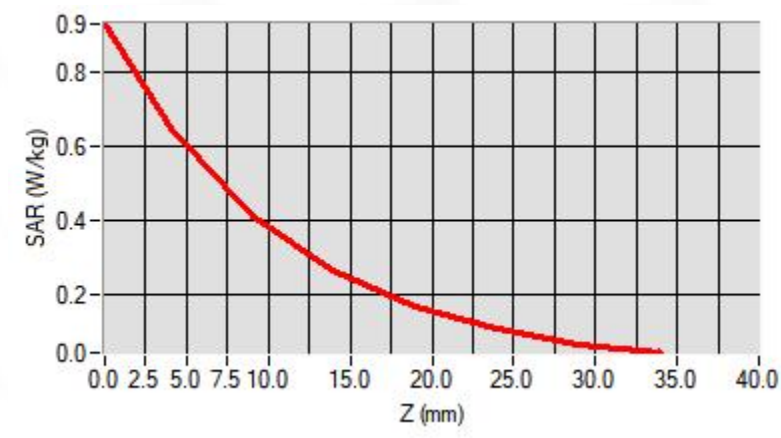
Maximum location: X=-14.00, Y=-16.00 ; SAR Peak: 0.95 W/kg

D. SAR 1g & 10g

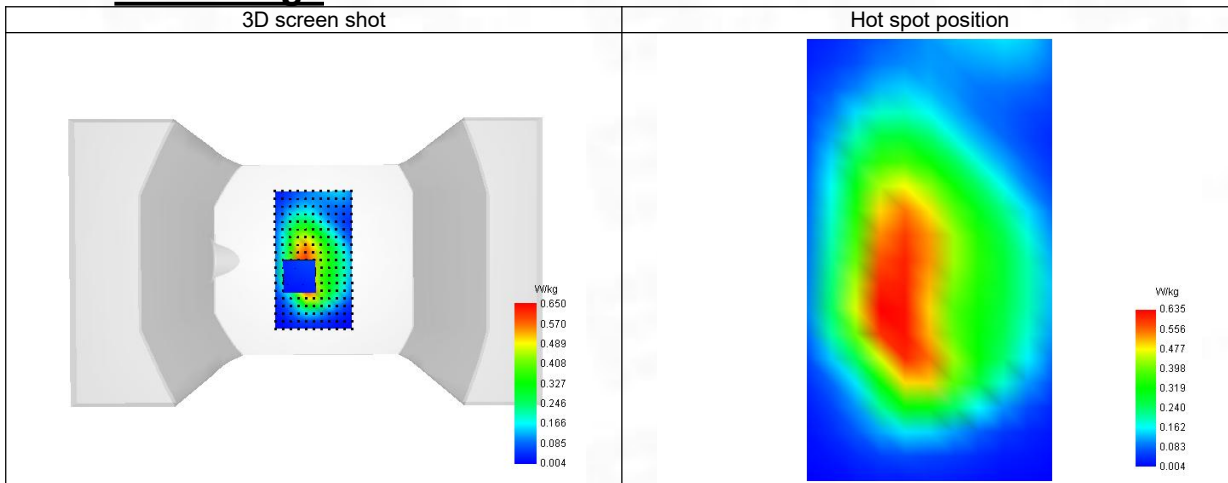
SAR 10g (W/Kg)	0.363
SAR 1g (W/Kg)	0.626
Variation (%)	0.220
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.275079

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.931	0.650	0.412	0.265	0.167	0.104	0.065



F. 3D Image



7-Head with front position in dist. 0mm on Channel 1513 in WCDMA Band 4

SAR Measurement at Band 4 (1700) (Cheek, Right)

Date of measurement: 15/10/2025

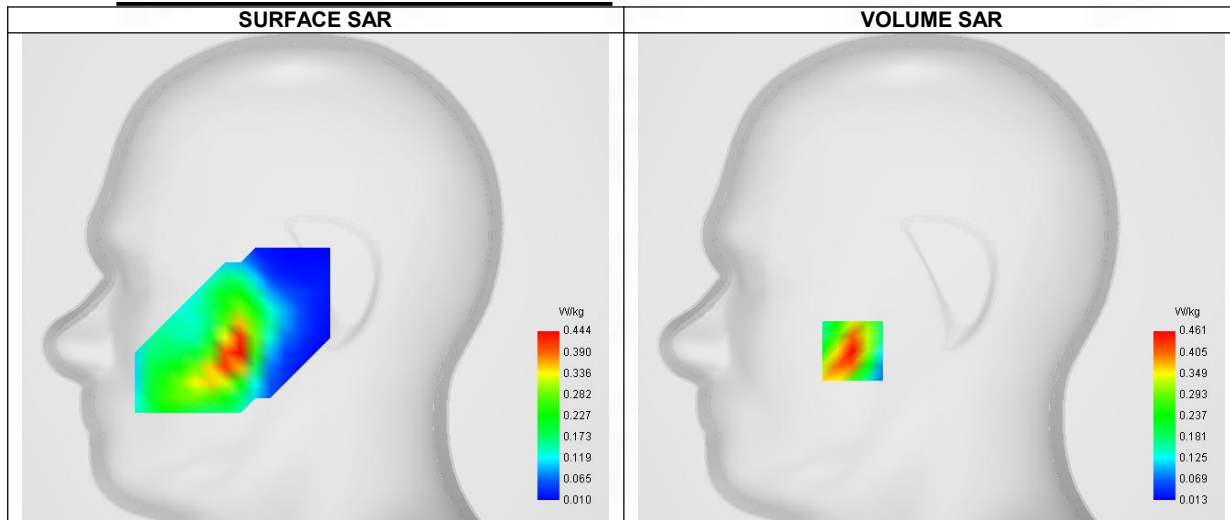
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	Band 4 (1700)
Channels/Frequency	Higher (1513)/ frequency 1752.600 Mhz
Signal	WCDMA
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1752.600
Relative permittivity (real part)	40.321
Relative permittivity (imaginary part)	14.859
Conductivity (S/m)	1.355

C. SAR Surface and Volume



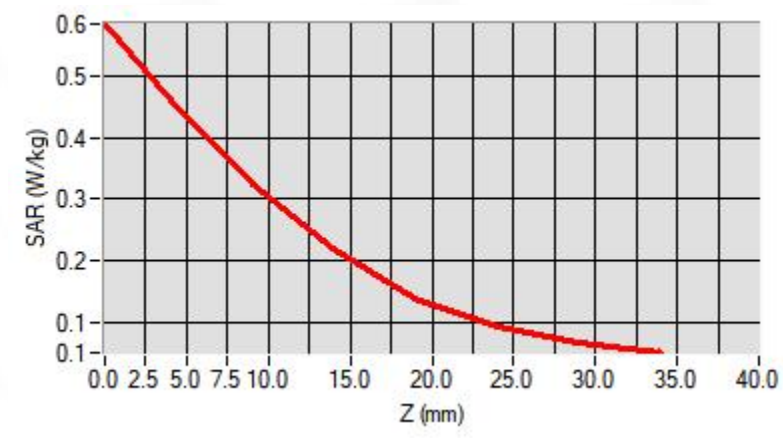
Maximum location: X=-42.00, Y=-39.00 ; SAR Peak: 0.60 W/kg

D. SAR 1g & 10g

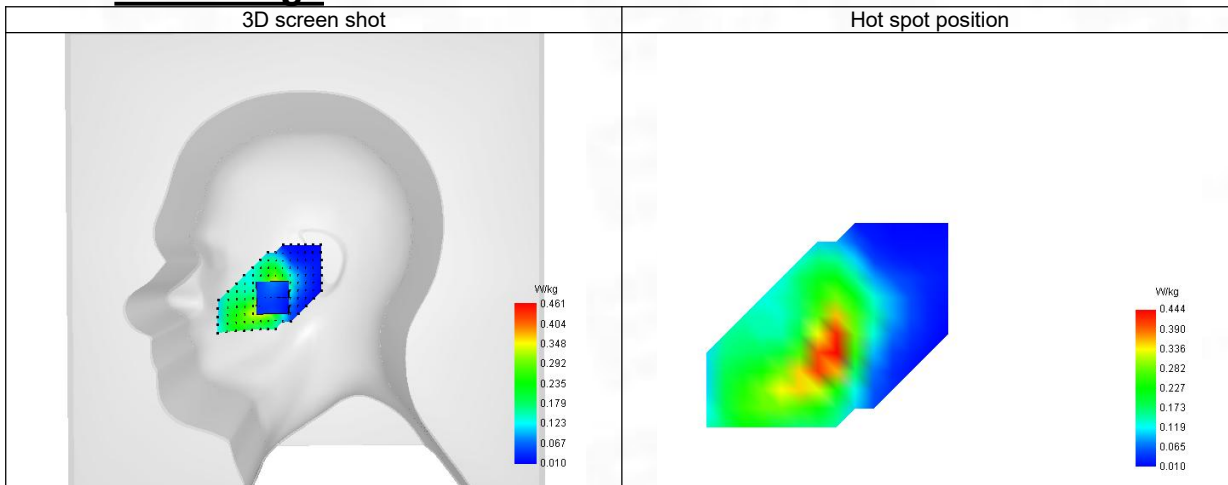
SAR 10g (W/Kg)	0.255
SAR 1g (W/Kg)	0.420
Variation (%)	-0.590
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	70.542081

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.584	0.461	0.325	0.220	0.140	0.095	0.067



F. 3D Image



8-Body with back position in dist. 10mm on Channel 1513 in WCDMA Band 4

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

Date of measurement: 15/10/2025

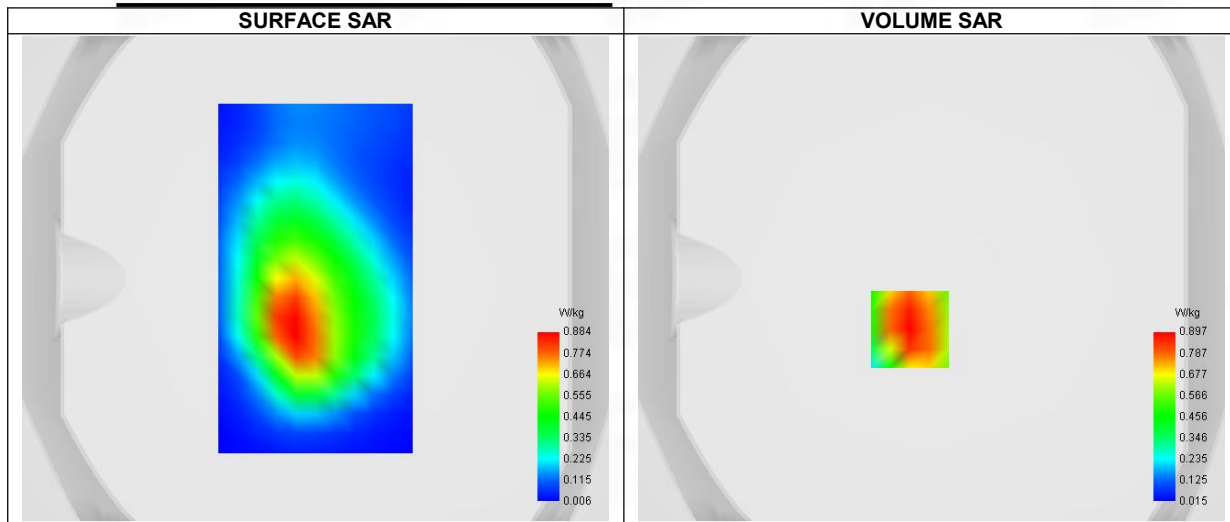
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 4 (1700)
Channels/Frequency	Higher (1513)/ frequency 1752.600 Mhz
Signal	WCDMA
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1752.600
Relative permittivity (real part)	40.321
Relative permittivity (imaginary part)	14.859
Conductivity (S/m)	1.355

C. SAR Surface and Volume



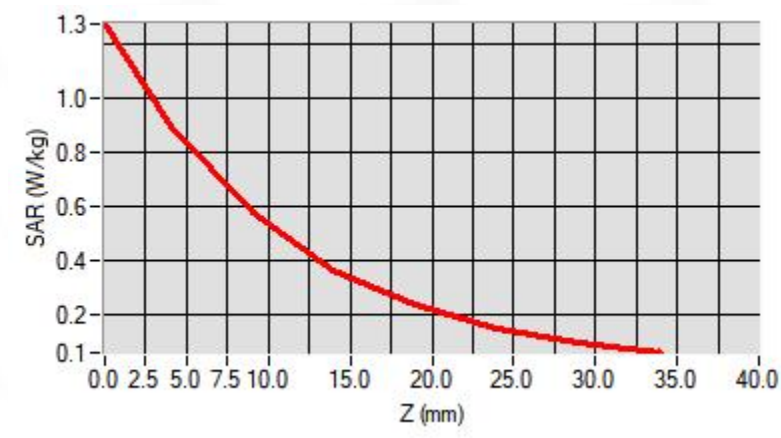
Maximum location: X=-9.00, Y=-21.00 ; SAR Peak: 1.30 W/kg

D. SAR 1g & 10g

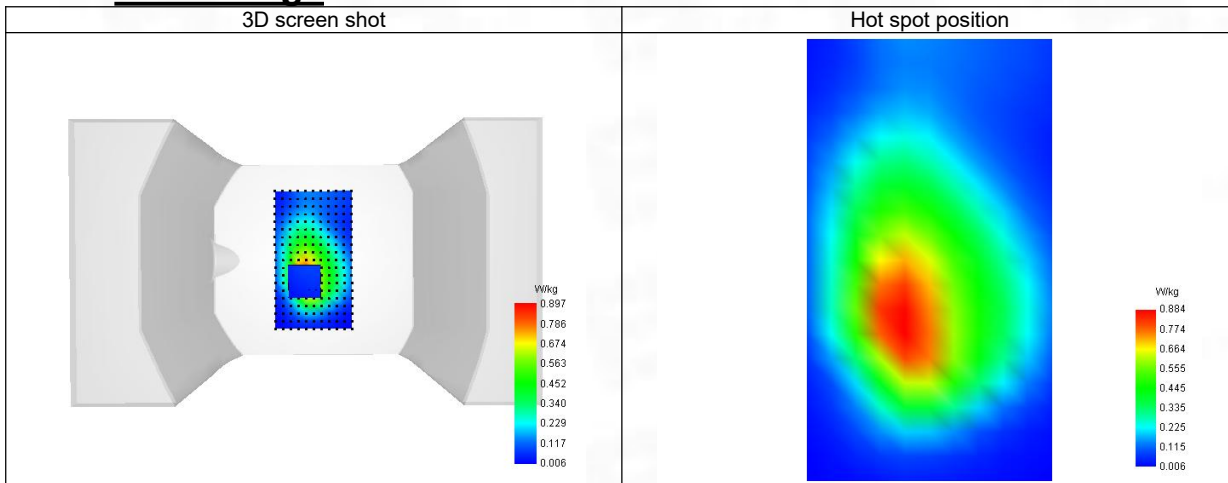
SAR 10g (W/Kg)	0.514
SAR 1g (W/Kg)	0.861
Variation (%)	-3.640
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	64.114452

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.273	0.897	0.575	0.365	0.235	0.151	0.093



F. 3D Image



9-Head with front position in dist. 0mm on Channel 4233 in WCDMA Band 5

SAR Measurement at Band 5 (850) (Cheek, Right)

Date of measurement: 13/10/2025

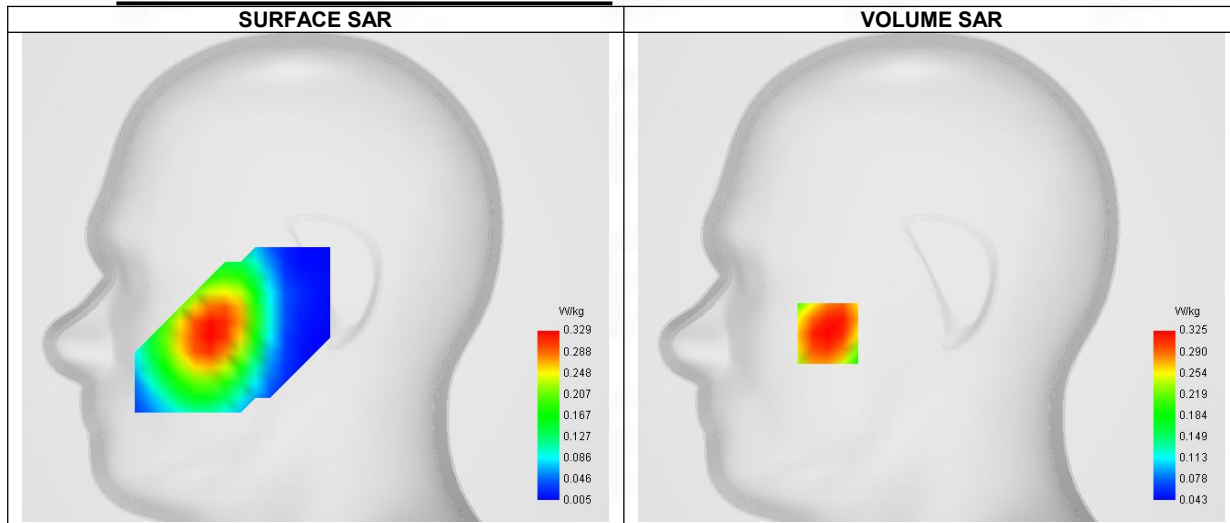
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
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)	41.904
Relative permittivity (imaginary part)	19.525
Conductivity (S/m)	0.899

C. SAR Surface and Volume



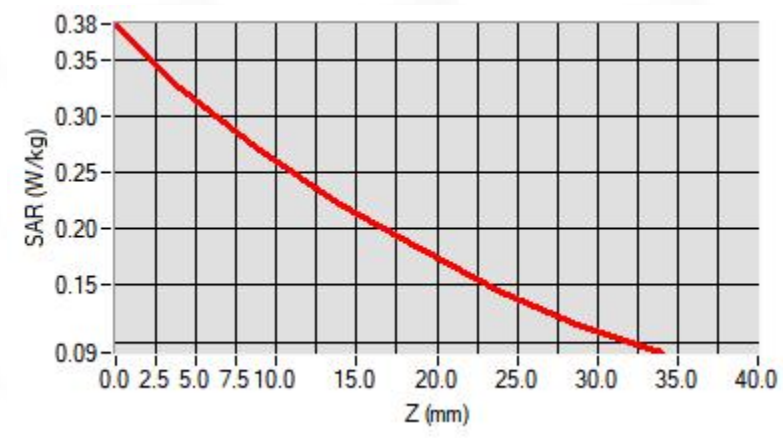
Maximum location: X=-55.00, Y=-30.00 ; SAR Peak: 0.38 W/kg

D. SAR 1g & 10g

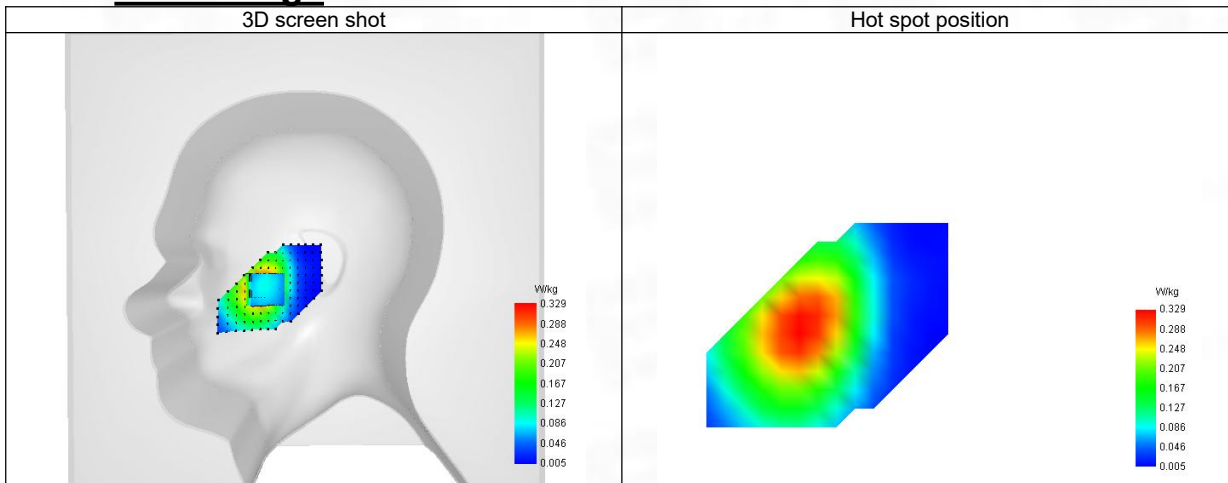
SAR 10g (W/Kg)	0.243
SAR 1g (W/Kg)	0.316
Variation (%)	-1.570
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.692308

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.381	0.325	0.259	0.222	0.183	0.144	0.113



F. 3D Image



10-Body with front position in dist. 10mm on Channel 4233 in WCDMA Band 5

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

Date of measurement: 13/10/2025

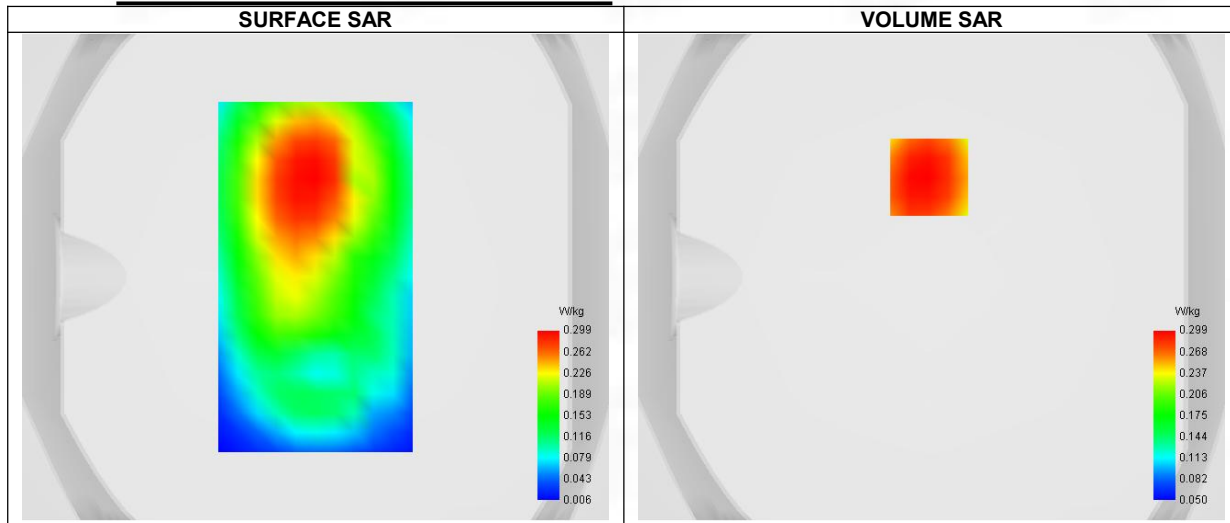
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	846.600
Relative permittivity (real part)	41.904
Relative permittivity (imaginary part)	19.525
Conductivity (S/m)	0.899

C. SAR Surface and Volume



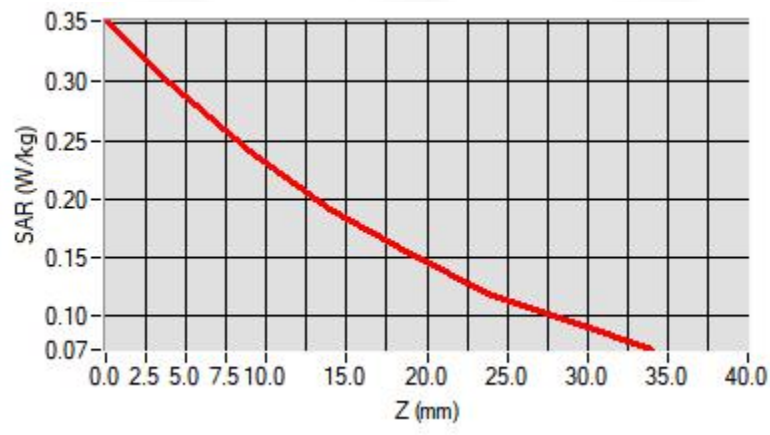
Maximum location: X=-1.00, Y=41.00 ; SAR Peak: 0.36 W/kg

D. SAR 1g & 10g

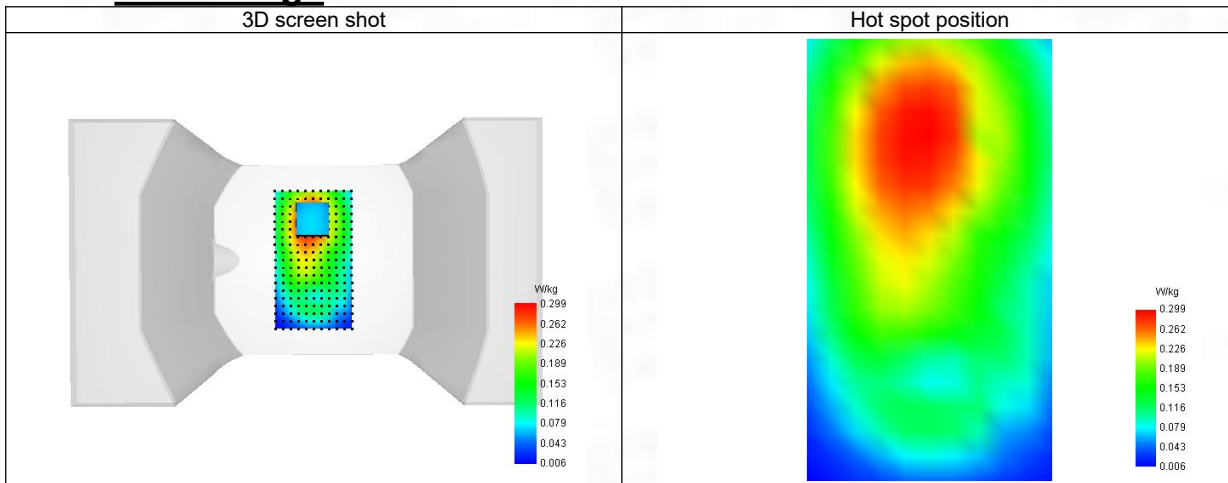
SAR 10g (W/Kg)	0.222
SAR 1g (W/Kg)	0.291
Variation (%)	-0.290
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.933110

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.352	0.299	0.239	0.190	0.153	0.118	0.095



F. 3D Image



11-Head with front position in dist. 0mm on Channel 18700 in LTE band 2

SAR Measurement at LTE band 2 (Cheek, Right)

Date of measurement: 17/10/2025

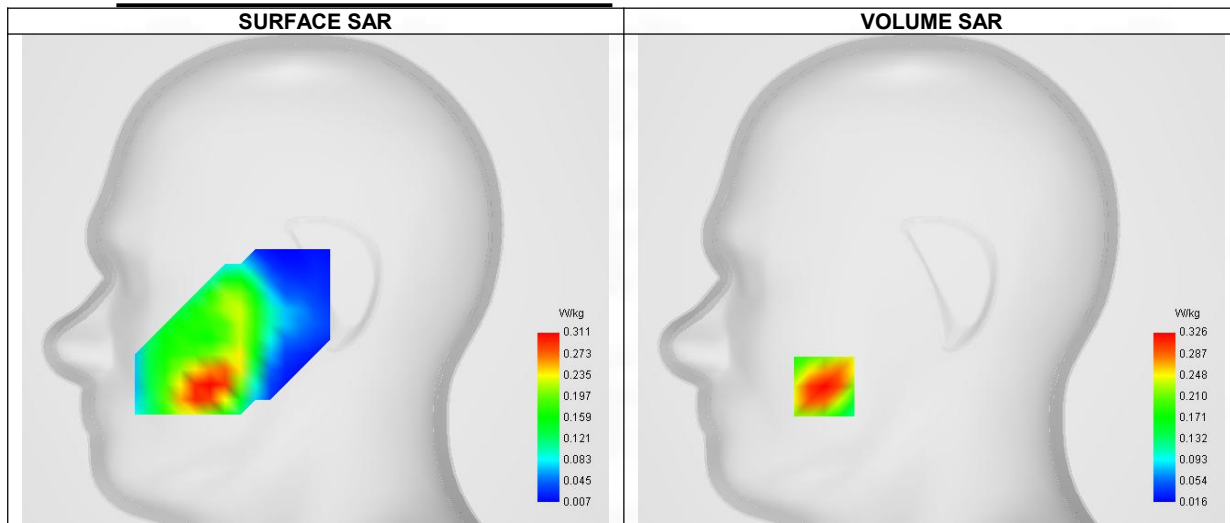
A. Experimental conditions.

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	Right head
Device Position	Cheek
Band	LTE band 2
Channels/Frequency	Lower (18700)/ 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)	40.159
Relative permittivity (imaginary part)	14.226
Conductivity (S/m)	1.391

C. SAR Surface and Volume

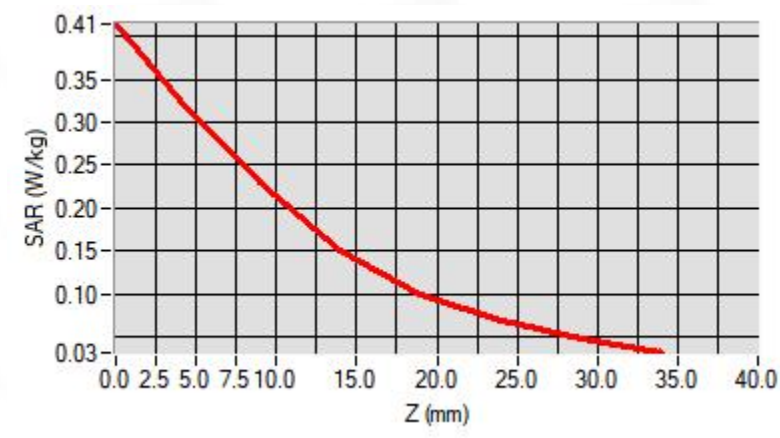


D. SAR 1g & 10g

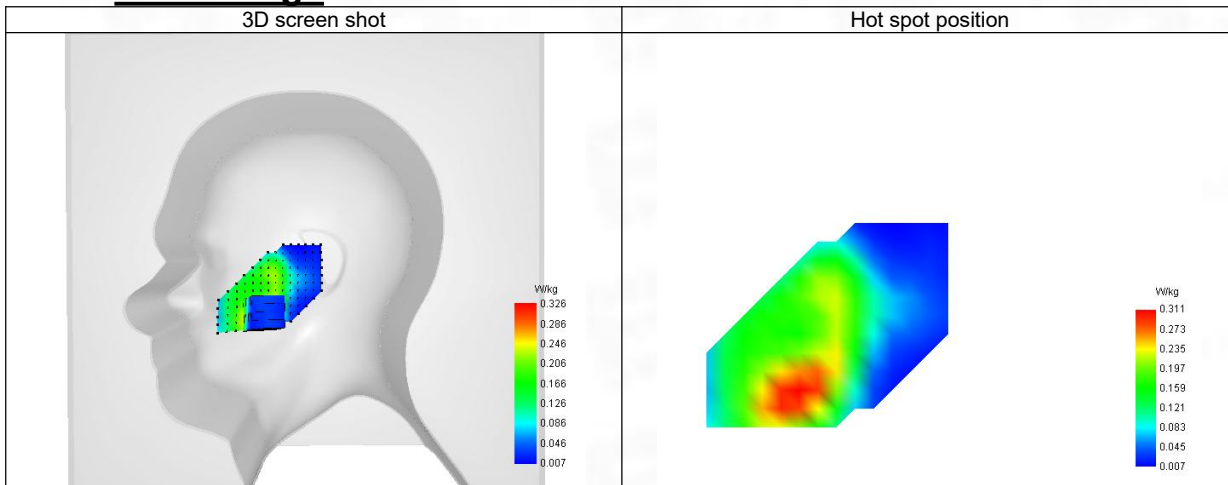
SAR 10g (W/Kg)	0.196
SAR 1g (W/Kg)	0.305
Variation (%)	-1.390
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	70.477582

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.414	0.326	0.230	0.151	0.100	0.069	0.049



F. 3D Image



12-Body with back position in dist. 10mm on Channel 18700 in LTE band 2

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

Date of measurement: 17/10/2025

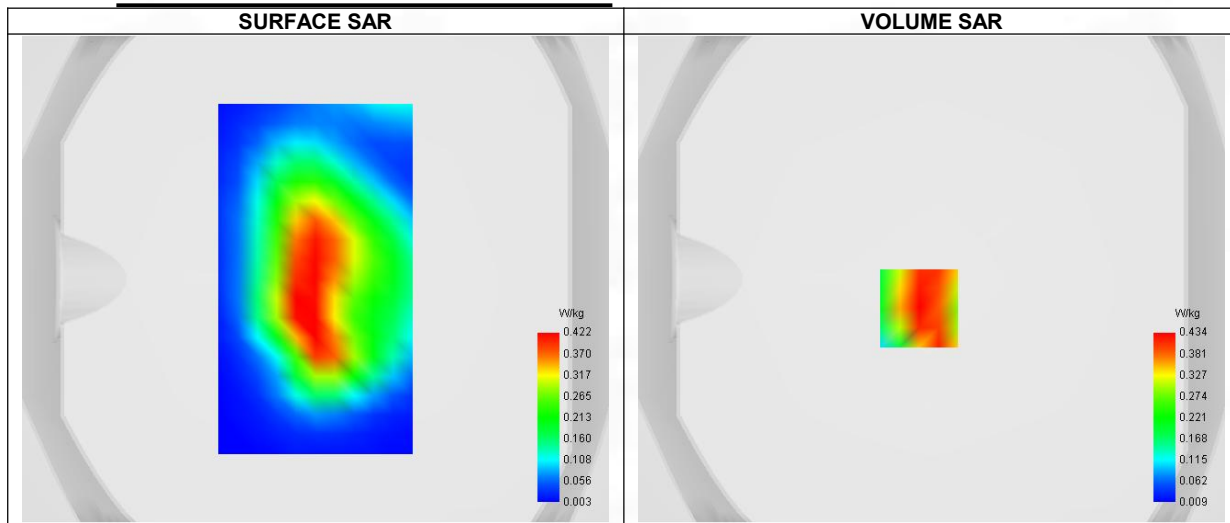
A. Experimental conditions.

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	Lower (18700)/ 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)	40.159
Relative permittivity (imaginary part)	14.226
Conductivity (S/m)	1.391

C. SAR Surface and Volume



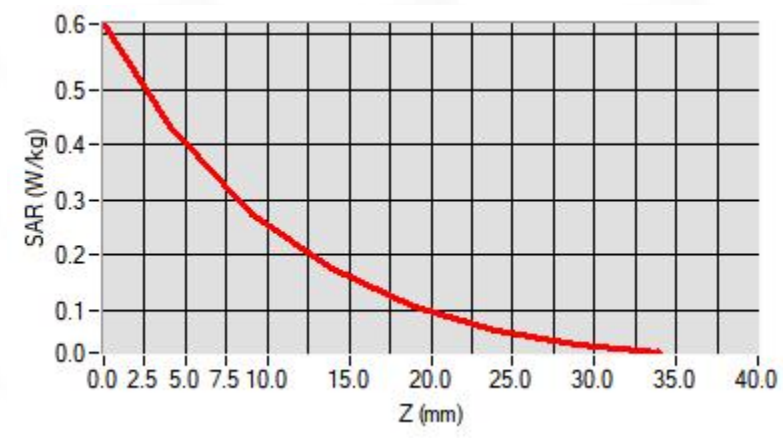
Maximum location: X=-5.00, Y=-12.00 ; SAR Peak: 0.64 W/kg

D. SAR 1g & 10g

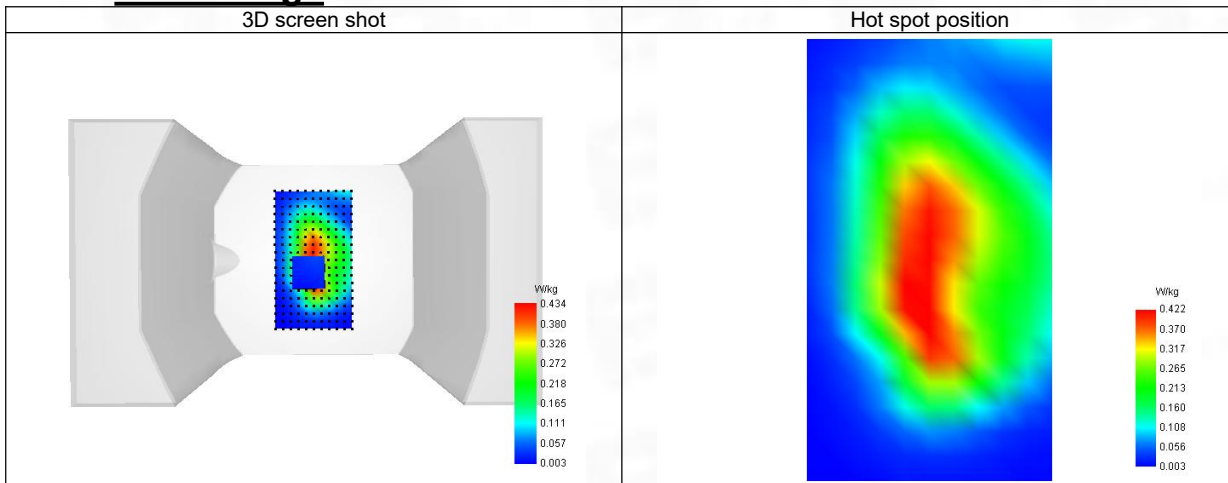
SAR 10g (W/Kg)	0.221
SAR 1g (W/Kg)	0.413
Variation (%)	-3.720
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.040693

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.618	0.434	0.273	0.175	0.107	0.065	0.039



F. 3D Image



13-Head with front position in dist. 0mm on Channel 20300 in LTE band 4

SAR Measurement at LTE band 4 (Cheek, Right)

Date of measurement: 15/10/2025

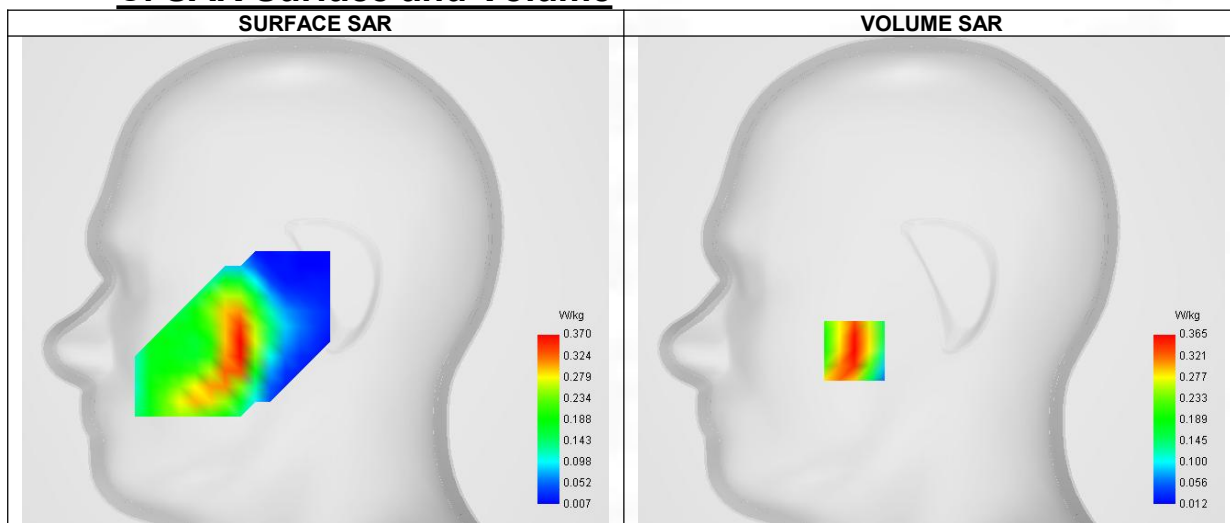
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	LTE band 4
Channels/Frequency	Higher (20300)/ frequency 1745.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	99
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1753.910
Relative permittivity (real part)	40.319
Relative permittivity (imaginary part)	14.852
Conductivity (S/m)	1.356

C. SAR Surface and Volume



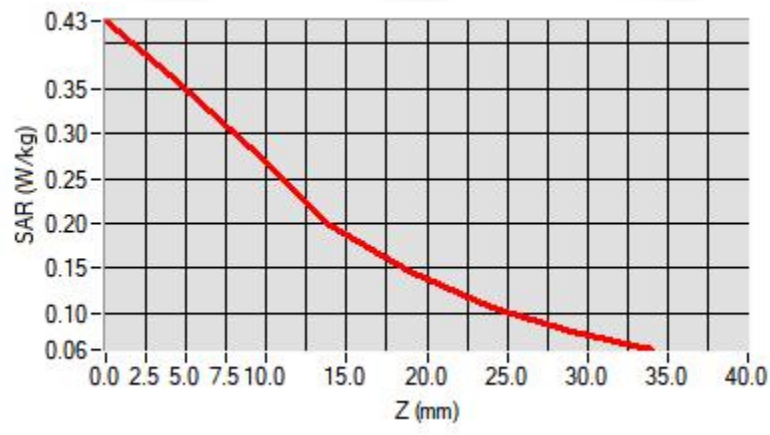
Maximum location: X=-41.00, Y=-37.00 ; SAR Peak: 0.45 W/kg

D. SAR 1g & 10g

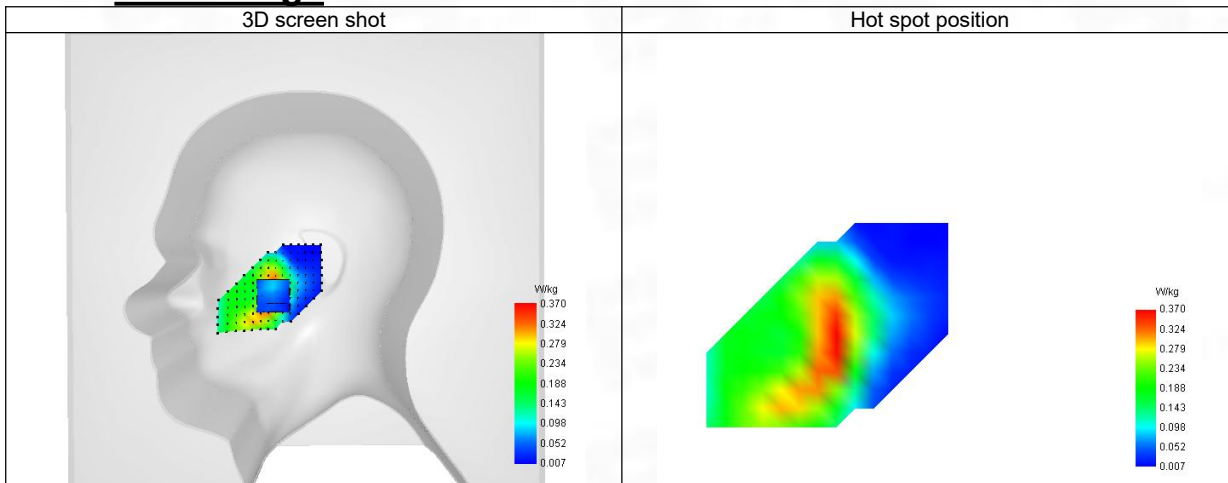
SAR 10g (W/Kg)	0.218
SAR 1g (W/Kg)	0.340
Variation (%)	2.310
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	77.880028

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.425	0.365	0.285	0.198	0.146	0.106	0.080



F. 3D Image



14-Body with back position in dist. 10mm on Channel 20300 in LTE band 4

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

Date of measurement: 15/10/2025

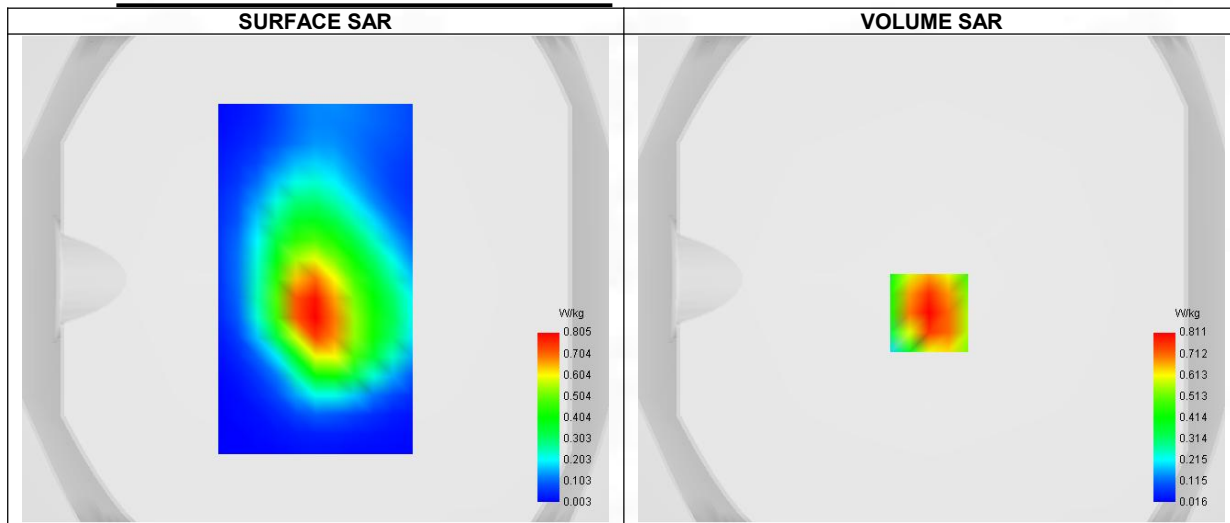
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Channels/Frequency	Higher (20300)/ frequency 1745.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	99
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1753.910
Relative permittivity (real part)	40.319
Relative permittivity (imaginary part)	14.852
Conductivity (S/m)	1.356

C. SAR Surface and Volume



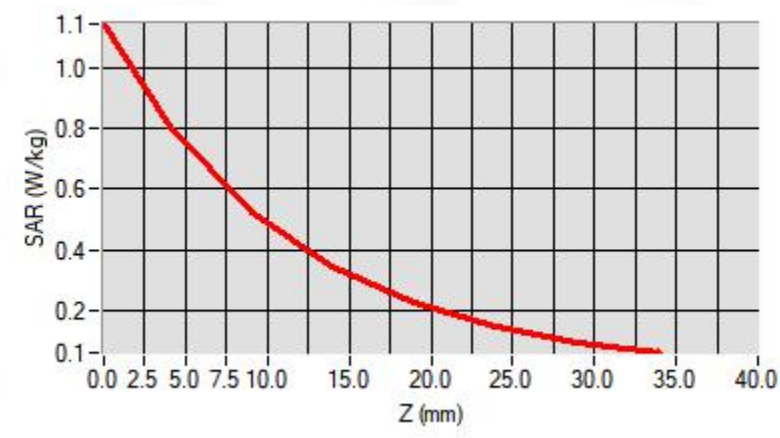
Maximum location: X=-1.00, Y=-14.00 ; SAR Peak: 1.16 W/kg

D. SAR 1g & 10g

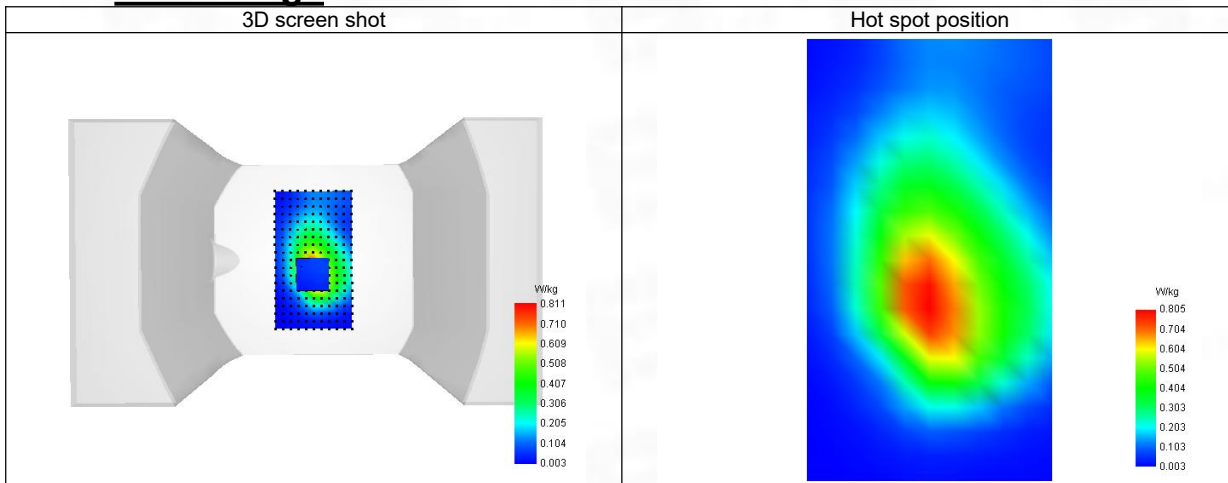
SAR 10g (W/Kg)	0.475
SAR 1g (W/Kg)	0.776
Variation (%)	-1.130
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	64.397003

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.147	0.811	0.523	0.342	0.223	0.144	0.094



F. 3D Image



15-Head with front position in dist. 0mm on Channel 20600 in LTE band 5

SAR Measurement at LTE band 5 (Cheek, Right)

Date of measurement: 13/10/2025

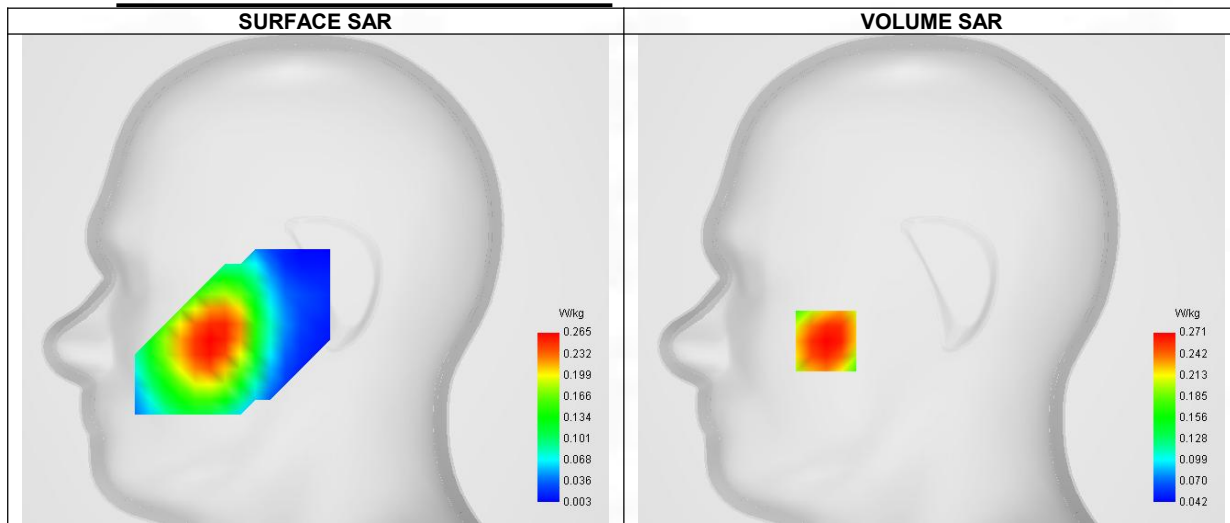
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
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	49
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	848.410
Relative permittivity (real part)	41.901
Relative permittivity (imaginary part)	19.516
Conductivity (S/m)	0.900

C. SAR Surface and Volume



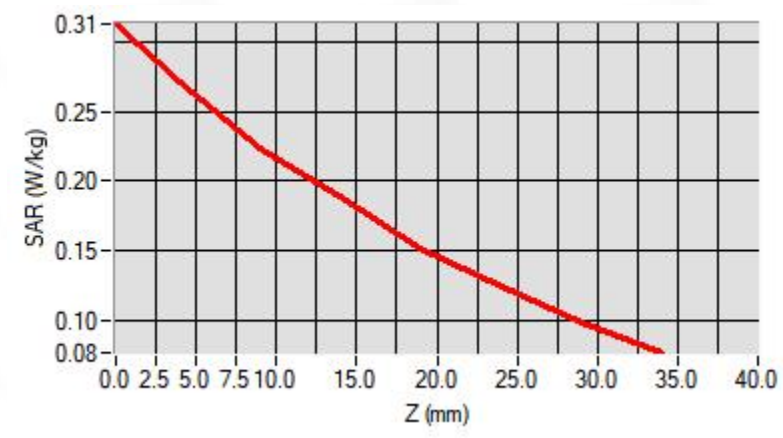
Maximum location: X=-56.00, Y=-33.00 ; SAR Peak: 0.31 W/kg

D. SAR 1g & 10g

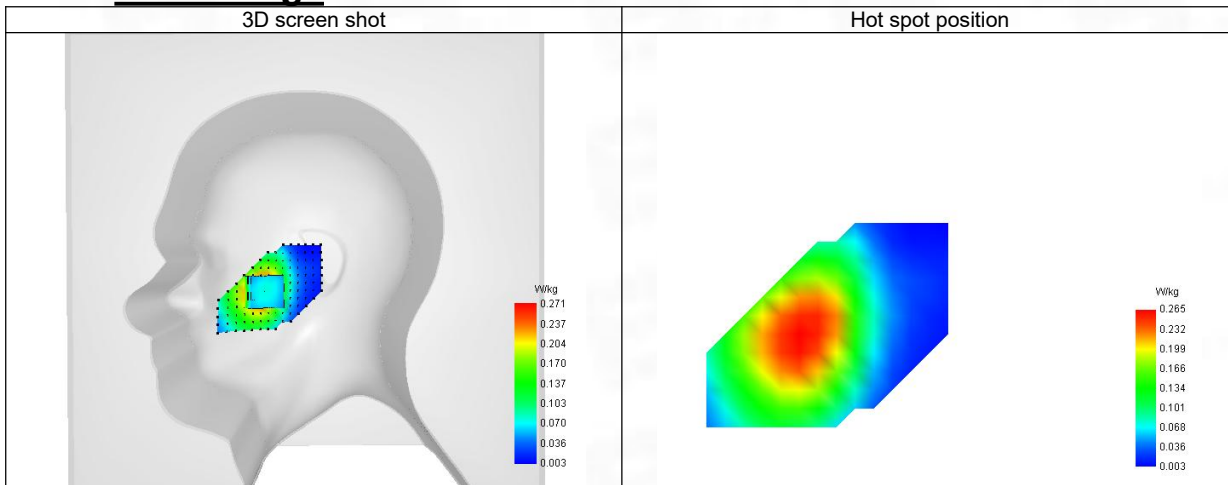
SAR 10g (W/Kg)	0.202
SAR 1g (W/Kg)	0.262
Variation (%)	0.360
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	78.597786

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.313	0.271	0.213	0.189	0.151	0.124	0.099



F. 3D Image



16-Body with front position in dist. 10mm on Channel 20600 in LTE band 5

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

Date of measurement: 13/10/2025

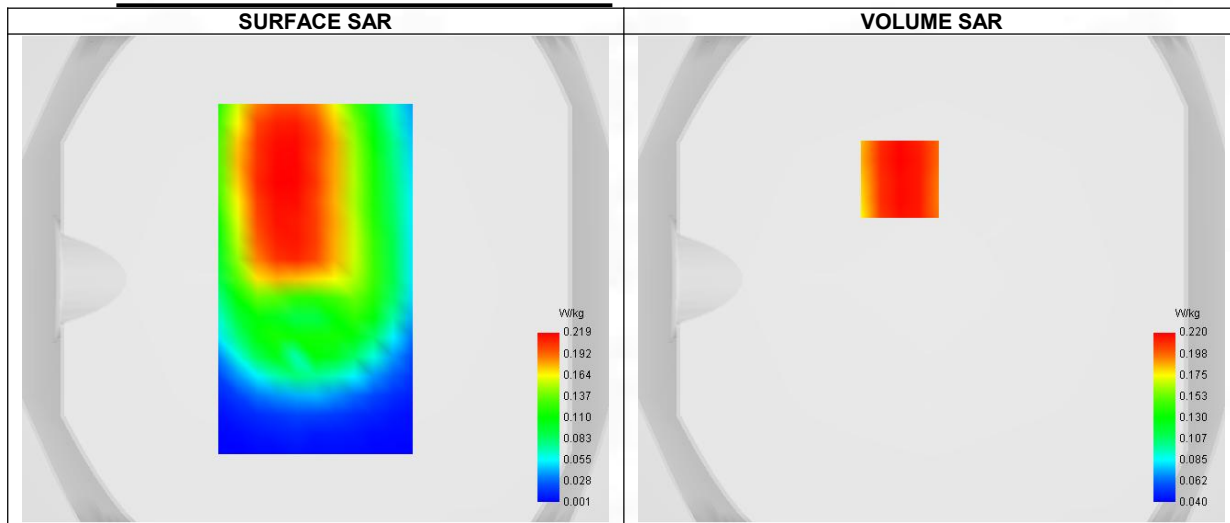
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Channels/Frequency	Higher (20600)/ frequency 844.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	49
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	848.410
Relative permittivity (real part)	41.901
Relative permittivity (imaginary part)	19.516
Conductivity (S/m)	0.900

C. SAR Surface and Volume



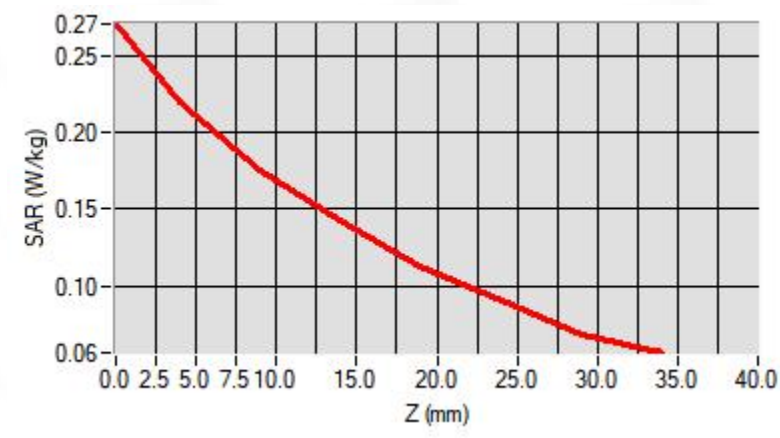
Maximum location: X=-13.00, Y=41.00 ; SAR Peak: 0.27 W/kg

D. SAR 1g & 10g

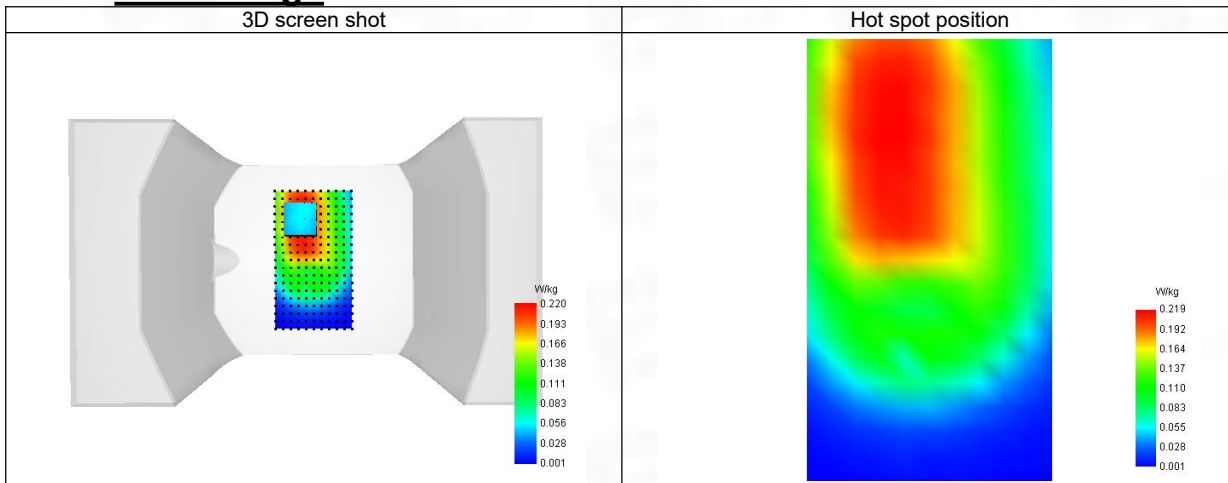
SAR 10g (W/Kg)	0.162
SAR 1g (W/Kg)	0.215
Variation (%)	-2.790
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.545455

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.271	0.220	0.175	0.143	0.113	0.091	0.069



F. 3D Image



17-Head with front position in dist. 0mm on Channel 23060 in LTE band 12

SAR Measurement at LTE band 12 (Cheek, Right)

Date of measurement: 11/10/2025

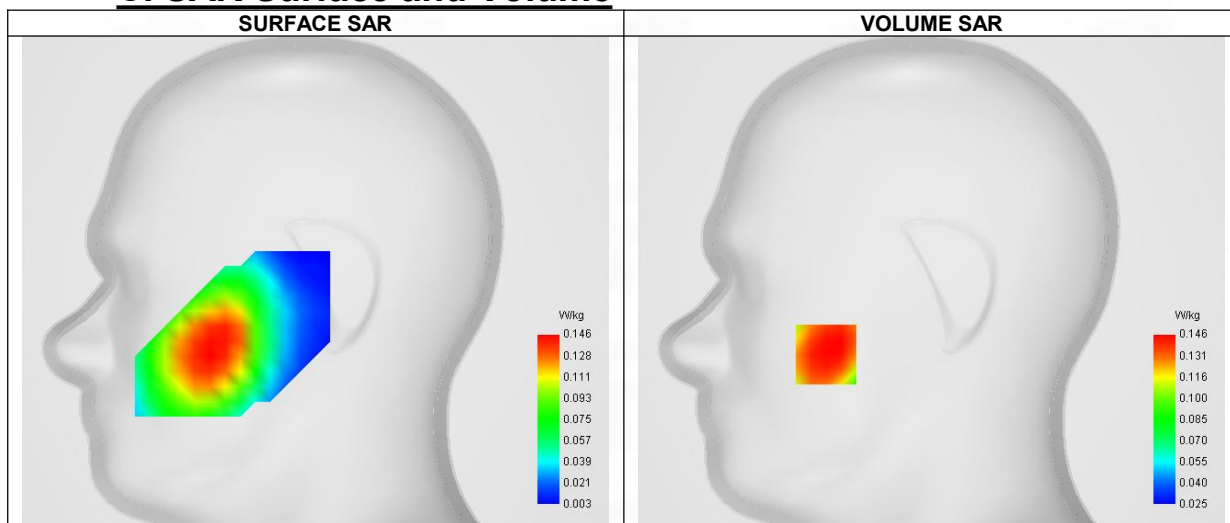
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	LTE band 12
Channels/Frequency	Lower (23060)/ frequency 704.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	699.590
Relative permittivity (real part)	42.590
Relative permittivity (imaginary part)	22.521
Conductivity (S/m)	0.875

C. SAR Surface and Volume



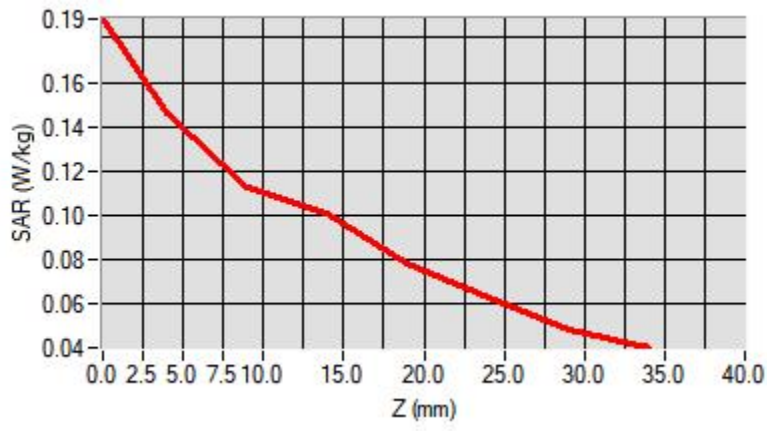
Maximum location: X=-56.00, Y=-39.00 ; SAR Peak: 0.17 W/kg

D. SAR 1g & 10g

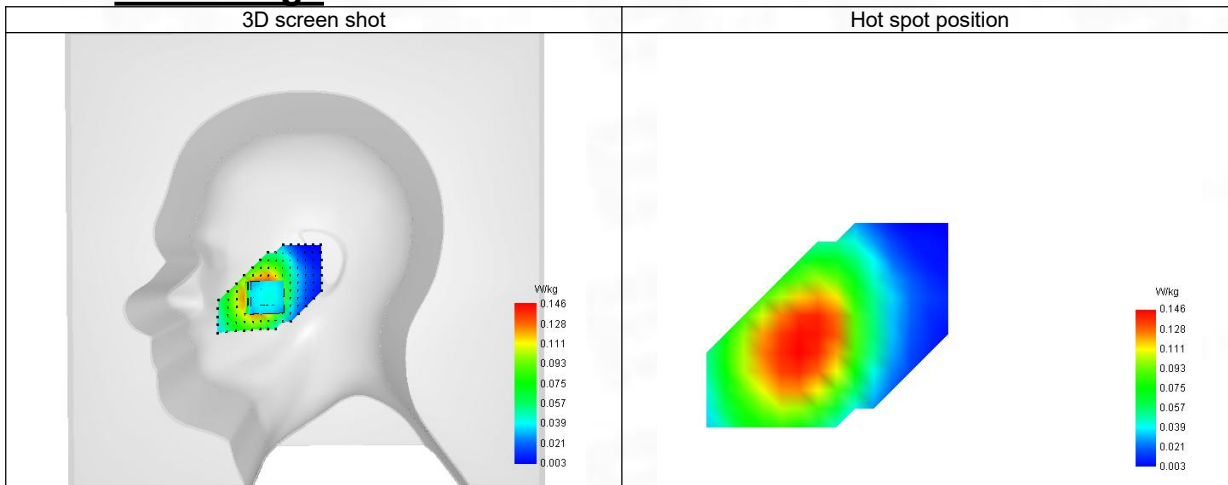
SAR 10g (W/Kg)	0.113
SAR 1g (W/Kg)	0.143
Variation (%)	-1.950
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	76.712329

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.188	0.146	0.112	0.101	0.078	0.063	0.048



F. 3D Image



18-Body with front position in dist. 10mm on Channel 23060 in LTE band 12

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

Date of measurement: 11/10/2025

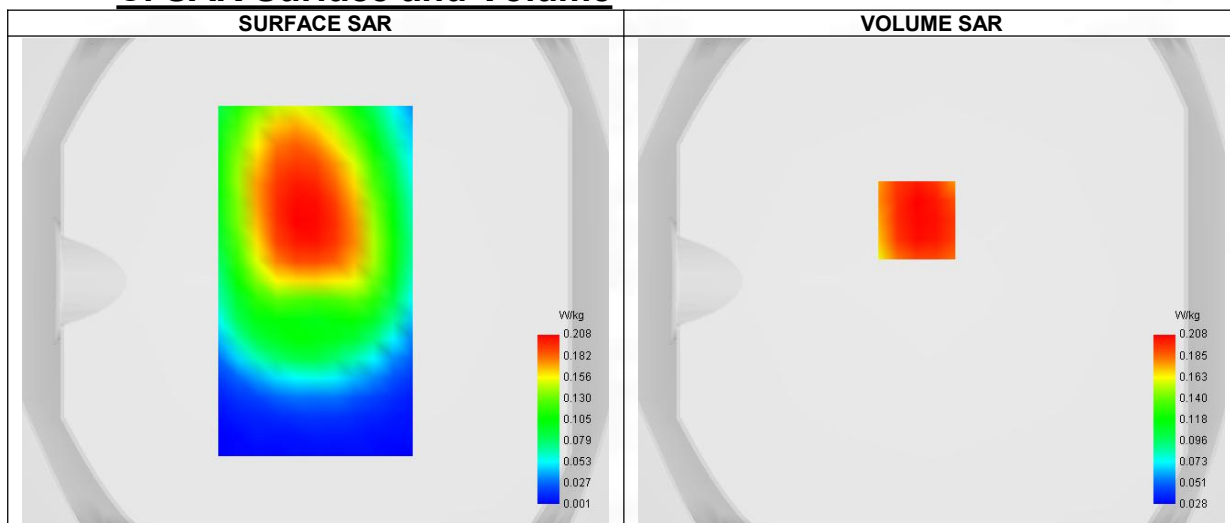
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Channels/Frequency	Lower (23060)/ frequency 704.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	699.590
Relative permittivity (real part)	42.590
Relative permittivity (imaginary part)	22.521
Conductivity (S/m)	0.875

C. SAR Surface and Volume



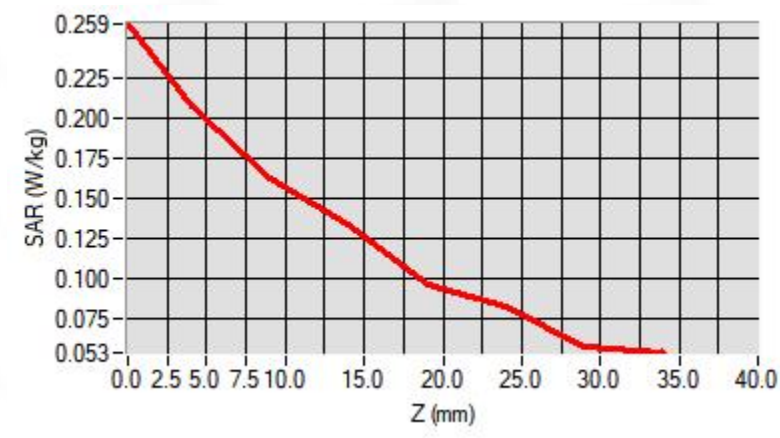
Maximum location: X=-6.00, Y=25.00 ; SAR Peak: 0.25 W/kg

D. SAR 1g & 10g

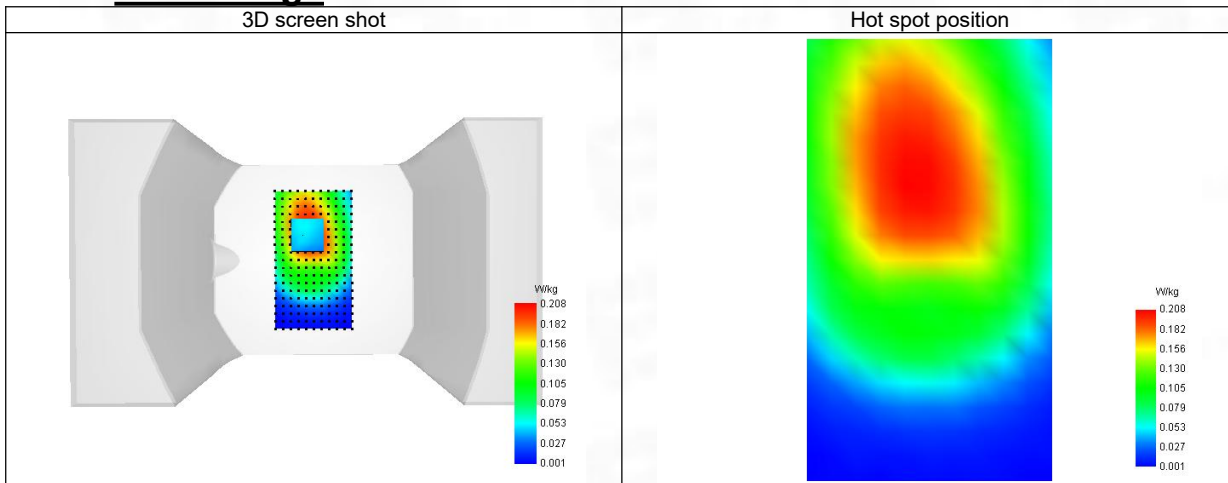
SAR 10g (W/Kg)	0.155
SAR 1g (W/Kg)	0.202
Variation (%)	-1.520
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	77.884615

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.259	0.208	0.162	0.133	0.096	0.083	0.057



F. 3D Image



19-Head with front position in dist. 0mm on Channel 23330 in LTE band 14

SAR Measurement at LTE band 14 (Cheek, Right)

Date of measurement: 11/10/2025

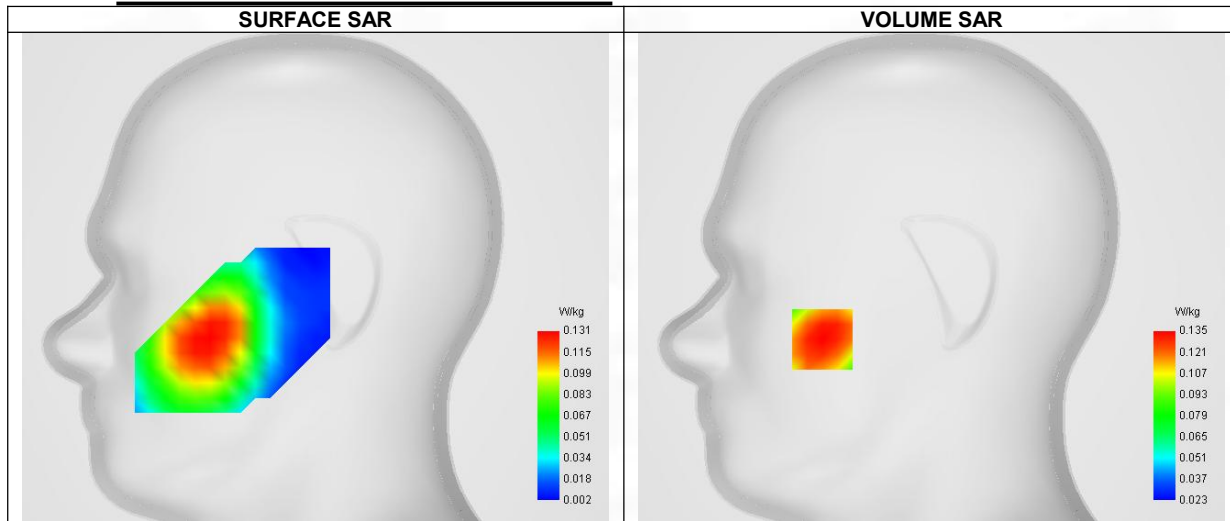
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	LTE band 14
Channels/Frequency	Middle (23330)/ frequency 793.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	25
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	793.090
Relative permittivity (real part)	42.130
Relative permittivity (imaginary part)	20.494
Conductivity (S/m)	0.888

C. SAR Surface and Volume



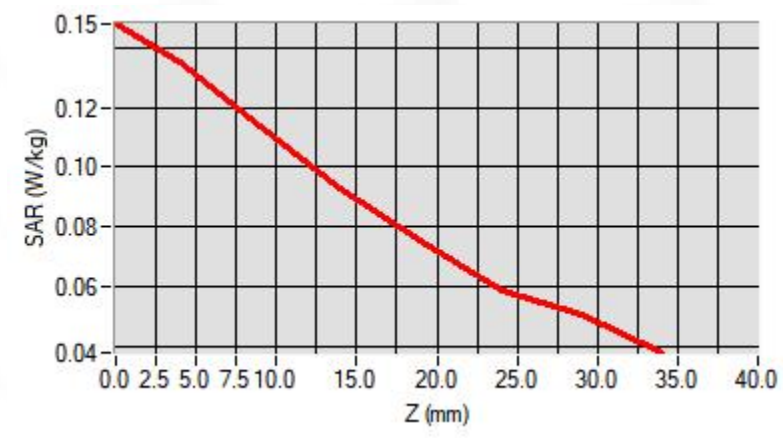
Maximum location: X=-58.00, Y=-33.00 ; SAR Peak: 0.15 W/kg

D. SAR 1g & 10g

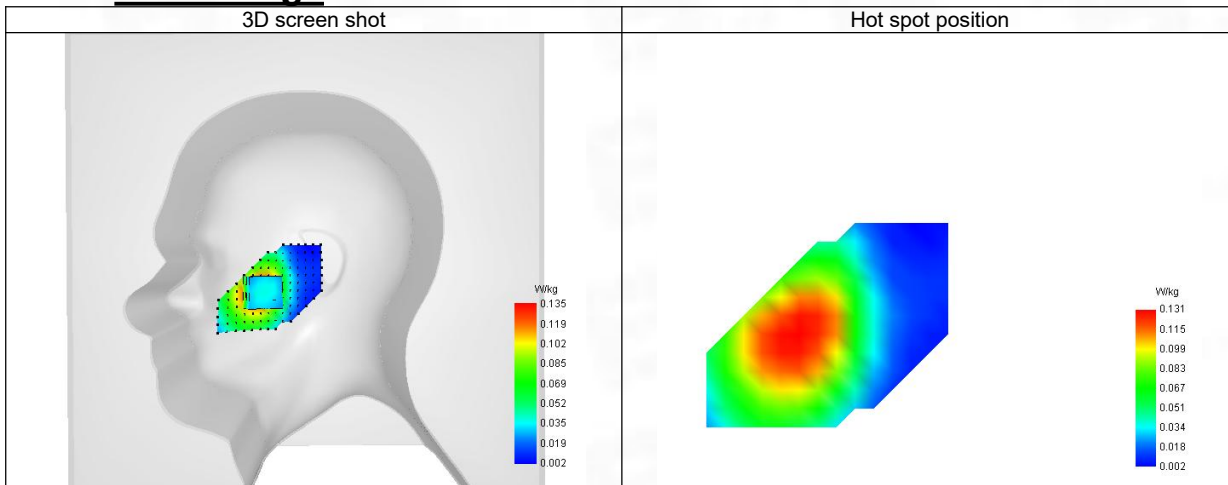
SAR 10g (W/Kg)	0.101
SAR 1g (W/Kg)	0.130
Variation (%)	-2.370
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	78.985507

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.148	0.138	0.109	0.093	0.075	0.059	0.050



F. 3D Image



20-Body with front position in dist. 10mm on Channel 23330 in LTE band 14

SAR Measurement at LTE band 14 (Body, Validation Plane)

Date of measurement: 11/10/2025

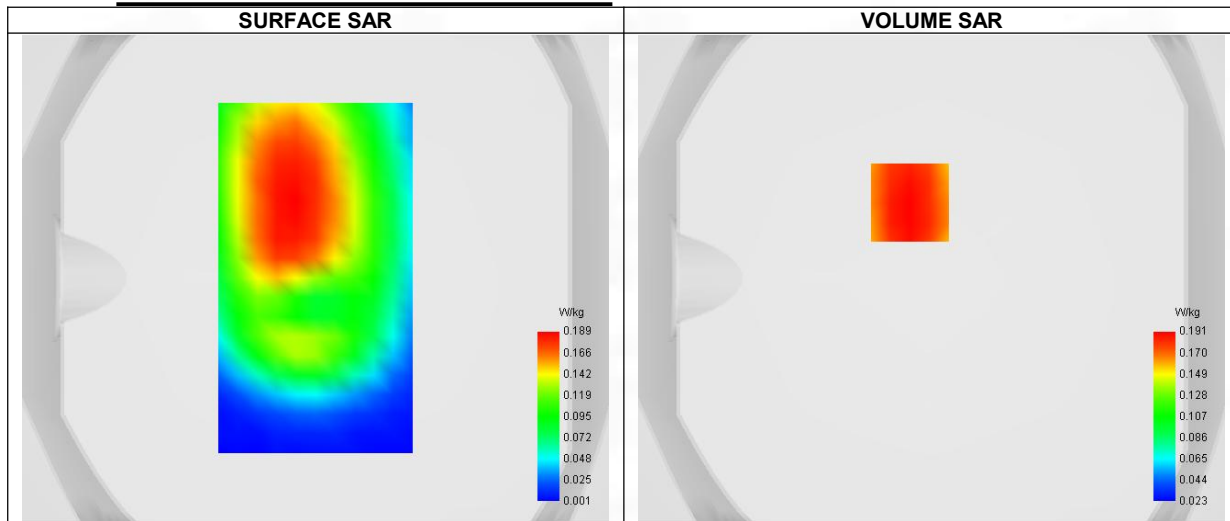
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 14
Channels/Frequency	Middle (23330)/ frequency 793.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	25
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	793.090
Relative permittivity (real part)	42.130
Relative permittivity (imaginary part)	20.494
Conductivity (S/m)	0.888

C. SAR Surface and Volume



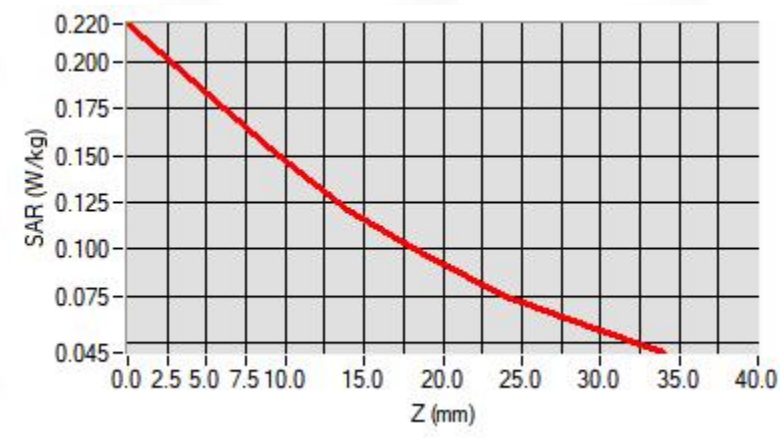
Maximum location: X=-9.00, Y=31.00 ; SAR Peak: 0.23 W/kg

D. SAR 1g & 10g

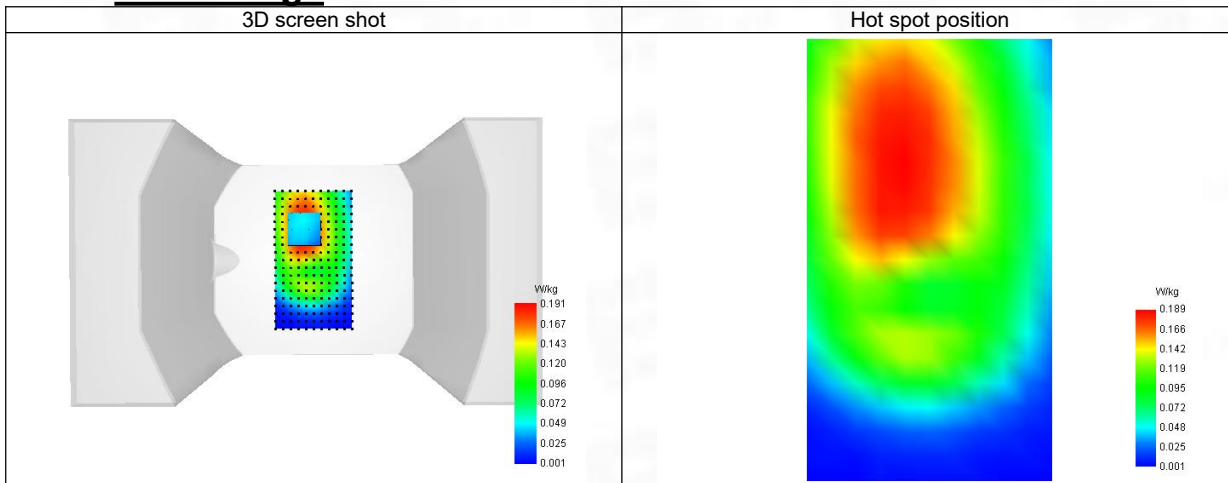
SAR 10g (W/Kg)	0.136
SAR 1g (W/Kg)	0.185
Variation (%)	-2.810
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.057592

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.220	0.191	0.151	0.121	0.096	0.074	0.060



F. 3D Image



21-Head with front position in dist. 0mm on Channel 23780 in LTE band 17

SAR Measurement at LTE band 17 (Cheek, Right)

Date of measurement: 11/10/2025

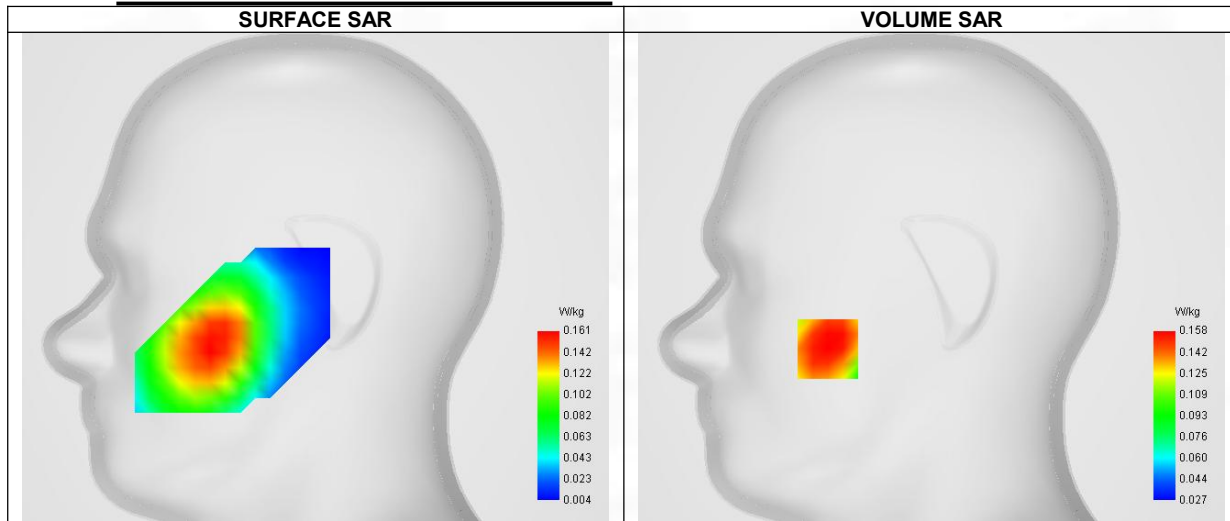
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	LTE band 17
Channels/Frequency	Lower (23780)/ frequency 709.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	49
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	713.410
Relative permittivity (real part)	42.522
Relative permittivity (imaginary part)	22.221
Conductivity (S/m)	0.877

C. SAR Surface and Volume



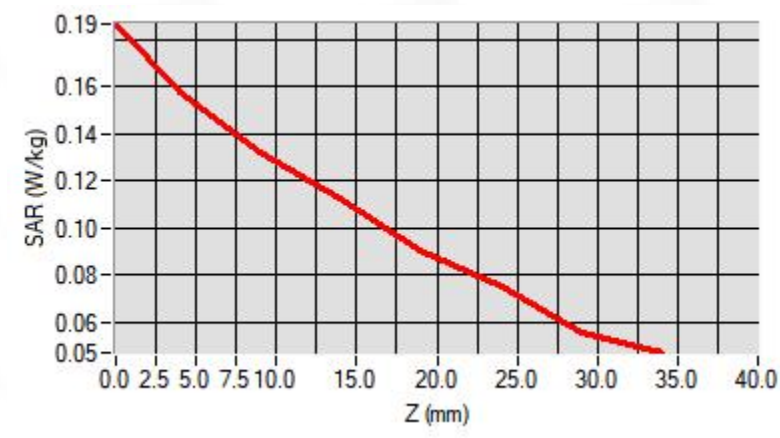
Maximum location: X=-55.00, Y=-38.00 ; SAR Peak: 0.19 W/kg

D. SAR 1g & 10g

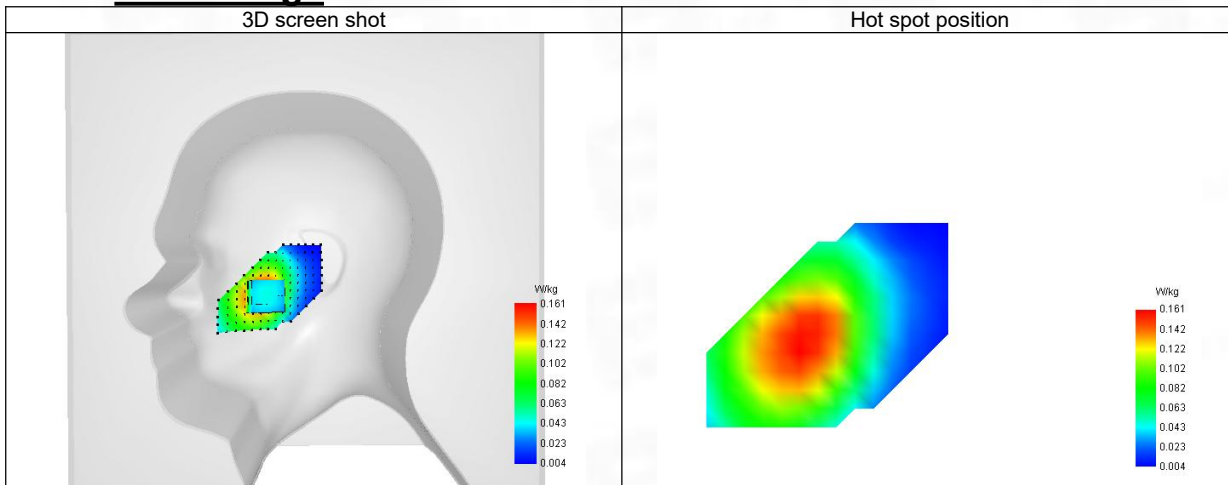
SAR 10g (W/Kg)	0.122
SAR 1g (W/Kg)	0.156
Variation (%)	-0.260
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.874214

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.187	0.159	0.127	0.113	0.090	0.075	0.055



F. 3D Image



22-Body with front position in dist. 10mm on Channel 23780 in LTE band 17

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

Date of measurement: 11/10/2025

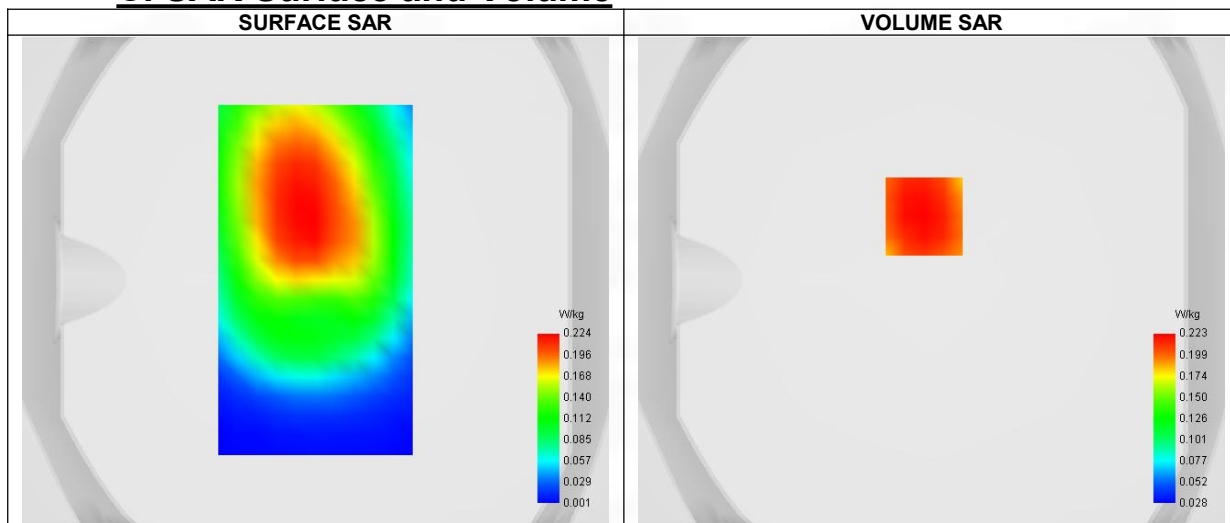
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 17
Channels/Frequency	Lower (23780)/ frequency 709.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	49
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	713.410
Relative permittivity (real part)	42.522
Relative permittivity (imaginary part)	22.221
Conductivity (S/m)	0.877

C. SAR Surface and Volume



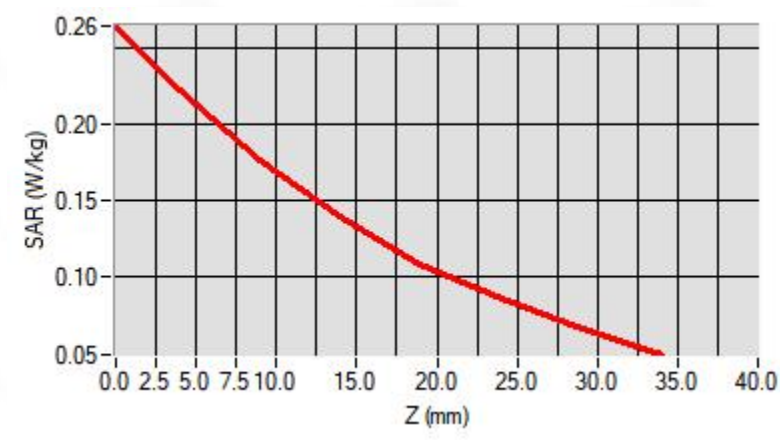
Maximum location: X=-3.00, Y=26.00 ; SAR Peak: 0.27 W/kg

D. SAR 1g & 10g

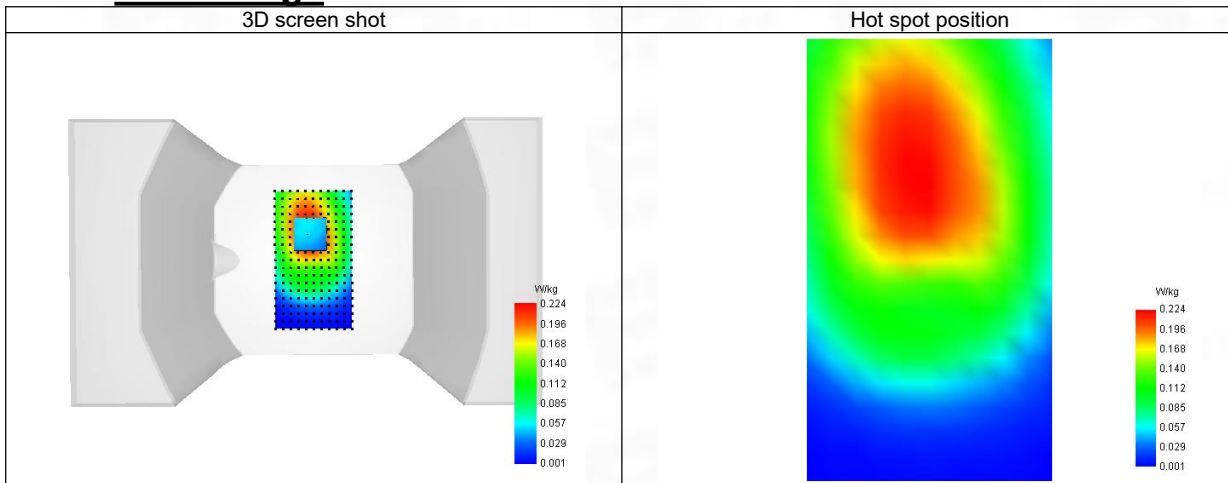
SAR 10g (W/Kg)	0.162
SAR 1g (W/Kg)	0.216
Variation (%)	-1.290
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.428355

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.265	0.223	0.177	0.140	0.109	0.086	0.066



F. 3D Image



23-Head with front position in dist. 0mm on Channel 40140 in LTE band 41

SAR Measurement at LTE band 41 (Cheek, Right)

Date of measurement: 21/10/2025

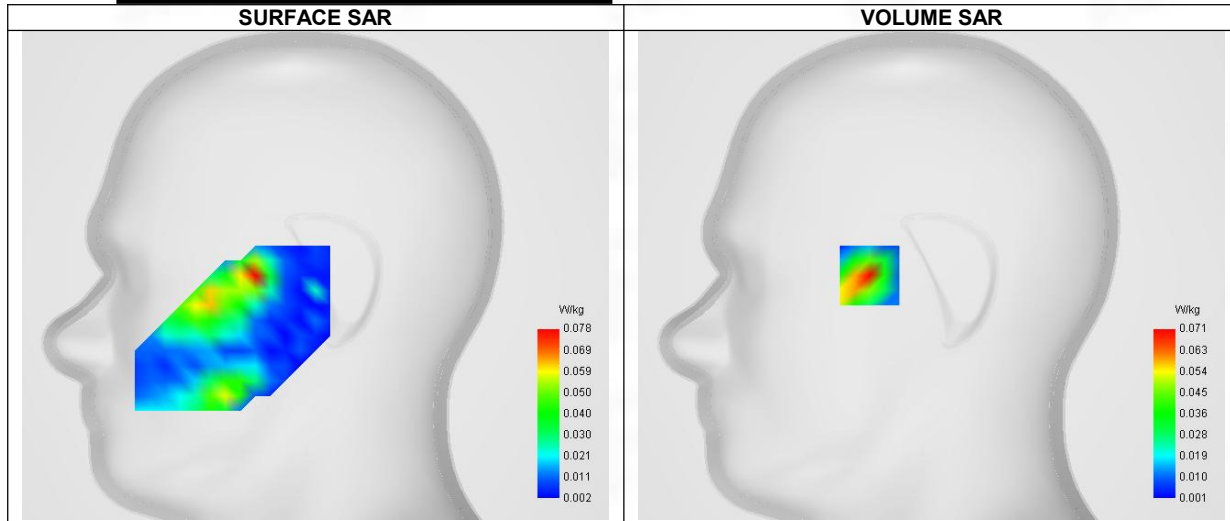
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.27
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	LTE band 41
Channels/Frequency	Lower (40140)/ frequency 2545.000 Mhz
Signal	LTE TDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1
Subframe configuration	0
Special subframe configuration	0
Cyclic prefix	Normal
Duty Cycle (%)	0.61

B. Permittivity

Middle TX Frequency (MHz)	2536.090
Relative permittivity (real part)	39.277
Relative permittivity (imaginary part)	13.154
Conductivity (S/m)	1.890

C. SAR Surface and Volume



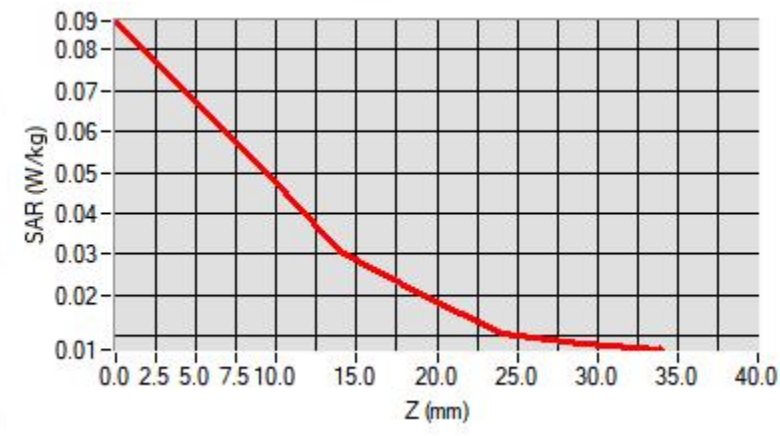
Maximum location: X=-33.00, Y=0.00 ; SAR Peak: 0.09 W/kg

D. SAR 1g & 10g

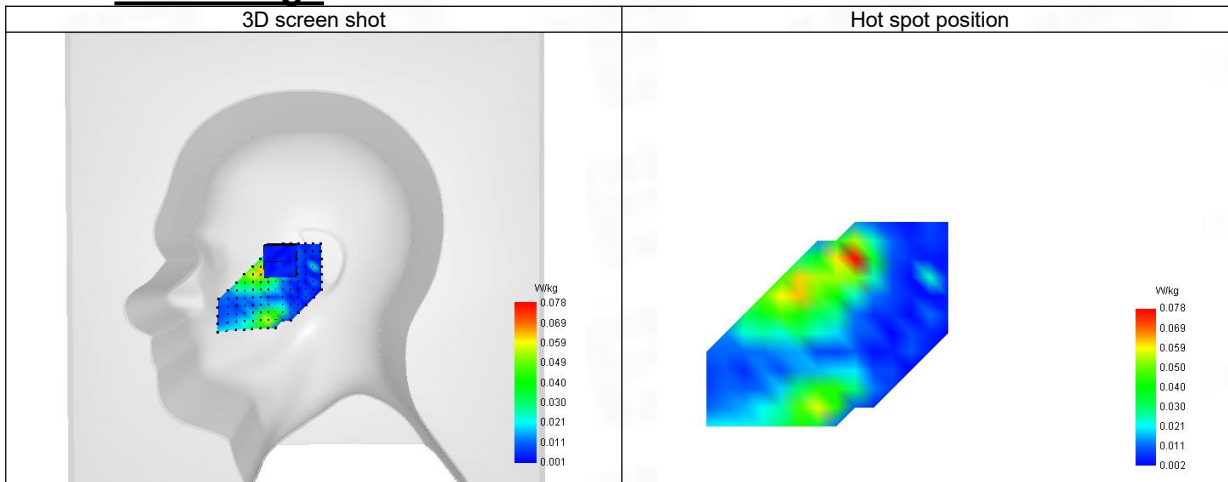
SAR 10g (W/Kg)	0.032
SAR 1g (W/Kg)	0.062
Variation (%)	2.310
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	72.409568

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.087	0.071	0.052	0.031	0.020	0.010	0.008



F. 3D Image



24-Body with back position in dist. 10mm on Channel 40140 in LTE band 41

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

Date of measurement: 21/10/2025

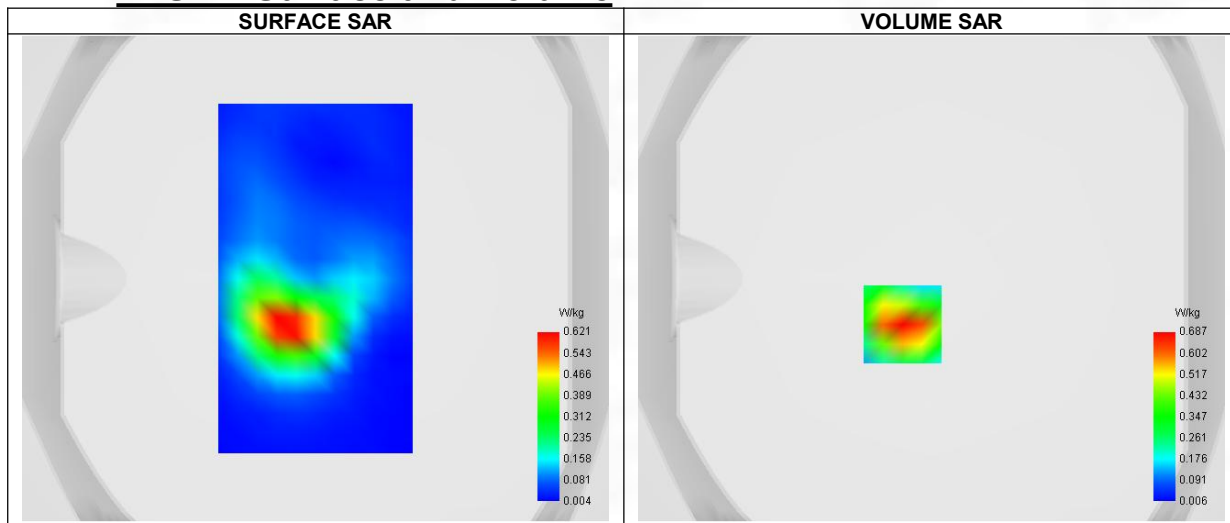
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Channels/Frequency	Lower (40140)/ frequency 2545.000 Mhz
Signal	LTE TDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	0
RB size	1
Subframe configuration	0
Special subframe configuration	0
Cyclic prefix	Normal
Duty Cycle (%)	0.61

B. Permittivity

Middle TX Frequency (MHz)	2536.090
Relative permittivity (real part)	39.277
Relative permittivity (imaginary part)	13.154
Conductivity (S/m)	1.890

C. SAR Surface and Volume

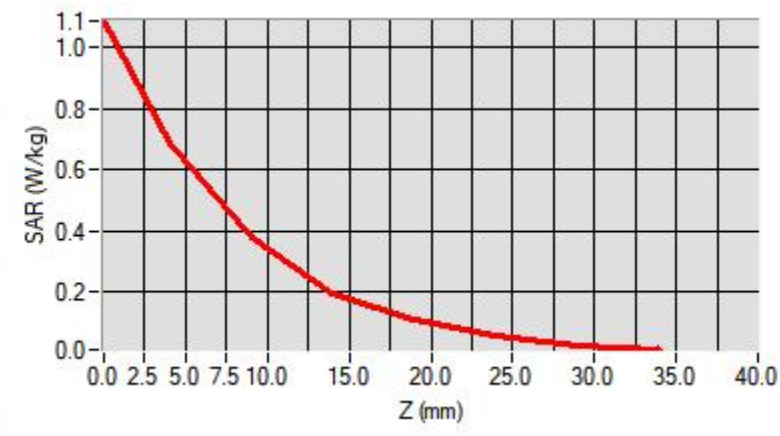


D. SAR 1g & 10g

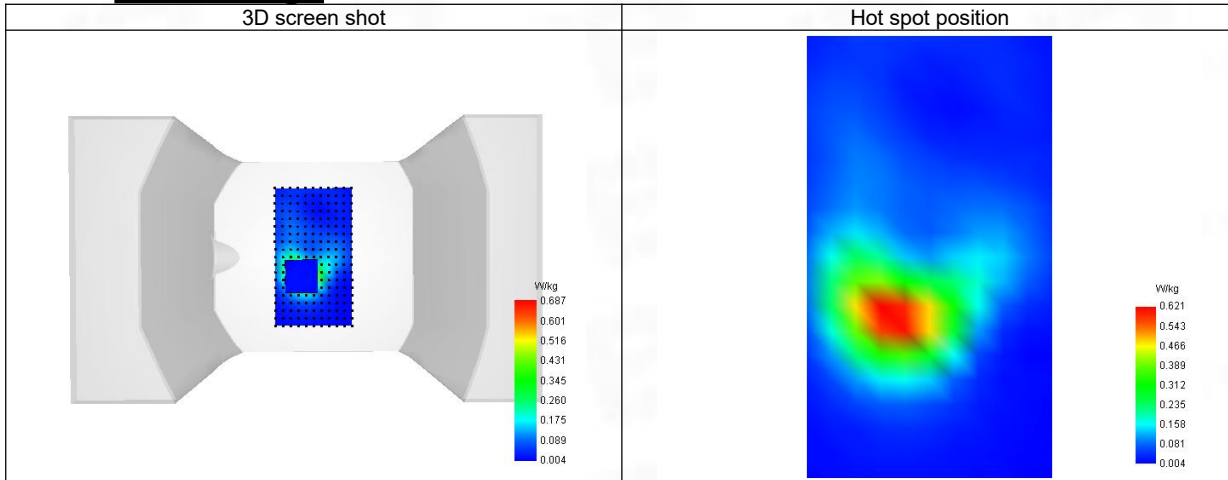
SAR 10g (W/Kg)	0.324
SAR 1g (W/Kg)	0.642
Variation (%)	-2.980
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.862091

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.084	0.687	0.377	0.197	0.110	0.059	0.029



F. 3D Image



25-Head with front position in dist. 0mm on Channel 132322 in LTE band 66

SAR Measurement at LTE band 66 (Cheek, Right)

Date of measurement: 15/10/2025

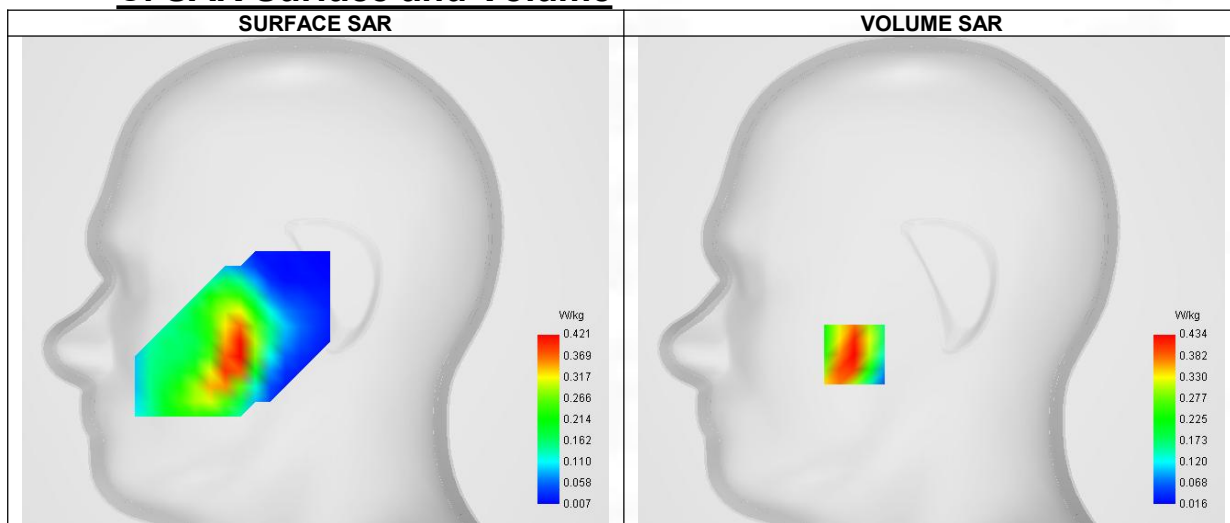
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	LTE band 66
Channels/Frequency	Middle (132322)/ frequency 1745.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	99
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1753.910
Relative permittivity (real part)	40.319
Relative permittivity (imaginary part)	14.852
Conductivity (S/m)	1.356

C. SAR Surface and Volume



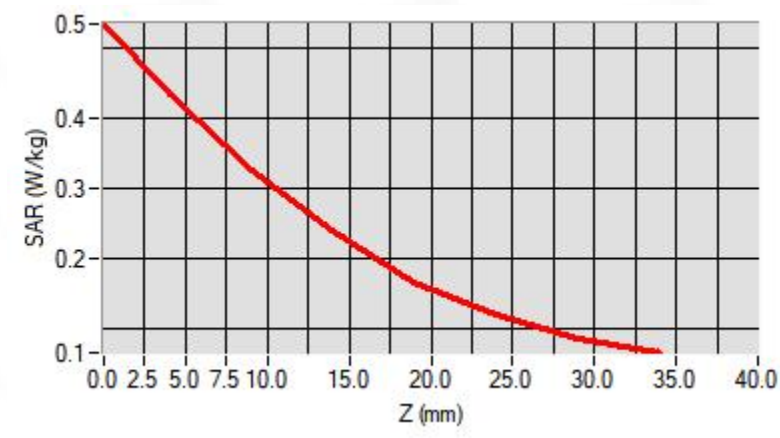
Maximum location: X=-41.00, Y=-39.00 ; SAR Peak: 0.57 W/kg

D. SAR 1g & 10g

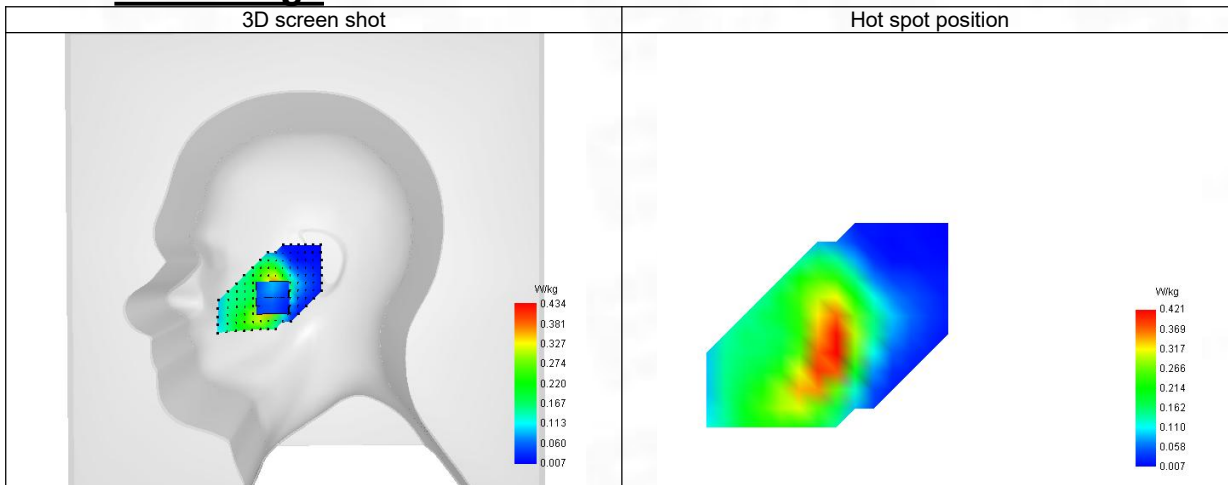
SAR 10g (W/Kg)	0.268
SAR 1g (W/Kg)	0.411
Variation (%)	0.420
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	74.483644

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.533	0.434	0.323	0.238	0.165	0.118	0.086



F. 3D Image



26-Body with back position in dist. 10mm on Channel 132322 in LTE band 66

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

Date of measurement: 15/10/2025

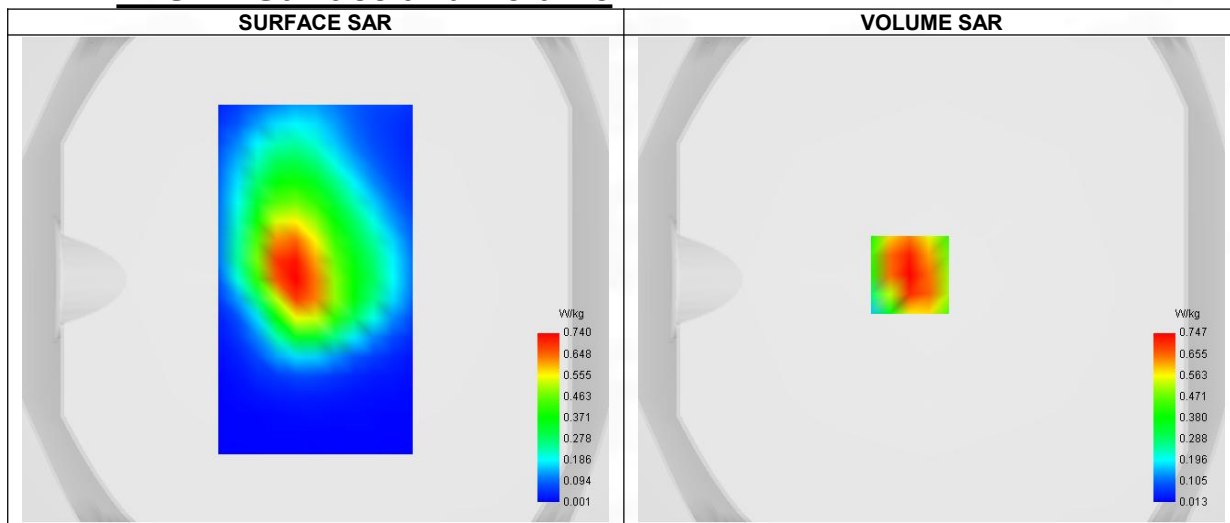
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.20
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 66
Channels/Frequency	Middle (132322)/ frequency 1745.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	99
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1753.910
Relative permittivity (real part)	40.319
Relative permittivity (imaginary part)	14.852
Conductivity (S/m)	1.356

C. SAR Surface and Volume

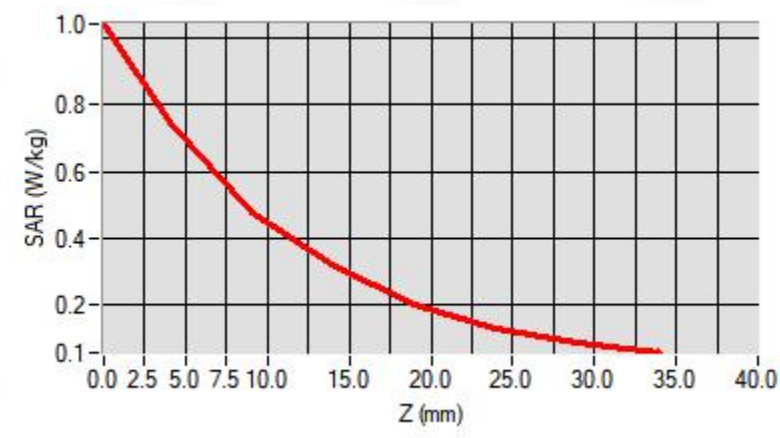


D. SAR 1g & 10g

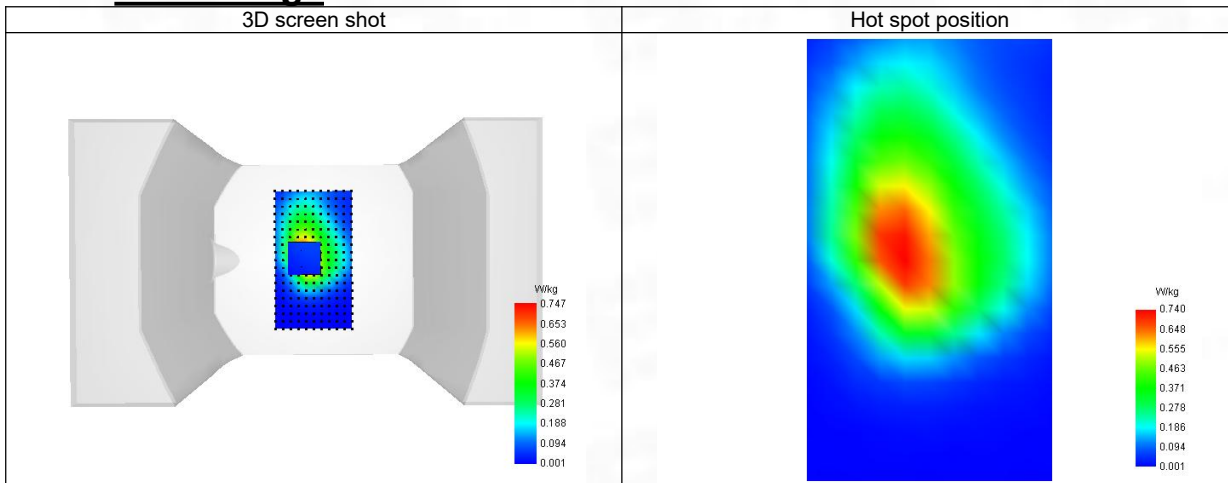
SAR 10g (W/Kg)	0.432
SAR 1g (W/Kg)	0.714
Variation (%)	-4.920
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	64.103541

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.045	0.747	0.479	0.318	0.197	0.122	0.081



F. 3D Image



27-Head with front position in dist. 0mm on Channel 133222 in LTE band 71

SAR Measurement at LTE band 71 (Cheek, Right)

Date of measurement: 11/10/2025

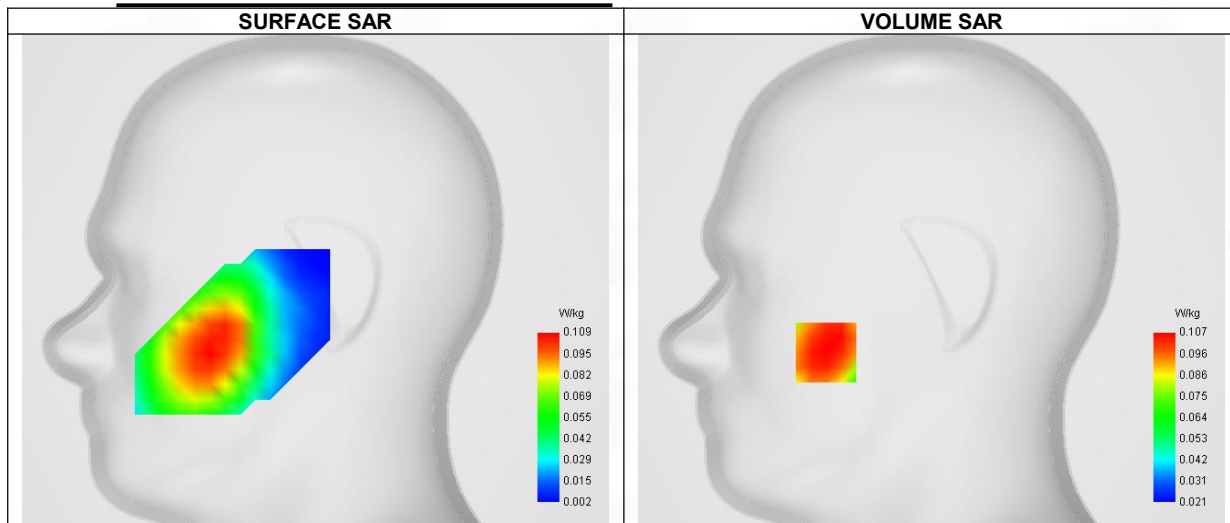
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
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)	42.720
Relative permittivity (imaginary part)	23.096
Conductivity (S/m)	0.872

C. SAR Surface and Volume



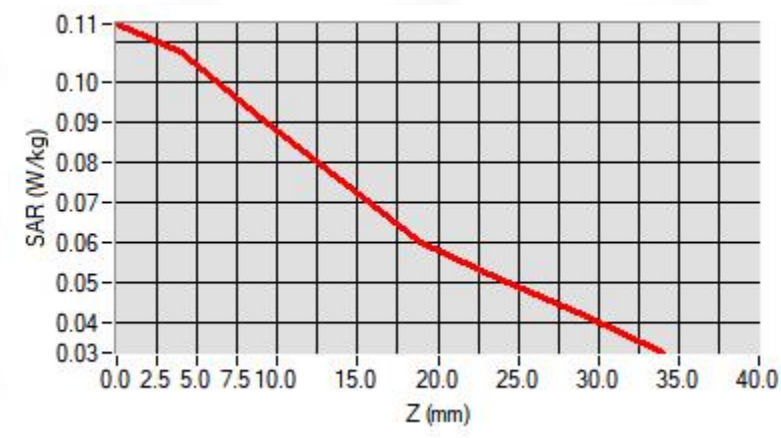
Maximum location: X=-56.00, Y=-39.00 ; SAR Peak: 0.12 W/kg

D. SAR 1g & 10g

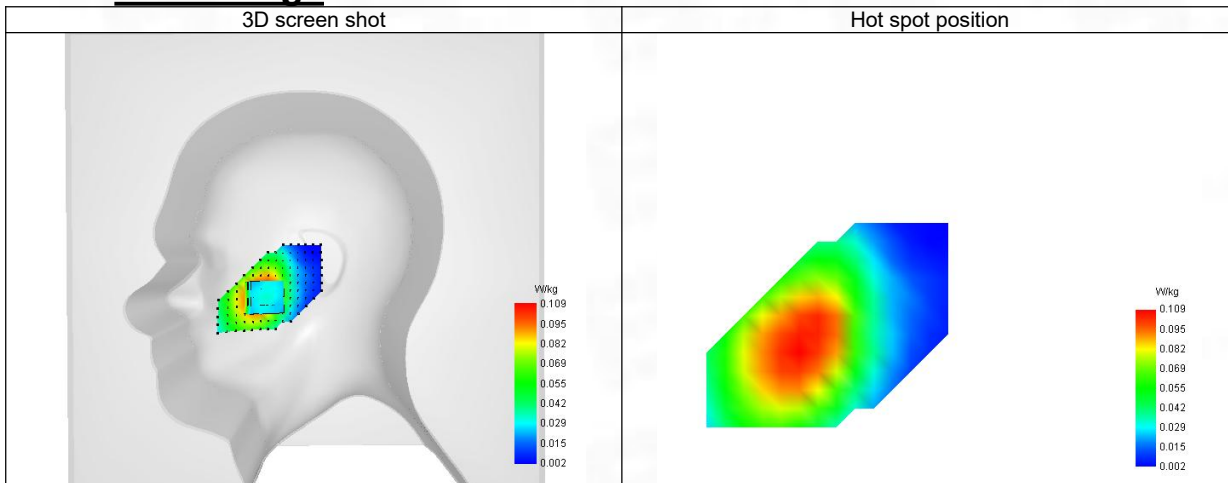
SAR 10g (W/Kg)	0.081
SAR 1g (W/Kg)	0.104
Variation (%)	-1.340
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	79.439252

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.114	0.107	0.085	0.076	0.060	0.050	0.042



F. 3D Image



28-Body with front position in dist. 10mm on Channel 133222 in LTE band 71

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

Date of measurement: 11/10/2025

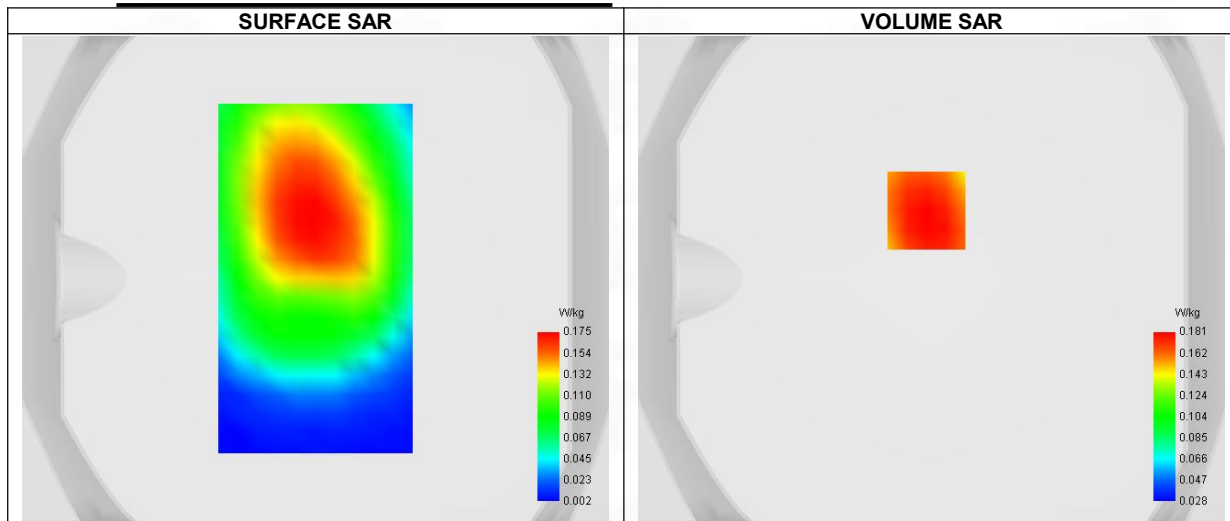
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 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)	42.720
Relative permittivity (imaginary part)	23.096
Conductivity (S/m)	0.872

C. SAR Surface and Volume

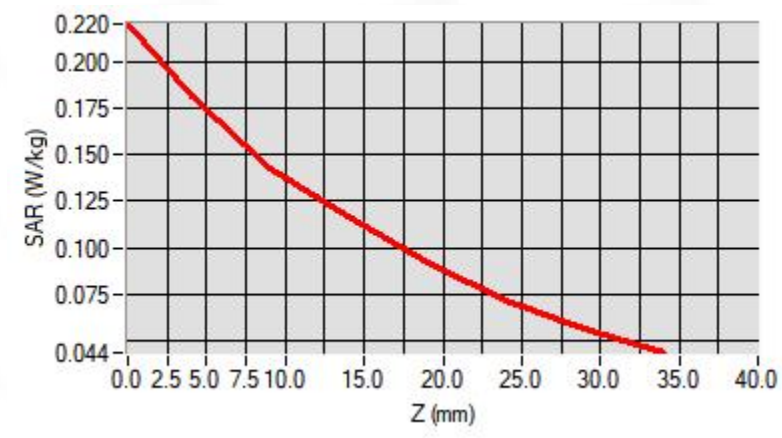


D. SAR 1g & 10g

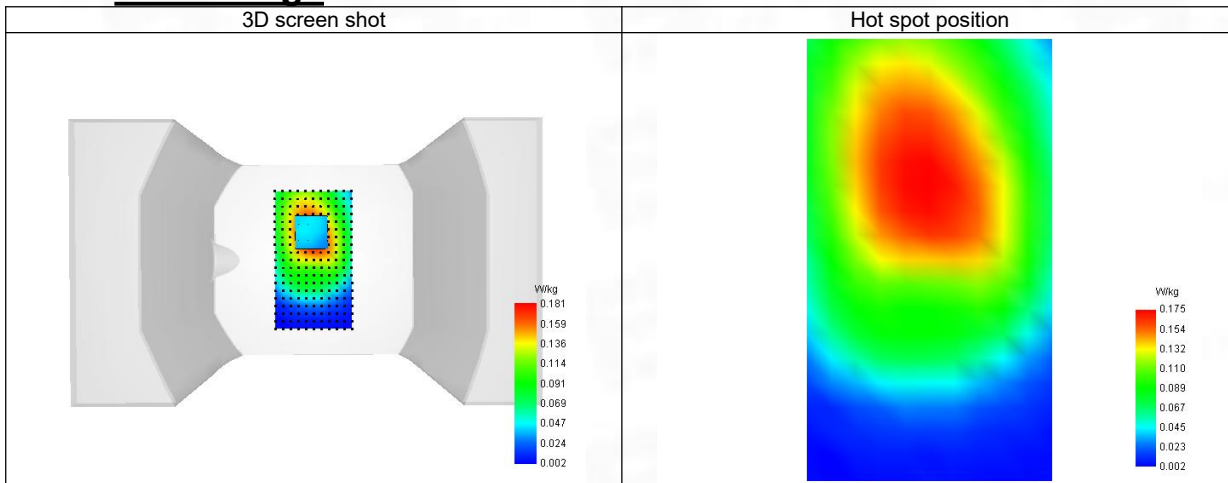
SAR 10g (W/Kg)	0.133
SAR 1g (W/Kg)	0.177
Variation (%)	-2.830
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	78.930156

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.220	0.181	0.143	0.117	0.092	0.072	0.057



F. 3D Image



29-Head with front position in dist. 0mm on Channel 11 in IEEE 802.11b ISM

SAR Measurement at ISM (Cheek, Right)

Date of measurement: 20/10/2025

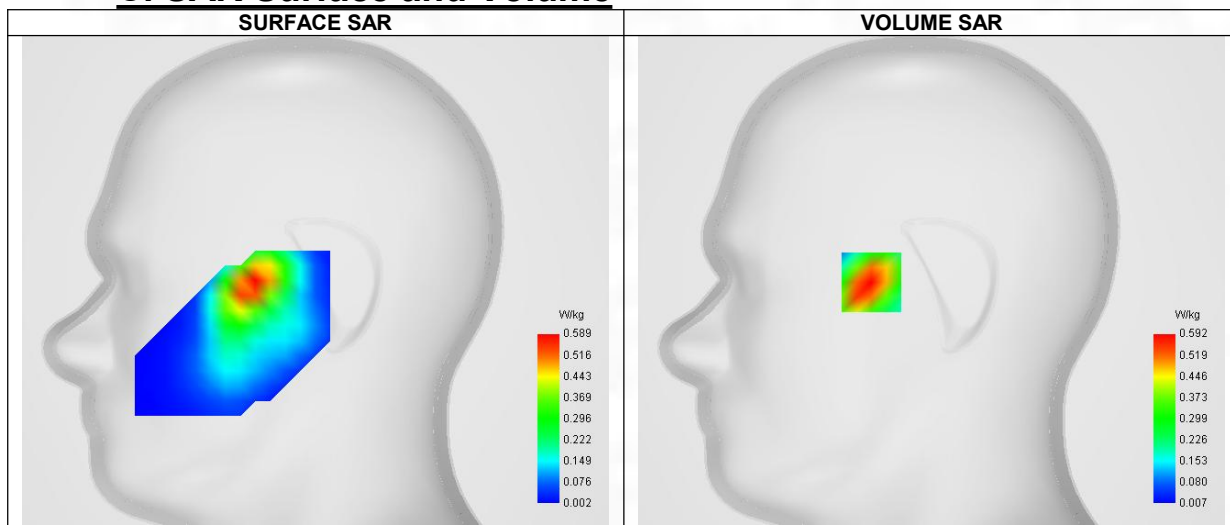
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Right head
Device Position	Cheek
Band	ISM
Channels/Frequency	Higher (11)/ frequency 2462.000 Mhz
Signal	IEEE 802.11 b

B. Permittivity

Middle TX Frequency (MHz)	2462.000
Relative permittivity (real part)	39.317
Relative permittivity (imaginary part)	13.493
Conductivity (S/m)	1.832

C. SAR Surface and Volume



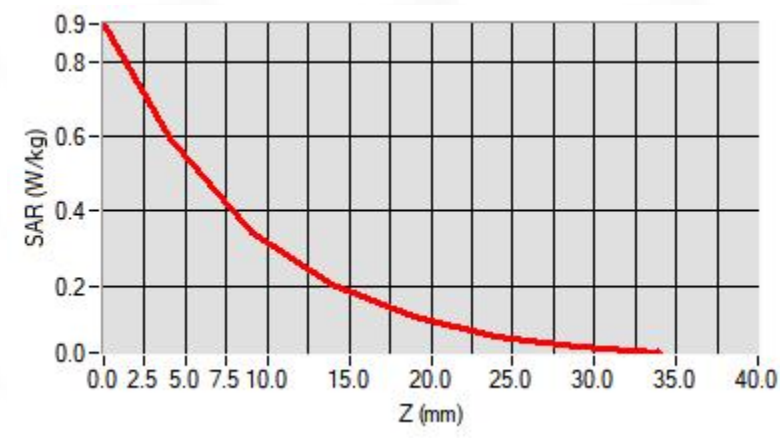
Maximum location: X=-32.00, Y=-1.00 ; SAR Peak: 0.90 W/kg

D. SAR 1g & 10g

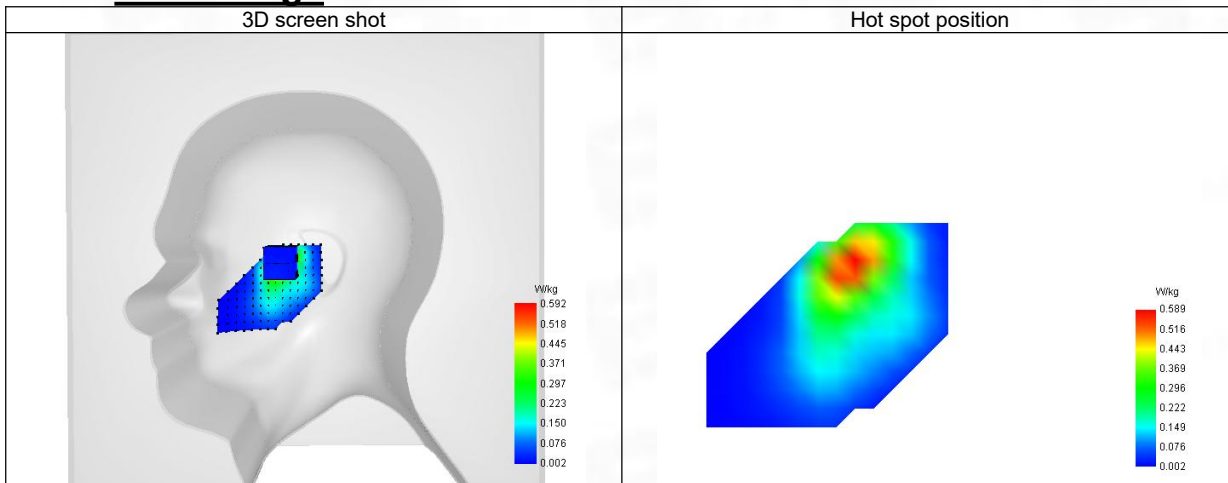
SAR 10g (W/Kg)	0.300
SAR 1g (W/Kg)	0.562
Variation (%)	2.290
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	57.583256

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.899	0.592	0.341	0.206	0.116	0.064	0.038



F. 3D Image



30-Body with back position in dist. 10mm on Channel 11 in IEEE 802.11b ISM

SAR Measurement at ISM (Body, Validation Plane)

Date of measurement: 20/10/2025

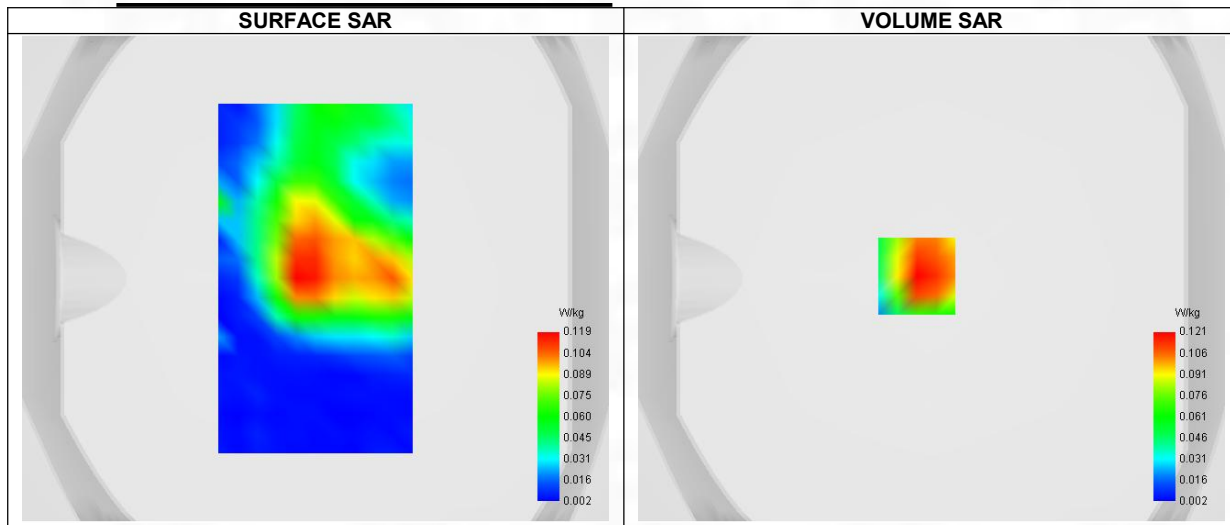
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.40
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	ISM
Channels/Frequency	Higher (11)/ frequency 2462.000 Mhz
Signal	IEEE 802.11 b

B. Permittivity

Middle TX Frequency (MHz)	2462.000
Relative permittivity (real part)	39.317
Relative permittivity (imaginary part)	13.493
Conductivity (S/m)	1.832

C. SAR Surface and Volume



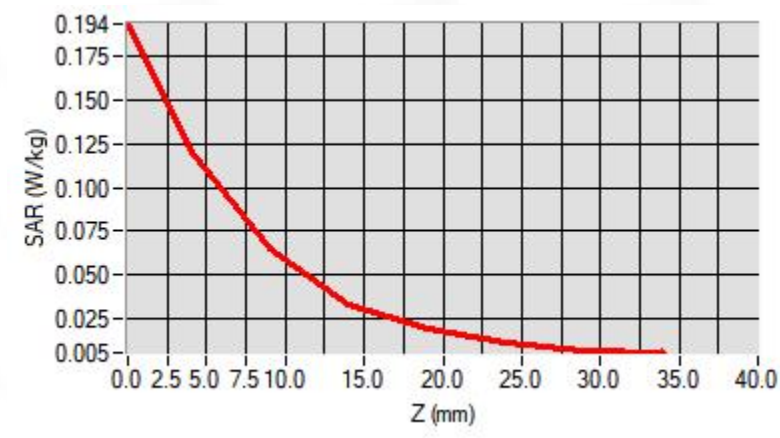
Maximum location: X=-6.00, Y=1.00 ; SAR Peak: 0.20 W/kg

D. SAR 1g & 10g

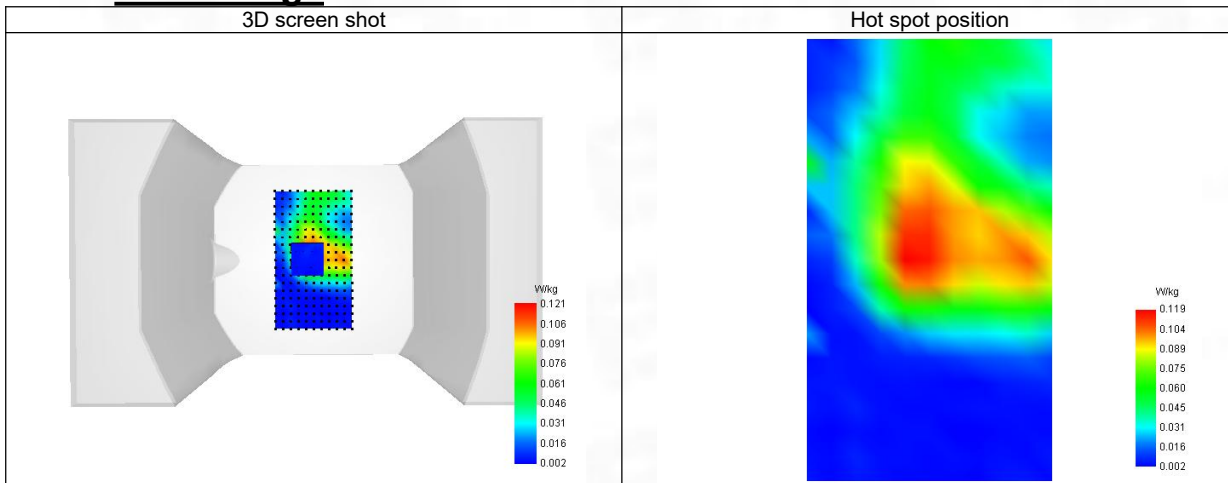
SAR 10g (W/Kg)	0.059
SAR 1g (W/Kg)	0.116
Variation (%)	4.860
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	53.989248

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.194	0.121	0.065	0.033	0.019	0.012	0.006



F. 3D Image



31-Head with front position in dist. 0mm on Channel 39 in Bluetooth

SAR Measurement at Bluetooth (Cheek, Right)

Date of measurement: 20/10/2025

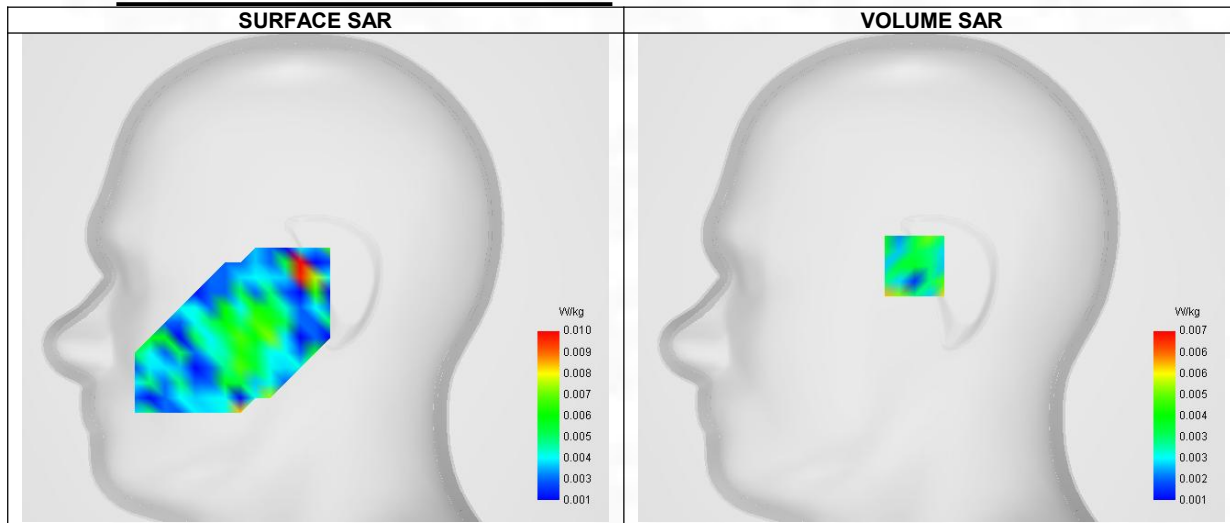
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	2441.000
Relative permittivity (real part)	39.323
Relative permittivity (imaginary part)	13.548
Conductivity (S/m)	1.463

C. SAR Surface and Volume



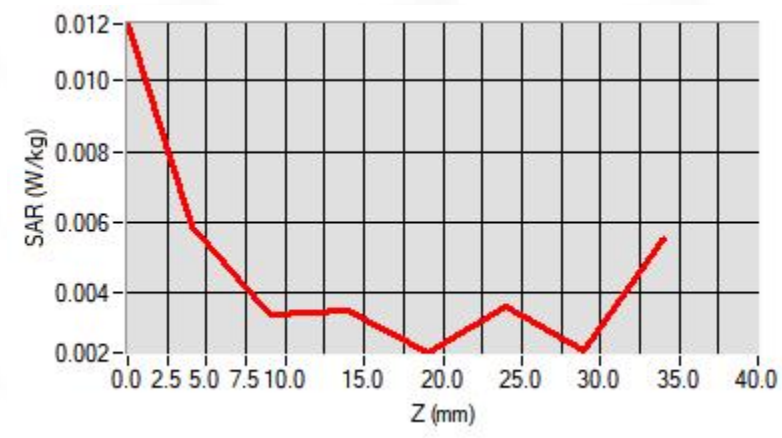
Maximum location: X=-9.00, Y=6.00 ; SAR Peak: 0.01 W/kg

D. SAR 1g & 10g

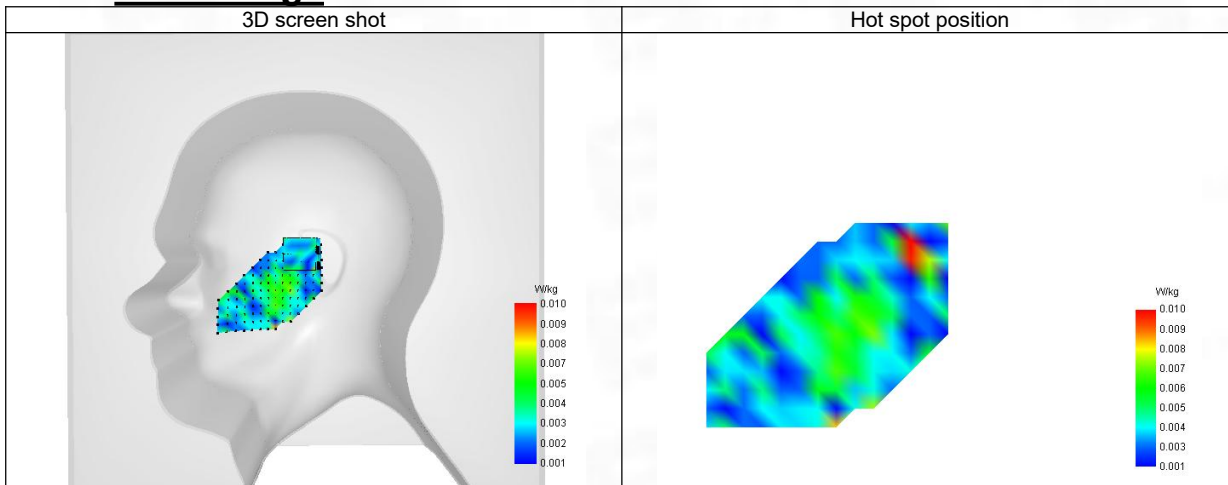
SAR 10g (W/Kg)	0.002
SAR 1g (W/Kg)	0.005
Variation (%)	-1.220
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	61.050299

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.012	0.006	0.003	0.004	0.002	0.004	0.002



F. 3D Image



32-Body with back position in dist. 10mm on Channel 39 in Bluetooth

SAR Measurement at Bluetooth (Body, Validation Plane)

Date of measurement: 20/10/2025

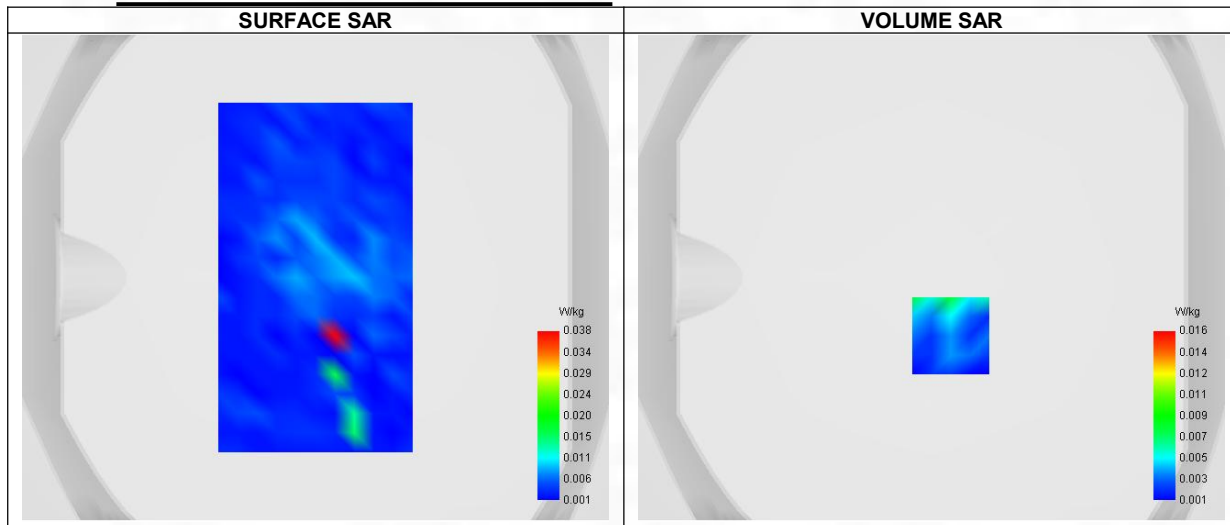
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	2441.000
Relative permittivity (real part)	39.323
Relative permittivity (imaginary part)	13.548
Conductivity (S/m)	1.463

C. SAR Surface and Volume



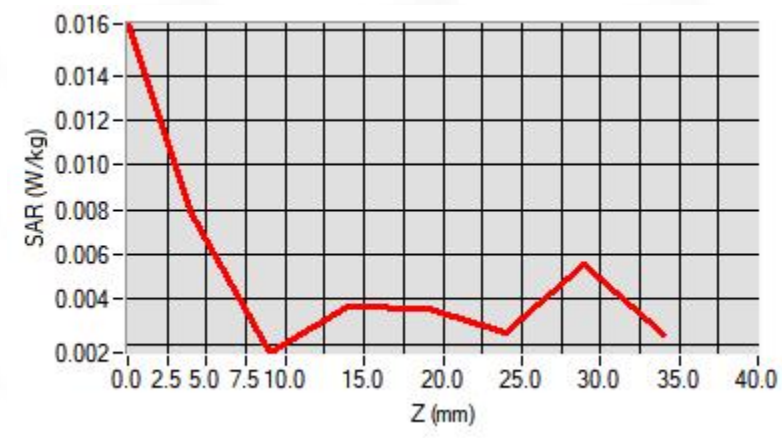
Maximum location: X=8.00, Y=-24.00 ; SAR Peak: 0.02 W/kg

D. SAR 1g & 10g

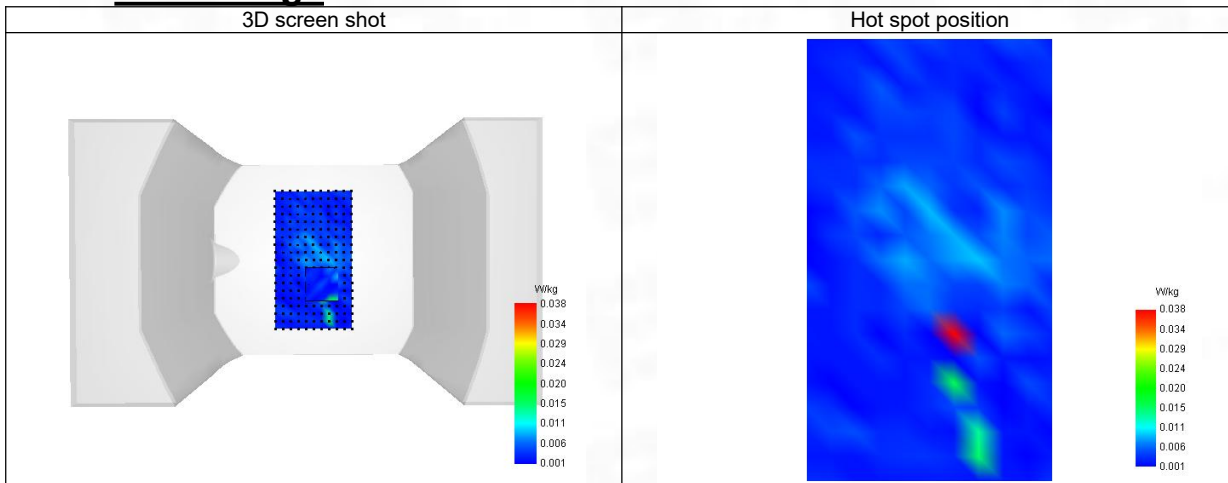
SAR 10g (W/Kg)	0.003
SAR 1g (W/Kg)	0.007
Variation (%)	3.600
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	20.603324

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.016	0.008	0.002	0.004	0.004	0.002	0.006

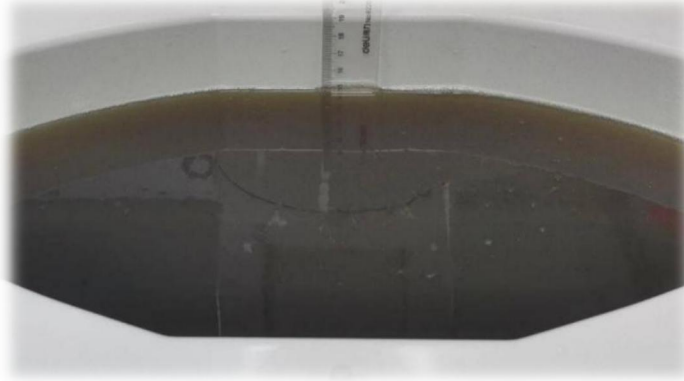


F. 3D Image

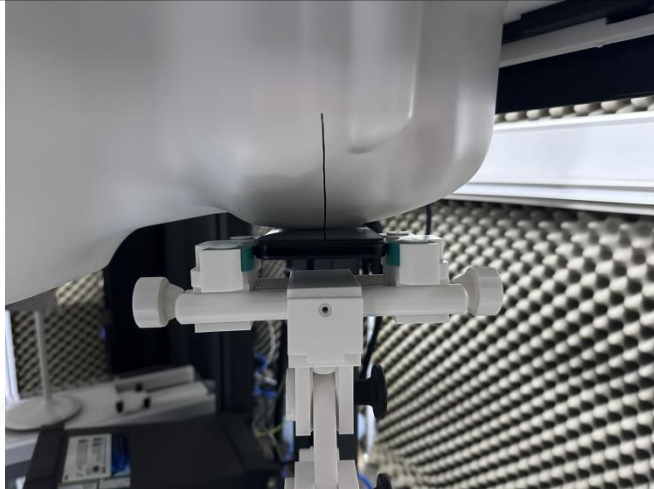


ANNEX D SAR Test Setup Photos

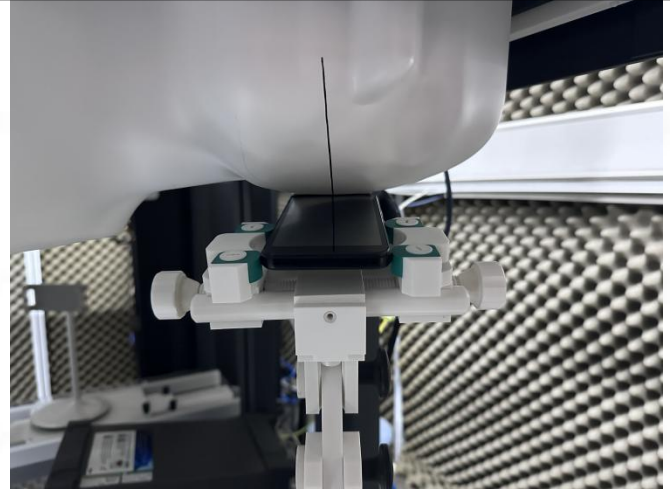
Reference Photo: simulation liquid depth 15cm



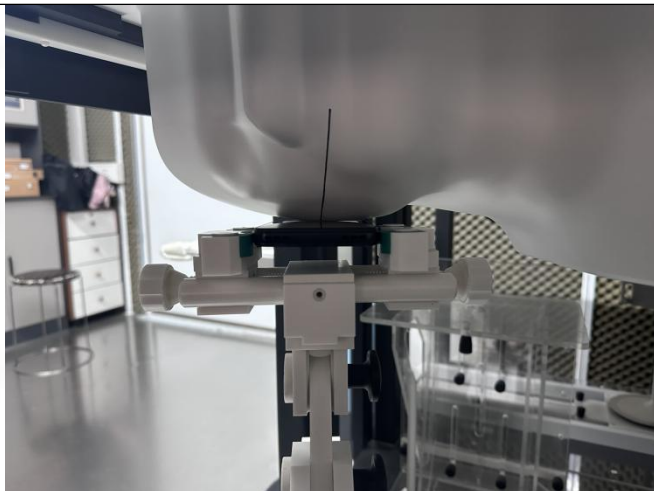
Reference Photos



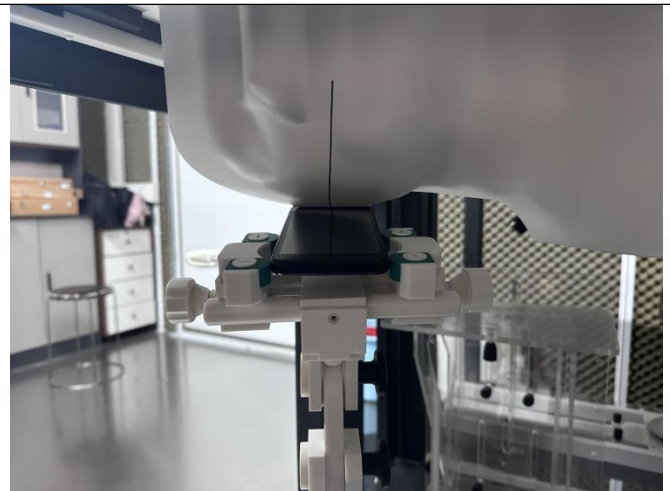
Left Head - Cheek



Left Head - Tilt



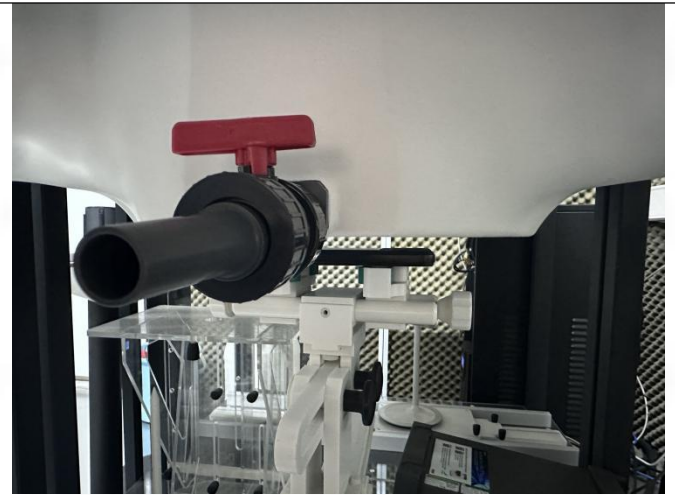
Right Head - Cheek



Right Head - Tilt



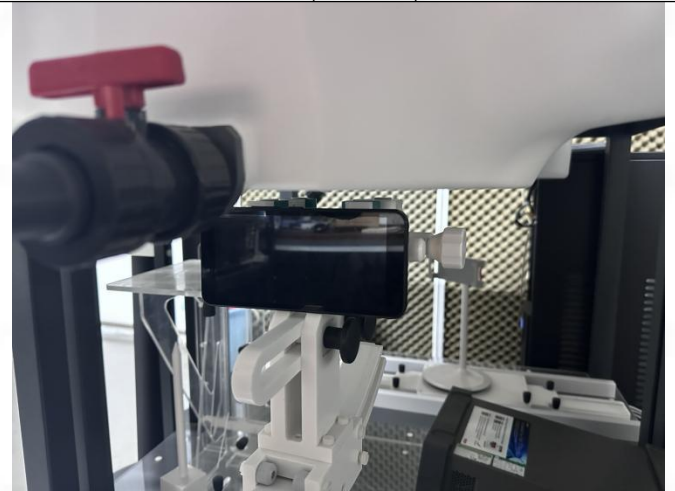
Front (dist. 10mm)



Back (dist. 10mm)



Left (dist. 10mm)



Right (dist. 10mm)



Top (dist. 10mm)



Bottom (dist. 10mm)

ANNEX E EUT External and Internal Photos

Please refer to RF Report.

ANNEX F Calibration Information

Please refer to the document "Calibration.pdf".



BTF Testing Lab (Shenzhen) Co., Ltd.

101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict,
Bao'an District, Shenzhen, China

www.btf-lab.com

--END OF REPORT--