



SAR Test Report

For

Applicant Name:

FOXX Development Inc.

Address:

3480 Preston Ridge Road, Suite500, Alpharetta, GA 30005, USA

EUT Name:

Tablet PC

Brand Name:

MIRO, FOXX, FOXXD, AIRVOICE, FOXXD HTH

Model Number:

C10 Pro

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:

BTF250620R00501

Test Standards:

FCC 47 CFR§2.1093 IEEE Std. 1528-2013
IEEE C95.1-2019 KDB447498 D01 KDB865664 D01
KDB865664 D02 KDB941225 D01 KDB941225 D05
KDB248227 D01 KDB941225 D06 KDB648474 D04
KDB690783 D01

FCC ID:

2AQRM-C10PRO

Test Conclusion:

Pass

Test Date:

2025-07-07 to 2025-07-14

Date of Issue:

2025-07-15

Tested By:

Jim Yin

Jim Yin / Tester

Date:

2025-07-15

Prepared By:

Amenda Zhong

Amenda Zhong / Project Engineer

Date:

2025-07-15

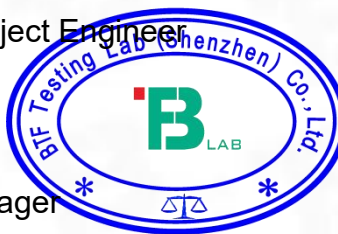
Approved By:

Ryan.CJ

Ryan.CJ / EMC Manager

Date:

2025-07-15



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Revision History		
Version	Issue Date	Revisions Content
R_V0	2025-07-15	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:	FOXX Development Inc.
Address:	3480 Preston Ridge Road, Suite500, Alpharetta, GA 30005, USA

2.2 Manufacturer Information

Company Name:	FOXX Development Inc.
Address:	3480 Preston Ridge Road, Suite500, Alpharetta, GA 30005, USA

2.3 Factory Information

Company Name:	FOXX Development Inc.
Address:	3480 Preston Ridge Road, Suite500, Alpharetta, GA 30005, USA

2.4 General Description of Equipment under Test (EUT)

EUT Name	Tablet PC
Under Test Model Name	C10 Pro
Sample No	BTFSN250620006

2.5 Equipment under Test Ancillary Equipment

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

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EGPRS 850/1900 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network FDD LTE Band 2/4/5/7/12/13/17/66/71 TDD LTE Band 41 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) BT (EDR+BLE)
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	GSM, WCDMA, LTE, WLAN, Bluetooth		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 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 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 12	TX: 698 ~ 716 MHz	RX: 728 ~ 746 MHz
	LTE Band 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 MHz
	LTE Band 17	TX: 704 ~ 716 MHz	RX: 734 ~ 746 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2200 MHz
	LTE Band 71	TX: 663 ~ 698 MHz	RX: 617 ~ 652 MHz
	LTE Band 41	2496 ~ 2690 MHz	
	802.11b/g/n(HT20)	2412 ~ 2462 MHz	
	802.11n(HT40)	2422 ~ 2452 MHz	
	802.11a /802.11n(HT20/40) /802.11ac(HT20/40/80)	U-NII-1: 5180 MHz ~ 5240 MHz, U-NII-2A: 5260 MHz ~ 5320 MHz, U-NII-2C: 5500 MHz ~ 5700 MHz, U-NII-3: 5745 MHz ~ 5825 MHz	
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
Hotspot Function	Support		
Power Reduction	Not Support		
Exposure Category	General Population/Uncontrolled exposure		
EUT Stage	Portable Device		
Product	Type		
	☐ Production unit	☒ Identical prototype	

3. Summary of Test Results

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
3	IEEE C95.1-2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz
4	KDB447498 D01	General RF Exposure Guidance v06
5	KDB865664 D01	SAR measurement 100MHz to 6GHz v01r04
6	KDB865664 D02	RF Exposure Reporting v01r02
7	KDB941225 D01	3G SAR Procedures v03r01
8	KDB941225 D05	SAR for LTE Devices v02r05
9	KDB248227 D01	802.11 Wi-Fi SAR v02r02
10	KDB941225 D06	Hotspot Mode v02r01
11	KDB648474 D04	Handset SAR v01r03
12	KDB690783 D01	SAR Listings on Grant v01r03

3.2 Device Category and SAR Limit

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

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

NOTE:

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

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

3.3 Test Result Summary

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

<Highest Reported standalone SAR>

Exposure Position	Frequency Band	Reported SAR (W/kg)	Equipment Class	Highest Reported SAR (W/kg)
Hotspot(Body) 1-g SAR (0 mm Gap)	GSM 850	0.202	PCB	0.968
	GSM 1900	0.493		
	WCDMA Band II	0.968		
	WCDMA Band IV	0.506		
	WCDMA Band V	0.132		
	LTE Band 2	0.785		
	LTE Band 4	0.559		
	LTE Band 5	0.140		
	LTE Band 7	0.460		
	LTE Band 12	0.159		
	LTE Band 13	0.118		
	LTE Band 17	0.193		
	LTE Band 41	0.614		
	LTE Band 66	0.468		
	LTE Band 71	0.082		
	WLAN 2.4 GHz	0.361	DTS	
	WLAN 5.2 GHz	0.428	NII	
	WLAN 5.4 GHz	0.502		
	WLAN 5.6 GHz	0.266		
	WLAN 5.8 GHz	0.304		
	Bluetooth	0.009	DSS	

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

<Highest Reported Simultaneous SAR>

Exposure Position	Simultaneous Configuration	Highest Reported Simultaneous Transmission SAR (W/kg)	Limit (W/kg)	Verdict
Hotspot(Body) 1-g SAR (0 mm Gap)	WCDMA Band II + 5.2G WIFI	1.470	1.6	Pass

3.4 Test Uncertainty

3.4.1 Measurement uncertainty evaluation for SAR test (300MHz to 6GHz)

Uncertainty Budget of 1g/10gpsSAR for DUT with COMOSAR											
Ambiente temperature: 18-25°C & ΔT≤2°C											
Humidity: 30-70%											
Frequency range: 150MHz-7500MHz											
Symbol	Input quantity Xi (source of uncertainty)	PDF _i	Unc. a(x) [±%]	Div. q	u(x)= a(x)/qi	c ₁ 1g	c ₂ 10 g	u(y)= c ₁ *u(xi) 1g [± %]	u(y)= c ₂ *u(xi) 10g [± %]	v _i	Frequency range [MHz]
Measurement System errors											
CF	Probe calibration	N (k=2)	11.00	2.00	5.50	1.00	1.00	5.50	5.50	∞	150-450
			14.00	2.00	7.00	1.00	1.00	7.00	7.00	∞	600-7500
CF _{drift}	Probe calibration drift	R	2.30	1.73	1.33	1.00	1.00	1.33	1.33	∞	150-450
			4.00	1.73	2.31	1.00	1.00	2.31	2.31	∞	600-7500
LIN	Probe linearity	R	4.70	1.73	2.71	1.00	1.00	2.71	2.71	∞	
	Detection limit	R	1.00	1.73	0.58	1.00	1.00	0.58	0.58	∞	
BBS	Broadband signal	R	0.00	1.73	0.00	1.00	1.00	0.00	0.00	∞	
ISO	Axial Isotropy	R	3.50	1.73	2.02	0.71	0.71	1.43	1.43	∞	
	Hemispherical Isotropy	R	5.90	1.73	3.41	0.71	0.71	2.41	2.41	∞	
DAE	Boundary effect	R	1.00	1.73	0.58	1.00	1.00	0.58	0.58	∞	
	Integration time	R	1.40	1.73	0.81	1.00	1.00	0.81	0.81	∞	
	Response time	R	0.00	1.73	0.00	1.00	1.00	0.00	0.00	∞	
	Readout electronics	N	0.50	1.00	0.50	1.00	1.00	0.50	0.50	∞	150-7500
AMB	Noise	R	3.00	1.73	1.73	1.00	1.00	1.73	1.73	∞	
	Reflections	R	3.00	1.73	1.73	1.00	1.00	1.73	1.73	∞	
Δ _{xyz}	Positioner Mechanical Tolerance	R	1.40	1.73	0.81	0.14	0.14	0.12	0.12	∞	≥150 & ≤3000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>3000 & ≤6000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>6000 & ≤7500
	Positioning with respect to Phantom Shell	R	1.40	1.73	0.81	0.14	0.14	0.12	0.12	∞	≥150 & ≤3000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>3000 & ≤6000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>6000 & ≤7500
DAT	Data processing errors	R	2.30	1.73	1.33	1.00	1.00	1.33	1.33	∞	150-7500
Phanom and DUT errors											
LIQ(σ,ε)	Conductivity measurement	N	4.07	1.00	4.07	0.79	0.77	3.22	3.13	9	
	Permittivity measurement	N	5.06	1.00	5.06	0.23	0.26	1.16	1.32	9	
LIQ(T _j)	Liquid Conductivity - Temperature Uncertainty	R	2.50	1.73	1.44	0.79	0.77	1.14	1.11	∞	
	Liquid Permittivity - Temperature Uncertainty	R	2.50	1.73	1.44	0.23	0.26	0.33	0.38	∞	150-7500
EPS	Shell permittivity	R	2.90	1.73	1.67	0.00	0.00	0.00	0.00	∞	≥150 & ≤3000
			2.90	1.73	1.67	0.25	0.25	0.42	0.42	∞	>3000 & ≤6000
			2.90	1.73	1.67	0.50	0.50	0.84	0.84	∞	>6000 & ≤7500
DIS	Distance between the radiating element of the DUT and the phantom medium	N	2.70	1.00	2.70	2.00	2.00	5.40	5.40	∞	≥150 & ≤3000
			2.70	1.00	2.70	2.00	2.00	5.40	5.40	∞	>3000 & ≤6000
			3.20	1.00	3.20	2.00	2.00	6.40	6.40	∞	>6000 & ≤7500
D _{xyz}	Repeatability of positioning the DUT or source against the phantom	N	2.60	1.00	2.60	1.00	1.00	2.60	2.60	13	
H	Device holder effects	N	3.00	1.00	3.00	1.00	1.00	3.00	3.00	23	
MOD	Effect of operating mode on probe sensitivity	R	8.20	1.73	4.73	1.00	1.00	4.73	4.73	∞	
RF _{drift}	Variation in SAR due to drift in output of DUT	R	5.00	1.73	2.89	1.00	1.00	2.89	2.89		150-7500
Corrections to the SAR result											
C(ε',σ)	Phantom deviation from target (ε',σ)	N	1.90	1.00	1.90	1.00	1.00	1.90	1.90		
C(R)	SAR scaling	R	5.00	1.73	2.89	1.00	1.00	2.89	2.89		
u(ΔSAR)	Combined uncertainty							12.54	12.53		150-450
								13.40	13.40		≥600 & ≤3000
								13.44	13.43		>3000 & ≤6000
								13.89	13.88		>6000 & ≤7500
U	Expanded uncertainty (95% confidence interval)							25.08	25.07		150-450
								26.80	26.79		≥600 & ≤3000
								26.87	26.86		>3000 & ≤6000
								27.77	27.76		>6000 & ≤7500

3.4.2 Measurement uncertainty evaluation for system check

Uncertainty Budget of 1g/10g psSAR for System Validation/Check COMOSAR											
Ambiente temperature: 18-25 °C & $\Delta T \leq 2^\circ\text{C}$											
Humidity: 30-70%											
Frequency range: 150MHz-7500MHz											
Symbol	Input quantity Xi (source of uncertainty)	PDF _i	Unc. a(x _i) [± %]	Div. q _i	u(x _i)= a(x _i)/ q _i	c _i 1g	c _i 10g	u(y)= c _i *u(x _i) 1g [± %]	u(y)= c _i *u(x _i) 10g [± %]	v _i	Frequency range [MHz]
Measurement System errors											
CF	Probe calibration	N (k=2)	11.00	2.00	5.50	1.00	1.00	5.50	5.50	∞	150-450
			14.00	2.00	7.00	1.00	1.00	7.00	7.00	∞	600-7500
CF _{drift}	Probe calibration drift	R	2.30	1.73	1.33	1.00	1.00	1.33	1.33	∞	150-450
			4.00	1.73	2.31	1.00	1.00	2.31	2.31	∞	600-7500
LIN	Probe linearity	R	4.70	1.73	2.71	1.00	1.00	2.71	2.71	∞	150-7500
	Detection limit	R	1.00	1.73	0.58	1.00	1.00	0.58	0.58	∞	
ISO	Axial Isotropy	R	3.50	1.73	2.02	0.71	0.71	1.43	1.43	∞	
	Hemispherical Isotropy	R	5.90	1.73	3.41	0.71	0.71	2.41	2.41	∞	
DAE	Boundary effect	R	1.00	1.73	0.58	1.00	1.00	0.58	0.58	∞	
	Integration time	R	1.40	1.73	0.81	1.00	1.00	0.81	0.81	∞	
	Response time	R	0.00	1.73	0.00	1.00	1.00	0.00	0.00	∞	
	Readout electronics	N	0.50	1.00	0.50	1.00	1.00	0.50	0.50	∞	
AMB	Noise	R	3.00	1.73	1.73	1.00	1.00	1.73	1.73	∞	
	Reflections	R	3.00	1.73	1.73	1.00	1.00	1.73	1.73	∞	
Δ _{xyz}	Positioner Mechanical Tolerance	R	1.40	1.73	0.81	0.14	0.14	0.12	0.12	∞	≥150 & ≤3000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>3000 & ≤6000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>6000 & ≤10000
	Positioning with respect to Phantom Shell	R	1.40	1.73	0.81	0.14	0.14	0.12	0.12	∞	≥150 & ≤3000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>3000 & ≤6000
			3.28	1.73	1.89	0.33	0.33	0.62	0.62	∞	>6000 & ≤10000
DAT	Data processing errors	R	2.30	1.73	1.33	1.00	1.00	1.33	1.33	∞	150-7500
Phantom and Dipoles errors											
LIQ(σ,ε)	Conductivity measurement	N	4.07	1.00	4.07	0.79	0.77	3.22	3.13	9	150-7500
	Permittivity measurement	N	5.06	1.00	5.06	0.23	0.26	1.16	1.32	9	
LIQ(T _c)	Liquid Conductivity - Temperature Uncertainty	R	2.50	1.73	1.44	0.79	0.77	1.14	1.11	∞	
	Liquid Permittivity - Temperature Uncertainty	R	2.50	1.73	1.44	0.23	0.26	0.33	0.38	∞	
EPS	Shell permittivity	R	2.90	1.73	1.67	0.00	0.00	0.00	0.00	∞	≥150 & ≤3000
			2.90	1.73	1.67	0.25	0.25	0.42	0.42	∞	>3000 & ≤6000
			2.90	1.73	1.67	0.50	0.50	0.84	0.84	∞	>6000 & ≤10000
DIS	Distance between the radiating element of the DUT and the phantom medium	N	2.70	1.00	2.70	2.00	2.00	5.40	5.40	∞	≥150 & ≤3000
			2.70	1.00	2.70	2.00	2.00	5.40	5.40	∞	>3000 & ≤6000
			3.20	1.00	3.20	2.00	2.00	6.40	6.40	∞	>6000 & ≤10000
VAL	Deviation of experimental antennas	N	4.50	1.73	2.60	1.00	1.00	2.60	2.60		150-7500
	Other uncertainty contributions	R	2.00	1.00	2.00	1.00	1.00	2.00	2.00		
P _{in}	Uncertainty in accepted power	R	3.00	1.73	1.73	1.00	1.00	1.73	1.73		
Corrections to the SAR result											
C(ε',σ)	Phantom deviation from target (ε',σ)	N	1.90	1.00	1.90	1.00	1.00	1.90	1.90		150-7500
u(ΔSAR)	Combined uncertainty							10.78	10.77		150-450
								11.77	11.76		≥600 & ≤3000
								11.81	11.80		>3000 & ≤6000
								12.32	12.31		>6000 & ≤7500
U	Expanded uncertainty (95% confidence interval)							21.56	21.54		150-450
								23.54	23.52		≥600 & ≤3000
								23.62	23.60		>3000 & ≤6000
								24.64	24.62		>6000 & ≤7500

4. Measurement System

4.1 Specific Absorption Rate (SAR) Definition

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

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

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

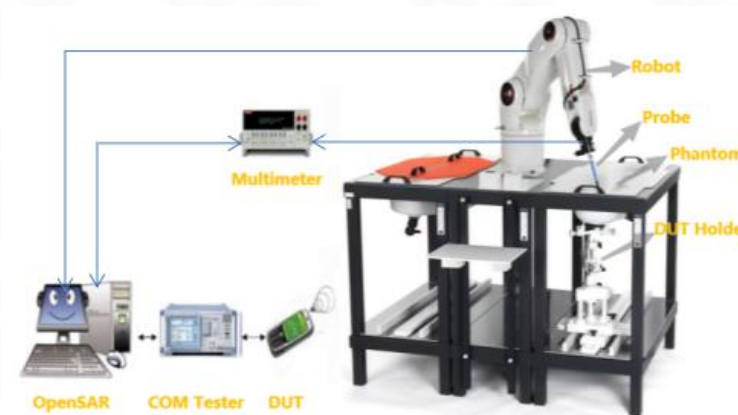
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

4.2 MVG SAR System

4.2.1 SAR system diagram



4.2.2 Robot



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

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

4.2.3 E-Field Probe

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

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



4.2.4 Phantoms

SAM Phantom

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



SAM Phantom

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

TWIN SAM phantom

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

ELLIPTICAL Phantom

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



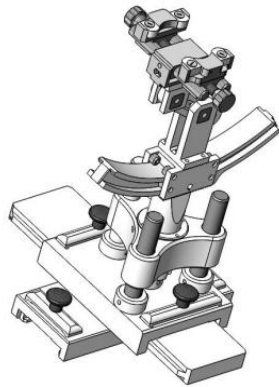
ELLI Phantom

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

Technical & mechanical characteristics

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

4.2.5 Device Holder



System Material	Permittivity	Loss tangent
Delrin	3.7	0.005

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

System Material	Permittivity	Loss tangent
PMMA	2.9	0.028

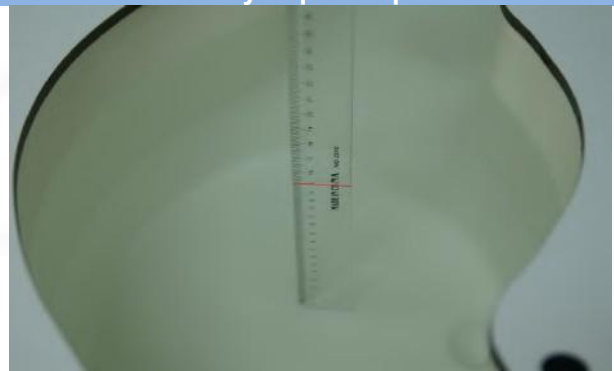
4.2.6 Simulating Liquid

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

Head Liquid Depth



Body Liquid Depth



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

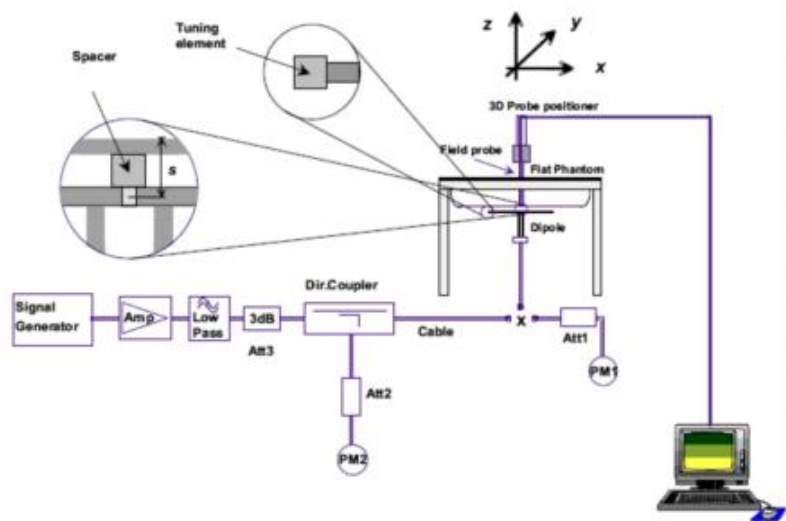
Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5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

5. System Verification

5.1 Purpose of System Check

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

5.2 System Check Setup



6. TEST POSITION CONFIGURATIONS

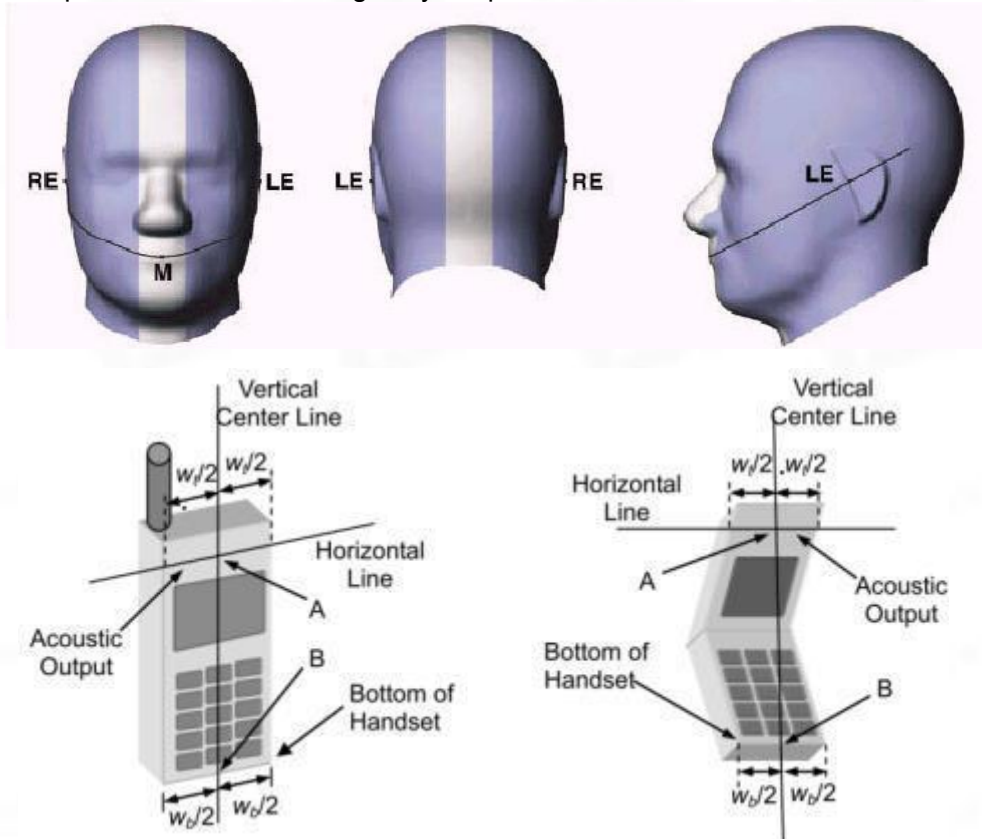
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Head Exposure Conditions

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

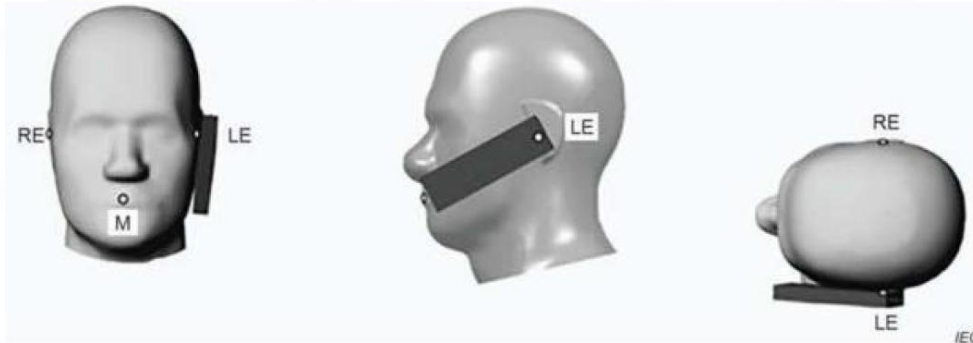
6.1.1 Two Imaginary Lines on the Handset

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



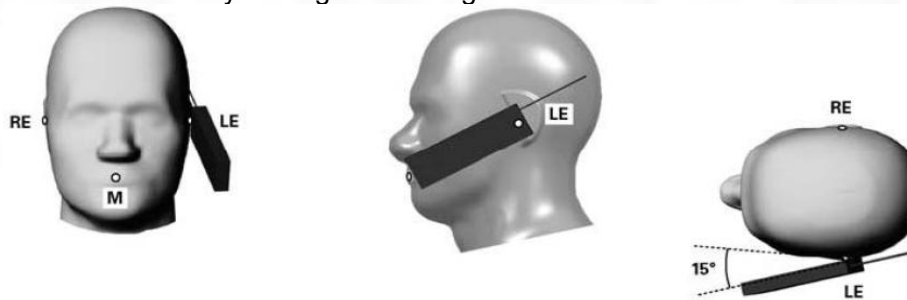
6.1.2 Two Imaginary Lines on the Handset

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



6.1.3 Titled Position

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

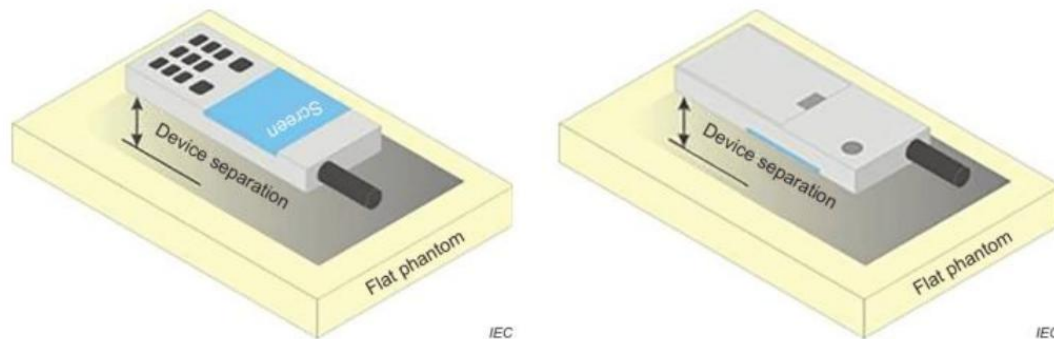


6.2 Body-worn Position Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory.

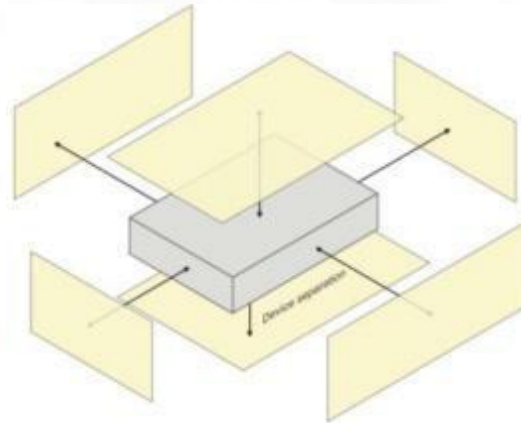
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.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

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



6.3 Hotspot Mode Exposure Position Conditions

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



6.4 Product Specific 10g Exposure Consideration

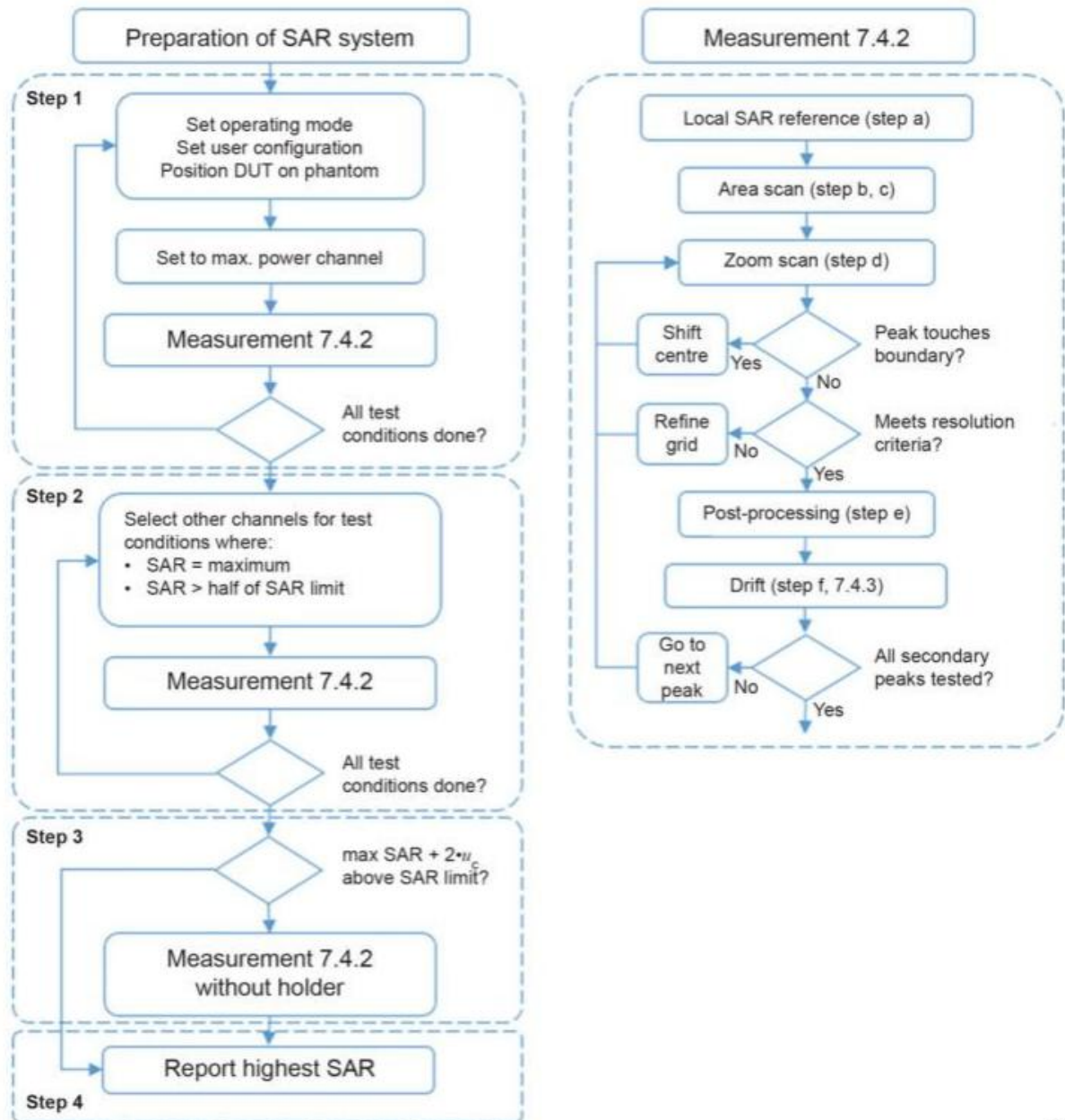
According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed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

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

7. Measurement Procedure

7.1 Measurement Process Diagram

Body SAR



IEC

7.2 SAR Scan General Requirement

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

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

7.3 Measurement Procedure

The following steps are used for each test position

- a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- c. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- d. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

7.4 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

8. Conducted RF Output Power

8.1 GSM

Mode: GSM850		Maximum Tune-up(dBm)	Burst Average Power (dBm)			Division Factors	Frame-Average Power (dBm)		
			CH128	CH190	CH251		CH128	CH190	CH251
			824.2MHz	836.6MHz	848.8MHz		824.2MHz	836.6MHz	848.8MHz
GSM		32.50	32.20	32.02	31.80	-9.03	23.17	22.99	22.77
GPRS (GMSK)	1Tx slot	32.50	32.20	31.99	31.78	-9.03	23.17	22.96	22.75
	2Tx slots	31.50	31.42	31.24	31.01	-6.02	25.40	25.22	24.99
	3Tx slots	30.00	29.76	29.56	29.32	-4.26	25.50	25.30	25.06
	4Tx slots	29.00	28.73	28.51	28.23	-3.01	25.72	25.50	25.22
EGPRS (8PSK)	1Tx slot	26.50	26.47	26.44	26.11	-9.03	17.44	17.41	17.08
	2Tx slots	25.50	25.34	25.33	25.09	-6.02	19.32	19.31	19.07
	3Tx slots	23.50	23.45	23.42	23.03	-4.26	19.19	19.16	18.77
	4Tx slots	22.50	22.28	22.22	21.90	-3.01	19.27	19.21	18.89
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	28.80	28.85	28.60	-9.03	19.77	19.82	19.57
GPRS (GMSK)	1Tx slot	29.00	28.79	28.51	28.67	-9.03	19.76	19.48	19.64
	2Tx slots	28.50	28.00	28.20	27.89	-6.02	21.98	22.18	21.87
	3Tx slots	26.50	26.00	26.18	25.87	-4.26	21.74	21.92	21.61
	4Tx slots	25.00	24.67	24.87	24.52	-3.01	21.66	21.86	21.51
EGPRS (8PSK)	1Tx slot	24.50	24.28	24.44	24.09	-9.03	15.25	15.41	15.06
	2Tx slots	25.00	23.46	23.53	24.64	-6.02	17.44	17.51	18.62
	3Tx slots	22.00	21.50	21.57	21.51	-4.26	17.24	17.31	17.25
	4Tx slots	22.00	21.63	20.40	20.41	-3.01	18.62	17.39	17.40
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
RMC 12.2K		22.50	1852.4	1880.0	1907.6
HSDPA	Subtest-1	20.50	20.25	20.18	19.72
	Subtest-2	20.50	20.17	20.12	19.77
	Subtest-3	20.50	20.14	20.06	19.74
	Subtest-4	20.50	20.25	20.05	19.81
HSUPA	Subtest-1	18.00	17.46	17.59	17.77
	Subtest-2	18.00	17.73	17.40	17.46
	Subtest-3	18.50	18.01	17.48	17.09
	Subtest-4	18.00	17.90	17.75	17.22
	Subtest-5	18.50	17.83	17.75	18.34
Mode		Maximum Tune-up(dBm)	WCDMA Band IV		
			Conducted Power (dBm)		
			CH1312	CH1413	CH1513
RMC 12.2K		23.00	1712.4	1732.6	1752.6
HSDPA	Subtest-1	20.50	20.02	20.22	20.35
	Subtest-2	20.50	20.02	20.24	20.36
	Subtest-3	20.50	20.02	20.26	20.39
	Subtest-4	20.50	20.01	20.23	20.37
HSUPA	Subtest-1	18.50	17.45	18.07	17.87
	Subtest-2	18.00	17.66	17.78	17.84
	Subtest-3	18.00	17.43	17.59	17.95
	Subtest-4	18.50	17.87	17.76	18.27
	Subtest-5	19.50	17.84	18.11	19.14
Mode		Maximum Tune-up(dBm)	WCDMA Band V		
			Conducted Power (dBm)		
			CH4132	CH4183	CH4233
RMC 12.2K		23.50	826.4	836.6	846.6
HSDPA	Subtest-1	21.00	22.92	23.02	23.09
	Subtest-2	21.00	20.58	20.76	20.84
	Subtest-3	21.00	20.61	20.75	20.84
	Subtest-4	21.00	20.61	20.72	20.83
HSUPA	Subtest-1	19.00	20.60	20.73	20.85
	Subtest-2	19.00	18.55	18.17	18.00
	Subtest-3	18.50	18.14	18.25	18.19
	Subtest-4	19.00	18.52	18.63	18.52
	Subtest-5	19.00	18.53	18.65	18.15
		19.50	19.19	19.34	18.66

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	23.00	22.84	21.93	22.09	
			2	23.00	22.97	22.05	22.17	
			5	23.00	22.79	21.69	22.08	
		3	0	22.50	22.40	22.30	22.14	
			2	22.50	22.13	22.19	22.10	
			3	22.50	22.03	22.21	22.12	
		6	0	22.00	21.53	21.35	21.20	
		16QAM	1	0	21.50	20.64	21.42	21.05
				2	22.00	9.37	21.53	21.10
	5			21.50	9.34	21.47	20.60	
	3		0	21.50	9.33	21.33	20.45	
			2	21.50	9.31	21.34	21.09	
			3	21.50	9.31	21.33	20.43	
	6		0	20.50	8.21	20.42	19.42	
	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	21.37	22.04	21.35
7				22.50	21.48	22.24	21.48	
14				22.50	21.32	22.03	21.37	
8			0	21.50	20.24	21.05	20.36	
			4	20.50	20.18	20.07	20.45	
			7	20.50	20.15	20.10	20.41	
15			0	20.50	20.12	20.04	20.36	
16QAM			1	0	21.50	20.16	21.27	20.90
				7	21.50	20.28	21.48	21.00
		14		21.50	20.13	21.27	20.84	
		8	0	20.50	19.11	20.11	19.53	
			4	20.50	19.16	20.10	19.57	
			7	20.00	19.07	19.15	19.57	
		15	0	19.50	19.18	19.21	19.49	
		Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18625	18900
1852.5MHz							1880.0MHz	1907.5MHz
5MHz		QPSK	1	0	22.00	21.50	21.52	21.48
	13			22.00	21.65	21.67	21.61	
	24			21.50	21.46	21.49	21.48	
	12		0	21.00	20.55	20.55	20.55	
			6	21.00	20.63	20.63	20.55	
			13	21.00	20.60	20.61	20.52	
	25		0	21.00	20.54	20.63	20.42	
	16QAM		1	0	21.00	20.53	20.87	20.34
				13	21.00	20.65	20.94	20.41
		24		21.00	20.54	20.75	20.37	
		12	0	19.50	19.49	19.43	19.44	
			6	20.00	19.56	19.56	19.69	
			13	20.00	19.55	19.56	19.47	
		25	0	20.00	19.55	19.59	19.55	

LTE-FDD Band 2				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		18650 1855.0MHz	18900 1880.0MHz	19150 1905.0MHz
10MHz	QPSK	1	0	22.00	21.85	21.81	21.69
			25	22.50	21.99	21.93	22.00
			49	22.00	21.75	21.76	21.89
		25	0	21.00	20.57	20.66	20.94
			13	21.00	20.60	20.70	20.86
			25	21.00	20.57	20.78	20.68
	16QAM	50	0	21.00	20.53	20.66	20.62
			0	21.50	20.78	20.88	21.19
			25	21.50	20.91	21.02	21.32
		1	49	21.50	20.71	20.77	21.01
			0	20.00	19.78	19.85	19.74
			13	20.00	19.78	19.84	19.63
		25	25	20.00	19.71	19.86	19.63
			0	20.00	19.58	19.81	19.58
15MHz	QPSK	1	0	22.00	21.96	21.75	21.50
			38	22.50	22.02	21.84	21.49
			74	22.00	21.83	21.67	21.60
		36	0	21.50	21.09	20.92	20.80
			18	21.50	21.14	20.96	20.78
			39	21.50	21.02	20.98	20.67
	16QAM	75	0	21.50	21.05	20.95	20.68
			0	21.50	21.12	20.97	21.09
			38	21.50	21.24	21.02	21.31
		1	74	21.50	21.17	20.81	21.06
			0	20.00	19.93	19.87	19.66
			18	20.00	19.97	19.90	19.64
		36	39	20.00	19.91	19.88	19.62
			0	20.00	19.93	19.90	19.62
20MHz	QPSK	1	0	22.00	21.41	21.54	21.36
			50	22.00	21.84	21.94	21.78
			99	22.00	21.51	21.37	21.30
		50	0	21.00	20.49	20.73	20.59
			25	21.00	20.58	20.69	20.60
			50	21.00	20.41	20.72	20.61
	16QAM	100	0	21.00	20.49	20.66	20.52
			0	21.00	20.90	20.82	20.59
			50	21.50	21.31	21.17	21.09
		1	99	21.50	21.12	20.60	20.63
			0	20.00	19.74	19.69	19.73
			25	20.00	19.80	19.69	19.75
		50	50	20.00	19.69	19.76	19.66
			0	20.00	19.72	19.72	19.75

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	22.00	21.32	21.56	21.59
			2	22.00	21.40	21.57	21.77
			5	22.00	21.25	21.32	21.71
		3	0	22.00	21.23	21.17	21.74
			2	22.00	21.26	20.99	21.76
			3	22.00	21.40	21.10	21.71
		6	0	21.00	20.36	20.47	20.81
	16QAM	1	0	21.00	20.31	20.49	20.63
			2	21.00	20.12	20.63	20.72
			5	21.00	20.17	20.36	20.64
		3	0	21.00	20.22	20.15	20.90
			2	21.00	20.27	20.20	20.92
			3	21.00	20.21	20.15	20.92
		6	0	20.00	19.17	19.25	19.67
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
3MHz	QPSK	1	0	22.00	21.32	21.14	21.84
			7	22.50	21.54	21.00	22.14
			14	22.50	21.39	21.22	22.17
		8	0	21.50	20.23	20.53	21.27
			4	21.50	20.25	20.47	21.31
			7	21.50	20.20	20.39	21.26
		15	0	21.50	20.06	20.37	21.21
	16QAM	1	0	22.00	20.24	20.46	21.57
			7	22.00	20.26	20.58	21.66
			14	22.00	20.13	20.53	21.53
		8	0	20.50	18.73	19.27	20.13
			4	20.50	18.74	19.08	20.17
			7	20.50	18.69	19.17	20.12
		15	0	20.00	18.54	19.10	19.98
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19976	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
5MHz	QPSK	1	0	22.00	21.64	21.91	21.46
			13	22.50	21.99	22.12	21.86
			24	22.00	21.67	21.89	21.79
		12	0	21.00	20.79	20.92	20.67
			6	21.00	20.86	20.87	20.73
			13	21.00	20.87	20.81	20.69
		25	0	21.00	20.80	20.71	20.56
	16QAM	1	0	21.00	20.82	21.00	20.62
			13	21.50	20.99	21.24	20.81
			24	21.50	20.70	21.12	20.71
		12	0	20.00	19.60	19.96	19.93
			6	20.50	19.67	20.03	19.98
			13	20.00	19.67	19.98	19.92
		25	0	20.00	19.64	19.91	19.98

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	22.00	21.73	22.00	21.91			
			25	22.50	21.84	22.20	22.09			
			49	22.50	22.01	22.02	21.83			
		25	0	21.00	20.82	20.98	20.74			
			13	21.50	20.87	21.02	20.60			
			25	21.50	20.96	21.03	20.63			
		50	0	21.00	20.86	20.95	20.52			
			16QAM	1	0	21.50	20.76	21.03	21.13	
					25	21.50	21.02	21.34	21.30	
	49	21.50			20.88	21.11	21.28			
	25	0		20.00	19.90	19.70	19.62			
		13		20.00	19.93	19.78	19.65			
		25		20.50	20.01	19.83	19.67			
	50	0		20.00	19.89	19.66	19.57			
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20025	20175	20325
								1717.5MHz	1732.5MHz	1747.5MHz
	15MHz	QPSK	1	0	22.00	21.43	21.52	21.74		
				38	22.00	21.59	21.84	21.61		
74				22.00	21.54	21.62	21.46			
36			0	21.00	20.11	20.71	20.81			
			18	21.50	20.06	21.01	20.80			
			39	21.00	19.56	20.66	20.69			
75			0	21.00	19.96	20.86	20.69			
			16QAM	1	0	21.50	20.84	20.79	21.06	
					38	21.50	20.84	20.99	21.22	
74		21.50			20.76	20.95	21.16			
36		0		20.00	19.43	19.74	19.35			
		18		20.00	19.46	19.68	19.46			
		39		20.00	19.48	19.60	19.44			
75		0		20.00	19.39	19.69	19.39			
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20050	20175	20300
								1720.0MHz	1732.5MHz	1745.0MHz
20MHz		QPSK	1	0	22.00	21.03	21.75	21.81		
				50	22.50	21.92	22.12	22.32		
	99			22.00	21.56	21.80	21.94			
	50		0	21.50	20.50	21.05	21.13			
			25	21.50	19.02	21.14	21.18			
			50	21.50	19.20	21.10	21.17			
	100		0	21.50	19.38	21.08	21.14			
			16QAM	1	0	21.50	20.46	20.90	21.11	
					50	22.00	20.89	21.33	21.50	
	99	21.50			20.43	21.00	21.16			
	50	0		20.50	18.65	20.00	20.15			
		25		20.50	18.73	20.10	20.18			
		50		20.50	18.89	20.04	20.14			
	100	0		20.50	18.59	20.04	20.17			

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	23.00	22.66	22.72	22.68
			2	23.00	22.73	22.80	22.83
			5	23.00	22.62	22.70	22.70
		3	0	23.00	22.66	22.82	22.79
			2	23.00	22.71	22.82	22.81
			3	23.00	22.67	22.82	22.75
	6	0	22.00	21.72	21.77	21.80	
	16QAM	1	0	22.00	21.76	21.70	21.68
			2	22.00	21.87	21.83	21.79
			5	22.00	21.77	21.72	21.76
		3	0	22.00	21.62	21.99	21.77
			2	22.50	21.66	22.04	21.80
			3	22.00	21.66	22.00	21.79
		6	0	21.00	20.70	20.82	20.69
Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20415	20525
	825.5MHz					836.5MHz	847.5MHz
3MHz	QPSK	1	0	23.00	22.55	22.64	22.03
			7	23.00	22.67	22.78	22.20
			14	23.00	22.59	22.64	22.05
		8	0	22.00	21.52	21.69	21.13
			4	22.00	21.60	21.70	21.14
			7	22.00	21.55	21.63	21.10
	15	0	22.00	21.49	21.59	21.13	
	16QAM	1	0	22.00	21.58	21.77	21.60
			7	22.00	21.70	21.71	21.73
			14	22.00	21.55	21.43	21.54
		8	0	21.00	20.55	20.42	20.24
			4	21.00	20.65	20.27	20.32
			7	21.00	20.58	20.32	20.23
		15	0	21.00	20.50	20.20	20.17

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	22.00	21.83	21.95	21.96
			13	22.50	22.00	22.08	22.04
			24	22.00	21.87	21.96	21.88
		12	0	21.50	20.91	21.06	21.02
			6	21.50	20.99	21.11	21.02
			13	21.50	21.01	21.04	20.92
		25	0	21.50	20.91	21.09	20.94
	16QAM	1	0	21.50	20.92	21.25	20.82
			13	21.50	21.03	21.36	20.88
			24	21.50	21.00	21.24	20.76
		12	0	20.50	19.83	20.10	19.95
			6	20.50	19.96	20.11	19.98
			13	20.50	19.98	20.06	19.87
		25	0	20.50	19.96	20.05	19.98

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	21.81	21.91	21.99
			25	22.50	22.02	22.09	22.08
			49	22.50	21.97	22.00	21.96
		25	0	21.50	20.90	21.09	21.08
			13	21.50	20.91	21.03	21.01
			25	21.50	20.91	21.06	20.99
		50	0	21.50	20.89	21.07	20.99
	16QAM	1	0	21.50	20.81	21.13	21.46
			25	22.00	21.04	21.28	21.65
			49	22.00	21.00	21.13	21.55
		25	0	20.50	19.98	20.07	20.11
			13	20.50	20.01	20.07	20.09
			25	20.50	20.04	20.11	20.00
		50	0	20.50	19.92	20.06	20.00

Band 7

LTE-FDD Band 7				Maximum Tune-up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		20775	21100	21425	
					2502.5MHz	2535.0MHz	2567.5MHz	
5MHz	QPSK	1	0	20.50	20.30	20.21	20.20	
			12	20.50	20.34	20.38	20.32	
			24	20.50	20.34	20.21	20.14	
		12	0	19.50	19.45	19.31	19.21	
			6	20.00	19.52	19.39	19.28	
			13	20.00	19.44	19.35	19.65	
		25	0	20.00	19.46	19.29	19.64	
		16QAM	1	0	20.00	19.21	19.31	19.69
				12	20.00	19.31	19.48	19.81
	24			20.00	19.19	19.29	19.66	
	12		0	19.00	18.44	18.24	18.62	
			6	19.00	18.49	18.35	18.68	
			13	19.00	18.44	18.29	18.63	
	25	0	19.00	18.47	18.33	18.50		
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20800	21100	21400
2505.0MHz						2535.0MHz	2565.0MHz	
10MHz	QPSK	1	0	21.00	20.82	20.66	20.65	
			24	21.00	20.93	20.84	20.83	
			49	21.00	20.74	20.62	20.63	
		25	0	20.00	19.83	19.71	19.67	
			12	20.00	19.78	19.73	19.71	
			25	20.00	19.79	19.69	19.69	
		50	0	20.00	19.82	19.71	19.73	
		16QAM	1	0	20.50	19.78	19.81	20.14
				24	20.50	19.92	20.00	20.31
	49			20.50	19.68	19.81	20.16	
	25		0	19.00	18.89	18.73	18.73	
			12	19.00	18.89	18.71	18.73	
			25	19.00	18.82	18.74	18.76	
	50	0	19.00	18.77	18.70	18.70		

LTE-FDD Band 7				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20825	21100	21375
					2507.5MHz	2535.0MHz	2562.5MHz
15MHz	QPSK	1	0	21.00	20.72	20.64	20.61
			38	21.00	20.75	20.70	20.67
			74	21.00	20.59	20.57	20.38
		36	0	20.00	19.84	19.74	19.63
			18	20.00	19.84	19.78	19.62
			39	20.00	19.79	19.75	19.45
		75	0	20.00	19.83	19.76	19.45
	16QAM	1	0	20.50	20.02	19.77	19.65
			38	20.50	20.05	19.86	19.67
			74	20.00	19.91	19.73	19.61
		36	0	19.00	18.83	18.68	18.36
			18	19.00	18.76	18.75	18.41
			39	19.00	18.74	18.69	18.58
		75	0	19.00	18.79	18.74	18.57
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20850	21100	21350
					2510.0MHz	2535.0MHz	2560.0MHz
20MHz	QPSK	1	0	21.00	20.59	20.22	20.27
			50	21.00	20.51	20.75	20.64
			99	20.50	20.35	20.07	20.00
		50	0	20.00	19.70	19.54	19.34
			25	20.00	19.69	19.72	19.21
			50	20.00	19.78	19.57	19.22
		100	0	20.00	19.66	19.66	19.24
	16QAM	1	0	20.00	19.58	19.49	19.25
			50	20.50	19.99	20.07	19.59
			99	20.00	19.45	19.53	19.24
		50	0	19.00	18.52	18.63	18.16
			25	19.00	18.47	18.72	18.32
			50	19.00	18.59	18.65	18.29
		100	0	19.00	18.62	18.62	18.33

Band 12

LTE-FDD Band 12				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23017	23095	23173
					699.7MHz	707.5MHz	715.3MHz
1.4MHz	QPSK	1	0	23.00	22.53	22.38	22.51
			2	23.00	22.64	22.41	22.60
			5	22.50	22.45	22.27	22.34
		3	0	22.50	22.48	22.29	22.44
			2	23.00	22.21	22.50	22.54
			3	22.50	22.21	22.29	22.24
		6	0	21.50	21.19	21.34	21.47
	16QAM	1	0	22.00	21.06	21.51	21.63
			2	22.00	21.12	21.46	21.64
			5	22.00	21.02	21.57	21.64
		3	0	22.00	21.23	21.64	21.47
			2	22.00	21.22	21.80	21.53
			3	22.00	21.48	21.58	21.50
		6	0	21.00	20.57	20.60	20.62

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
3MHz	QPSK	1	0	23.00	22.85	22.72	22.62
			7	23.00	22.94	22.85	22.71
			14	23.00	22.83	22.67	22.56
		8	0	22.00	21.77	21.73	21.56
			4	22.00	21.81	21.73	21.60
			7	22.00	21.80	21.67	21.56
		15	0	22.00	21.74	21.67	21.55
	16QAM	1	0	22.50	21.77	21.83	22.09
			7	22.50	21.92	22.00	22.17
			14	22.50	21.76	21.82	22.00
		8	0	21.00	20.79	20.67	20.69
			4	21.00	20.86	20.69	20.74
			7	21.00	20.86	20.65	20.68
		15	0	21.00	20.78	20.61	20.58
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
5MHz	QPSK	1	0	23.00	22.72	22.61	22.56
			13	23.00	22.82	22.73	22.63
			24	23.00	22.70	22.62	22.50
		12	0	22.00	21.68	21.73	21.57
			6	22.00	21.80	21.73	21.64
			13	22.00	21.81	21.60	21.55
		25	0	22.00	21.77	21.64	21.55
	16QAM	1	0	22.00	21.73	21.83	21.39
			13	22.00	21.88	21.97	21.47
			24	22.00	21.78	21.87	21.31
		12	0	21.00	20.63	20.68	20.53
			6	21.00	20.75	20.69	20.59
			13	21.00	20.77	20.63	20.50
		25	0	21.00	20.75	20.62	20.59
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23060	23095	23130
					704.0MHz	707.5MHz	711.0MHz
10MHz	QPSK	1	0	23.00	22.81	22.75	22.70
			25	23.00	22.98	22.91	22.83
			49	23.00	22.74	22.66	22.60
		25	0	22.00	21.62	21.85	21.76
			13	22.00	21.77	21.71	21.72
			25	22.00	21.66	21.67	21.73
		50	0	22.00	21.63	21.75	21.78
	16QAM	1	0	22.50	21.74	21.84	22.16
			25	22.50	21.89	22.02	22.35
			49	22.50	21.72	21.78	22.04
		25	0	21.00	20.63	20.82	20.78
			13	21.00	20.79	20.68	20.74
			25	21.00	20.71	20.64	20.79
		50	0	21.00	20.65	20.75	20.78

Band 13

LTE-FDD Band 13				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23205	23230	23255
					779.5MHz	782.0MHz	784.5MHz
5MHz	QPSK	1	0	22.50	22.22	22.20	22.25
			13	22.50	22.17	22.32	22.32
			24	22.50	22.12	22.20	22.24
		12	0	21.50	21.23	21.23	21.30
			6	21.50	21.35	21.29	21.36
			13	21.50	21.32	21.23	21.25
		25	0	21.50	21.27	21.24	21.31
	16QAM	1	0	21.50	21.04	21.28	21.47
			13	22.00	21.16	21.42	21.57
			24	22.00	21.06	21.28	21.50
		12	0	20.50	20.18	20.18	20.34
			6	20.50	20.33	20.28	20.38
			13	20.50	20.29	20.18	20.31
		25	0	20.50	20.32	20.25	20.28
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23230		
					782.0MHz		
10MHz	QPSK	1	0	22.50	22.27		
			25	22.50	22.42		
			49	22.50	22.27		
		25	0	21.50	21.14		
			13	21.50	21.23		
			25	21.50	21.12		
		50	0	21.50	21.12		
	16QAM	1	0	21.50	21.27		
			25	21.50	21.23		
			49	21.50	21.24		
		25	0	20.50	20.30		
			13	20.50	20.39		
			25	20.50	20.21		
		50	0	20.50	20.20		

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	23.00	22.52	22.73	22.48
			13	23.00	22.57	22.80	22.51
			24	23.00	22.49	22.54	22.44
		12	0	22.00	21.64	21.65	21.42
			6	22.00	21.64	21.64	21.43
			13	22.00	21.55	21.52	21.47
		25	0	22.00	21.54	21.60	21.40
	16QAM	1	0	22.00	21.32	21.66	21.33
			13	22.00	21.47	21.81	21.37
			24	22.00	21.39	21.64	21.25
		12	0	21.00	20.77	20.47	20.47
			6	21.00	20.82	20.55	20.50
			13	21.00	20.73	20.46	20.37
		25	0	21.00	20.82	20.57	20.49

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23780	23790	23800
					709MHz	710MHz	711MHz
10MHz	QPSK	1	0	23.00	22.67	22.68	22.91
			25	23.50	22.76	22.83	23.04
			49	23.00	22.36	22.43	22.80
		25	0	22.50	21.75	21.66	22.04
			13	22.00	21.53	21.44	21.87
			25	22.00	21.52	21.56	21.91
		50	0	22.50	21.63	21.63	22.01
	16QAM	1	0	22.50	21.53	21.56	22.02
			25	22.50	21.65	21.91	22.08
			49	22.00	21.34	21.95	21.92
		25	0	21.50	20.81	21.14	21.03
			13	21.50	20.77	21.05	20.88
			25	21.50	20.75	21.01	20.94
		50	0	21.00	20.75	21.00	20.97

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	23.00	21.47	20.98	22.98
			13	22.50	21.33	21.13	22.37
			24	23.00	21.15	20.70	22.63
		12	0	22.50	20.49	20.01	22.36
			6	23.00	20.47	19.83	22.63
			13	23.00	20.49	20.05	22.57
		25	0	22.50	20.27	19.75	22.24
	16QAM	1	0	22.50	20.41	19.97	22.19
			13	22.50	20.57	20.34	22.09
			24	22.00	20.38	20.19	21.73
		12	0	22.50	19.40	18.65	22.12
			6	22.00	19.28	18.73	21.78
			13	22.50	19.47	18.98	22.03
		25	0	22.00	19.28	19.00	21.79
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39700	40620	41540
					2501.0MHz	2593.0MHz	2685.0MHz
10MHz	QPSK	1	0	23.50	21.28	21.11	23.34
			25	23.00	21.67	20.98	22.91
			49	22.50	21.24	21.12	22.47
		25	0	23.00	20.53	20.05	22.98
			13	23.00	20.33	20.06	22.85
			25	23.00	20.58	19.83	22.76
		50	0	23.00	20.53	20.07	22.82
	16QAM	1	0	22.50	20.32	19.88	22.37
			25	22.50	20.41	19.93	22.18
			49	22.00	20.33	19.88	21.90
		25	0	22.00	19.22	18.77	21.92
			13	22.50	19.48	18.76	22.20
			25	22.00	19.47	19.09	21.92
		50	0	22.50	19.48	18.76	22.16

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	23.50	21.24	20.74	23.39
			38	23.50	21.53	20.83	23.19
			74	23.00	21.08	21.06	22.84
		36	0	23.00	20.52	19.80	22.93
			18	23.50	20.34	20.09	23.02
			39	23.00	20.47	19.83	22.56
		75	0	23.00	20.27	20.09	22.66
	16QAM	1	0	23.00	20.18	19.77	22.81
			38	22.50	20.60	19.88	22.33
			74	22.50	20.46	19.76	22.04
		36	0	22.00	19.20	18.99	21.97
			18	22.50	19.47	19.03	22.35
			39	22.50	19.21	19.12	22.07
		75	0	22.50	19.47	18.77	22.04
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39750	40620	41490
					2506.0MHz	2593.0MHz	2680.0MHz
20MHz	QPSK	1	0	24.00	21.36	20.59	23.87
			50	23.50	21.41	20.90	23.05
			99	23.00	20.90	20.56	22.63
		50	0	23.00	20.25	19.75	22.75
			25	23.00	20.48	20.08	22.84
			50	23.00	20.19	20.00	22.73
		100	0	23.50	20.23	20.04	23.16
	16QAM	1	0	23.00	19.73	19.75	22.88
			50	23.00	19.88	20.01	22.77
			99	22.50	20.22	19.61	22.30
		50	0	22.50	19.22	18.76	22.03
			25	22.00	19.30	19.08	21.80
			50	22.00	19.22	19.06	21.74
		100	0	22.50	19.17	18.74	22.05

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	23.00	22.55	22.83	22.99
			2	23.50	22.63	22.94	23.13
			5	23.00	22.55	22.85	22.98
		3	0	23.00	22.54	22.81	22.95
			2	23.50	22.60	22.87	23.00
			3	23.00	22.57	22.85	22.95
		6	0	22.50	21.68	22.01	22.07
	16QAM	1	0	22.50	21.58	21.71	22.03
			2	22.50	21.72	21.89	22.23
			5	22.50	21.57	21.69	22.04
		3	0	22.00	21.43	21.64	21.89
			2	22.00	21.46	21.65	21.88
			3	22.00	21.43	21.63	21.86
		6	0	21.50	20.49	20.90	21.03

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131987	132322	132657
					1711.5MHz	1745.0MHz	1778.5MHz
3MHz	QPSK	1	0	23.00	22.60	22.93	22.93
			7	23.50	22.84	23.10	23.16
			14	23.00	22.63	22.91	22.99
		8	0	22.50	21.63	21.99	22.06
			4	22.50	21.69	22.02	22.10
			7	22.50	21.70	21.97	22.08
	16QAM	15	0	22.50	21.61	21.89	22.00
			0	22.50	21.70	21.77	22.12
			7	22.50	21.87	21.97	22.29
		8	14	22.50	21.64	21.79	22.09
			0	21.50	20.59	20.91	21.07
			4	21.50	20.62	20.96	21.11
		15	7	21.50	20.61	20.91	21.07
			0	21.50	20.47	20.77	21.01
			0	21.50	20.47	20.77	21.01
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131997	132322	132647
					1712.5MHz	1745.0MHz	1777.5MHz
5MHz	QPSK	1	0	23.00	22.56	22.90	22.94
			13	23.50	22.67	23.01	23.07
			24	23.00	22.67	22.91	22.96
		12	0	22.50	21.55	21.88	22.03
			6	22.50	21.65	21.94	22.08
			13	22.50	21.68	21.90	22.04
	16QAM	25	0	22.50	21.61	21.88	22.03
			0	22.00	21.64	21.94	21.97
			13	22.50	21.74	22.01	22.08
		1	24	22.50	21.69	21.94	22.00
			0	21.50	20.55	20.87	21.01
			6	21.50	20.68	20.92	21.05
		12	13	21.50	20.64	20.87	21.00
			0	21.50	20.56	20.92	21.03
			0	21.50	20.56	20.92	21.03
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132022	132322	132622
					1715.0MHz	1745.0MHz	1775.0MHz
10MHz	QPSK	1	0	23.00	22.58	22.88	22.97
			25	23.50	22.81	23.02	23.04
			49	23.00	22.72	22.88	22.95
		25	0	22.50	21.66	21.91	22.15
			13	22.50	21.71	21.94	22.08
			25	22.50	21.79	21.97	22.09
	16QAM	50	0	22.50	21.68	21.89	22.11
			0	22.50	21.69	21.77	22.15
			25	22.50	21.84	21.91	22.23
		1	49	22.50	21.72	21.78	22.12
			0	21.50	20.62	20.91	21.15
			13	21.50	20.69	20.93	21.04
		25	25	21.50	20.75	20.96	21.05
			0	21.50	20.69	20.85	21.10
			0	21.50	20.69	20.85	21.10

LTE-FDD Band 66				Maximum Tune-up(dBm)	Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset		132047	132322	132597		
					1717.5MHz	1745.0MHz	1772.5MHz		
15MHz	QPSK	1	0	23.00	22.58	22.87	22.89		
			38	23.00	22.80	22.91	22.99		
			74	23.00	22.78	22.86	22.90		
		36	0	22.50	21.79	22.08	22.26		
			18	22.50	21.90	22.07	22.24		
			39	22.50	21.96	22.12	22.21		
		75	0	22.50	21.87	22.09	22.22		
		16QAM	1	0	22.50	21.71	21.74	22.03	
				38	22.50	21.88	21.80	22.15	
	74			22.50	21.84	21.71	22.06		
	36		0	21.50	20.72	20.91	21.14		
			18	21.50	20.81	20.90	21.11		
			39	21.50	20.87	20.94	21.08		
	75		0	21.50	20.77	20.97	21.12		
	Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132072	132322	132572
							1720.0MHz	1745.0MHz	1770.0MHz
	20MHz	QPSK	1	0	23.00	22.46	22.53	22.81	
				50	23.50	22.97	22.96	23.19	
99				23.00	22.69	22.60	22.85		
50			0	22.50	21.57	21.82	22.05		
			25	22.50	21.68	21.87	22.06		
			50	22.00	21.70	21.86	21.97		
100			0	22.50	21.62	21.80	22.02		
16QAM			1	0	22.00	21.40	21.59	21.82	
				50	22.50	21.80	21.99	22.19	
		99		22.00	21.62	21.68	21.90		
		50	0	21.50	20.52	20.86	21.03		
			25	21.50	20.65	20.87	21.06		
			50	21.00	20.66	20.86	20.98		
		100	0	21.50	20.58	20.77	21.00		

Band 71

LTE-FDD Band 71				Maximum Tune-up(dBm)	Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset		133147	133297	133447		
					665.5MHz	680.5MHz	695.5MHz		
5MHz	QPSK	1	0	23.00	22.57	22.22	22.42		
			13	23.00	22.76	22.40	22.57		
			24	23.00	22.69	22.30	22.53		
		12	0	22.00	21.53	21.21	21.52		
			6	22.00	21.70	21.30	21.54		
			13	22.00	21.64	21.30	21.48		
		25	0	22.00	21.55	21.24	21.50		
			16QAM	1	0	21.50	21.34	21.03	21.43
					13	22.00	21.41	21.15	21.60
	24	22.00			21.37	21.08	21.55		
	12	0		20.50	20.01	20.21	20.48		
		6		20.50	20.25	20.32	20.49		
		13		20.50	20.15	20.40	20.48		
	25	0	21.00	20.10	20.31	20.52			

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	133172	133297	133422
					668.0MHz	680.5MHz	693.0MHz
10MHz	QPSK	1	0	22.50	22.13	22.21	22.40
			25	23.00	22.42	22.46	22.69
			49	23.00	22.28	22.33	22.55
		25	0	21.50	21.14	21.16	21.48
			13	22.00	21.25	21.31	21.50
			25	21.50	21.20	21.35	21.45
	16QAM	50	0	21.50	21.15	21.24	21.45
			0	22.00	21.03	21.32	21.81
			25	22.50	21.36	21.49	22.06
		1	49	22.50	21.22	21.44	22.00
			0	21.00	20.20	20.17	20.53
			13	21.00	20.34	20.33	20.54
		25	25	20.50	20.27	20.34	20.43
			0	20.50	20.13	20.22	20.44
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	22.04	22.10	22.27
			38	22.50	22.29	22.31	22.46
			74	22.50	22.28	22.32	22.49
		36	0	22.00	21.27	21.21	21.51
			18	22.00	21.34	21.38	21.54
			39	22.00	21.43	21.41	21.54
	16QAM	75	0	22.00	21.35	21.29	21.50
			0	22.00	21.26	21.21	21.68
			38	22.00	21.54	21.43	21.91
		1	74	22.50	21.49	21.43	22.01
			0	21.00	20.20	20.22	20.53
			18	21.00	20.26	20.34	20.66
		36	39	21.00	20.40	20.34	20.53
			0	21.00	20.28	20.33	20.62
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	133222	133322	133372
					673.0MHz	683.0MHz	688.0MHz
20MHz	QPSK	1	0	22.50	22.39	21.98	22.48
			50	23.00	22.97	22.50	22.91
			99	23.00	22.69	22.28	22.40
		50	0	22.00	21.73	21.10	21.29
			25	22.00	21.45	21.48	21.64
			50	22.00	21.49	21.52	21.56
	16QAM	100	0	21.50	21.38	21.43	21.40
			0	21.50	21.12	21.42	21.29
			50	22.00	21.65	21.92	21.91
		1	99	22.00	21.36	21.75	21.53
			0	21.00	20.25	20.29	20.57
			25	21.00	20.28	20.70	20.81
		50	50	21.00	20.44	20.69	20.75
			0	21.00	20.37	20.68	20.73

8.4 Wi-Fi

2.4G

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
2.4g Wifi (2.4~2.4835)	802.11b	1	2412	14.69	15.00	No
		6	2437	15.29	15.50	Yes
		11	2462	14.95	15.00	No
	802.11g	1	2412	12.66	13.00	No
		6	2437	13.24	13.50	No
		11	2462	12.90	13.00	No
	802.11n(HT20)	1	2412	12.47	12.50	No
		6	2437	13.20	13.50	No
		11	2462	12.80	13.00	No
	802.11n(HT40)	3	2422	11.94	12.00	No
		6	2437	12.33	12.50	No
		9	2452	12.76	13.00	No

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

5G

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-1 (5.150~5.250)	802.11a	36	5180	11.87	12.00	No
		40	5200	12.01	12.50	No
		48	5240	12.20	12.50	No
	802.11n(HT20)	36	5180	11.77	12.00	No
		40	5200	11.75	12.00	No
		48	5240	12.09	12.50	No
	802.11ac(VHT20)	36	5180	11.60	12.00	No
		40	5200	11.67	12.00	No
		48	5240	12.11	12.50	No
	802.11n(HT40)	38	5190	11.95	12.00	No
		46	5230	12.48	12.50	No
	802.11ac(VHT40)	38	5190	12.02	12.50	No
		46	5230	12.46	12.50	No
	802.11ac(VHT80)	42	5210	12.62	13.00	Yes
Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-2a (5.250~5.350)	802.11a	52	5260	12.89	13.00	No
		56	5280	13.03	13.50	No
		64	5320	13.27	13.50	Yes
	802.11n(HT20)	52	5260	12.20	13.00	No
		56	5300	12.78	13.00	No
		64	5320	13.14	13.50	No
	802.11ac(VHT20)	52	5260	12.28	12.50	No
		56	5300	12.88	13.00	No
		64	5320	13.08	13.50	No
	802.11n(HT40)	54	5270	12.55	13.00	No
		62	5310	13.04	13.50	No
	802.11ac(VHT40)	54	5270	12.52	13.00	No
		62	5310	12.96	13.00	No
	802.11ac(VHT80)	58	5290	13.01	13.50	No

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-2c (5.470~5.725)	802.11a	100	5500	12.16	12.50	No
		116	5580	13.15	13.50	No
		140	5700	13.17	13.50	No
	802.11n(HT20)	100	5500	12.03	12.50	No
		120	5580	12.91	13.00	No
		140	5700	12.98	13.00	No
	802.11ac(VHT20)	100	5500	12.62	13.00	No
		116	5580	13.42	13.50	No
		140	5700	13.43	13.50	Yes
	802.11n(HT40)	102	5510	12.32	12.50	No
		118	5550	12.65	13.00	No
		134	5670	12.77	13.00	No
	802.11ac(VHT40)	102	5510	12.79	13.00	No
		118	5550	13.35	13.50	No
		134	5670	13.29	13.50	No
	802.11ac(VHT80)	106	5530	13.22	13.50	No
		122	5610	13.37	13.50	No
Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
U-NII-3 (5.725~5.850)	802.11a	149	5745	12.81	13.00	Yes
		157	5785	12.67	13.00	No
		165	5825	12.17	12.50	No
	802.11n(HT20)	149	5745	12.51	13.00	No
		157	5785	12.36	12.50	No
		165	5825	11.88	12.00	No
	802.11ac(VHT20)	149	5745	12.47	12.50	No
		157	5785	12.33	12.50	No
		165	5825	11.88	12.00	No
	802.11n(HT40)	151	5755	12.65	13.00	No
		159	5795	12.40	12.50	No
	802.11ac(VHT40)	151	5755	12.68	13.00	No
		159	5795	12.41	12.50	No
	802.11ac(VHT80)	155	5775	12.77	13.00	No

8.5 Bluetooth

EDR	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	39	78
			2402MHz	2441MHz	2480MHz
			7.13	6.60	4.32
	GFSK	7.50			
	$\pi/4$ QPSK	7.00	6.59	6.77	4.54
	8DPSK	7.00	6.61	6.76	4.56
BLE	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	20	39
			2402MHz	2440MHz	2480MHz
			-6.35	-6.09	-7.84
	1Mbps	-6.00			
	2Mbps	-6.00	-6.25	-6.02	-7.80

Note

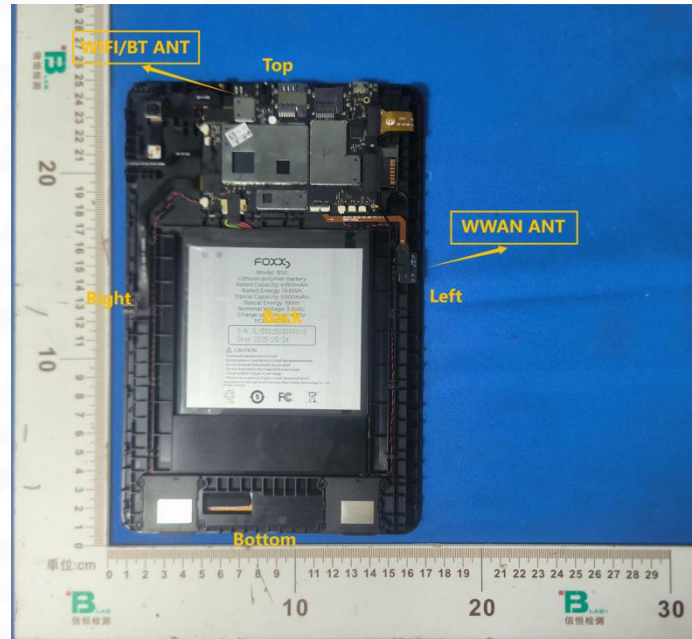
- Per KDB 447498 D01 General RF Exposure Guidance v06, the 1-g SAR test exclusion thresholds for 300 MHz to 6 GHz at *test separation distances* ≤ 40 cm are determined by:

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

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

9. Test Exclusion Consideration

Antenna information:



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

Distance of The Antenna to the EUT surface and edge (mm)						
Antenna	Front Side (mm)	Back Side (mm)	Left Edge (mm)	Right Edge (mm)	Top Edge (mm)	Bottom Edge (mm)
WWAN	<25	<25	<25	154	92	140
BT/Wifi	<25	<25	94	65	<25	226
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	Yes	No	No	No
BT/Wifi	Yes	Yes	No	No	Yes	No

9.1 SAR Test Exclusion Consideration Table

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

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

W/kg for test separation distances ≤ 50 mm;

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

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

10. Test Result

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
GPRS 850+4slots	Back	128	824.2	2.810	0.163	100.00	1.000	28.73	29.00	1.064	0.173	/
	Left	128	824.2	-3.420	0.190	100.00	1.000	28.73	29.00	1.064	0.202	1#

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
GPRS 1900+4slots	Back	661	1880.0	2.370	0.460	100.00	1.000	28.20	28.50	1.072	0.493	2#
	Left	661	1880.0	-1.630	0.359	100.00	1.000	28.20	28.50	1.072	0.385	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
WCDMA Band 2 (RMC*)	Back	9262	1852.4	-2.650	0.943	100.00	1.000	22.39	22.50	1.026	0.968	3#
	Back-Repeat	9262	1852.4	1.460	0.936	100.00	1.000	22.39	22.50	1.026	0.960	/
	Back	9400	1880.0	3.260	0.864	100.00	1.000	22.16	22.50	1.081	0.934	/
	Back	9538	1907.6	-4.150	0.813	100.00	1.000	21.92	22.00	1.019	0.828	/
	Left	9262	1852.4	-2.080	0.756	100.00	1.000	22.39	22.50	1.026	0.776	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
WCDMA Band 4 (RMC*)	Back	1513	1752.6	-0.070	0.470	100.00	1.000	22.68	23.00	1.076	0.506	4#
	Left	1513	1752.6	1.840	0.432	100.00	1.000	22.68	23.00	1.076	0.465	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Reported SAR (W/kg)	Meas. No.
WCDMA Band 5 (RMC*)	Back	4233	846.6	-3.590	0.094	100.00	1.000	23.09	23.50	1.099	0.103	/
	Left	4233	846.6	2.990	0.120	100.00	1.000	23.09	23.50	1.099	0.132	5#

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 2 (BW: 20MHz)	1RB	Back	18900	1880.0	-1.290	0.774	100.00	1.000	21.94	22.00	1.014	0.785	6#
		Left	18900	1880.0	3.570	0.526	100.00	1.000	21.94	22.00	1.014	0.533	/
	50%RB	Back	18900	1880.0	2.710	0.732	100.00	1.000	20.73	21.00	1.064	0.779	/
		Left	18900	1880.0	-3.240	0.504	100.00	1.000	20.73	21.00	1.064	0.536	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 4 (BW: 20MHz)	1RB	Back	20300	1745.0	2.450	0.536	100.00	1.000	22.32	22.50	1.042	0.559	7#
		Left	20300	1745.0	0.230	0.445	100.00	1.000	22.32	22.50	1.042	0.464	/
	50%RB	Back	20300	1745.0	-0.440	0.500	100.00	1.000	21.18	21.50	1.076	0.538	/
		Left	20300	1745.0	-4.120	0.417	100.00	1.000	21.18	21.50	1.076	0.449	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 5 (BW: 10MHz)	1RB	Back	20525	836.5	3.400	0.102	100.00	1.000	22.09	22.50	1.099	0.112	/
		Left	20525	836.5	2.700	0.127	100.00	1.000	22.09	22.50	1.099	0.140	8#
	50%RB	Back	20525	836.5	-3.080	0.086	100.00	1.000	21.09	21.50	1.099	0.095	/
		Left	20525	836.5	-1.230	0.109	100.00	1.000	21.09	21.50	1.099	0.120	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 7 (BW: 20MHz)	1RB	Back	21100	2535.0	-3.180	0.434	100.00	1.000	20.75	21.00	1.059	0.460	9#
		Left	21100	2535.0	1.340	0.387	100.00	1.000	20.75	21.00	1.059	0.410	/
	50%RB	Back	21100	2535.0	-2.120	0.402	100.00	1.000	19.72	20.00	1.067	0.429	/
		Left	21100	2535.0	1.340	0.353	100.00	1.000	19.72	20.00	1.067	0.377	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 12 (BW: 10MHz)	1RB	Back	23060	704.0	2.160	0.158	100.00	1.000	22.98	23.00	1.005	0.159	10#
		Left	23060	704.0	-4.220	0.103	100.00	1.000	22.98	23.00	1.005	0.104	/
	50%RB	Back	23060	704.0	-0.660	0.113	100.00	1.000	21.77	22.00	1.054	0.119	/
		Left	23060	704.0	-0.480	0.087	100.00	1.000	21.77	22.00	1.054	0.092	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 13 (BW: 10MHz)	1RB	Back	23230	782.0	2.900	0.116	100.00	1.000	22.42	22.50	1.019	0.118	11#
		Left	23230	782.0	2.800	0.095	100.00	1.000	22.42	22.50	1.019	0.097	/
	50%RB	Back	23230	782.0	-3.910	0.103	100.00	1.000	21.23	21.50	1.064	0.110	/
		Left	23230	782.0	-0.800	0.086	100.00	1.000	21.23	21.50	1.064	0.092	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 17 (BW: 10MHz)	1RB	Back	23800	711.0	1.230	0.174	100.00	1.000	23.04	23.50	1.112	0.193	12#
		Left	23800	711.0	-2.340	0.132	100.00	1.000	23.04	23.50	1.112	0.147	/
	50%RB	Back	23800	711.0	1.130	0.154	100.00	1.000	22.04	22.50	1.112	0.171	/
		Left	23800	711.0	2.000	0.121	100.00	1.000	22.04	22.50	1.112	0.135	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 41 (BW: 20MHz)	1RB	Back	41490	2680.0	-4.340	0.596	100.00	1.000	23.87	24.00	1.030	0.614	13#
		Left	41490	2680.0	-3.020	0.524	100.00	1.000	23.87	24.00	1.030	0.540	/
	50%RB	Back	41490	2680.0	-0.190	0.564	100.00	1.000	22.84	23.00	1.038	0.585	/
		Left	41490	2680.0	-1.670	0.495	100.00	1.000	22.84	23.00	1.038	0.514	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 66 (BW: 20MHz)	1RB	Back	132572	1770.0	-2.320	0.436	100.00	1.000	23.19	23.50	1.074	0.468	14#
		Left	132572	1770.0	-2.690	0.385	100.00	1.000	23.19	23.50	1.074	0.413	/
	50%RB	Back	132572	1770.0	0.680	0.401	100.00	1.000	22.06	22.50	1.107	0.444	/
		Left	132572	1770.0	-0.680	0.348	100.00	1.000	22.06	22.50	1.107	0.385	/

Body(hotspot open, 0mm Gap)													
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Band 71 (BW: 20MHz)	1RB	Back	133222	673.0	-3.530	0.081	100.00	1.000	22.97	23.00	1.007	0.082	15#
		Left	133222	673.0	-1.730	0.067	100.00	1.000	22.97	23.00	1.007	0.067	/
	50%RB	Back	133222	673.0	-0.490	0.075	100.00	1.000	21.73	22.00	1.064	0.080	/
		Left	133222	673.0	1.330	0.061	100.00	1.000	21.73	22.00	1.064	0.065	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
2.4g (2.4~2.4835) 802.11b	Back	6	2437	4.450	0.344	100.00	1.000	15.29	15.50	1.050	0.361	16#
	Top	6	2437	-0.350	0.302	100.00	1.000	15.29	15.50	1.050	0.317	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-1 (5.150~5.250) 802.11ac(VHT80)	Back	42	5210	-2.680	0.392	100.00	1.000	12.62	13.00	1.091	0.428	17#
	Top	42	5210	-0.490	0.345	100.00	1.000	12.62	13.00	1.091	0.376	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-2a (5.250~5.350) 802.11a	Back	64	5320	-3.520	0.476	100.00	1.000	13.27	13.50	1.054	0.502	18#
	Top	64	5320	2.790	0.431	100.00	1.000	13.27	13.50	1.054	0.454	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-2c (5.470~5.725) 802.11ac(VHT20)	Back	140	5700	-3.620	0.262	100.00	1.000	13.43	13.50	1.016	0.266	19#
	Top	140	5700	-1.920	0.234	100.00	1.000	13.43	13.50	1.016	0.238	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
U-NII-3 (5.725~5.850) 802.11a	Back	149	5745	3.270	0.291	100.00	1.000	12.81	13.00	1.045	0.304	20#
	Top	149	5745	-2.130	0.254	100.00	1.000	12.81	13.00	1.045	0.265	/

Body(hotspot open, 0mm Gap)												
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
EDR	Back	0	2402	-3.860	0.008	100.00	1.000	7.13	7.50	1.089	0.009	21#
	Top	0	2402	-2.130	0.005	100.00	1.000	7.13	7.50	1.089	0.005	/

Note:

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

11. SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Note: For 1g SAR, the highest measured 1g SAR is $0.943 > 0.80$ 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 2 (RMC*)	Back	9262	1852.4	0.943	1.007
	Back-repeat	9262	1852.4	0.936	

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

12. Simultaneous Transmission

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR 1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR 1g 1.6 W/kg), SAR test exclusion is determined by the SAR to Peak Location Ratio (SPLSR).

12.1 Simultaneous Transmission Mode Considerations

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. The device has 2 Tx antennas, WWAN main antenna, Wifi/BT antenna supports 2.4G/5G Wi-Fi and BT. The 2 antennas can always transmit simultaneously. The work mode combination is showed as below table.

Application Simultaneous Transmission information:

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

12.2 Sum SAR of Simultaneous Transmission

Hotspot(body-worn)

Band	Test Position	Scaled				Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + WIFI 5G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
		WWAN	WIFI 2.4G	WIFI 5G	Bluetooth					
WCDMA Band 2 (RMC*)	Back	0.968	0.361	0.502	0.009	1.329	1.470	0.977	N/A	N/A
	Left	0.776	/	/	/	0.776	0.776	0.776	N/A	N/A
	Top	/	0.317	0.454	0.005	0.317	0.454	0.005	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
3dB Attenuator	MIDWEST MICROWAVE	263-3dB	N/A	2025/04/02	2026/04/01
Coupler	MERRIMAC	CWM-10R-10.8G	LOT-83391	2024/10/25	2025/10/24
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
5200MHz-5800MHz Validation Dipole	MVG	SID5000	07/22 DIP5G000-670	2025/05/26	2028/05/25
LIMESAR Dielectric Probe	MVG	SCLMP	06/22 OCPG88	2024/02/02	2025/02/01
ENA Series Network Analyzer	Agilent	E5071B	MY42301221	2023/11/16	2024/11/15
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	42.08	0.89	0.88	0.43%	-1.12%	±5%	21.5	7/7/2025
835	41.50	41.87	0.90	0.89	0.89%	-1.11%	±5%	21.7	8/7/2025
1800	40.00	40.24	1.40	1.38	0.60%	-1.43%	±5%	21.4	9/7/2025
1900	40.00	40.11	1.40	1.41	0.27%	0.71%	±5%	21.6	10/7/2025
2450	39.20	38.86	1.80	1.83	-0.87%	1.67%	±5%	20.9	11/7/2025
2600	39.00	38.67	1.96	1.94	-0.85%	-1.02%	±5%	20.5	12/7/2025
5200	36.00	36.23	4.66	4.61	0.64%	-1.07%	±5%	20.7	13/7/2025
5400	35.80	35.84	4.86	4.83	0.11%	-0.62%	±5%	20.7	13/7/2025
5600	35.50	35.46	5.07	5.08	-0.11%	0.20%	±5%	20.3	14/7/2025
5800	35.30	35.21	5.27	5.18	-0.25%	-1.71%	±5%	20.3	14/7/2025

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	0.502	0.791	5.02	7.91	5.55	8.41	-9.55%	-5.95%
835	100	0.565	1.034	5.65	10.34	6.12	9.46	-7.68%	9.30%
1800	100	1.980	3.699	19.80	36.99	19.83	37.93	-0.15%	-2.48%
1900	100	1.901	3.795	19.01	37.95	20.82	40.29	-8.69%	-5.81%
2450	100	2.489	5.437	24.89	54.37	24.55	52.72	1.38%	3.13%
2600	100	2.408	5.218	24.08	52.18	24.43	53.76	-1.43%	-2.94%
5200	100	2.213	7.245	22.13	72.45	22.78	78.16	-2.85%	-7.31%
5400	100	2.462	8.273	24.62	82.73	22.55	78.64	9.18%	5.20%
5600	100	2.407	8.326	24.07	83.26	23.95	82.72	0.50%	0.65%
5800	100	2.171	7.651	21.71	76.51	22.71	78.32	-4.40%	-2.31%

System Performance Check Data (750 MHz)

System check at 750 MHz

Date of measurement: 7/7/2025

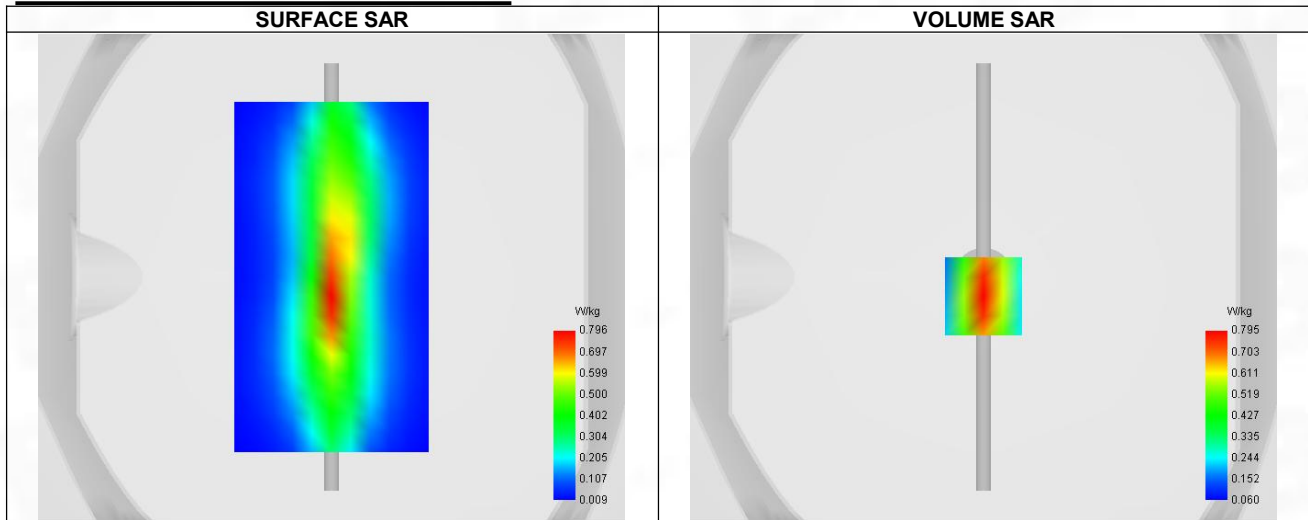
A. Experimental conditions.

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

B. Permittivity

Frequency (MHz)	750.000
Relative permittivity (real part)	42.083
Relative permittivity (imaginary part)	21.254
Conductivity (S/m)	0.878

C. SAR Surface and Volume



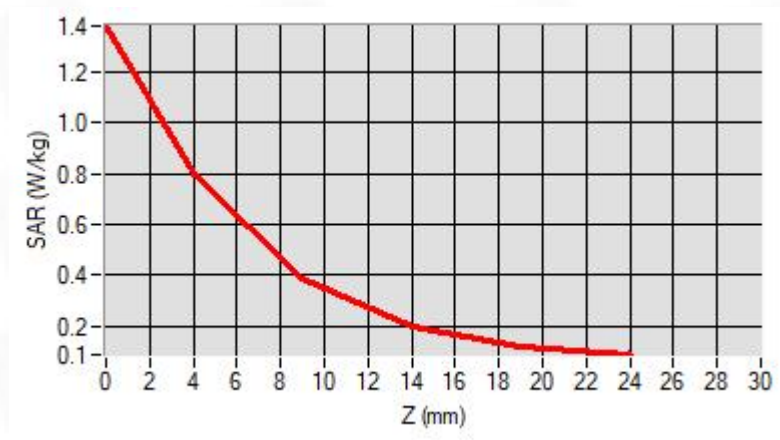
Maximum location: X=0.00, Y=-8.00 ; SAR Peak: 1.38 W/kg

D. SAR 1g & 10g

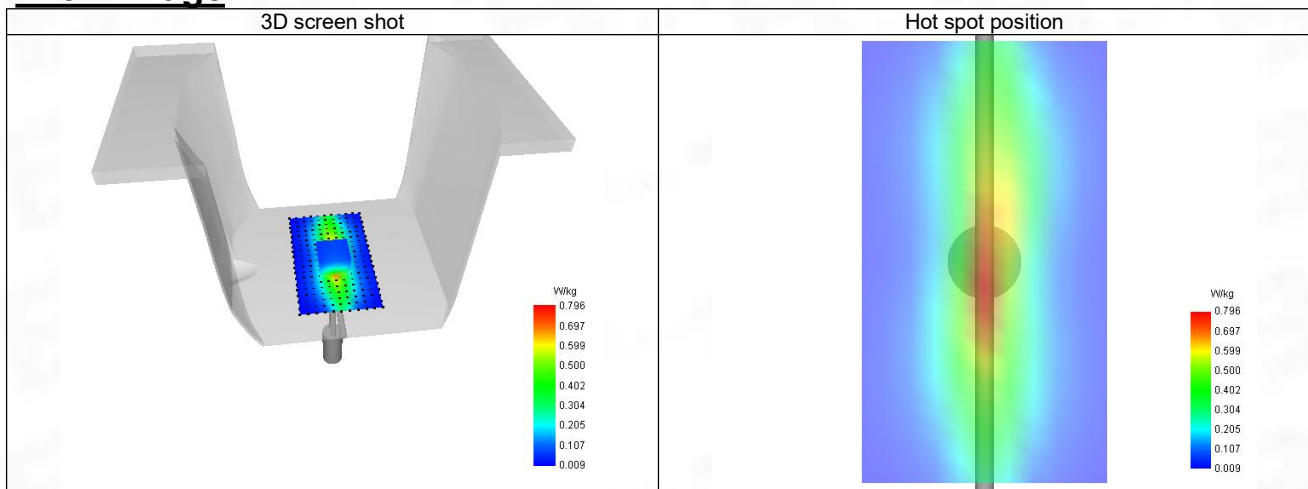
SAR 10g (W/Kg)	0.502
SAR 1g (W/Kg)	0.791
Variation (%)	-2.790
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	48.553459

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	1.380	0.795	0.386	0.198	0.122



F. 3D Image



System Performance Check Data (835 MHz)

System check at 835 MHz

Date of measurement: 8/7/2025

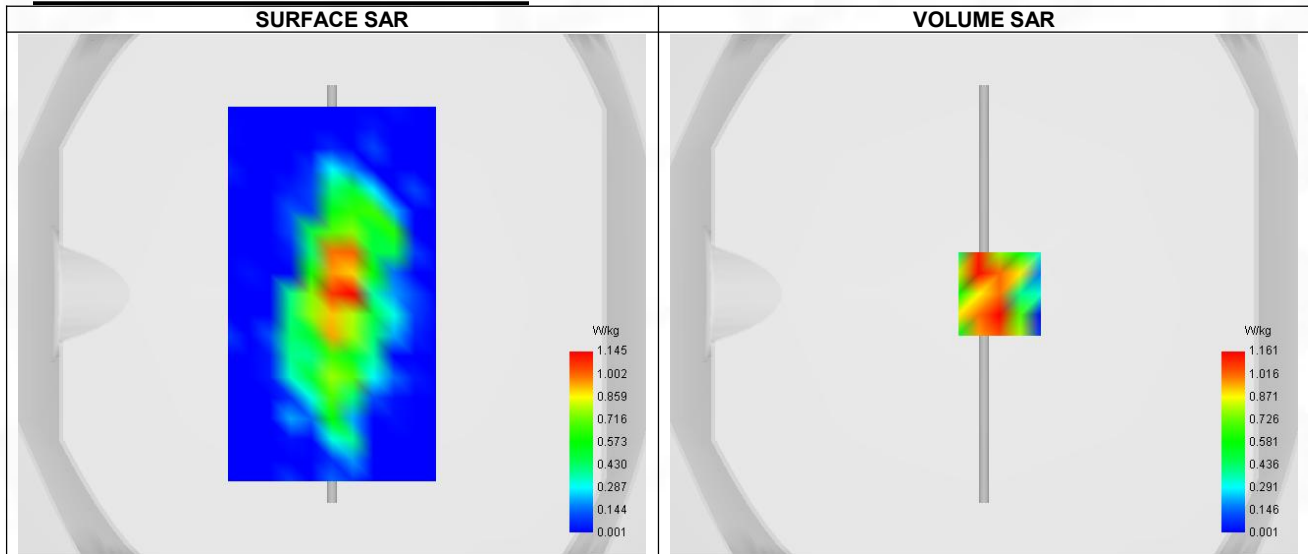
A. Experimental conditions.

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

B. Permittivity

Frequency (MHz)	835.000
Relative permittivity (real part)	41.866
Relative permittivity (imaginary part)	20.574
Conductivity (S/m)	0.891

C. SAR Surface and Volume



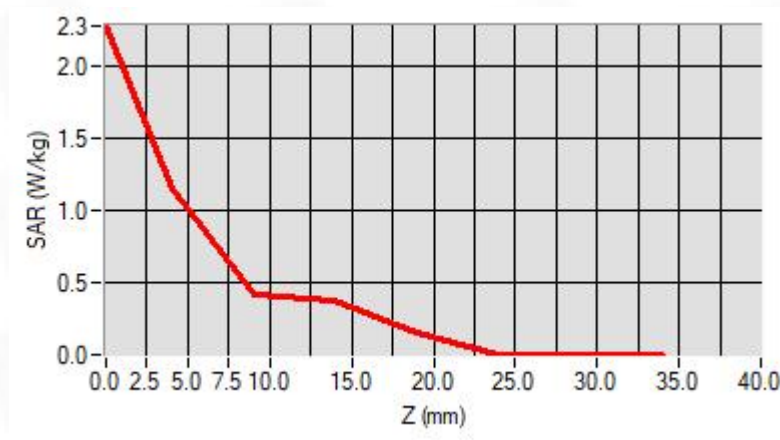
Maximum location: X=6.00, Y=0.00 ; SAR Peak: 2.27 W/kg

D. SAR 1g & 10g

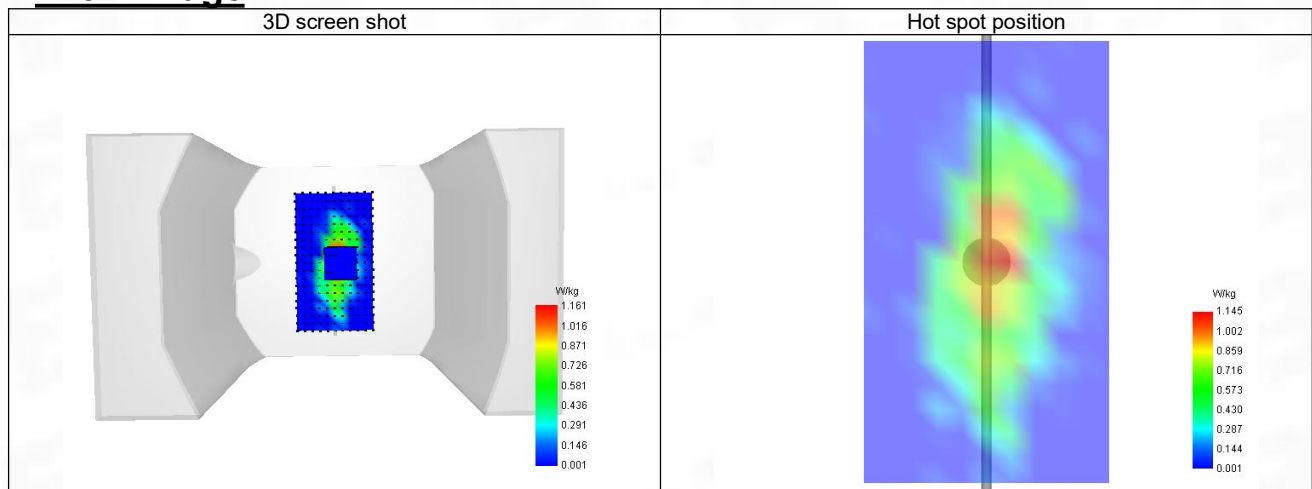
SAR 10g (W/Kg)	0.565
SAR 1g (W/Kg)	1.034
Variation (%)	-2.780
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	40.847610

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	2.280	1.109	0.453	0.372	0.149



F. 3D Image



System Performance Check Data (1800 MHz)

System check at 1800 MHz

Date of measurement: 9/7/2025

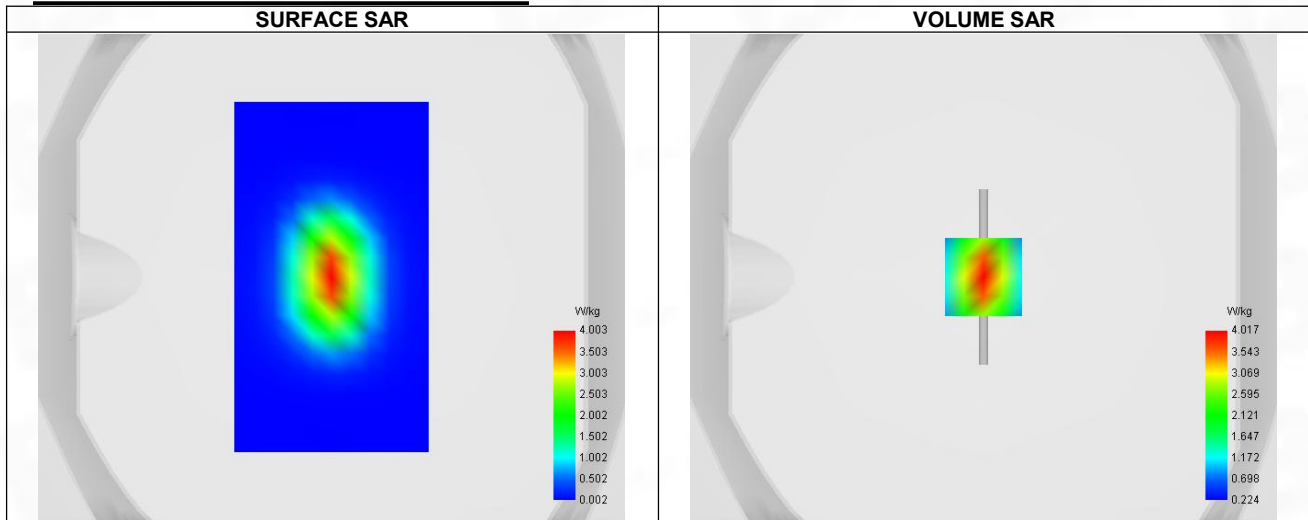
A. Experimental conditions.

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

B. Permittivity

Frequency (MHz)	1800.000
Relative permittivity (real part)	40.243
Relative permittivity (imaginary part)	16.854
Conductivity (S/m)	1.375

C. SAR Surface and Volume



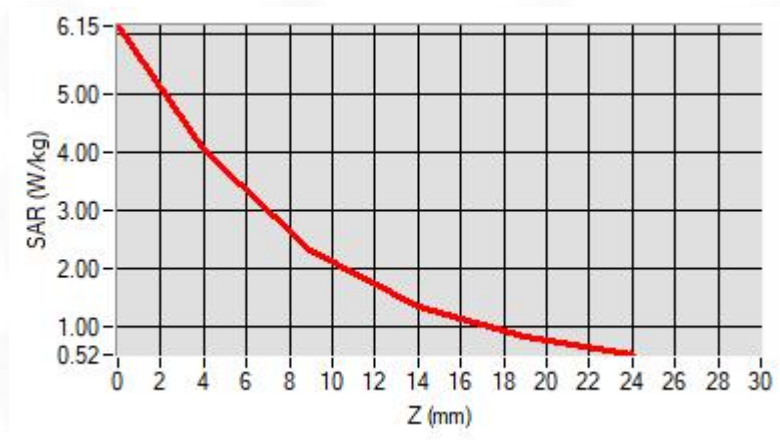
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 6.15 W/kg

D. SAR 1g & 10g

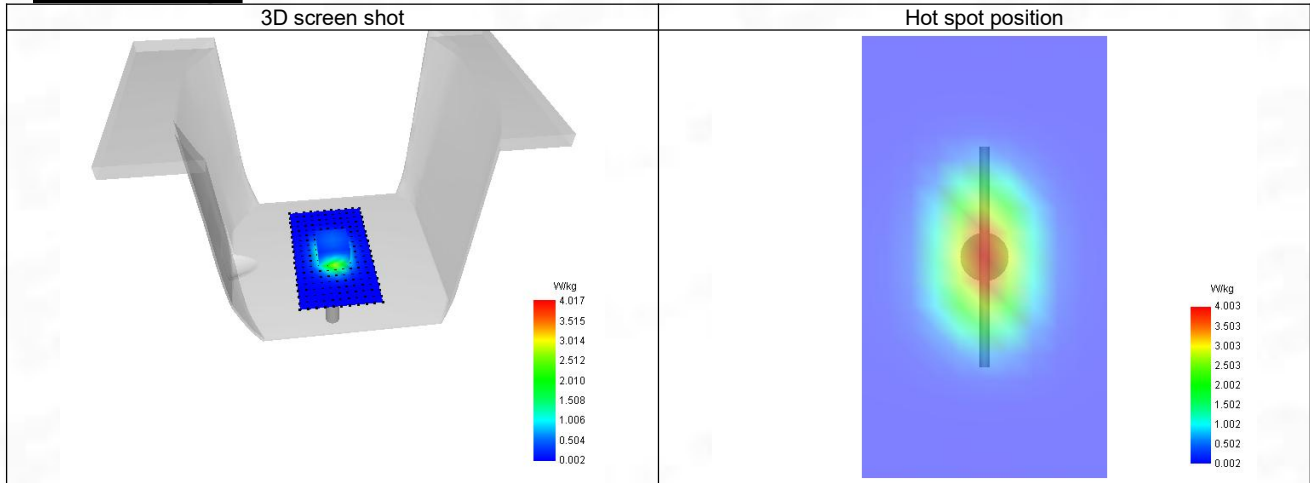
SAR 10g (W/Kg)	1.980
SAR 1g (W/Kg)	3.699
Variation (%)	-1.450
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	57.729649

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	6.151	4.017	2.319	1.361	0.842



F. 3D Image



System Performance Check Data (1900 MHz)

System check at 1900 MHz

Date of measurement: 10/7/2025

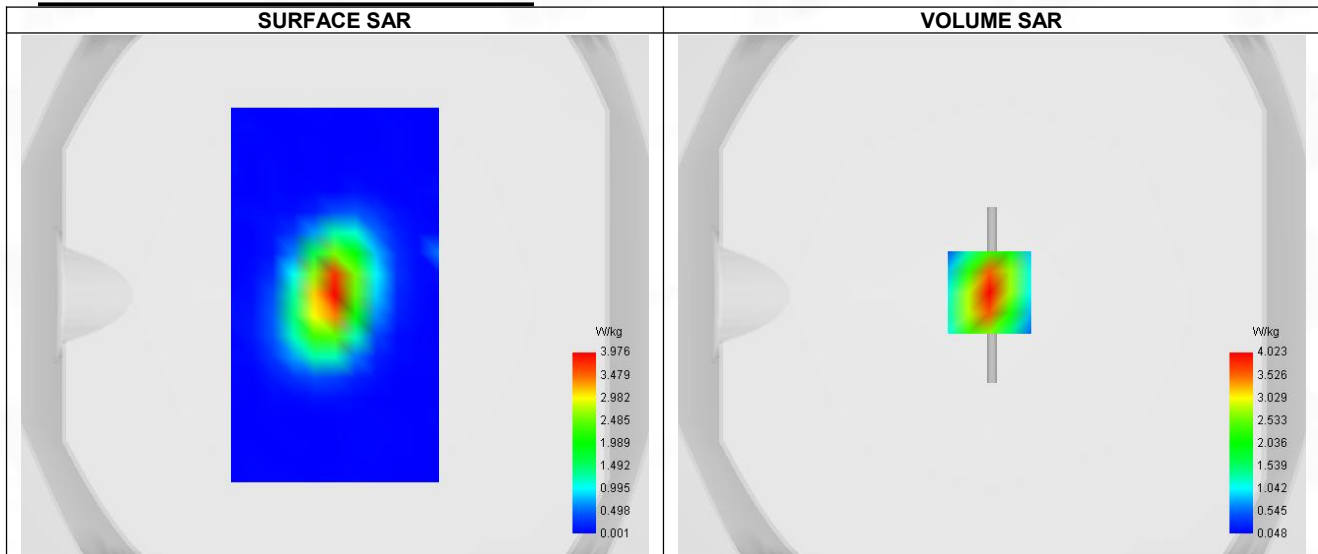
A. Experimental conditions.

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

B. Permittivity

Frequency (MHz)	1900.000
Relative permittivity (real part)	40.113
Relative permittivity (imaginary part)	15.421
Conductivity (S/m)	1.410

C. SAR Surface and Volume

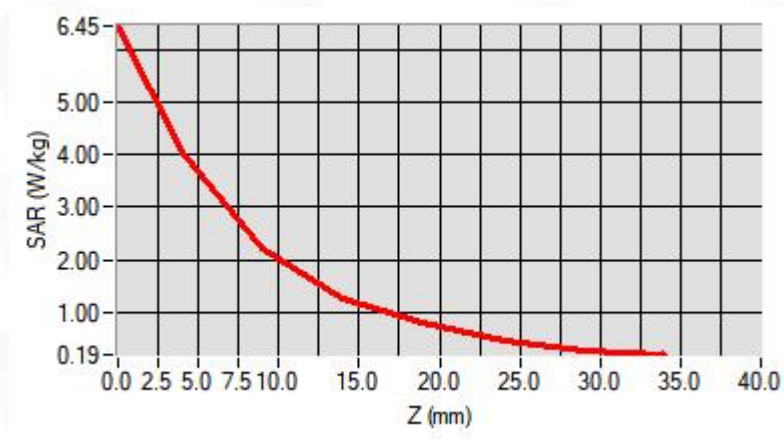


D. SAR 1g & 10g

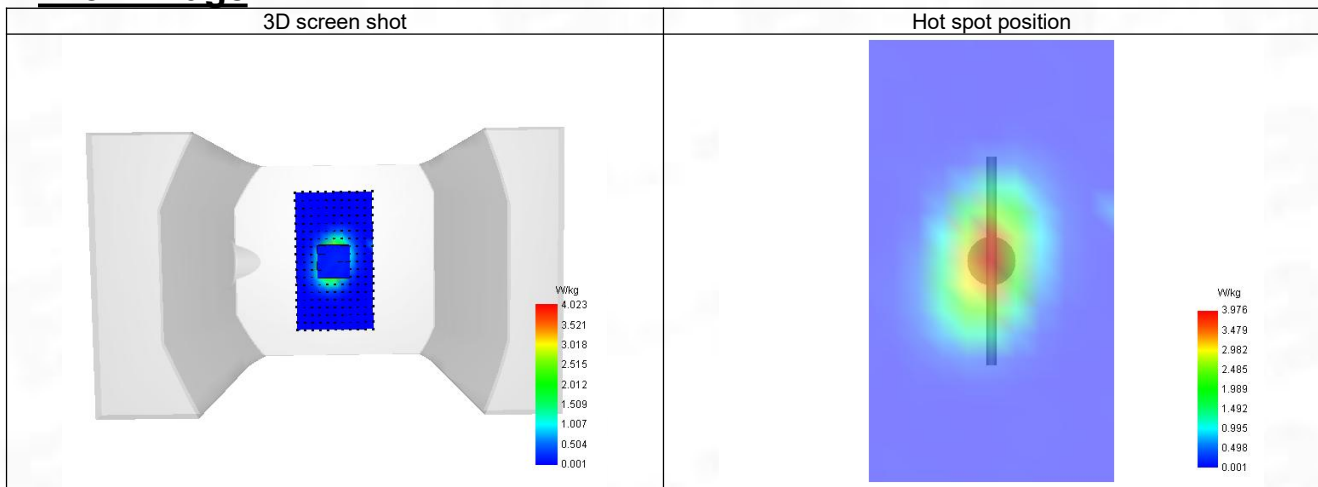
SAR 10g (W/Kg)	1.901
SAR 1g (W/Kg)	3.795
Variation (%)	-2.930
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	55.431270

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	6.445	4.023	2.230	1.248	0.795



F. 3D Image



System Performance Check Data (2450 MHz)

System check at 2450 MHz

Date of measurement: 11/7/2025

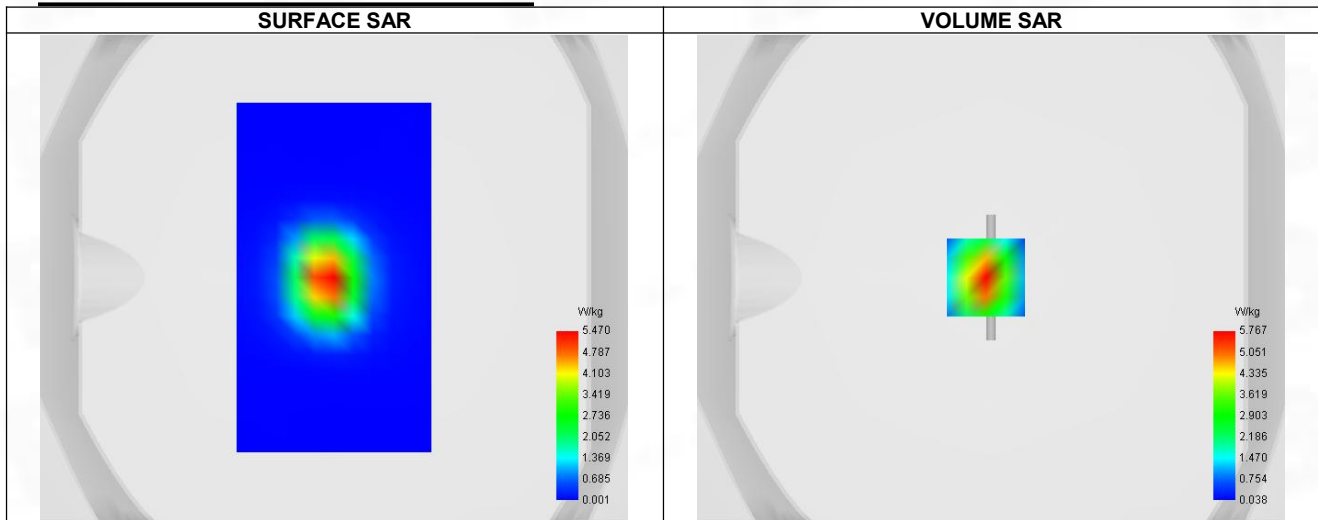
A. Experimental conditions.

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

B. Permittivity

Frequency (MHz)	2450.000
Relative permittivity (real part)	38.858
Relative permittivity (imaginary part)	13.657
Conductivity (S/m)	1.825

C. SAR Surface and Volume



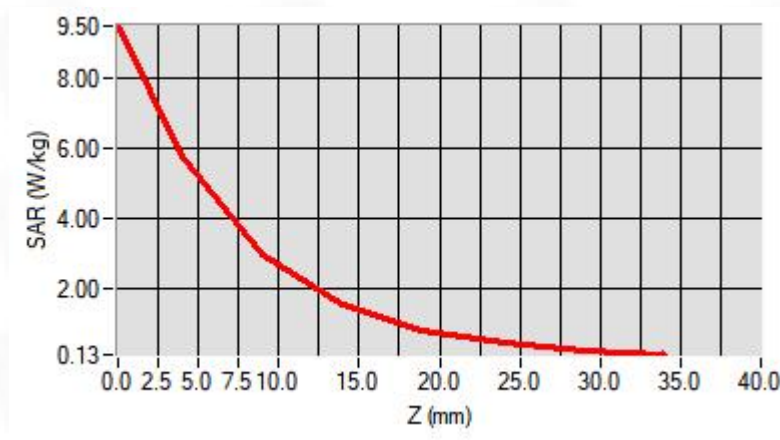
Maximum location: X=-2.00, Y=0.00 ; SAR Peak: 9.45 W/kg

D. SAR 1g & 10g

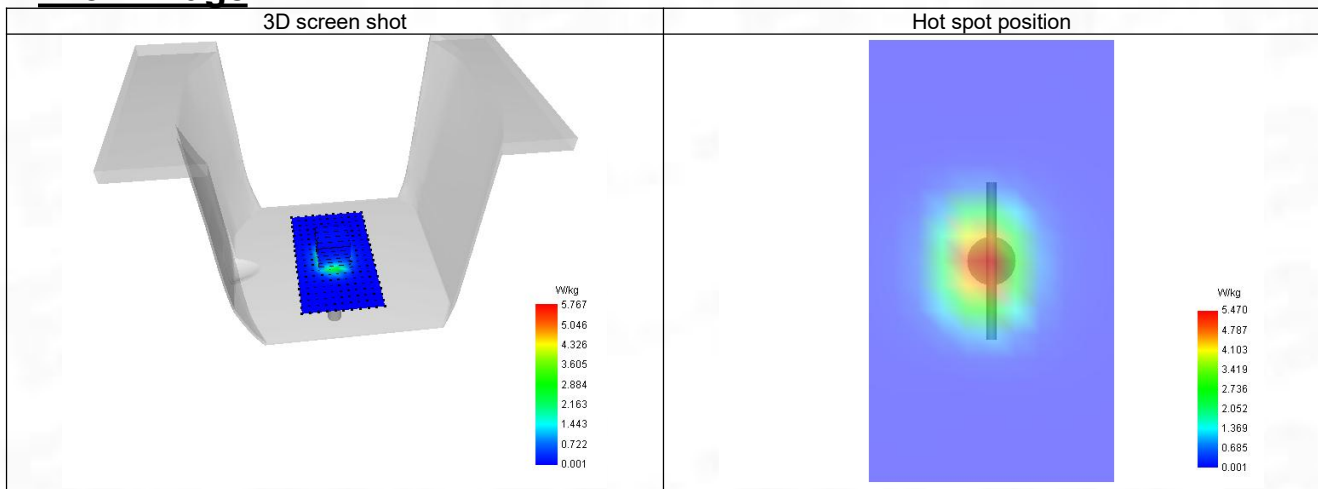
SAR 10g (W/Kg)	2.489
SAR 1g (W/Kg)	5.437
Variation (%)	-0.510
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	51.361193

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	9.497	5.767	2.962	1.557	0.829



F. 3D Image



System Performance Check Data (2600 MHz)

System check at 2600 MHz

Date of measurement: 12/7/2025

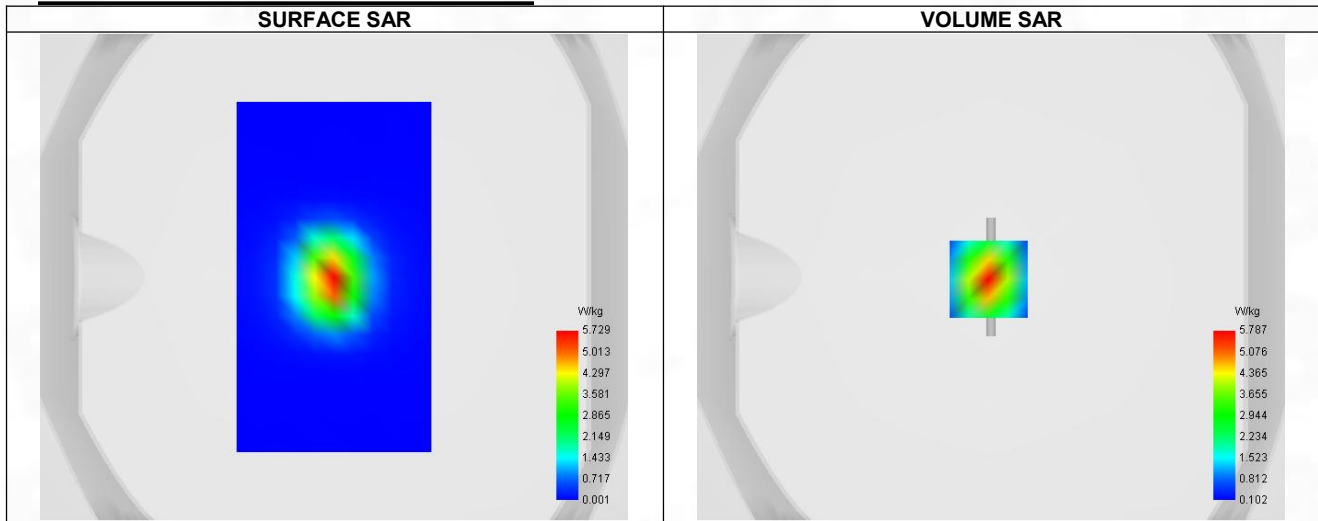
A. Experimental conditions.

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

B. Permittivity

Frequency (MHz)	2600.000
Relative permittivity (real part)	38.672
Relative permittivity (imaginary part)	12.754
Conductivity (S/m)	1.943

C. SAR Surface and Volume



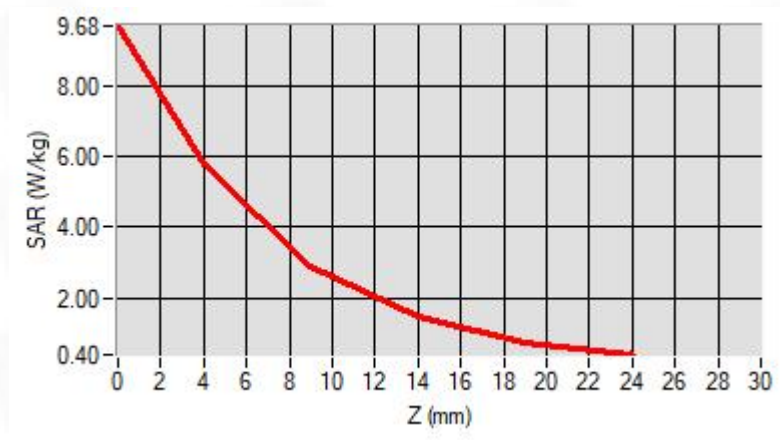
Maximum location: X=-1.00, Y=-1.00 ; SAR Peak: 9.66 W/kg

D. SAR 1g & 10g

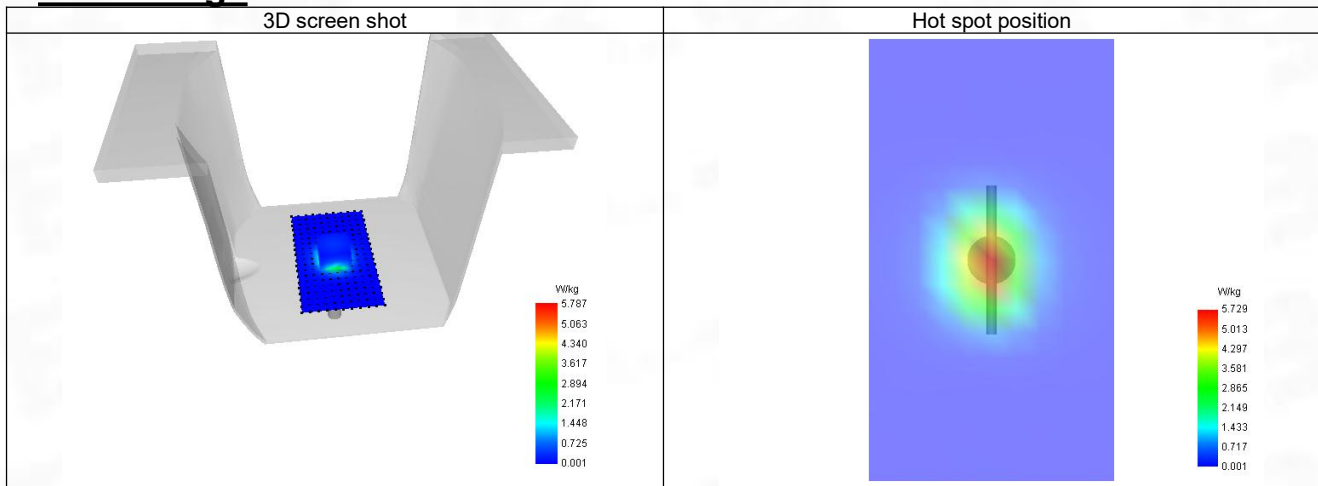
SAR 10g (W/Kg)	2.408
SAR 1g (W/Kg)	5.218
Variation (%)	2.010
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.267842

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	9.676	5.787	2.909	1.454	0.770



F. 3D Image



System Performance Check Data (5200 MHz)

System check at 5200 MHz

Date of measurement: 13/7/2025

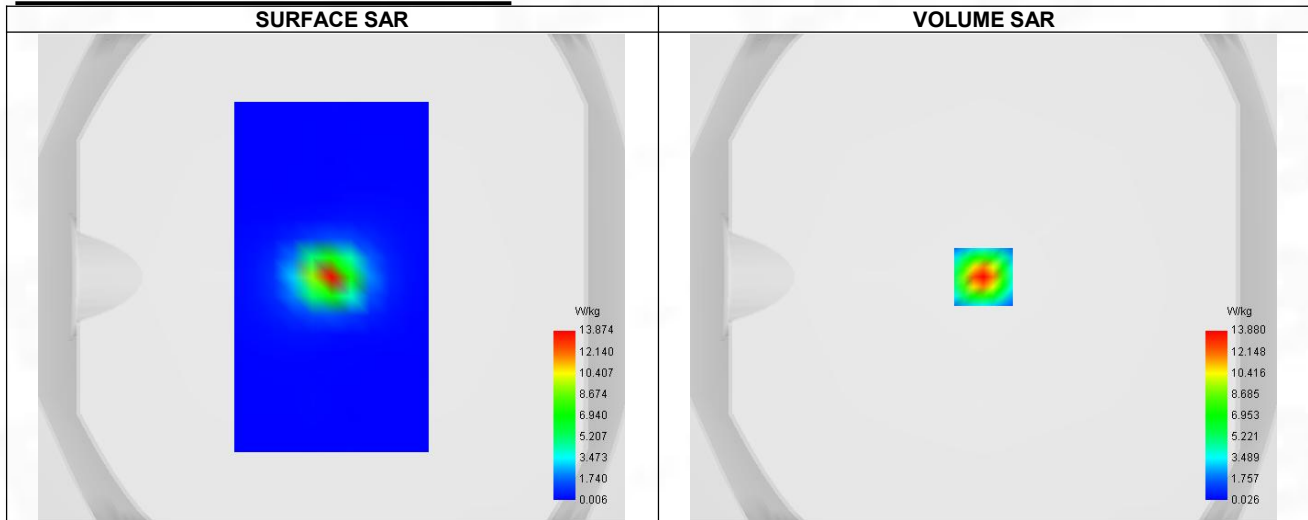
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.18
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW

B. Permittivity

Frequency (MHz)	5200.000
Relative permittivity (real part)	36.232
Relative permittivity (imaginary part)	15.748
Conductivity (S/m)	4.612

C. SAR Surface and Volume



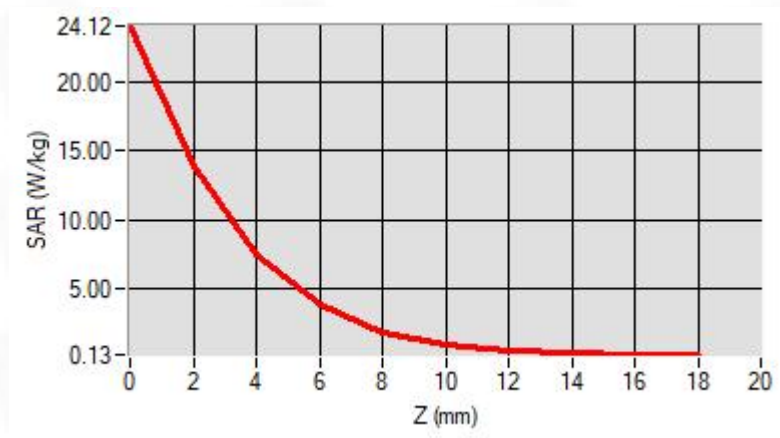
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 23.75 W/kg

D. SAR 1g & 10g

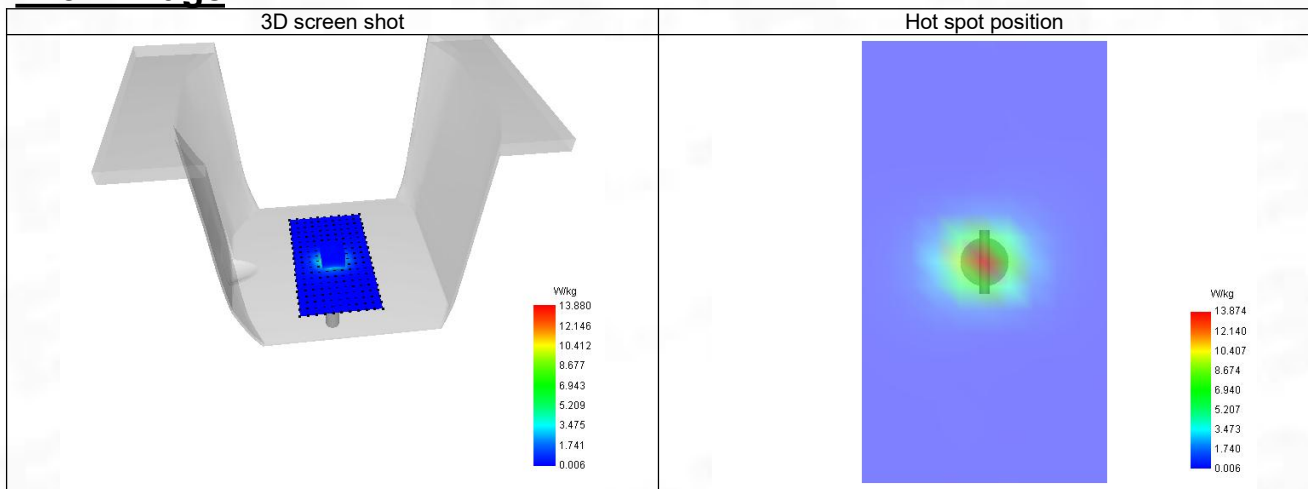
SAR 10g (W/Kg)	2.213
SAR 1g (W/Kg)	7.245
Variation (%)	1.460
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	53.559078

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	24.118	13.880	7.434	3.717	1.800	0.869	0.442	0.253	0.170



F. 3D Image



System Performance Check Data (5400 MHz)

System check at 5400 MHz

Date of measurement: 13/7/2025

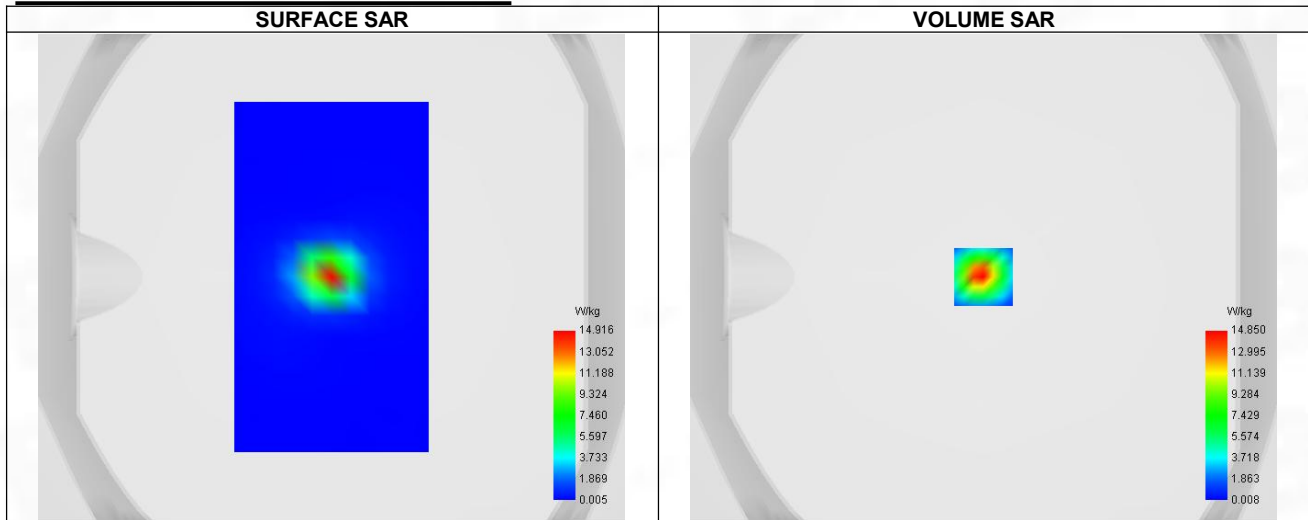
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.14
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5400
Channels	Middle
Signal	CW

B. Permittivity

Frequency (MHz)	5400.000
Relative permittivity (real part)	35.836
Relative permittivity (imaginary part)	16.228
Conductivity (S/m)	4.828

C. SAR Surface and Volume



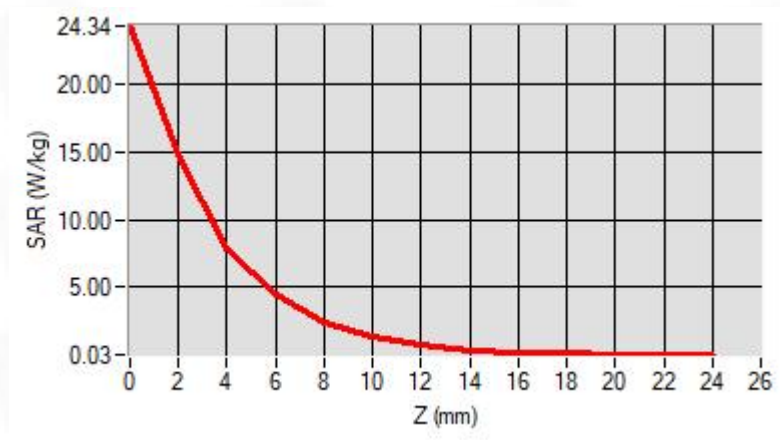
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 26.18 W/kg

D. SAR 1g & 10g

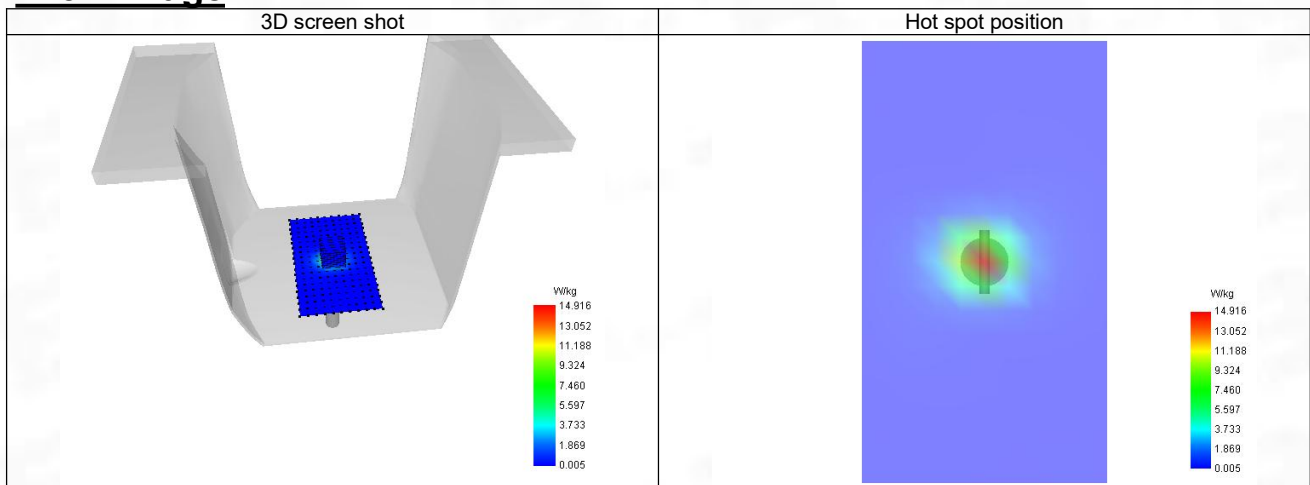
SAR 10g (W/Kg)	2.462
SAR 1g (W/Kg)	8.273
Variation (%)	-14.630
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	53.468013

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	24.340	14.850	7.940	4.411	2.387	1.295	0.709	0.395	0.211



F. 3D Image



System Performance Check Data (5600 MHz)

System check at 5600 MHz

Date of measurement: 14/7/2025

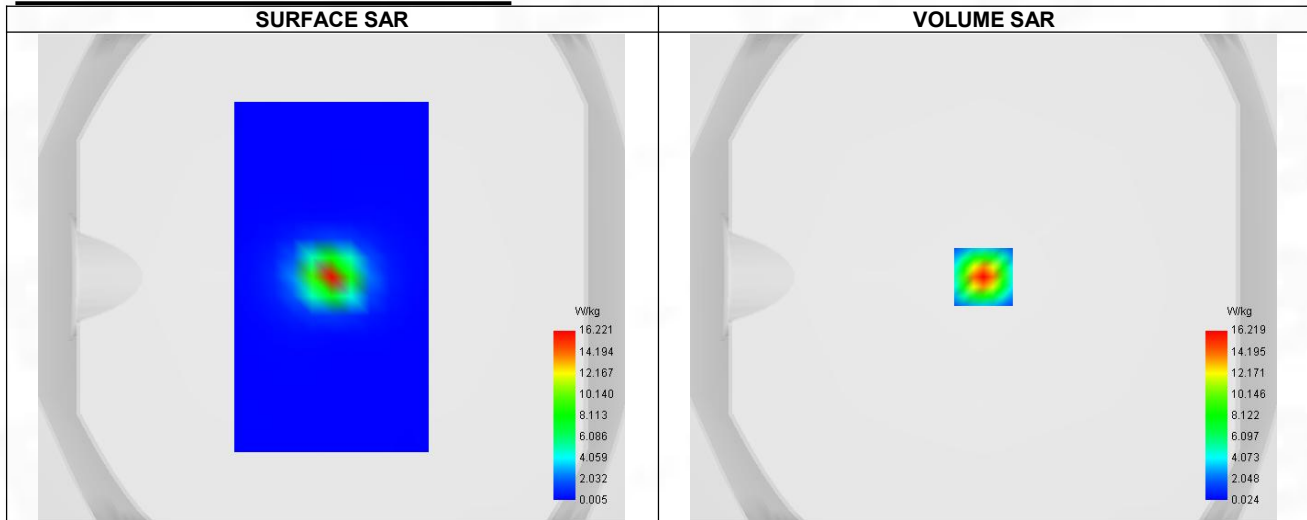
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.12
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2mm, Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5600
Channels	Middle
Signal	CW

B. Permittivity

Frequency (MHz)	5600.000
Relative permittivity (real part)	35.463
Relative permittivity (imaginary part)	16.386
Conductivity (S/m)	5.082

C. SAR Surface and Volume



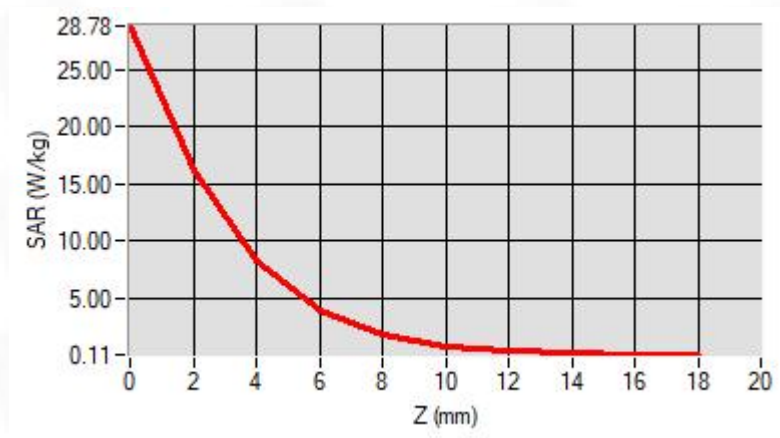
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 28.36 W/kg

D. SAR 1g & 10g

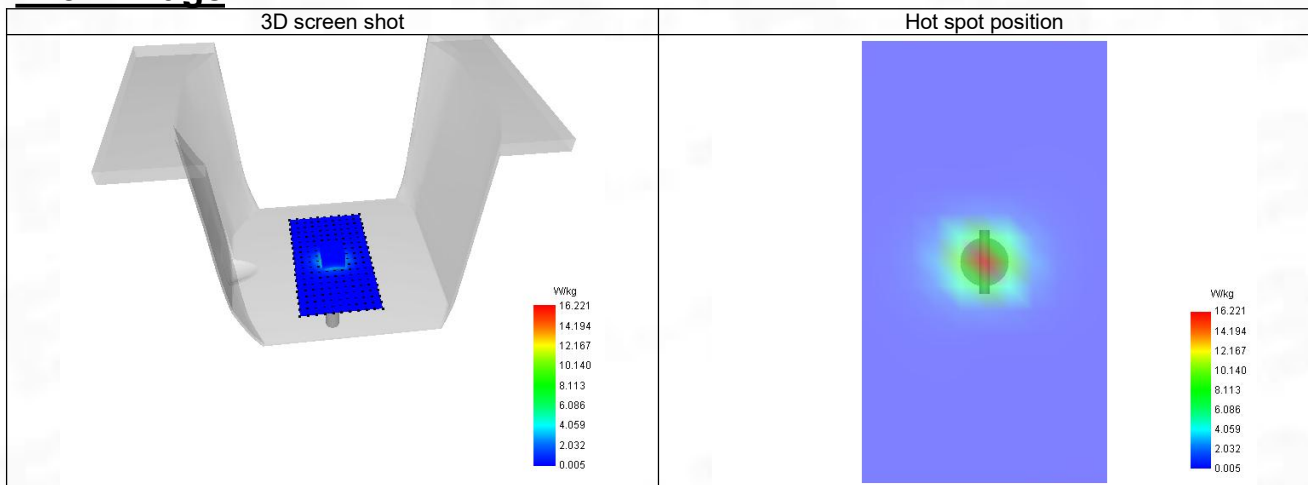
SAR 10g (W/Kg)	2.407
SAR 1g (W/Kg)	8.326
Variation (%)	2.750
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	51.871262

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	28.776	16.219	8.413	4.018	1.831	0.820	0.386	0.210	0.143



F. 3D Image



System Performance Check Data (5800 MHz)

System check at 5800 MHz

Date of measurement: 14/7/2025

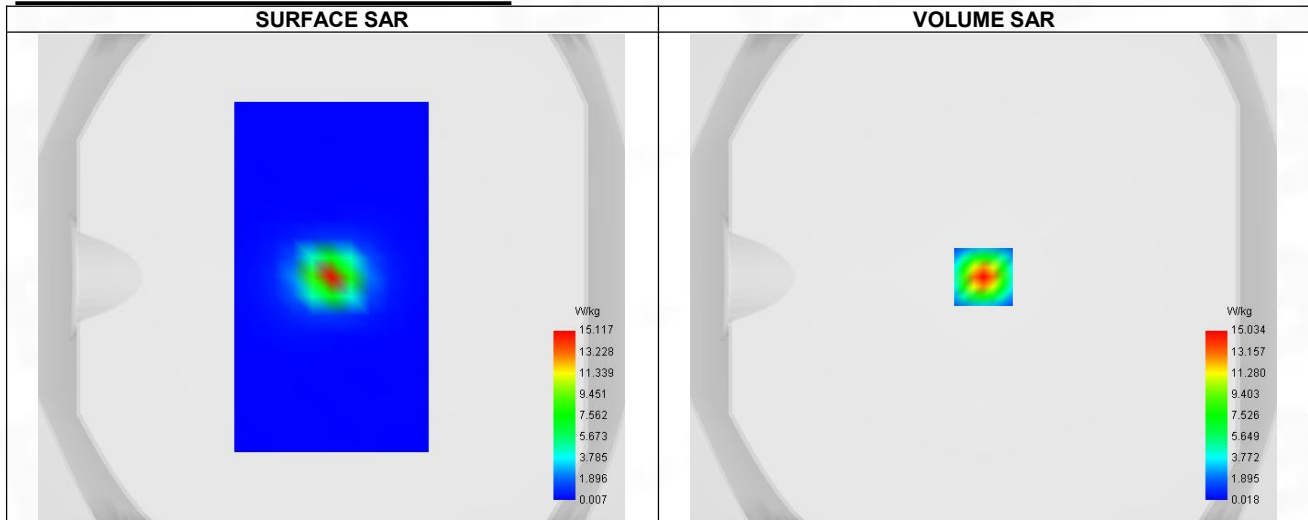
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.11
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW

B. Permittivity

Frequency (MHz)	5800.000
Relative permittivity (real part)	35.212
Relative permittivity (imaginary part)	16.425
Conductivity (S/m)	5.178

C. SAR Surface and Volume



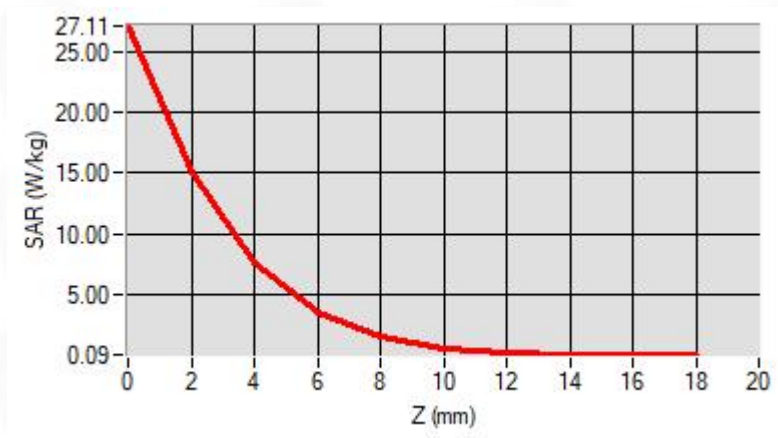
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 26.73 W/kg

D. SAR 1g & 10g

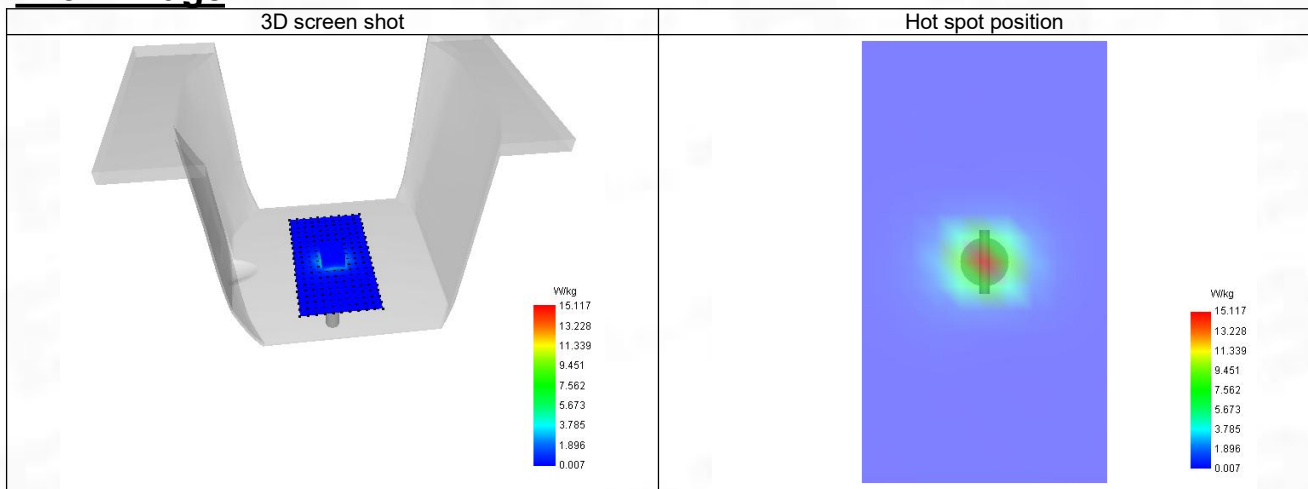
SAR 10g (W/Kg)	2.171
SAR 1g (W/Kg)	7.651
Variation (%)	5.730
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	50.572037

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	27.106	15.034	7.603	3.499	1.516	0.636	0.280	0.147	0.103



F. 3D Image



ANNEX C Test Data

1-Body with left position in dist. 0mm on Channel 128 in GPRS 850+4slots

SAR Measurement at GPRS850 (Body, Validation Plane)

Date of measurement: 8/7/2025

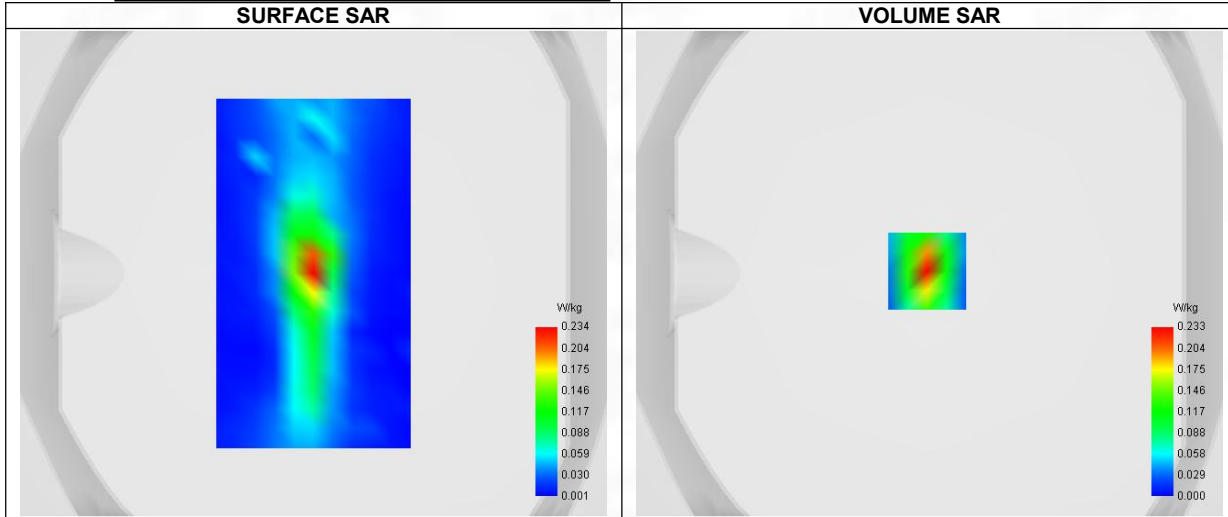
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.15
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS850
Channels/Frequency	Lower (128)/ frequency 824.200 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	4

B. Permittivity

Middle TX Frequency (MHz)	824.200
Relative permittivity (real part)	41.894
Relative permittivity (imaginary part)	20.660
Conductivity (S/m)	0.889

C. SAR Surface and Volume



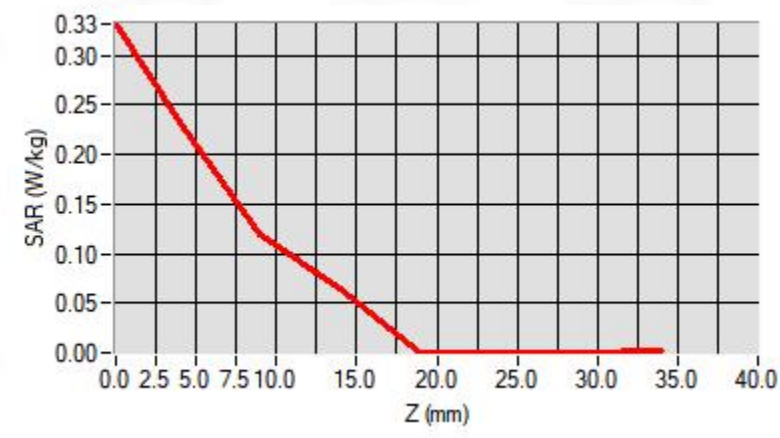
Maximum location: X=-1.00, Y=1.00 ; SAR Peak: 0.34 W/kg

D. SAR 1g & 10g

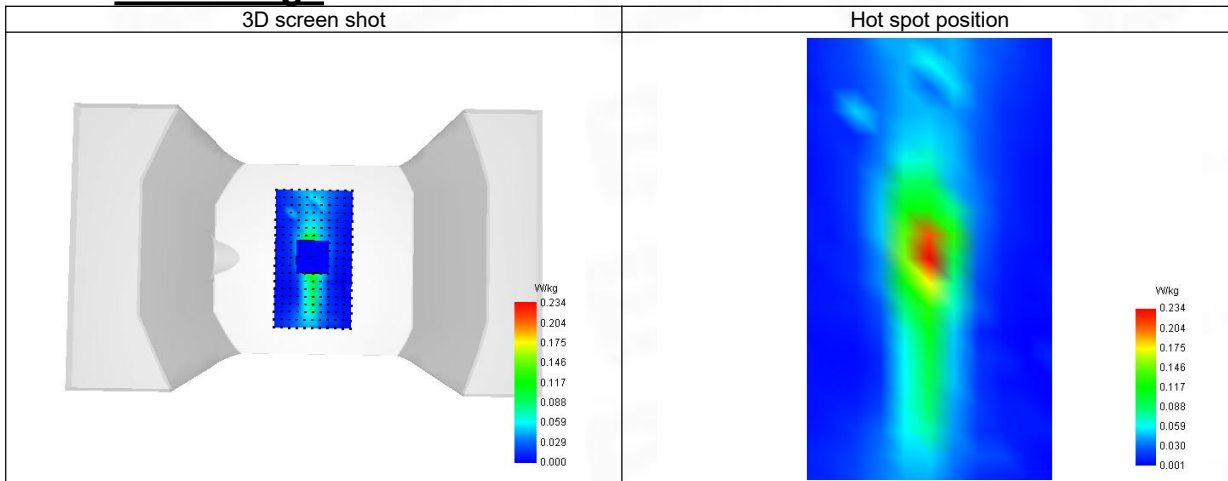
SAR 10g (W/Kg)	0.080
SAR 1g (W/Kg)	0.190
Variation (%)	-3.420
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	51.555535

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.331	0.233	0.120	0.065	0.000	0.001	0.001



F. 3D Image



2-Body with back position in dist. 0mm on Channel 661 in GPRS 1900+2slots

SAR Measurement at GPRS1900 (Body, Validation Plane)

Date of measurement: 10/7/2025

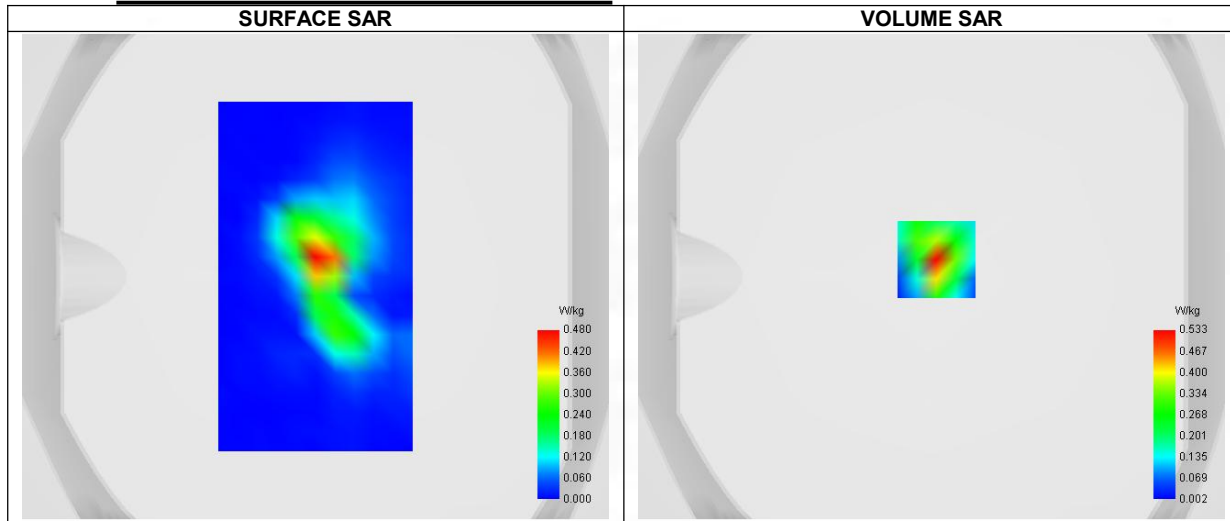
A. Experimental conditions.

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	Middle (661)/ frequency 1880.000 Mhz
Signal	TDMA (GPRS)
Modulation	GMSK (CS-1)
TX-slots	2

B. Permittivity

Middle TX Frequency (MHz)	1880.000
Relative permittivity (real part)	40.139
Relative permittivity (imaginary part)	15.708
Conductivity (S/m)	1.403

C. SAR Surface and Volume

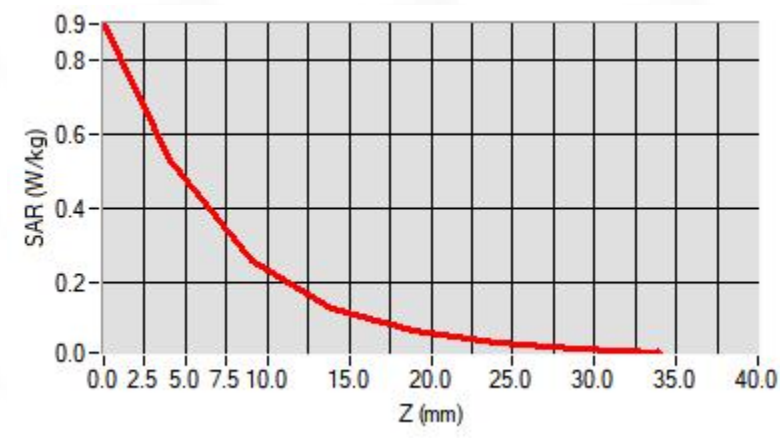


D. SAR 1g & 10g

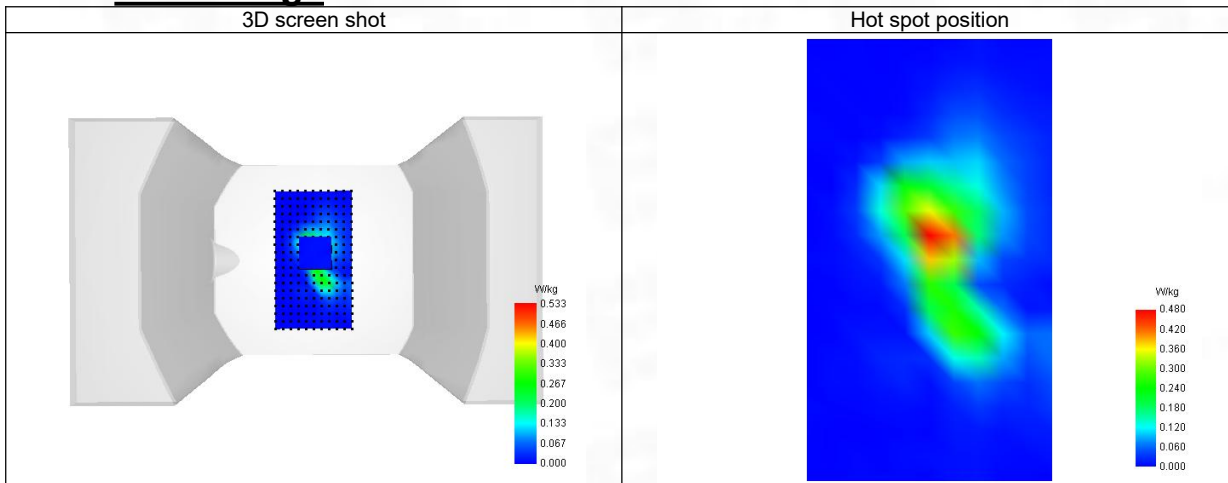
SAR 10g (W/Kg)	0.198
SAR 1g (W/Kg)	0.460
Variation (%)	2.370
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	49.160531

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.900	0.533	0.262	0.131	0.068	0.040	0.023



F. 3D Image



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

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

Date of measurement: 9/7/2025

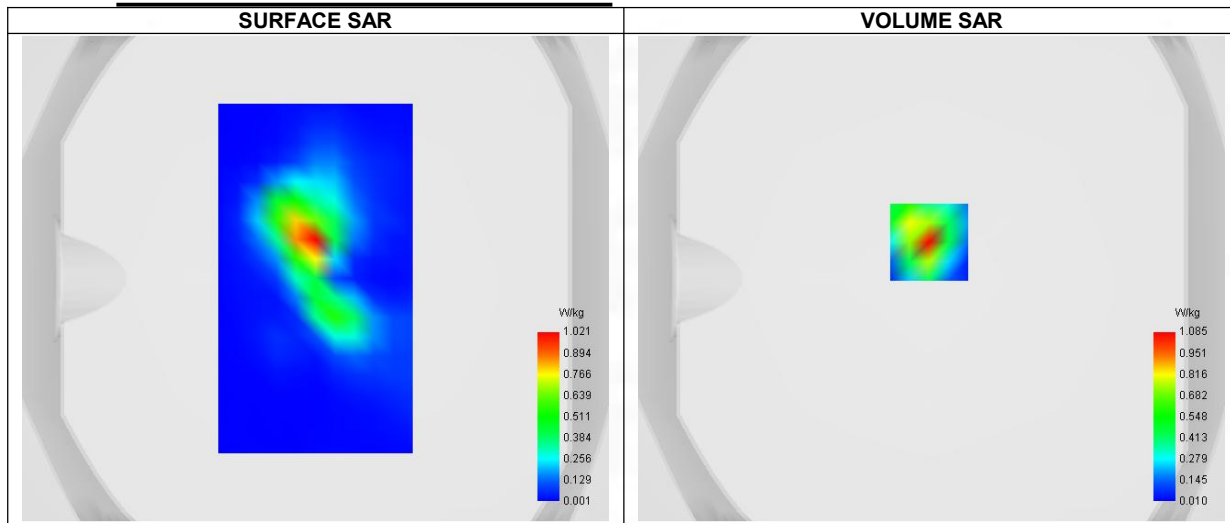
A. Experimental conditions.

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)	40.175
Relative permittivity (imaginary part)	16.103
Conductivity (S/m)	1.393

C. SAR Surface and Volume



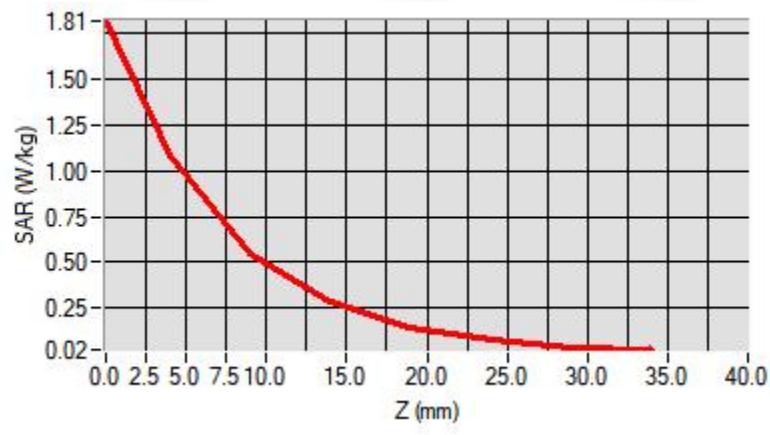
Maximum location: X=-1.00, Y=15.00 ; SAR Peak: 1.82 W/kg

D. SAR 1g & 10g

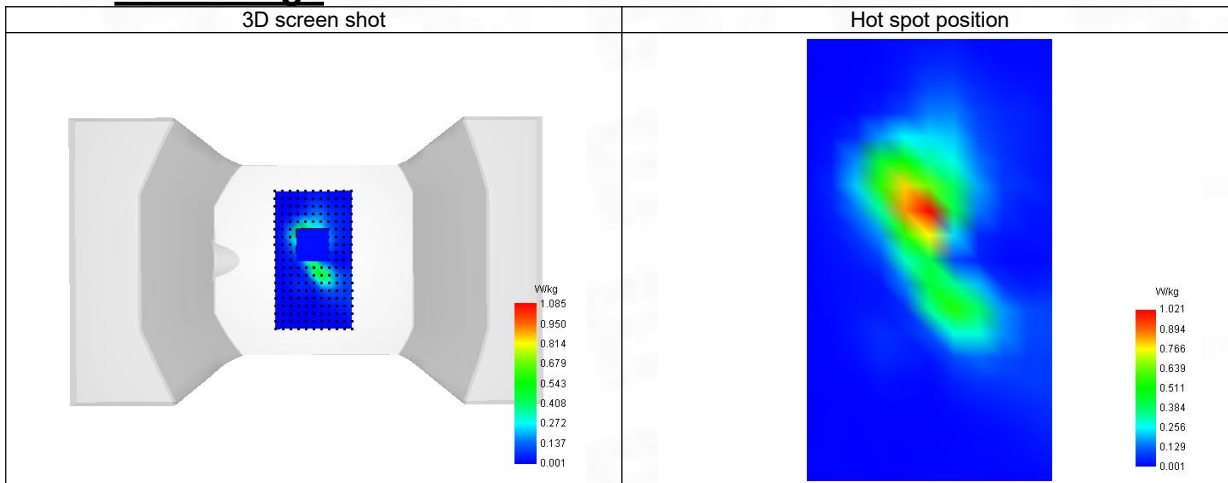
SAR 10g (W/Kg)	0.406
SAR 1g (W/Kg)	0.943
Variation (%)	-2.650
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.312039

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.814	1.085	0.546	0.284	0.149	0.080	0.041



F. 3D Image



4-Body with back position in dist. 0mm on Channel 1513 in WCDMA Band 4

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

Date of measurement: 9/7/2025

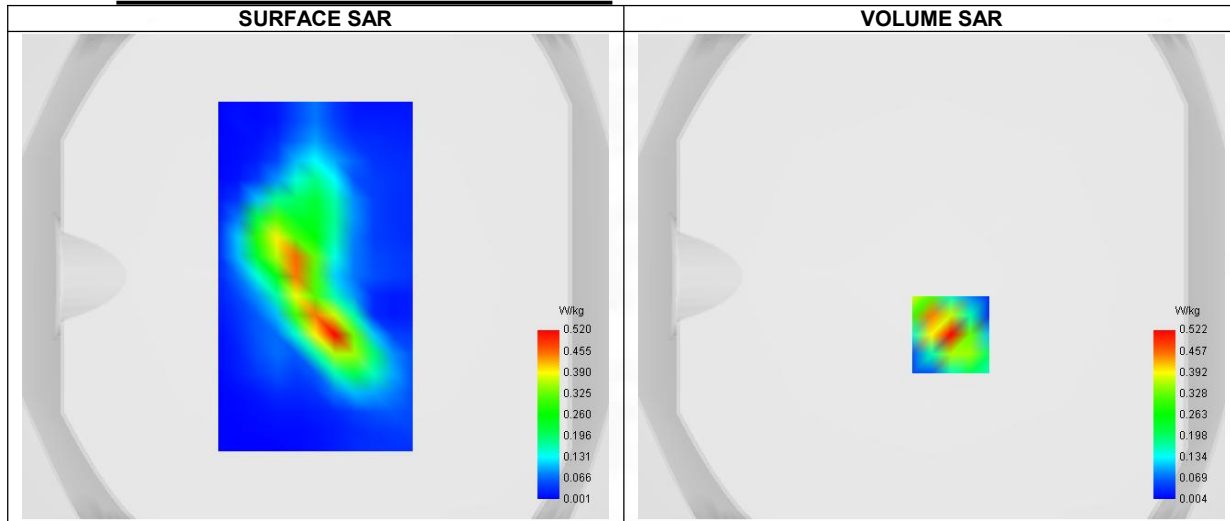
A. Experimental conditions.

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)	40.323
Relative permittivity (imaginary part)	17.037
Conductivity (S/m)	1.351

C. SAR Surface and Volume



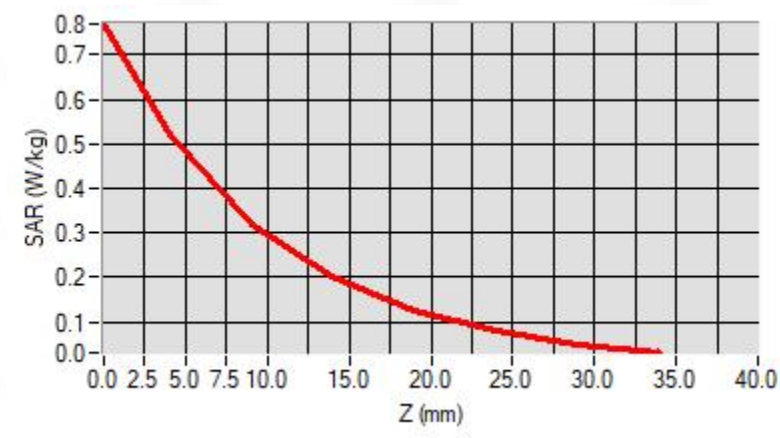
Maximum location: X=8.00, Y=-24.00 ; SAR Peak: 0.78 W/kg

D. SAR 1g & 10g

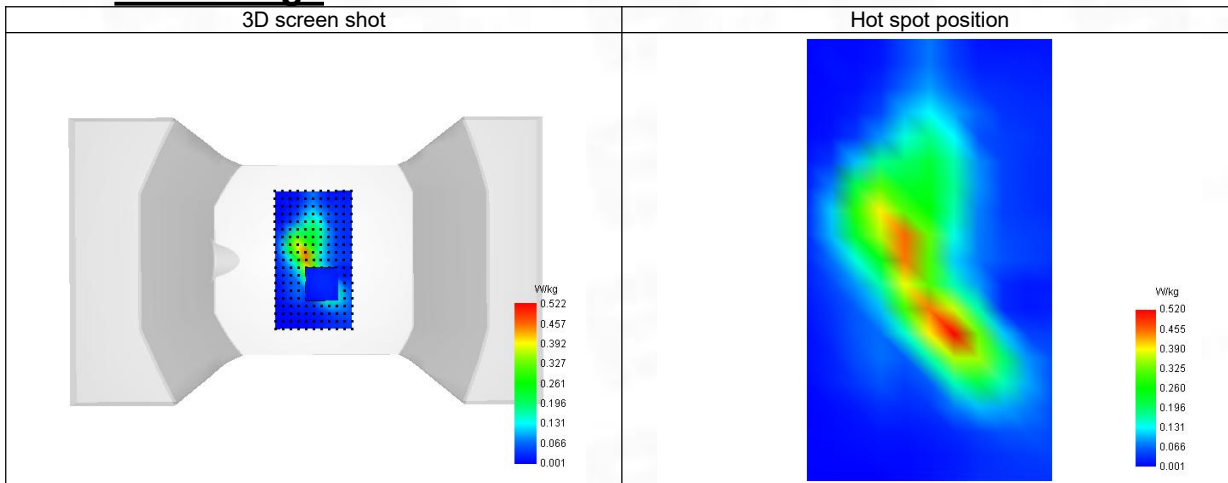
SAR 10g (W/Kg)	0.237
SAR 1g (W/Kg)	0.470
Variation (%)	-0.070
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	61.334921

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.769	0.522	0.320	0.203	0.128	0.078	0.048



F. 3D Image



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

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

Date of measurement: 8/7/2025

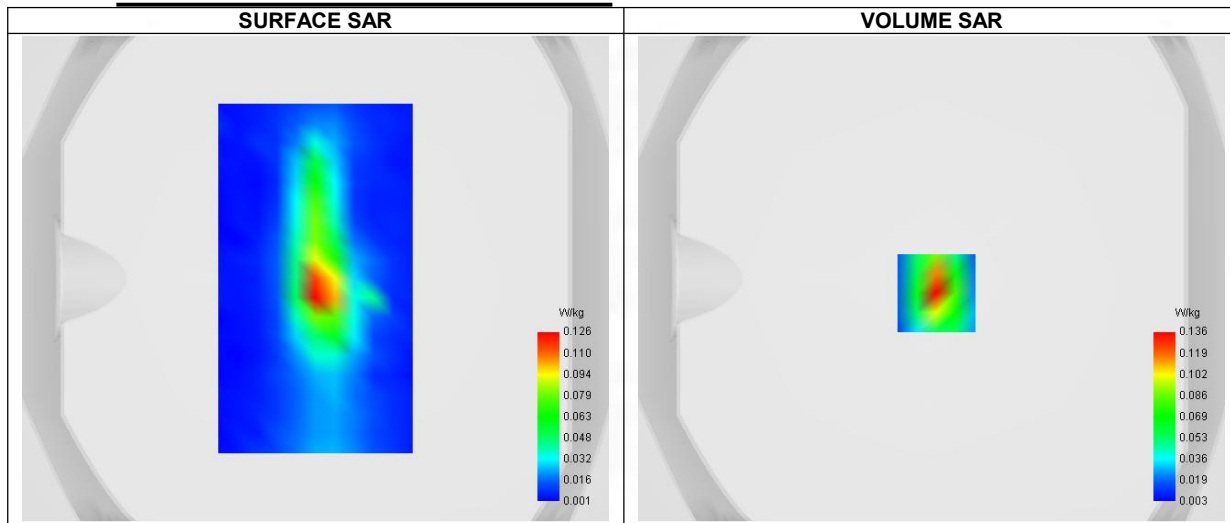
A. Experimental conditions.

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)	41.846
Relative permittivity (imaginary part)	20.529
Conductivity (S/m)	0.897

C. SAR Surface and Volume



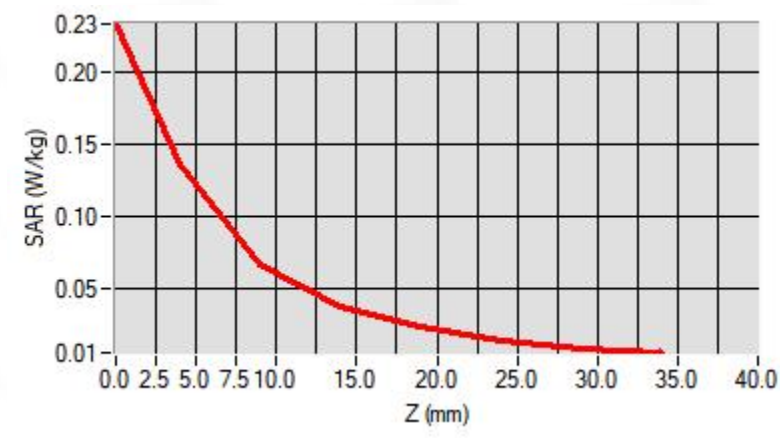
Maximum location: X=2.00, Y=-6.00 ; SAR Peak: 0.23 W/kg

D. SAR 1g & 10g

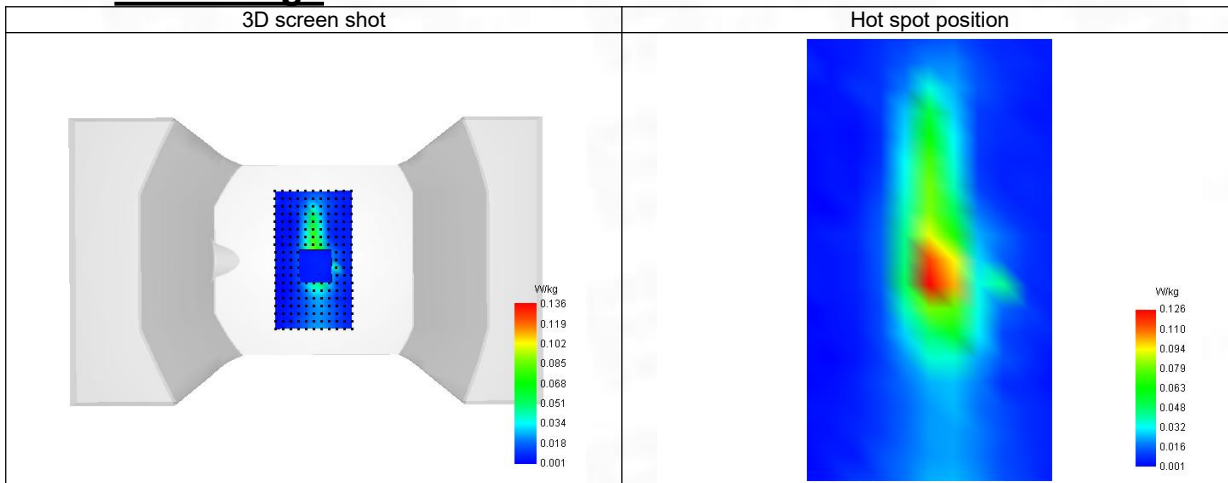
SAR 10g (W/Kg)	0.054
SAR 1g (W/Kg)	0.120
Variation (%)	2.990
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	49.896185

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.233	0.136	0.068	0.038	0.024	0.015	0.009



F. 3D Image



6-Body with back position in dist. 0mm on Channel 18900 in LTE band 2

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

Date of measurement: 10/7/2025

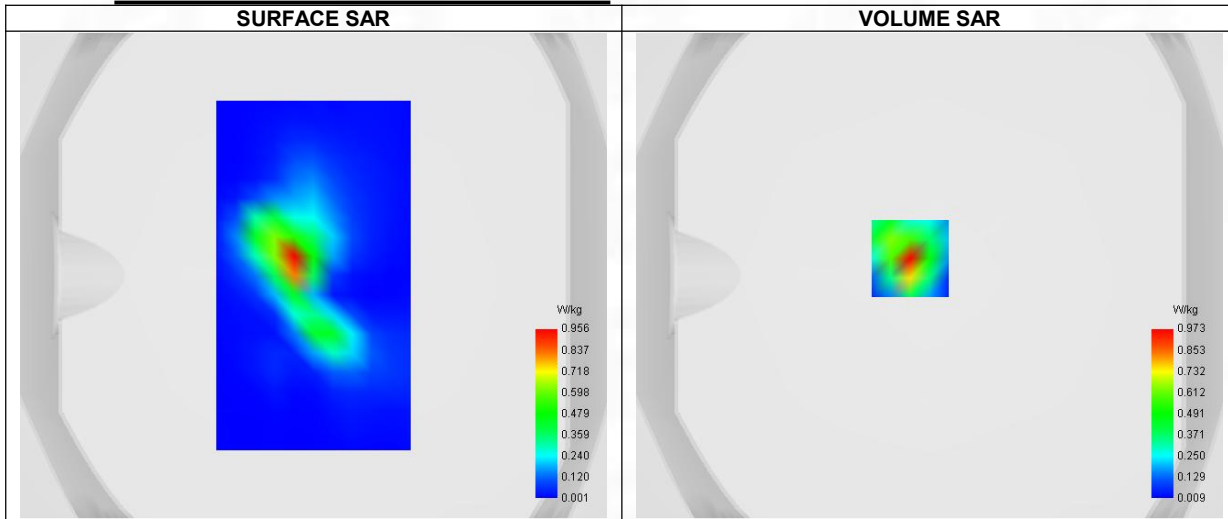
A. Experimental conditions.

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	Middle (18900)/ frequency 1880.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	50
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1880.090
Relative permittivity (real part)	40.139
Relative permittivity (imaginary part)	15.706
Conductivity (S/m)	1.403

C. SAR Surface and Volume



Maximum location: X=-8.00, Y=7.00 ; SAR Peak: 1.63 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.353
SAR 1g (W/Kg)	0.774
Variation (%)	-1.290
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.141931

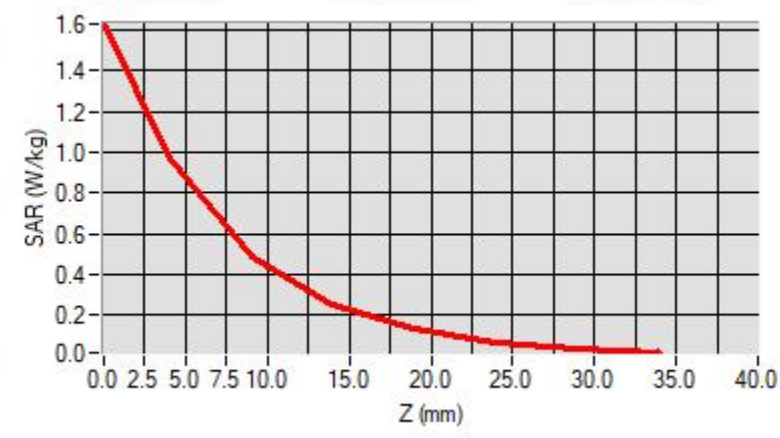
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.629	0.973	0.488	0.250	0.133	0.067	0.035

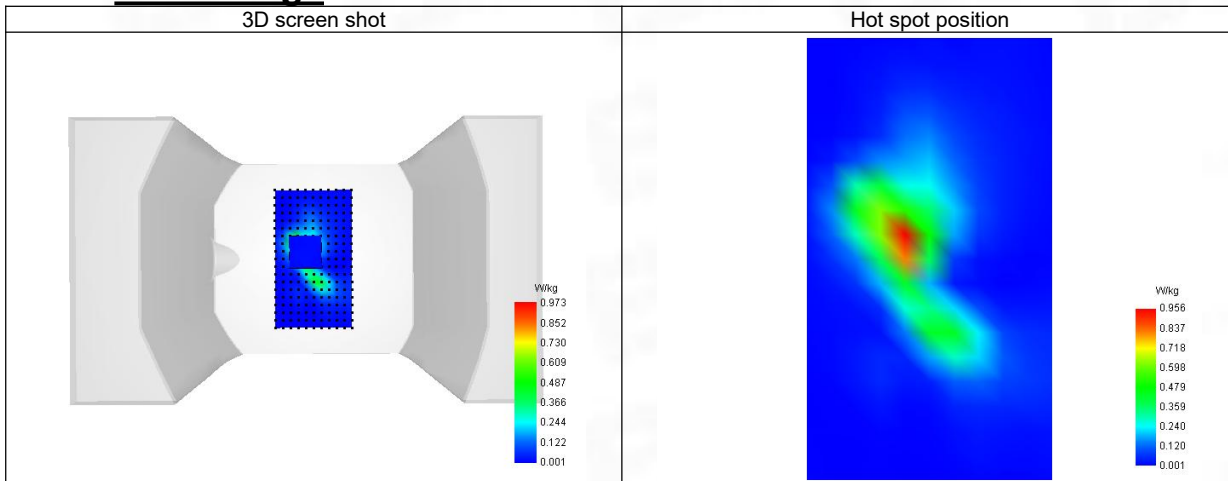
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F. 3D Image



7-Body with back position in dist. 0mm on Channel 20300 in LTE band 4

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

Date of measurement: 9/7/2025

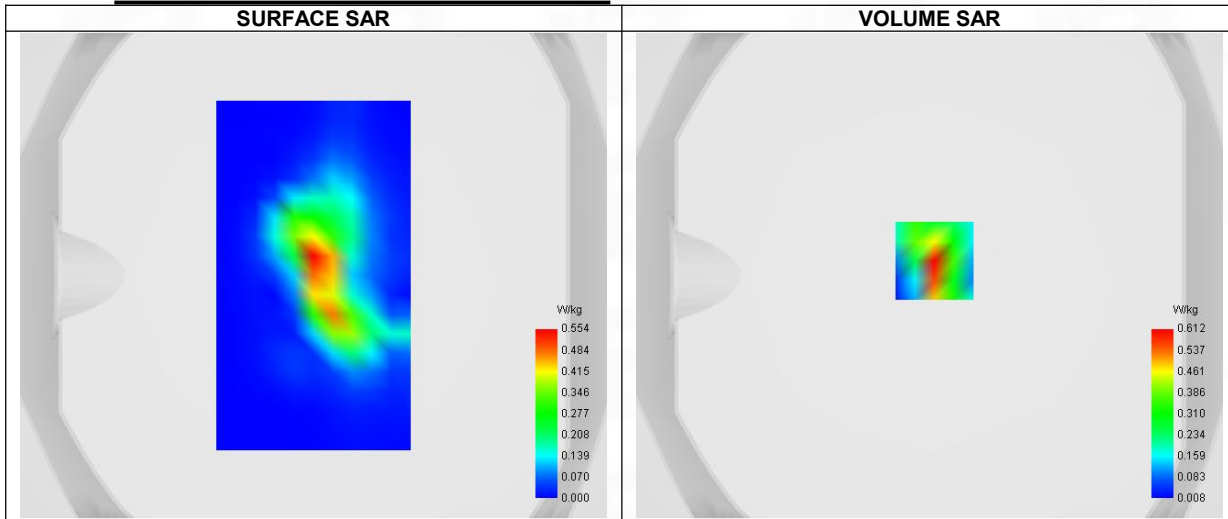
A. Experimental conditions.

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	1
RB size	50

B. Permittivity

Middle TX Frequency (MHz)	1740.680
Relative permittivity (real part)	40.343
Relative permittivity (imaginary part)	17.083
Conductivity (S/m)	1.345

C. SAR Surface and Volume



Maximum location: X=2.00, Y=6.00 ; SAR Peak: 1.04 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.224
SAR 1g (W/Kg)	0.536
Variation (%)	2.450
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	48.765570

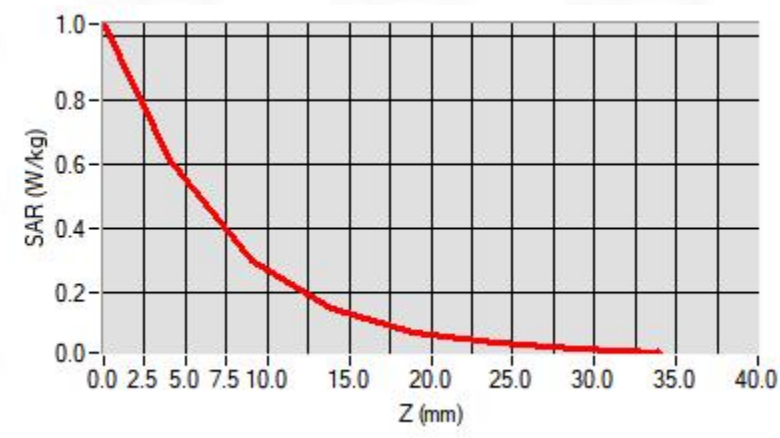
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.041	0.612	0.299	0.151	0.077	0.040	0.022

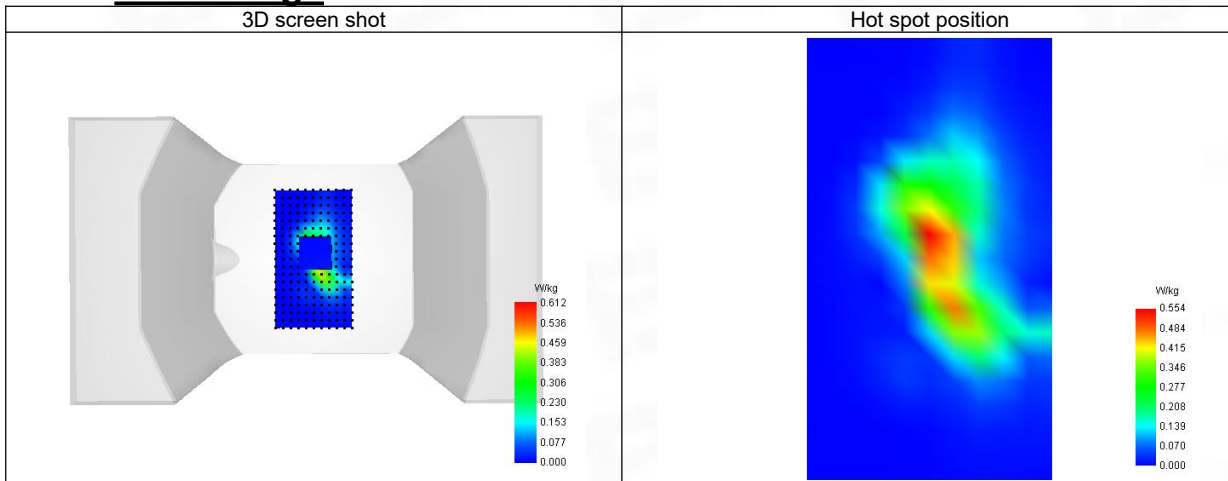
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F. 3D Image



8-Body with left position in dist. 0mm on Channel 20525 in LTE band 5

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

Date of measurement: 8/7/2025

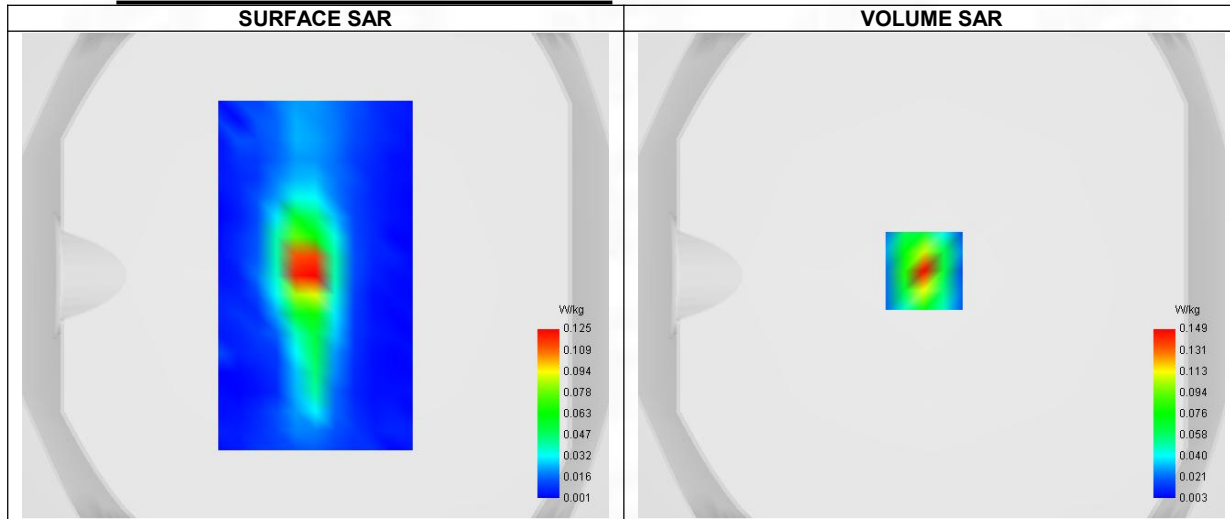
A. Experimental conditions.

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	Middle (20525)/ frequency 836.500 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	25
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	836.590
Relative permittivity (real part)	41.863
Relative permittivity (imaginary part)	20.568
Conductivity (S/m)	0.892

C. SAR Surface and Volume



D. SAR 1g & 10g

SAR 10g (W/Kg)	0.055
SAR 1g (W/Kg)	0.127
Variation (%)	2.700
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	47.281401

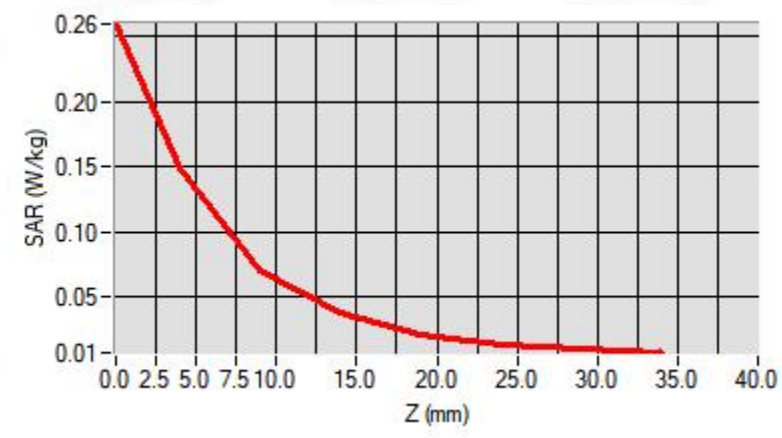
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.260	0.149	0.070	0.037	0.021	0.012	0.009

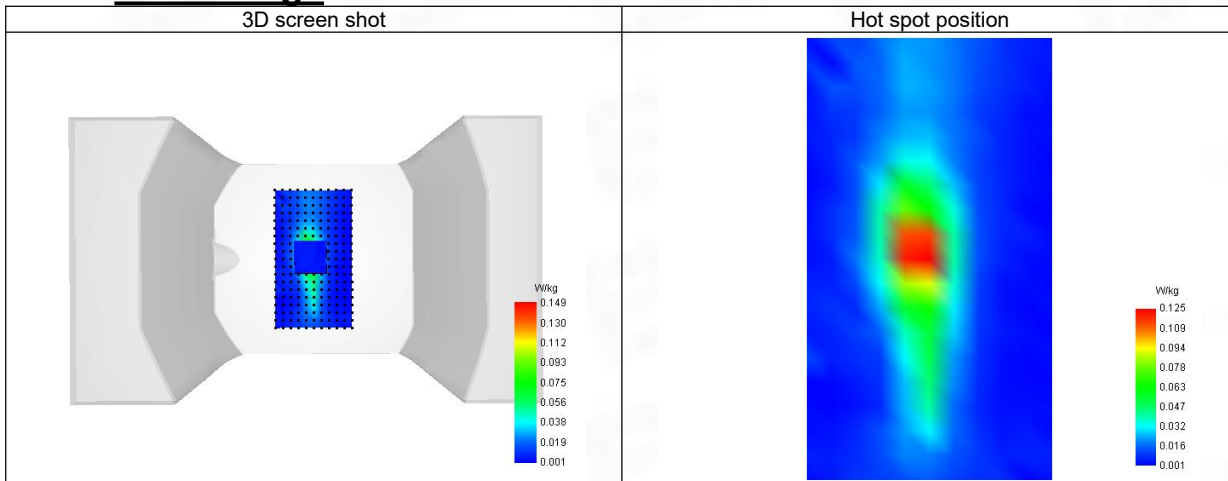
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F. 3D Image



9-Body with back position in dist. 0mm on Channel 21100 in LTE band 7

SAR Measurement at LTE band 7 (Body, Validation Plane)

Date of measurement: 12/7/2025

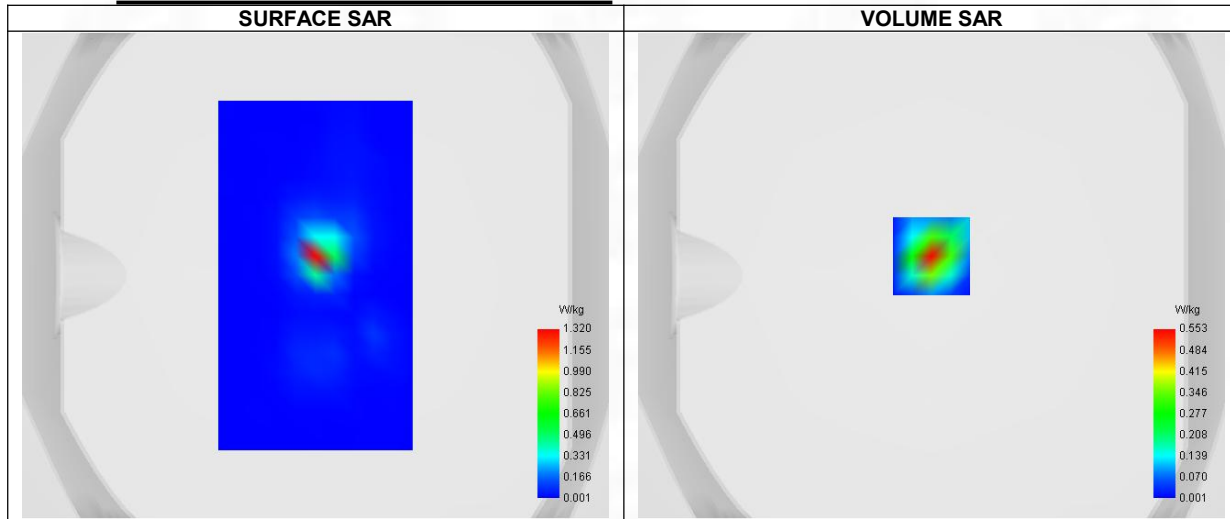
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.27
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 7
Channels/Frequency	Middle (21100)/ frequency 2535.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	50
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	2535.090
Relative permittivity (real part)	38.752
Relative permittivity (imaginary part)	13.145
Conductivity (S/m)	1.892

C. SAR Surface and Volume



Maximum location: X=0.00, Y=8.00 ; SAR Peak: 0.68 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.184
SAR 1g (W/Kg)	0.434
Variation (%)	-3.180
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	66.606791

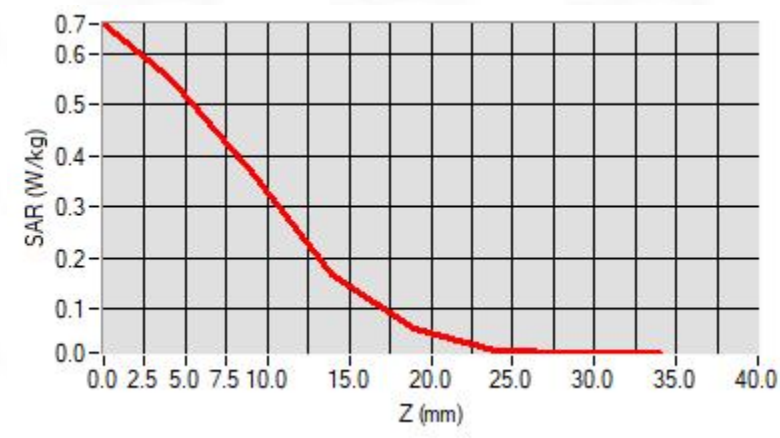
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.659	0.553	0.368	0.167	0.063	0.019	0.015

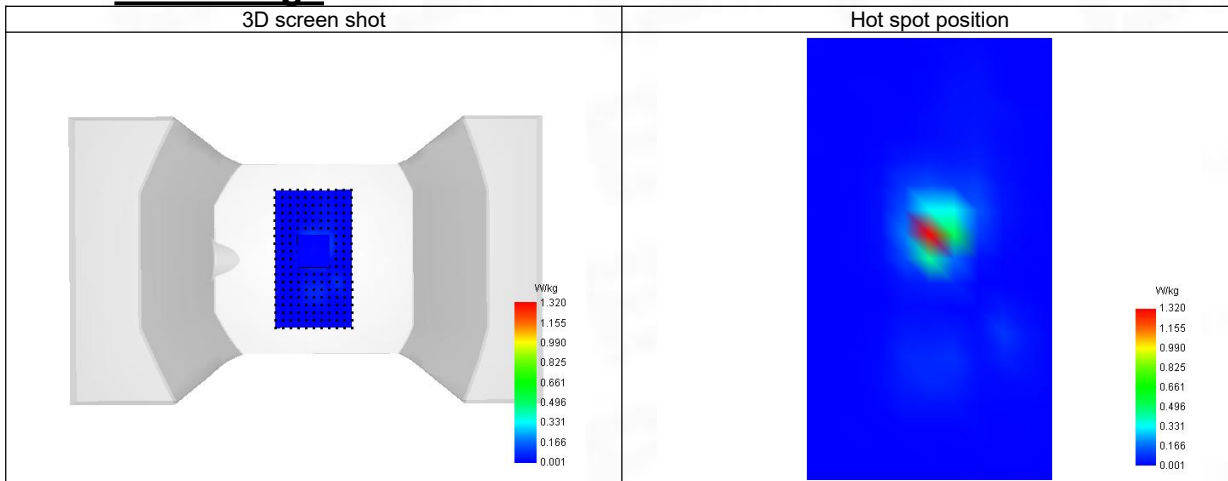
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F. 3D Image



10-Body with back position in dist. 0mm on Channel 23060 in LTE band 12

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

Date of measurement: 7/7/2025

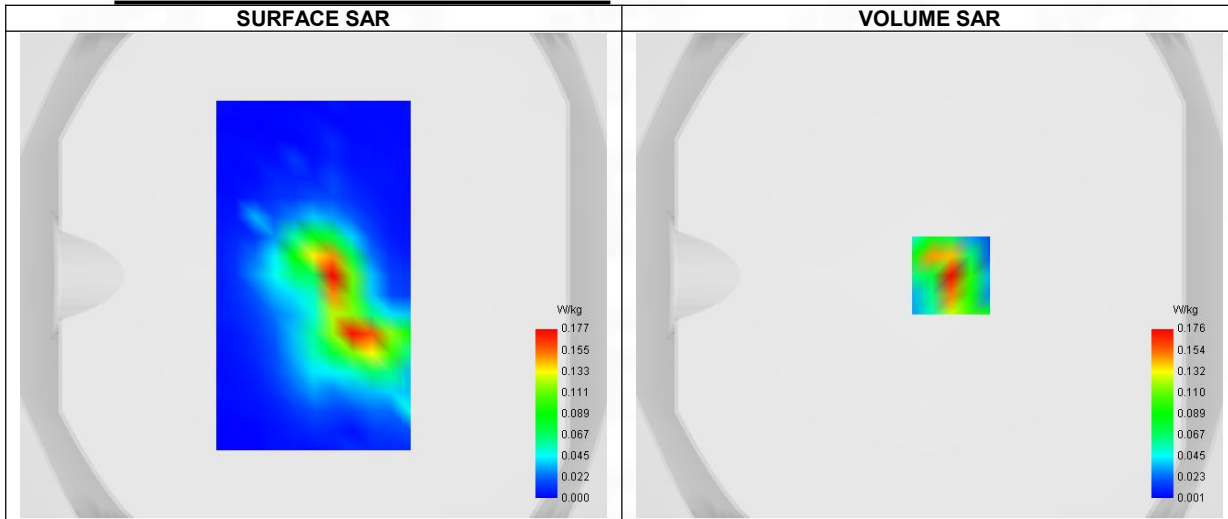
A. Experimental conditions.

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	25
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	704.090
Relative permittivity (real part)	42.200
Relative permittivity (imaginary part)	21.621
Conductivity (S/m)	0.871

C. SAR Surface and Volume



Maximum location: X=9.00, Y=0.00 ; SAR Peak: 0.34 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.065
SAR 1g (W/Kg)	0.158
Variation (%)	2.160
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	38.853181

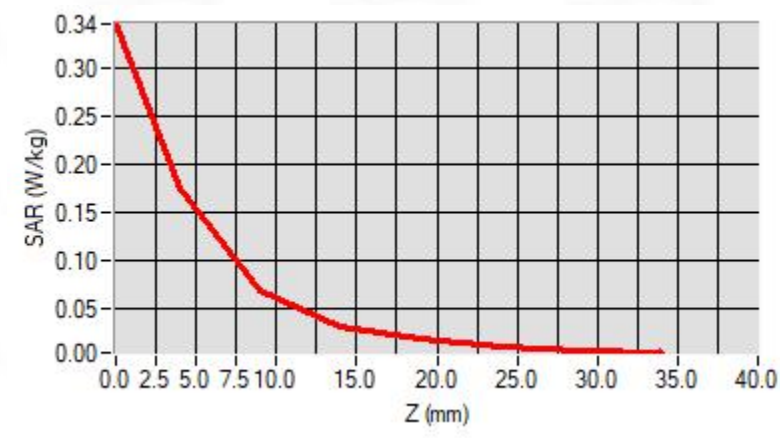
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.345	0.176	0.068	0.033	0.019	0.011	0.007

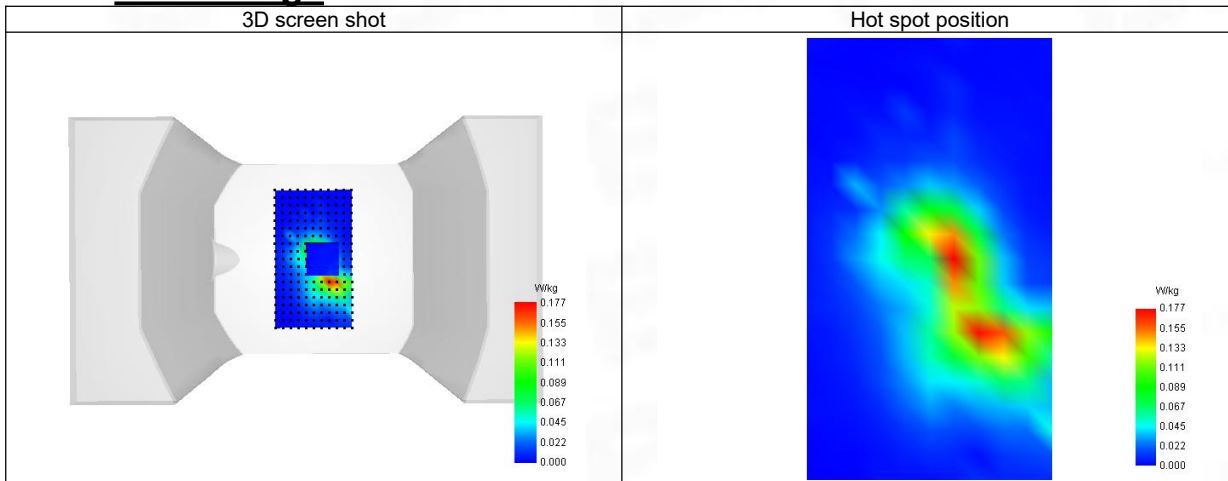
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F. 3D Image



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

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

Date of measurement: 7/7/2025

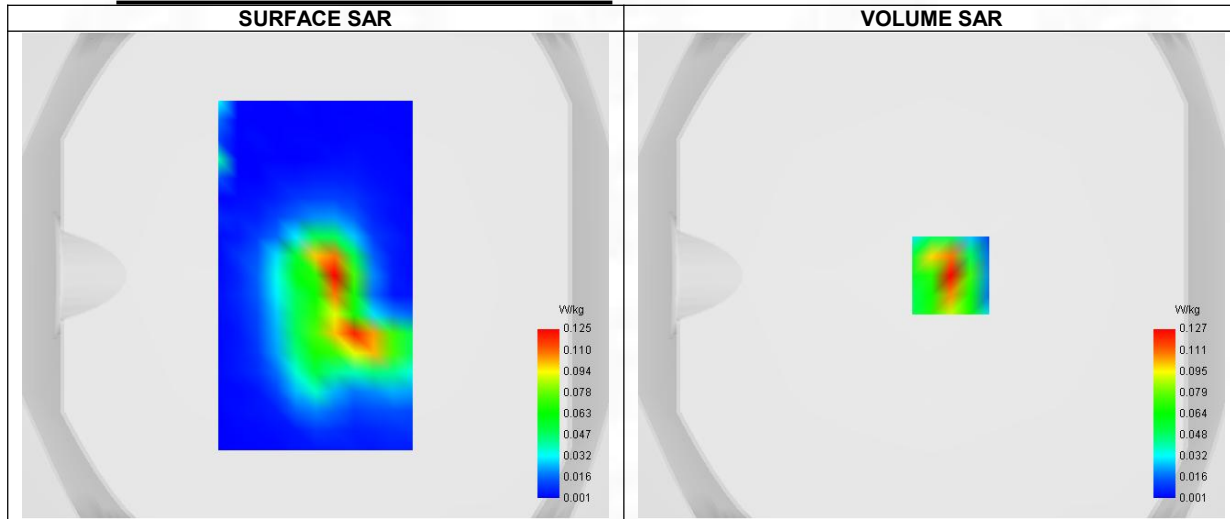
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.24
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Channels/Frequency	Middle (23230)/ frequency 782.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	25
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	782.090
Relative permittivity (real part)	42.001
Relative permittivity (imaginary part)	20.997
Conductivity (S/m)	0.883

C. SAR Surface and Volume



D. SAR 1g & 10g

SAR 10g (W/Kg)	0.048
SAR 1g (W/Kg)	0.116
Variation (%)	2.900
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	41.562879

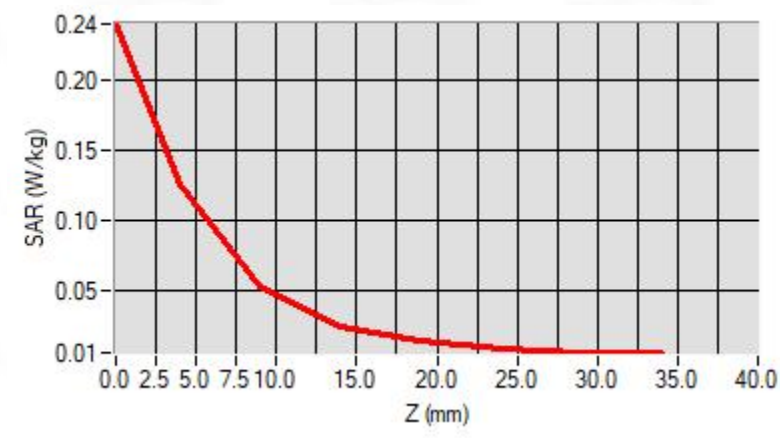
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.240	0.127	0.053	0.025	0.015	0.010	0.006

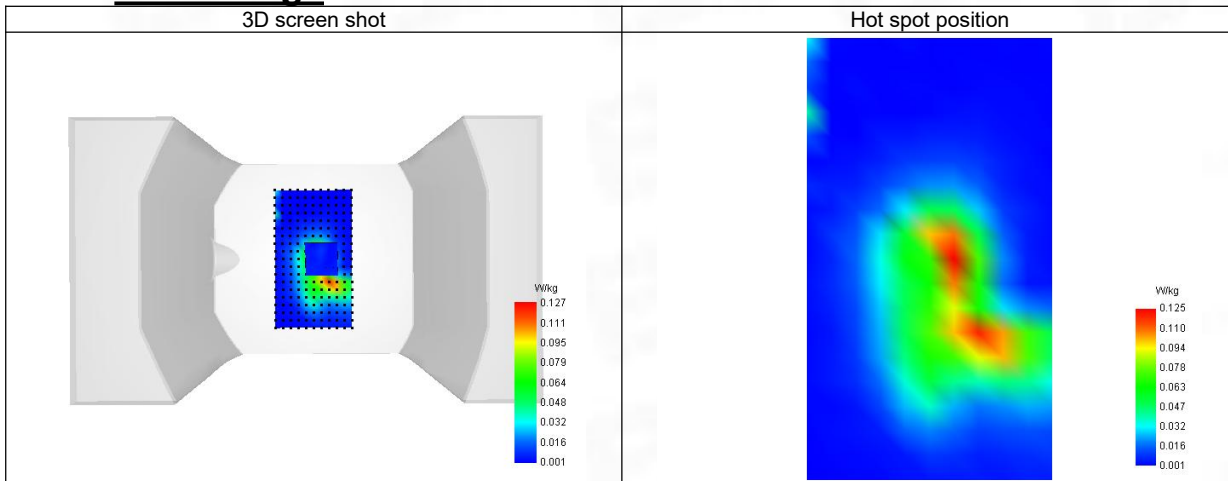
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F. 3D Image



12-Body with back position in dist. 0mm on Channel 23800 in LTE band 17

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

Date of measurement: 7/7/2025

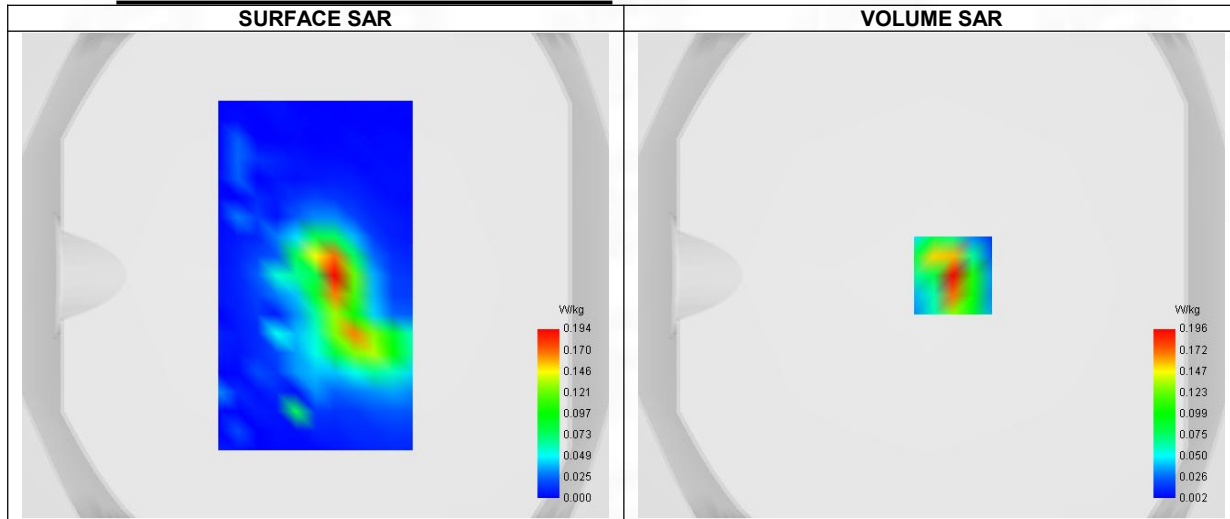
A. Experimental conditions.

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	Higher (23800)/ frequency 711.000 Mhz
Signal	LTE FDD
Cell Bandwidth	10 Mhz
Modulation	SC-OFDM - QPSK
RB offset	25
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	711.090
Relative permittivity (real part)	42.182
Relative permittivity (imaginary part)	21.565
Conductivity (S/m)	0.872

C. SAR Surface and Volume



D. SAR 1g & 10g

SAR 10g (W/Kg)	0.071
SAR 1g (W/Kg)	0.174
Variation (%)	1.230
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	39.055749

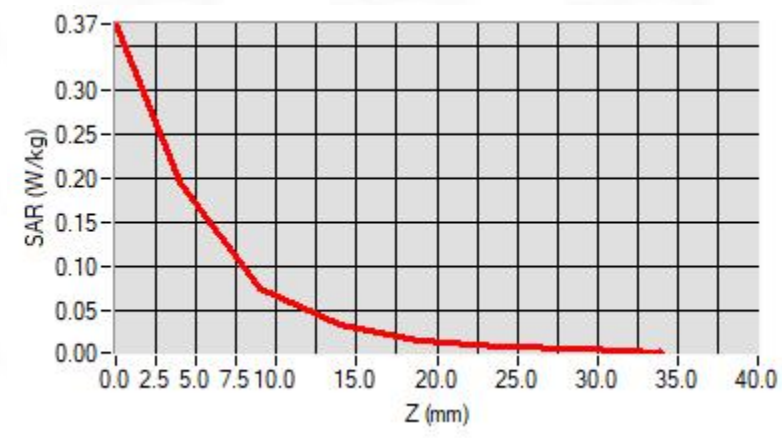
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.374	0.196	0.077	0.035	0.017	0.011	0.007

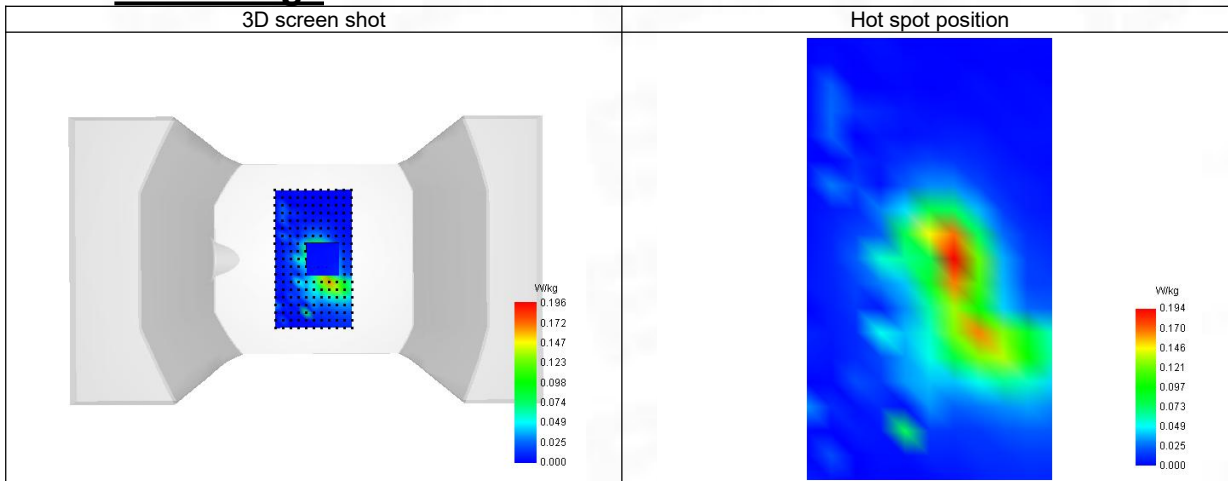
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F. 3D Image



13-Body with back position in dist. 0mm on Channel 41490 in LTE band 41

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

Date of measurement: 12/7/2025

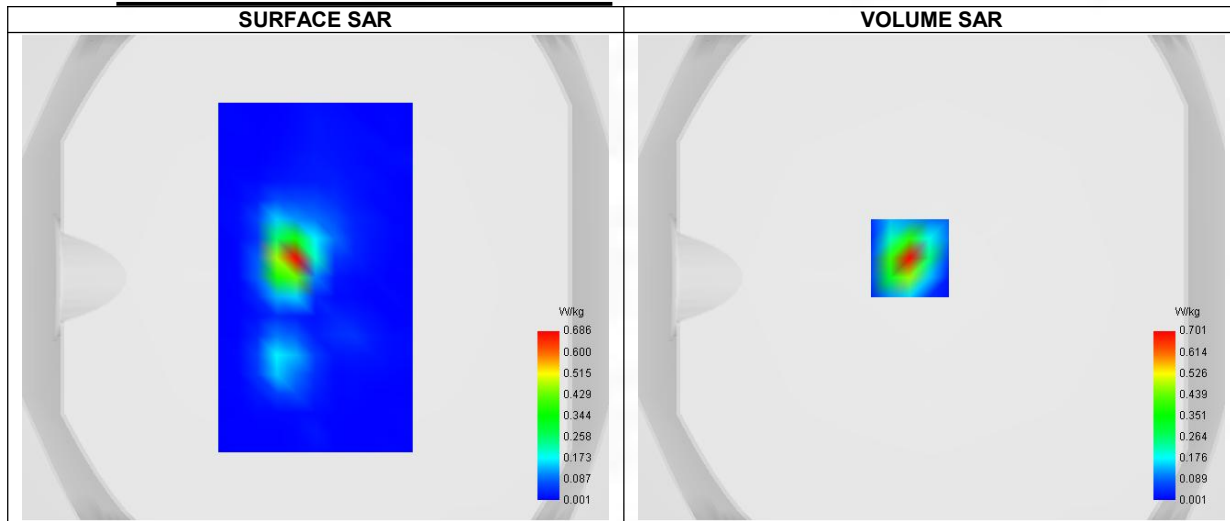
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.27
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Channels/Frequency	Higher (41490)/ frequency 2680.000 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)	2671.090
Relative permittivity (real part)	38.605
Relative permittivity (imaginary part)	12.836
Conductivity (S/m)	2.016

C. SAR Surface and Volume



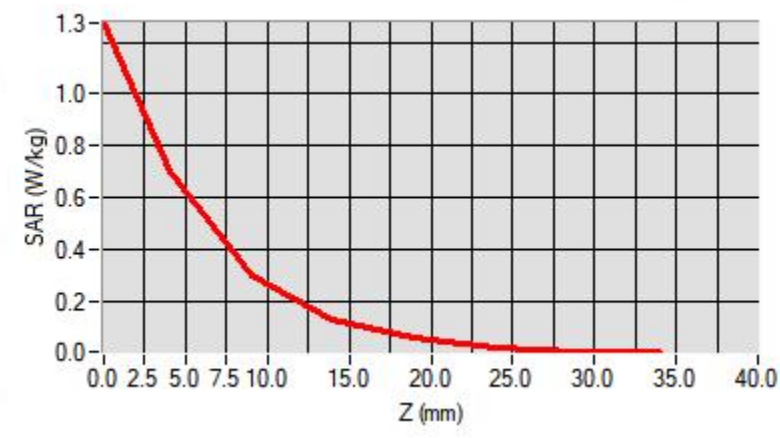
Maximum location: X=-9.00, Y=8.00 ; SAR Peak: 1.26 W/kg

D. SAR 1g & 10g

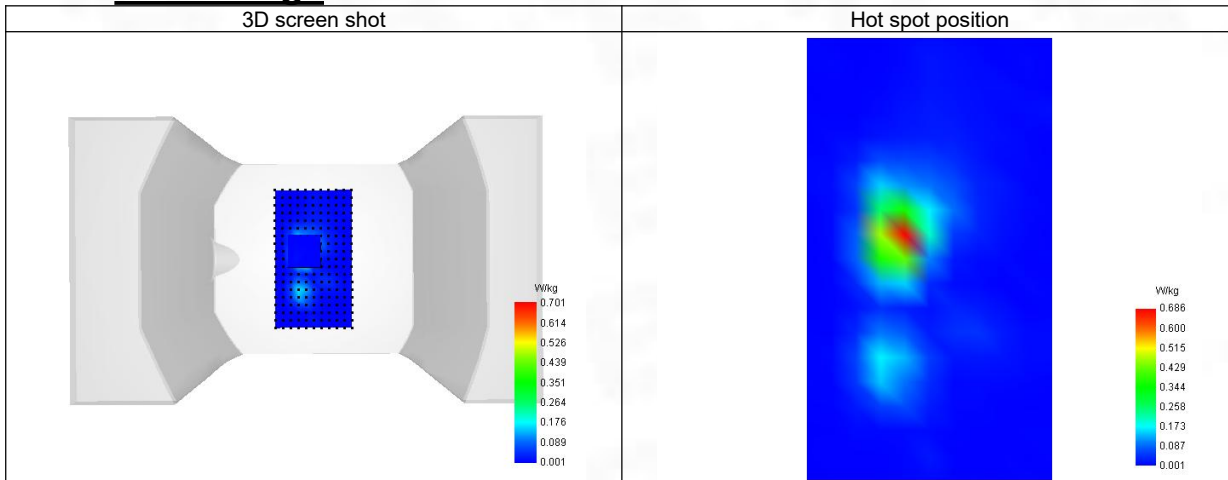
SAR 10g (W/Kg)	0.212
SAR 1g (W/Kg)	0.596
Variation (%)	-4.340
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	43.256965

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.274	0.701	0.303	0.128	0.060	0.023	0.010



F. 3D Image



14-Body with back position in dist. 0mm on Channel 132572 in LTE band 66

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

Date of measurement: 9/7/2025

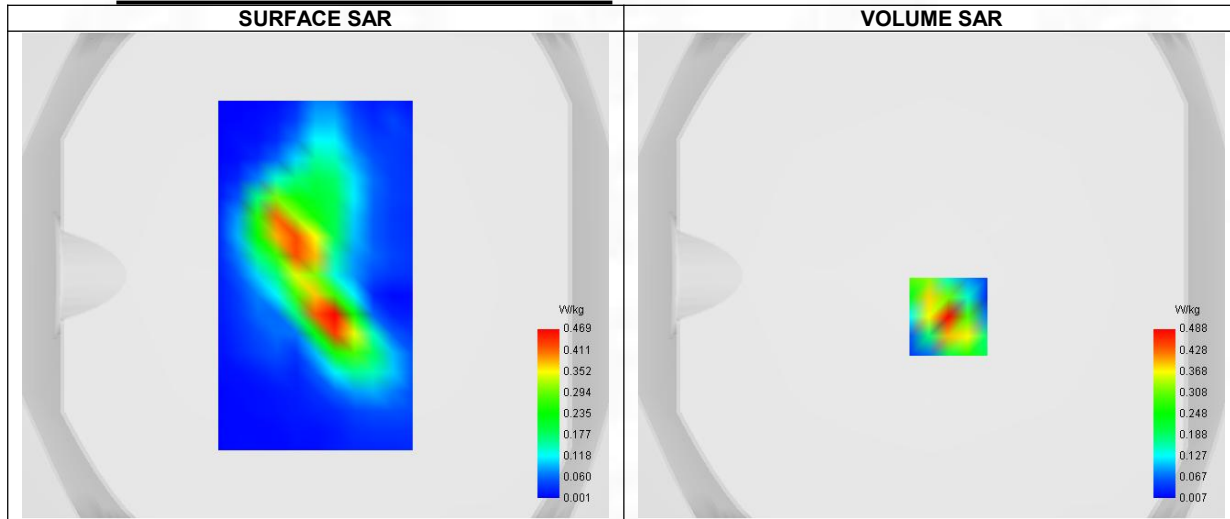
A. Experimental conditions.

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	Higher (132572)/ frequency 1770.000 Mhz
Signal	LTE FDD
Cell Bandwidth	20 Mhz
Modulation	SC-OFDM - QPSK
RB offset	50
RB size	1

B. Permittivity

Middle TX Frequency (MHz)	1770.090
Relative permittivity (real part)	40.293
Relative permittivity (imaginary part)	16.969
Conductivity (S/m)	1.360

C. SAR Surface and Volume



Maximum location: X=7.00, Y=-17.00 ; SAR Peak: 0.71 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.222
SAR 1g (W/Kg)	0.436
Variation (%)	-2.320
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	62.558008

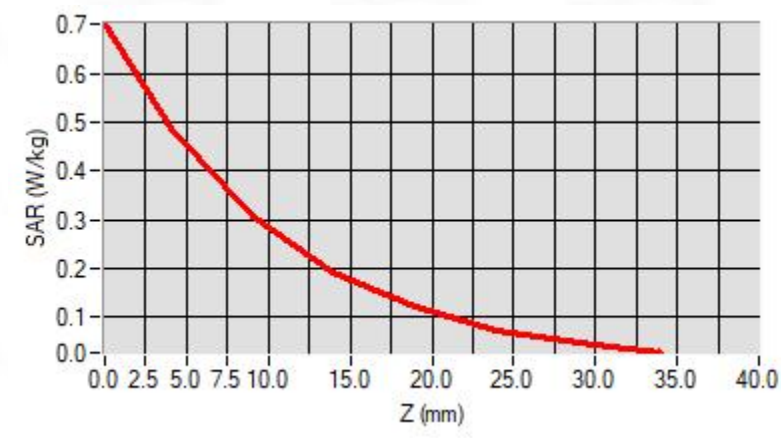
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.701	0.488	0.305	0.193	0.120	0.074	0.046

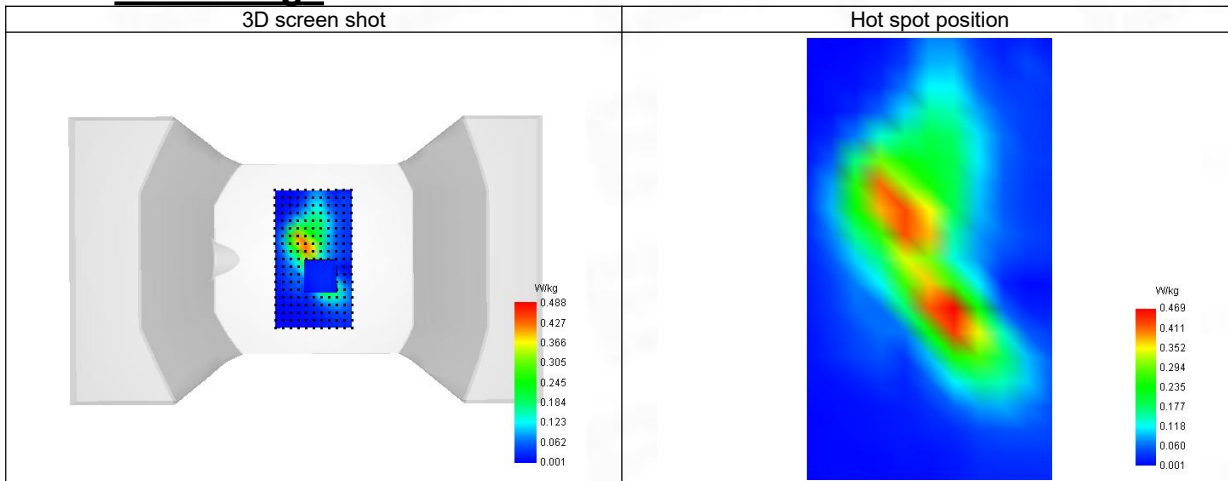
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F. 3D Image



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

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

Date of measurement: 7/7/2025

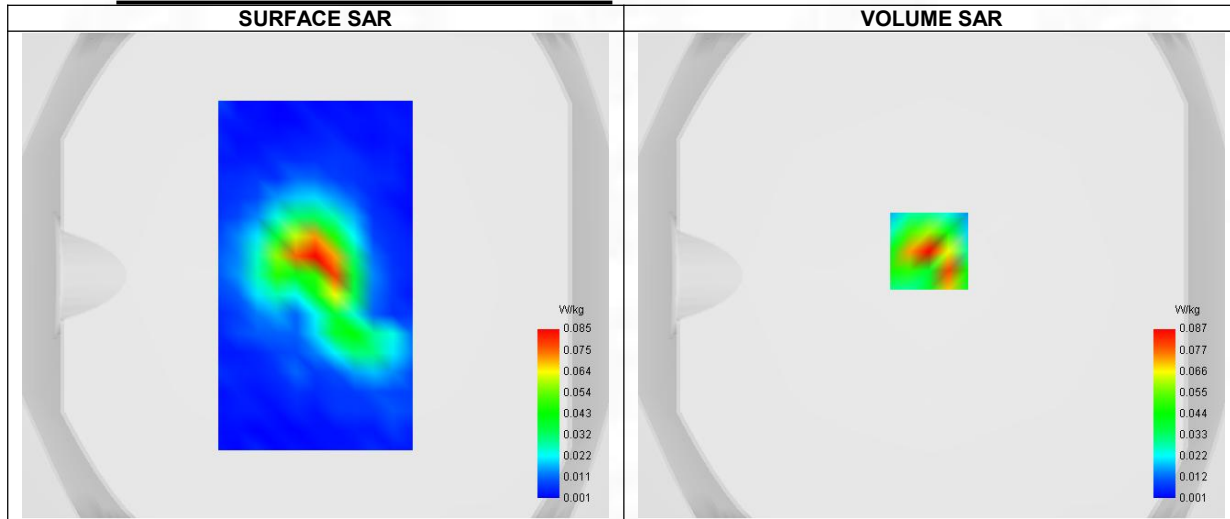
A. Experimental conditions.

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)	42.279
Relative permittivity (imaginary part)	21.869
Conductivity (S/m)	0.866

C. SAR Surface and Volume



Maximum location: X=-1.00, Y=10.00 ; SAR Peak: 0.18 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.033
SAR 1g (W/Kg)	0.081
Variation (%)	-3.530
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	32.706107

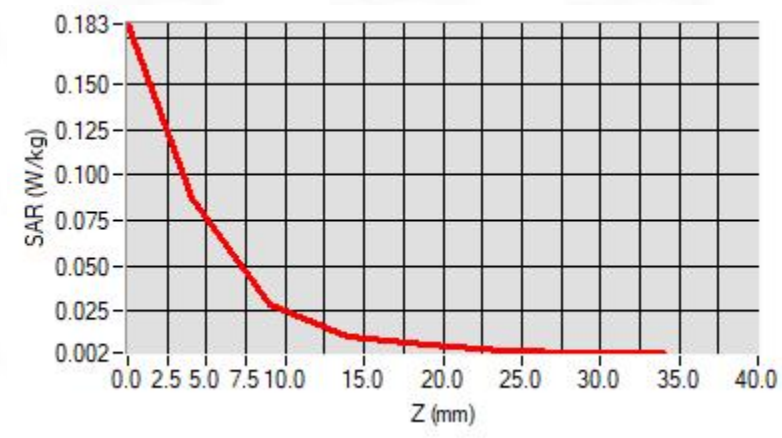
E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.183	0.087	0.029	0.011	0.007	0.004	0.003

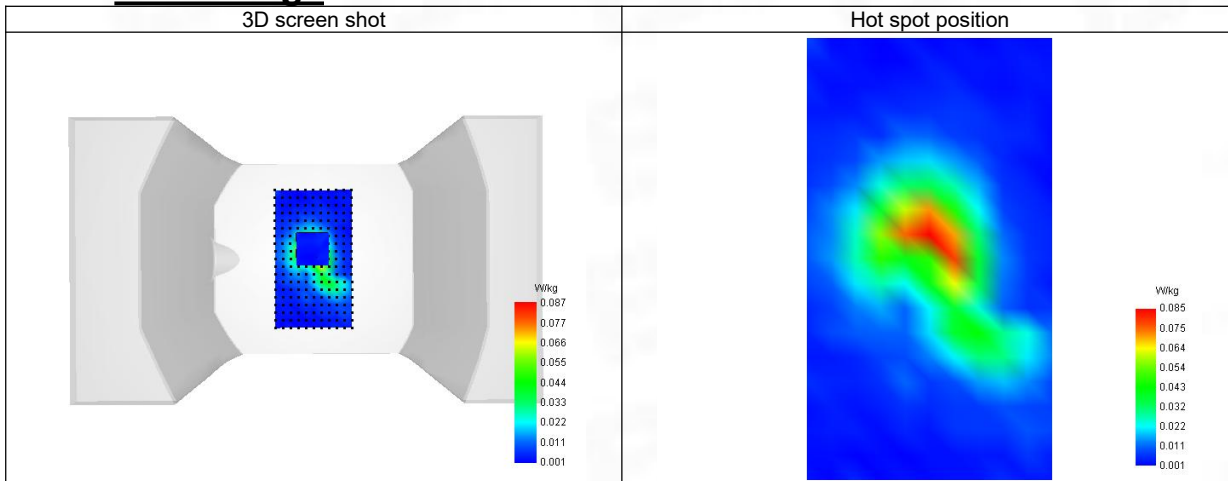
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F. 3D Image



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

SAR Measurement at ISM (Body, Validation Plane)

Date of measurement: 11/7/2025

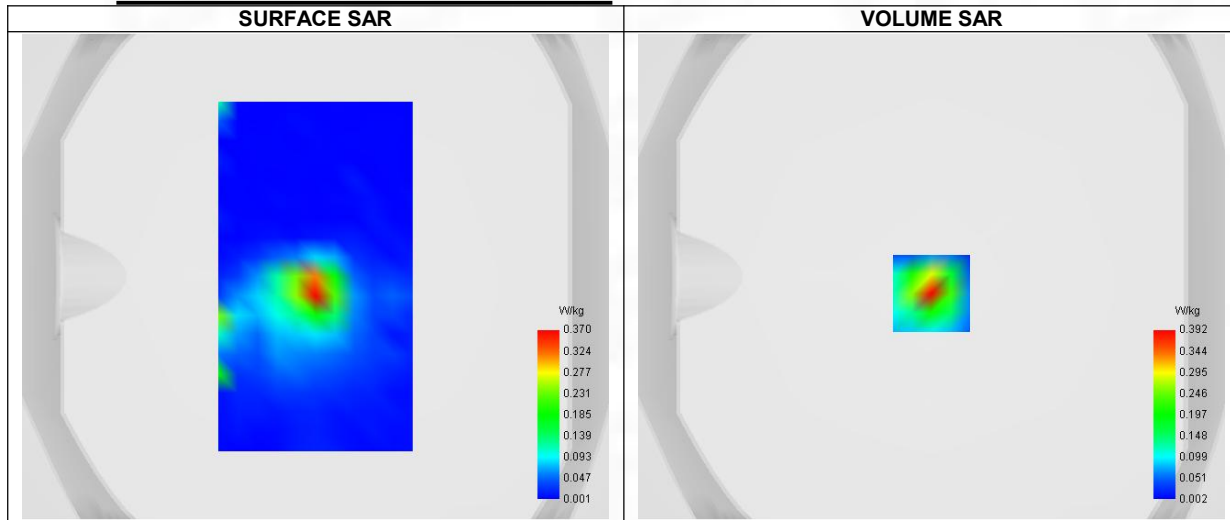
A. Experimental conditions.

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

B. Permittivity

Middle TX Frequency (MHz)	2437.000
Relative permittivity (real part)	38.888
Relative permittivity (imaginary part)	13.699
Conductivity (S/m)	1.815

C. SAR Surface and Volume



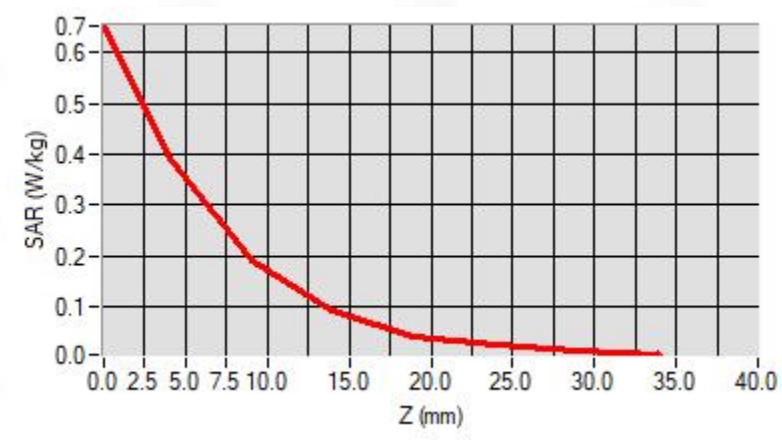
Maximum location: X=0.00, Y=-7.00 ; SAR Peak: 0.67 W/kg

D. SAR 1g & 10g

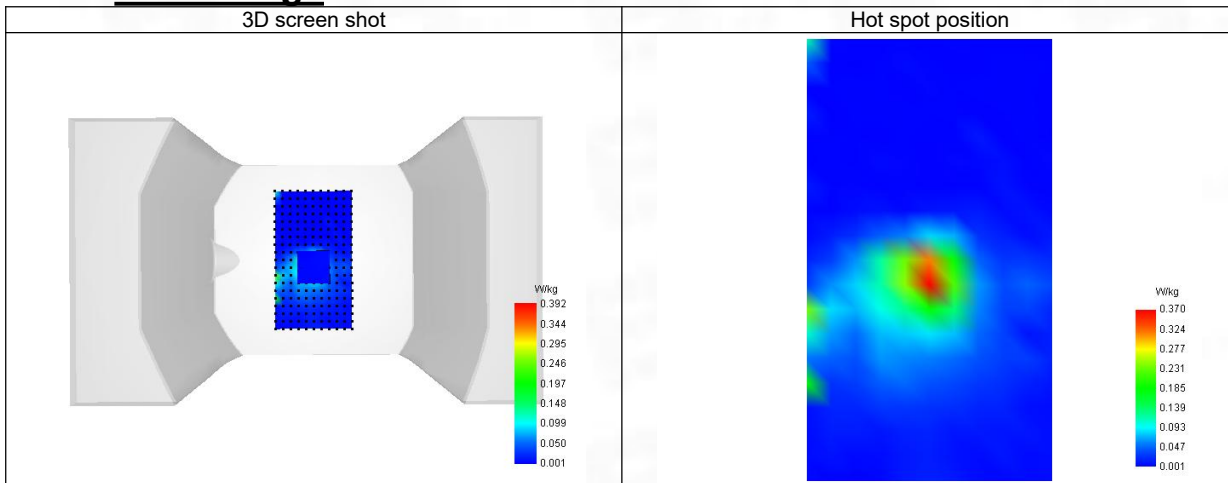
SAR 10g (W/Kg)	0.138
SAR 1g (W/Kg)	0.344
Variation (%)	4.450
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	48.825679

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.653	0.392	0.192	0.092	0.041	0.023	0.014



F. 3D Image



17-Body with back position in dist. 0mm on Channel 42 in IEEE 802.11ac U-NII

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

Date of measurement: 13/7/2025

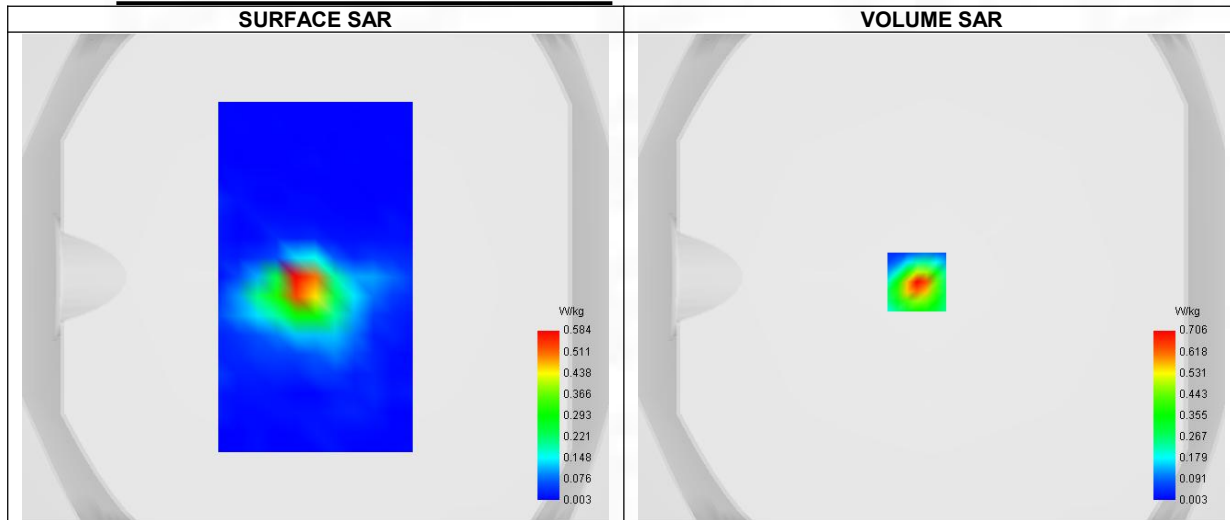
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.18
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-1
Channels/Frequency	Higher (42)/ frequency 5210.000 Mhz
Signal	IEEE 802.11 ac

B. Permittivity

Middle TX Frequency (MHz)	5210.000
Relative permittivity (real part)	36.212
Relative permittivity (imaginary part)	15.772
Conductivity (S/m)	4.623

C. SAR Surface and Volume



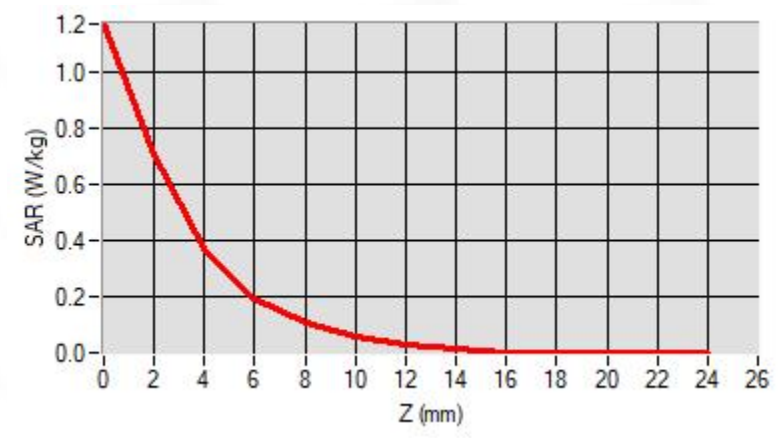
Maximum location: X=-6.00, Y=-2.00 ; SAR Peak: 1.24 W/kg

D. SAR 1g & 10g

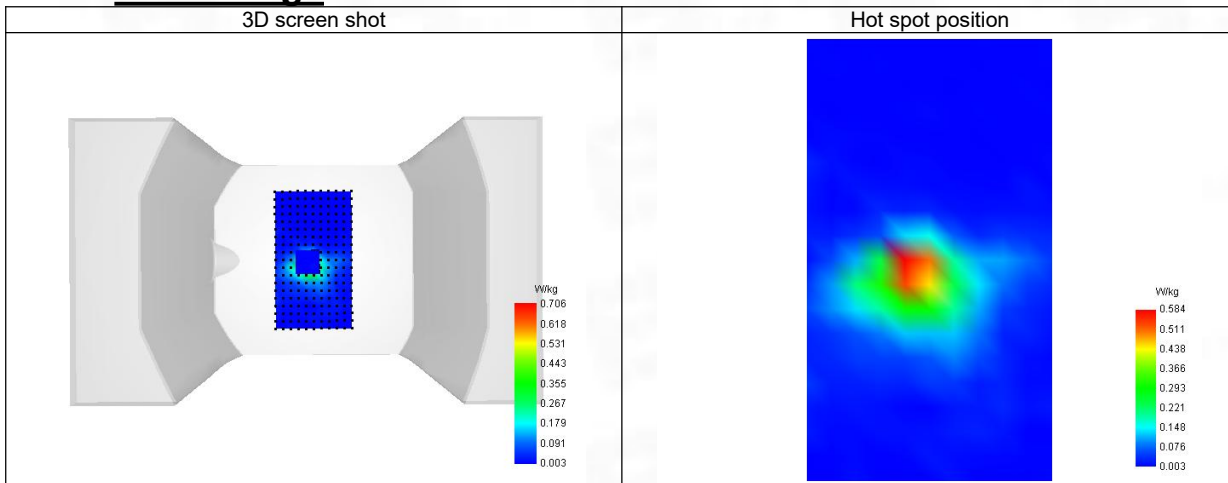
SAR 10g (W/Kg)	0.126
SAR 1g (W/Kg)	0.392
Variation (%)	-2.680
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	52.743640

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	1.169	0.706	0.373	0.199	0.108	0.063	0.033	0.015	0.006	0.005	0.004	0.004



F. 3D Image



18-Body with back position in dist. 0mm on Channel 64 in IEEE 802.11a U-NII

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

Date of measurement: 13/7/2025

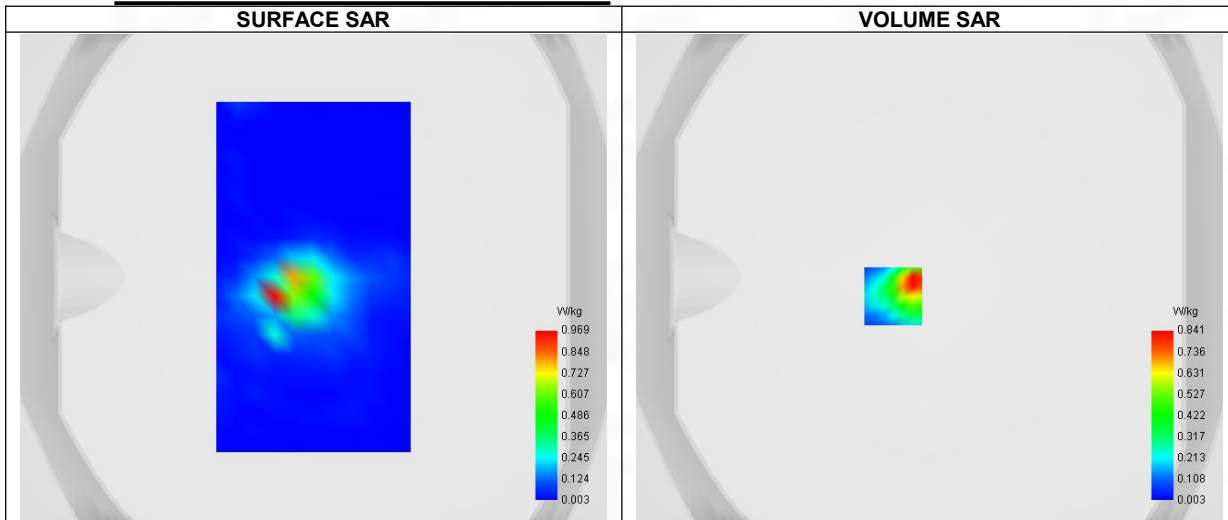
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.14
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-2a
Channels/Frequency	Higher (64)/ frequency 5320.000 Mhz
Signal	IEEE 802.11 a

B. Permittivity

Middle TX Frequency (MHz)	5320.000
Relative permittivity (real part)	35.994
Relative permittivity (imaginary part)	16.036
Conductivity (S/m)	4.742

C. SAR Surface and Volume



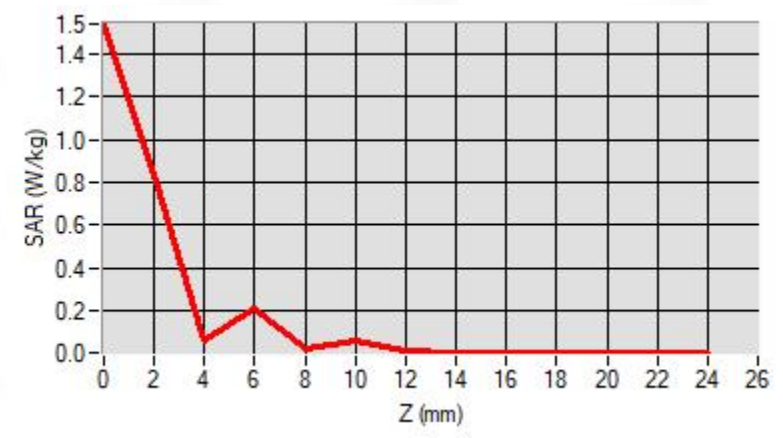
Maximum location: X=-15.00, Y=-8.00 ; SAR Peak: 1.61 W/kg

D. SAR 1g & 10g

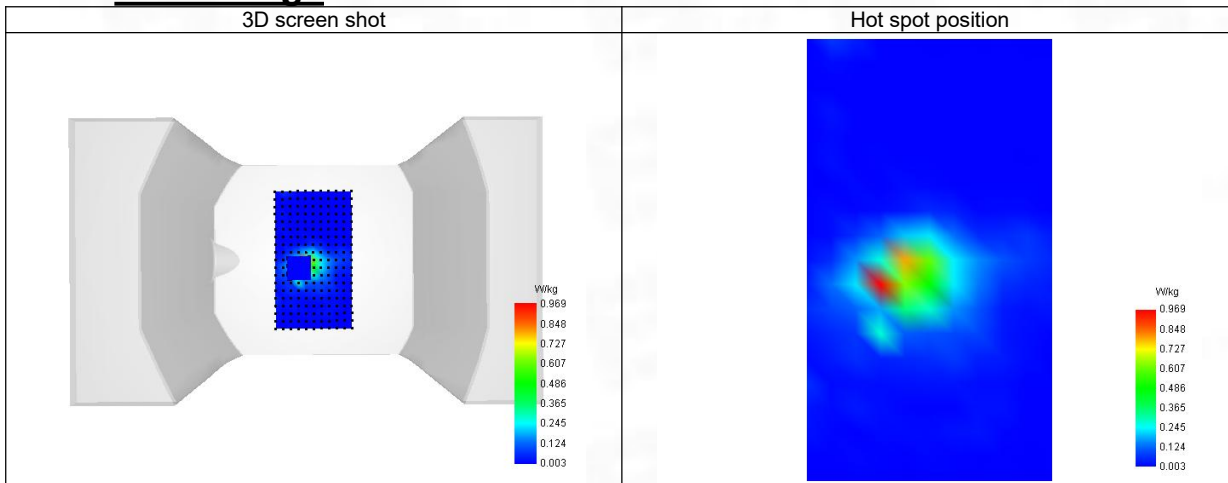
SAR 10g (W/Kg)	0.107
SAR 1g (W/Kg)	0.476
Variation (%)	-3.520
Horizontal validation criteria: minimum distance (mm)	5.656854
Vertical validation criteria: SAR ratio M2/M1 (%)	50.433496

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	1.538	0.841	0.062	0.214	0.021	0.057	0.009	0.006	0.006	0.006	0.004	0.004



F. 3D Image



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

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

Date of measurement: 14/7/2025

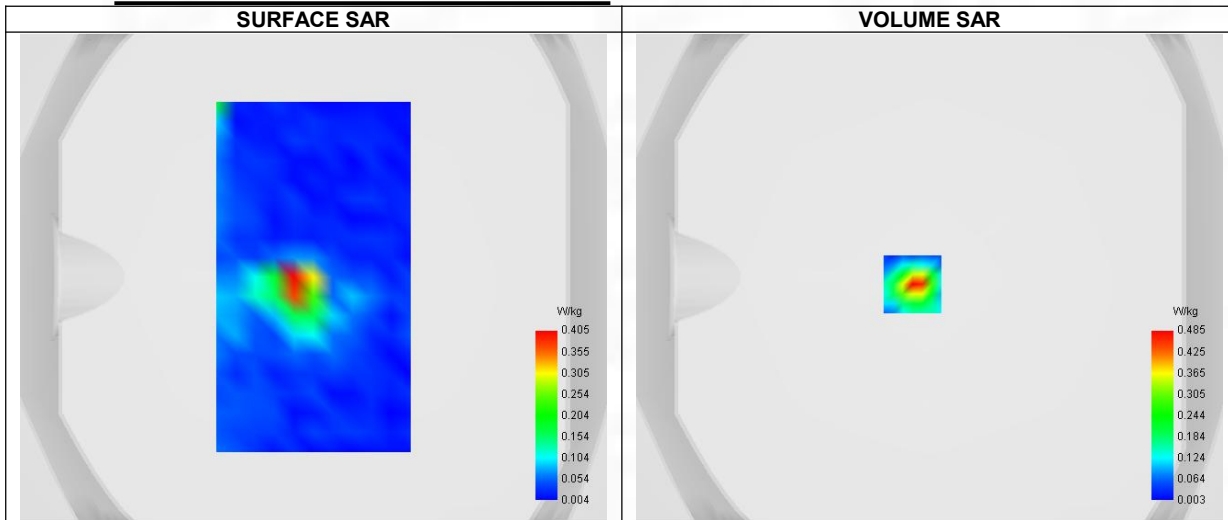
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.12
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-2c
Channels/Frequency	Higher (140)/ frequency 5700.000 Mhz
Signal	IEEE 802.11 ac

B. Permittivity

Middle TX Frequency (MHz)	5700.000
Relative permittivity (real part)	35.338
Relative permittivity (imaginary part)	16.406
Conductivity (S/m)	5.130

C. SAR Surface and Volume



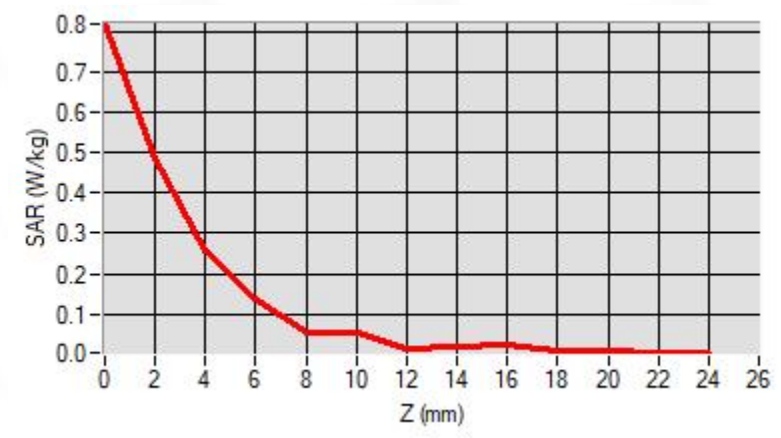
Maximum location: X=-7.00, Y=-3.00 ; SAR Peak: 0.84 W/kg

D. SAR 1g & 10g

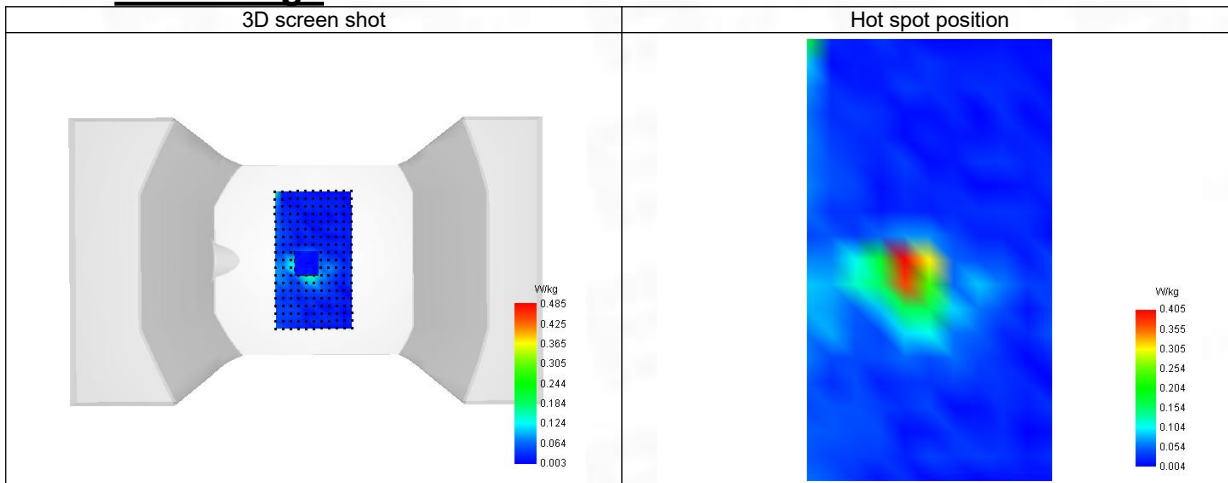
SAR 10g (W/Kg)	0.079
SAR 1g (W/Kg)	0.262
Variation (%)	-3.620
Horizontal validation criteria: minimum distance (mm)	5.656854
Vertical validation criteria: SAR ratio M2/M1 (%)	53.318665

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.818	0.485	0.259	0.139	0.056	0.052	0.013	0.019	0.026	0.008	0.010	0.004



F. 3D Image



20-Body with back position in dist. 0mm on Channel 149 in IEEE 802.11a U-NII

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

Date of measurement: 14/7/2025

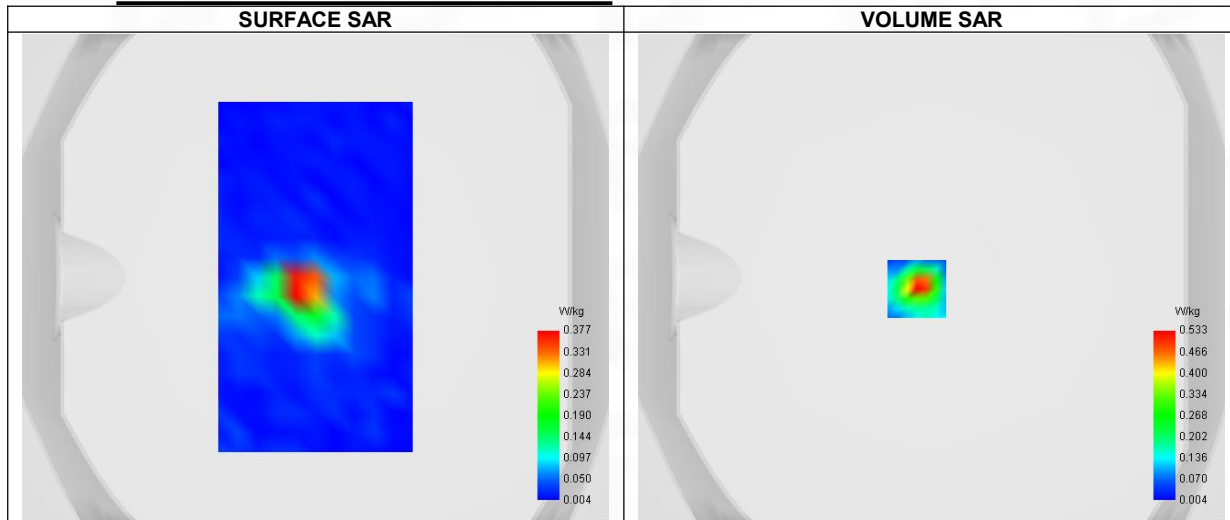
A. Experimental conditions.

Probe	0125-EPGO-445
ConvF	1.11
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12, dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-3
Channels/Frequency	Lower (149)/ frequency 5745.000 Mhz
Signal	IEEE 802.11 a

B. Permittivity

Middle TX Frequency (MHz)	5745.000
Relative permittivity (real part)	35.281
Relative permittivity (imaginary part)	16.414
Conductivity (S/m)	5.152

C. SAR Surface and Volume



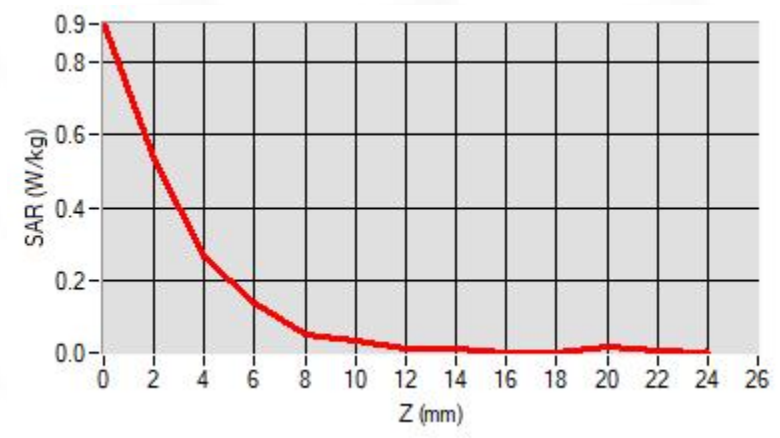
Maximum location: X=-6.00, Y=-5.00 ; SAR Peak: 0.98 W/kg

D. SAR 1g & 10g

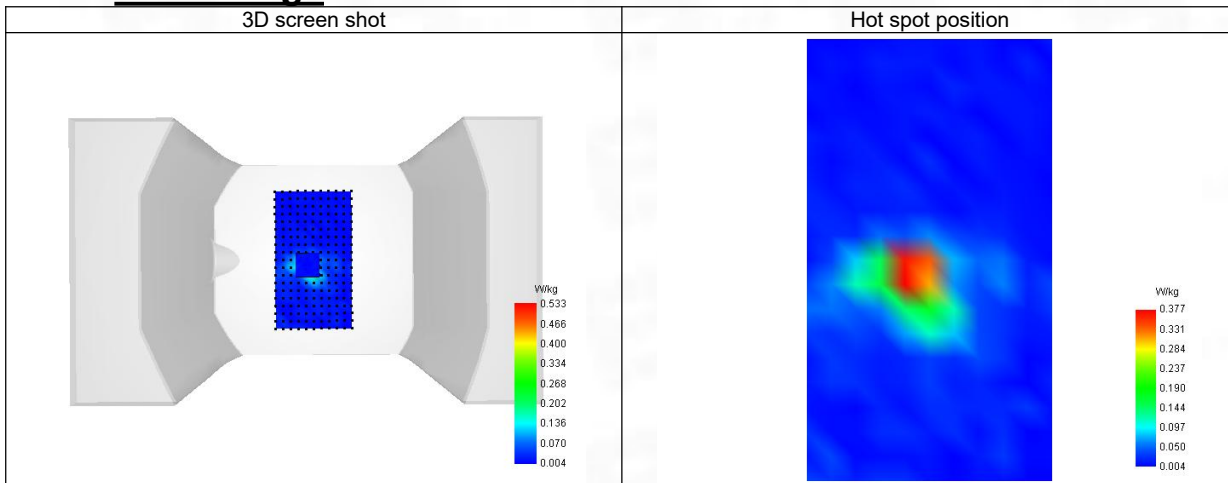
SAR 10g (W/Kg)	0.083
SAR 1g (W/Kg)	0.291
Variation (%)	3.270
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.282797

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.901	0.533	0.268	0.139	0.052	0.036	0.016	0.014	0.005	0.005	0.021	0.010



F. 3D Image



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

SAR Measurement at Bluetooth (Body, Validation Plane)

Date of measurement: 3/7/2025

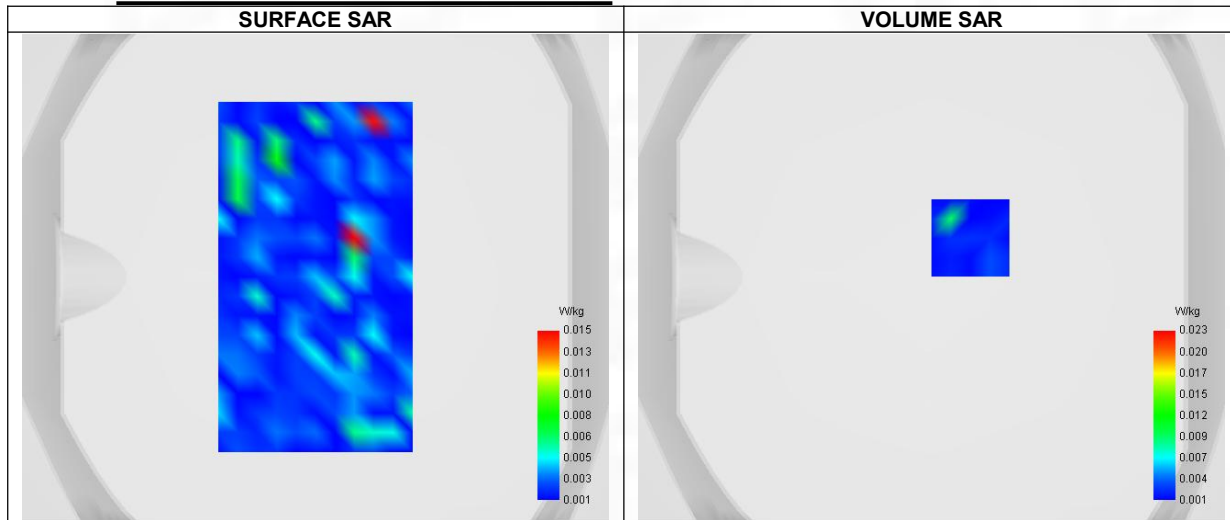
A. Experimental conditions.

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	Lower (0)/ frequency 2402.000 Mhz
Signal	Bluetooth

B. Permittivity

Middle TX Frequency (MHz)	2402.000
Relative permittivity (real part)	38.968
Relative permittivity (imaginary part)	13.811
Conductivity (S/m)	1.789

C. SAR Surface and Volume

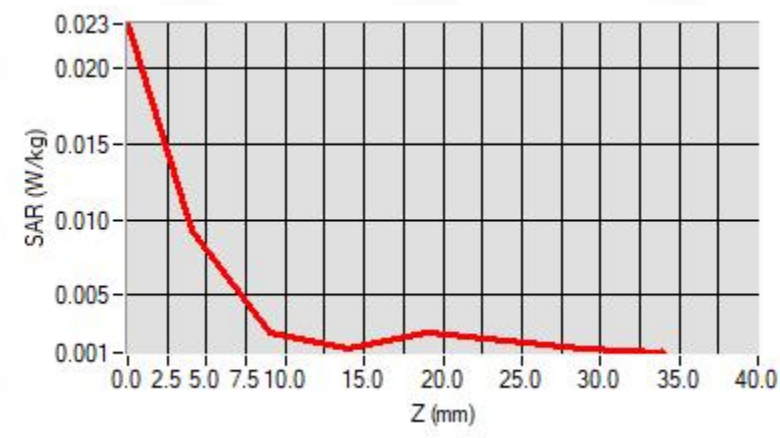


D. SAR 1g & 10g

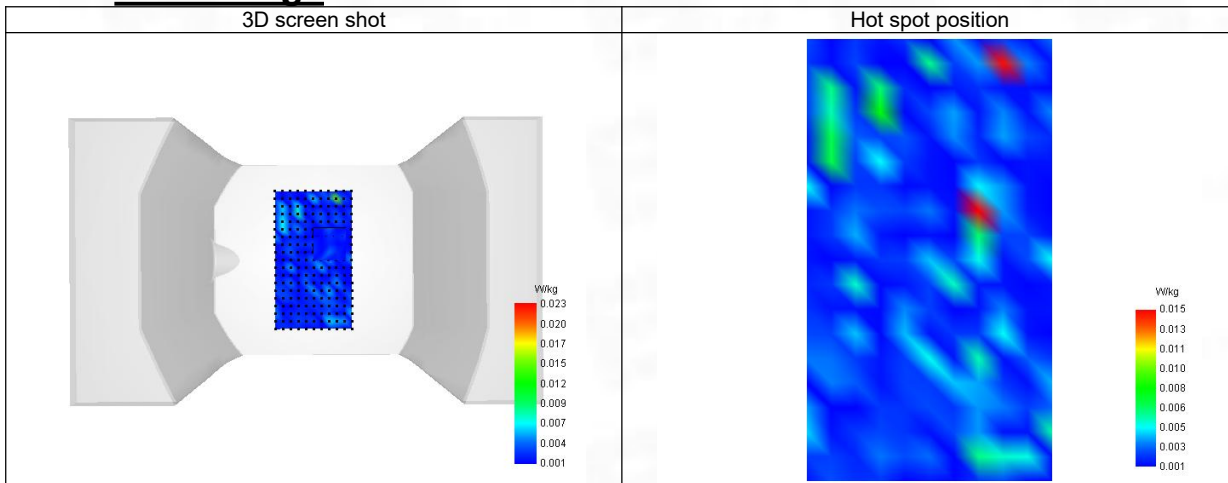
SAR 10g (W/Kg)	0.003
SAR 1g (W/Kg)	0.008
Variation (%)	-3.860
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	44.444444

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.023	0.009	0.004	0.001	0.002	0.002	0.001



F. 3D Image



ANNEX D SAR Test Setup Photos

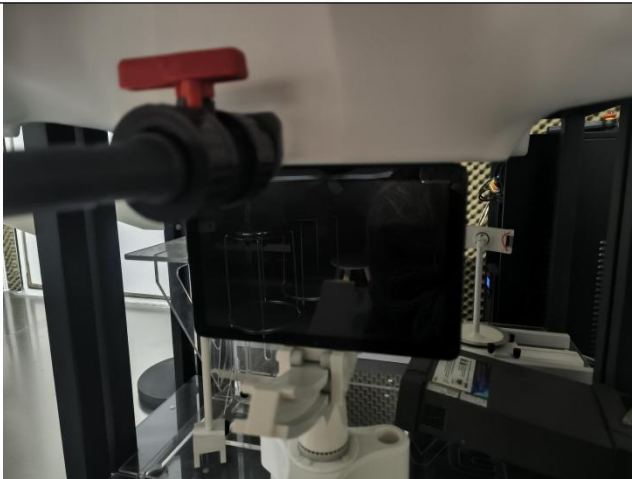
Reference Photo: simulation liquid depth 15.9cm



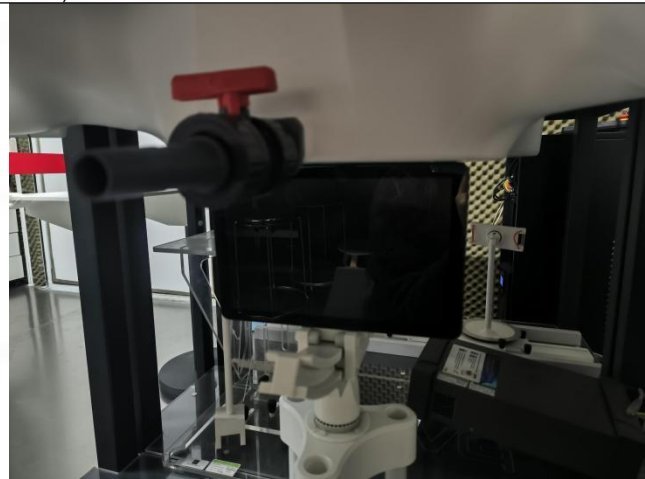
Test positions



Back (dist. 0mm)



Left (dist. 0mm)



Right (dist. 0mm)



ANNEX E EUT External and Internal Photos

Please refer to RF Report.

ANNEX F Calibration Information

Please refer to the document "Calibration.pdf".



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