

TEST REPORT

Reference No...... : WTX25X09245774W009
FCC ID : 2AEPIBLACKG4
Applicant : COLOMBIANA DE COMERCIO S.A.
Address : Car. 43E No 8-71, Medellin, Colombia
Manufacturer : Sichuan Koobee Communication Equipment Co., Ltd.
Address : 3 Floor, Building 2, 69 Gangyuan Road West Section, Lingang Development
Zone, Yibin City, Sichuan Province, China
Product Name : Smart Phone
Model No...... : Black G4
FCC Part 2.1093
Standards : IEEE Std C95.1: 2019
IEEE C95.3: 2021
Date of Receipt sample : 2025-08-06
Date of Test..... : 2025-08-20 to 2025-09-17
Date of Issue : 2025-09-17
Test Report Form No. : WTX_IEEE_1528W
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

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Report version

Version No.	Date of issue	Description
Rev.00	2025-09-17	Original
/	/	/

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT:	
Product Name:	Smart Phone
Brand Name:	Kalley
Model No.:	Black G4
Adding Model(s):	/
Rated Voltage:	Battery: DC 3.89V; DC 5.0V=== 2.0A charging from adapter
Battery Capacity:	5900mAh
Power Adapter:	Model No.: ES166F-US-0500200 Input: 100-240V~, 50/60Hz, 0.5A Output: 5.0V===2.0A Manufacturer: SHENZHEN EAST SUN ELECTRONICS CO., LTD
Software Version:	Kalley_Black_G4_V01_20250718
Hardware Version:	KC26NQ_01
<i>Note: 1.The test data is gathered from a production sample provided by the manufacturer.</i> <i>2.This EUT has two SIM card slots, and use same one RF module. We found that RF parameters are the same, when we insert the card 1 and card 2. So we usually performed the test under main card slot 1.</i>	

Technical Characteristics of EUT:	
2G	
Support Networks:	GSM, GPRS, EDGE
Support Band:	GSM850/PCS1900
Uplink Frequency:	GSM/GPRS/EDGE 850: 824~849MHz GSM/GPRS/EDGE 1900: 1850~1910MHz
Downlink Frequency:	GSM/GPRS/EDGE 850: 869~894MHz GSM/GPRS/EDGE 1900: 1930~1990MHz
RF Output Power:	GSM850: 32.89dBm, GSM1900: 30.31dBm EDGE850:26.68dBm, EDGE1900: 27.00 dBm
Type of Modulation:	GMSK, 8PSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM850: -2.53dBi; GSM1900: -1.57dBi
GPRS/EDGE Class:	Class 12
3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Band:	WCDMA Band 2, WCDMA Band 4, WCDMA Band 5
Uplink Frequency:	WCDMA Band 2: 1850~1910MHz WCDMA Band 4: 1710-1755MHz WCDMA Band 5: 824~849MHz
Downlink Frequency:	WCDMA Band 2: 1930~1990MHz WCDMA Band 4: 2110-2155MHz WCDMA Band 5: 869~894MHz
RF Output Power:	WCDMA Band 2: 22.70dBm, WCDMA Band 4: 22.15dBm, WCDMA Band 5: 22.65dBm
Type of Modulation:	BPSK, QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	WCDMA Band 2: -1.57dBi, WCDMA Band 4: -1.39dBi, WCDMA Band 5: -2.53dBi
4G	
Support Networks:	FDD-LTE, TDD-LTE
Support Band:	FDD-LTE Band 2, 4, 5, 7, 12, 13, 66, TDD-LTE 41
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 7: Tx: 2500~2570MHz, FDD-LTE Band 12: Tx: 699-716MHz, FDD-LTE Band 13: Tx: 777-787MHz, TDD-LTE Band 41: Tx: 2496-2690MHz,

	FDD-LTE Band 66: Tx: 1710-1780MHz,
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz, FDD-LTE Band 4: Rx: 2110-2155MHz, FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 7: Rx: 2620-2690MHz, FDD-LTE Band 12: Rx: 729-746MHz, FDD-LTE Band 13: Rx: 746-756MHz, TDD-LTE Band 41: Rx: 2496-2690MHz, FDD-LTE Band 66: Rx: 2110-2200MHz,
RF Output Power:	LTE Band 2: 23.72dBm; LTE Band 4: 23.48dBm LTE Band 5: 24.03dBm; LTE Band 7: 23.43dBm LTE Band 12: 23.98dBm; LTE Band 13: 23.93dBm LTE Band 41: 22.61dBm; LTE Band 66: 23.51dBm
Type of Modulation:	QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	LTE Band 2: -1.57dBi; LTE Band 4: -1.39dBi; LTE Band 5: -2.53dBi; LTE Band 7: -0.87dBi; LTE Band 12: -3.12dBi; LTE Band 13: -3.07dBi; LTE Band 41: -0.87dBi; LTE Band 66: -1.39dBi
WIFI(2.4GHz)	
Support Standards:	802.11b, 802.11g, 802.11n-HT20, 802.11n-HT40
Frequency Range:	2412-2462MHz for 11b/g/n(HT20), 2422-2452MHz for 11n(HT40)
Max. RF Output Power:	17.48dBm (Conducted)
Type of Modulation:	DSSS, OFDM
Quantity of Channels:	11 for 802.11b/g/n-HT20; 7 for 802.11n-HT40
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	0.3dBi
WIFI(5GHz)	
Support Standards:	802.11a, 802.11n-HT20/40, 802.11ac-VHT20/40/80
Frequency Range:	5180-5240MHz, 5260-5320MHz, 5500-5700MHz, 5745-5825MHz
Max. RF Output Power:	U-NII-1: 17.50dBm(Conducted) U-NII-2A: 17.73dBm(Conducted) U-NII-2C: 18.67dBm(Conducted) U-NII-3: 17.99dBm (Conducted)
Type of Modulation:	OFDM
Antenna Type:	Integral Antenna
Antenna Gain:	1.16dBi
Bluetooth	
Bluetooth Version:	Bluetooth V5.0
Frequency Range:	2402-2480MHz
Max. RF Output Power:	3.89dBm(Conducted)

Data Rate:	1Mbps, 2Mbps, 3Mbps
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Quantity of Channels:	79/40
Channel Separation:	1MHz/2MHz
Antenna Type:	Integral Antenna
Antenna Gain:	0.3dBi
<i>Note: The Antenna Gain is provided by the customer and can affect the validity of results. 2. Please refer to WTX25X08213514W for the 5GHz WiFi SAR report</i>	

1.2 Test Standards

The following report is accordance with FCC 47 CFR Part 2.1093, IEEE Std C95.1: 2019, IEEE C95.3: 2021, KDB 447498 D01 v06, KDB 648474 D04 v01r03, KDB 248227 D01 v02r02, KDB 941225 D01 v03r01, KDB 941225 D05 v02r05 , and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02.

The objective is to determine compliance with FCC Part 2.1093 of the Federal Communication Commissions rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which is result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02. The public notice KDB 447498 D01 v06 for Mobile and Portable Devices RF Exposure Procedure also.

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010. Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.

2. Summary of Test Results

The maximum results of Specific Absorption Rate (SAR) have found during testing are as follows:

Frequency Band	Head SAR	Body-worn (10mm Gap)	Hotspot (10mm Gap)	SAR _{1g} Limit (W/kg)
	Maximum SAR _{1g} (W/kg)	Maximum SAR _{1g} (W/kg)	Maximum SAR _{1g} (W/kg)	
GSM	0.679	0.382	0.376	1.6
WCDMA	0.800	0.226	0.256	1.6
LTE	0.707	0.303	0.303	1.6
WLAN 2.4GHz	0.294	0.145	0.145	1.6
WLAN 5GHz	0.701	0.328	0.328	1.6
Simultaneous Transmission	1.501	0.546	0.704	1.6

Remark:

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2.1093 and IEEE Std C95.1: 2019, and had been tested in accordance with the measurement methods and procedure specified in KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02.

3. Specific Absorption Rate (SAR)

3.1 Introduction

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.

3.2 SAR Definition

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 either related to the temperature elevation in tissue by

$$SAR = C \left(\frac{\delta T}{\delta t} \right)$$

Where: C is the specific heat capacity, δT is the temperature rise and δt is the exposure duration, or 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.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

4. SAR Measurement System

4.1 The Measurement System

Comosar is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The Comosar system consists of the following items:

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

The following figure shows the system.

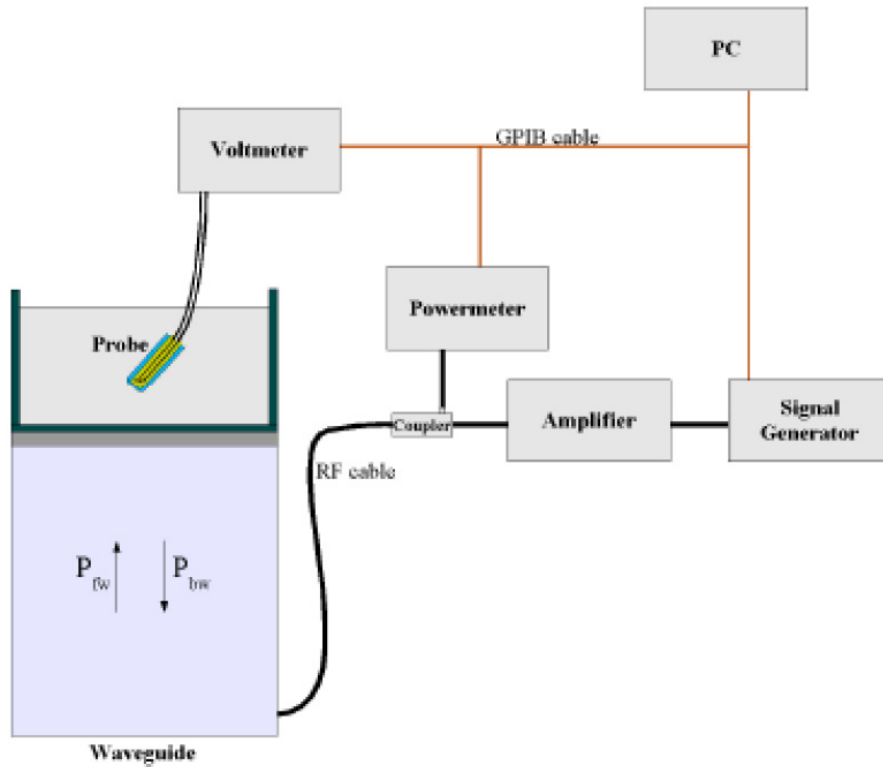


The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 10g mass.

4.2 Probe

For the measurements the Specific Dosimetric E-Field Probe SSE2 0725-EPGO-446, and refer to the calibration report for probe parameters.

Probe calibration is realized, in compliance with IEC/IEEE 62209-1528:2020 STD, with CALISAR, Antenna proprietary calibration system. The calibration is performed with the IEC/IEEE 62209-1528:2020 annexes technique using reference guide at the five frequencies.



$$SAR = \frac{4(P_{fw} - P_{bw})}{ab\delta} \cos^2\left(\pi \frac{y}{a}\right) e^{-(2z/\delta)}$$

Where :

P_{fw} = Forward Power

P_{bw} = Backward Power

a and b = Waveguide dimensions

δ = Skin depth

Keithley configuration:

Rate = Medium; Filter = ON; RDGS = 10; Filter type = Moving Average; Range auto after each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it. The calibration factors, CF(N), for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are:

$$CF(N) = SAR(N)/V_{lin}(N) \quad (N=1,2,3)$$

The linearised output voltage $V_{lin}(N)$ is obtained from the displayed output voltage $V(N)$ using

$$V_{lin}(N) = V(N) * (1 + V(N)/DCP(N)) \quad (N=1,2,3)$$

where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

Dosimetric Assessment Procedure

Each E-Probe/Probe Amplifier combination has unique calibration parameters. SATIMO Probe calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm²) using an with CALISAR, Antenna proprietary calibration system.

Free Space Assessment Procedure

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1mW/cm².

Temperature Assessment Procedure

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated head tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C \frac{\Delta T}{\Delta t}$$

Where:

- Δt = exposure time (30 seconds),
- C = heat capacity of tissue (brain or muscle),
- ΔT = temperature increase due to RF exposure.

SAR is proportional to $\Delta T/\Delta t$, the initial rate of tissue heating, before thermal diffusion takes place. The electric field in the simulated tissue can be used to estimate SAR by equating the thermally derived SAR to that with the E- field component.

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

Where:

σ = simulated tissue conductivity,

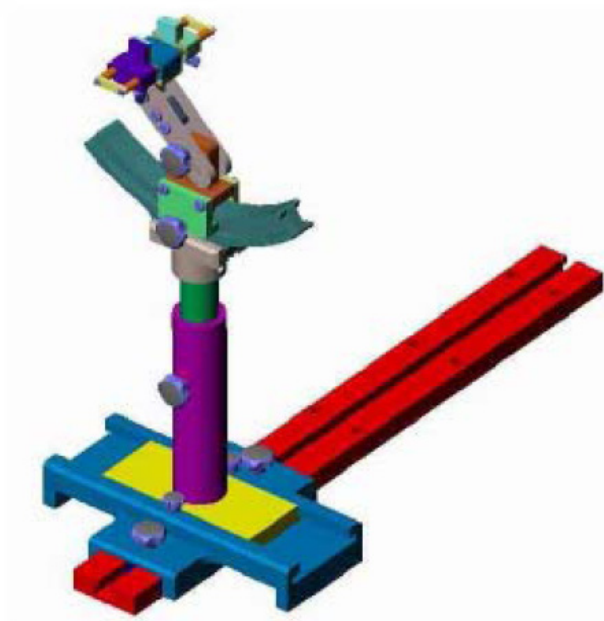
ρ = Tissue density (1.25 g/cm³ for brain tissue)

4.4 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

4.5 Device Holder

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
Delrin	3.7	0.005

4.6 Test Equipment List

Fixed asset Number	Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
WTXE1105A1002	E-Field Probe	MVG	SSE2	0725-EPGO-446	2025-02-12	2026-02-11
WTXE1053A1001-001	750MHz Dipole	MVG	SID750	SN 47/12 DIP 0G750-203	2023-08-20	2026-08-19
WTXE1053A1001-002	835MHz Dipole	MVG	SID835	SN 47/12 DIP 0G835-204	2023-08-20	2026-08-19
WTXE1053A1001-004	1800MHz Dipole	MVG	SID1800	SN 47/12 DIP 1G800-206	2023-08-20	2026-08-19
WTXE1053A1001-005	1900MHz Dipole	MVG	SID1900	SN 47/12 DIP 1G900-207	2023-08-20	2026-08-19
WTXE1053A1001-007	2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2023-08-20	2026-08-19
WTXE1053A1006-002	2600MHz Dipole	MVG	SID2600	SN 28/21 DIP 2G600-590	2024-07-11	2027-07-10
WTXE1053A1001-010	Dielectric Probe	SATIMO	SCLMP	SN 47/12 OCPG49	2025-02-23	2026-02-22
WTXE1075A1003	Power meter	Keithley	3500	1232959	2025-02-23	2026-02-22
WTXE1075A1002	Power meter	Keithley	3500	1162591	2025-02-23	2026-02-22
WTXE1104A1003	EXG Analog Signal Generator	KEYSIGHT	N5173B	MY61252892	2025-02-23	2026-02-22
WTXE1022A1002	GSM Tester	Rohde & Schwarz	CMU200	114403	2025-02-23	2026-02-22
WTXE1041A1002	Communications Tester	Rohde & Schwarz	CMW500	148650	2025-02-23	2026-02-22
WTXE1036A1001	Network Analyzer	Rohde & Schwarz	ZVB 8	101353	2024-10-15	2025-10-14
WTXE1076A1001	Power Divider	HP	11636B	JC-2017-10-002	2025-02-23	2026-02-22
WTXE1103A1001	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22
WTXE1103A1002	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22
WTXE1103A1003	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22

5. Tissue Simulating Liquids

5.1 Composition of Tissue Simulating Liquid

For the measurement of the field distribution inside the SAM phantom with SMTIMO, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. 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. Please see the following photos for the liquid height.



Liquid Height for Head/Body SAR

The Composition of Tissue Simulating Liquid

Frequency (MHz)	Water (%)	Salt (%)	Sugar (%)	HEC (%)	Preventol (%)	DGBE (%)
Head/Body						
750	41.1	1.4	57.0	0.2	0.3	0
835	40.3	1.4	57.9	0.2	0.2	0
1700-1900	55.2	0.3	0	0	0	44.5
2450	55.0	0.1	0	0	0	44.9
2600	54.9	0.1	0	0	0	45.0

Frequency (MHz)	Water (%)	Hexyl Carbitol (%)	Triton X-100 (%)
Head/Body			
5200-5800	65.52	17.24	17.24

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

According to FCC KDBs, IEC/IEEE 62209-1528:2020 standards state that the system validation measurements must be performed using a reference dipole meeting the fore mentioned return loss and mechanical dimension requirements. The validation measurement must be performed against a liquid filled flat phantom, with the phantom constructed as outlined in the fore mentioned standards. Per the standards, the dipole shall be positioned below the bottom of the phantom, with the dipole length centered and parallel to the longest dimension of the flat phantom, with the top surface of the dipole at the described distance from the bottom surface of the phantom.

Target Frequency (MHz)	Head		Body	
	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity (σ)	Permittivity (ϵ_r)
150	0.76	52.3	0.80	61.9
300	0.87	45.3	0.92	58.2
450	0.87	43.5	0.94	56.7
750	0.89	41.9	0.96	55.5
835	0.90	41.5	0.97	55.2
900	0.97	41.5	1.05	55.0
915	0.98	41.5	1.06	55.0
1450	1.20	40.5	1.30	54.0
1610	1.29	40.3	1.40	53.8
1800-2000	1.40	40.0	1.52	53.3
2450	1.80	39.2	1.95	52.7
2600	1.96	39.0	2.16	52.5
3000	2.40	38.5	2.73	52.0
5200	4.66	36.0	5.30	49.0
5400	4.86	35.8	5.53	48.7
5600	5.07	35.5	5.77	48.5
5800	5.27	35.3	6.00	48.2

5.3 Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using COMOSAR Dielectric Probe Kit and an Agilent Network Analyzer.

Calibration Result for Dielectric Parameters of Tissue Simulating Liquid

Head Tissue Simulating Liquid									
Freq. MHz	Temp. (°C)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ϵ_r)	Target (ϵ_r)	Delta (%)		
750	23.2	0.92	0.89	3.37	42.38	41.9	1.15	±5	2025-08-31
835	23.2	0.89	0.90	-1.11	41.14	41.5	-0.87	±5	2025-08-30
1800	23.0	1.37	1.40	-2.14	39.28	40.0	-1.80	±5	2025-08-21
1900	23.0	1.43	1.40	2.14	41.13	40.0	2.83	±5	2025-08-20
2450	22.8	1.76	1.80	-2.22	38.54	39.2	-1.68	±5	2025-08-29
2600	22.8	1.94	1.96	-1.02	38.89	39.0	-0.28	±5	2025-08-28

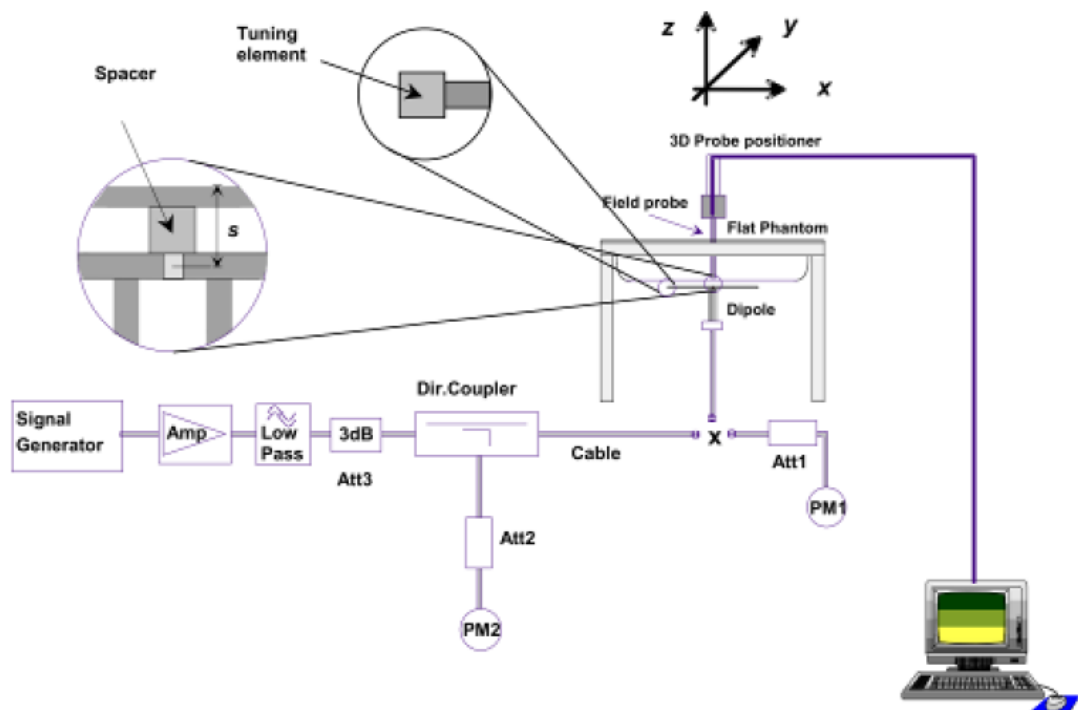
6. SAR Measurement Evaluation

6.1 Purpose of System Performance 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. This 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.

6.2 System Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave which comes from a signal generator at frequency 835MHz, 1800MHz, 1900MHz, 2450MHz, 2600MHz, and 5GHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom.



System Verification Setup Block Diagram



Setup Photo of Dipole Antenna

The output power on dipole port must be calibrated to 24 dBm(250 mW) before dipole is connected.

6.3 Validation Results

Comparing to the original SAR value provided by SATIMO, the validation data should be within its specification of 10 %. Table 6.1 shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion.

Frequency	Power	Targeted SAR _{1g}	Measured SAR _{1g}	Normalized SAR _{1g}	Tolerance	Date
(MHz)	(mw)	(W/kg)	(W/kg)	(W/kg)	(%)	
750	250	8.78	2.165	8.660	-1.37	2025-08-31
835	250	9.65	2.411	9.644	-0.06	2025-08-30
1800	250	38.49	9.611	38.444	-0.12	2025-08-21
1900	250	39.59	9.913	39.652	0.16	2025-08-20
2450	250	53.76	13.452	53.808	0.09	2025-08-29
2600	250	56.81	13.670	54.680	-3.75	2025-08-28

Remark: Referring to IEC/IEEE 62209-1528:2020, the system check shall be performed at a test frequency that is within ±10% or ±100 MHz of the compliance test mid-band frequency, so the 1750 MHz system verification is made of 1800MHz Dipole.

Targeted and Measurement SAR

Please refer to Annex A for the plots of system performance check.

7. EUT Testing Position

7.1 Define Two Imaginary Lines on The Handset

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

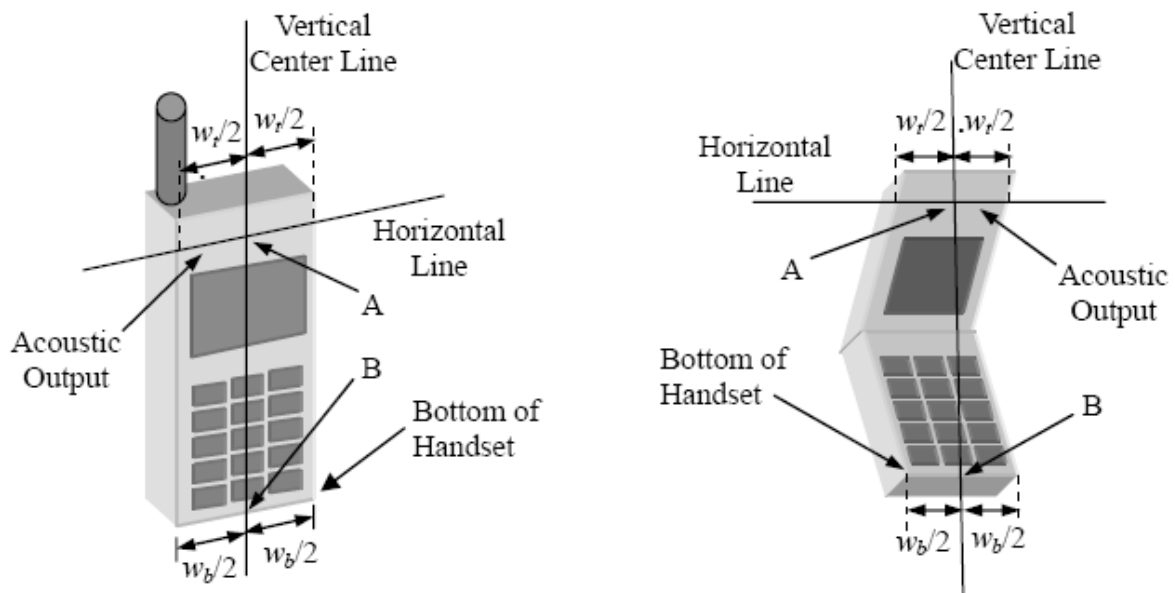


Illustration for Handset Vertical and Horizontal Reference Lines

7.2 Cheek Position

(a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.

(b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig. 7.2).

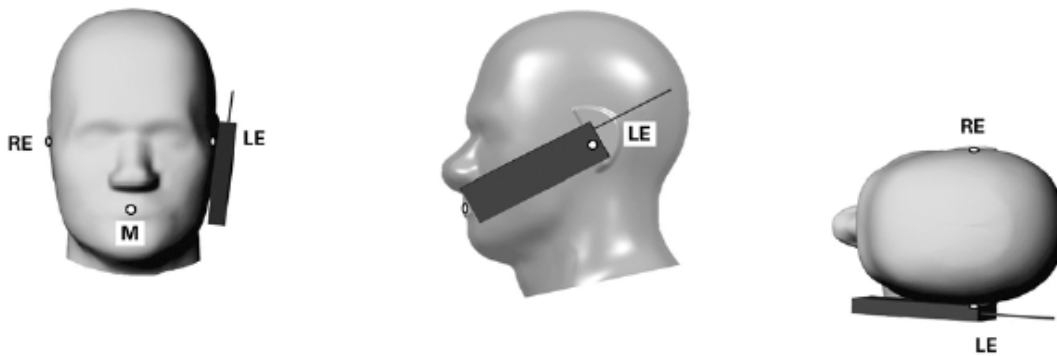


Illustration for Cheek Position

7.3 Tilted Position

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

(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see Fig. 7.3).

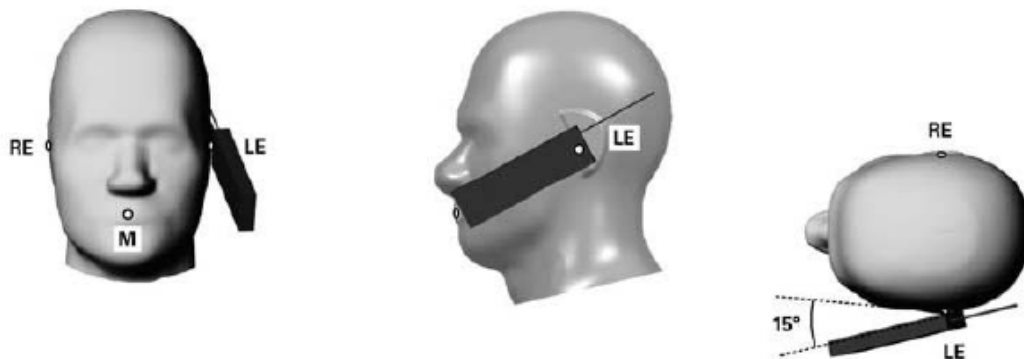


Illustration for Tilted Position

7.4 Body Position

- (a) To position the device parallel to the phantom surface with each side.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 10mm.

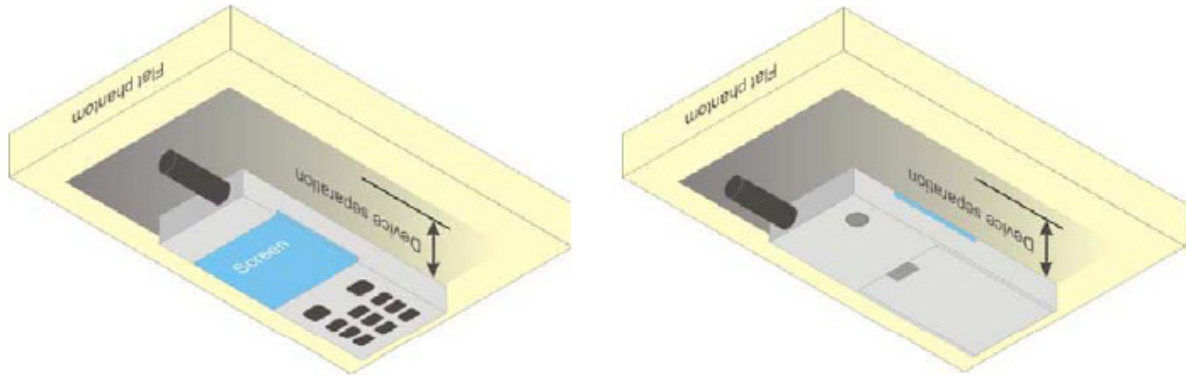
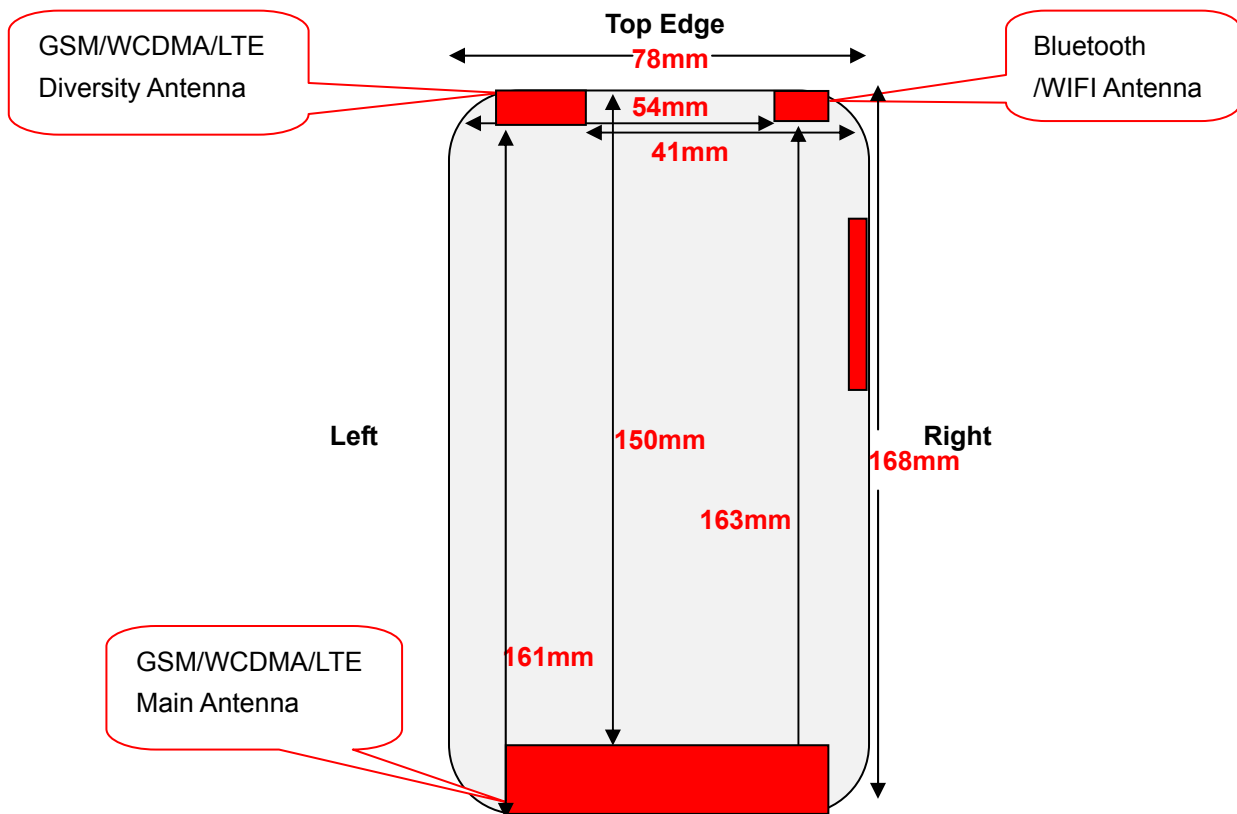


Illustration for Body Position

7.5 EUT Antenna Position



Bottom Edge
< EUT Front Side View >
Block Diagram for EUT Antenna Position

Distance of EUT antenna-to-edge/surface(mm),						
Antennas	Back Side	Front Side	Left Edge	Right Edge	Top Edge	Bottom Edge
WWAN	<25	<25	<25	<25	150	<25
Bluetooth /WIFI	<25	<25	54	<25	<25	163

7.6 EUT Testing Position

Head/Body mode SAR assessments are required for this device. This EUT was tested in different positions for different SAR test modes, more information as below:

Head SAR tests				
Antennas	Right Cheek	Left Cheek	Right Tilted	Left Tilted
WWAN	Yes	Yes	Yes	Yes
Bluetooth /WIFI	Yes	Yes	Yes	Yes

Body SAR tests, Test distance: 10mm						
Antennas	Back Side	Front Side	Left Edge	Right Edge	Top Edge	Bottom Edge
WWAN	Yes	Yes	Yes	Yes	No	Yes
Bluetooth /WIFI	Yes	Yes	No	Yes	Yes	No

Note:

1. The WWAN Antenna is GSM/WCDMA/LTE Main Antenna. The GSM/WCDMA/LTE Diversity Antenna is Down Antenna.
2. Head/Body SAR/Hotspot mode assessments are required.

Remark:

1. Referring to KDB 941225 D06, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test separation distances is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
2. Per KDB 447498 D01v06, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user, which is 0 mm for head SAR, 10 mm for body SAR.

Please refer to Annex D for the EUT test setup photos.

8. SAR Measurement Procedures

8.1 Measurement Procedures

The measurement procedures are as follows:

- (a) Use base station simulator (if applicable) or engineering software to transmit RF power continuously (continuous Tx) in the highest power channel.
- (b) Keep EUT to radiate maximum output power or 100% factor (if applicable)
- (c) Measure output power through RF cable and power meter.
- (d) Place the EUT in the positions as Annex D demonstrates.
- (e) Set scan area, grid size and other setting on the SATIMO software.
- (f) Measure SAR results for the highest power channel on each testing position.
- (g) Find out the largest SAR result on these testing positions of each band
- (h) Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

8.2 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The SATIMO software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine. The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

8.3 Area & Zoom Scan Procedures

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 measures 5x5x7 points with step size 8, 8 and 5 mm for 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

8.4 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing (step-size is 4, 4 and 2.5 mm). When all volume scan were completed, the software can combine and subsequently superpose these measurement data to calculating the multiband SAR.

8.5 SAR Averaged Methods

The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body. The probe tip must not be in contact with the phantom surface in order to minimize measurements errors, but the highest local SAR will occur at the surface of the phantom.

An extrapolation is using to determinate this highest local SAR values. The extrapolation is based on a fourth-order least-square polynomial fit of measured data. The local SAR value is then extrapolated from the liquid surface with a 1mm step.

The measurements have to be performed over a limited time (due to the duration of the battery) so the step of measurement is high. It could vary between 5 and 8 mm. To obtain an accurate assessment of the maximum SAR averaged over 10g and 1 g requires a very fine resolution in the three dimensional scanned data array.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In SATIMO measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.

9. SAR Test Result

9.1 Conducted RF Output Power

GSM - Burst Average Power (dBm)								
Band	GSM850			Tune-up power (dBm)	PCS1900			Tune-up power (dBm)
Channel	128	190	251		512	661	810	
Frequency (MHz)	824.2	836.6	848.8		1850.2	1880	1909.8	
GSM	32.30	32.89	32.32	33.0	30.31	30.27	30.12	31.0
GPRS (1 slot)	32.30	32.85	32.31	33.0	30.22	30.29	30.16	31.0
GPRS (2 slots)	31.85	32.31	31.79	33.0	29.70	29.78	29.73	30.0
GPRS (3 slots)	31.65	31.97	31.48	32.0	29.38	29.44	29.41	30.0
GPRS (4 slots)	31.25	31.57	31.08	32.0	28.94	29.13	29.00	30.0
EGPRS (1 slot)	26.68	26.60	26.52	27.0	26.29	26.41	26.39	27.0
EGPRS (2 slots)	26.27	26.12	26.11	27.0	25.83	25.90	25.84	26.0
EGPRS (3 slots)	26.03	25.79	25.78	27.0	25.53	25.61	25.54	26.0
EGPRS (4 slots)	25.86	25.52	25.56	27.0	25.23	25.33	25.28	26.0

GSM - Source-Based Time-Average Power (dBm)								
Band	GSM850			Tune-up power (dBm)	PCS1900			Tune-up power (dBm)
Channel	128	190	251		512	661	810	
Frequency (MHz)	824.2	836.6	848.8		1850.2	1880	1909.8	
GSM	23.27	23.86	23.29	24.0	21.28	21.24	21.09	22.0
GPRS (1 slot)	23.27	23.82	23.28	24.0	21.19	21.26	21.13	22.0
GPRS (2 slots)	25.83	26.29	25.77	26.0	23.68	23.76	23.71	24.0
GPRS (3 slots)	27.39	27.71	27.22	28.0	25.12	25.18	25.15	26.0
GPRS (4 slots)	28.24	28.56	28.07	29.0	25.93	26.12	25.99	26.5
EGPRS (1 slot)	17.65	17.57	17.49	18.0	17.26	17.38	17.36	18.0
EGPRS (2 slots)	20.25	20.10	20.09	21.0	19.81	19.88	19.82	20.0
EGPRS (3 slots)	21.77	21.53	21.52	22.0	21.27	21.35	21.28	22.0
EGPRS (4 slots)	22.85	22.51	22.55	23.0	22.22	22.32	22.27	23.0

Note: The source-based time-averaged power is linearly scaled the maximum burst averaged power based on time slots. The calculated method are shown as below:

Source based time-average power = Burst averaged power - Duty cycle factor in dB

Duty cycle factor = 9 dB for 1 Tx slot, 6 dB for 2 Tx slots, 4.25 dB for 3 Tx slots, 3 dB for 4 Tx slots

Remark:

1. For Head SAR testing, GSM should be evaluated; therefore the EUT was set in GSM for GSM850 and GSM1900 due to its highest source-based time-average power.
2. For Body SAR testing, GPRS should be evaluated; therefore the EUT was set in GPRS (4TX slots) for

GSM850 and GPRS (4TX slots) for GSM1900, due to its highest source-based time-average power.

3. Per KDB 447498 D01 v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.

WCDMA - Average Power (dBm)								
Band	WCDMA Band II				WCDMA Band V			
Channel	9262	9400	9538	Tune-up power (dBm)	4132	4182	4233	Tune-up power (dBm)
Frequency (MHz)	1852.4	1880.0	1907.6		826.4	836.4	846.6	
RMC 12.2k	22.57	22.70	22.59	23.0	22.55	22.65	22.62	23.0
HSDPA Subtest-1	21.60	21.68	21.52	22.0	21.56	21.69	21.59	22.0
HSDPA Subtest-2	21.16	21.22	21.10	22.0	21.02	21.15	21.12	22.0
HSDPA Subtest-3	20.93	20.99	20.76	22.0	20.81	20.90	20.84	22.0
HSDPA Subtest-4	20.61	20.62	20.44	21.0	20.47	20.56	20.51	21.0
HSUPA Subtest-1	21.21	21.22	21.10	22.0	21.16	21.19	21.29	21.0
HSUPA Subtest-2	20.70	20.74	20.57	21.0	20.73	20.74	20.78	21.0
HSUPA Subtest-3	20.42	20.53	20.28	21.0	20.41	20.49	20.51	21.0
HSUPA Subtest-4	20.20	20.37	20.01	21.0	20.15	20.26	20.33	21.0
HSUPA Subtest-5	19.95	20.10	19.74	21.0	19.83	19.97	20.04	21.0

WCDMA - Average Power (dBm)								
Band	WCDMA Band IV							
Channel	1312	1413	1513	Tune-up power (dBm)				
Frequency (MHz)	1712.4	1732.6	1752.6					
RMC 12.2k	22.15	22.09	22.11	23.0				
HSDPA Subtest-1	20.58	20.54	20.53	21.0				
HSDPA Subtest-2	20.08	20.03	20.09	21.0				
HSDPA Subtest-3	19.87	19.77	19.76	21.0				
HSDPA Subtest-4	19.51	19.44	19.33	20.0				
HSUPA Subtest-1	20.17	20.18	20.12	21.0				
HSUPA Subtest-2	19.71	19.63	19.59	20.0				
HSUPA Subtest-3	19.44	19.41	19.37	20.0				
HSUPA Subtest-4	19.15	19.16	19.22	20.0				
HSUPA Subtest-5	18.76	18.86	18.86	19.0				

Remark:

1. Per KDB 941225 D01 v03, the 12.2kbps RMC mode was selected for SAR testing (the primary mode).
2. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode 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.

LTE Band 2:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
1.4MHz	18607	1850.7	QPSK	1	0	23.54	23.0±1	/
				1	2	23.59	23.0±1	/
				1	5	23.45	23.0±1	/
				3	0	23.54	23.0±1	/
				3	1	23.53	23.0±1	/
				3	2	23.46	23.0±1	/
				6	0	22.47	23.0±1	1.0
			16QAM	1	0	22.41	22.0±1	1.0
				1	2	22.47	22.0±1	1.0
				1	5	22.41	22.0±1	1.0
				3	0	22.42	22.0±1	1.0
				3	1	22.48	22.0±1	1.0
				3	2	22.37	22.0±1	1.0
				6	0	21.58	22.0±1	1.0
	18900	1880	QPSK	1	0	23.49	23.0±1	/
				1	2	23.58	23.0±1	/
				1	5	23.48	23.0±1	/
				3	0	23.52	23.0±1	/
				3	1	23.56	23.0±1	/
				3	2	23.51	23.0±1	/
				6	0	22.51	23.0±1	1.0
			16QAM	1	0	22.74	22.0±1	1.0
				1	2	22.8	22.0±1	1.0
				1	5	22.7	22.0±1	1.0
				3	0	22.64	22.0±1	1.0
				3	1	22.64	22.0±1	1.0
				3	2	22.61	22.0±1	1.0
				6	0	21.36	22.0±1	1.0
	19193	1909.3	QPSK	1	0	23.24	23.0±1	/
				1	2	23.38	23.0±1	/
				1	5	23.27	23.0±1	/
				3	0	23.34	23.0±1	/
				3	1	23.34	23.0±1	/
				3	2	23.35	23.0±1	/
				6	0	22.38	23.0±1	1.0
			16QAM	1	0	22.23	22.0±1	1.0
				1	2	22.25	22.0±1	1.0
				1	5	22.22	22.0±1	1.0
				3	0	22.43	22.0±1	1.0

				3	1	22.49	22.0±1	1.0
				3	2	22.39	22.0±1	1.0
				6	0	21.45	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
3MHz	18615	1851.5	QPSK	1	0	23.59	23.0±1	/
				1	8	23.69	23.0±1	/
				1	14	23.55	23.0±1	/
				6	0	22.46	23.0±1	1.0
				6	4	22.51	23.0±1	1.0
				6	9	22.47	23.0±1	1.0
				15	0	22.45	23.0±1	1.0
			16QAM	1	0	22.31	22.0±1	1.0
				1	8	22.39	22.0±1	1.0
				1	14	22.3	22.0±1	1.0
				6	0	21.53	22.0±1	1.0
				6	4	21.54	22.0±1	1.0
				6	9	21.48	22.0±1	1.0
				15	0	21.45	22.0±1	1.0
	18900	1880	QPSK	1	0	23.57	23.0±1	/
				1	8	23.68	23.0±1	/
				1	14	23.54	23.0±1	/
				6	0	22.52	23.0±1	1.0
				6	4	22.58	23.0±1	1.0
				6	9	22.5	23.0±1	1.0
				15	0	22.5	23.0±1	1.0
			16QAM	1	0	22.8	22.0±1	1.0
				1	8	22.93	22.0±1	1.0
				1	14	22.84	22.0±1	1.0
				6	0	21.59	22.0±1	1.0
				6	4	21.6	22.0±1	1.0
				6	9	21.55	22.0±1	1.0
				15	0	21.53	22.0±1	1.0
	19185	1908.5	QPSK	1	0	23.41	23.0±1	/
				1	8	23.53	23.0±1	/
				1	14	23.34	23.0±1	/
				6	0	22.4	23.0±1	1.0
				6	4	22.44	23.0±1	1.0
				6	9	22.35	23.0±1	1.0
				15	0	22.35	23.0±1	1.0

			16QAM	1	0	22.32	22.0±1	1.0
				1	8	22.41	22.0±1	1.0
				1	14	22.27	22.0±1	1.0
				6	0	21.38	22.0±1	1.0
				6	4	21.39	22.0±1	1.0
				6	9	21.35	22.0±1	1.0
				15	0	21.27	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	18625	1852.5	QPSK	1	0	23.41	23.0±1	/
				1	12	23.62	23.0±1	/
				1	24	23.4	23.0±1	/
				12	0	22.43	23.0±1	1.0
				12	6	22.49	23.0±1	1.0
				12	11	22.45	23.0±1	1.0
				25	0	22.42	23.0±1	1.0
			16QAM	1	0	22.51	22.0±1	1.0
				1	12	22.73	22.0±1	1.0
				1	24	22.5	22.0±1	1.0
				12	0	21.46	22.0±1	1.0
				12	6	21.51	22.0±1	1.0
				12	11	21.51	22.0±1	1.0
				25	0	21.45	22.0±1	1.0
	18900	1880	QPSK	1	0	23.5	23.0±1	/
				1	12	23.69	23.0±1	/
				1	24	23.46	23.0±1	/
				12	0	22.52	23.0±1	1.0
				12	6	22.53	23.0±1	1.0
				12	11	22.46	23.0±1	1.0
				25	0	22.49	23.0±1	1.0
			16QAM	1	0	22.88	22.0±1	1.0
				1	12	23.04	22.0±1	1.0
				1	24	22.88	22.0±1	1.0
				12	0	21.63	22.0±1	1.0
				12	6	21.65	22.0±1	1.0
				12	11	21.59	22.0±1	1.0
				25	0	21.57	22.0±1	1.0
	19175	1907.5	QPSK	1	0	23.37	23.0±1	/
				1	12	23.59	23.0±1	/

				1	24	23.34	23.0±1	/
				12	0	22.4	23.0±1	1.0
				12	6	22.41	23.0±1	1.0
				12	11	22.29	23.0±1	1.0
				25	0	22.32	23.0±1	1.0
			16QAM	1	0	22.34	22.0±1	1.0
				1	12	22.52	22.0±1	1.0
				1	24	22.3	22.0±1	1.0
				12	0	21.38	22.0±1	1.0
				12	6	21.41	22.0±1	1.0
				12	11	21.29	22.0±1	1.0
				25	0	21.27	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	18650	1855	QPSK	1	0	23.61	23.0±1	/
				1	24	23.64	23.0±1	/
				1	49	23.52	23.0±1	/
				25	0	22.46	23.0±1	1.0
				25	12	22.51	23.0±1	1.0
				25	24	22.49	23.0±1	1.0
				50	0	22.52	23.0±1	1.0
			16QAM	1	0	22.32	22.0±1	1.0
				1	24	22.38	22.0±1	1.0
				1	49	22.27	22.0±1	1.0
				25	0	21.48	22.0±1	1.0
				25	12	21.51	22.0±1	1.0
				25	24	21.51	22.0±1	1.0
				50	0	21.5	22.0±1	1.0
	18900	1880	QPSK	1	0	23.58	23.0±1	/
				1	24	23.68	23.0±1	/
				1	49	23.54	23.0±1	/
				25	0	22.55	23.0±1	1.0
				25	12	22.54	23.0±1	1.0
				25	24	22.46	23.0±1	1.0
				50	0	22.49	23.0±1	1.0
			16QAM	1	0	22.79	22.0±1	1.0
				1	24	22.93	22.0±1	1.0
				1	49	22.76	22.0±1	1.0
				25	0	21.58	22.0±1	1.0

				25	12	21.56	22.0±1	1.0
				25	24	21.51	22.0±1	1.0
				50	0	21.54	22.0±1	1.0
	19150	1905	QPSK	1	0	23.43	23.0±1	/
				1	24	23.51	23.0±1	/
				1	49	23.36	23.0±1	/
				25	0	22.42	23.0±1	1.0
				25	12	22.4	23.0±1	1.0
				25	24	22.31	23.0±1	1.0
				50	0	22.36	23.0±1	1.0
			16QAM	1	0	22.41	22.0±1	1.0
				1	24	22.39	22.0±1	1.0
				1	49	22.27	22.0±1	1.0
				25	0	21.47	22.0±1	1.0
				25	12	21.49	22.0±1	1.0
				25	24	21.39	22.0±1	1.0
				50	0	21.39	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
15MHz	18675	1857.5	QPSK	1	0	23.47	23.0±1	/
				1	37	23.66	23.0±1	/
				1	74	23.36	23.0±1	/
				36	0	22.58	23.0±1	1.0
				36	16	22.57	23.0±1	1.0
				36	35	22.56	23.0±1	1.0
				75	0	22.57	23.0±1	1.0
			16QAM	1	0	22.23	22.0±1	1.0
				1	37	22.5	22.0±1	1.0
				1	74	22.19	22.0±1	1.0
				36	0	21.48	22.0±1	1.0
				36	16	21.52	22.0±1	1.0
				36	35	21.49	22.0±1	1.0
				75	0	21.52	22.0±1	1.0
	18900	1880	QPSK	1	0	23.47	23.0±1	/
				1	37	23.71	23.0±1	/
				1	74	23.46	23.0±1	/
				36	0	22.62	23.0±1	1.0
				36	16	22.64	23.0±1	1.0
				36	35	22.61	23.0±1	1.0

			16QAM	75	0	22.56	23.0±1	1.0
				1	0	22.73	22.0±1	1.0
				1	37	22.97	22.0±1	1.0
				1	74	22.7	22.0±1	1.0
				36	0	21.57	22.0±1	1.0
				36	16	21.59	22.0±1	1.0
				36	35	21.55	22.0±1	1.0
				75	0	21.53	22.0±1	1.0
	19125	1902.5	QPSK	1	0	23.52	23.0±1	/
				1	37	23.66	23.0±1	/
				1	74	23.35	23.0±1	/
				36	0	22.52	23.0±1	1.0
				36	16	22.54	23.0±1	1.0
				36	35	22.45	23.0±1	1.0
				75	0	22.47	23.0±1	1.0
			16QAM	1	0	22.78	22.0±1	1.0
				1	37	22.84	22.0±1	1.0
				1	74	22.49	22.0±1	1.0
				36	0	21.43	22.0±1	1.0
				36	16	21.38	22.0±1	1.0
				36	35	21.36	22.0±1	1.0
				75	0	21.41	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
20MHz	18700	1860	QPSK	1	0	23.23	23.0±1	/
				1	49	23.49	23.0±1	/
				1	99	23.15	23.0±1	/
				50	0	22.42	23.0±1	1.0
				50	24	22.48	23.0±1	1.0
				50	49	22.5	23.0±1	1.0
				100	0	22.48	23.0±1	1.0
			16QAM	1	0	22.68	22.4±1	1.0
				1	49	23.02	22.4±1	1.0
				1	99	22.63	22.4±1	1.0
				50	0	21.48	22.4±1	1.0
				50	24	21.49	22.4±1	1.0
				50	49	21.57	22.4±1	1.0
				100	0	21.52	22.4±1	1.0
	18900	1880	QPSK	1	0	23.29	23.0±1	/
				1	49	23.72	23.0±1	/

	19100	1900		1	99	23.27	23.0±1	/
				50	0	22.52	23.0±1	1.0
				50	24	22.52	23.0±1	1.0
				50	49	22.45	23.0±1	1.0
				100	0	22.47	23.0±1	1.0
			16QAM	1	0	22.64	22.0±1	1.0
				1	49	22.98	22.0±1	1.0
				1	99	22.59	22.0±1	1.0
				50	0	21.53	22.0±1	1.0
				50	24	21.57	22.0±1	1.0
				50	49	21.49	22.0±1	1.0
				100	0	21.48	22.0±1	1.0
			QPSK	1	0	23.33	23.0±1	/
				1	49	23.59	23.0±1	/
				1	99	23.14	23.0±1	/
				50	0	22.55	23.0±1	1.0
				50	24	22.49	23.0±1	1.0
				50	49	22.29	23.0±1	1.0
				100	0	22.45	23.0±1	1.0
			16QAM	1	0	22.64	22.0±1	1.0
				1	49	22.9	22.0±1	1.0
				1	99	22.38	22.0±1	1.0
				50	0	21.54	22.0±1	1.0
				50	24	21.48	22.0±1	1.0
				50	49	21.3	22.0±1	1.0
				100	0	21.47	22.0±1	1.0

LTE Band 4:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
1.4MHz	19957	1710.7	QPSK	1	0	23.35	23.0±1	/
				1	2	23.45	23.0±1	/
				1	5	23.35	23.0±1	/
				3	0	23.39	23.0±1	/
				3	1	23.48	23.0±1	/
				3	2	23.39	23.0±1	/
				6	0	22.4	23.0±1	1.0
			16QAM	1	0	22.44	22.0±1	1.0
				1	2	22.53	22.0±1	1.0
				1	5	22.41	22.0±1	1.0
				3	0	22.46	22.0±1	1.0

				3	1	22.5	22.0±1	1.0
				3	2	22.41	22.0±1	1.0
				6	0	21.52	22.0±1	1.0
	20175	1732.5	QPSK	1	0	22.98	23.0±1	/
				1	2	23.09	23.0±1	/
				1	5	22.95	23.0±1	/
				3	0	23.07	23.0±1	/
				3	1	23.13	23.0±1	/
				3	2	23.04	23.0±1	/
				6	0	22.07	23.0±1	1.0
			16QAM	1	0	22.35	22.0±1	1.0
				1	2	22.47	22.0±1	1.0
				1	5	22.34	22.0±1	1.0
				3	0	22.22	22.0±1	1.0
				3	1	22.29	22.0±1	1.0
				3	2	22.25	22.0±1	1.0
				6	0	21.01	22.0±1	1.0
	20393	1754.3	QPSK	1	0	22.99	23.0±1	/
				1	2	23.1	23.0±1	/
				1	5	22.98	23.0±1	/
				3	0	23.1	23.0±1	/
				3	1	23.15	23.0±1	/
				3	2	23.11	23.0±1	/
				6	0	22.08	23.0±1	1.0
			16QAM	1	0	22.06	22.0±1	1.0
				1	2	22.11	22.0±1	1.0
				1	5	22.07	22.0±1	1.0
				3	0	22.25	22.0±1	1.0
				3	1	22.33	22.0±1	1.0
				3	2	22.28	22.0±1	1.0
				6	0	21.32	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
3MHz	19965	1711.5	QPSK	1	0	23.33	23.0±1	/
				1	8	23.45	23.0±1	/
				1	14	23.26	23.0±1	/
				6	0	22.34	23.0±1	1.0
				6	4	22.39	23.0±1	1.0
				6	9	22.33	23.0±1	1.0

				15	0	22.33	23.0±1	1.0
			16QAM	1	0	22.27	22.0±1	1.0
				1	8	22.38	22.0±1	1.0
				1	14	22.2	22.0±1	1.0
				8	0	21.48	22.0±1	1.0
				8	4	21.49	22.0±1	1.0
				8	9	21.44	22.0±1	1.0
				15	0	21.38	22.0±1	1.0
	20175	1732.5	QPSK	1	0	23.01	23.0±1	/
				1	8	23.16	23.0±1	/
				1	14	23.01	23.0±1	/
				6	0	22.01	23.0±1	1.0
				6	4	22.04	23.0±1	1.0
				6	9	22.03	23.0±1	1.0
				15	0	22	23.0±1	1.0
			16QAM	1	0	22.39	22.0±1	1.0
				1	8	22.51	22.0±1	1.0
				1	14	22.34	22.0±1	1.0
				6	0	21.14	22.0±1	1.0
				6	4	21.09	22.0±1	1.0
				6	9	21.1	22.0±1	1.0
				15	0	21.07	22.0±1	1.0
	20385	1753.5	QPSK	1	0	23.04	23.0±1	/
				1	8	23.24	23.0±1	/
				1	14	23	23.0±1	/
				6	0	22.07	23.0±1	1.0
				6	4	22.11	23.0±1	1.0
				6	9	22.07	23.0±1	1.0
				15	0	22.06	23.0±1	1.0
			16QAM	1	0	22.1	22.0±1	1.0
				1	8	22.23	22.0±1	1.0
				1	14	22.04	22.0±1	1.0
				8	0	21.16	22.0±1	1.0
				8	4	21.18	22.0±1	1.0
				8	9	21.17	22.0±1	1.0
				15	0	21.08	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	19975	1712.5	QPSK	1	0	23.2	23.0±1	/
				1	49	23.43	23.0±1	/
				1	99	23.14	23.0±1	/
				12	0	22.31	23.0±1	1.0
				12	24	22.37	23.0±1	1.0
				12	49	22.35	23.0±1	1.0
				25	0	22.3	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	49	22.61	22.0±1	1.0
				1	99	22.34	22.0±1	1.0
				12	0	21.37	22.0±1	1.0
				12	24	21.41	22.0±1	1.0
				12	49	21.39	22.0±1	1.0
				25	0	21.36	22.0±1	1.0
	20175	1732.5	QPSK	1	0	22.9	23.0±1	/
				1	49	23.16	23.0±1	/
				1	99	22.88	23.0±1	/
				12	0	22	23.0±1	1.0
				12	24	22.08	23.0±1	1.0
				12	49	22.03	23.0±1	1.0
				25	0	22.01	23.0±1	1.0
			16QAM	1	0	22.44	22.0±1	1.0
				1	49	22.66	22.0±1	1.0
				1	99	22.42	22.0±1	1.0
				12	0	21.17	22.0±1	1.0
				12	24	21.19	22.0±1	1.0
				12	49	21.14	22.0±1	1.0
				25	0	21.11	22.0±1	1.0
	20375	1752.5	QPSK	1	0	23.02	23.0±1	/
				1	49	23.3	23.0±1	/
				1	99	23.04	23.0±1	/
				12	0	22.08	23.0±1	1.0
				12	24	22.12	23.0±1	1.0
				12	49	22.08	23.0±1	1.0
				25	0	22.04	23.0±1	1.0
			16QAM	1	0	22.09	22.0±1	1.0
				1	49	22.32	22.0±1	1.0
				1	99	22.08	22.0±1	1.0
				12	0	21.16	22.0±1	1.0

				12	24	21.22	22.0±1	1.0
				12	49	21.14	22.0±1	1.0
				25	0	21.09	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	20000	1715	QPSK	1	0	23.33	23.0±1	/
				1	49	23.35	23.0±1	/
				1	99	23.18	23.0±1	/
				25	0	22.29	23.0±1	1.0
				25	24	22.3	23.0±1	1.0
				25	49	22.33	23.0±1	1.0
				50	0	22.34	23.0±1	1.0
			16QAM	1	0	22.2	22.0±1	1.0
				1	49	22.22	22.0±1	1.0
				1	99	22.07	22.0±1	1.0
				25	0	21.33	22.0±1	1.0
				25	24	21.35	22.0±1	1.0
				25	49	21.37	22.0±1	1.0
				50	0	21.32	22.0±1	1.0
	20175	1732.5	QPSK	1	0	23.04	23.0±1	/
				1	49	23.11	23.0±1	/
				1	99	22.99	23.0±1	/
				25	0	22.09	23.0±1	1.0
				25	24	22.09	23.0±1	1.0
				25	49	22.08	23.0±1	1.0
				50	0	22.1	23.0±1	1.0
			16QAM	1	0	22.35	22.0±1	1.0
				1	49	22.45	22.0±1	1.0
				1	99	22.33	22.0±1	1.0
				25	0	21.12	22.0±1	1.0
				25	24	21.11	22.0±1	1.0
				25	49	21.15	22.0±1	1.0
				50	0	21.14	22.0±1	1.0
	20350	1750	QPSK	1	0	23	23.0±1	/
				1	49	23.13	23.0±1	/
				1	99	23.03	23.0±1	/
				25	0	22.15	23.0±1	1.0
				25	24	22.11	23.0±1	1.0
				25	49	22.09	23.0±1	1.0

			16QAM	50	0	22.14	23.0±1	1.0
				1	0	22.01	22.0±1	1.0
				1	49	22.17	22.0±1	1.0
				1	99	22.03	22.0±1	1.0
				25	0	21.31	22.0±1	1.0
				25	24	21.28	22.0±1	1.0
				25	49	21.27	22.0±1	1.0
				50	0	21.25	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
15MHz	20025	1717.5	QPSK	1	0	23.19	23.0±1	/
				1	49	23.34	23.0±1	/
				1	99	22.98	23.0±1	/
				36	0	22.33	23.0±1	1.0
				36	24	22.34	23.0±1	1.0
				36	49	22.3	23.0±1	1.0
				75	0	22.33	23.0±1	1.0
			16QAM	1	0	22.15	22.0±1	1.0
				1	49	22.28	22.0±1	1.0
				1	99	21.95	22.0±1	1.0
				36	0	21.28	22.0±1	1.0
				36	24	21.24	22.0±1	1.0
				36	49	21.25	22.0±1	1.0
				75	0	21.29	22.0±1	1.0
	20175	1732.5	QPSK	1	0	22.96	23.0±1	/
				1	49	23.19	23.0±1	/
				1	99	22.93	23.0±1	/
				36	0	22.17	23.0±1	1.0
				36	24	22.15	23.0±1	1.0
				36	49	22.16	23.0±1	1.0
				75	0	22.13	23.0±1	1.0
			16QAM	1	0	22.33	22.0±1	1.0
				1	49	22.52	22.0±1	1.0
				1	99	22.24	22.0±1	1.0
				36	0	21.14	22.0±1	1.0
				36	24	21.15	22.0±1	1.0
				36	49	21.12	22.0±1	1.0
				75	0	21.12	22.0±1	1.0
	20325	1747.5	QPSK	1	0	22.94	23.0±1	/

				1	49	23.27	23.0±1	/
				1	99	22.99	23.0±1	/
				36	0	22.14	23.0±1	1.0
				36	24	22.14	23.0±1	1.0
				36	49	22.15	23.0±1	1.0
				75	0	22.14	23.0±1	1.0
			16QAM	1	0	22.34	22.0±1	1.0
				1	49	22.62	22.0±1	1.0
				1	99	22.35	22.0±1	1.0
				36	0	21.12	22.0±1	1.0
				36	24	21.18	22.0±1	1.0
				36	49	21.14	22.0±1	1.0
				75	0	21.15	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
20MHz	20050	1720	QPSK	1	0	22.95	23.0±1	/
				1	49	23.26	23.0±1	/
				1	99	22.73	23.0±1	/
				50	0	22.15	23.0±1	1.0
				50	24	22.19	23.0±1	1.0
				50	49	22.19	23.0±1	1.0
				100	0	22.2	23.0±1	1.0
			16QAM	1	0	22.53	22.0±1	1.0
				1	49	22.85	22.0±1	1.0
				1	99	22.32	22.0±1	1.0
				50	0	21.17	22.0±1	1.0
				50	24	21.23	22.0±1	1.0
				50	49	21.24	22.0±1	1.0
				100	0	21.23	22.0±1	1.0
	20175	1732.5	QPSK	1	0	22.76	23.0±1	/
				1	49	23.14	23.0±1	/
				1	99	22.79	23.0±1	/
				50	0	22.11	23.0±1	1.0
				50	24	22.09	23.0±1	1.0
				50	49	22.05	23.0±1	1.0
				100	0	22.07	23.0±1	1.0
			16QAM	1	0	22.24	22.0±1	1.0
				1	49	22.54	22.0±1	1.0
				1	99	22.18	22.0±1	1.0

	20300	1745		50	0	21.1	22.0±1	1.0
				50	24	21.13	22.0±1	1.0
				50	49	21.07	22.0±1	1.0
				100	0	21.08	22.0±1	1.0
			QPSK	1	0	22.7	23.0±1	/
				1	49	23.13	23.0±1	/
				1	99	22.77	23.0±1	/
				50	0	22.11	23.0±1	1.0
				50	24	22.09	23.0±1	1.0
				50	49	22.07	23.0±1	1.0
				100	0	22.08	23.0±1	1.0
			16QAM	1	0	22.14	22.0±1	1.0
				1	49	22.54	22.0±1	1.0
				1	99	22.19	22.0±1	1.0
				50	0	21.11	22.0±1	1.0
				50	24	21.12	22.0±1	1.0
				50	49	21.11	22.0±1	1.0
				100	0	21.13	22.0±1	1.0

LTE Band 5:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
1.4MHz	20407	824.7	QPSK	1	0	23.89	23.5±1	/
				1	2	24	23.5±1	/
				1	5	23.87	23.5±1	/
				3	0	23.93	23.5±1	/
				3	1	23.93	23.5±1	/
				3	2	23.86	23.5±1	/
				6	0	22.88	23.5±1	1.0
			16QAM	1	0	22.76	22.0±1	1.0
				1	2	22.91	22.0±1	1.0
				1	5	22.79	22.0±1	1.0
				3	0	22.82	22.0±1	1.0
				3	1	22.83	22.0±1	1.0
				3	2	22.79	22.0±1	1.0
				6	0	21.93	22.0±1	1.0
	20525	836.5	QPSK	1	0	23.65	23.0±1	/
				1	2	23.76	23.0±1	/
				1	5	23.65	23.0±1	/
				3	0	23.76	23.0±1	/
				3	1	23.79	23.0±1	/

				3	2	23.75	23.0±1	/
				6	0	22.72	23.0±1	1.0
				16QAM	1	0	23.01	22.5±1
					1	2	23.08	22.5±1
					1	5	22.98	22.5±1
					3	0	22.84	22.5±1
					3	1	22.91	22.5±1
					3	2	22.89	22.5±1
					6	0	21.61	22.5±1
	20634	848.3	QPSK	1	0	23.72	23.0±1	/
				1	2	23.9	23.0±1	/
				1	5	23.79	23.0±1	/
				3	0	23.9	23.0±1	/
				3	1	23.95	23.0±1	/
				3	2	23.92	23.0±1	/
				6	0	22.92	23.0±1	1.0
			16QAM	1	0	22.81	23.0±1	1.0
				1	2	22.79	23.0±1	1.0
				1	5	22.76	23.0±1	1.0
				3	0	23	23.0±1	1.0
				3	1	23.07	23.0±1	1.0
				3	2	23.04	23.0±1	1.0
				6	0	22.05	23.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
3MHz	20415	825.5	QPSK	1	0	23.94	23.5±1	/
				1	8	24.01	23.5±1	/
				1	14	23.86	23.5±1	/
				6	0	22.82	23.5±1	1.0
				6	4	22.85	23.5±1	1.0
				6	9	22.84	23.5±1	1.0
				15	0	22.8	23.5±1	1.0
			16QAM	1	0	22.64	22.0±1	1.0
				1	8	22.79	22.0±1	1.0
				1	14	22.64	22.0±1	1.0
				8	0	21.91	22.0±1	1.0
				8	4	21.9	22.0±1	1.0
				8	9	21.9	22.0±1	1.0
				15	0	21.83	22.0±1	1.0

	20525	836.5	QPSK	1	0	23.74	23.0±1	/
				1	8	23.83	23.0±1	/
				1	14	23.68	23.0±1	/
				6	0	22.68	23.0±1	1.0
				6	4	22.69	23.0±1	1.0
				6	9	22.64	23.0±1	1.0
				15	0	22.66	23.0±1	1.0
			16QAM	1	0	23.03	22.5±1	1.0
				1	8	23.16	22.5±1	1.0
				1	14	22.96	22.5±1	1.0
				6	0	21.77	22.5±1	1.0
				6	4	21.77	22.5±1	1.0
				6	9	21.69	22.5±1	1.0
				15	0	21.7	22.5±1	1.0
	20635	847.5	QPSK	1	0	23.79	23.0±1	/
				1	8	23.93	23.0±1	/
				1	14	23.8	23.0±1	/
				6	0	22.83	23.0±1	1.0
				6	4	22.88	23.0±1	1.0
				6	9	22.85	23.0±1	1.0
				15	0	22.81	23.0±1	1.0
			16QAM	1	0	22.76	22.0±1	1.0
				1	8	22.9	22.0±1	1.0
				1	14	22.77	22.0±1	1.0
				8	0	21.83	22.0±1	1.0
				8	4	21.89	22.0±1	1.0
				8	9	21.86	22.0±1	1.0
				15	0	21.81	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	20425	826.5	QPSK	1	0	23.73	23.0±1	/
				1	49	23.92	23.0±1	/
				1	99	23.66	23.0±1	/
				12	0	22.79	23.0±1	1.0
				12	24	22.85	23.0±1	1.0
				12	49	22.78	23.0±1	1.0
				25	0	22.77	23.0±1	1.0
			16QAM	1	0	22.82	22.5±1	1.0
				1	49	23.07	22.5±1	1.0

				1	99	22.78	22.5±1	1.0
				12	0	21.82	22.5±1	1.0
				12	24	21.94	22.5±1	1.0
				12	49	21.85	22.5±1	1.0
				25	0	21.83	22.5±1	1.0
	20525	836.5	QPSK	1	0	23.63	23.0±1	/
				1	49	23.84	23.0±1	/
				1	99	23.57	23.0±1	/
				12	0	22.71	23.0±1	1.0
				12	24	22.74	23.0±1	1.0
				12	49	22.66	23.0±1	1.0
				25	0	22.66	23.0±1	1.0
			16QAM	1	0	23.08	22.5±1	1.0
				1	49	23.3	22.5±1	1.0
				1	99	23.02	22.5±1	1.0
				12	0	21.84	22.5±1	1.0
				12	24	21.84	22.5±1	1.0
				12	49	21.72	22.5±1	1.0
				25	0	21.73	22.5±1	1.0
	20625	846.5	QPSK	1	0	23.74	23.0±1	/
				1	49	23.98	23.0±1	/
				1	99	23.8	23.0±1	/
				12	0	22.84	23.0±1	1.0
				12	24	22.85	23.0±1	1.0
				12	49	22.78	23.0±1	1.0
				25	0	22.78	23.0±1	1.0
			16QAM	1	0	22.76	22.5±1	1.0
				1	49	23.02	22.5±1	1.0
				1	99	22.82	22.5±1	1.0
				12	0	21.89	22.5±1	1.0
				12	24	21.87	22.5±1	1.0
				12	49	21.83	22.5±1	1.0
				25	0	21.74	22.5±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	20450	829	QPSK	1	0	24.03	23.5±1	/
				1	49	23.92	23.5±1	/
				1	99	23.75	23.5±1	/
				25	0	22.87	23.5±1	1.0
				25	24	22.86	23.5±1	1.0
				25	49	22.82	23.5±1	1.0
				50	0	22.81	23.5±1	1.0
			16QAM	1	0	22.67	22.0±1	1.0
				1	49	22.77	22.0±1	1.0
				1	99	22.61	22.0±1	1.0
				25	0	21.88	22.0±1	1.0
				25	24	21.91	22.0±1	1.0
				25	49	21.86	22.0±1	1.0
				50	0	21.86	22.0±1	1.0
	20525	836.5	QPSK	1	0	23.77	23.0±1	/
				1	49	23.79	23.0±1	/
				1	99	23.75	23.0±1	/
				25	0	22.73	23.0±1	1.0
				25	24	22.74	23.0±1	1.0
				25	49	22.7	23.0±1	1.0
				50	0	22.7	23.0±1	1.0
			16QAM	1	0	23.08	22.5±1	1.0
				1	49	23.1	22.5±1	1.0
				1	99	23.05	22.5±1	1.0
				25	0	21.79	22.5±1	1.0
				25	24	21.83	22.5±1	1.0
				25	49	21.73	22.5±1	1.0
				50	0	21.76	22.5±1	1.0
	20600	844	QPSK	1	0	23.65	23.0±1	/
				1	49	23.81	23.0±1	/
				1	99	23.85	23.0±1	/
				25	0	22.82	23.0±1	1.0
				25	24	22.86	23.0±1	1.0
				25	49	22.79	23.0±1	1.0
				50	0	22.82	23.0±1	1.0
			16QAM	1	0	22.61	22.0±1	1.0
				1	49	22.79	22.0±1	1.0
				1	99	22.81	22.0±1	1.0
				25	0	21.92	22.0±1	1.0

				25	24	21.96	22.0±1	1.0
				25	49	21.89	22.0±1	1.0
				50	0	21.83	22.0±1	1.0

LTE Band 7:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	20775	2502.5	QPSK	1	0	22.41	22.0±1	/
				1	49	22.58	22.0±1	/
				1	99	22.29	22.0±1	/
				12	0	21.42	22.0±1	1.0
				12	24	21.48	22.0±1	1.0
				12	49	21.41	22.0±1	1.0
				25	0	21.41	22.0±1	1.0
			16QAM	1	0	21.45	21.0±1	1.0
				1	49	21.64	21.0±1	1.0
				1	99	21.38	21.0±1	1.0
				12	0	20.43	21.0±1	1.0
				12	24	20.46	21.0±1	1.0
				12	49	20.38	21.0±1	1.0
				25	0	20.34	21.0±1	1.0
	21100	2535	QPSK	1	0	22.42	22.0±1	/
				1	49	22.7	22.0±1	/
				1	99	22.49	22.0±1	/
				12	0	21.41	22.0±1	1.0
				12	24	21.45	22.0±1	1.0
				12	49	21.38	22.0±1	1.0
				25	0	21.41	22.0±1	1.0
			16QAM	1	0	21.48	21.0±1	1.0
				1	49	21.75	21.0±1	1.0
				1	99	21.5	21.0±1	1.0
				12	0	20.44	21.0±1	1.0
				12	24	20.47	21.0±1	1.0
				12	49	20.44	21.0±1	1.0
				25	0	20.39	21.0±1	1.0
	21425	2567.5	QPSK	1	0	23.16	23.0±1	/
				1	49	23.40	23.0±1	/
				1	99	23.15	23.0±1	/
				12	0	22.19	23.0±1	1.0
				12	24	22.28	23.0±1	1.0
				12	49	22.22	23.0±1	1.0

			16QAM	25	0	22.21	23.0±1	1.0
				1	0	22.6	22.0±1	1.0
				1	49	22.83	22.0±1	1.0
				1	99	22.56	22.0±1	1.0
				12	0	21.28	22.0±1	1.0
				12	24	21.34	22.0±1	1.0
				12	49	21.32	22.0±1	1.0
				25	0	21.24	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	20800	2505	QPSK	1	0	22.56	22.0±1	/
				1	49	22.54	22.0±1	/
				1	99	22.46	22.0±1	/
				25	0	21.36	22.0±1	1.0
				25	24	21.45	22.0±1	1.0
				25	49	21.43	22.0±1	1.0
				50	0	21.41	22.0±1	1.0
			16QAM	1	0	21.33	21.0±1	1.0
				1	49	21.38	21.0±1	1.0
				1	99	21.26	21.0±1	1.0
				25	0	20.38	21.0±1	1.0
				25	24	20.43	21.0±1	1.0
				25	49	20.41	21.0±1	1.0
				50	0	20.39	21.0±1	1.0
	21100	2535	QPSK	1	0	22.43	22.0±1	/
				1	49	22.54	22.0±1	/
				1	99	22.56	22.0±1	/
				25	0	21.38	22.0±1	1.0
				25	24	21.45	22.0±1	1.0
				25	49	21.48	22.0±1	1.0
				50	0	21.46	22.0±1	1.0
			16QAM	1	0	21.69	21.0±1	1.0
				1	49	21.92	21.0±1	1.0
				1	99	21.81	21.0±1	1.0
				25	0	20.41	21.0±1	1.0
				25	24	20.44	21.0±1	1.0
				25	49	20.51	21.0±1	1.0
				50	0	20.44	21.0±1	1.0
	21400	2565	QPSK	1	0	23.15	23.0±1	/

				1	49	23.31	23.0±1	/
				1	99	23.16	23.0±1	/
				25	0	22.22	23.0±1	1.0
				25	24	22.23	23.0±1	1.0
				25	49	22.28	23.0±1	1.0
				50	0	22.21	23.0±1	1.0
			16QAM	1	0	22.08	22.0±1	1.0
				1	49	22.31	22.0±1	1.0
				1	99	22.14	22.0±1	1.0
				25	0	21.26	22.0±1	1.0
				25	24	21.26	22.0±1	1.0
				25	49	21.29	22.0±1	1.0
				50	0	21.23	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
15MHz	20825	2507.5	QPSK	1	0	22.42	22.0±1	/
				1	49	22.55	22.0±1	/
				1	99	22.3	22.0±1	/
				36	0	21.43	22.0±1	1.0
				36	24	21.49	22.0±1	1.0
				36	49	21.51	22.0±1	1.0
				75	0	21.46	22.0±1	1.0
			16QAM	1	0	21.26	21.0±1	1.0
				1	49	21.39	21.0±1	1.0
				1	99	21.12	21.0±1	1.0
				36	0	20.32	21.0±1	1.0
				36	24	20.44	21.0±1	1.0
				36	49	20.39	21.0±1	1.0
				75	0	20.39	21.0±1	1.0
	21100	2535	QPSK	1	0	22.37	22.0±1	/
				1	49	22.64	22.0±1	/
				1	99	22.54	22.0±1	/
				36	0	21.49	22.0±1	1.0
				36	24	21.56	22.0±1	1.0
				36	49	21.57	22.0±1	1.0
				75	0	21.54	22.0±1	1.0
			16QAM	1	0	21.63	21.0±1	1.0
				1	49	21.9	21.0±1	1.0
				1	99	21.8	21.0±1	1.0

				36	0	20.47	21.0±1	1.0
				36	24	20.54	21.0±1	1.0
				36	49	20.54	21.0±1	1.0
				75	0	20.48	21.0±1	1.0
	21375	2562.5	QPSK	1	0	22.98	23.0±1	/
				1	49	23.38	23.0±1	/
				1	99	23.13	23.0±1	/
				36	0	22.2	23.0±1	1.0
				36	24	22.29	23.0±1	1.0
				36	49	22.3	23.0±1	1.0
				75	0	22.25	23.0±1	1.0
			16QAM	1	0	22.27	22.0±1	1.0
				1	49	22.68	22.0±1	1.0
				1	99	22.36	22.0±1	1.0
				36	0	21.09	22.0±1	1.0
				36	24	21.17	22.0±1	1.0
				36	49	21.23	22.0±1	1.0
				75	0	21.17	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
20MHz	20850	2510	QPSK	1	0	22.16	22.0±1	/
				1	49	22.48	22.0±1	/
				1	99	22.13	22.0±1	/
				50	0	21.28	22.0±1	1.0
				50	24	21.39	22.0±1	1.0
				50	49	21.42	22.0±1	1.0
				100	0	21.39	22.0±1	1.0
			16QAM	1	0	21.62	21.0±1	1.0
				1	49	21.92	21.0±1	1.0
				1	99	21.63	21.0±1	1.0
				50	0	20.27	21.0±1	1.0
				50	24	20.38	21.0±1	1.0
				50	49	20.45	21.0±1	1.0
				100	0	20.41	21.0±1	1.0
	21100	2535	QPSK	1	0	22.15	22.0±1	/
				1	49	22.53	22.0±1	/
				1	99	22.43	22.0±1	/
				50	0	21.42	22.0±1	1.0
				50	24	21.52	22.0±1	1.0

				50	49	21.5	22.0±1	1.0
				100	0	21.5	22.0±1	1.0
			16QAM	1	0	21.57	21.0±1	1.0
				1	49	21.95	21.0±1	1.0
				1	99	21.81	21.0±1	1.0
				50	0	20.42	21.0±1	1.0
				50	24	20.44	21.0±1	1.0
				50	49	20.51	21.0±1	1.0
				100	0	20.48	21.0±1	1.0
	21350	2560	QPSK	1	0	22.64	22.5±1	/
				1	49	23.43	22.5±1	/
				1	99	22.94	22.5±1	/
				50	0	21.99	22.5±1	1.0
				50	24	22.09	22.5±1	1.0
				50	49	22.11	22.5±1	1.0
				100	0	22.07	22.5±1	1.0
			16QAM	1	0	21.98	22.0±1	1.0
				1	49	22.63	22.0±1	1.0
				1	99	22.22	22.0±1	1.0
				50	0	20.96	22.0±1	1.0
				50	24	21.02	22.0±1	1.0
				50	49	21.06	22.0±1	1.0
				100	0	21.04	22.0±1	1.0

LTE Band 12:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
1.4MHz	23017	699.7	QPSK	1	0	23.59	23.0±1	/
				1	2	23.75	23.0±1	/
				1	5	23.72	23.0±1	/
				3	0	23.68	23.0±1	/
				3	1	23.77	23.0±1	/
				3	2	23.79	23.0±1	/
				6	0	22.72	23.0±1	1.0
			16QAM	1	0	22.68	22.0±1	1.0
				1	2	22.75	22.0±1	1.0
				1	5	22.84	22.0±1	1.0
				3	0	22.72	22.0±1	1.0
				3	1	22.83	22.0±1	1.0
				3	2	22.79	22.0±1	1.0
				6	0	21.85	22.0±1	1.0

	23095	707.5	QPSK	1	0	23.64	23.0±1	/
				1	2	23.76	23.0±1	/
				1	5	23.63	23.0±1	/
				3	0	23.78	23.0±1	/
				3	1	23.77	23.0±1	/
				3	2	23.69	23.0±1	/
				6	0	22.66	23.0±1	1.0
			16QAM	1	0	22.92	22.5±1	1.0
				1	2	23.09	22.5±1	1.0
				1	5	22.99	22.5±1	1.0
				3	0	22.91	22.5±1	1.0
				3	1	22.88	22.5±1	1.0
				3	2	22.86	22.5±1	1.0
				6	0	21.63	22.5±1	1.0
	23173	715.3	QPSK	1	0	23.5	23.0±1	/
				1	2	23.68	23.0±1	/
				1	5	23.55	23.0±1	/
				3	0	23.66	23.0±1	/
				3	1	23.72	23.0±1	/
				3	2	23.74	23.0±1	/
				6	0	22.65	23.0±1	1.0
			16QAM	1	0	22.6	22.0±1	1.0
				1	2	22.73	22.0±1	1.0
				1	5	22.62	22.0±1	1.0
				3	0	22.85	22.0±1	1.0
				3	1	22.9	22.0±1	1.0
				3	2	22.95	22.0±1	1.0
				6	0	21.84	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
3MHz	23025	700.5	QPSK	1	0	23.68	23.0±1	/
				1	8	23.97	23.0±1	/
				1	14	23.76	23.0±1	/
				8	0	22.67	23.0±1	1.0
				8	4	22.81	23.0±1	1.0
				8	9	22.76	23.0±1	1.0
				15	0	22.74	23.0±1	1.0
			16QAM	1	0	22.54	22.0±1	1.0
				1	8	22.79	22.0±1	1.0

				1	14	22.65	22.0±1	1.0
				8	0	21.87	22.0±1	1.0
				8	4	21.94	22.0±1	1.0
				8	9	21.93	22.0±1	1.0
				15	0	21.8	22.0±1	1.0
	23095	707.5	QPSK	1	0	23.73	23.0±1	/
				1	8	23.95	23.0±1	/
				1	14	23.7	23.0±1	/
				8	0	22.62	23.0±1	1.0
				8	4	22.71	23.0±1	1.0
				8	9	22.67	23.0±1	1.0
				15	0	22.67	23.0±1	1.0
			16QAM	1	0	23.06	22.5±1	1.0
				1	8	23.19	22.5±1	1.0
				1	14	23.05	22.5±1	1.0
				8	0	21.81	22.5±1	1.0
				8	4	21.86	22.5±1	1.0
				8	9	21.79	22.5±1	1.0
				15	0	21.76	22.5±1	1.0
	23165	714.5	QPSK	1	0	23.64	23.0±1	/
				1	8	23.76	23.0±1	/
				1	14	23.62	23.0±1	/
				8	0	22.64	23.0±1	1.0
				8	4	22.67	23.0±1	1.0
				8	9	22.63	23.0±1	1.0
				15	0	22.66	23.0±1	1.0
			16QAM	1	0	22.7	22.0±1	1.0
				1	8	22.83	22.0±1	1.0
				1	14	22.62	22.0±1	1.0
				8	0	21.73	22.0±1	1.0
				8	4	21.77	22.0±1	1.0
				8	9	21.74	22.0±1	1.0
				15	0	21.65	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	23035	701.5	QPSK	1	0	23.53	23.0±1	/
				1	49	23.96	23.0±1	/
				1	99	23.64	23.0±1	/
				12	0	22.7	23.0±1	1.0

				12	24	22.79	23.0±1	1.0
				12	49	22.78	23.0±1	1.0
				25	0	22.72	23.0±1	1.0
			16QAM	1	0	22.74	22.5±1	1.0
				1	49	23.1	22.5±1	1.0
				1	99	22.82	22.5±1	1.0
				12	0	21.83	22.5±1	1.0
				12	24	21.91	22.5±1	1.0
				12	49	21.89	22.5±1	1.0
				25	0	21.84	22.5±1	1.0
	23095	707.5	QPSK	1	0	23.61	23.0±1	/
				1	49	23.84	23.0±1	/
				1	99	23.5	23.0±1	/
				12	0	22.68	23.0±1	1.0
				12	24	22.73	23.0±1	1.0
				12	49	22.67	23.0±1	1.0
				25	0	22.66	23.0±1	1.0
			16QAM	1	0	23.1	22.5±1	1.0
				1	49	23.35	22.5±1	1.0
				1	99	23.03	22.5±1	1.0
				12	0	21.89	22.5±1	1.0
				12	24	21.9	22.5±1	1.0
				12	49	21.83	22.5±1	1.0
				25	0	21.82	22.5±1	1.0
	23155	713.5	QPSK	1	0	23.56	23.0±1	/
				1	49	23.86	23.0±1	/
				1	99	23.63	23.0±1	/
				12	0	22.7	23.0±1	1.0
				12	24	22.7	23.0±1	1.0
				12	49	22.6	23.0±1	1.0
				25	0	22.64	23.0±1	1.0
			16QAM	1	0	22.67	22.0±1	1.0
				1	49	22.95	22.0±1	1.0
				1	99	22.68	22.0±1	1.0
				12	0	21.76	22.0±1	1.0
				12	24	21.8	22.0±1	1.0
				12	49	21.7	22.0±1	1.0
				25	0	21.66	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	23060	704	QPSK	1	0	23.68	23.0±1	/
				1	49	23.98	23.0±1	/
				1	99	23.7	23.0±1	/
				25	0	22.84	23.0±1	1.0
				25	24	22.77	23.0±1	1.0
				25	49	22.75	23.0±1	1.0
				50	0	22.79	23.0±1	1.0
			16QAM	1	0	22.56	22.0±1	1.0
				1	49	22.77	22.0±1	1.0
				1	99	22.56	22.0±1	1.0
				25	0	21.92	22.0±1	1.0
				25	24	21.86	22.0±1	1.0
				25	49	21.82	22.0±1	1.0
				50	0	21.85	22.0±1	1.0
	23095	707.5	QPSK	1	0	23.79	23.0±1	/
				1	49	23.8	23.0±1	/
				1	99	23.65	23.0±1	/
				25	0	22.72	23.0±1	1.0
				25	24	22.7	23.0±1	1.0
				25	49	22.68	23.0±1	1.0
				50	0	22.68	23.0±1	1.0
			16QAM	1	0	23.07	22.5±1	1.0
				1	49	23.14	22.5±1	1.0
				1	99	22.97	22.5±1	1.0
				25	0	21.89	22.5±1	1.0
				25	24	21.8	22.5±1	1.0
				25	49	21.78	22.5±1	1.0
				50	0	21.79	22.5±1	1.0
	23130	711	QPSK	1	0	23.64	23.0±1	/
				1	49	23.69	23.0±1	/
				1	99	23.62	23.0±1	/
				25	0	22.65	23.0±1	1.0
				25	24	22.69	23.0±1	1.0
				25	49	22.57	23.0±1	1.0
				50	0	22.63	23.0±1	1.0
			16QAM	1	0	22.7	22.0±1	1.0
				1	49	22.76	22.0±1	1.0
				1	99	22.67	22.0±1	1.0
				25	0	21.83	22.0±1	1.0

				25	24	21.83	22.0±1	1.0
				25	49	21.74	22.0±1	1.0
				50	0	21.74	22.0±1	1.0

LTE Band 13:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	23205	779.5	QPSK	1	0	23.64	23.0±1	/
				1	49	23.93	23.0±1	/
				1	99	23.65	23.0±1	/
				12	0	22.62	23.0±1	1.0
				12	24	22.81	23.0±1	1.0
				12	49	22.85	23.0±1	1.0
				25	0	22.75	23.0±1	1.0
			16QAM	1	0	22.77	22.5±1	1.0
				1	49	23.09	22.5±1	1.0
				1	99	22.79	22.5±1	1.0
				12	0	21.71	22.5±1	1.0
				12	24	21.89	22.5±1	1.0
				12	49	21.91	22.5±1	1.0
				25	0	21.8	22.5±1	1.0
	23230	782.0	QPSK	1	0	23.65	23.0±1	/
				1	49	23.81	23.0±1	/
				1	99	23.6	23.0±1	/
				12	0	22.57	23.0±1	1.0
				12	24	22.79	23.0±1	1.0
				12	49	22.76	23.0±1	1.0
				25	0	22.7	23.0±1	1.0
			16QAM	1	0	23.17	22.5±1	1.0
				1	49	23.33	22.5±1	1.0
				1	99	23.13	22.5±1	1.0
				12	0	21.73	22.5±1	1.0
				12	24	21.93	22.5±1	1.0
				12	49	21.84	22.5±1	1.0
				25	0	21.77	22.5±1	1.0
	23255	784.5	QPSK	1	0	23.66	23.0±1	/
				1	49	23.91	23.0±1	/
				1	99	23.61	23.0±1	/
				12	0	22.64	23.0±1	1.0
				12	24	22.71	23.0±1	1.0

				12	49	22.66	23.0±1	1.0
				25	0	22.64	23.0±1	1.0
			16QAM	1	0	22.81	22.0±1	1.0
				1	49	22.89	22.0±1	1.0
				1	99	22.65	22.0±1	1.0
				12	0	21.67	22.0±1	1.0
				12	24	21.75	22.0±1	1.0
				12	49	21.69	22.0±1	1.0
				25	0	21.65	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	23230	782.0	QPSK	1	0	23.78	23.0±1	/
				1	49	23.82	23.0±1	/
				1	99	23.71	23.0±1	/
				25	0	22.61	23.0±1	1.0
				25	24	22.74	23.0±1	1.0
				25	49	22.82	23.0±1	1.0
				50	0	22.74	23.0±1	1.0
			16QAM	1	0	22.66	22.0±1	1.0
				1	49	22.7	22.0±1	1.0
				1	99	22.56	22.0±1	1.0
				25	0	21.64	22.0±1	1.0
				25	24	21.79	22.0±1	1.0
				25	49	21.86	22.0±1	1.0
				50	0	21.71	22.0±1	1.0

LTE Band 41:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	40265	2557.5	QPSK	1	0	21.83	21.5±1	/
				1	12	22.22	21.5±1	/
				1	24	21.88	21.5±1	/
				12	0	20.91	21.5±1	1.0
				12	6	20.9	21.5±1	1.0
				12	11	20.83	21.5±1	1.0
				25	0	20.92	21.5±1	1.0
			16QAM	1	0	21.1	20.5±1	1.0
				1	12	21.5	20.5±1	1.0
				1	24	21.19	20.5±1	1.0

				12	0	19.9	20.5±1	1.0
				12	6	19.97	20.5±1	1.0
				12	11	19.92	20.5±1	1.0
				25	0	19.86	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.23	22.0±1	/
				1	12	22.58	22.0±1	/
				1	24	22.27	22.0±1	/
				12	0	21.35	22.0±1	1.0
				12	6	21.33	22.0±1	1.0
				12	11	21.35	22.0±1	1.0
				25	0	21.37	22.0±1	1.0
			16QAM	1	0	21.44	21.0±1	1.0
				1	12	21.8	21.0±1	1.0
				1	24	21.44	21.0±1	1.0
				12	0	20.32	21.0±1	1.0
				12	6	20.36	21.0±1	1.0
				12	11	20.33	21.0±1	1.0
				25	0	20.28	21.0±1	1.0
	41215	2652.5	QPSK	1	0	22.06	22.0±1	/
				1	12	22.39	22.0±1	/
				1	24	22.09	22.0±1	/
				12	0	21.15	22.0±1	1.0
				12	6	21.13	22.0±1	1.0
				12	11	21.08	22.0±1	1.0
				25	0	21.11	22.0±1	1.0
			16QAM	1	0	21.28	21.0±1	1.0
				1	12	21.64	21.0±1	1.0
				1	24	21.34	21.0±1	1.0
				12	0	20.1	21.0±1	1.0
				12	6	20.13	21.0±1	1.0
				12	11	20.12	21.0±1	1.0
				25	0	20.14	21.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	40290	2560.0	QPSK	1	0	21.8	21.0±1	/
				1	24	21.97	21.0±1	/
				1	49	21.93	21.0±1	/
				25	0	20.88	21.0±1	1.0
				25	12	20.92	21.0±1	1.0

				25	24	20.98	21.0±1	1.0
				50	0	20.85	21.0±1	1.0
			16QAM	1	0	21.03	20.5±1	1.0
				1	24	21.2	20.5±1	1.0
				1	49	21.17	20.5±1	1.0
				25	0	19.8	20.5±1	1.0
				25	12	19.88	20.5±1	1.0
				25	24	19.98	20.5±1	1.0
				50	0	19.87	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.44	22.0±1	/
				1	24	22.51	22.0±1	/
				1	49	22.41	22.0±1	/
				25	0	21.36	22.0±1	1.0
				25	12	21.39	22.0±1	1.0
				25	24	21.28	22.0±1	1.0
				50	0	21.33	22.0±1	1.0
			16QAM	1	0	21.72	21.0±1	1.0
				1	24	21.8	21.0±1	1.0
				1	49	21.68	21.0±1	1.0
				25	0	20.32	21.0±1	1.0
				25	12	20.31	21.0±1	1.0
				25	24	20.26	21.0±1	1.0
				50	0	20.27	21.0±1	1.0
	41190	2650.0	QPSK	1	0	22.04	22.0±1	/
				1	24	22.13	22.0±1	/
				1	49	22.1	22.0±1	/
				25	0	21.08	22.0±1	1.0
				25	12	21.07	22.0±1	1.0
				25	24	21.05	22.0±1	1.0
				50	0	21.04	22.0±1	1.0
			16QAM	1	0	21.4	21.0±1	1.0
				1	24	21.49	21.0±1	1.0
				1	49	21.47	21.0±1	1.0
				25	0	20.12	21.0±1	1.0
				25	12	20.13	21.0±1	1.0
				25	24	20.1	21.0±1	1.0
				50	0	20.1	21.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
15MHz	40315	2562.5	QPSK	1	0	21.79	21.5±1	/
				1	37	22.16	21.5±1	/
				1	74	21.88	21.5±1	/
				36	0	20.88	21.5±1	1.0
				36	16	21.02	21.5±1	1.0
				36	35	21.04	21.5±1	1.0
				75	0	20.93	21.5±1	1.0
			16QAM	1	0	20.94	20.5±1	1.0
				1	37	21.33	20.5±1	1.0
				1	74	21.13	20.5±1	1.0
				36	0	19.8	20.5±1	1.0
				36	16	19.95	20.5±1	1.0
				36	35	19.96	20.5±1	1.0
				75	0	19.87	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.35	22.0±1	/
				1	37	22.51	22.0±1	/
				1	74	22.35	22.0±1	/
				36	0	21.37	22.0±1	1.0
				36	16	21.36	22.0±1	1.0
				36	35	21.35	22.0±1	1.0
				75	0	21.34	22.0±1	1.0
			16QAM	1	0	21.64	21.0±1	1.0
				1	37	21.92	21.0±1	1.0
				1	74	21.65	21.0±1	1.0
				36	0	20.25	21.0±1	1.0
				36	16	20.31	21.0±1	1.0
				36	35	20.22	21.0±1	1.0
				75	0	20.26	21.0±1	1.0
	41165	2647.5	QPSK	1	0	21.92	22.0±1	/
				1	37	22.29	22.0±1	/
				1	74	22	22.0±1	/
				36	0	21.03	22.0±1	1.0
				36	16	21.06	22.0±1	1.0
				36	35	21.06	22.0±1	1.0
				75	0	21.04	22.0±1	1.0
			16QAM	1	0	21.21	21.0±1	1.0
				1	37	21.58	21.0±1	1.0
				1	74	21.29	21.0±1	1.0
				36	0	20.06	21.0±1	1.0

				36	16	20.07	21.0±1	1.0
				36	35	20.1	21.0±1	1.0
				75	0	20.06	21.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
20MHz	40340	2565.0	QPSK	1	0	21.69	21.0±1	/
				1	49	22.1	21.0±1	/
				1	99	21.86	21.0±1	/
				50	0	20.79	21.0±1	1.0
				50	24	20.93	21.0±1	1.0
				50	49	21.06	21.0±1	1.0
				100	0	20.9	21.0±1	1.0
			16QAM	1	0	20.84	20.5±1	1.0
				1	49	21.31	20.5±1	1.0
				1	99	21.1	20.5±1	1.0
				50	0	19.74	20.5±1	1.0
				50	24	19.88	20.5±1	1.0
				50	49	20.01	20.5±1	1.0
				100	0	19.89	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.19	22.0±1	/
				1	49	22.61	22.0±1	/
				1	99	22.12	22.0±1	/
				50	0	21.36	22.0±1	1.0
				50	24	21.27	22.0±1	1.0
				50	49	21.22	22.0±1	1.0
				100	0	21.27	22.0±1	1.0
			16QAM	1	0	21.24	21.0±1	1.0
				1	49	21.52	21.0±1	1.0
				1	99	21.24	21.0±1	1.0
				50	0	20.34	21.0±1	1.0
				50	24	20.26	21.0±1	1.0
				50	49	20.18	21.0±1	1.0
				100	0	20.3	21.0±1	1.0
	41140	2645.0	QPSK	1	0	21.89	21.5±1	/
				1	49	22.21	21.5±1	/
				1	99	21.89	21.5±1	/
				50	0	20.97	21.5±1	1.0
				50	24	21.02	21.5±1	1.0
				50	49	21.02	21.5±1	1.0

			16QAM	100	0	20.95	21.5±1	1.0
				1	0	21.16	21.0±1	1.0
				1	49	21.53	21.0±1	1.0
				1	99	21.26	21.0±1	1.0
				50	0	20.04	21.0±1	1.0
				50	24	20.09	21.0±1	1.0
				50	49	20.09	21.0±1	1.0
				100	0	20.04	21.0±1	1.0

LTE Band 66:

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
1.4MHz	131979	1710.7	QPSK	1	0	23.34	23.0±1	/
				1	2	23.42	23.0±1	/
				1	5	23.3	23.0±1	/
				3	0	23.41	23.0±1	/
				3	1	23.44	23.0±1	/
				3	2	23.37	23.0±1	/
				6	0	22.35	23.0±1	1.0
			16QAM	1	0	22.42	22.0±1	1.0
				1	2	22.56	22.0±1	1.0
				1	5	22.42	22.0±1	1.0
				3	0	22.44	22.0±1	1.0
				3	1	22.51	22.0±1	1.0
				3	2	22.45	22.0±1	1.0
				6	0	21.61	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.04	23.0±1	/
				1	2	23.16	23.0±1	/
				1	5	23.04	23.0±1	/
				3	0	23.09	23.0±1	/
				3	1	23.15	23.0±1	/
				3	2	23.09	23.0±1	/
				6	0	22.15	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	2	22.54	22.0±1	1.0
				1	5	22.43	22.0±1	1.0
				3	0	22.34	22.0±1	1.0
				3	1	22.34	22.0±1	1.0
				3	2	22.34	22.0±1	1.0
				6	0	21.05	22.0±1	1.0
	132664	1779.2	QPSK	1	0	22.93	23.0±1	/

				1	2	23.01	23.0±1	/
				1	5	22.92	23.0±1	/
				3	0	23.03	23.0±1	/
				3	1	23.09	23.0±1	/
				3	2	23.06	23.0±1	/
				6	0	22.01	23.0±1	1.0
			16QAM	1	0	22	22.0±1	1.0
				1	2	22.06	22.0±1	1.0
				1	5	21.99	22.0±1	1.0
				3	0	22.2	22.0±1	1.0
				3	1	22.27	22.0±1	1.0
				3	2	22.15	22.0±1	1.0
				6	0	21.23	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
3MHz	131987	1711.5	QPSK	1	0	23.4	23.0±1	/
				1	8	23.41	23.0±1	/
				1	14	23.35	23.0±1	/
				6	0	22.39	23.0±1	1.0
				6	4	22.43	23.0±1	1.0
				6	9	22.43	23.0±1	1.0
				15	0	22.38	23.0±1	1.0
			16QAM	1	0	22.34	22.0±1	1.0
				1	8	22.41	22.0±1	1.0
				1	14	22.26	22.0±1	1.0
				8	0	21.54	22.0±1	1.0
				8	4	21.47	22.0±1	1.0
				8	9	21.53	22.0±1	1.0
				15	0	21.45	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.16	23.0±1	/
				1	8	23.34	23.0±1	/
				1	14	23.13	23.0±1	/
				6	0	22.14	23.0±1	1.0
				6	4	22.19	23.0±1	1.0
				6	9	22.13	23.0±1	1.0
				15	0	22.14	23.0±1	1.0
			16QAM	1	0	22.49	22.0±1	1.0
				1	8	22.67	22.0±1	1.0
				1	14	22.51	22.0±1	1.0

				6	0	21.26	22.0±1	1.0
				6	4	21.27	22.0±1	1.0
				6	9	21.22	22.0±1	1.0
				15	0	21.17	22.0±1	1.0
	132656	1778.4	QPSK	1	0	23.06	23.0±1	/
				1	8	23.19	23.0±1	/
				1	14	23.03	23.0±1	/
				6	0	22.06	23.0±1	1.0
				6	4	22.08	23.0±1	1.0
				6	9	22.05	23.0±1	1.0
				15	0	22.05	23.0±1	1.0
			16QAM	1	0	22.08	22.0±1	1.0
				1	8	22.24	22.0±1	1.0
				1	14	22.03	22.0±1	1.0
				8	0	21.15	22.0±1	1.0
				8	4	21.21	22.0±1	1.0
				8	9	21.11	22.0±1	1.0
				15	0	21.09	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	131997	1712.5	QPSK	1	0	23.21	23.0±1	/
				1	49	23.47	23.0±1	/
				1	99	23.19	23.0±1	/
				12	0	22.32	23.0±1	1.0
				12	24	22.41	23.0±1	1.0
				12	49	22.38	23.0±1	1.0
				25	0	22.36	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	49	22.68	22.0±1	1.0
				1	99	22.42	22.0±1	1.0
				12	0	21.42	22.0±1	1.0
				12	24	21.51	22.0±1	1.0
				12	49	21.44	22.0±1	1.0
				25	0	21.4	22.0±1	1.0
	132321	1744.9	QPSK	1	0	22.95	23.0±1	/
				1	49	23.22	23.0±1	/
				1	99	22.99	23.0±1	/
				12	0	22.15	23.0±1	1.0
				12	24	22.17	23.0±1	1.0

				12	49	22.12	23.0±1	1.0
				25	0	22.13	23.0±1	1.0
			16QAM	1	0	22.53	22.0±1	1.0
				1	49	22.76	22.0±1	1.0
				1	99	22.52	22.0±1	1.0
				12	0	21.25	22.0±1	1.0
				12	24	21.3	22.0±1	1.0
				12	49	21.24	22.0±1	1.0
				25	0	21.18	22.0±1	1.0
	132646	1777.4	QPSK	1	0	23.01	23.0±1	/
				1	49	23.29	23.0±1	/
				1	99	23.02	23.0±1	/
				12	0	22.06	23.0±1	1.0
				12	24	22.09	23.0±1	1.0
				12	49	21.98	23.0±1	1.0
				25	0	22.03	23.0±1	1.0
			16QAM	1	0	22.09	22.0±1	1.0
				1	49	22.32	22.0±1	1.0
				1	99	22.05	22.0±1	1.0
				12	0	21.2	22.0±1	1.0
				12	24	21.18	22.0±1	1.0
				12	49	21.12	22.0±1	1.0
				25	0	21.06	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	132022	1715	QPSK	1	0	23.31	23.0±1	/
				1	49	23.5	23.0±1	/
				1	99	23.2	23.0±1	/
				25	0	22.35	23.0±1	1.0
				25	24	22.38	23.0±1	1.0
				25	49	22.39	23.0±1	1.0
				50	0	22.38	23.0±1	1.0
			16QAM	1	0	22.25	22.0±1	1.0
				1	49	22.29	22.0±1	1.0
				1	99	22.1	22.0±1	1.0
				25	0	21.37	22.0±1	1.0
				25	24	21.42	22.0±1	1.0
				25	49	21.41	22.0±1	1.0
				50	0	21.36	22.0±1	1.0

	132321	1744.9	QPSK	1	0	23.09	23.0±1	/
				1	49	23.28	23.0±1	/
				1	99	23.16	23.0±1	/
				25	0	22.19	23.0±1	1.0
				25	24	22.19	23.0±1	1.0
				25	49	22.22	23.0±1	1.0
				50	0	22.2	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	49	22.6	22.0±1	1.0
				1	99	22.51	22.0±1	1.0
				25	0	21.25	22.0±1	1.0
				25	24	21.23	22.0±1	1.0
				25	49	21.23	22.0±1	1.0
				50	0	21.23	22.0±1	1.0
	132621	1774.9	QPSK	1	0	23.04	23.0±1	/
				1	49	23.15	23.0±1	/
				1	99	23.03	23.0±1	/
				25	0	22.18	23.0±1	1.0
				25	24	22.12	23.0±1	1.0
				25	49	22.04	23.0±1	1.0
				50	0	22.13	23.0±1	1.0
			16QAM	1	0	22.04	22.0±1	1.0
				1	49	22.2	22.0±1	1.0
				1	99	22.05	22.0±1	1.0
				25	0	21.34	22.0±1	1.0
				25	24	21.29	22.0±1	1.0
				25	49	21.19	22.0±1	1.0
				50	0	21.24	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
15MHz	132097	1722.5	QPSK	1	0	23.21	23.0±1	/
				1	49	23.39	23.0±1	/
				1	99	23.02	23.0±1	/
				36	0	22.36	23.0±1	1.0
				36	24	22.38	23.0±1	1.0
				36	49	22.34	23.0±1	1.0
				75	0	22.34	23.0±1	1.0
			16QAM	1	0	22.18	22.0±1	1.0
				1	49	22.3	22.0±1	1.0

				1	99	21.99	22.0±1	1.0
				36	0	21.27	22.0±1	1.0
				36	24	21.3	22.0±1	1.0
				36	49	21.27	22.0±1	1.0
				75	0	21.34	22.0±1	1.0
	132321	1744.9	QPSK	1	0	23.03	23.0±1	/
				1	49	23.24	23.0±1	/
				1	99	23.06	23.0±1	/
				36	0	22.24	23.0±1	1.0
				36	24	22.28	23.0±1	1.0
				36	49	22.24	23.0±1	1.0
				75	0	22.26	23.0±1	1.0
			16QAM	1	0	22.36	22.0±1	1.0
				1	49	22.6	22.0±1	1.0
				1	99	22.44	22.0±1	1.0
				36	0	21.23	22.0±1	1.0
				36	24	21.26	22.0±1	1.0
				36	49	21.25	22.0±1	1.0
				75	0	21.25	22.0±1	1.0
	132546	1767.4	QPSK	1	0	23.05	23.0±1	/
				1	49	23.29	23.0±1	/
				1	99	22.96	23.0±1	/
				36	0	22.2	23.0±1	1.0
				36	24	22.19	23.0±1	1.0
				36	49	22.07	23.0±1	1.0
				75	0	22.18	23.0±1	1.0
			16QAM	1	0	22.43	22.0±1	1.0
				1	49	22.64	22.0±1	1.0
				1	99	22.4	22.0±1	1.0
				36	0	21.2	22.0±1	1.0
				36	24	21.14	22.0±1	1.0
				36	49	21.14	22.0±1	1.0
				75	0	21.19	22.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
20MHz	132072	1720	QPSK	1	0	22.99	23.0±1	/
				1	49	23.19	23.0±1	/
				1	99	22.84	23.0±1	/
				50	0	22.23	23.0±1	1.0

	132321	1744.9		50	24	22.27	23.0±1	1.0
				50	49	22.25	23.0±1	1.0
				100	0	22.22	23.0±1	1.0
			16QAM	1	0	22.54	22.0±1	1.0
				1	49	22.81	22.0±1	1.0
				1	99	22.42	22.0±1	1.0
				50	0	21.27	22.0±1	1.0
				50	24	21.29	22.0±1	1.0
				50	49	21.3	22.0±1	1.0
				100	0	21.26	22.0±1	1.0
			QPSK	1	0	23.42	23.0±1	/
				1	49	23.51	23.0±1	/
				1	99	23.32	23.0±1	/
				50	0	22.19	23.0±1	1.0
				50	24	22.21	23.0±1	1.0
				50	49	22.16	23.0±1	1.0
				100	0	22.16	23.0±1	1.0
	132471	1759.9	16QAM	1	0	22.28	22.0±1	1.0
				1	49	22.65	22.0±1	1.0
				1	99	22.33	22.0±1	1.0
				50	0	21.18	22.0±1	1.0
				50	24	21.28	22.0±1	1.0
				50	49	21.18	22.0±1	1.0
				100	0	21.21	22.0±1	1.0
			QPSK	1	0	22.87	23.0±1	/
				1	49	23.17	23.0±1	/
				1	99	22.82	23.0±1	/
				50	0	22.22	23.0±1	1.0
				50	24	22.19	23.0±1	1.0
				50	49	21.98	23.0±1	1.0
				100	0	22.1	23.0±1	1.0
			16QAM	1	0	22.34	22.0±1	1.0
				1	49	22.59	22.0±1	1.0
				1	99	22.29	22.0±1	1.0
				50	0	21.24	22.0±1	1.0
				50	24	21.23	22.0±1	1.0
				50	49	21.02	22.0±1	1.0
				100	0	21.16	22.0±1	1.0

Remark:

1. Per KDB941225 D05 v02r05, Start with the largest channel bandwidth then measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle, and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. 6 When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.
2. Per KDB941225 D05 v02r05, the procedures required for 1 RB allocation in 5.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.
3. Per KDB941225 D05 v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations, and the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB941225 D05 v02r05, for each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in 5.2.1, 5.2.2, and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

WLAN(2.4GHz)					
Test Mode	Data Rate	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-up power (dBm)
802.11b	11Mbps	CH 01	2412	16.52	18.0
		CH 06	2437	17.48	18.0
		CH 11	2462	16.89	18.0
802.11g	54Mbps	CH 01	2412	16.26	18.0
		CH 06	2437	17.10	18.0
		CH 11	2462	16.43	18.0
802.11n-HT20	MCS7	CH 01	2412	16.10	17.0
		CH 06	2437	16.98	17.0
		CH 11	2462	16.02	17.0
802.11n-HT40	MCS7	CH 03	2422	16.10	17.0
		CH 06	2437	16.09	17.0
		CH 09	2452	16.05	17.0

Note: 5G Wi-Fi Power tested results please refer to the test report WTX25X08213514W.

Remark:

1. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.
2. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements ,when the reported SAR of the highest measured maximum output power channel (see 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.
3. For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is ≤ 1.2 W/kg.
4. Per KDB 248227 D01 v02r02, When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined by applying the following steps sequentially.
 - 1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same specified maximum output power.
 - 2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
 - 3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
 - 4) When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n.

Bluetooth - Maximum Average Power				
Test Mode	Data Rate	Frequency (MHz)	Conducted Power(dBm)	Tune-up power (dBm)
GFSK	1Mbps	2402	2.52	4.0
		2441	3.89	4.0
		2480	3.47	4.0
$\pi/4$ DQPSK	2Mbps	2402	1.73	3.5
		2441	3.11	3.5
		2480	2.68	3.5
8DPSK	3Mbps	2402	1.75	3.5
		2441	3.16	3.5
		2480	2.68	3.5

Bluetooth - Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Conducted Power(dBm)	Tune-up power (dBm)
LE	1Mbps	CH 00	2402	-4.44	-3.0
		CH 19	2440	-3.05	-3.0
		CH 39	2480	-3.51	-3.0
	2Mbps	CH 00	2402	-4.30	-3.0
		CH 19	2440	-3.03	-3.0
		CH 38	2480	-3.38	-3.0

Remark:

Bluetooth maximum output power is 3.89dBm and Maximum Tune-Up output power is 4.0dBm. Per KDB 447498 D01 V06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	Result	Limit
4.0	2.51	5	2.48	0.791	3

The exclusion threshold is $0.791 < 3$, therefore, the RF exposure evaluation is not required.

9.2 Test Results for Standalone SAR Test

Head SAR

GSM850 – Head SAR Test									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	GSM	Right Cheek	190	836.6	32.89	33	1.026	0.309	0.317
	GSM	Right Tilted	190	836.6	32.89	33	1.026	0.285	0.292
1.	GSM	Left Cheek	190	836.6	32.89	33	1.026	0.353	0.362
	GSM	Left Tilted	190	836.6	32.89	33	1.026	0.338	0.347
	GPRS_4TX	Right Cheek	190	836.6	31.57	32	1.104	0.276	0.305
	GPRS_4TX	Right Tilted	190	836.6	31.57	32	1.104	0.262	0.289
	GPRS_4TX	Left Cheek	190	836.6	31.57	32	1.104	0.327	0.361
	GPRS_4TX	Left Tilted	190	836.6	31.57	32	1.104	0.319	0.352

GSM1900 – Head SAR Test									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
2.	GSM	Right Cheek	512	1850.2	30.31	31	1.172	0.579	0.679
	GSM	Right Tilted	512	1850.2	30.31	31	1.172	0.563	0.660
	GSM	Left Cheek	512	1850.2	30.31	31	1.172	0.515	0.604
	GSM	Left Tilted	512	1850.2	30.31	31	1.172	0.502	0.588
	GPRS_4TX	Right Cheek	661	1880	29.13	30	1.222	0.555	0.678
	GPRS_4TX	Right Tilted	661	1880	29.13	30	1.222	0.544	0.665
	GPRS_4TX	Left Cheek	661	1880	29.13	30	1.222	0.499	0.610
	GPRS_4TX	Left Tilted	661	1880	29.13	30	1.222	0.490	0.599

WCDMA Band 2 – Head SAR Test									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC	Right Cheek	9400	1880	22.70	23	1.072	0.453	0.485
	RMC	Right Tilted	9400	1880	22.70	23	1.072	0.436	0.467
3.	RMC	Left Cheek	9400	1880	22.70	23	1.072	0.747	0.800
	RMC	Left Tilted	9400	1880	22.70	23	1.072	0.729	0.781

WCDMA Band 4 – Head SAR Test									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
4.	RMC	Right Cheek	1312	1712.4	22.15	23	1.216	0.341	0.415
	RMC	Right Tilted	1312	1712.4	22.15	23	1.216	0.322	0.392
	RMC	Left Cheek	1312	1712.4	22.15	23	1.216	0.331	0.403
	RMC	Left Tilted	1312	1712.4	22.15	23	1.216	0.315	0.383

WCDMA Band 5 – Head SAR Test									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
5.	RMC	Right Cheek	4183	836.6	22.65	23	1.084	0.292	0.317
	RMC	Right Tilted	4183	836.6	22.65	23	1.084	0.276	0.299
	RMC	Left Cheek	4183	836.6	22.65	23	1.084	0.213	0.231
	RMC	Left Tilted	4183	836.6	22.65	23	1.084	0.201	0.218

LTE Band 2– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Right Cheek	1880	23.72	24	1.067	0.413	0.441
	QPSK 20MHz 1RB	Right Tilted	1880	23.72	24	1.067	0.395	0.421
6.	QPSK 20MHz 1RB	Left Cheek	1880	23.72	24	1.067	0.663	0.707
	QPSK 20MHz 1RB	Left Tilted	1880	23.72	24	1.067	0.647	0.690
	QPSK 20MHz 50%RB	Right Cheek	1880	23.72	24	1.067	0.401	0.428
	QPSK 20MHz 50%RB	Right Tilted	1880	23.72	24	1.067	0.382	0.407
	QPSK 20MHz 50%RB	Left Cheek	1880	23.72	24	1.067	0.649	0.692
	QPSK 20MHz 50%RB	Left Tilted	1880	23.72	24	1.067	0.638	0.680

LTE Band 4– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 1.4MHz 1RB	Right Cheek	1710.7	23.48	24	1.127	0.337	0.380
	QPSK 1.4MHz 1RB	Right Tilted	1710.7	23.48	24	1.127	0.315	0.355
7.	QPSK 1.4MHz 1RB	Left Cheek	1710.7	23.48	24	1.127	0.540	0.609
	QPSK 1.4MHz 1RB	Left Tilted	1710.7	23.48	24	1.127	0.529	0.596
	QPSK 1.4MHz 50%RB	Right Cheek	1710.7	23.48	24	1.127	0.326	0.367
	QPSK 1.4MHz 50%RB	Right Tilted	1710.7	23.48	24	1.127	0.311	0.351
	QPSK 1.4MHz 50%RB	Left Cheek	1710.7	23.48	24	1.127	0.528	0.595
	QPSK 1.4MHz 50%RB	Left Tilted	1710.7	23.48	24	1.127	0.520	0.586
	QPSK 20MHz 1RB	Right Cheek	1720	23.26	24	1.186	0.314	0.372
	QPSK 20MHz 1RB	Right Tilted	1720	23.26	24	1.186	0.302	0.358
	QPSK 20MHz 1RB	Left Cheek	1720	23.26	24	1.186	0.513	0.608
	QPSK 20MHz 1RB	Left Tilted	1720	23.26	24	1.186	0.505	0.599
	QPSK 20MHz 50%RB	Right Cheek	1720	23.26	24	1.186	0.305	0.362
	QPSK 20MHz 50%RB	Right Tilted	1720	23.26	24	1.186	0.297	0.352
	QPSK 20MHz 50%RB	Left Cheek	1720	23.26	24	1.186	0.504	0.598
	QPSK 20MHz 50%RB	Left Tilted	1720	23.26	24	1.186	0.499	0.592

LTE Band 5– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
8.	QPSK 10MHz 1RB	Right Cheek	829	24.03	24.5	1.114	0.208	0.232
	QPSK 10MHz 1RB	Right Tilted	829	24.03	24.5	1.114	0.186	0.207
	QPSK 10MHz 1RB	Left Cheek	829	24.03	24.5	1.114	0.203	0.226
	QPSK 10MHz 1RB	Left Tilted	829	24.03	24.5	1.114	0.181	0.202
	QPSK 10MHz 50%RB	Right Cheek	829	24.03	24.5	1.114	0.195	0.217
	QPSK 10MHz 50%RB	Right Tilted	829	24.03	24.5	1.114	0.181	0.202
	QPSK 10MHz 50%RB	Left Cheek	829	24.03	24.5	1.114	0.189	0.211
	QPSK 10MHz 50%RB	Left Tilted	829	24.03	24.5	1.114	0.174	0.194

LTE Band 7– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Right Cheek	2560	23.43	23.5	1.016	0.289	0.294
	QPSK 20MHz 1RB	Right Tilted	2560	23.43	23.5	1.016	0.273	0.277
9.	QPSK 20MHz 1RB	Left Cheek	2560	23.43	23.5	1.016	0.360	0.366
	QPSK 20MHz 1RB	Left Tilted	2560	23.43	23.5	1.016	0.342	0.348
	QPSK 20MHz 50%RB	Right Cheek	2560	23.43	23.5	1.016	0.277	0.282
	QPSK 20MHz 50%RB	Right Tilted	2560	23.43	23.5	1.016	0.265	0.269
	QPSK 20MHz 50%RB	Left Cheek	2560	23.43	23.5	1.016	0.352	0.358
	QPSK 20MHz 50%RB	Left Tilted	2560	23.43	23.5	1.016	0.336	0.341

LTE Band 12– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 10MHz 1RB	Right Cheek	704	23.98	24	1.005	0.124	0.125
	QPSK 10MHz 1RB	Right Tilted	704	23.98	24	1.005	0.116	0.117
10.	QPSK 10MHz 1RB	Left Cheek	704	23.98	24	1.005	0.155	0.156
	QPSK 10MHz 1RB	Left Tilted	704	23.98	24	1.005	0.138	0.139
	QPSK 10MHz 50%RB	Right Cheek	704	23.98	24	1.005	0.118	0.119
	QPSK 10MHz 50%RB	Right Tilted	704	23.98	24	1.005	0.111	0.112
	QPSK 10MHz 50%RB	Left Cheek	704	23.98	24	1.005	0.136	0.137
	QPSK 10MHz 50%RB	Left Tilted	704	23.98	24	1.005	0.125	0.126

LTE Band 13– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
11.	QPSK 5MHz 1RB	Right Cheek	779.5	23.93	24	1.016	0.146	0.148
	QPSK 5MHz 1RB	Right Tilted	779.5	23.93	24	1.016	0.132	0.134
	QPSK 5MHz 1RB	Left Cheek	779.5	23.93	24	1.016	0.133	0.135
	QPSK 5MHz 1RB	Left Tilted	779.5	23.93	24	1.016	0.118	0.120
	QPSK 5MHz 50%RB	Right Cheek	779.5	23.93	24	1.016	0.138	0.140
	QPSK 5MHz 50%RB	Right Tilted	779.5	23.93	24	1.016	0.124	0.126
	QPSK 5MHz 50%RB	Left Cheek	779.5	23.93	24	1.016	0.127	0.129
	QPSK 5MHz 50%RB	Left Tilted	779.5	23.93	24	1.016	0.111	0.113
	QPSK 10MHz 1RB	Right Cheek	782	23.82	24	1.042	0.123	0.128
	QPSK 10MHz 1RB	Right Tilted	782	23.82	24	1.042	0.115	0.120
	QPSK 10MHz 1RB	Left Cheek	782	23.82	24	1.042	0.117	0.122
	QPSK 10MHz 1RB	Left Tilted	782	23.82	24	1.042	0.102	0.106
	QPSK 10MHz 50%RB	Right Cheek	782	23.82	24	1.042	0.116	0.121
	QPSK 10MHz 50%RB	Right Tilted	782	23.82	24	1.042	0.103	0.107
	QPSK 10MHz 50%RB	Left Cheek	782	23.82	24	1.042	0.109	0.114
	QPSK 10MHz 50%RB	Left Tilted	782	23.82	24	1.042	0.096	0.100

LTE Band 41– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Right Cheek	2605.0	22.61	23	1.094	0.372	0.407
	QPSK 20MHz 1RB	Right Tilted	2605.0	22.61	23	1.094	0.356	0.389
12.	QPSK 20MHz 1RB	Left Cheek	2605.0	22.61	23	1.094	0.455	0.498
	QPSK 20MHz 1RB	Left Tilted	2605.0	22.61	23	1.094	0.427	0.467
	QPSK 20MHz 50%RB	Right Cheek	2605.0	22.61	23	1.094	0.365	0.399
	QPSK 20MHz 50%RB	Right Tilted	2605.0	22.61	23	1.094	0.351	0.384
	QPSK 20MHz 50%RB	Left Cheek	2605.0	22.61	23	1.094	0.446	0.488
	QPSK 20MHz 50%RB	Left Tilted	2605.0	22.61	23	1.094	0.422	0.462

LTE Band 66– Head SAR Test								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Right Cheek	1744.9	23.51	24	1.119	0.309	0.346
	QPSK 20MHz 1RB	Right Tilted	1744.9	23.51	24	1.119	0.285	0.319
13.	QPSK 20MHz 1RB	Left Cheek	1744.9	23.51	24	1.119	0.517	0.579
	QPSK 20MHz 1RB	Left Tilted	1744.9	23.51	24	1.119	0.503	0.563
	QPSK 20MHz 50%RB	Right Cheek	1744.9	23.51	24	1.119	0.298	0.334
	QPSK 20MHz 50%RB	Right Tilted	1744.9	23.51	24	1.119	0.273	0.306
	QPSK 20MHz 50%RB	Left Cheek	1744.9	23.51	24	1.119	0.508	0.569
	QPSK 20MHz 50%RB	Left Tilted	1744.9	23.51	24	1.119	0.495	0.554

WLAN 2.4GHz – Head SAR Test									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
14.	802.11b	Right Cheek	6	2437	17.48	18	1.127	0.261	0.294
	802.11b	Right Tilted	6	2437	17.48	18	1.127	0.248	0.280
	802.11b	Left Cheek	6	2437	17.48	18	1.127	0.222	0.250
	802.11b	Left Tilted	6	2437	17.48	18	1.127	0.216	0.243

Remark: Per KDB 447498 D01 v06, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

Body-worn SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	GSM	Front Side	190	836.6	31.57	32	1.104	0.197	0.218
15.	GSM	Back Side	190	836.6	31.57	32	1.104	0.346	0.382

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	GSM	Front Side	661	1880	29.13	30	1.222	0.109	0.133
16.	GSM	Back Side	661	1880	29.13	30	1.222	0.165	0.202

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC 12.2k	Front Side	9400	1880	22.70	23	1.072	0.133	0.143
17.	RMC 12.2k	Back Side	9400	1880	22.70	23	1.072	0.211	0.226

WCDMA Band 4 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC 12.2k	Front Side	1312	1712.4	22.15	23	1.216	0.124	0.151
18.	RMC 12.2k	Back Side	1312	1712.4	22.15	23	1.216	0.154	0.187

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC 12.2k	Front Side	4183	836.6	22.65	23	1.084	0.134	0.145
19.	RMC 12.2k	Back Side	4183	836.6	22.65	23	1.084	0.180	0.195

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	1880	23.72	24	1.067	0.178	0.190
20.	QPSK 20MHz 1RB	Back Side	1880	23.72	24	1.067	0.220	0.235
	QPSK 20MHz 50%RB	Front Side	1880	23.72	24	1.067	0.170	0.181
	QPSK 20MHz 50%RB	Back Side	1880	23.72	24	1.067	0.212	0.226

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 1.4MHz 1RB	Front Side	1710.7	23.48	24	1.127	0.128	0.144
21.	QPSK 1.4MHz 1RB	Back Side	1710.7	23.48	24	1.127	0.167	0.188
	QPSK 1.4MHz 50%RB	Front Side	1710.7	23.48	24	1.127	0.117	0.132
	QPSK 1.4MHz 50%RB	Back Side	1710.7	23.48	24	1.127	0.161	0.181
	QPSK 20MHz 1RB	Front Side	1720	23.26	24	1.186	0.116	0.138
	QPSK 20MHz 1RB	Back Side	1720	23.26	24	1.186	0.102	0.121
	QPSK 20MHz 50%RB	Front Side	1720	23.26	24	1.186	0.098	0.116
	QPSK 20MHz 50%RB	Back Side	1720	23.26	24	1.186	0.139	0.165

LTE Band 5–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 10MHz 1RB	Front Side	829	24.03	24.5	1.114	0.133	0.148
22.	QPSK 10MHz 1RB	Back Side	829	24.03	24.5	1.114	0.206	0.230
	QPSK 10MHz 50%RB	Front Side	829	24.03	24.5	1.114	0.125	0.139
	QPSK 10MHz 50%RB	Back Side	829	24.03	24.5	1.114	0.201	0.224

LTE Band 7–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	2560	23.43	23.5	1.016	0.174	0.177
23.	QPSK 20MHz 1RB	Back Side	2560	23.43	23.5	1.016	0.298	0.303
	QPSK 20MHz 50%RB	Front Side	2560	23.43	23.5	1.016	0.166	0.169
	QPSK 20MHz 50%RB	Back Side	2560	23.43	23.5	1.016	0.291	0.296

LTE Band 12–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 10MHz 1RB	Front Side	704	23.98	24	1.005	0.129	0.130
24.	QPSK 10MHz 1RB	Back Side	704	23.98	24	1.005	0.194	0.195
	QPSK 10MHz 50%RB	Front Side	704	23.98	24	1.005	0.124	0.125
	QPSK 10MHz 50%RB	Back Side	704	23.98	24	1.005	0.181	0.182

LTE Band 13–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 5MHz 1RB	Front Side	779.5	23.93	24	1.016	0.070	0.071
25.	QPSK 5MHz 1RB	Back Side	779.5	23.93	24	1.016	0.153	0.155
	QPSK 5MHz 50%RB	Front Side	779.5	23.93	24	1.016	0.063	0.064
	QPSK 5MHz 50%RB	Back Side	779.5	23.93	24	1.016	0.144	0.146
	QPSK 10MHz 1RB	Front Side	782	23.82	24	1.042	0.054	0.056
	QPSK 10MHz 1RB	Back Side	782	23.82	24	1.042	0.135	0.141
	QPSK 10MHz 50%RB	Front Side	782	23.82	24	1.042	0.050	0.052
	QPSK 10MHz 50%RB	Back Side	782	23.82	24	1.042	0.131	0.137

LTE Band 41–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	2605.0	22.61	23	1.094	0.103	0.113
26.	QPSK 20MHz 1RB	Back Side	2605.0	22.61	23	1.094	0.232	0.254
	QPSK 20MHz 50%RB	Front Side	2605.0	22.61	23	0.094	0.094	0.103
	QPSK 20MHz 50%RB	Back Side	2605.0	22.61	23	0.219	0.219	0.240

LTE Band 66–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	1744.9	23.51	24	1.119	0.121	0.135
27.	QPSK 20MHz 1RB	Back Side	1744.9	23.51	24	1.119	0.169	0.189
	QPSK 20MHz 50%RB	Front Side	1744.9	23.51	24	1.119	0.116	0.130
	QPSK 20MHz 50%RB	Back Side	1744.9	23.51	24	1.119	0.164	0.184

WLAN 2.4GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11b	Front Side	6	2437	17.48	18	1.127	0.099	0.112
28.	802.11b	Back Side	6	2437	17.48	18	1.127	0.129	0.145

Hotspot SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	GPRS_4TX	Front Side	190	836.6	31.57	32	1.104	0.188	0.208
29.	GPRS_4TX	Back Side	190	836.6	31.57	32	1.104	0.341	0.376
	GPRS_4TX	Left Edge	190	836.6	31.57	32	1.104	0.150	0.166
	GPRS_4TX	Right Edge	190	836.6	31.57	32	1.104	0.330	0.364
	GPRS_4TX	Bottom Edge	190	836.6	31.57	32	1.104	0.164	0.181

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	GPRS_4TX	Front Side	661	1880	29.13	30	1.222	0.102	0.125
30.	GPRS_4TX	Back Side	661	1880	29.13	30	1.222	0.158	0.193
	GPRS_4TX	Left Edge	661	1880	29.13	30	1.222	0.084	0.103
	GPRS_4TX	Right Edge	661	1880	29.13	30	1.222	0.015	0.018
	GPRS_4TX	Bottom Edge	661	1880	29.13	30	1.222	0.138	0.169

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC 12.2k	Front Side	9400	1880	22.70	23	1.072	0.133	0.143
31.	RMC 12.2k	Back Side	9400	1880	22.70	23	1.072	0.211	0.226
	RMC 12.2k	Left Edge	9400	1880	22.70	23	1.072	0.172	0.184
	RMC 12.2k	Right Edge	9400	1880	22.70	23	1.072	0.131	0.140
	RMC 12.2k	Bottom Edge	9400	1880	22.70	23	1.072	0.161	0.173

WCDMA Band 4 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC 12.2k	Front Side	1312	1712.4	22.15	23	1.216	0.124	0.151
	RMC 12.2k	Back Side	1312	1712.4	22.15	23	1.216	0.154	0.187
	RMC 12.2k	Left Edge	1312	1712.4	22.15	23	1.216	0.080	0.097
	RMC 12.2k	Right Edge	1312	1712.4	22.15	23	1.216	0.087	0.106
32.	RMC 12.2k	Bottom Edge	1312	1712.4	22.15	23	1.216	0.207	0.252

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC 12.2k	Front Side	4183	836.6	22.65	23	1.084	0.134	0.145
	RMC 12.2k	Back Side	4183	836.6	22.65	23	1.084	0.180	0.195
	RMC 12.2k	Left Edge	4183	836.6	22.65	23	1.084	0.176	0.191
33.	RMC 12.2k	Right Edge	4183	836.6	22.65	23	1.084	0.236	0.256
	RMC 12.2k	Bottom Edge	4183	836.6	22.65	23	1.084	0.168	0.182

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	1880	23.72	24	1.067	0.178	0.190
34.	QPSK 20MHz 1RB	Back Side	1880	23.72	24	1.067	0.220	0.235
	QPSK 20MHz 1RB	Left Edge	1880	23.72	24	1.067	0.171	0.182
	QPSK 20MHz 1RB	Right Edge	1880	23.72	24	1.067	0.058	0.062
	QPSK 20MHz 1RB	Bottom Edge	1880	23.72	24	1.067	0.152	0.162
	QPSK 20MHz 50%RB	Front Side	1880	23.72	24	1.067	0.170	0.181
	QPSK 20MHz 50%RB	Back Side	1880	23.72	24	1.067	0.212	0.226
	QPSK 20MHz 50%RB	Left Edge	1880	23.72	24	1.067	0.162	0.173
	QPSK 20MHz 50%RB	Right Edge	1880	23.72	24	1.067	0.050	0.053
	QPSK 20MHz 50%RB	Bottom Edge	1880	23.72	24	1.067	0.144	0.154

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 1.4MHz 1RB	Front Side	1710.7	23.48	24	1.127	0.128	0.144
35.	QPSK 1.4MHz 1RB	Back Side	1710.7	23.48	24	1.127	0.167	0.188
	QPSK 1.4MHz 1RB	Left Edge	1710.7	23.48	24	1.127	0.122	0.138
	QPSK 1.4MHz 1RB	Right Edge	1710.7	23.48	24	1.127	0.057	0.064
	QPSK 1.4MHz 1RB	Bottom Edge	1710.7	23.48	24	1.127	0.157	0.177
	QPSK 1.4MHz 50%RB	Front Side	1710.7	23.48	24	1.127	0.117	0.132
	QPSK 1.4MHz 50%RB	Back Side	1710.7	23.48	24	1.127	0.161	0.181
	QPSK 1.4MHz 50%RB	Left Edge	1710.7	23.48	24	1.127	0.114	0.129
	QPSK 1.4MHz 50%RB	Right Edge	1710.7	23.48	24	1.127	0.051	0.057
	QPSK 1.4MHz 50%RB	Bottom Edge	1710.7	23.48	24	1.127	0.144	0.162
	QPSK 20MHz 1RB	Front Side	1720	23.26	24	1.186	0.116	0.138
	QPSK 20MHz 1RB	Back Side	1720	23.26	24	1.186	0.102	0.121
	QPSK 20MHz 1RB	Left Edge	1720	23.26	24	1.186	0.104	0.123
	QPSK 20MHz 1RB	Right Edge	1720	23.26	24	1.186	0.046	0.055
	QPSK 20MHz 1RB	Bottom Edge	1720	23.26	24	1.186	0.129	0.153
	QPSK 20MHz 50%RB	Front Side	1720	23.26	24	1.186	0.098	0.116
	QPSK 20MHz 50%RB	Back Side	1720	23.26	24	1.186	0.139	0.165
	QPSK 20MHz 50%RB	Left Edge	1720	23.26	24	1.186	0.091	0.108
	QPSK 20MHz 50%RB	Right Edge	1720	23.26	24	1.186	0.044	0.052
	QPSK 20MHz 50%RB	Bottom Edge	1720	23.26	24	1.186	0.125	0.148

LTE Band 5–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 10MHz 1RB	Front Side	829	24.03	24.5	1.114	0.133	0.148
36.	QPSK 10MHz 1RB	Back Side	829	24.03	24.5	1.114	0.206	0.230
	QPSK 10MHz 1RB	Left Edge	829	24.03	24.5	1.114	0.076	0.085
	QPSK 10MHz 1RB	Right Edge	829	24.03	24.5	1.114	0.052	0.058
	QPSK 10MHz 1RB	Bottom Edge	829	24.03	24.5	1.114	0.171	0.191
	QPSK 10MHz 50%RB	Front Side	829	24.03	24.5	1.114	0.125	0.139
	QPSK 10MHz 50%RB	Back Side	829	24.03	24.5	1.114	0.201	0.224
	QPSK 10MHz 50%RB	Left Edge	829	24.03	24.5	1.114	0.065	0.072
	QPSK 10MHz 50%RB	Right Edge	829	24.03	24.5	1.114	0.044	0.049
	QPSK 10MHz 50%RB	Bottom Edge	829	24.03	24.5	1.114	0.159	0.177

LTE Band 7–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	2560	23.43	23.5	1.016	0.174	0.177
37.	QPSK 20MHz 1RB	Back Side	2560	23.43	23.5	1.016	0.298	0.303
	QPSK 20MHz 1RB	Left Edge	2560	23.43	23.5	1.016	0.233	0.237
	QPSK 20MHz 1RB	Right Edge	2560	23.43	23.5	1.016	0.131	0.133
	QPSK 20MHz 1RB	Bottom Edge	2560	23.43	23.5	1.016	0.083	0.084
	QPSK 20MHz 50%RB	Front Side	2560	23.43	23.5	1.016	0.166	0.169
	QPSK 20MHz 50%RB	Back Side	2560	23.43	23.5	1.016	0.291	0.296
	QPSK 20MHz 50%RB	Left Edge	2560	23.43	23.5	1.016	0.228	0.232
	QPSK 20MHz 50%RB	Right Edge	2560	23.43	23.5	1.016	0.125	0.127
	QPSK 20MHz 50%RB	Bottom Edge	2560	23.43	23.5	1.016	0.081	0.082

LTE Band 12–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 10MHz 1RB	Front Side	704	23.98	24	1.005	0.129	0.130
38.	QPSK 10MHz 1RB	Back Side	704	23.98	24	1.005	0.194	0.195
	QPSK 10MHz 1RB	Left Edge	704	23.98	24	1.005	0.137	0.138
	QPSK 10MHz 1RB	Right Edge	704	23.98	24	1.005	0.091	0.091
	QPSK 10MHz 1RB	Bottom Edge	704	23.98	24	1.005	0.088	0.088
	QPSK 10MHz 50%RB	Front Side	704	23.98	24	1.005	0.124	0.125
	QPSK 10MHz 50%RB	Back Side	704	23.98	24	1.005	0.181	0.182
	QPSK 10MHz 50%RB	Left Edge	704	23.98	24	1.005	0.131	0.132
	QPSK 10MHz 50%RB	Right Edge	704	23.98	24	1.005	0.085	0.085
	QPSK 10MHz 50%RB	Bottom Edge	704	23.98	24	1.005	0.074	0.074

LTE Band 13–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 5MHz 1RB	Front Side	779.5	23.93	24	1.016	0.070	0.071
39.	QPSK 5MHz 1RB	Back Side	779.5	23.93	24	1.016	0.153	0.155
	QPSK 5MHz 1RB	Left Edge	779.5	23.93	24	1.016	0.084	0.085
	QPSK 5MHz 1RB	Right Edge	779.5	23.93	24	1.016	0.068	0.069
	QPSK 5MHz 1RB	Bottom Edge	779.5	23.93	24	1.016	0.127	0.129
	QPSK 5MHz 50%RB	Front Side	779.5	23.93	24	1.016	0.063	0.064
	QPSK 5MHz 50%RB	Back Side	779.5	23.93	24	1.016	0.144	0.146
	QPSK 5MHz 50%RB	Left Edge	779.5	23.93	24	1.016	0.076	0.077
	QPSK 5MHz 50%RB	Right Edge	779.5	23.93	24	1.016	0.06	0.061
	QPSK 5MHz 50%RB	Bottom Edge	779.5	23.93	24	1.016	0.119	0.121
	QPSK 10MHz 1RB	Front Side	782.0	23.82	24	1.042	0.054	0.056
	QPSK 10MHz 1RB	Back Side	782.0	23.82	24	1.042	0.135	0.141
	QPSK 10MHz 1RB	Left Edge	782.0	23.82	24	1.042	0.077	0.080
	QPSK 10MHz 1RB	Right Edge	782.0	23.82	24	1.042	0.057	0.059
	QPSK 10MHz 1RB	Bottom Edge	782.0	23.82	24	1.042	0.118	0.123
	QPSK 10MHz 50%RB	Front Side	782.0	23.82	24	1.042	0.050	0.052
	QPSK 10MHz 50%RB	Back Side	782.0	23.82	24	1.042	0.131	0.137
	QPSK 10MHz 50%RB	Left Edge	782.0	23.82	24	1.042	0.072	0.075
	QPSK 10MHz 50%RB	Right Edge	782.0	23.82	24	1.042	0.051	0.053
	QPSK 10MHz 50%RB	Bottom Edge	782.0	23.82	24	1.042	0.112	0.117

LTE Band 41–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	2605.0	22.61	23	1.094	0.103	0.113
40.	QPSK 20MHz 1RB	Back Side	2605.0	22.61	23	1.094	0.232	0.254
	QPSK 20MHz 1RB	Left Edge	2605.0	22.61	23	1.094	0.118	0.129
	QPSK 20MHz 1RB	Right Edge	2605.0	22.61	23	1.094	0.058	0.063
	QPSK 20MHz 1RB	Bottom Edge	2605.0	22.61	23	1.094	0.084	0.092
	QPSK 20MHz 50%RB	Front Side	2605.0	22.61	23	1.094	0.094	0.103
	QPSK 20MHz 50%RB	Back Side	2605.0	22.61	23	1.094	0.219	0.240
	QPSK 20MHz 50%RB	Left Edge	2605.0	22.61	23	1.094	0.105	0.115
	QPSK 20MHz 50%RB	Right Edge	2605.0	22.61	23	1.094	0.051	0.056
	QPSK 20MHz 50%RB	Bottom Edge	2605.0	22.61	23	1.094	0.077	0.084

LTE Band 66–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	1744.9	23.51	24	1.119	0.121	0.135
41.	QPSK 20MHz 1RB	Back Side	1744.9	23.51	24	1.119	0.169	0.189
	QPSK 20MHz 1RB	Left Edge	1744.9	23.51	24	1.119	0.092	0.103
	QPSK 20MHz 1RB	Right Edge	1744.9	23.51	24	1.119	0.026	0.029
	QPSK 20MHz 1RB	Bottom Edge	1744.9	23.51	24	1.119	0.141	0.158
	QPSK 20MHz 50%RB	Front Side	1744.9	23.51	24	1.119	0.116	0.130
	QPSK 20MHz 50%RB	Back Side	1744.9	23.51	24	1.119	0.164	0.184
	QPSK 20MHz 50%RB	Left Edge	1744.9	23.51	24	1.119	0.088	0.099
	QPSK 20MHz 50%RB	Right Edge	1744.9	23.51	24	1.119	0.024	0.027
	QPSK 20MHz 50%RB	Bottom Edge	1744.9	23.51	24	1.119	0.135	0.151

WLAN 2.4GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11b	Front Side	6	2437	17.48	18	1.127	0.099	0.112
42.	802.11b	Back Side	6	2437	17.48	18	1.127	0.129	0.145
	802.11b	Right Side	6	2437	17.48	18	1.127	0.060	0.068
	802.11b	Top Side	6	2437	17.48	18	1.127	0.128	0.144

Remark:

1. Per KDB 447498 D01 v06, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
2. 5G Wi-Fi SAR tested results please refer to the test report WTX25X08213514W.

9.3 Simultaneous Multi-band Transmission SAR Analysis

List of Mode for Simultaneous Multi-band Transmission

No.	Configurations	Head SAR	Body SAR
1	GSM(Voice/Data) + WLAN(2.4GHz)(Data)	Yes	Yes
2	WCDMA (Voice/Data)+ WLAN(2.4GHz)(Data)	Yes	Yes
3	LTE(Data) + WLAN(2.4GHz)(Data)	Yes	Yes
4	GSM(Voice/Data) + WLAN(5GHz)(Data)	Yes	Yes
5	WCDMA (Voice/Data)+ WLAN(5GHz)(Data)	Yes	Yes
6	LTE(Data) + WLAN(5GHz)(Data)	Yes	Yes
7	GSM(Voice/Data) + Bluetooth(Data)	Yes	Yes
8	WCDMA (Voice/Data) + Bluetooth(Data)	Yes	Yes
9	LTE(Data) + Bluetooth(Data)	Yes	Yes

Remark:

1. GSM, WCDMA and LTE share the same antenna, and cannot transmit simultaneously.
2. WLAN and Bluetooth share the same antenna, and cannot transmit simultaneously.
3. According to the KDB 447498 D01 v06, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x]$
W/kg for test separation distances ≤ 50 mm;

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

For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01 v06 as below:

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	X	SAR(1g) 5mm	SAR(1g) 10mm
4	2.51	5/10	2.480	7.5	0.105	0.052

4. The maximum SAR summation is calculated based on the same configuration and test position.

Head SAR**WWAN and WLAN**

	WWAN		WLAN(2.4GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Right Cheek	GSM	0.679	0.294	0.973
Right Tilted	GSM	0.665	0.280	0.945
Left Cheek	GSM	0.610	0.250	0.860
Left Tilted	GSM	0.599	0.243	0.842
Right Cheek	WCDMA	0.485	0.294	0.779
Right Tilted	WCDMA	0.467	0.280	0.747
Left Cheek	WCDMA	0.800	0.250	1.050
Left Tilted	WCDMA	0.781	0.243	1.024
Right Cheek	LTE	0.441	0.294	0.735
Right Tilted	LTE	0.421	0.280	0.701
Left Cheek	LTE	0.707	0.250	0.957
Left Tilted	LTE	0.690	0.243	0.933

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Right Cheek	GSM	0.679	0.105	0.784
Right Tilted	GSM	0.665	0.105	0.770
Left Cheek	GSM	0.610	0.105	0.715
Left Tilted	GSM	0.599	0.105	0.704
Right Cheek	WCDMA	0.485	0.105	0.590
Right Tilted	WCDMA	0.467	0.105	0.572
Left Cheek	WCDMA	0.800	0.105	0.905
Left Tilted	WCDMA	0.781	0.105	0.886
Right Cheek	LTE	0.441	0.105	0.546
Right Tilted	LTE	0.421	0.105	0.526
Left Cheek	LTE	0.707	0.105	0.812
Left Tilted	LTE	0.690	0.105	0.795

WWAN and WLAN

	WWAN		WLAN(5GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Right Cheek	GSM	0.679	0.289	0.968
Right Tilted	GSM	0.665	0.277	0.942
Left Cheek	GSM	0.610	0.701	1.311
Left Tilted	GSM	0.599	0.679	1.278
Right Cheek	WCDMA	0.485	0.289	0.774
Right Tilted	WCDMA	0.467	0.277	0.744
Left Cheek	WCDMA	0.800	0.701	1.501
Left Tilted	WCDMA	0.781	0.679	1.460
Right Cheek	LTE	0.441	0.289	0.730
Right Tilted	LTE	0.421	0.277	0.698
Left Cheek	LTE	0.707	0.701	1.408
Left Tilted	LTE	0.690	0.679	1.369

Body-worn SAR**WWAN and WLAN**

	WWAN		WLAN(2.4GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM	0.218	0.112	0.330
Back	GSM	0.382	0.145	0.527
Front	WCDMA	0.151	0.112	0.263
Back	WCDMA	0.226	0.145	0.371
Front	LTE	0.190	0.112	0.302
Back	LTE	0.303	0.145	0.448

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM	0.218	0.052	0.270
Back	GSM	0.382	0.052	0.434
Front	WCDMA	0.151	0.052	0.203
Back	WCDMA	0.226	0.052	0.278
Front	LTE	0.190	0.052	0.242
Back	LTE	0.303	0.052	0.355

WWAN and WLAN

	WWAN		WLAN(5GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM	0.218	0.328	0.546
Back	GSM	0.382	0.120	0.502
Front	WCDMA	0.151	0.328	0.479
Back	WCDMA	0.226	0.120	0.346
Front	LTE	0.190	0.328	0.518
Back	LTE	0.303	0.120	0.423

Hotspot SAR**WWAN and WLAN**

	WWAN		WLAN(2.4GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM	0.208	0.112	0.320
Back	GSM	0.376	0.145	0.521
Left side	GSM	0.166	-	0.166
Right side	GSM	0.364	0.068	0.432
Top side	GSM	-	0.144	0.144
Bottom side	GSM	0.181	-	0.181
Front	WCDMA	0.151	0.112	0.263
Back	WCDMA	0.226	0.145	0.371
Left side	WCDMA	0.191	-	0.191
Right side	WCDMA	0.256	0.068	0.324
Top side	WCDMA	-	0.144	0.144
Bottom side	WCDMA	0.252	-	0.252
Front	LTE	0.190	0.112	0.302
Back	LTE	0.303	0.145	0.448
Left side	LTE	0.237	-	0.237
Right side	LTE	0.133	0.068	0.201
Top side	LTE	-	0.144	0.144
Bottom side	LTE	0.191	-	0.191

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM	0.208	0.052	0.260
Back	GSM	0.376	0.052	0.428
Left side	GSM	0.166	-	0.166
Right side	GSM	0.364	0.052	0.416
Top side	GSM	-	0.052	0.052
Bottom side	GSM	0.181	-	0.181
Front	WCDMA	0.151	0.052	0.203
Back	WCDMA	0.226	0.052	0.278
Left side	WCDMA	0.191	-	0.191
Right side	WCDMA	0.256	0.052	0.308
Top side	WCDMA	-	0.052	0.052
Bottom side	WCDMA	0.252	-	0.252
Front	LTE	0.190	0.052	0.242
Back	LTE	0.303	0.052	0.355
Left side	LTE	0.237	-	0.237
Right side	LTE	0.133	0.052	0.185
Top side	LTE	-	0.052	0.052
Bottom side	LTE	0.191	-	0.191

WWAN and WLAN

	WWAN		WLAN(5GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM	0.208	0.120	0.328
Back	GSM	0.376	0.328	0.704
Left side	GSM	0.166	-	0.166
Right side	GSM	0.364	0.133	0.364
Top side	GSM	-	0.208	0.208
Bottom side	GSM	0.181	-	0.181
Front	WCDMA	0.151	0.328	0.479
Back	WCDMA	0.226	0.120	0.346
Left side	WCDMA	0.191	-	0.191
Right side	WCDMA	0.256	0.133	0.256
Top side	WCDMA	-	0.208	0.208
Bottom side	WCDMA	0.252	-	0.252

Front	LTE	0.190	0.328	0.518
Back	LTE	0.303	0.120	0.423
Left side	LTE	0.237	-	0.237
Right side	LTE	0.133	0.133	0.133
Top side	LTE	-	0.208	0.208
Bottom side	LTE	0.191	-	0.191

10. Measurement Uncertainty

10.1 Uncertainty for SAR Test

Input quantity X_i (source of uncertainty)	Ref.	Prob. Dist PDF_i	Unc. $a(x_i)$	Div. q_i	$u(x_i) =$ $a(x_i)/q_i$	c_i (1 g; 10 g)	$u(y)$ $=c_i \cdot u(x_i)$	v_i or v_{eff}
Measurement System errors								
Probe calibration	8.4.1.1	N	7.00					
Probe calibration drift	8.4.1.2	R	0					
Probe linearity and detection limit	8.4.1.3	R	5.00					
Broadband signal	8.4.1.4	R	0					
Probe isotropy	8.4.1.5	R	2.50					
Other probe and data acquisition errors	8.4.1.6	N	0.02					
RF ambient and noise	8.4.1.7	N	0					
Probe positioning errors	8.4.1.8	N	1.40					
Data processing errors	8.4.1.9	N	0.05					
Phantom and device (DUT or validation antenna) errors								
Measurement of phantom conductivity(σ)	8.4.2.1	N	4.00		4.00	c_ϵ, c_σ	4.00	
Temperature effects (medium)	8.4.2.2	R	2.50		1.44	c_ϵ, c_σ	1.44	
Shell permittivity	8.4.2.3	R	5.00		2.88	See 8.4.2.3	2.88	
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	N	0.03		0.03	2	0.02	
Repeatability of positioning the DUT or source against the phantom	8.4.2.5	N	0.05		0.05	1	0.05	
Device holder effects	8.4.2.6	N	5.00		5.00	1	5.00	
Effect of operating mode on probe sensitivity	8.4.2.7	R	0		0	1	0	
Time-average SAR	8.4.2.8	R	0		0	1	0	
Variation in SAR due to drift in output of DUT	8.4.2.9	N	5.00		5.00	1	5.00	
Validation antenna uncertainty (validation measurement only)	8.4.2.10	N	0		0	1	0	
Uncertainty in accepted power	8.4.2.11	N	0		0	1	0	

(validation measurement only)								
Corrections to the SAR result								
Phantom deviation from target (ϵ' , σ)	8.4.3.1	N	0.05			1	0.05	
SAR scaling	8.4.3.2	R	2.00		1.15	1	1.15	
Combined Standard Uncertainty		RSS			10.11		10.11	$V_{\text{eff}} =$
Expanded uncertainty, U		K=2			20.23		20.23	

Annex A. Plots of System Performance Check

MEASUREMENT 1

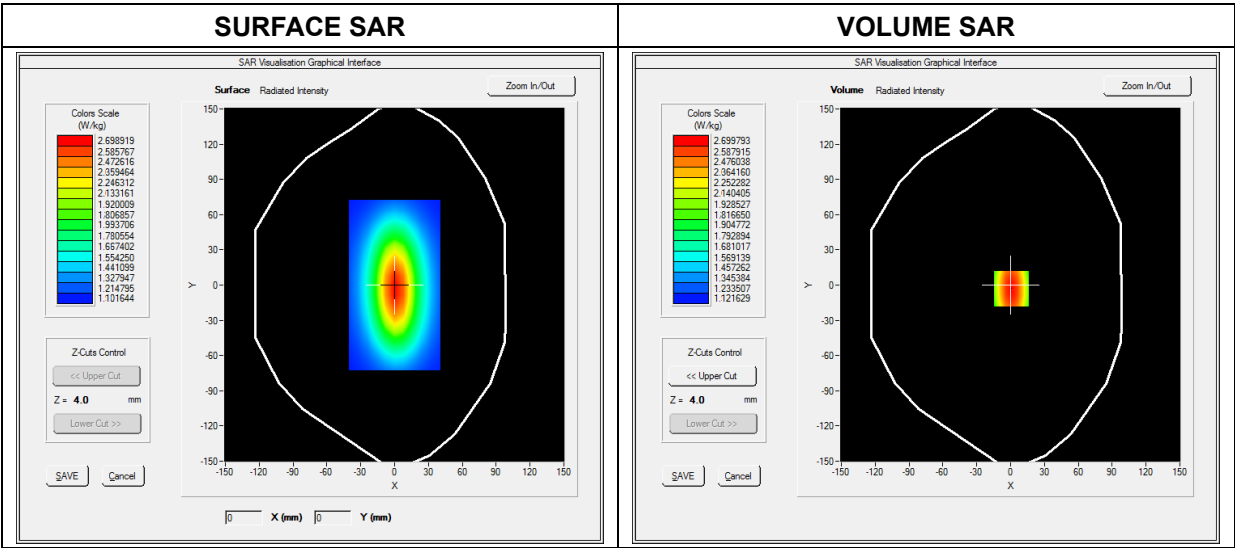
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2025-08-31
Measurement duration: 7 minutes 21 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.08; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative Permittivity (real part)	42.384574
Conductivity (S/m)	0.922373
Power Variation (%)	3.836300
Ambient Temperature	23.5
Liquid Temperature	23.5

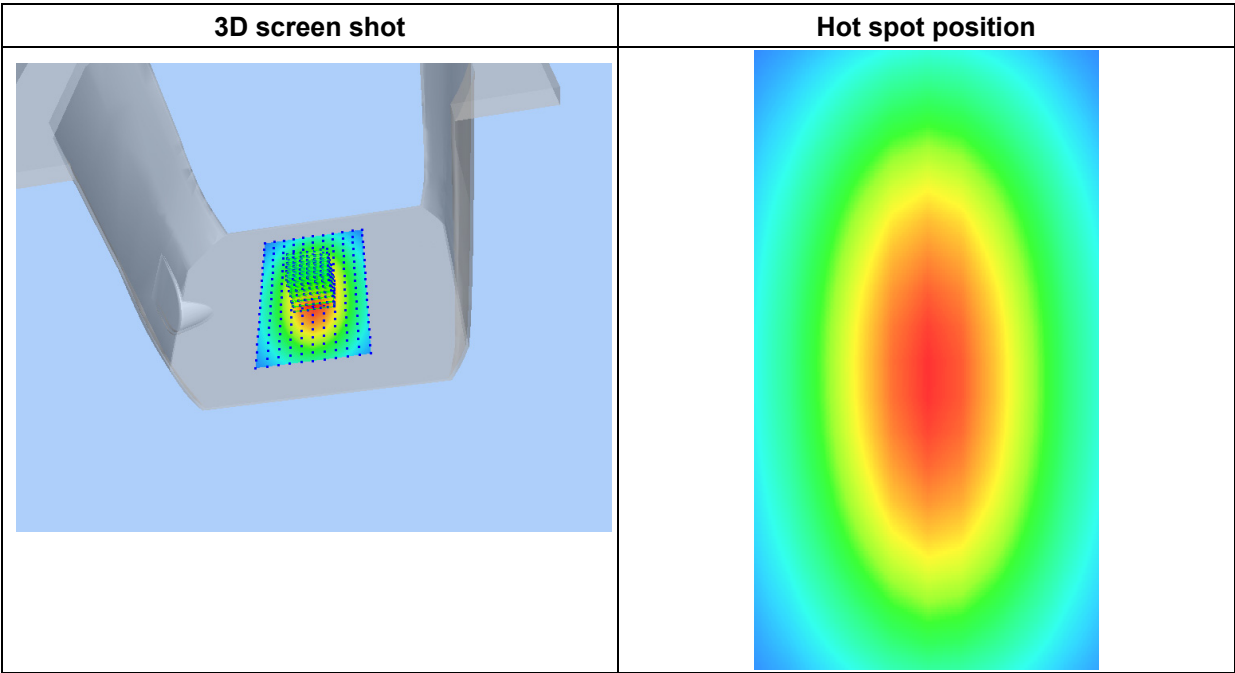
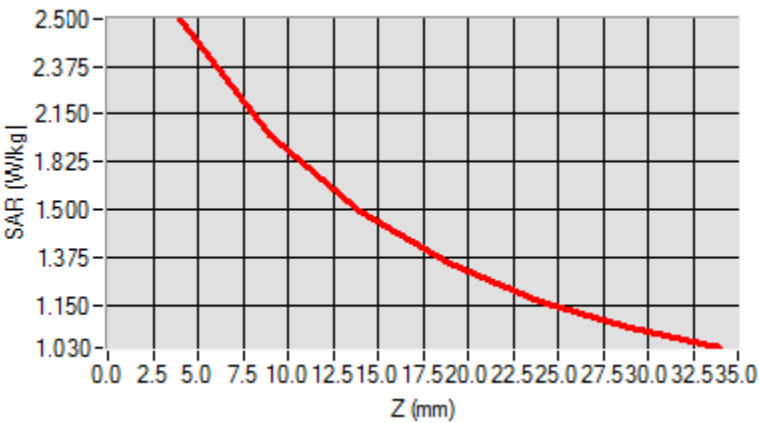


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.042744
SAR 1g (W/Kg)	2.164534

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.3634	1.8023	1.4523	1.2514	1.1005	1.0245



MEASUREMENT 2

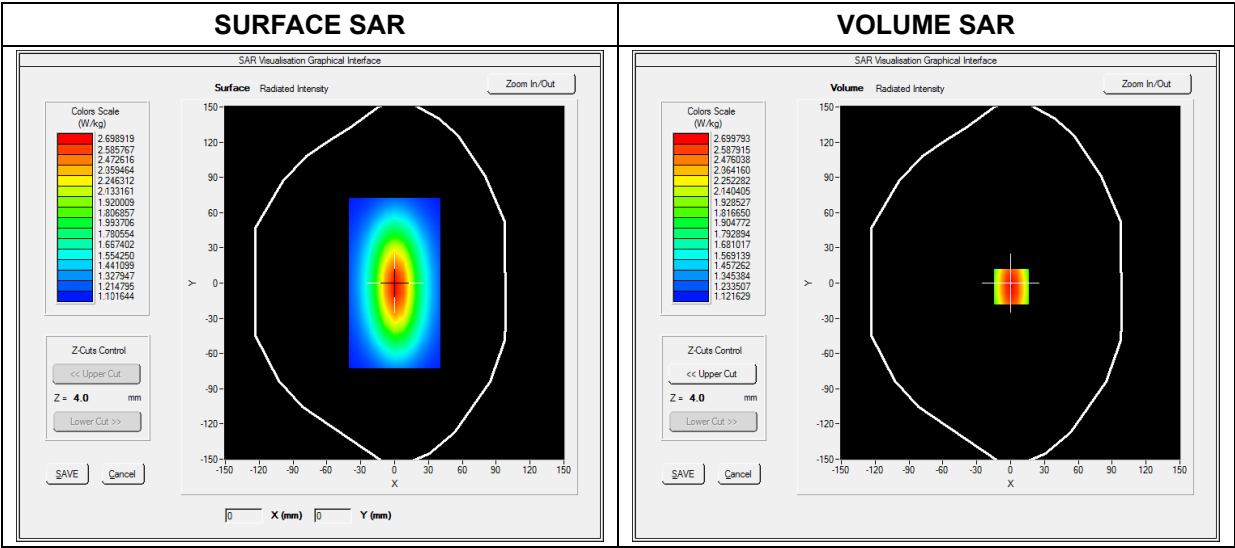
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2025-08-30
Measurement duration: 7 minutes 21 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative Permittivity (real part)	41.142452
Conductivity (S/m)	0.891245
Power Variation (%)	3.843700
Ambient Temperature	23.2
Liquid Temperature	23.2

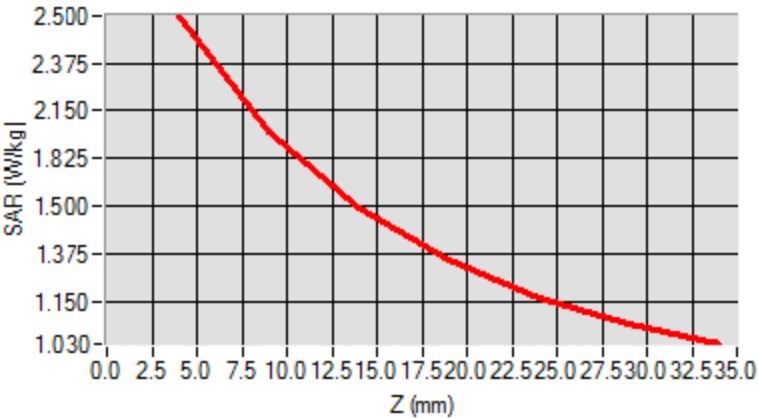


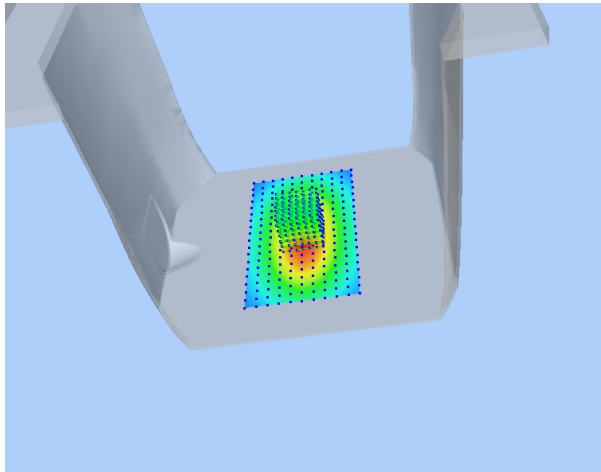
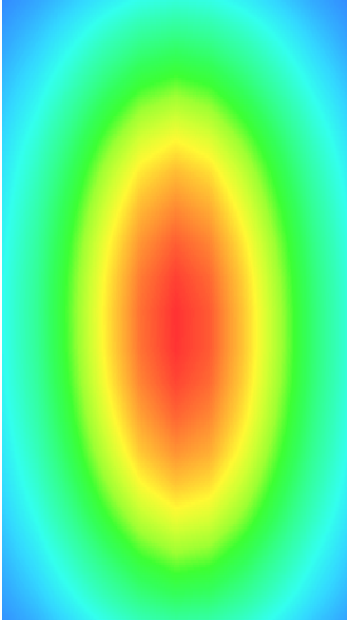
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.519489
SAR 1g (W/Kg)	2.411253

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.4900	1.8942	1.4811	1.3541	1.1123	1.0539



3D screen shot	Hot spot position
	

MEASUREMENT 3

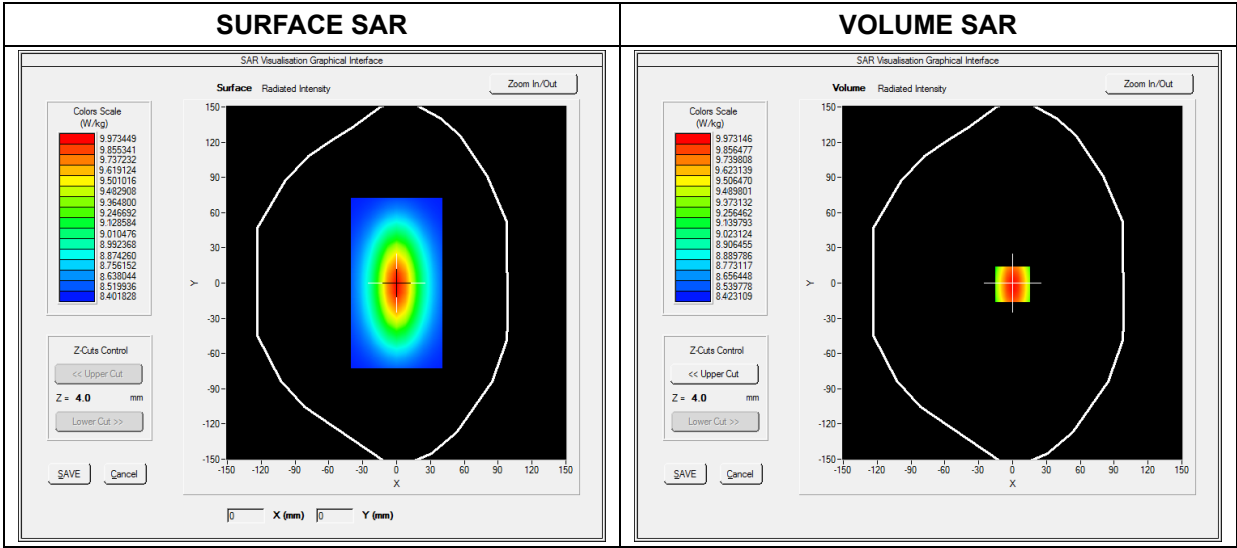
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative Permittivity (real part)	39.284895
Conductivity (S/m)	1.371258
Power Variation (%)	1.403200
Ambient Temperature	23.0
Liquid Temperature	23.0

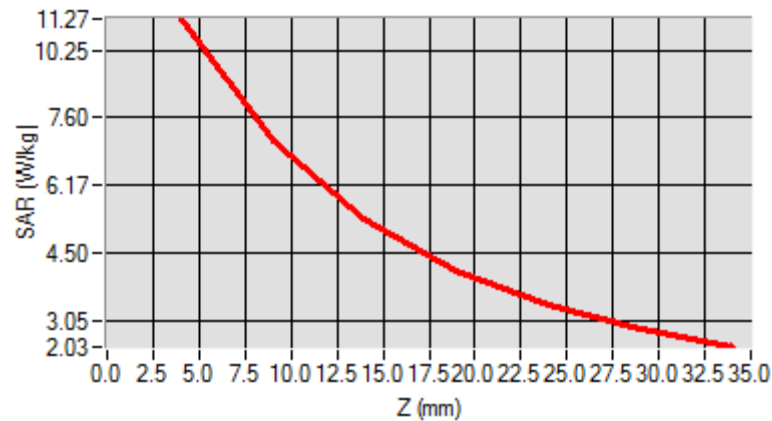


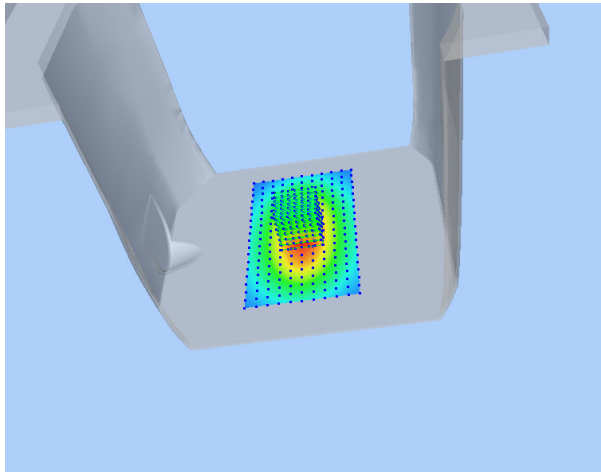
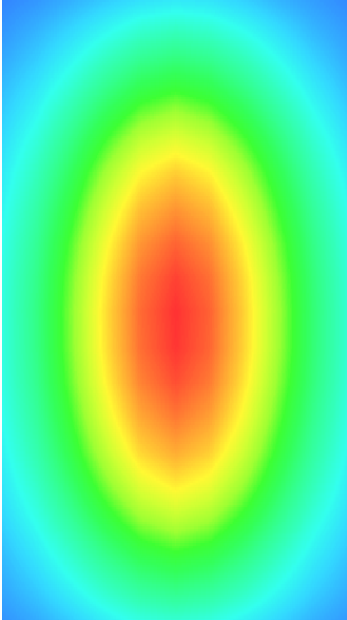
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.171252
SAR 1g (W/Kg)	9.611250

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.3455	7.1125	5.1026	3.425	3.0242	2.1125



3D screen shot	Hot spot position
	

MEASUREMENT 4

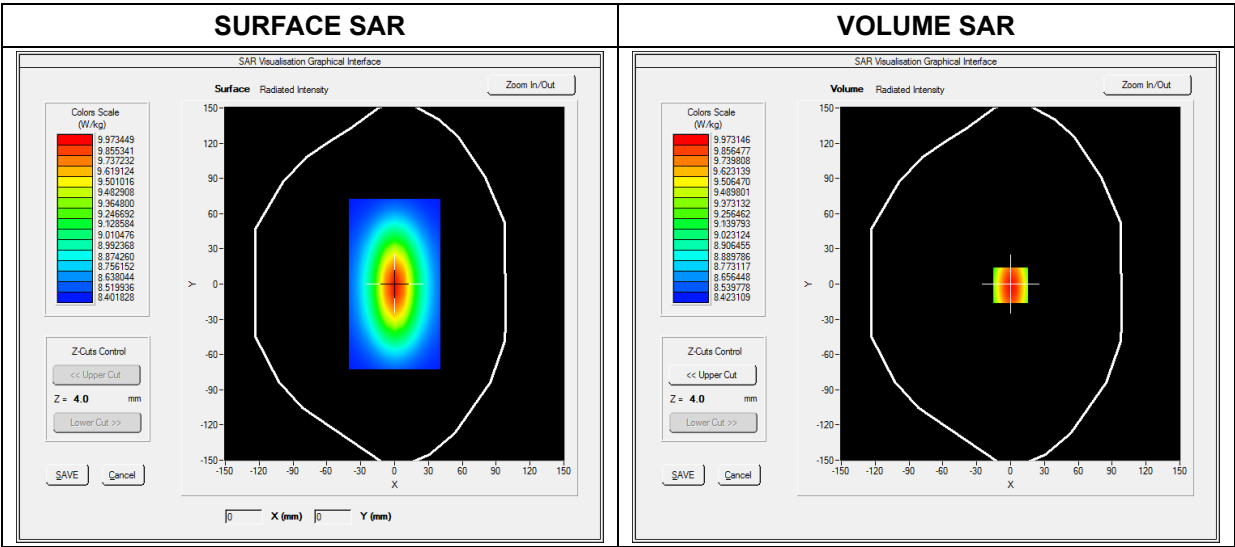
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2025-08-20
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.39; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	41.131249
Conductivity (S/m)	1.434703
Power Variation (%)	1.225400
Ambient Temperature	23.0
Liquid Temperature	23.0

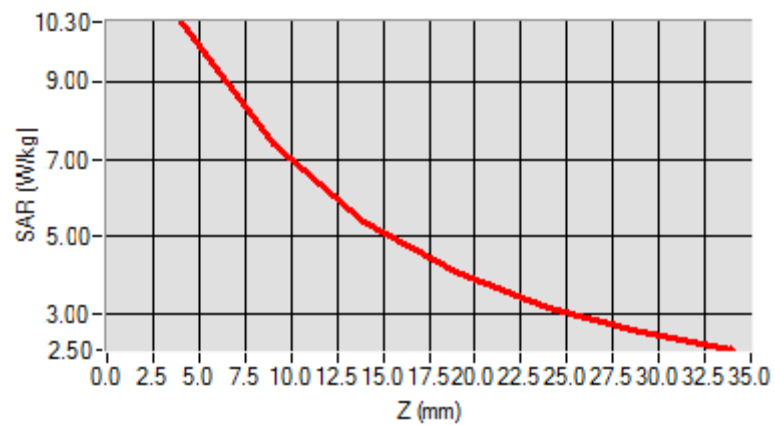


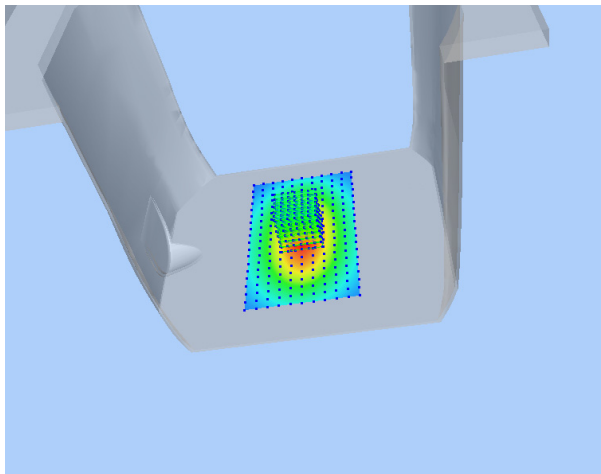
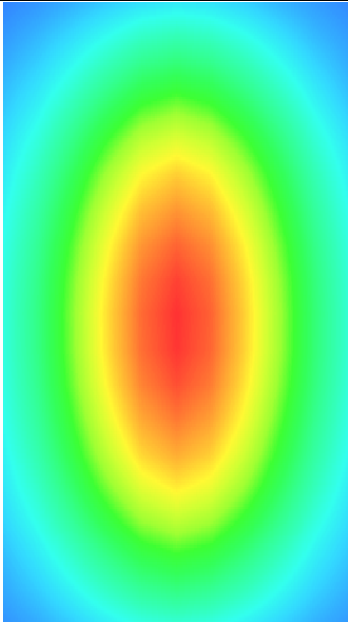
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.174526
SAR 1g (W/Kg)	9.913214

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.2354	6.8400	5.0121	4.1189	3.0522	2.8424



3D screen shot	Hot spot position
	

MEASUREMENT 5

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 2025-08-29

Measurement duration: 12 minutes 21 seconds

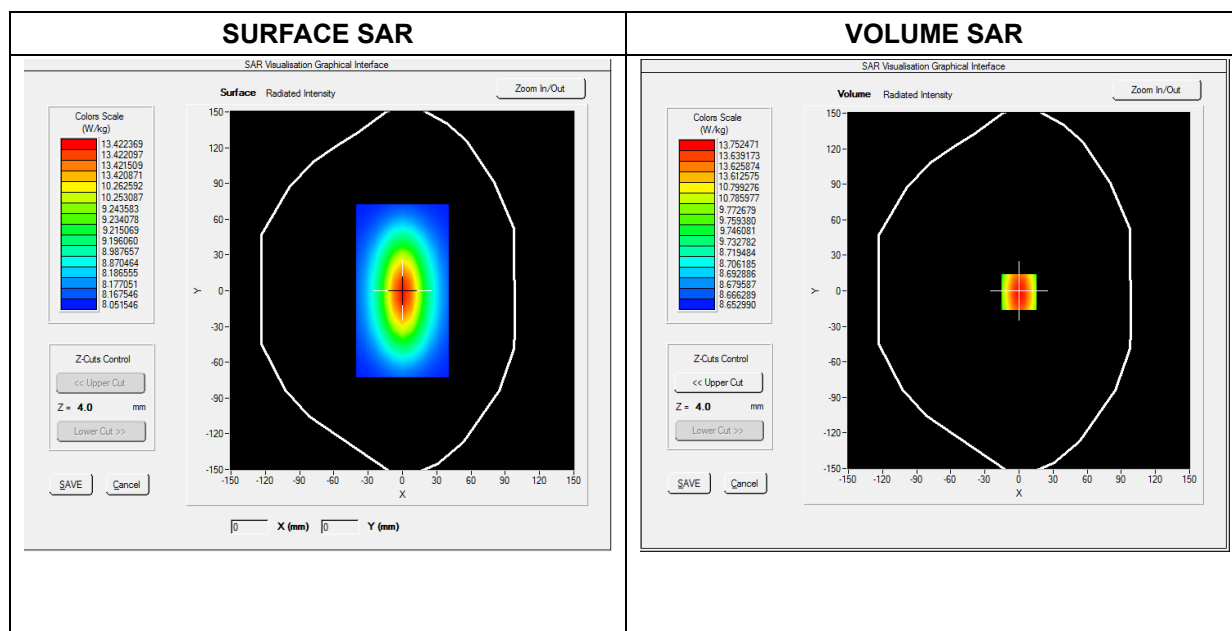
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	38.543661
Conductivity (S/m)	1.763036
Power Variation (%)	1.141400
Ambient Temperature	22.8
Liquid Temperature	22.8

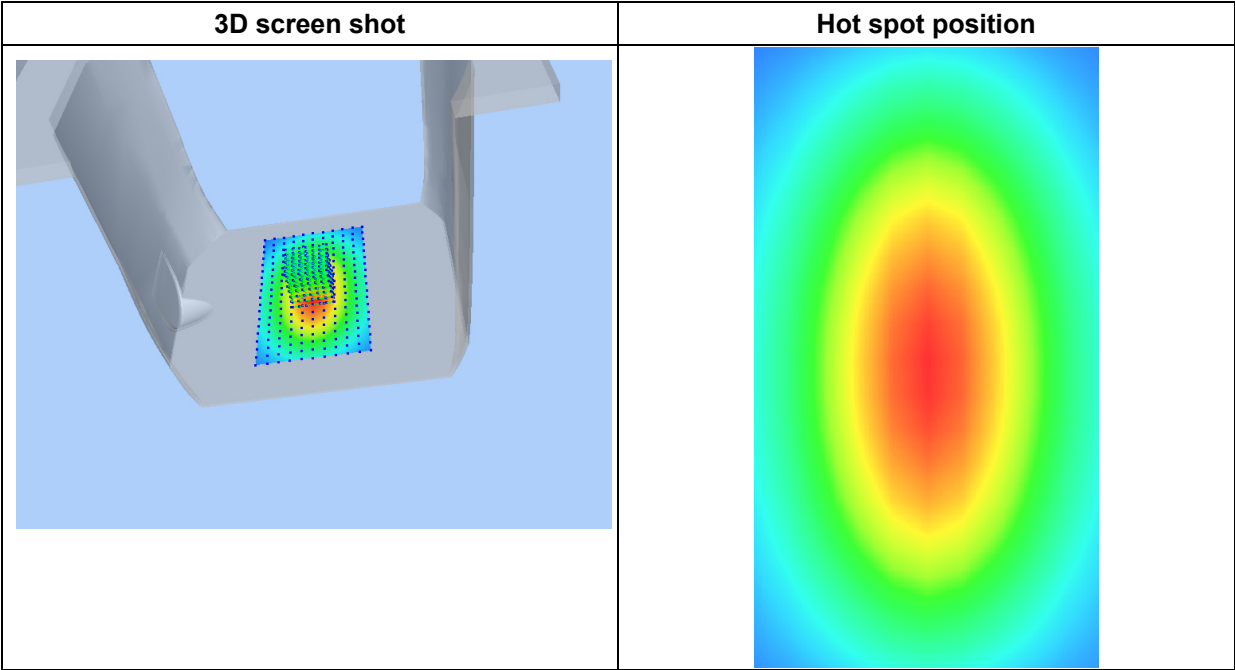
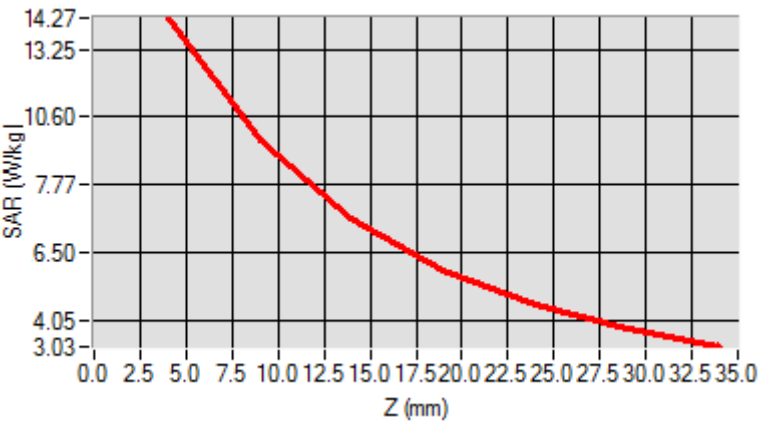


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	8.020427
SAR 1g (W/Kg)	13.452457

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	14.1034	12.0012	10.2624	7.4715	5.9022	4.5114



MEASUREMENT 6

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 2025-08-28

Measurement duration: 12 minutes 21 seconds

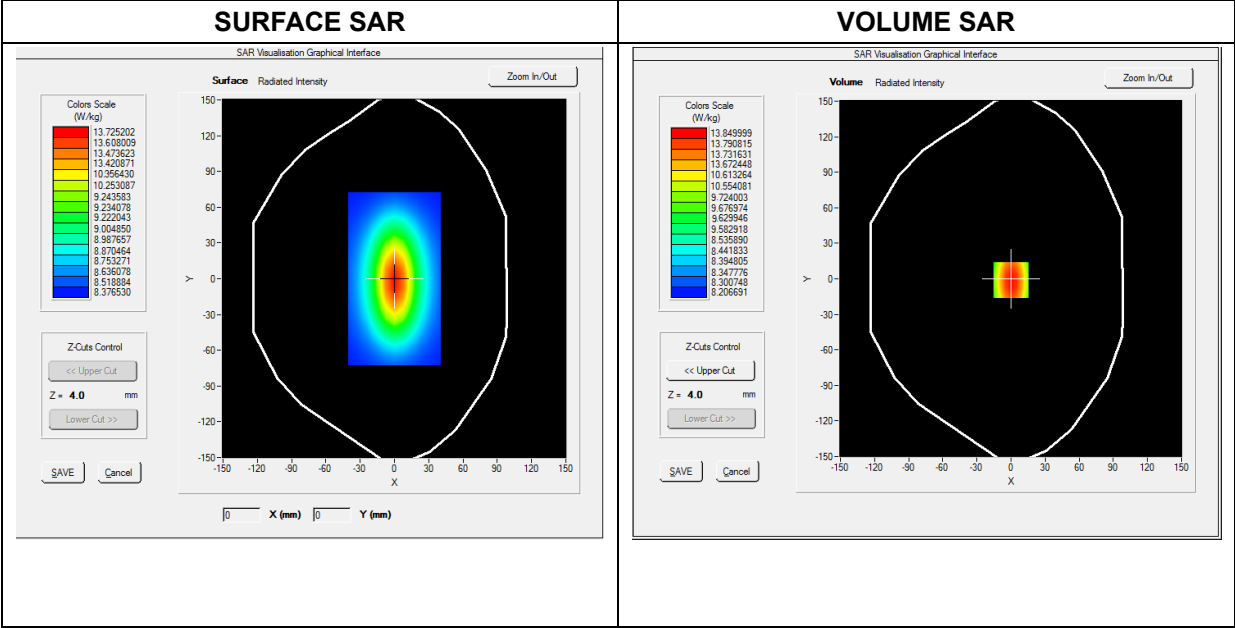
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.36; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative Permittivity (real part)	38.891929
Conductivity (S/m)	1.944182
Power Variation (%)	1.822100
Ambient Temperature	22.8
Liquid Temperature	22.8

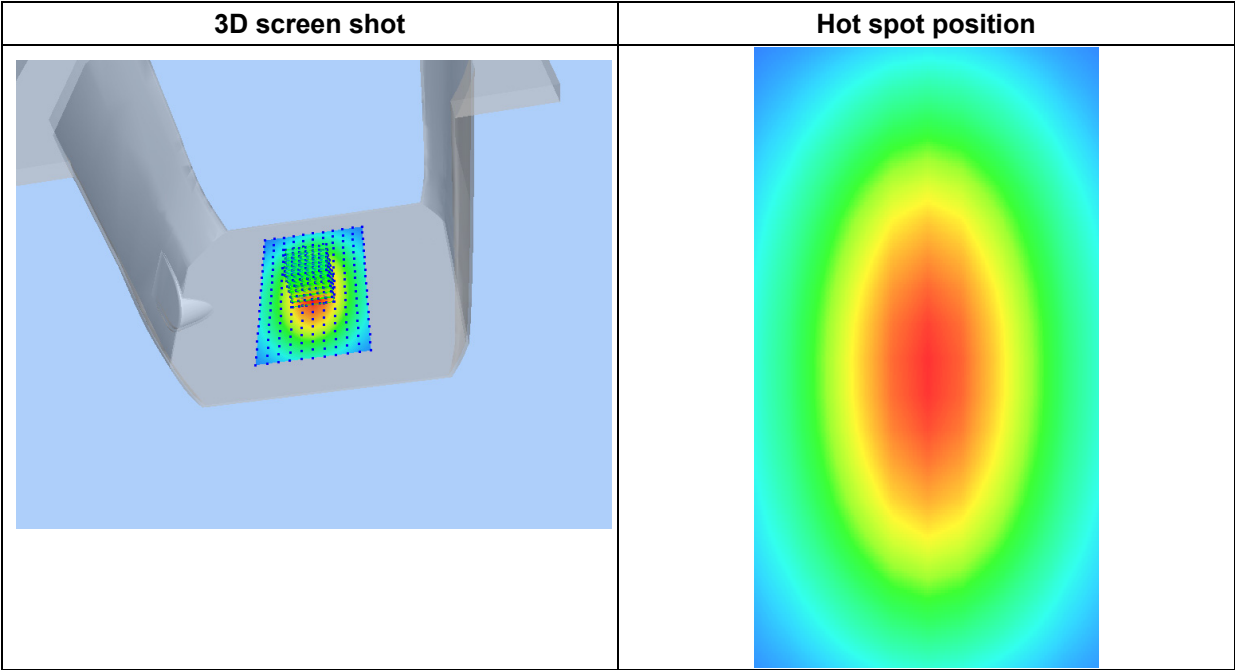
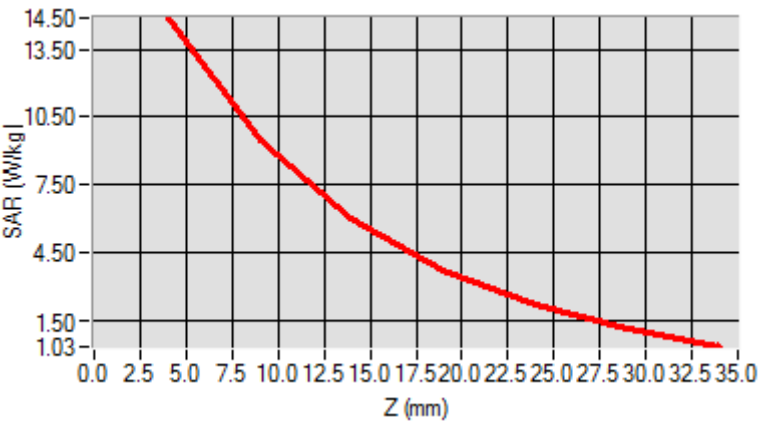


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	8.270822
SAR 1g (W/Kg)	13.670282

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	14.0426	12.1354	10.2965	7.4854	5.9354	4.5186



Annex B. Plots of SAR Measurement

MEASUREMENT 1

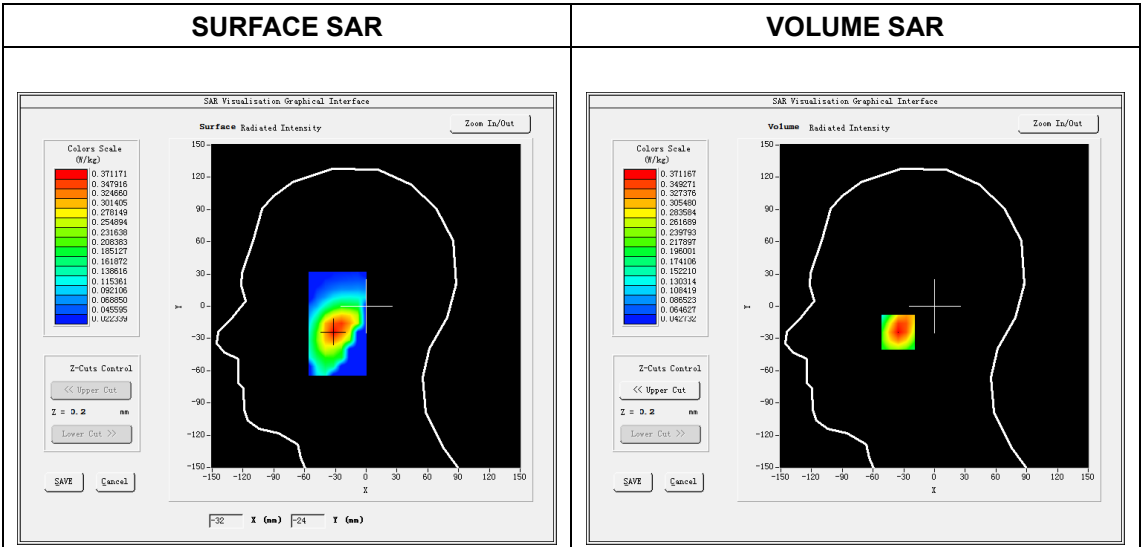
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

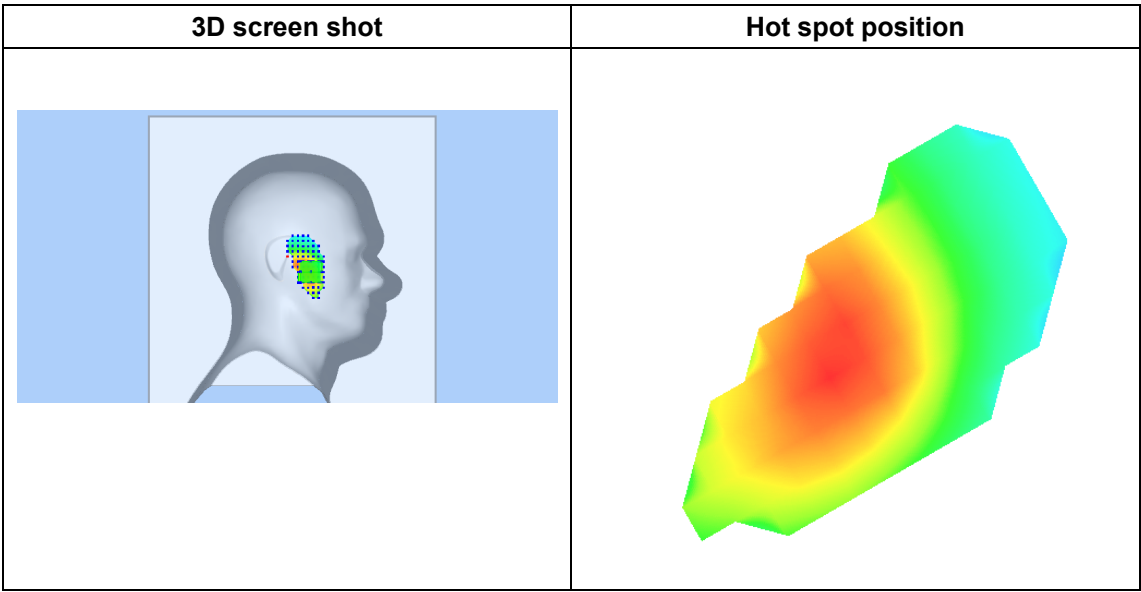
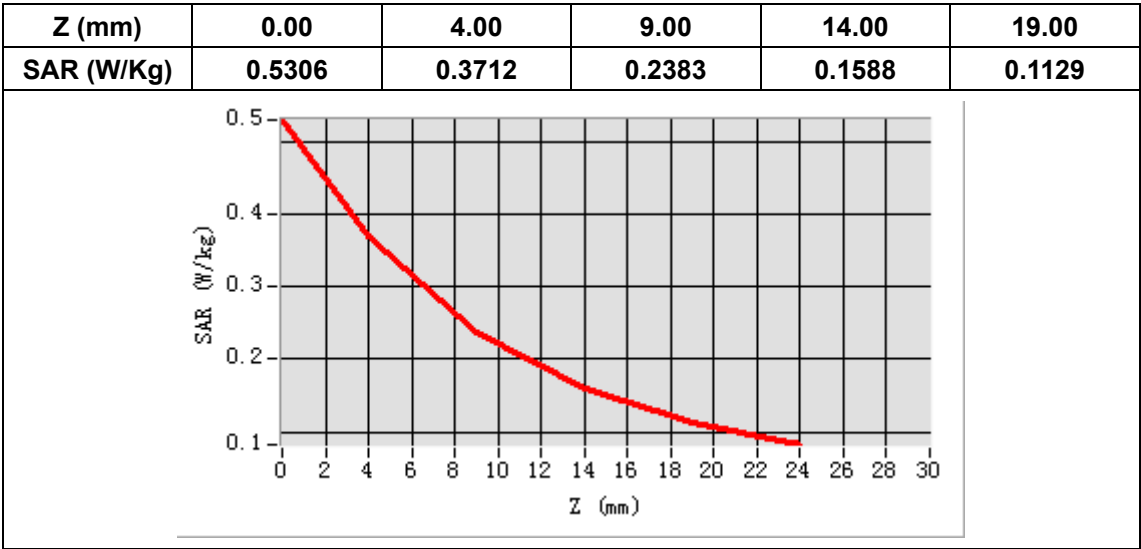
Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.143224
Conductivity (S/m)	0.892451
Power Variation (%)	1.453600
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=-32.00, Y=-24.00

SAR Peak: 0.54 W/kg

SAR 10g (W/Kg)	0.222401
SAR 1g (W/Kg)	0.353343



MEASUREMENT 2

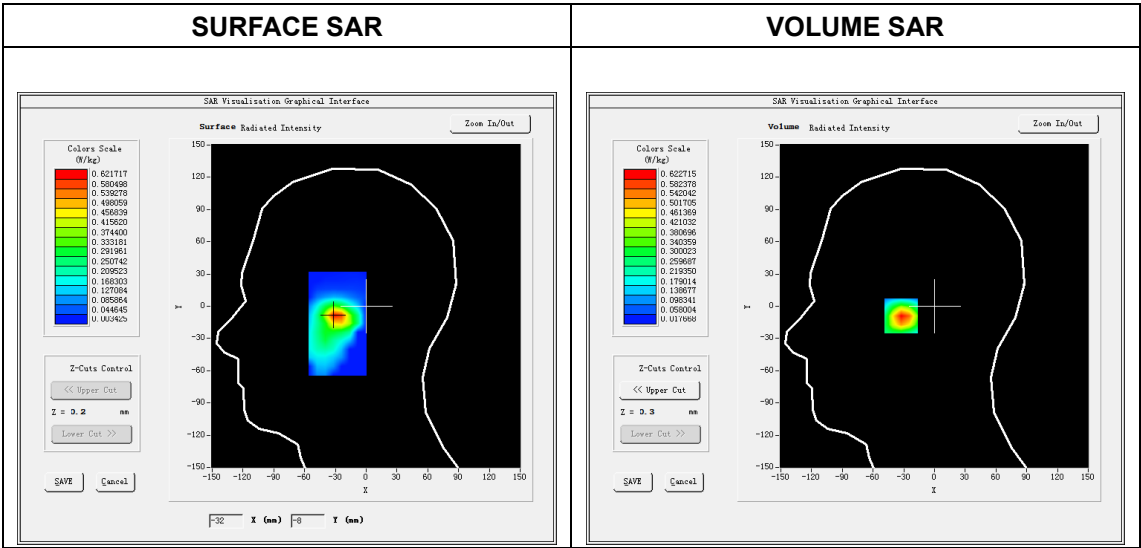
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

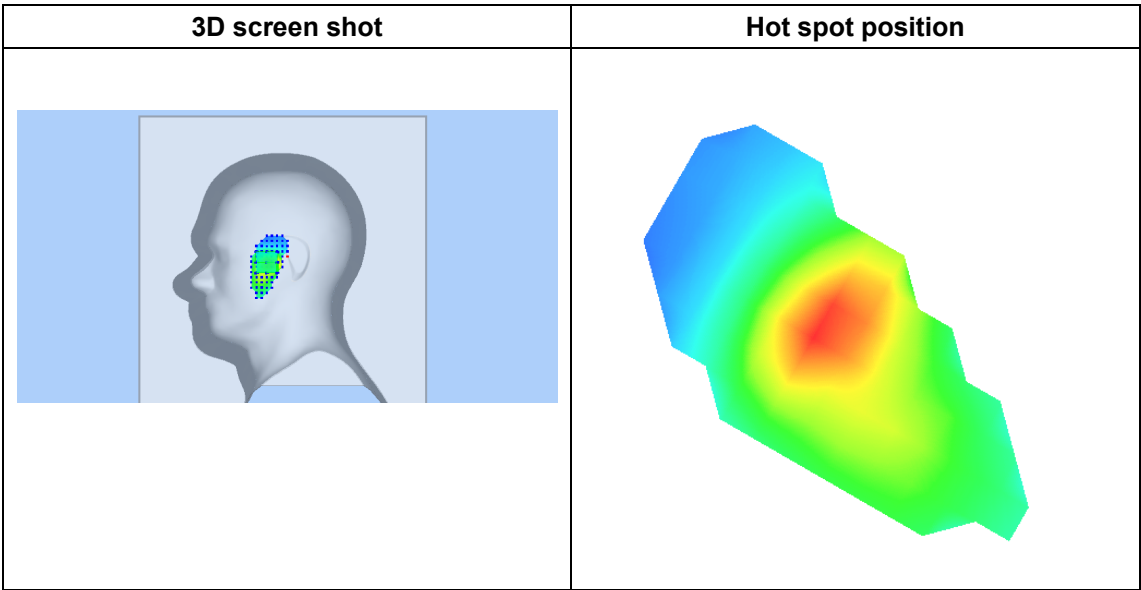
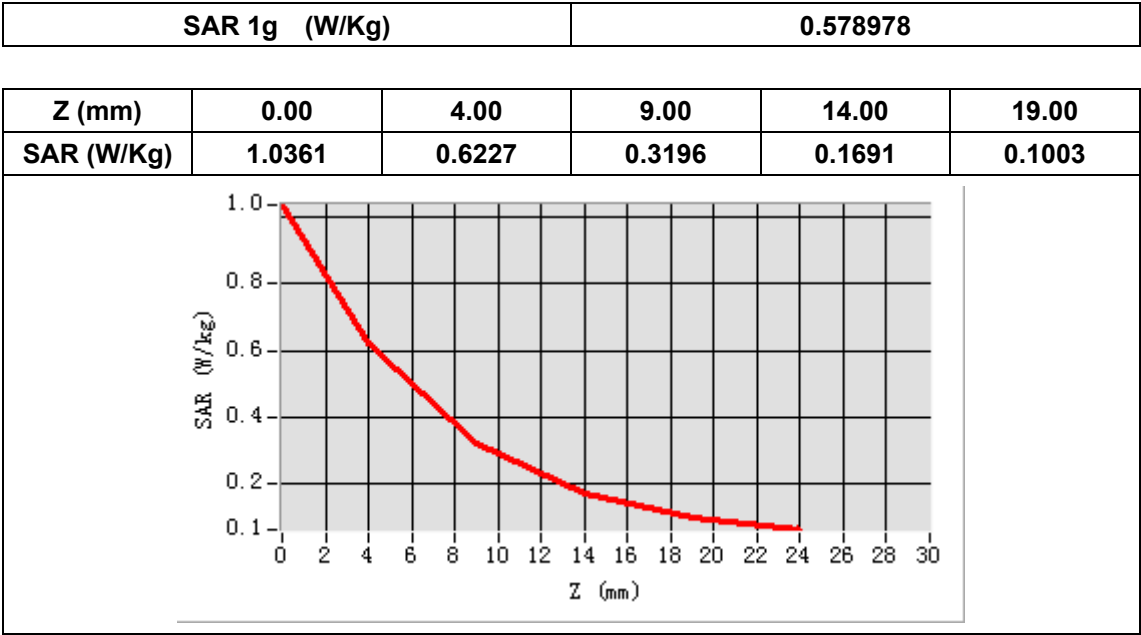
Frequency (MHz)	1850.200000
Relative Permittivity (real part)	39.282245
Conductivity (S/m)	1.372811
Power Variation (%)	2.515400
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=-30.00, Y=-9.00

SAR Peak: 1.05 W/kg

SAR 10g (W/Kg)	0.288919
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MEASUREMENT 3

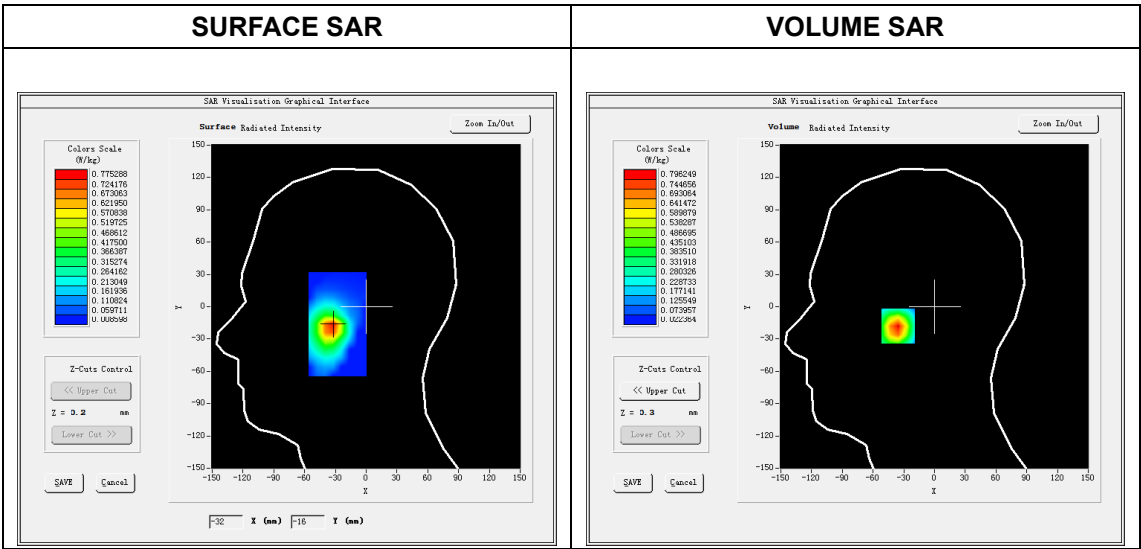
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	WCDMA1900_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

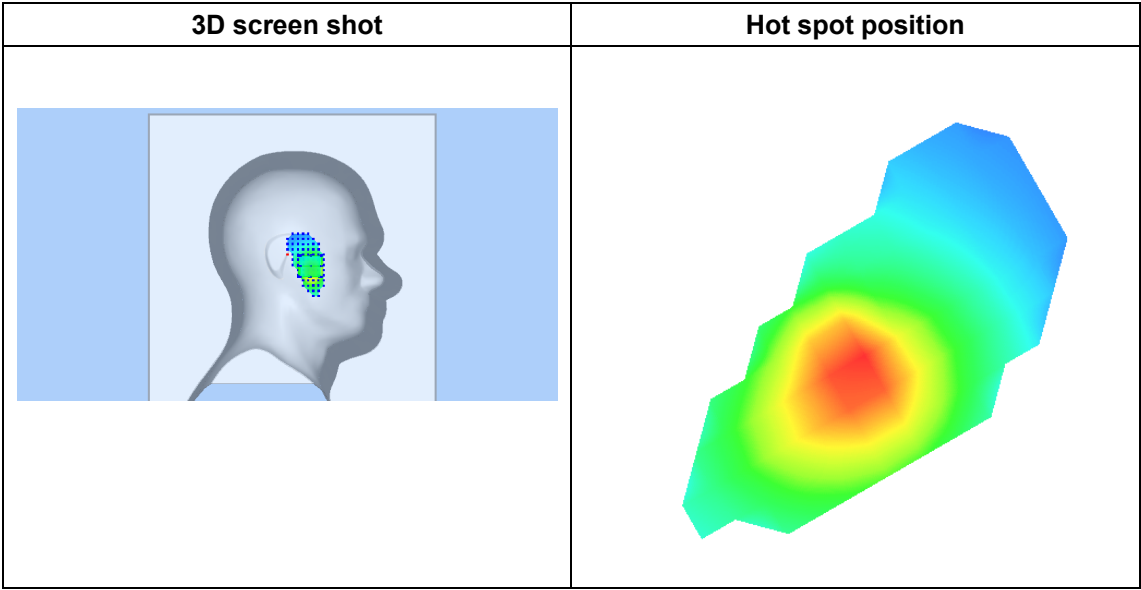
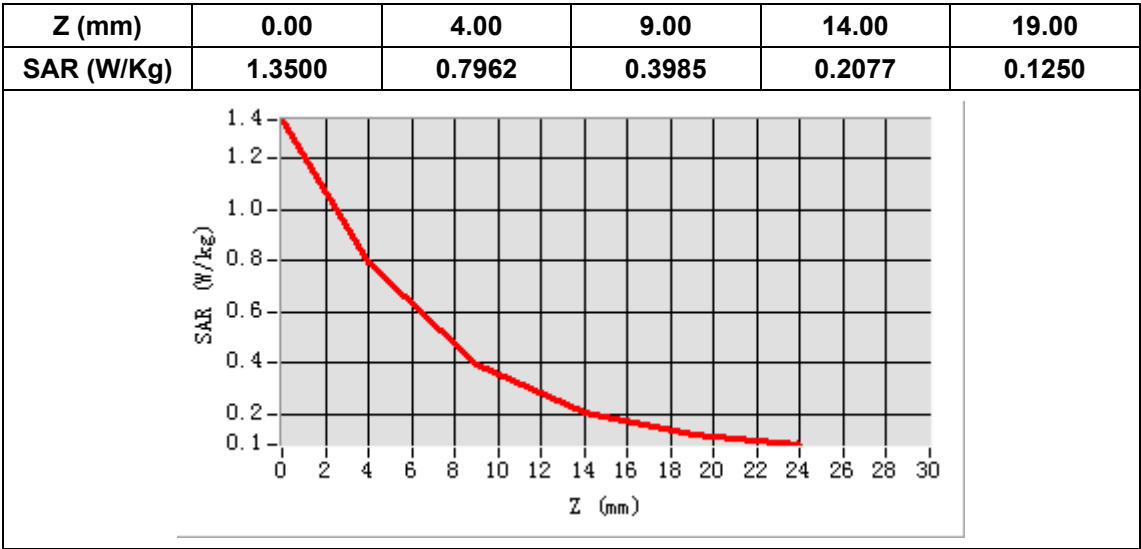
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	39.281248
Conductivity (S/m)	1.373671
Power Variation (%)	2.452400
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=-33.00, Y=-18.00

SAR Peak: 1.35 W/kg

SAR 10g (W/Kg)	0.383907
SAR 1g (W/Kg)	0.746785



MEASUREMENT 4

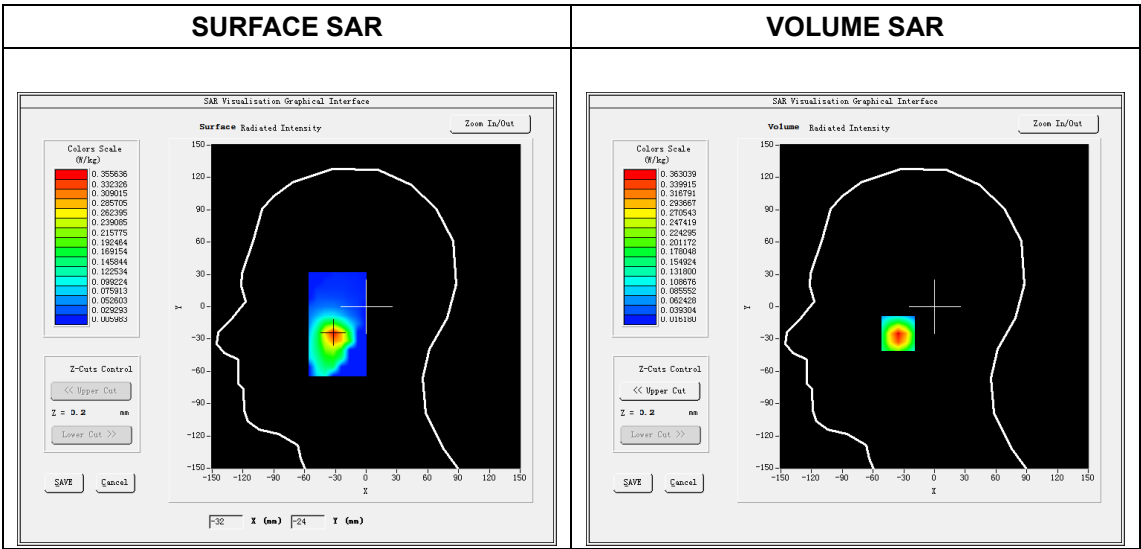
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	WCDMA1700_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

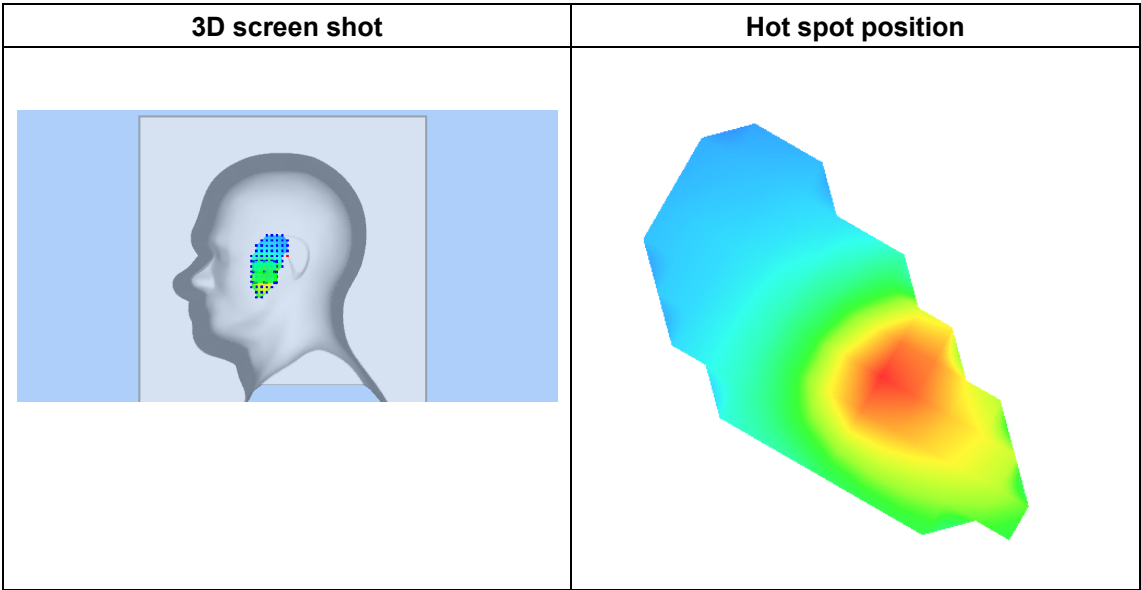
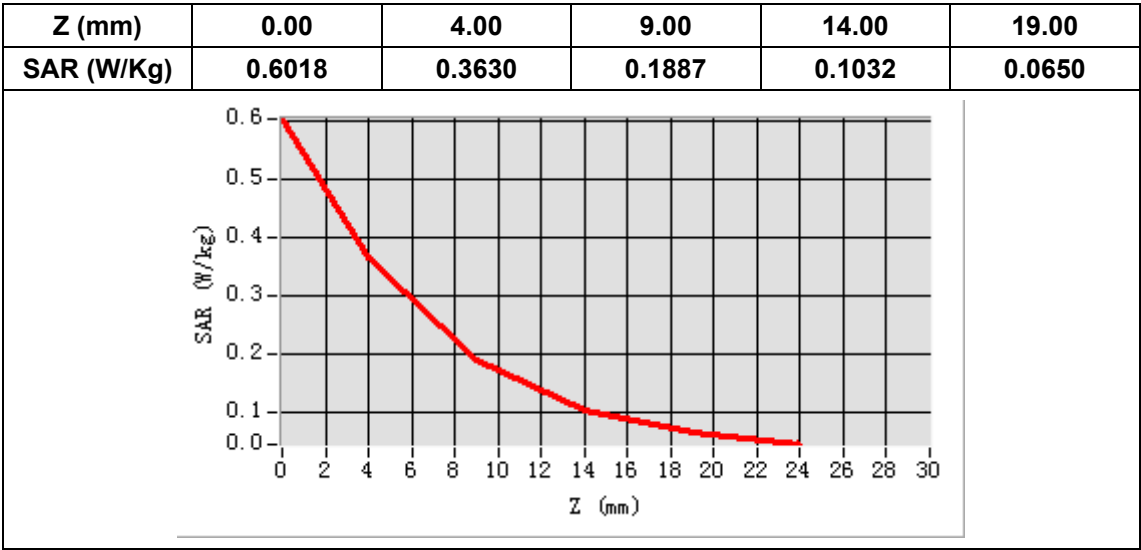
Frequency (MHz)	1712.400000
Relative Permittivity (real part)	39.281275
Conductivity (S/m)	1.374607
Power Variation (%)	2.814500
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=-32.00, Y=-25.00

SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.176762
SAR 1g (W/Kg)	0.341079



MEASUREMENT 5

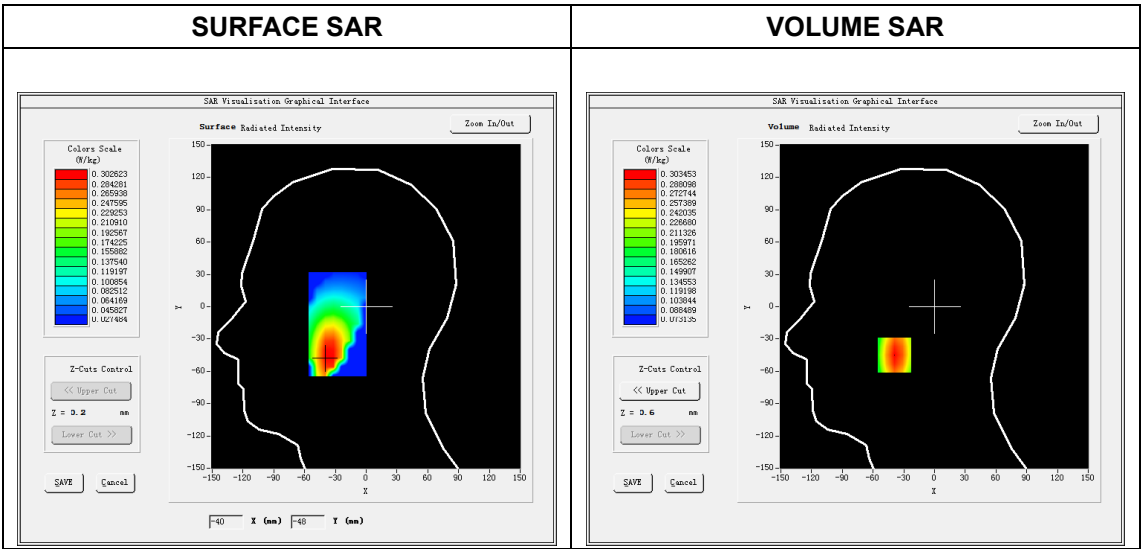
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	WCDMA850_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

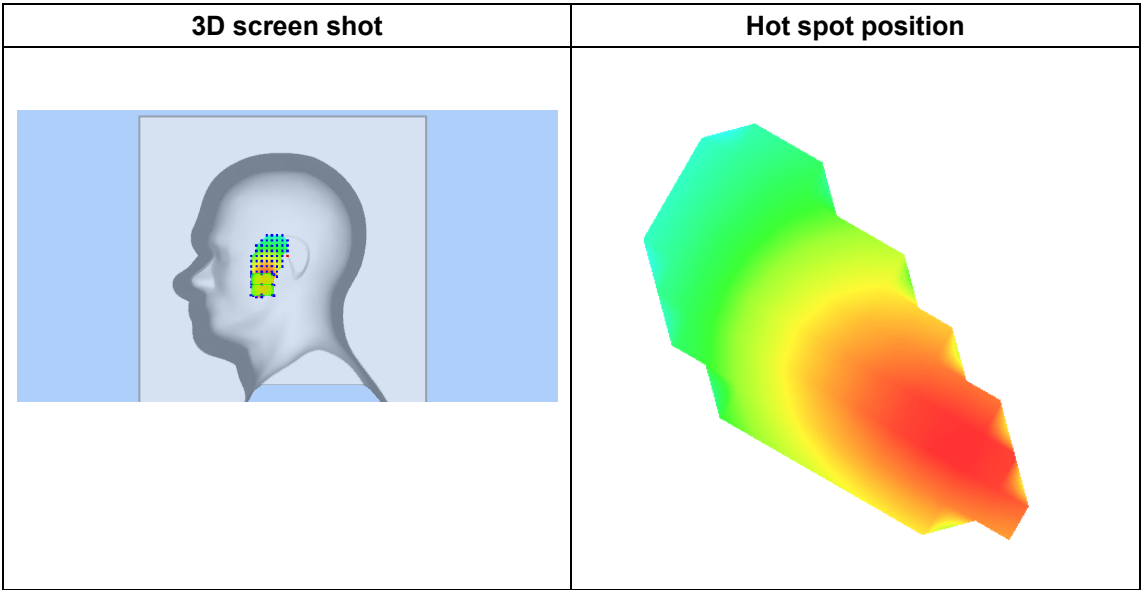
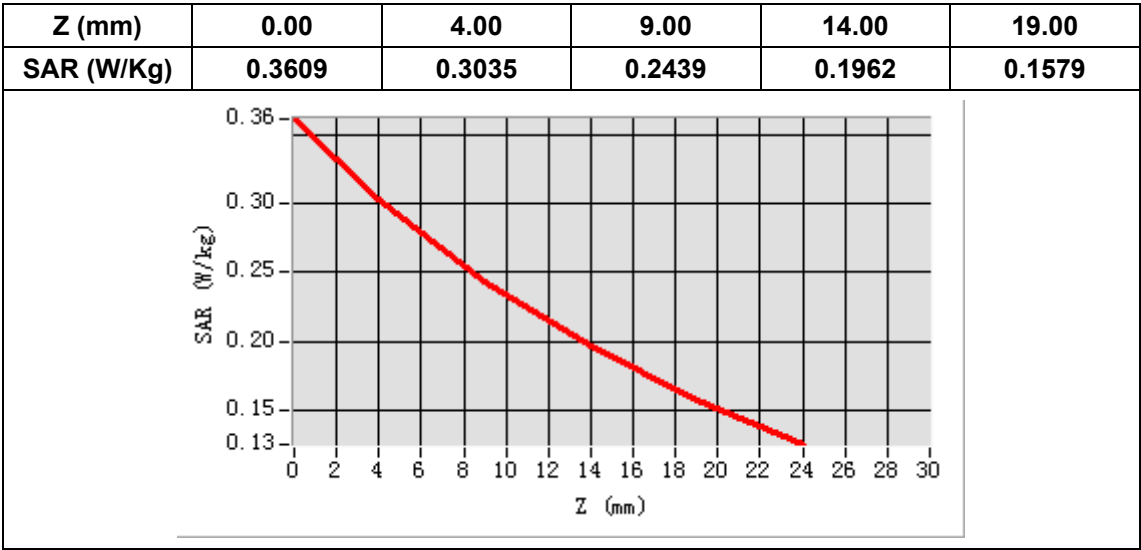
Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.143224
Conductivity (S/m)	0.892451
Power Variation (%)	-1.363800
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=-37.00, Y=-45.00

SAR Peak: 0.36 W/kg

SAR 10g (W/Kg)	0.218471
SAR 1g (W/Kg)	0.291945



MEASUREMENT 6

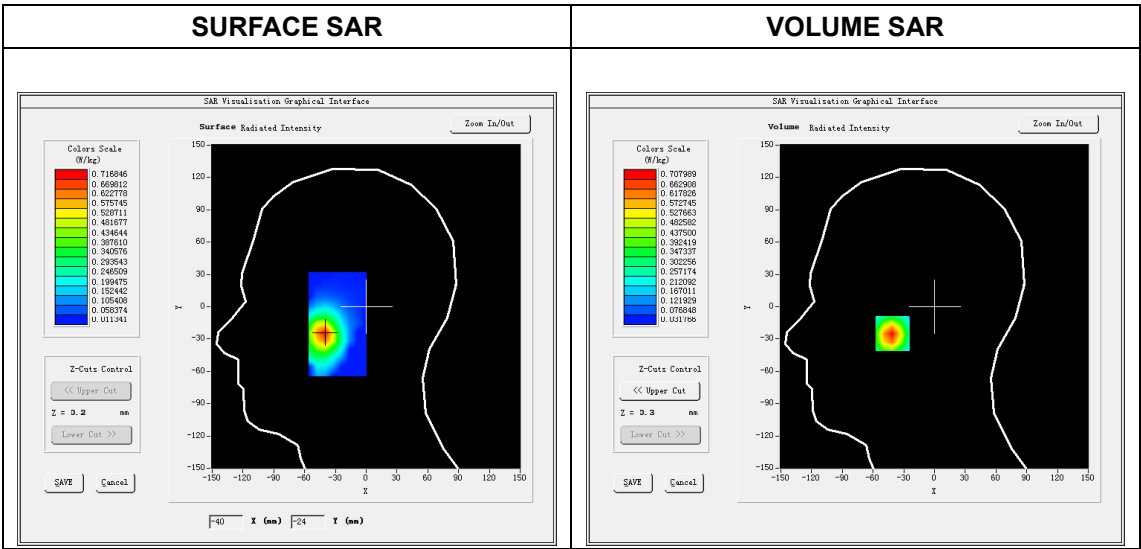
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 2
Channels	QPSK, 20MHz, 1RB,Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

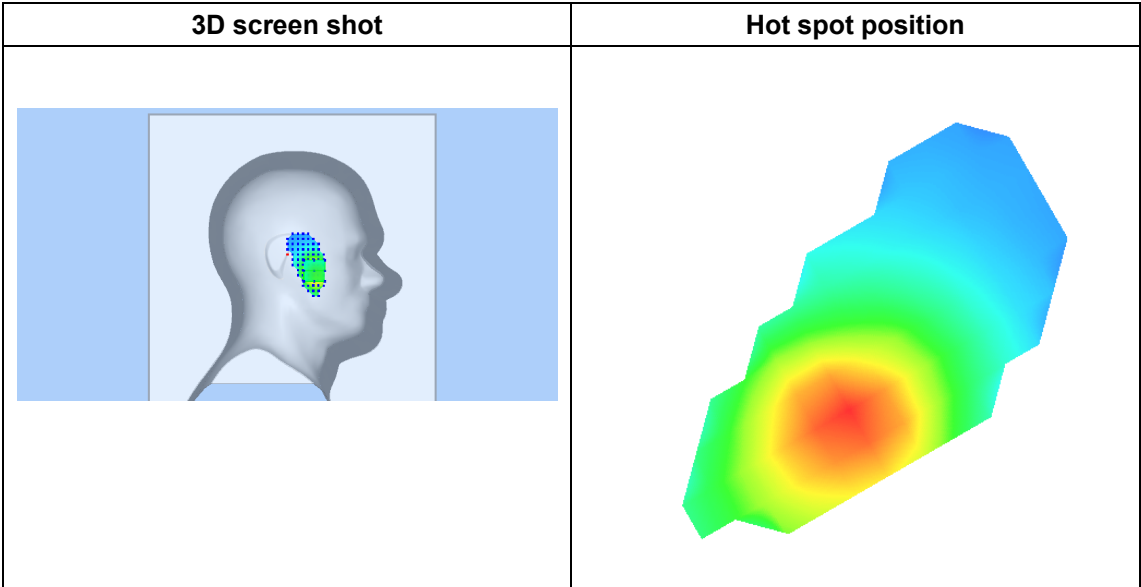
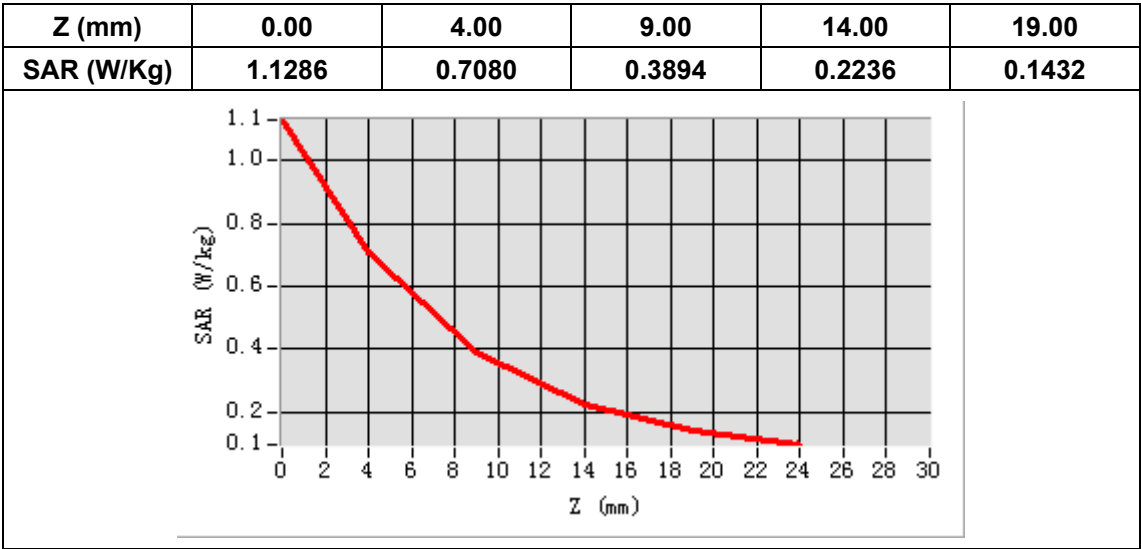
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	39.281248
Conductivity (S/m)	1.373671
Power Variation (%)	-1.348500
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=-41.00, Y=-25.00

SAR Peak: 1.13 W/kg

SAR 10g (W/Kg)	0.365908
SAR 1g (W/Kg)	0.662713



MEASUREMENT 7

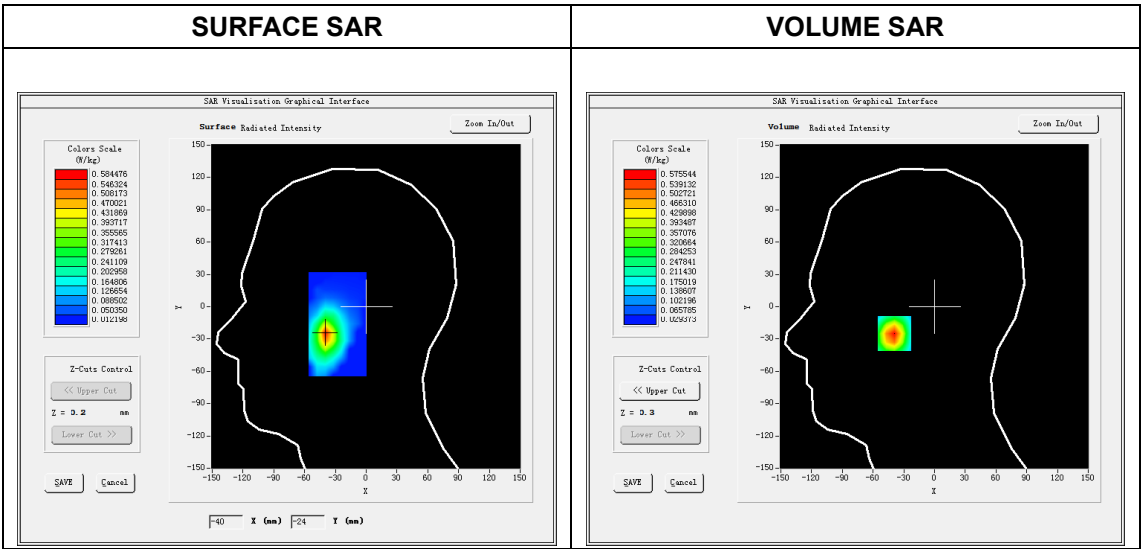
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 4
Channels	QPSK, 1.4MHz, 1RB, Low
Signal	Duty Cycle 1:1

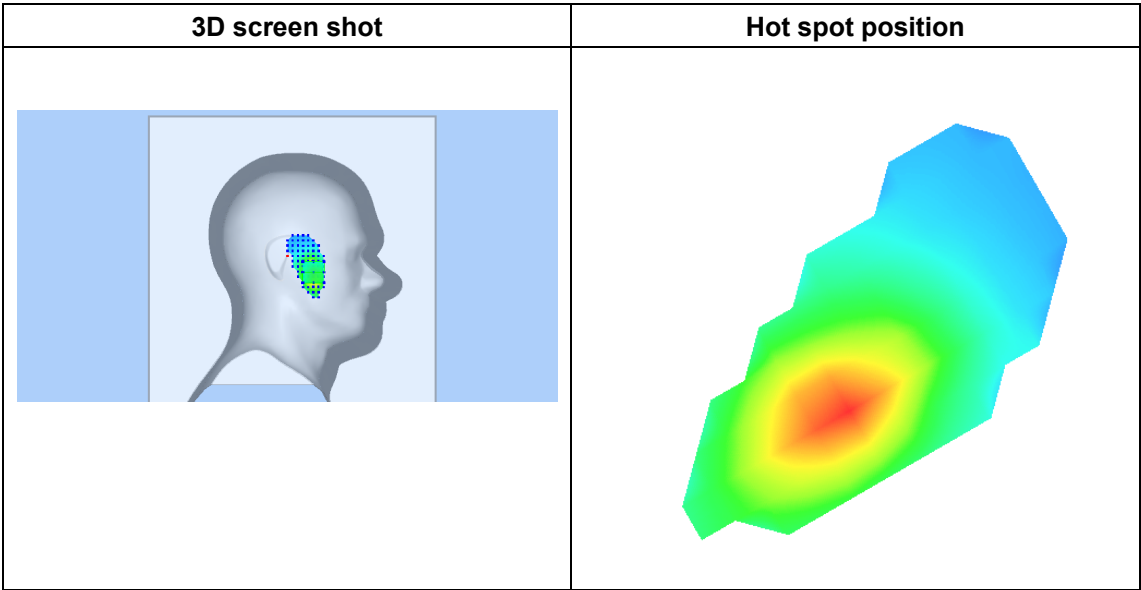
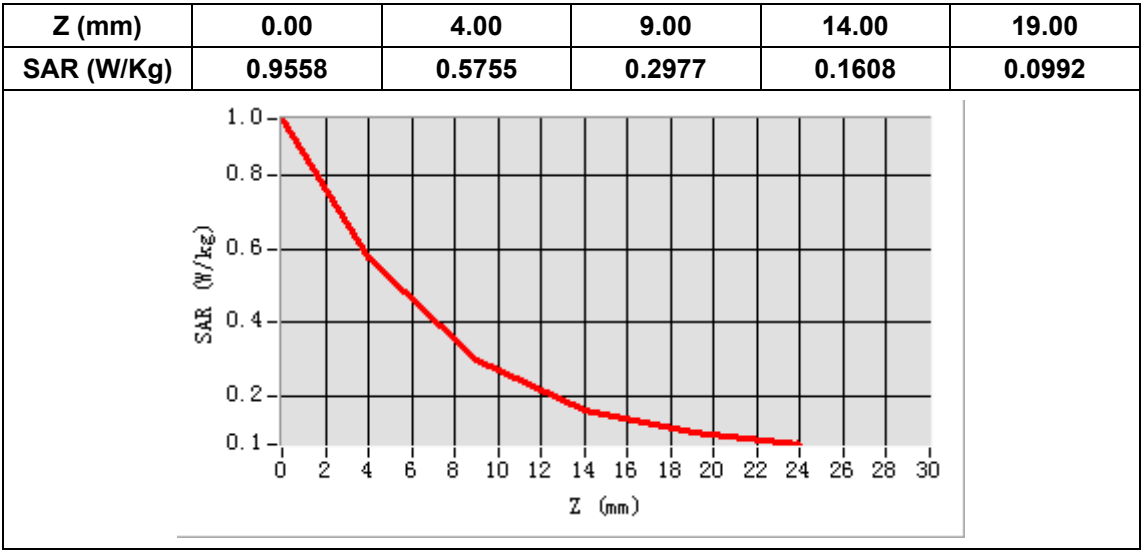
B. SAR Measurement Results

Frequency (MHz)	1710.700000
Relative Permittivity (real part)	39.281375
Conductivity (S/m)	1.372874
Power Variation (%)	1.561700
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=-39.00, Y=-25.00
SAR Peak: 0.96 W/kg

SAR 10g (W/Kg)	0.287423
SAR 1g (W/Kg)	0.539760



MEASUREMENT 8

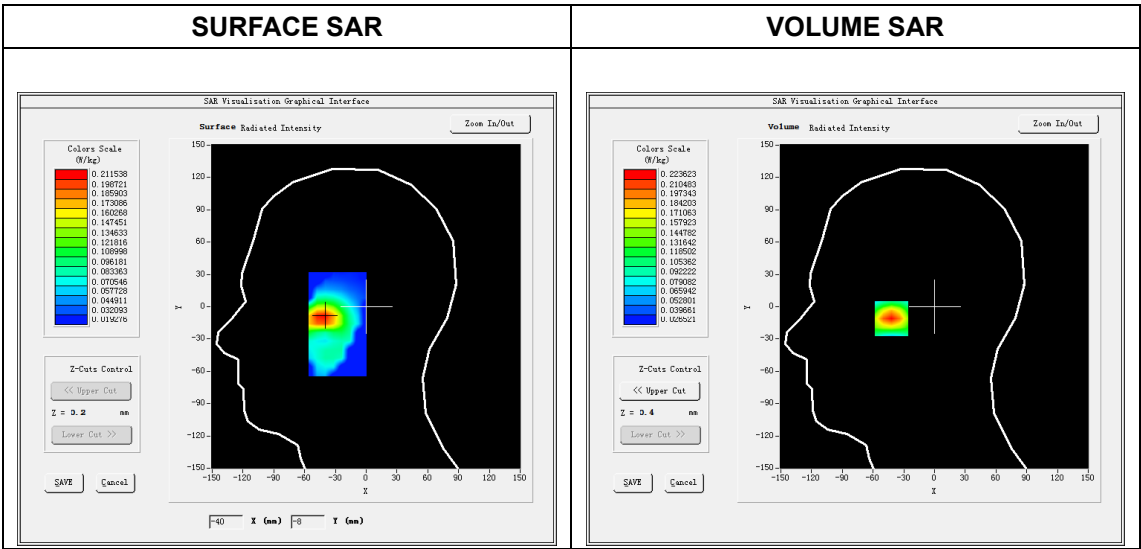
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE Band 5
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

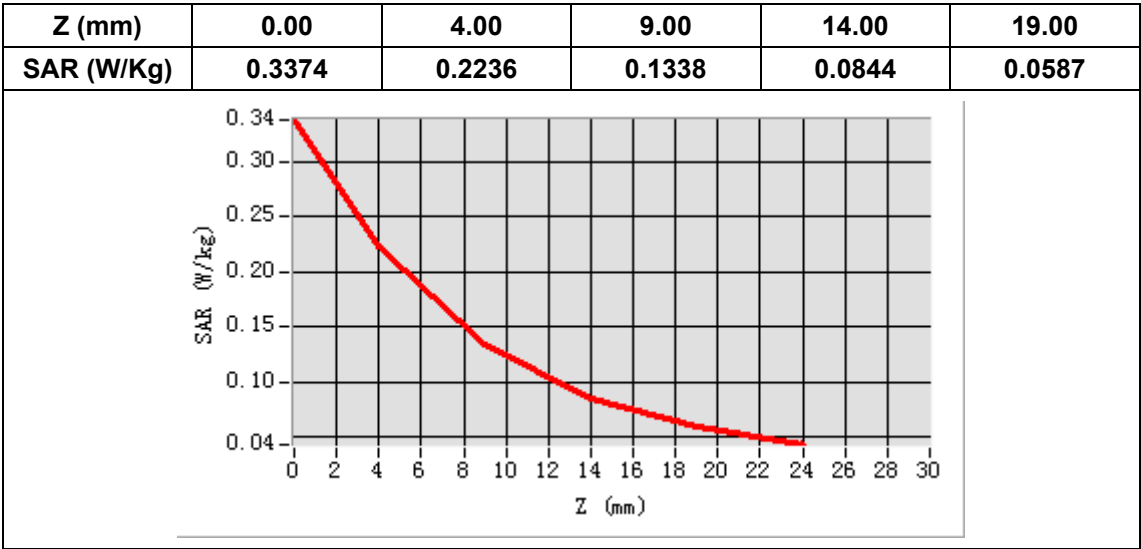
Frequency (MHz)	829.000000
Relative Permittivity (real part)	41.143245
Conductivity (S/m)	0.892451
Power Variation (%)	2.878500
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=-42.00, Y=-10.00

SAR Peak: 0.34 W/kg

SAR 10g (W/Kg)	0.120667
SAR 1g (W/Kg)	0.208188



MEASUREMENT 9

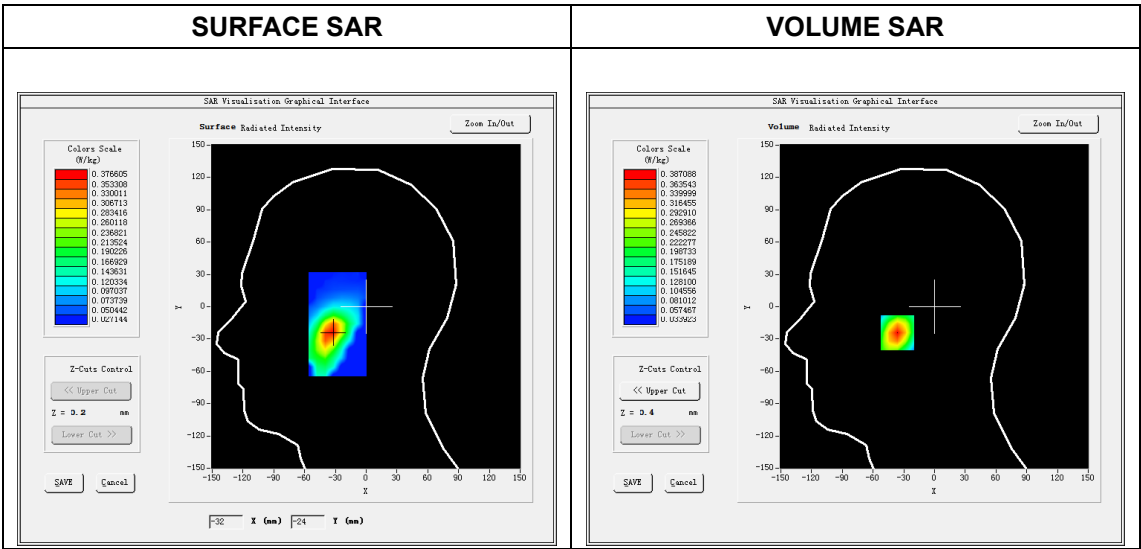
Type: Measurement (Complete)
Date of measurement: 2025-08-28
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.36; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 7
Channels	QPSK, 20MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

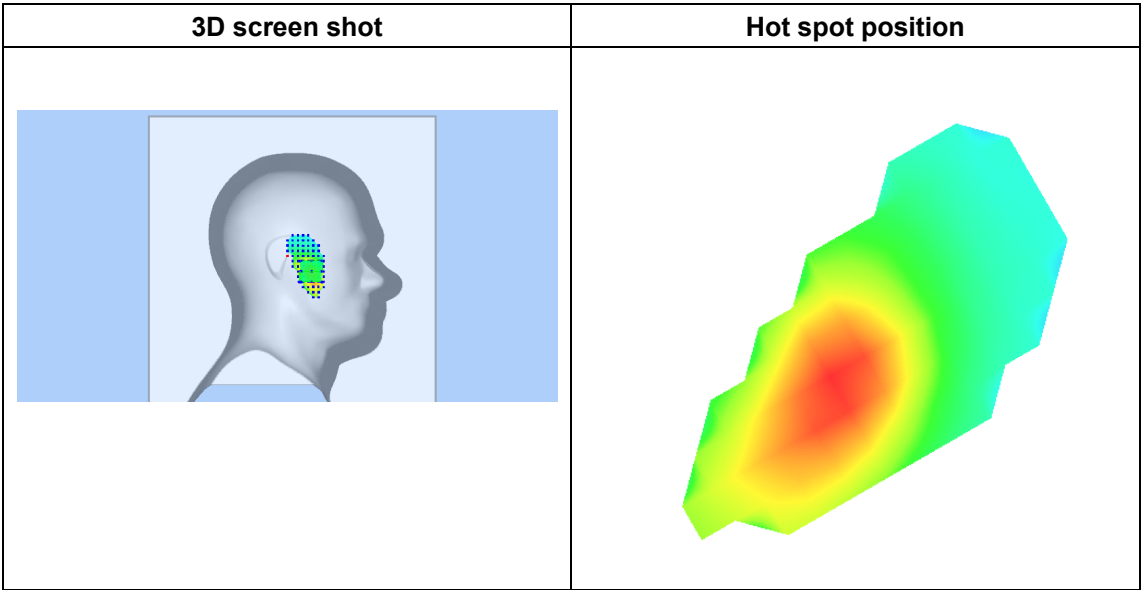
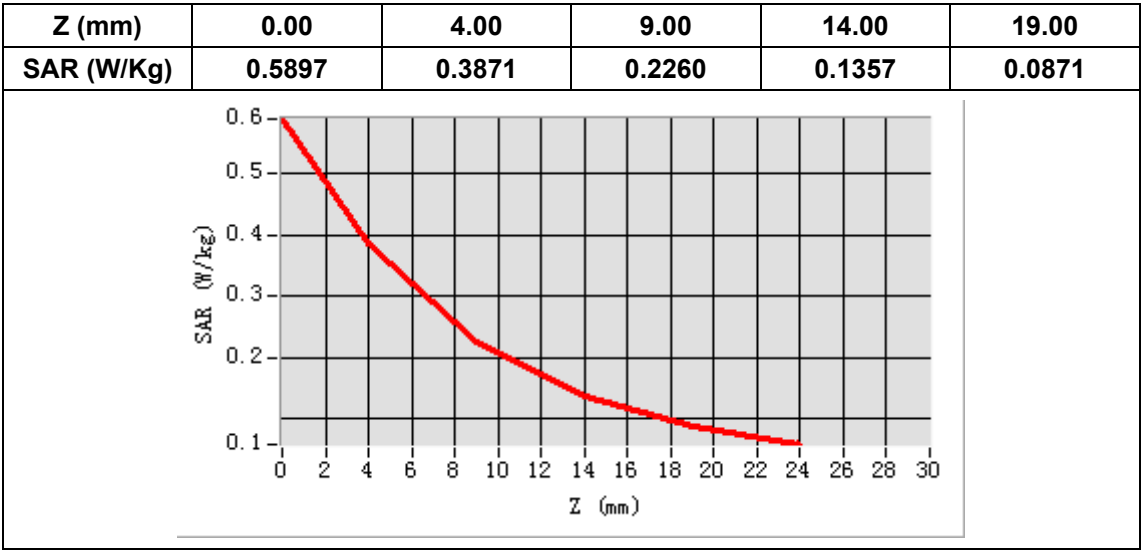
Frequency (MHz)	2560.000000
Relative Permittivity (real part)	38.893245
Conductivity (S/m)	1.941451
Power Variation (%)	1.878500
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=-34.00, Y=-24.00

SAR Peak: 0.59 W/kg

SAR 10g (W/Kg)	0.199847
SAR 1g (W/Kg)	0.360325



MEASUREMENT 10

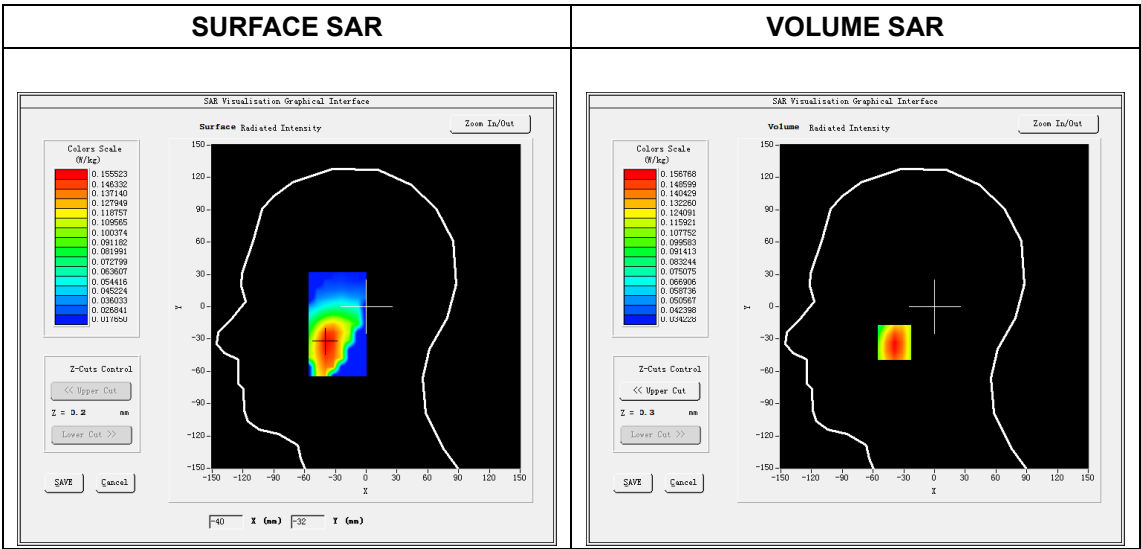
Type: Measurement (Complete)
Date of measurement: 2025-08-31
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.08; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 12
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

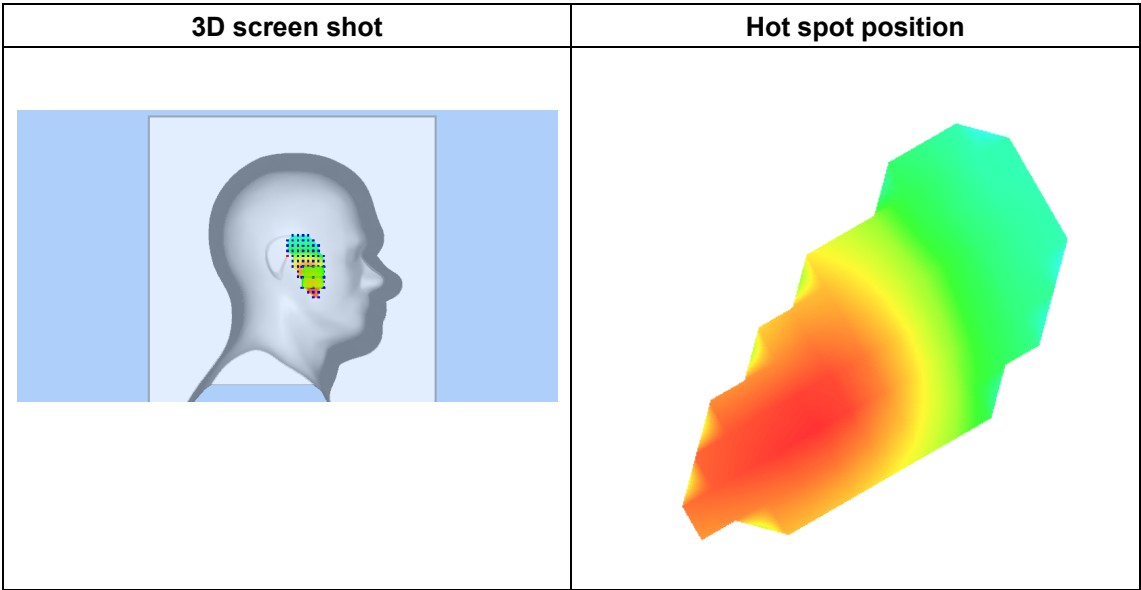
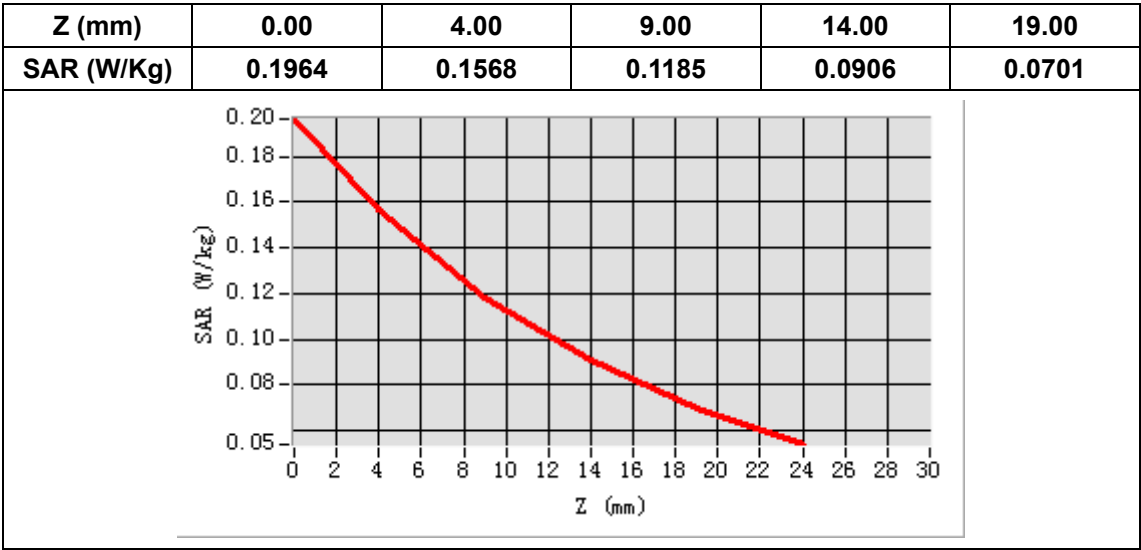
B. SAR Measurement Results

Frequency (MHz)	704.000000
Relative Permittivity (real part)	42.384156
Conductivity (S/m)	0.923129
Power Variation (%)	-1.785400
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=-38.00, Y=-33.00
SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.113708
SAR 1g (W/Kg)	0.155365



MEASUREMENT 11

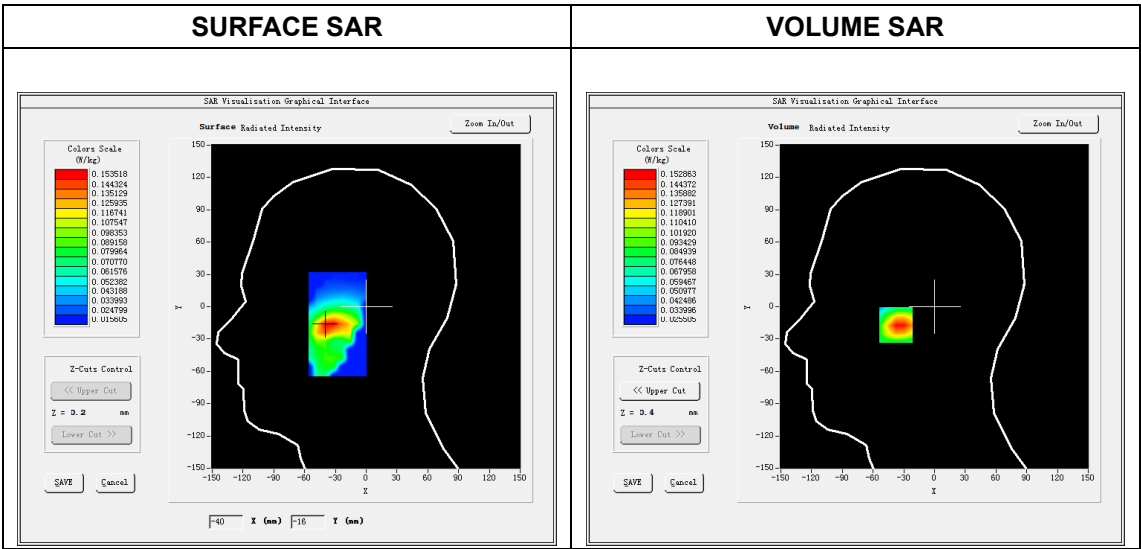
Type: Measurement (Complete)
Date of measurement: 2025-08-31
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.08; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE Band 13
Channels	QPSK, 5MHz, 1RB, Middle
Signal	Duty Cycle 1:1

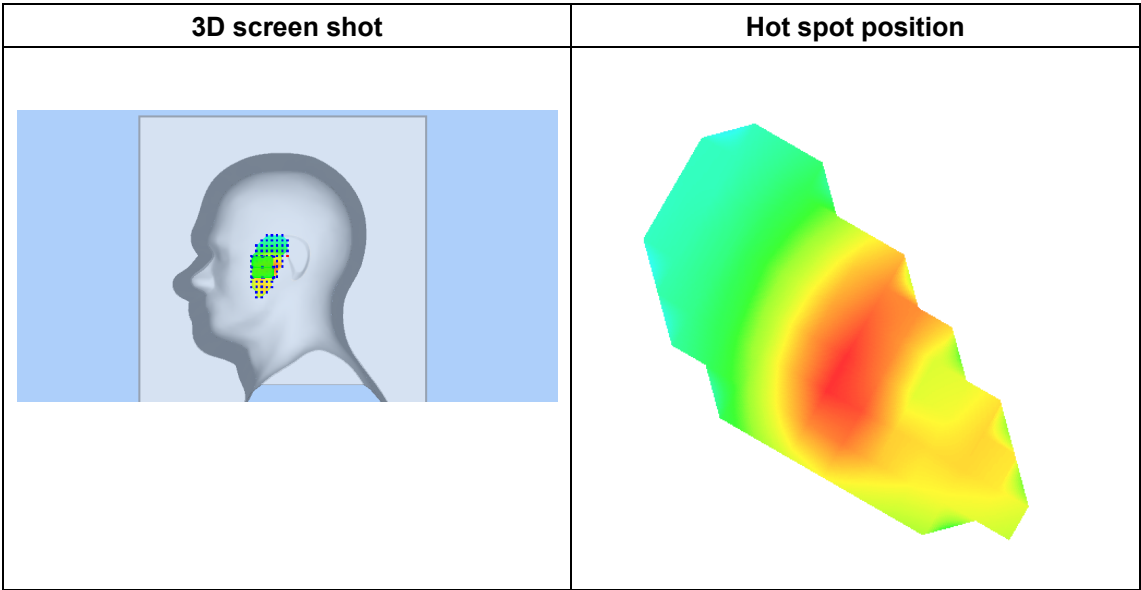
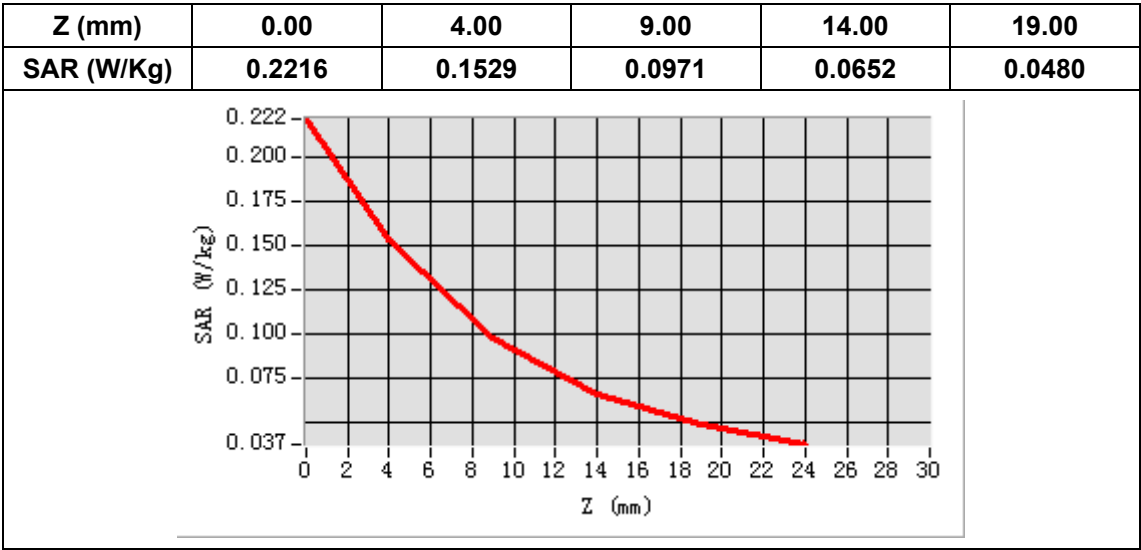
B. SAR Measurement Results

Frequency (MHz)	779.500000
Relative Permittivity (real part)	42.384224
Conductivity (S/m)	0.921925
Power Variation (%)	1.869900
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=-37.00, Y=-17.00
SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.089707
SAR 1g (W/Kg)	0.145980



MEASUREMENT 12

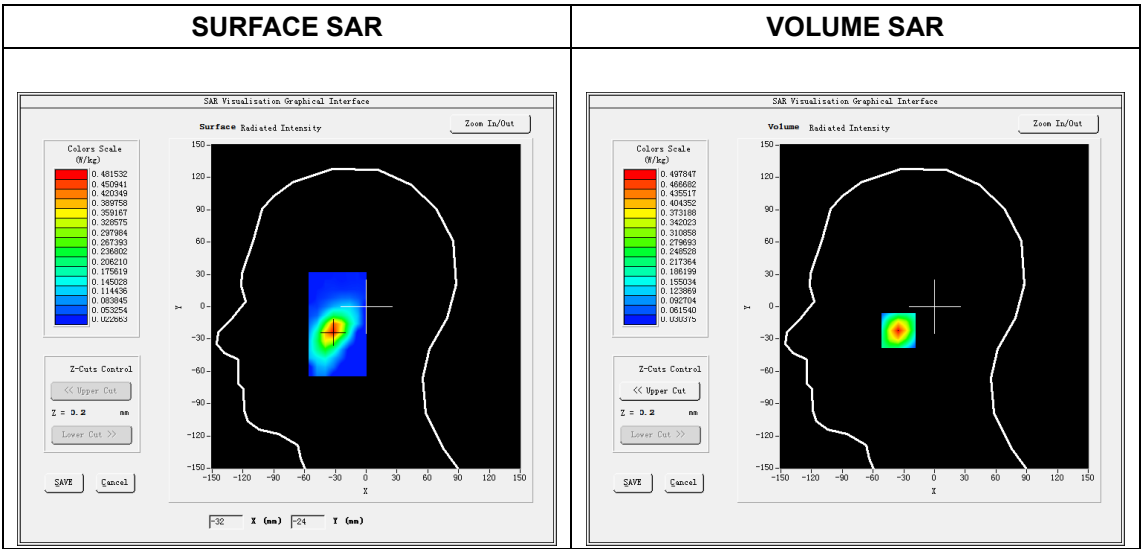
Type: Measurement (Complete)
Date of measurement: 2025-08-28
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.36; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 41
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

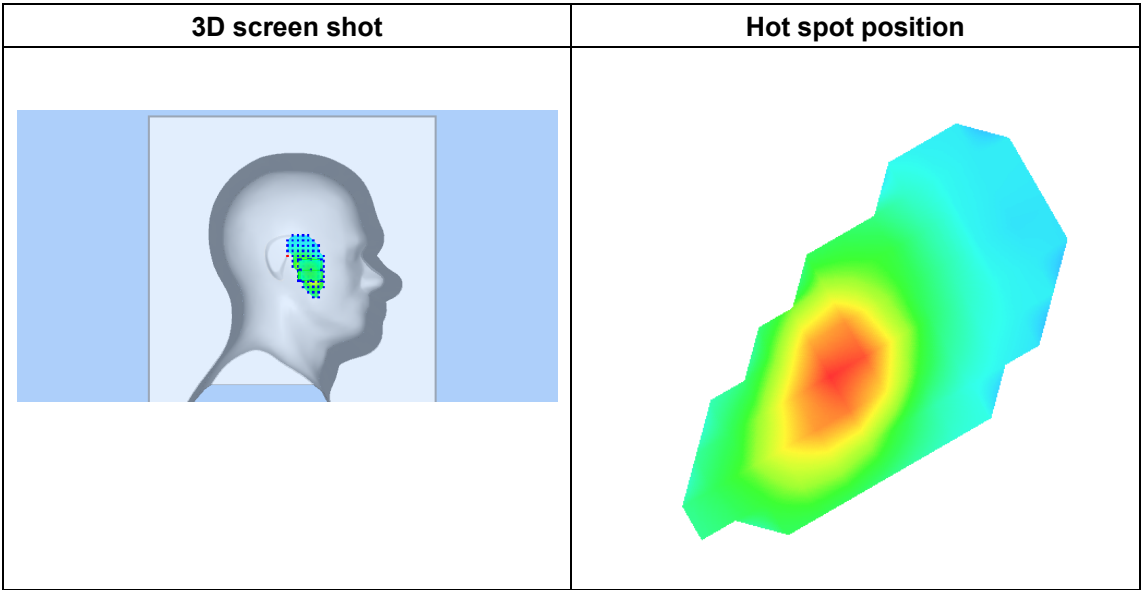
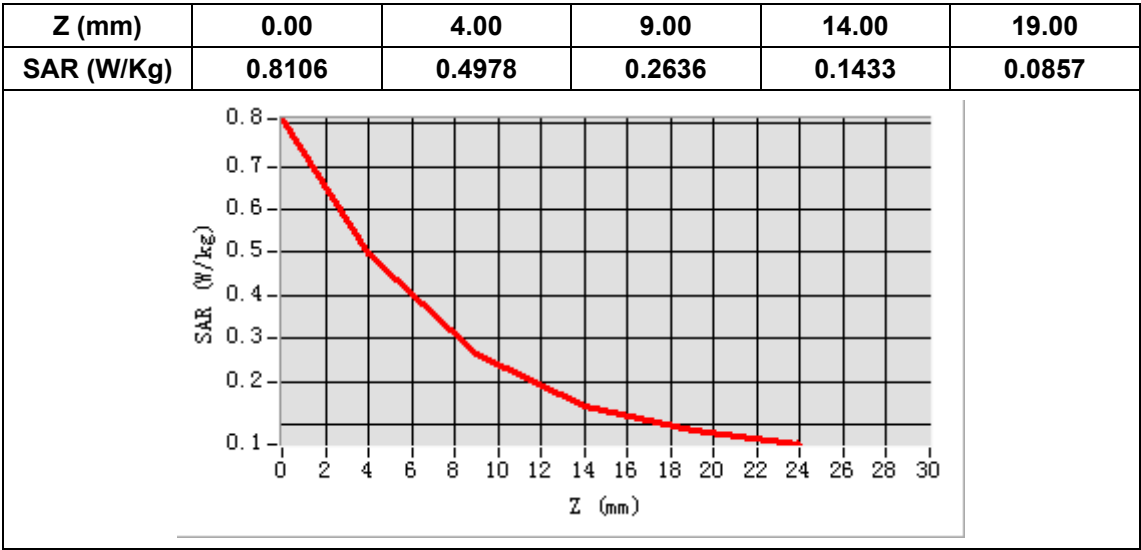
B. SAR Measurement Results

Frequency (MHz)	2605.000000
Relative Permittivity (real part)	38.894368
Conductivity (S/m)	1.942696
Power Variation (%)	-1.058100
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=-32.00, Y=-22.00
SAR Peak: 0.81 W/kg

SAR 10g (W/Kg)	0.226481
SAR 1g (W/Kg)	0.454876



MEASUREMENT 13

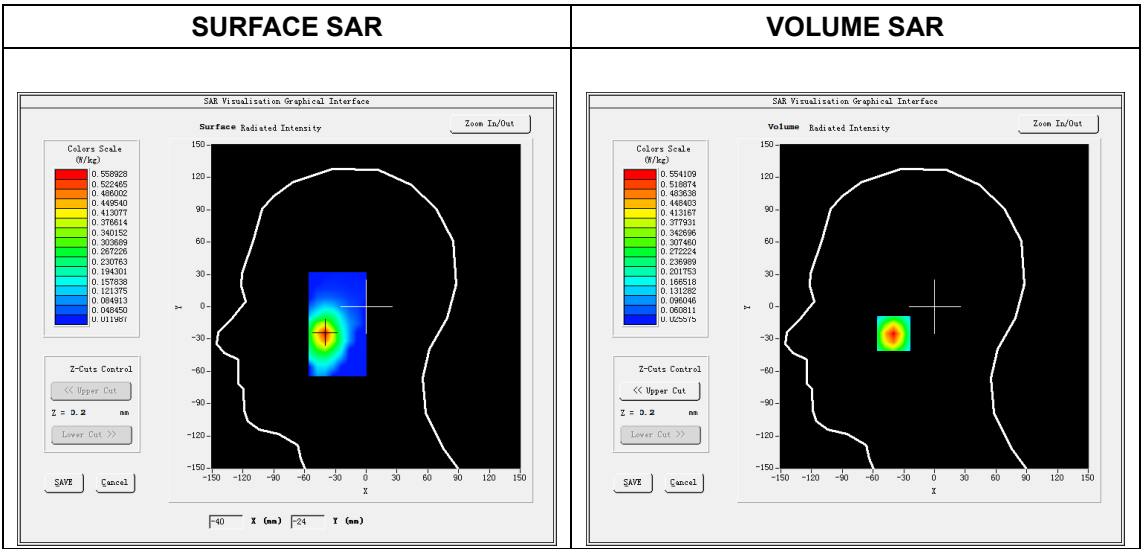
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 66
Channels	QPSK, 20MHz, 1RB, Middle
Signal	Duty Cycle 1:1

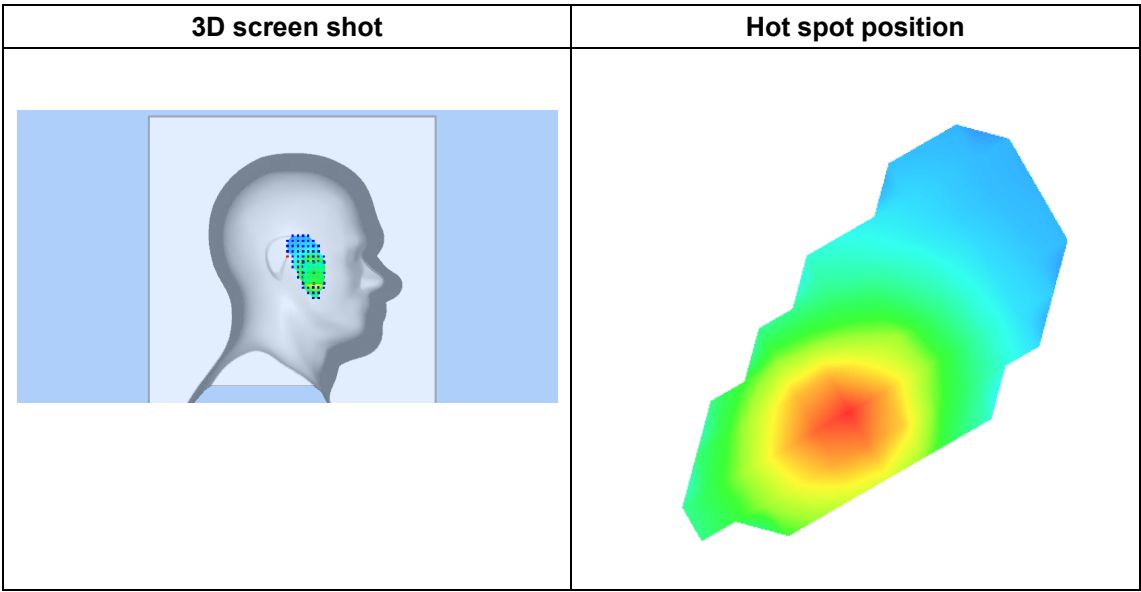
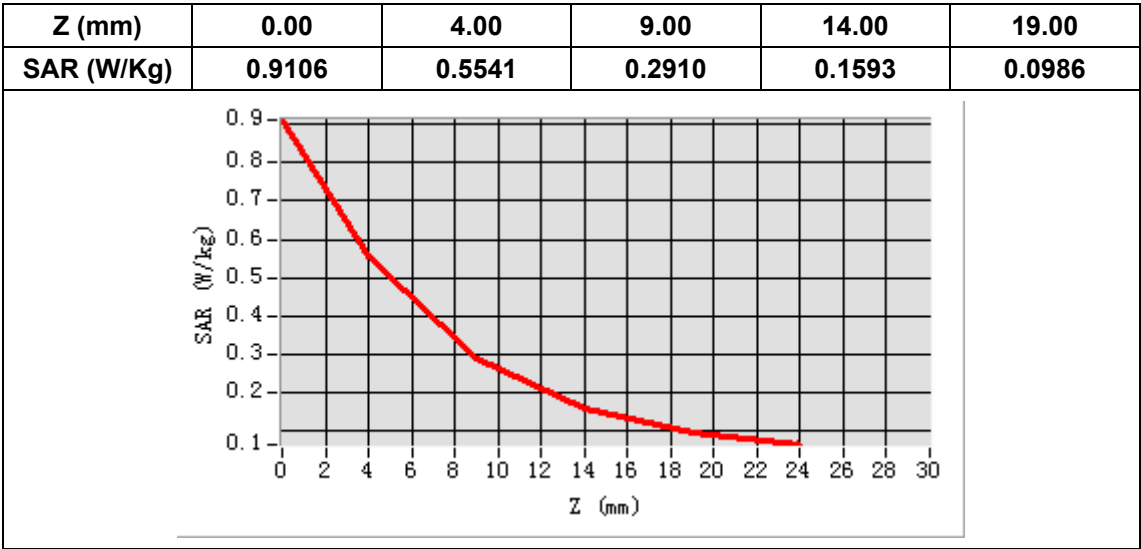
B. SAR Measurement Results

Frequency (MHz)	1744.900000
Relative Permittivity (real part)	39.281327
Conductivity (S/m)	1.372948
Power Variation (%)	1.169900
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=-40.00, Y=-25.00
SAR Peak: 0.91 W/kg

SAR 10g (W/Kg)	0.274511
SAR 1g (W/Kg)	0.516551



MEASUREMENT 14

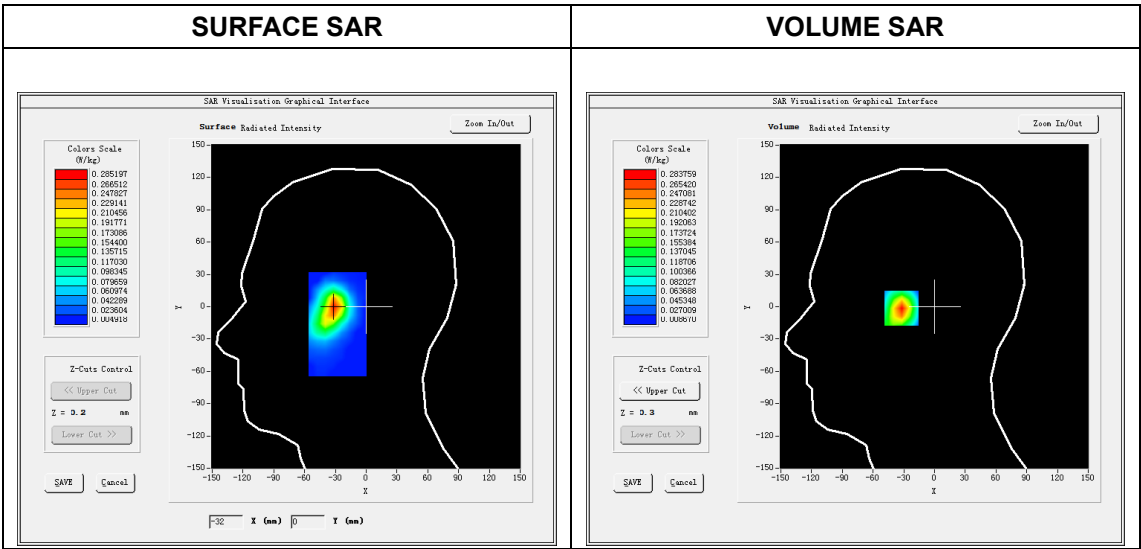
Type: Measurement (Complete)
Date of measurement: 2025-08-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	WiFi_802.11b
Channels	Middle
Signal	Duty Cycle 1:1

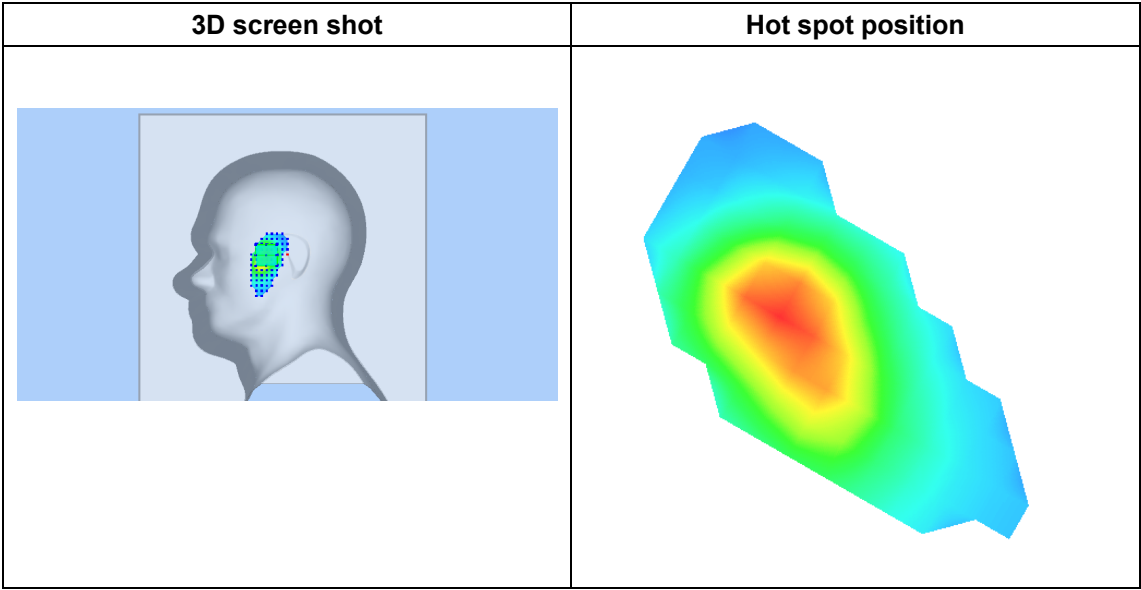
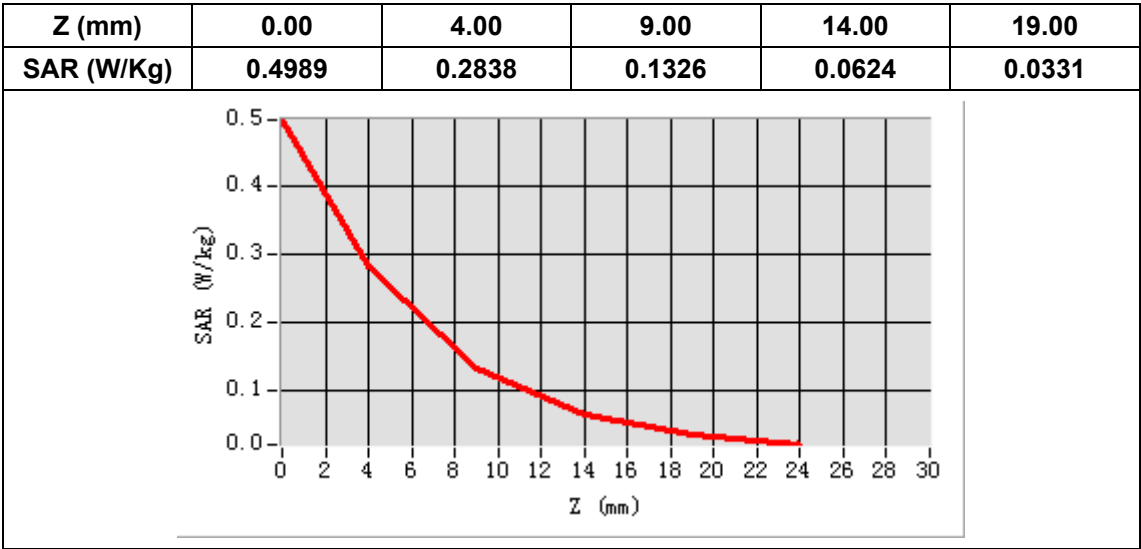
B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative Permittivity (real part)	38.544231
Conductivity (S/m)	1.763168
Power Variation (%)	-1.963800
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=-31.00, Y=0.00
SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.122244
SAR 1g (W/Kg)	0.260594



MEASUREMENT 15

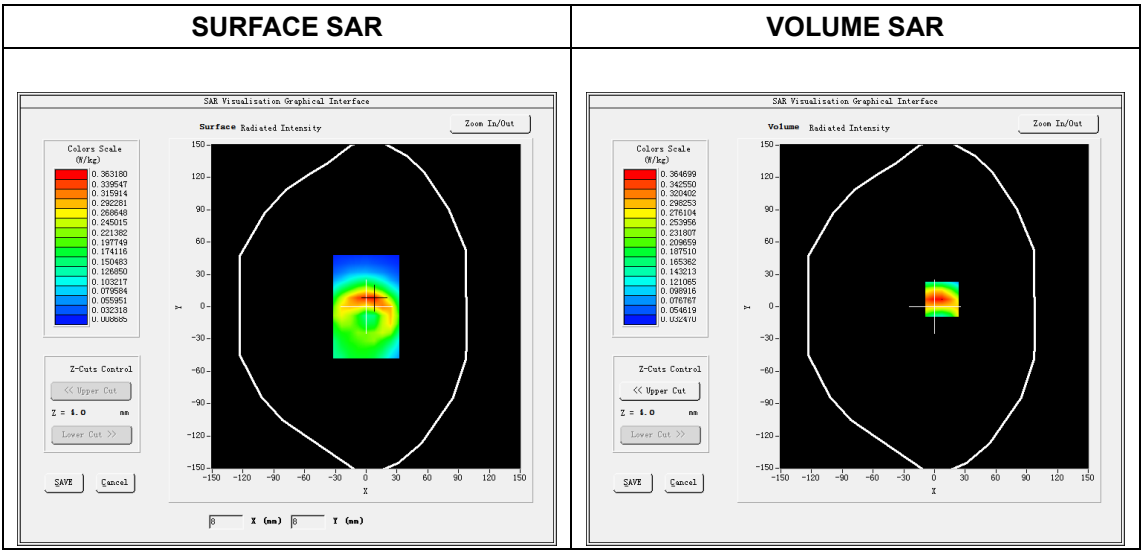
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

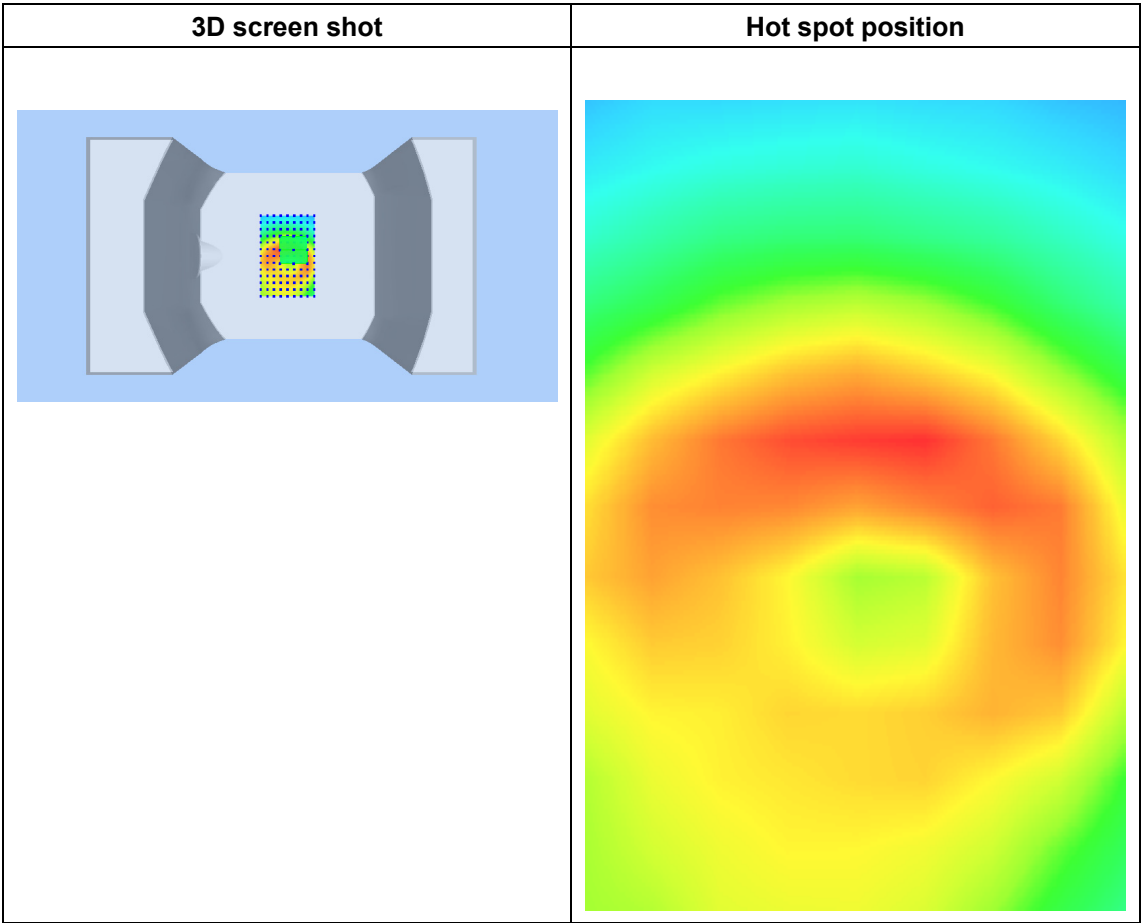
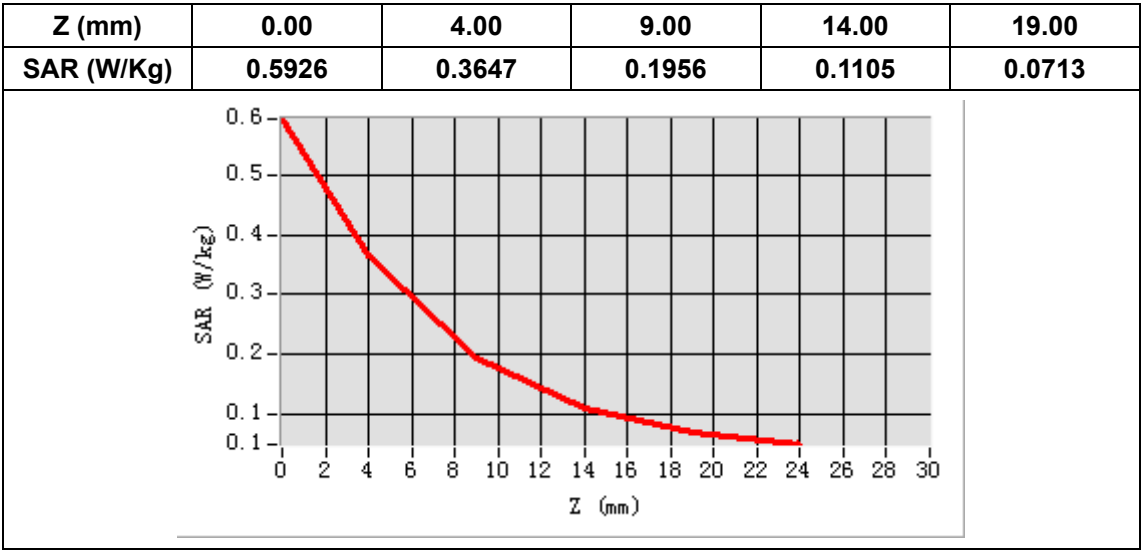
B. SAR Measurement Results

Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.143224
Conductivity (S/m)	0.892451
Power Variation (%)	1.747200
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=7.00, Y=7.00
SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.192217
SAR 1g (W/Kg)	0.345722



MEASUREMENT 16

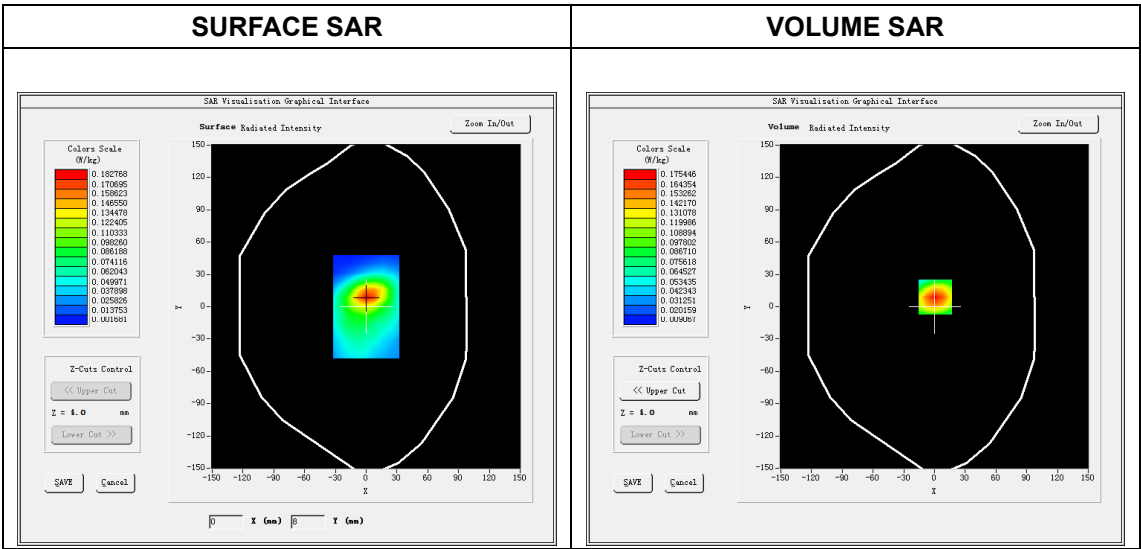
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

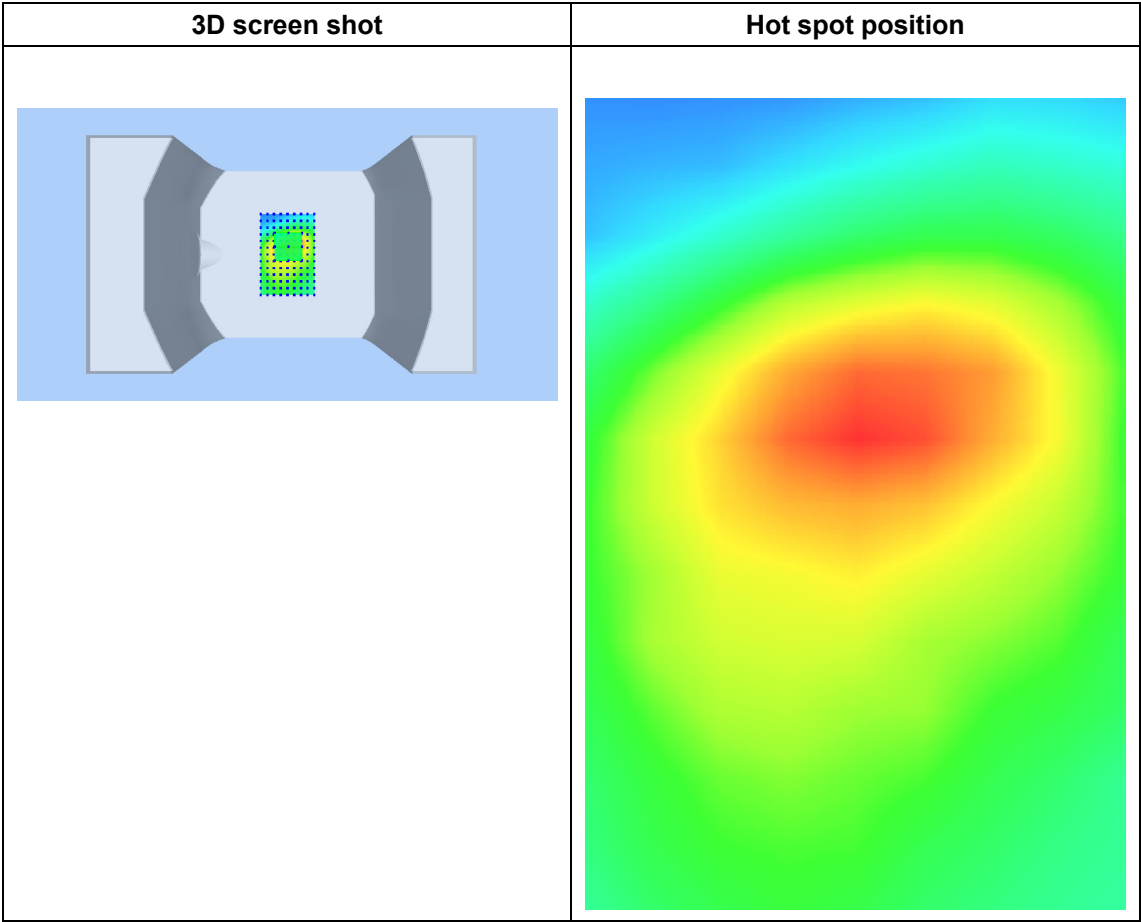
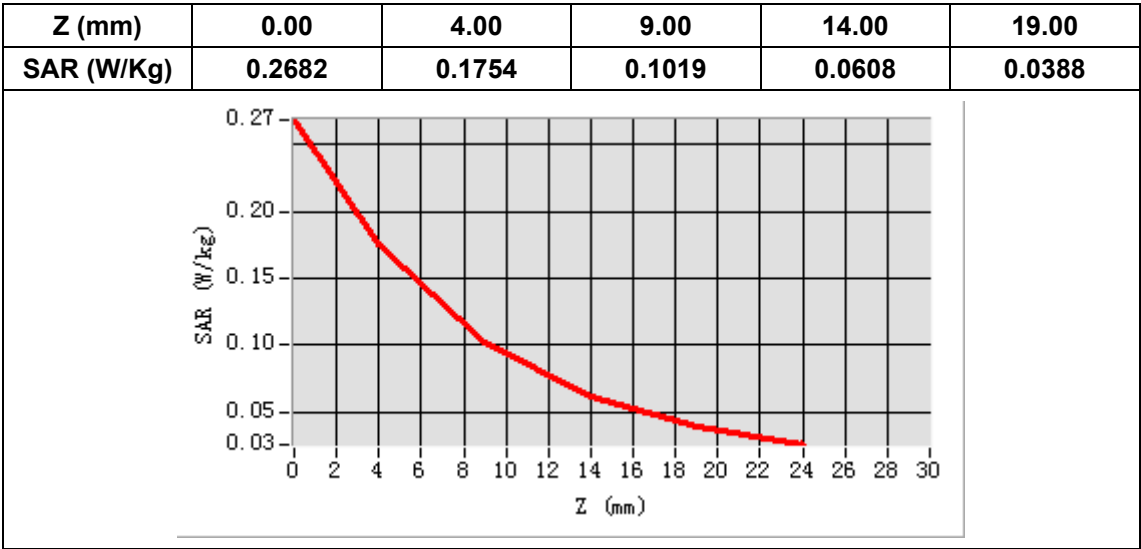
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative Permittivity (real part)	39.281248
Conductivity (S/m)	1.373671
Power Variation (%)	-1.174100
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=1.00, Y=9.00
SAR Peak: 0.27 W/kg

SAR 10g (W/Kg)	0.093656
SAR 1g (W/Kg)	0.164620



MEASUREMENT 17/31

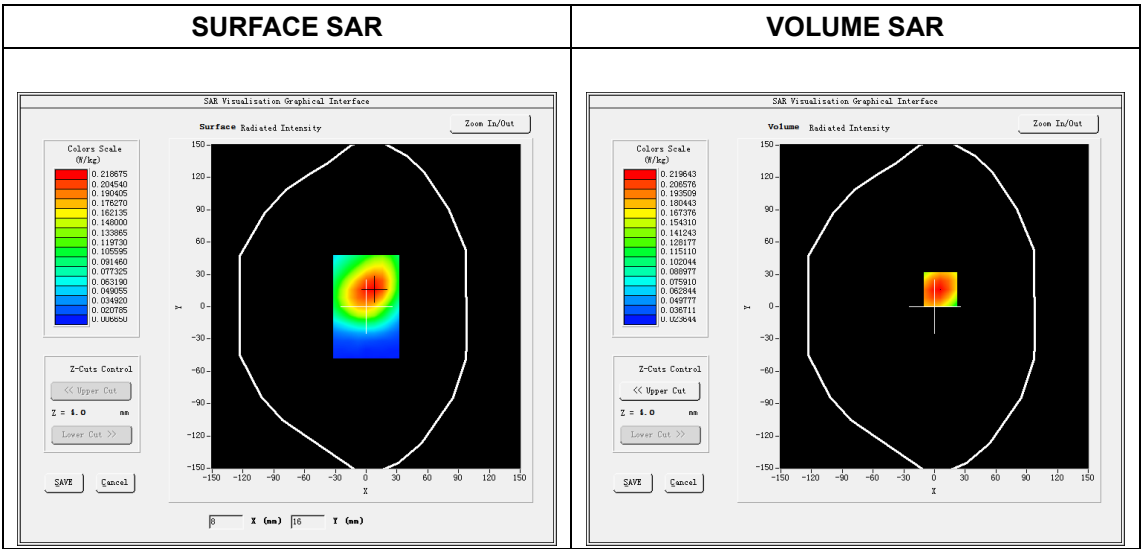
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

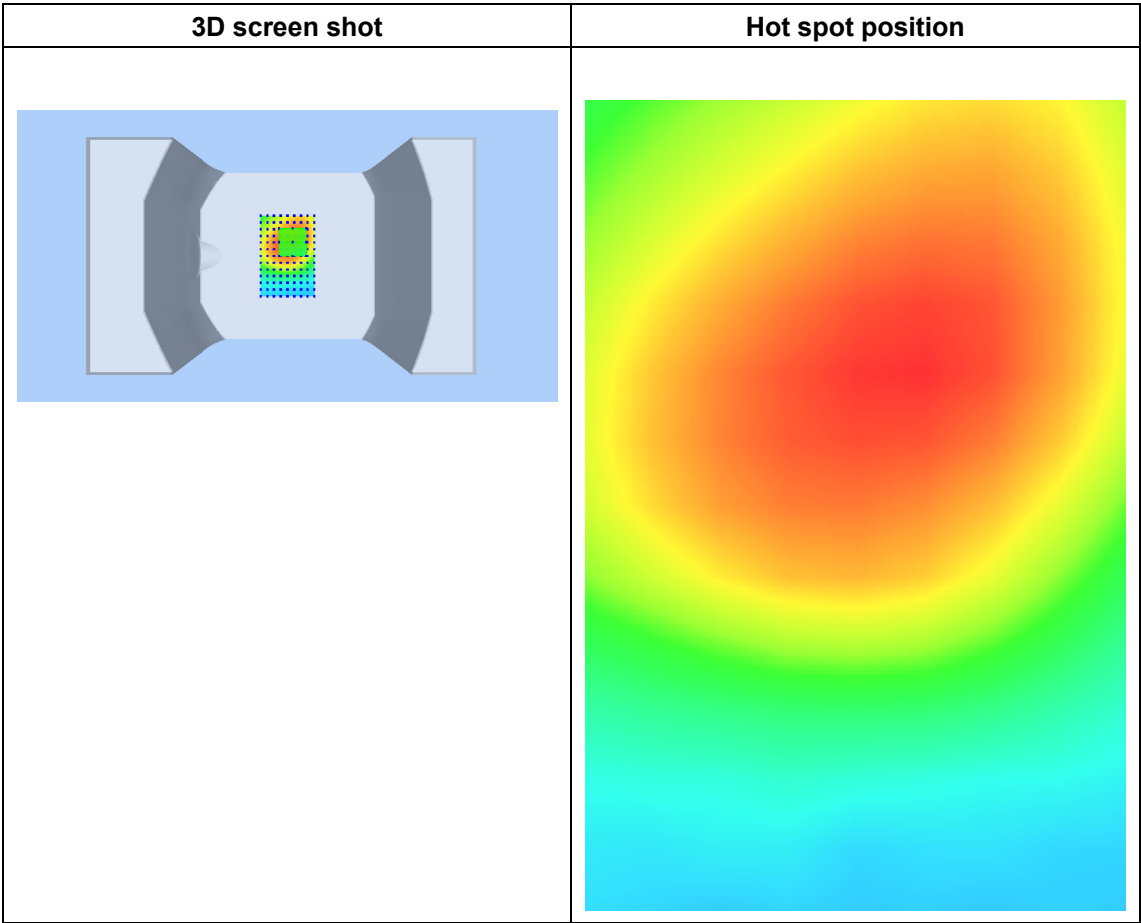
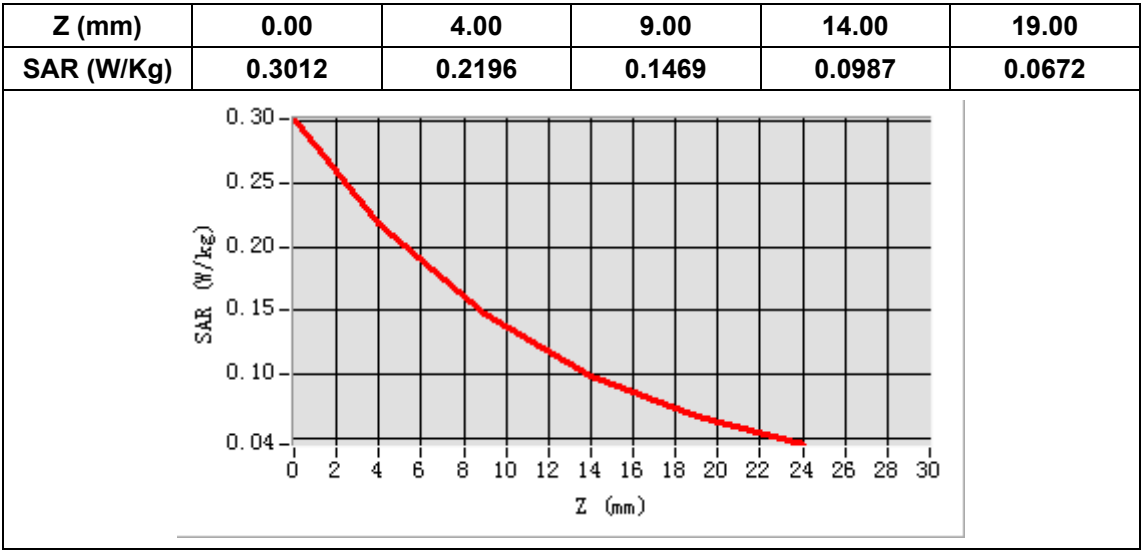
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	39.281248
Conductivity (S/m)	1.373671
Power Variation (%)	-1.477500
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=6.00, Y=16.00

SAR Peak: 0.30 W/kg

SAR 10g (W/Kg)	0.139400
SAR 1g (W/Kg)	0.210799



MEASUREMENT 18

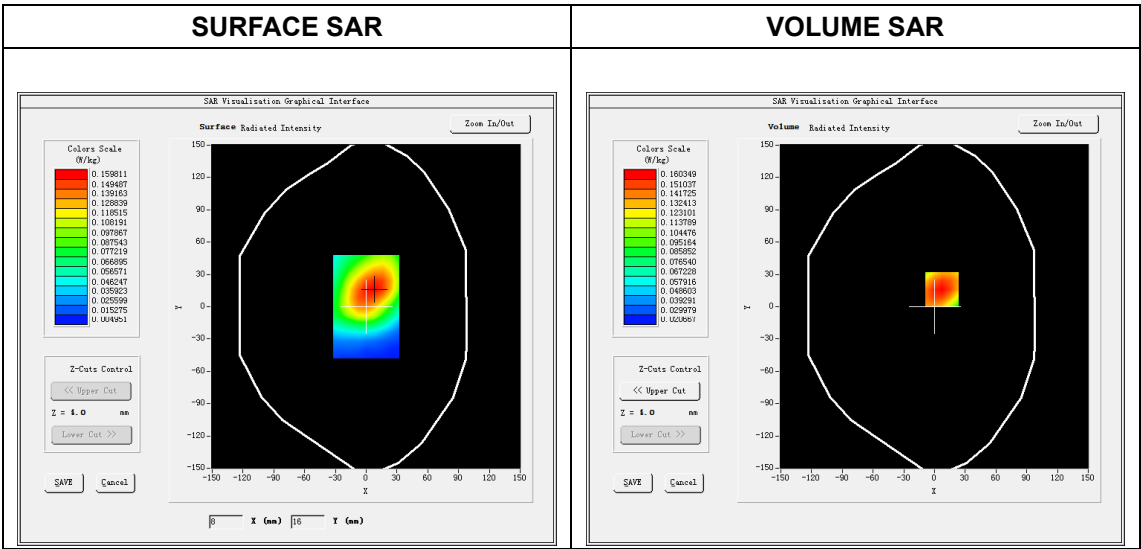
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WCDMA1700_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

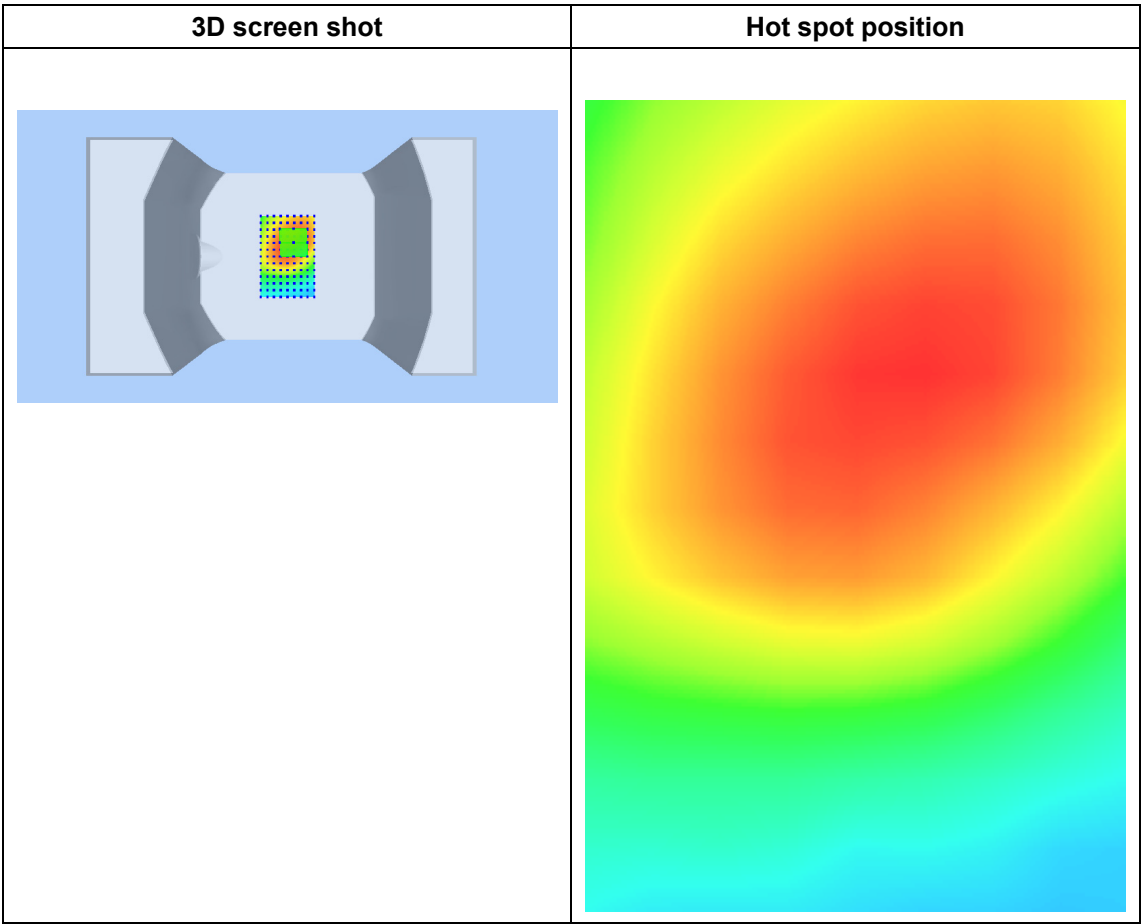
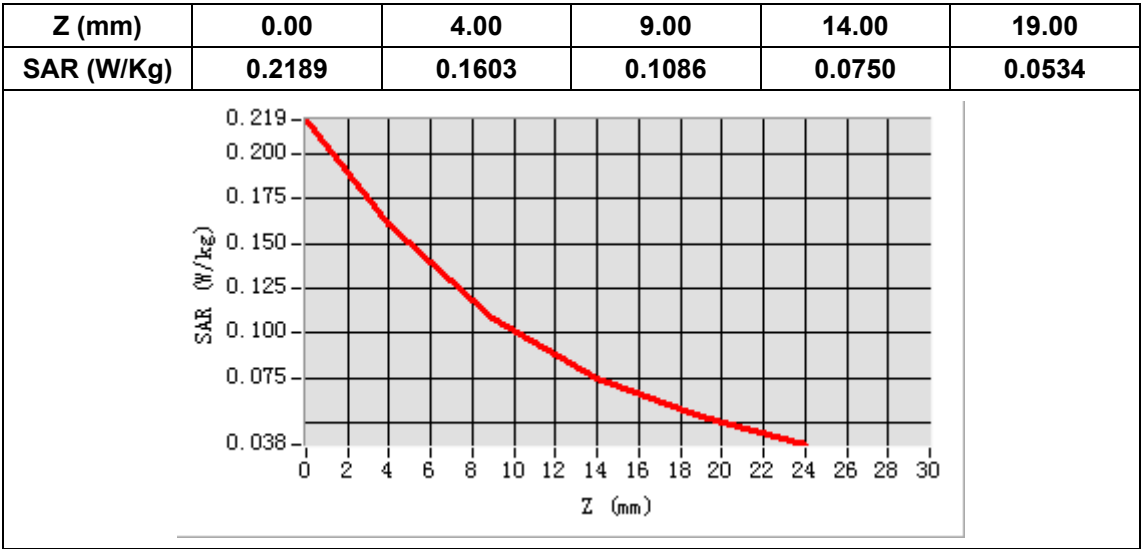
Frequency (MHz)	1712.400000
Relative Permittivity (real part)	39.281275
Conductivity (S/m)	1.374607
Power Variation (%)	4.424300
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=7.00, Y=16.00

SAR Peak: 0.22 W/kg

SAR 10g (W/Kg)	0.104531
SAR 1g (W/Kg)	0.154023



MEASUREMENT 19

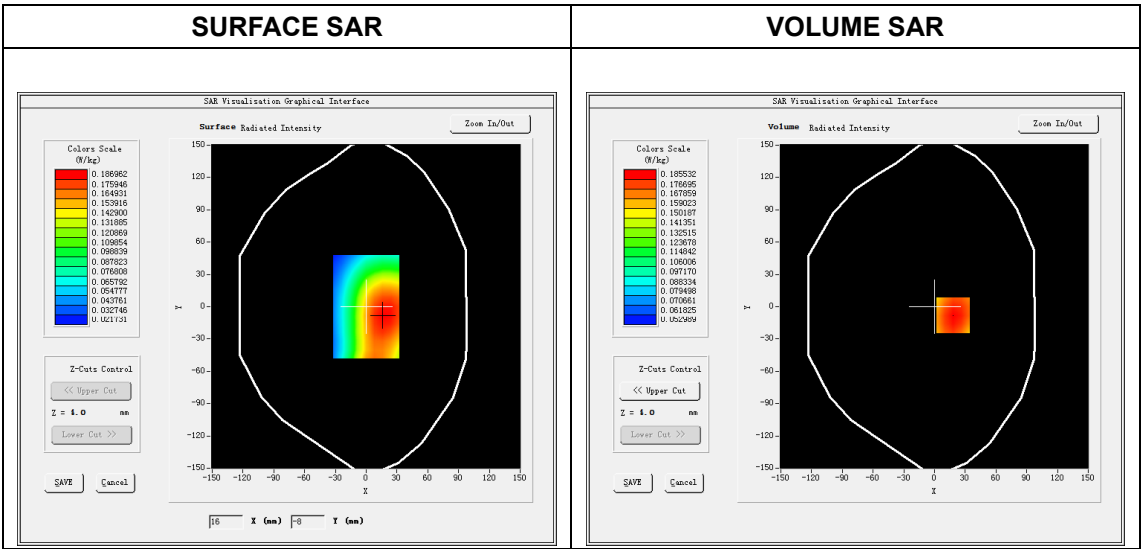
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WCDMA850_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

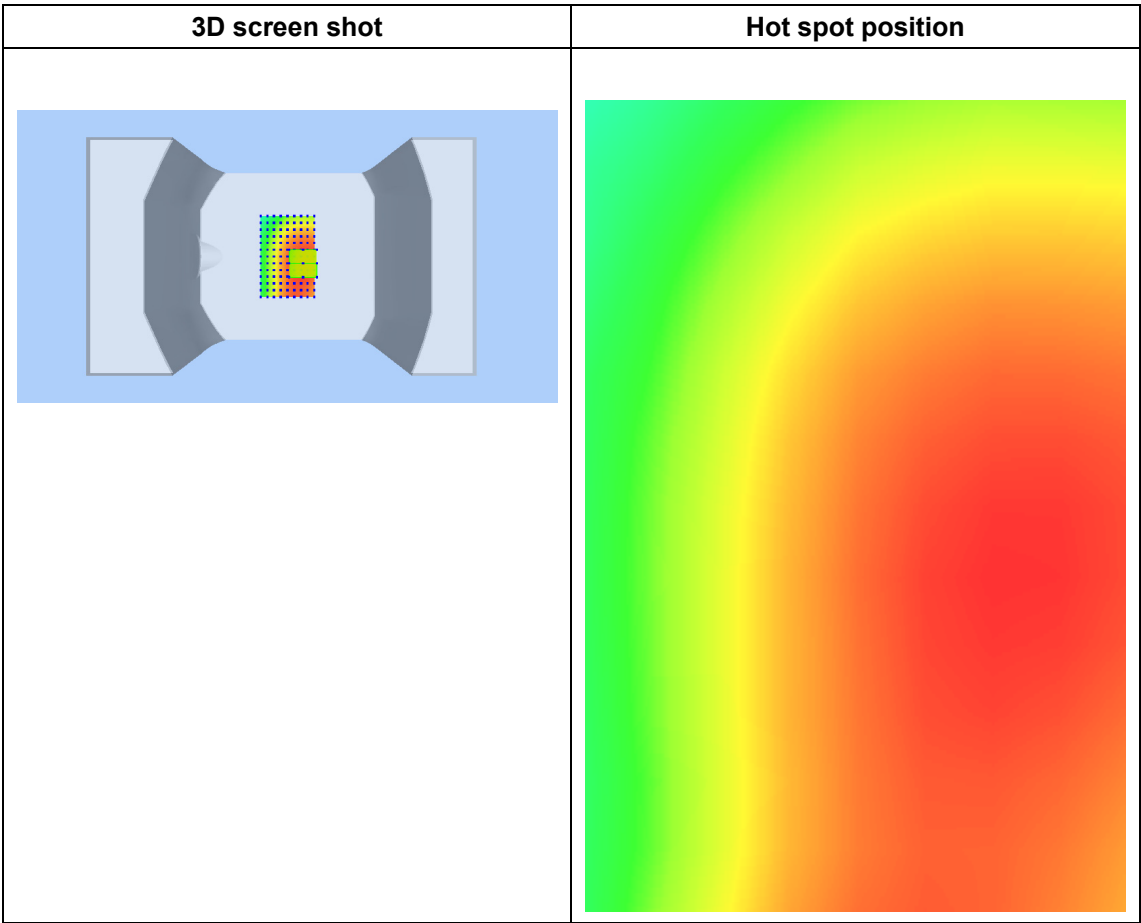
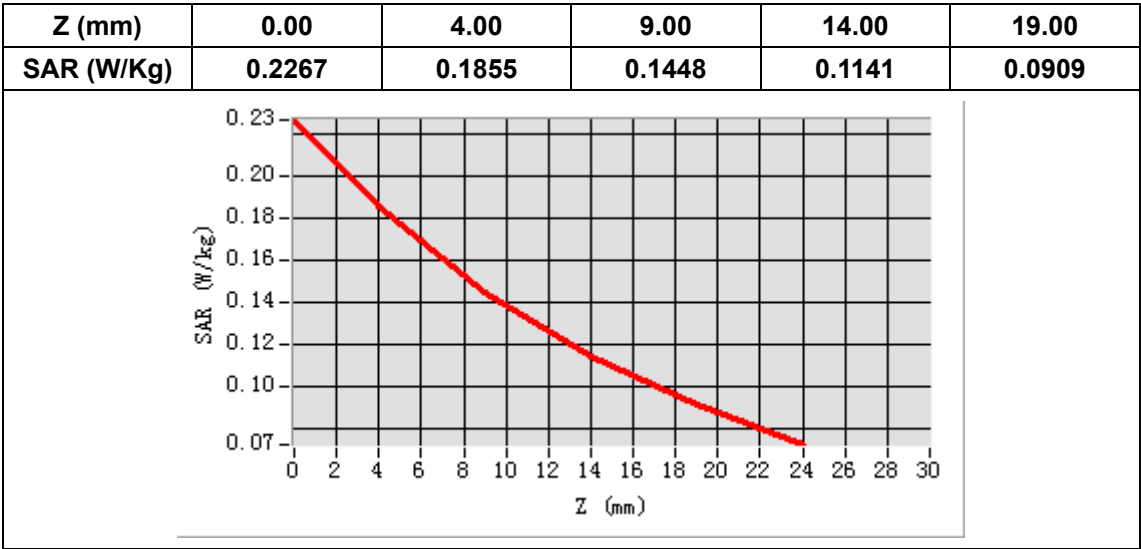
Frequency (MHz)	836.600000
Relative Permittivity (real part)	40.833245
Conductivity (S/m)	0.891245
Power Variation (%)	-1.239800
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=18.00, Y=-8.00

SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.136788
SAR 1g (W/Kg)	0.179880



MEASUREMENT 20/34

Type: Measurement (Complete)

Date of measurement: 2025-08-21

Measurement duration: 12 minutes 3 seconds

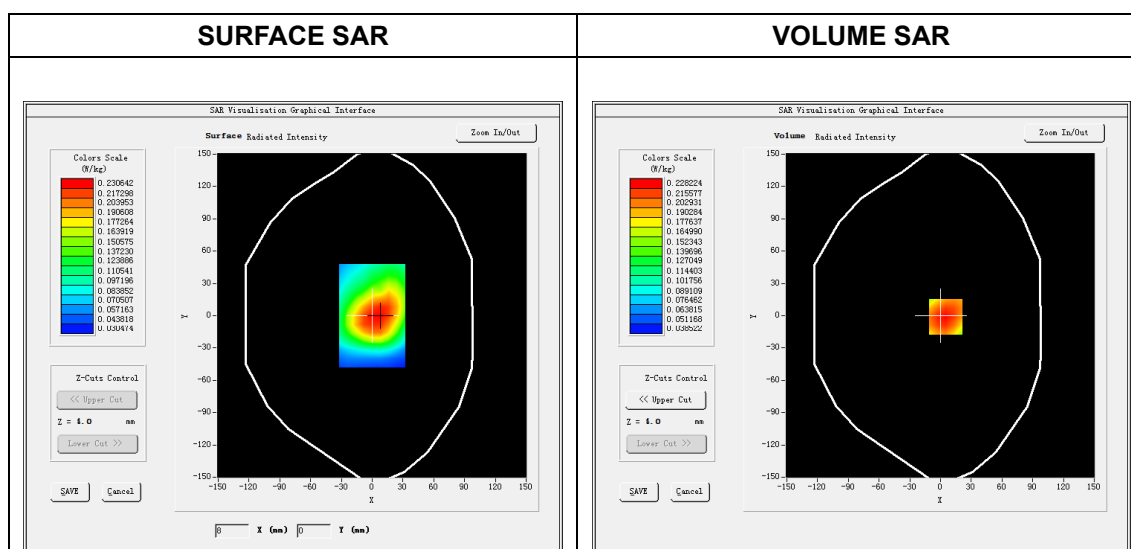
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 2
Channels	QPSK, 20MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

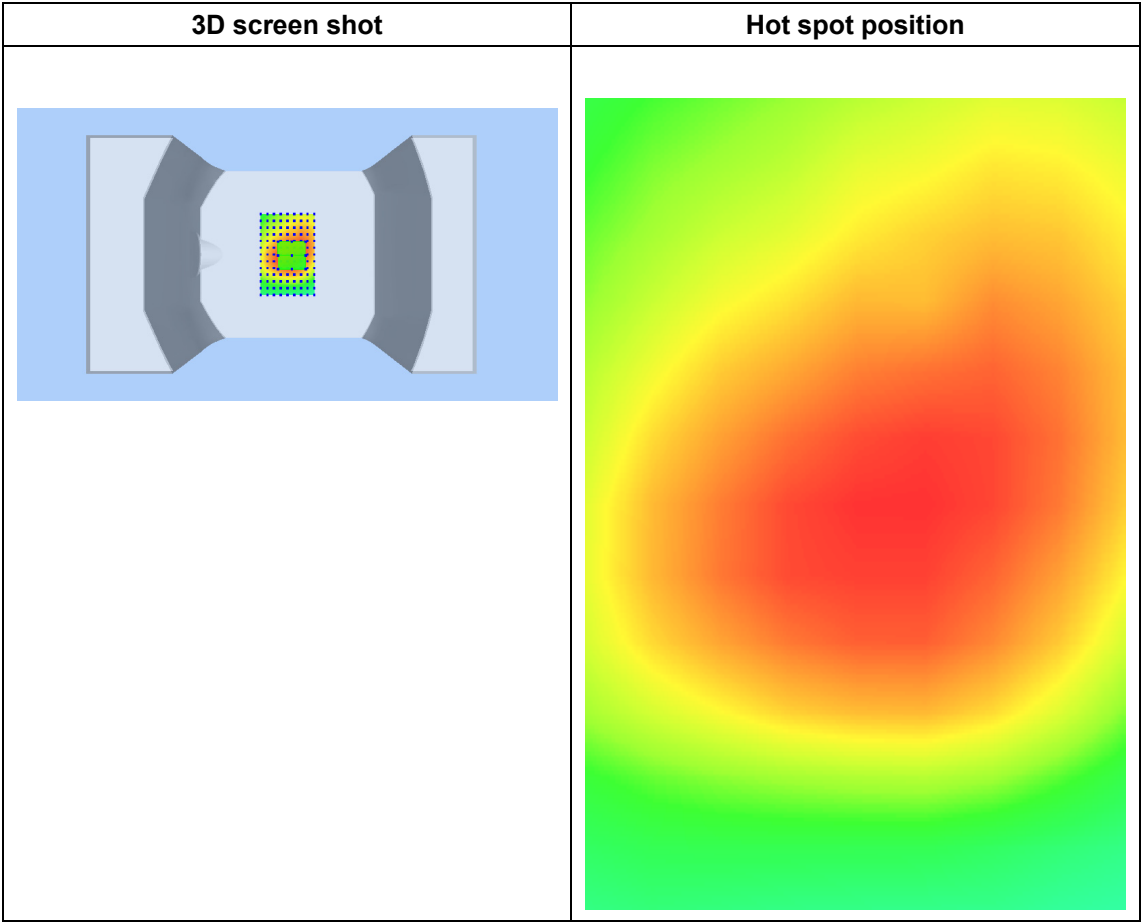
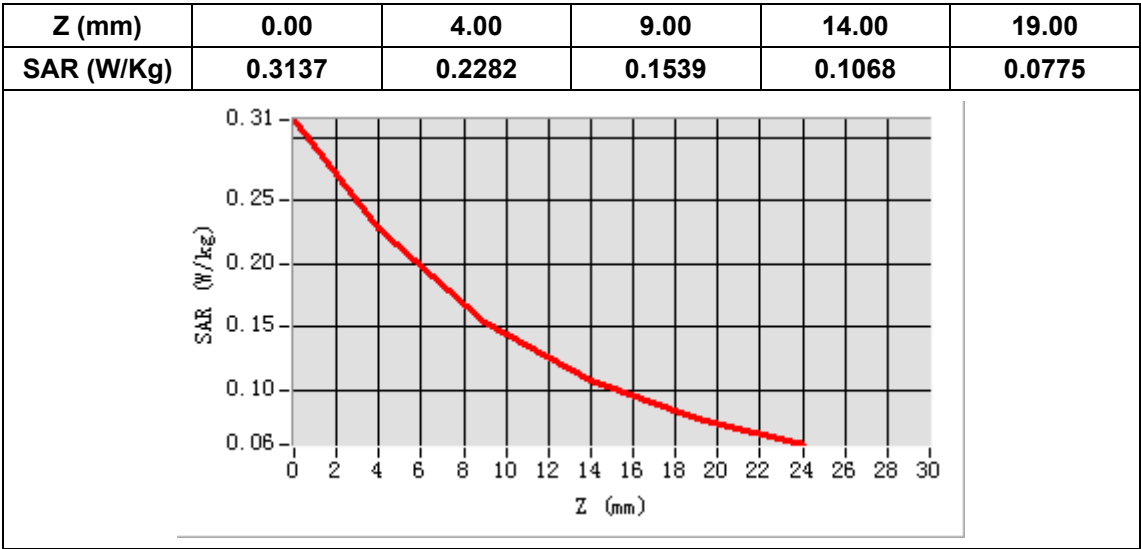
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	39.281248
Conductivity (S/m)	1.373671
Power Variation (%)	-2.941700
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=5.00, Y=-1.00

SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.150227
SAR 1g (W/Kg)	0.219944



MEASUREMENT 21/35

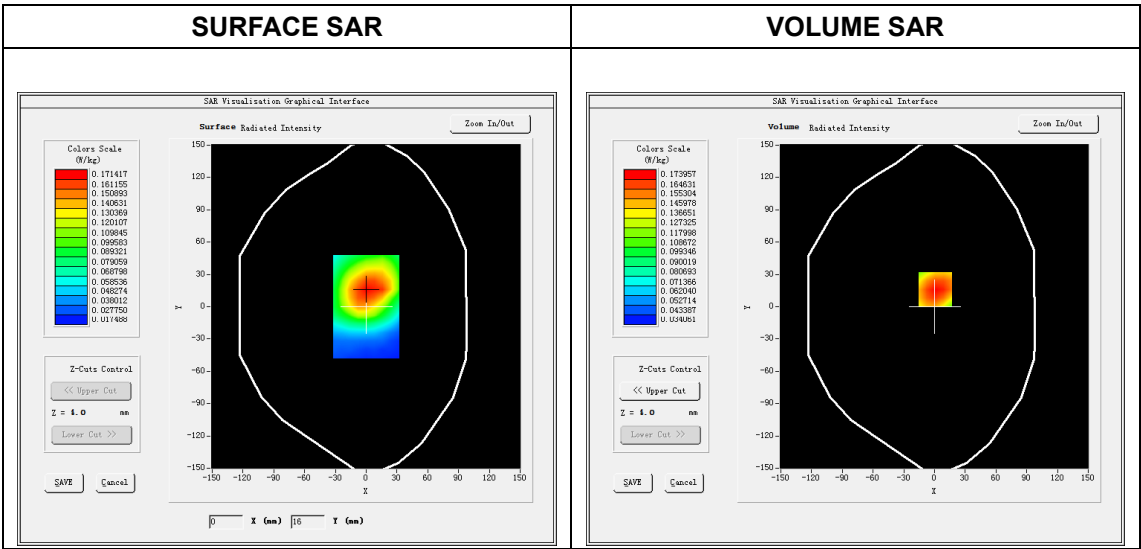
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 4
Channels	QPSK, 1.4MHz, 1RB, Low
Signal	Duty Cycle 1:1

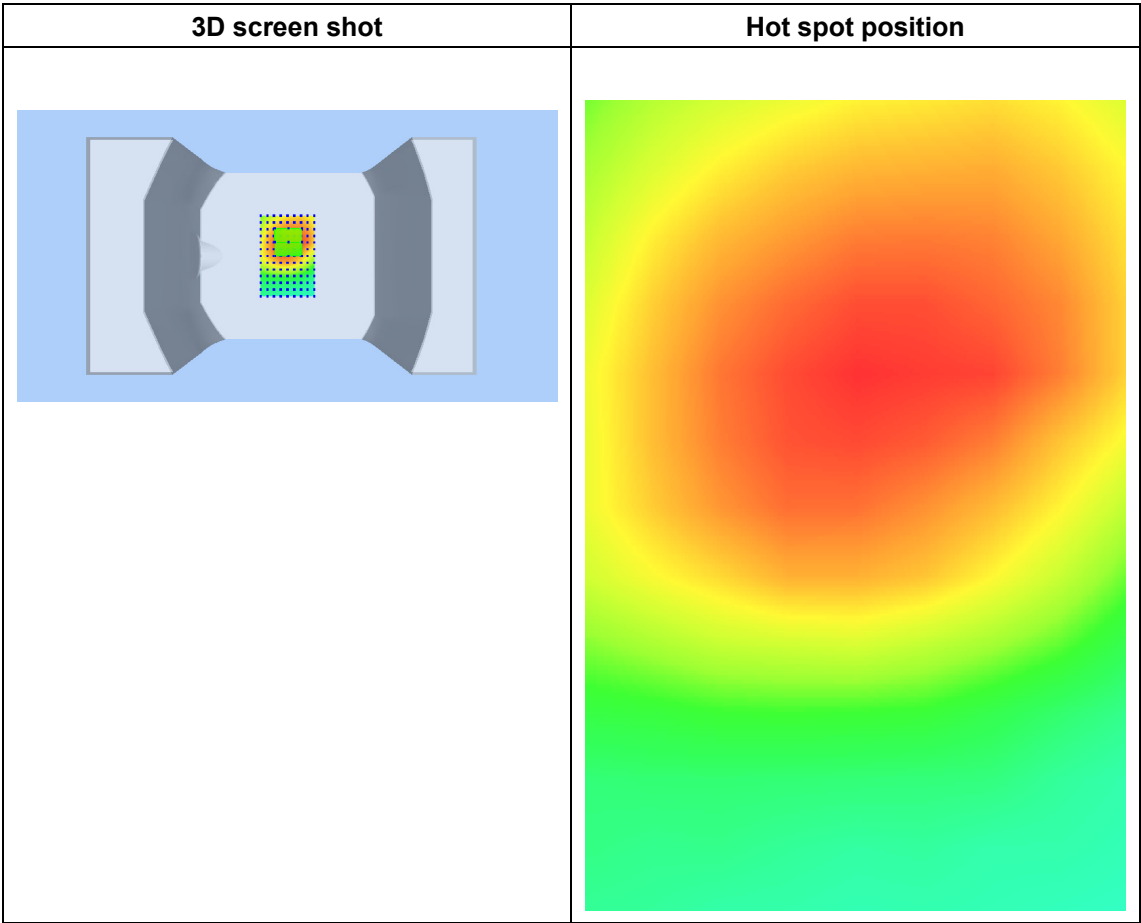
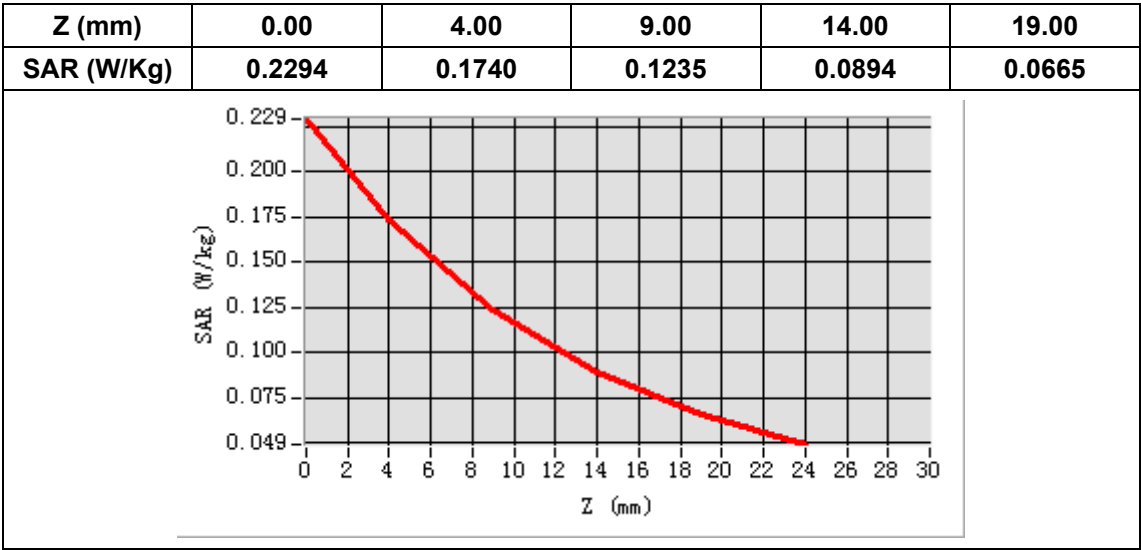
B. SAR Measurement Results

Frequency (MHz)	1710.700000
Relative Permittivity (real part)	39.281375
Conductivity (S/m)	1.372874
Power Variation (%)	2.866400
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=1.00, Y=16.00
SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.116782
SAR 1g (W/Kg)	0.167291



MEASUREMENT 22/36

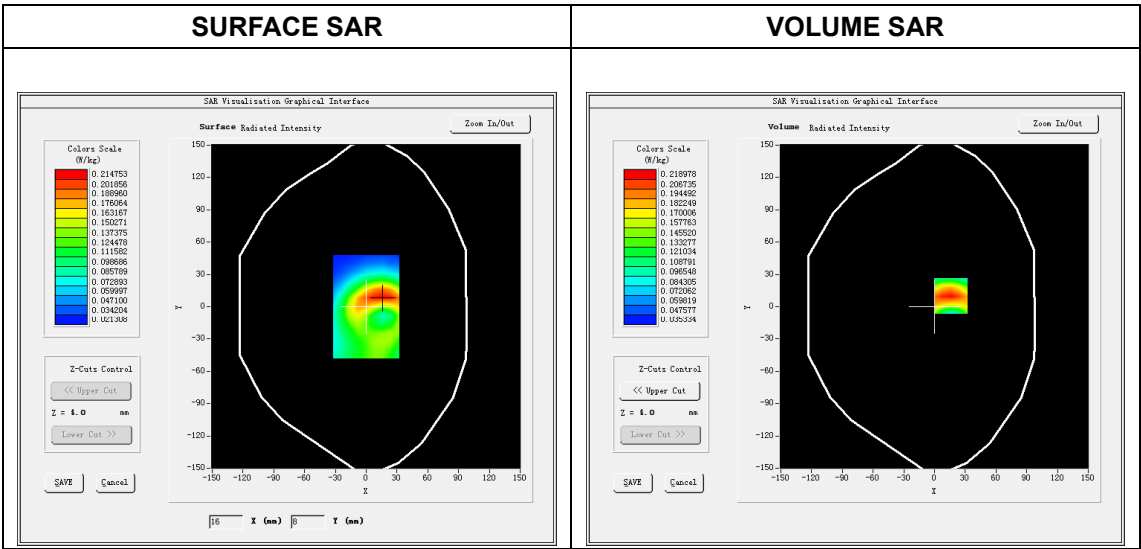
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 5
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

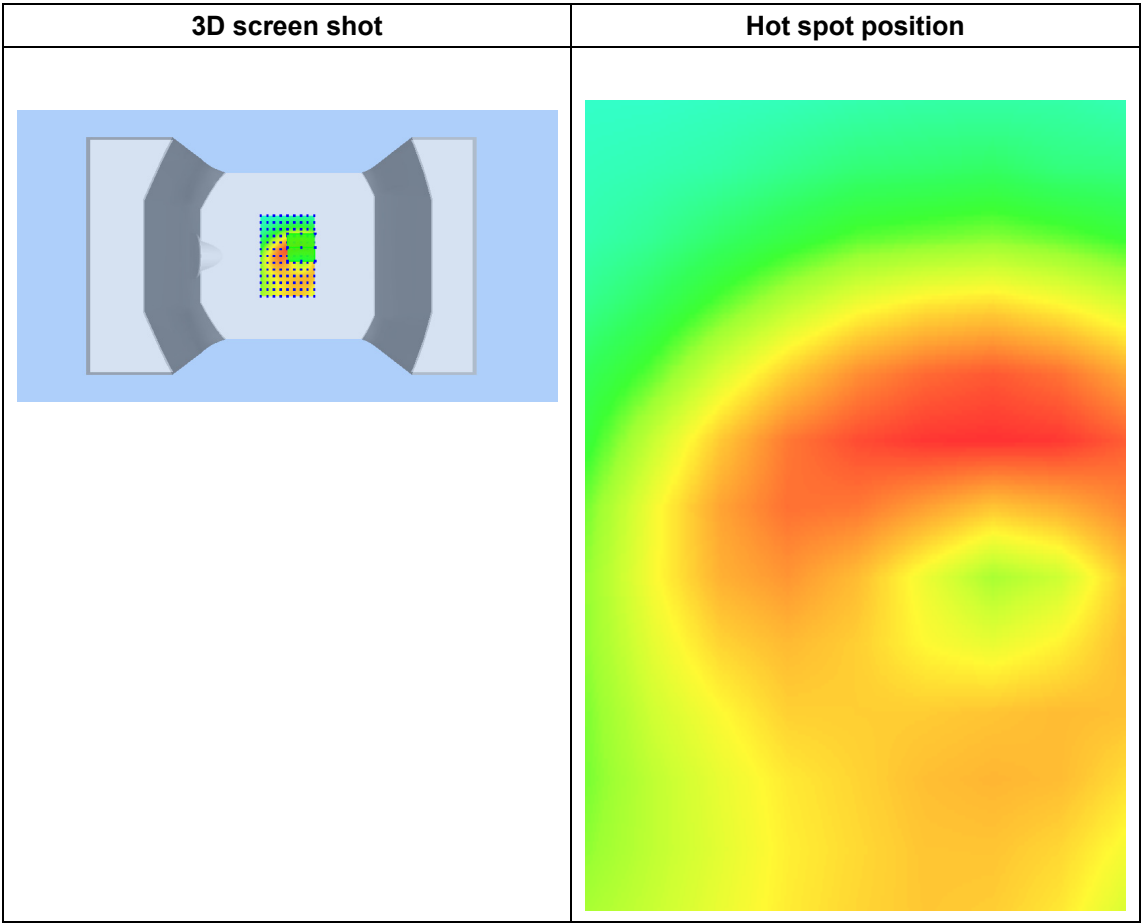
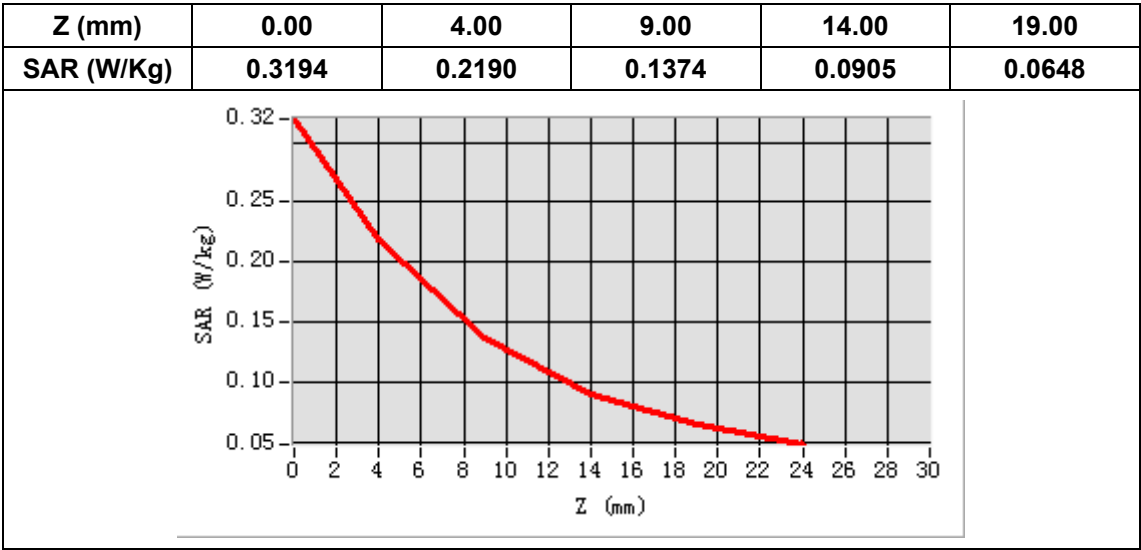
Frequency (MHz)	829.000000
Relative Permittivity (real part)	41.143245
Conductivity (S/m)	0.892451
Power Variation (%)	2.814700
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=16.00, Y=10.00

SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.127517
SAR 1g (W/Kg)	0.206234



MEASUREMENT 23/37

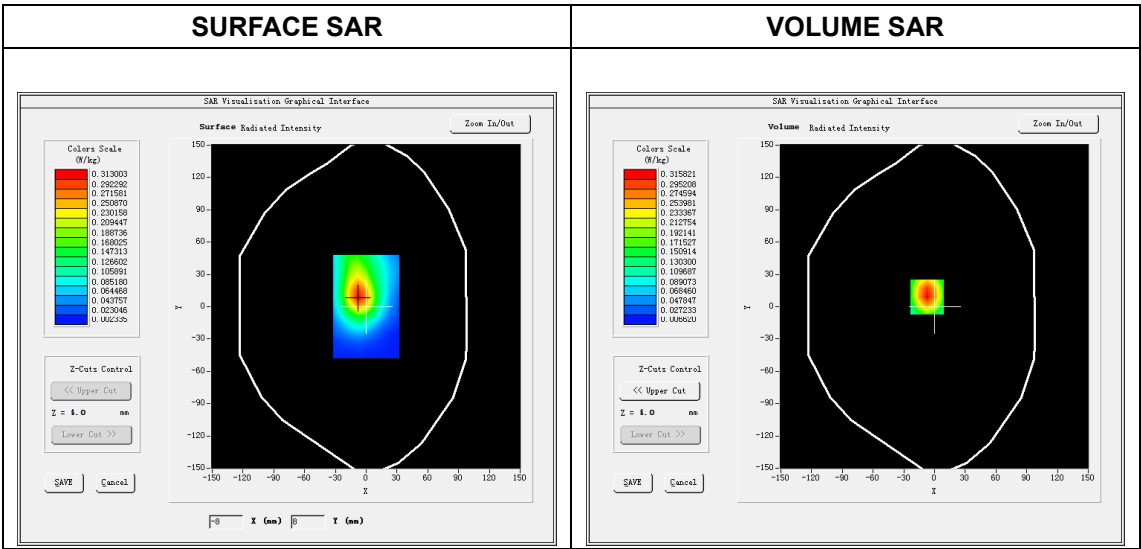
Type: Measurement (Complete)
Date of measurement: 2025-08-28
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.36; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 7
Channels	QPSK, 20MHz, 1RB, High
Signal	Duty Cycle 1:1

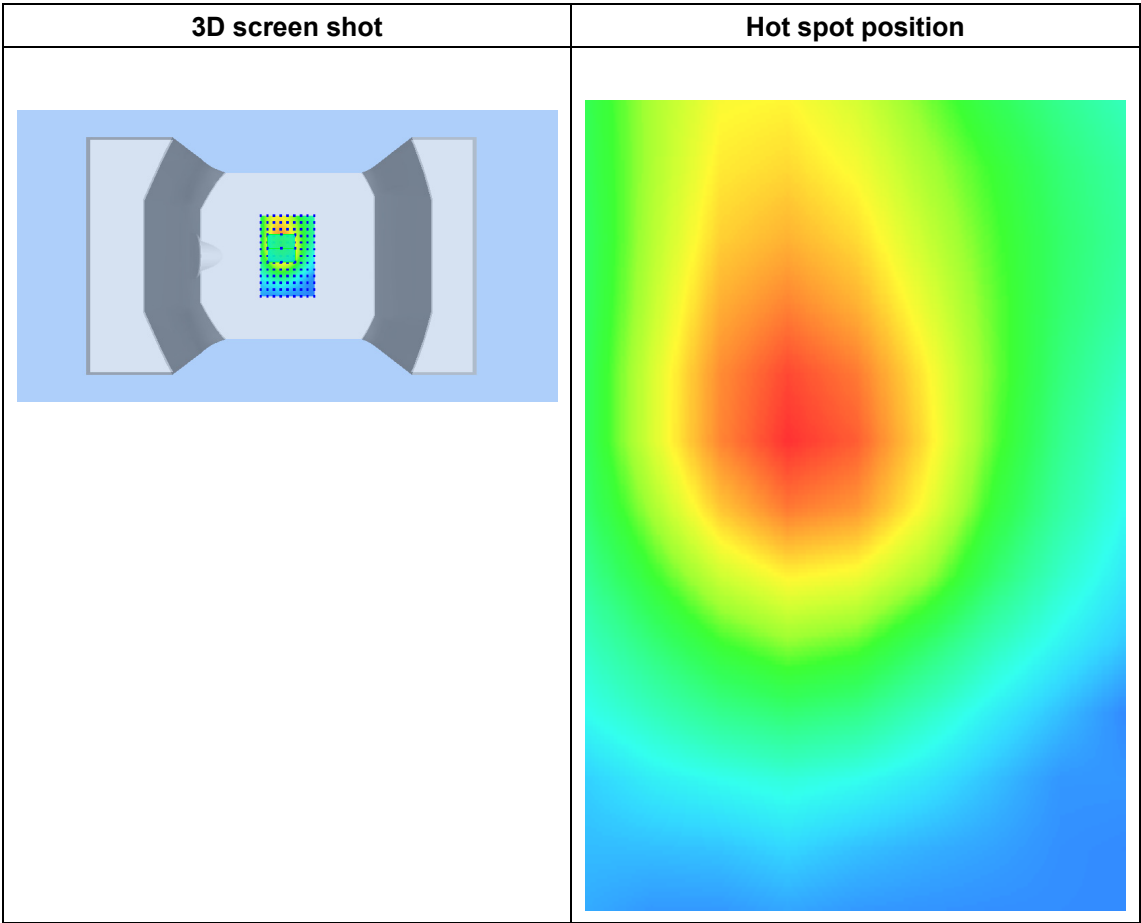
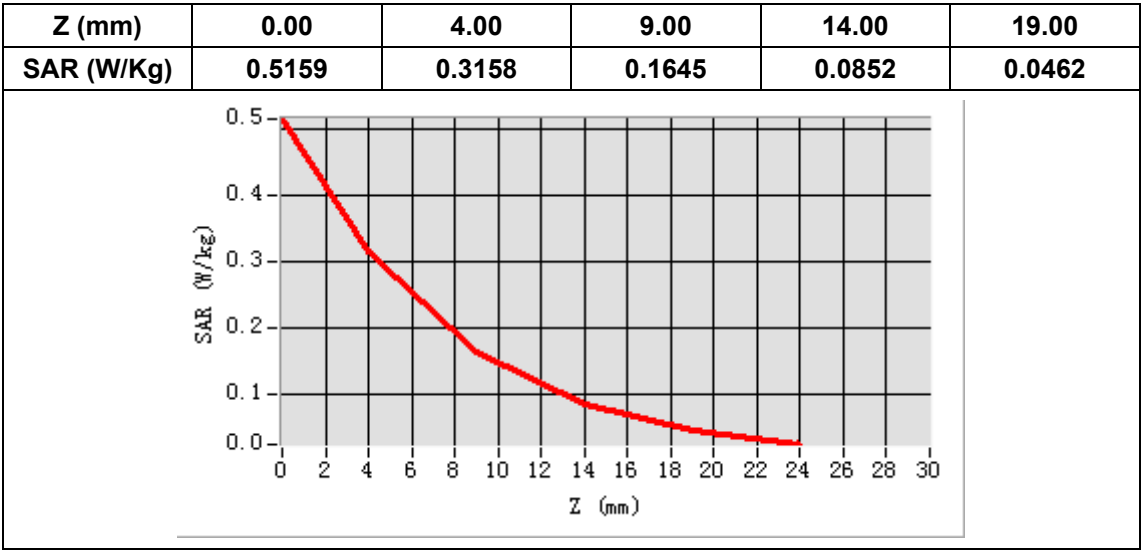
B. SAR Measurement Results

Frequency (MHz)	2560.000000
Relative Permittivity (real part)	38.893245
Conductivity (S/m)	1.941451
Power Variation (%)	-0.861400
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=-7.00, Y=9.00
SAR Peak: 0.52 W/kg

SAR 10g (W/Kg)	0.155684
SAR 1g (W/Kg)	0.297739



MEASUREMENT 24/38

Type: Measurement (Complete)

Date of measurement: 2025-08-31

Measurement duration: 12 minutes 3 seconds

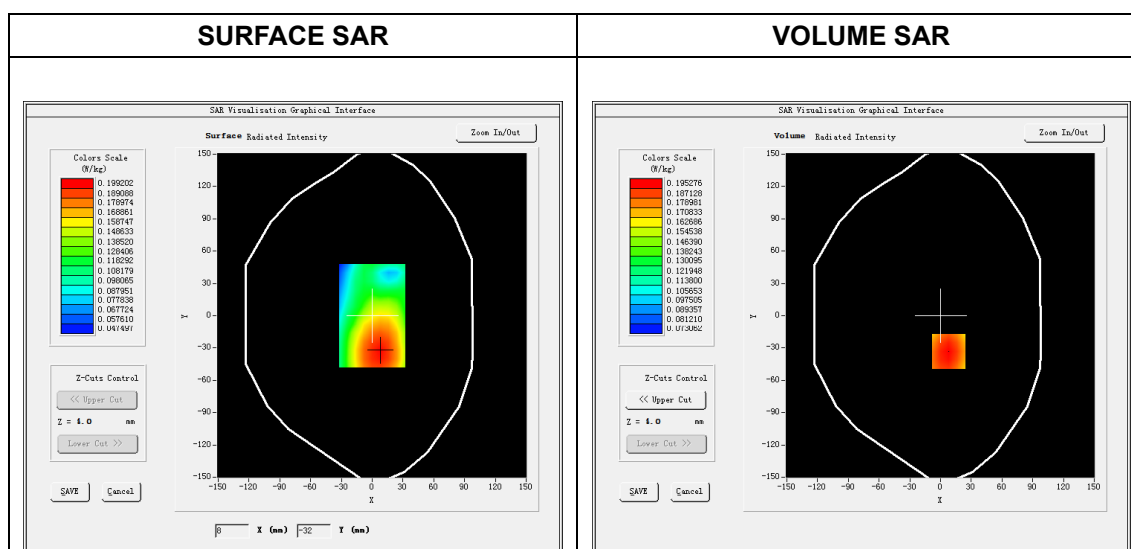
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.08; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 12
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

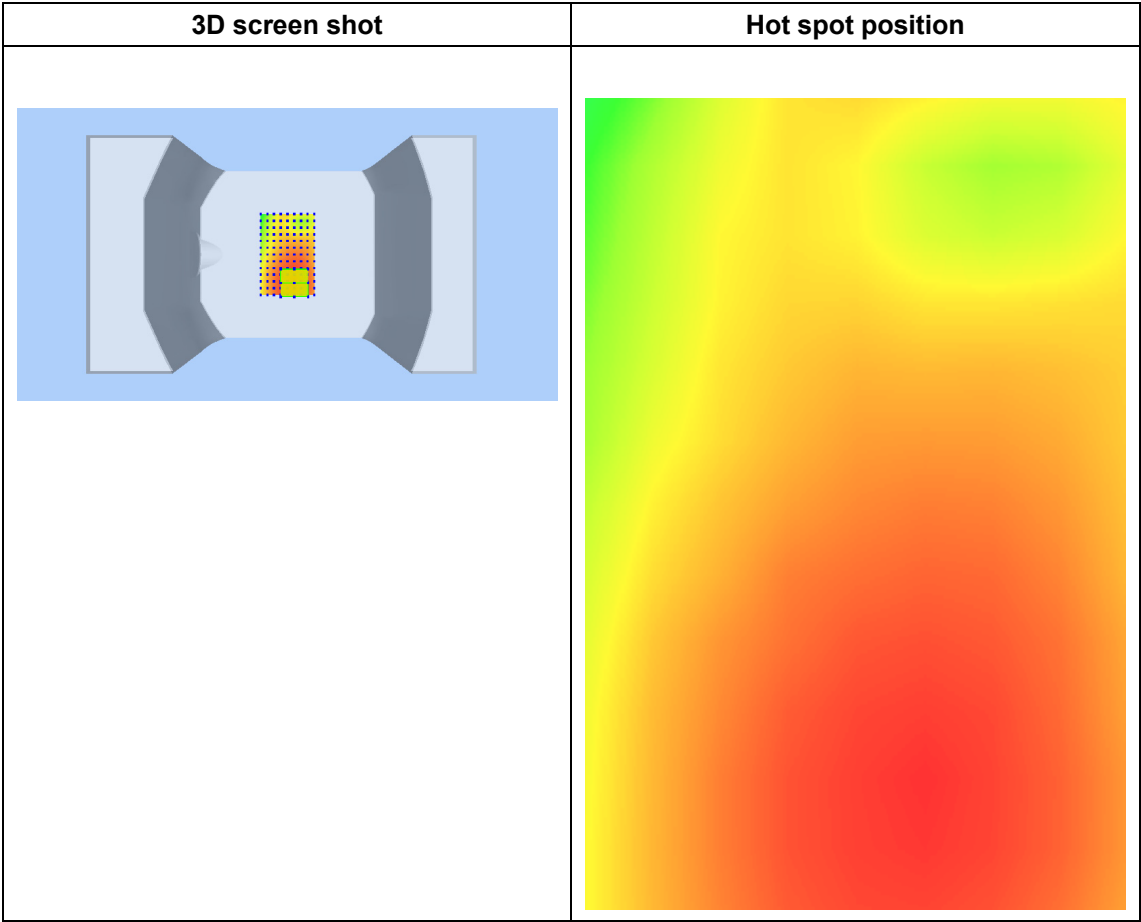
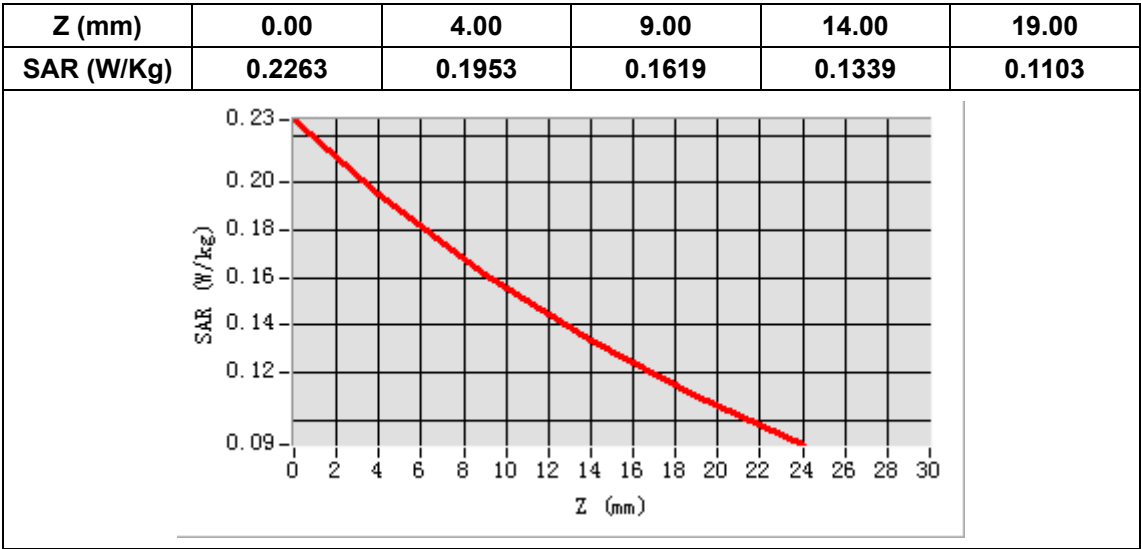
Frequency (MHz)	704.000000
Relative Permittivity (real part)	42.384156
Conductivity (S/m)	0.923129
Power Variation (%)	2.575100
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=8.00, Y=-33.00

SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.153978
SAR 1g (W/Kg)	0.194032



MEASUREMENT 25/39

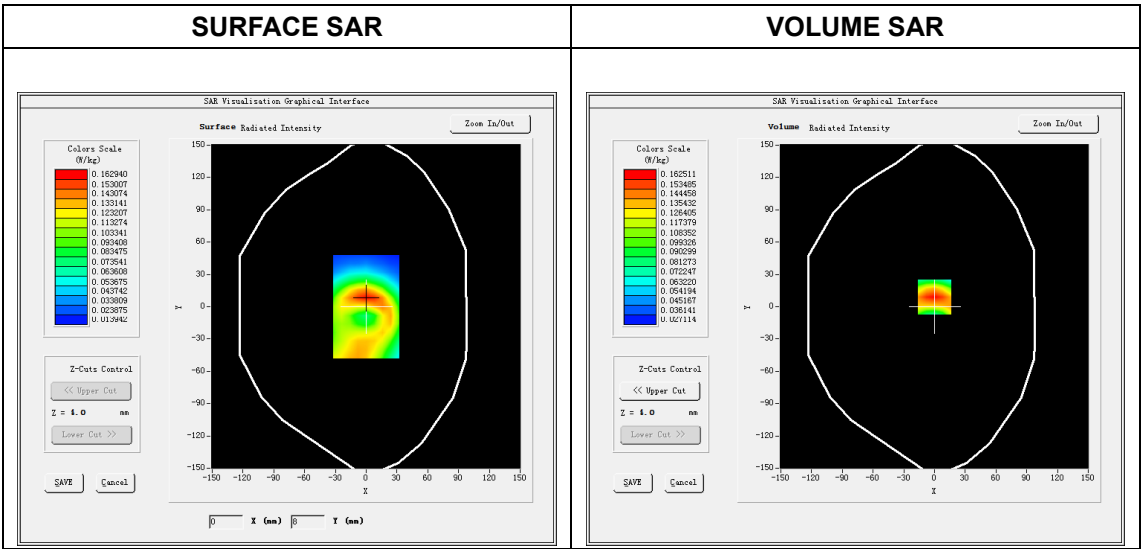
Type: Measurement (Complete)
Date of measurement: 2025-08-31
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.08; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 13
Channels	QPSK, 5MHz, 1RB, Middle
Signal	Duty Cycle 1:1

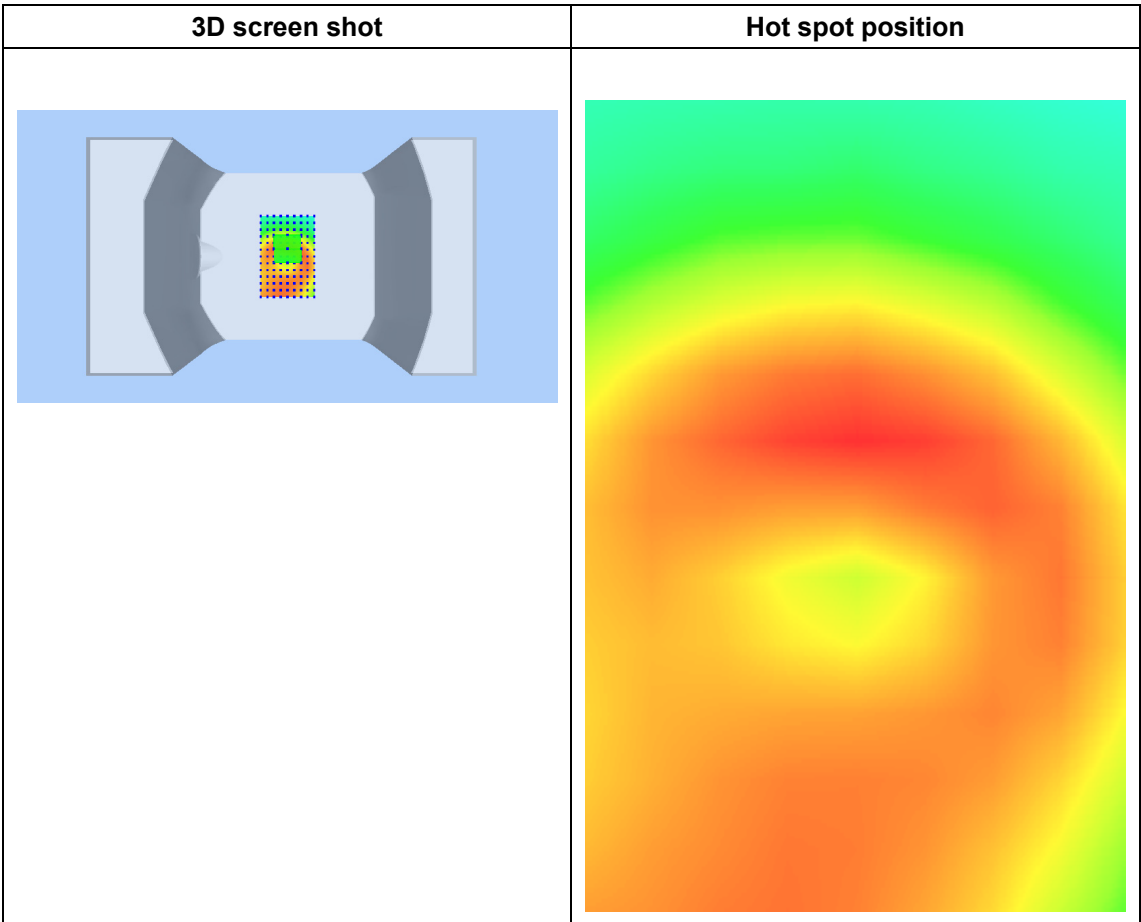
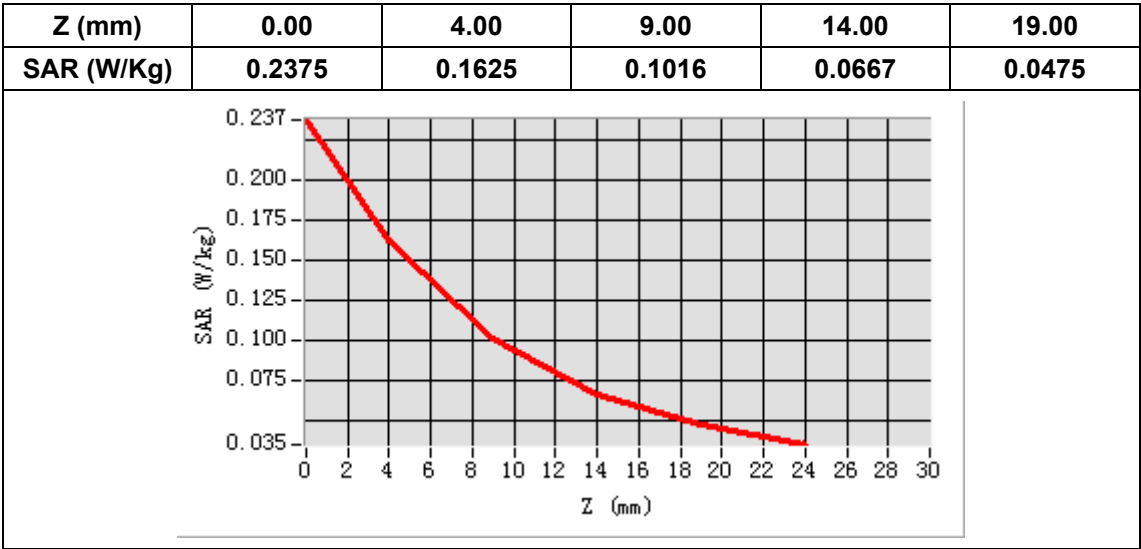
B. SAR Measurement Results

Frequency (MHz)	779.500000
Relative Permittivity (real part)	42.384224
Conductivity (S/m)	0.921925
Power Variation (%)	0.361500
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=0.00, Y=9.00
SAR Peak: 0.24 W/kg

SAR 10g (W/Kg)	0.094330
SAR 1g (W/Kg)	0.153110



MEASUREMENT 26/40

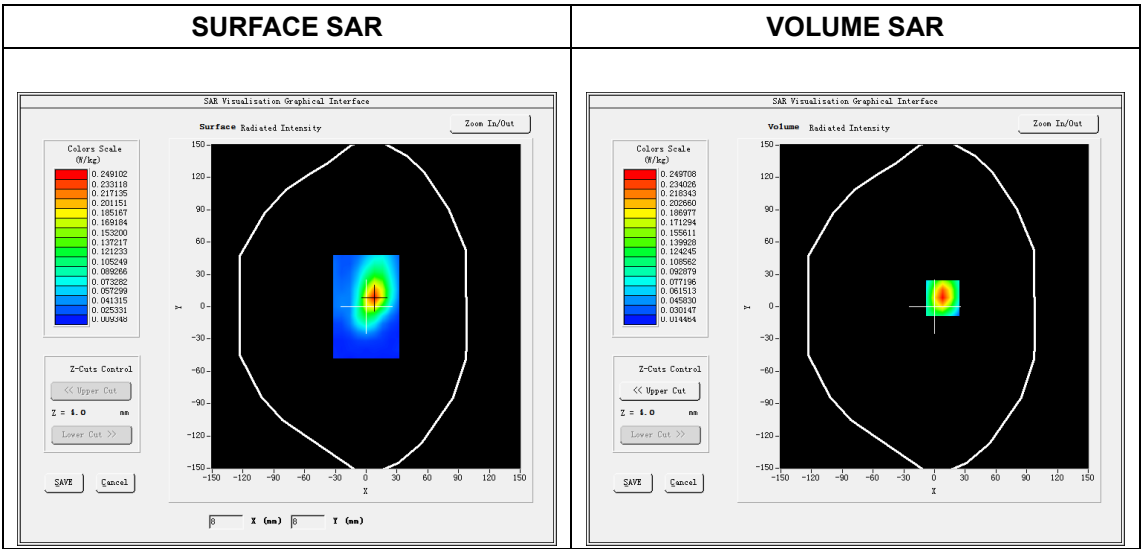
Type: Measurement (Complete)
Date of measurement: 2025-08-28
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.36; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 41
Channels	QPSK, 20MHz, 1RB, Middle
Signal	Duty Cycle 1:1

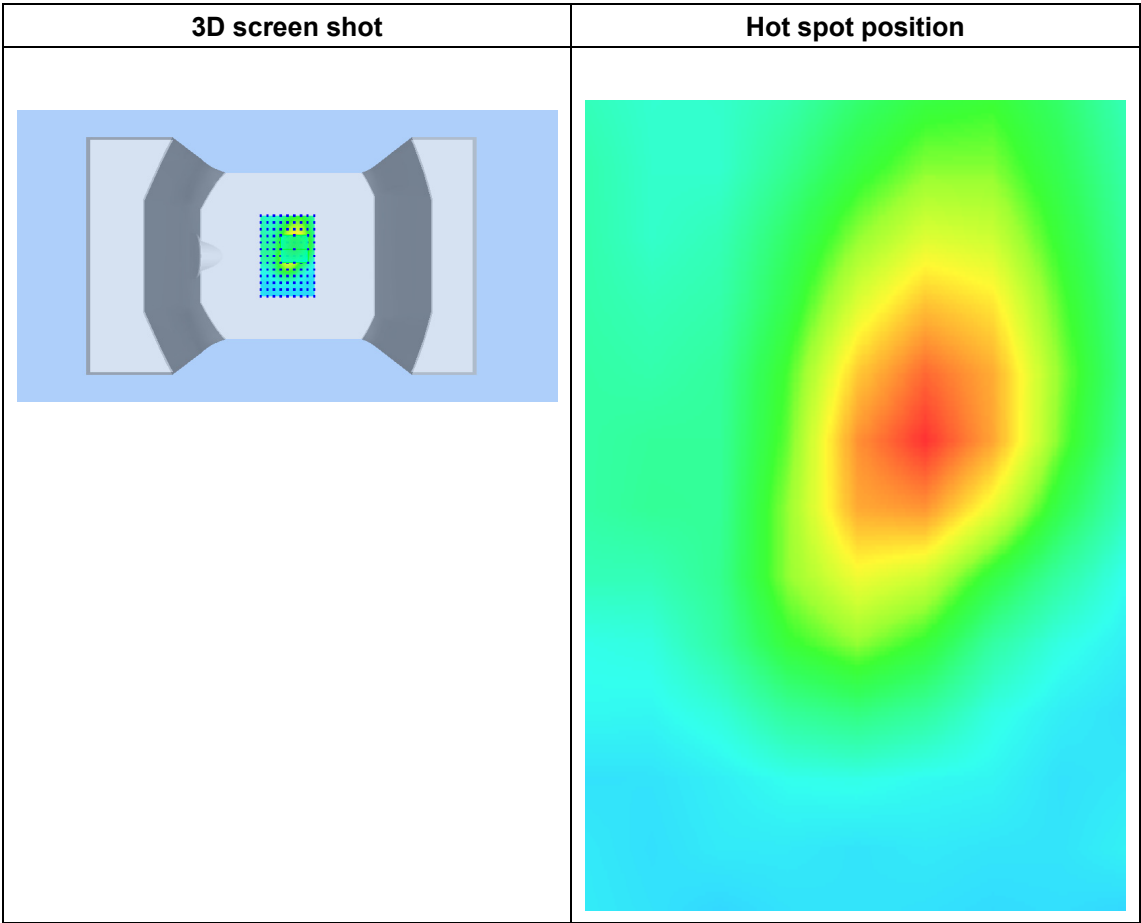
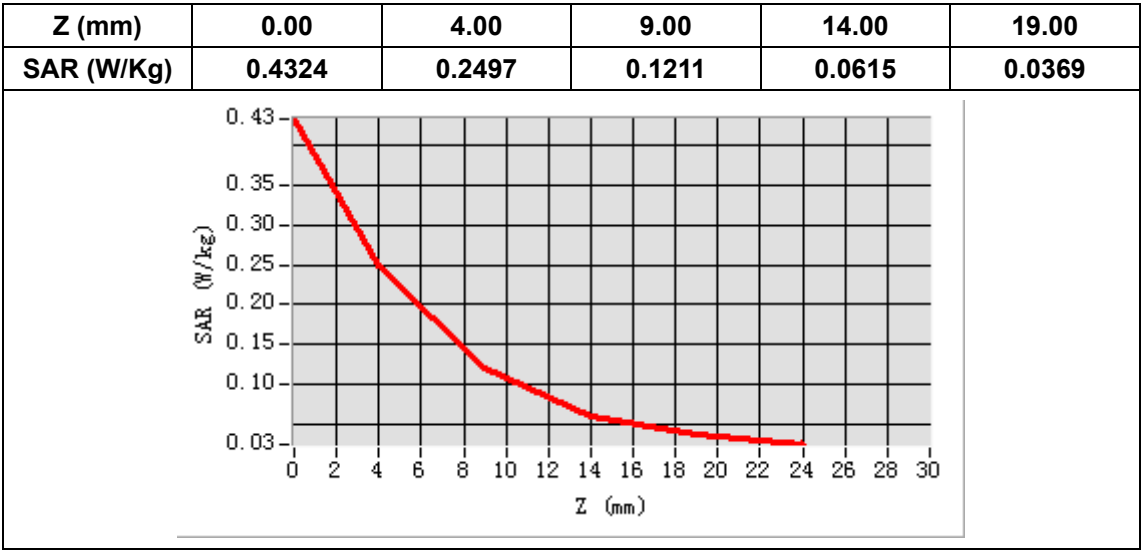
B. SAR Measurement Results

Frequency (MHz)	2605.000000
Relative Permittivity (real part)	38.894368
Conductivity (S/m)	1.942696
Power Variation (%)	2.354300
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=8.00, Y=8.00
SAR Peak: 0.43 W/kg

SAR 10g (W/Kg)	0.114546
SAR 1g (W/Kg)	0.232057



MEASUREMENT 27/41

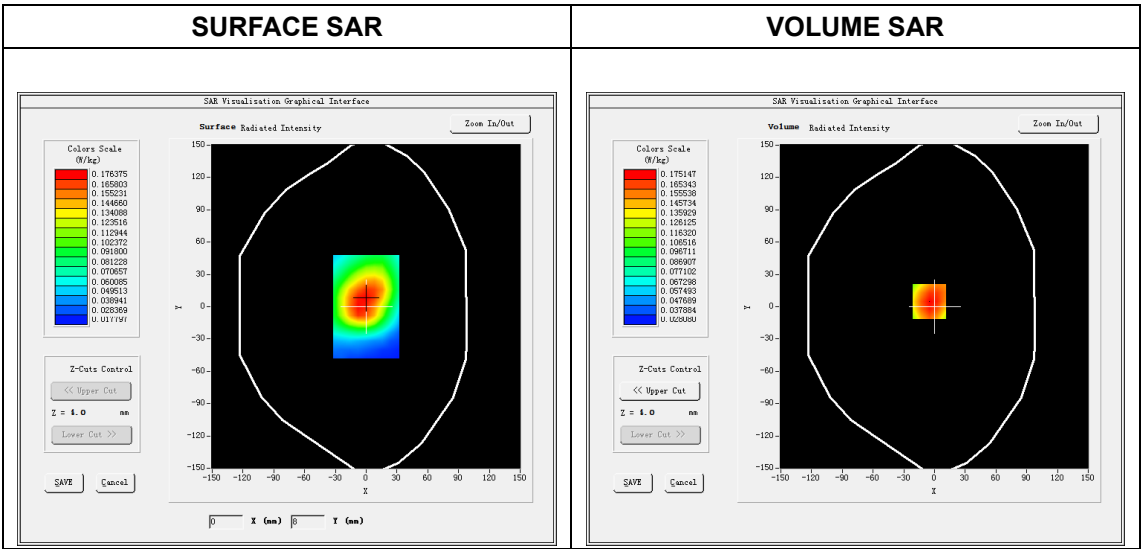
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 66
Channels	QPSK, 20MHz, 1RB, Middle
Signal	Duty Cycle 1:1

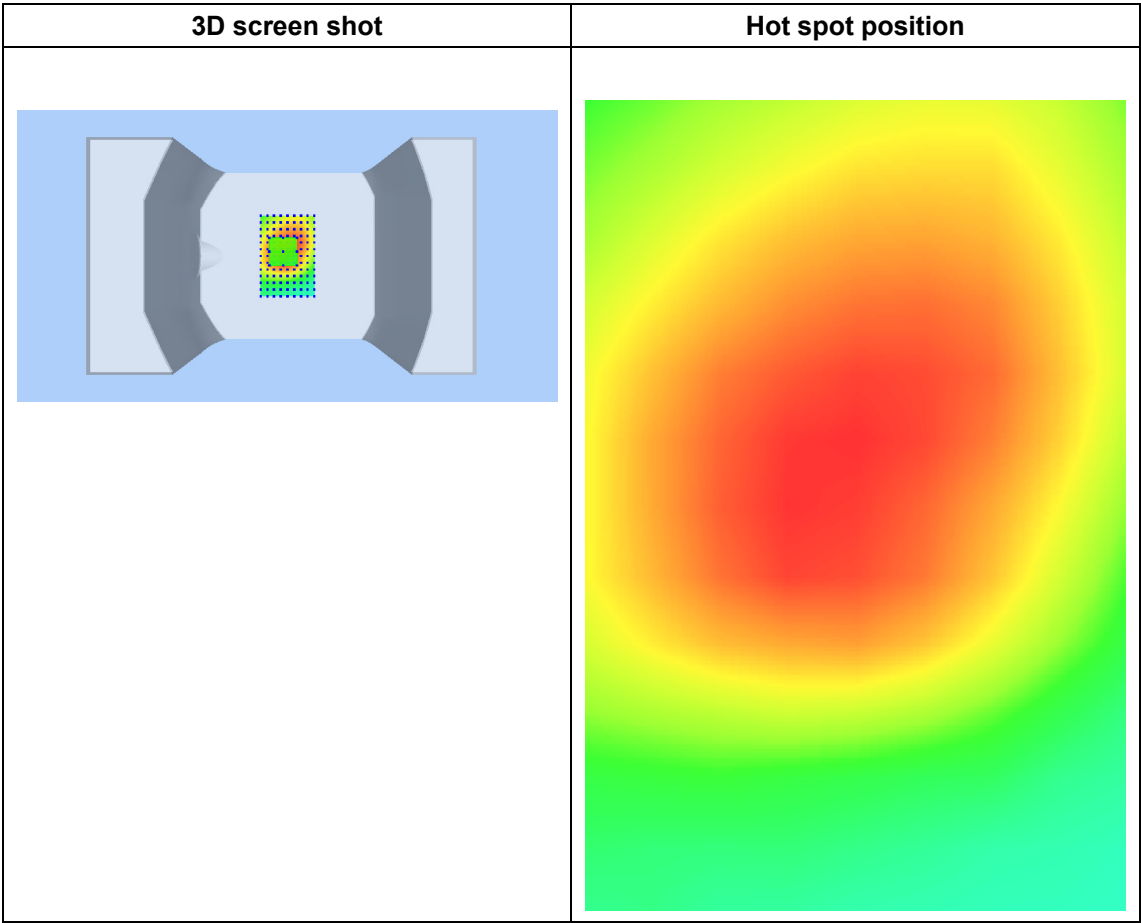
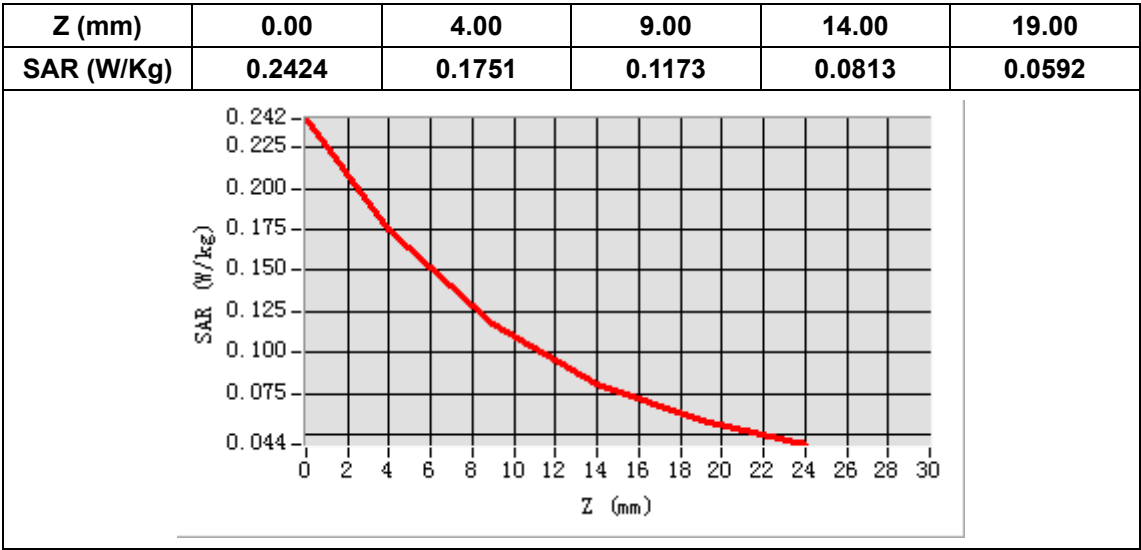
B. SAR Measurement Results

Frequency (MHz)	1744.900000
Relative Permittivity (real part)	39.281327
Conductivity (S/m)	1.372948
Power Variation (%)	-1.378500
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=-5.00, Y=5.00
SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.114784
SAR 1g (W/Kg)	0.169220



MEASUREMENT 28/42

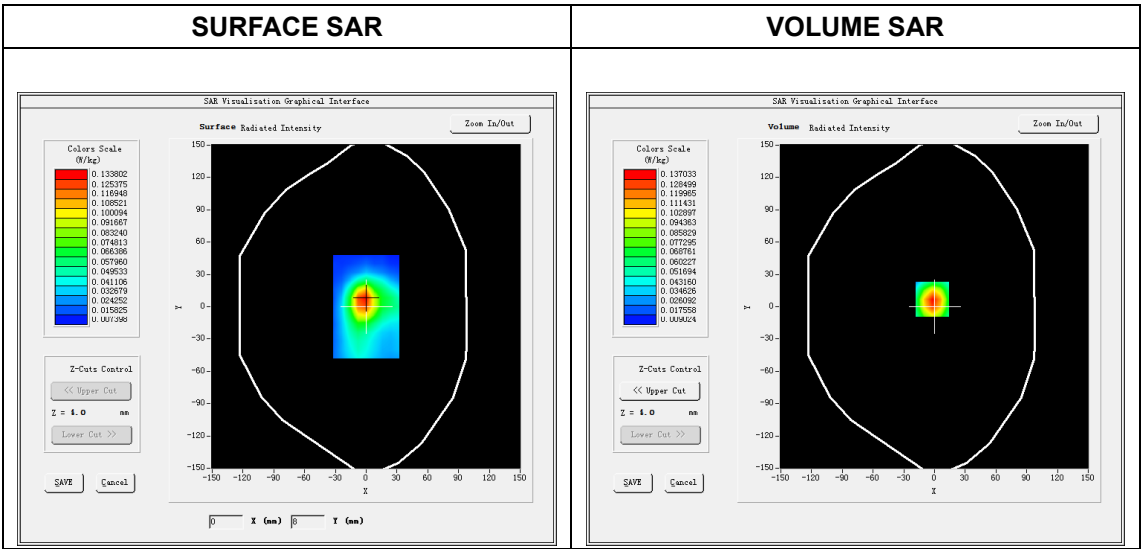
Type: Measurement (Complete)
Date of measurement: 2025-08-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WiFi_802.11b
Channels	Middle
Signal	Duty Cycle 1:1

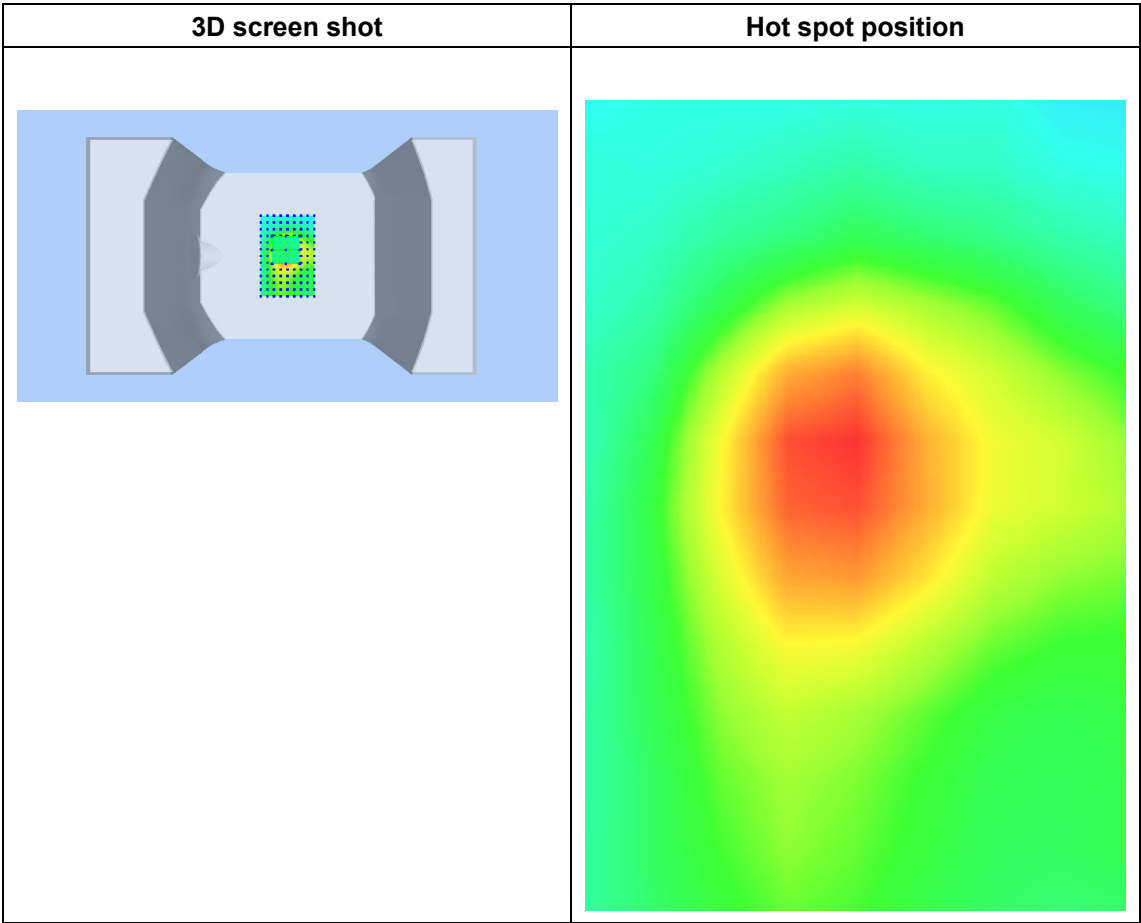
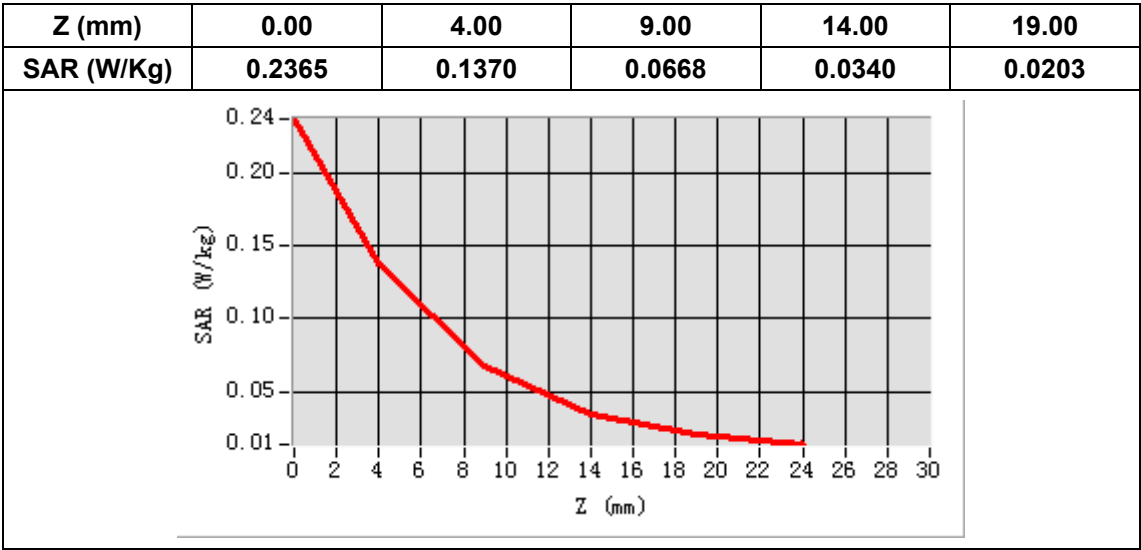
B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative Permittivity (real part)	38.544231
Conductivity (S/m)	1.763168
Power Variation (%)	2.368900
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=-2.00, Y=7.00
SAR Peak: 0.24 W/kg

SAR 10g (W/Kg)	0.066232
SAR 1g (W/Kg)	0.129305



MEASUREMENT 29

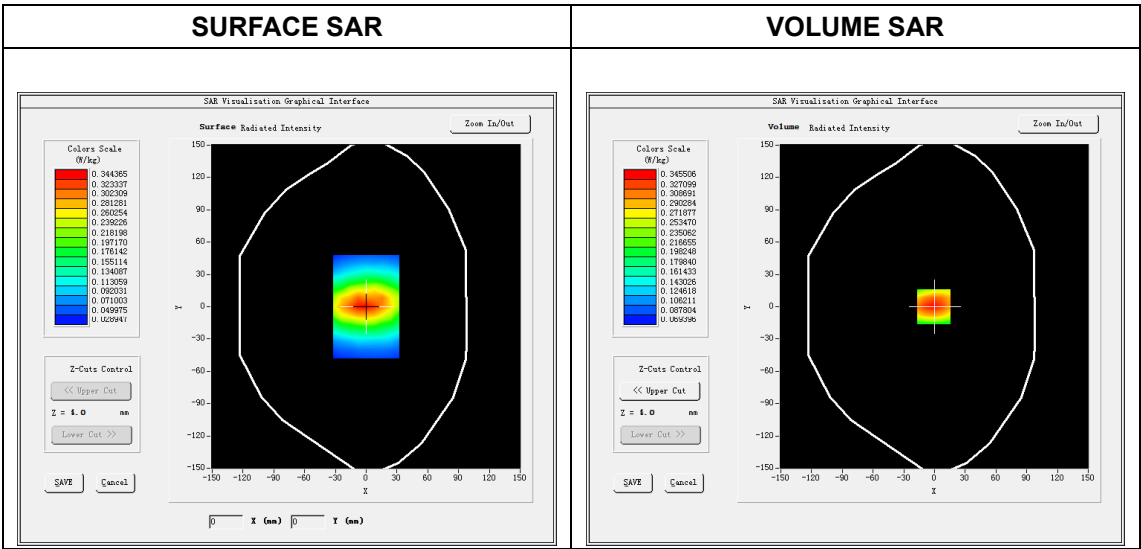
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat plane
Device Position	Back
Band	GPRS850_4TX
Channels	Middle
Signal	Duty Cycle: 1:2

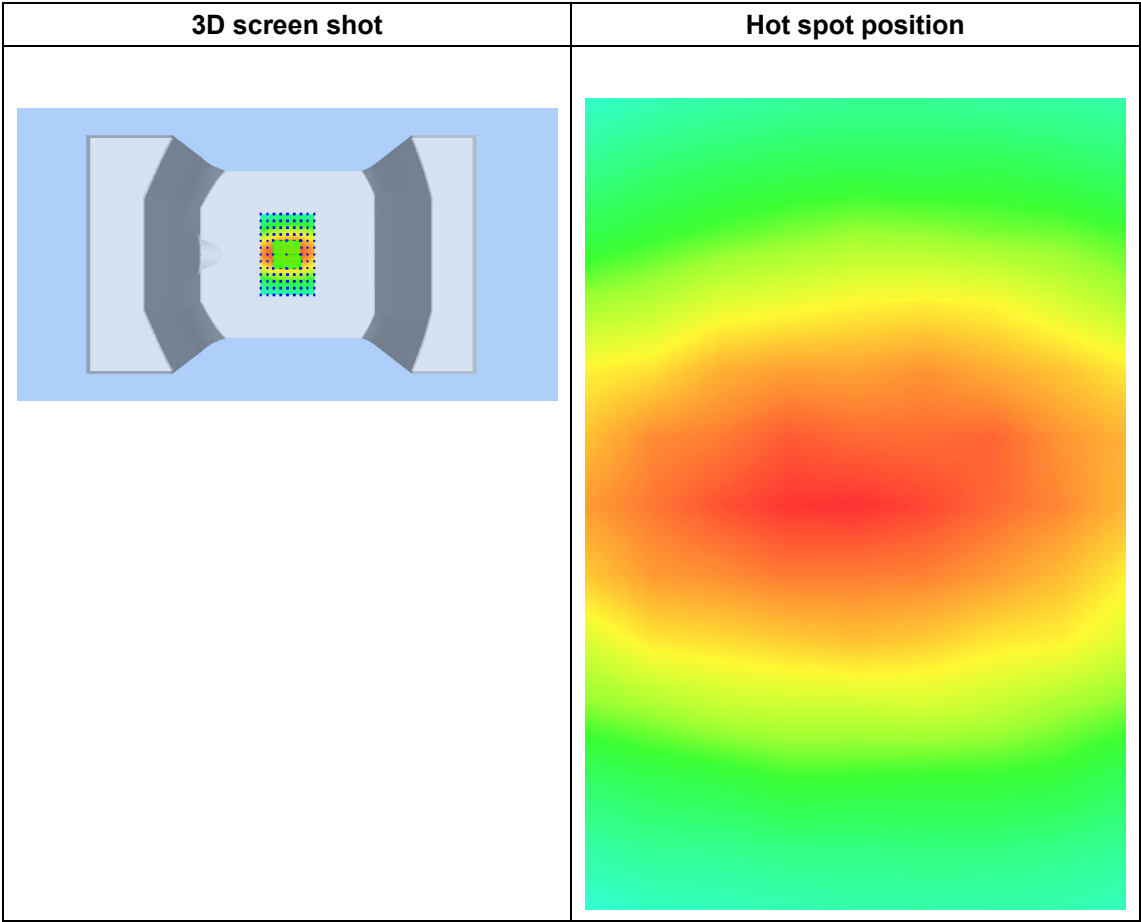
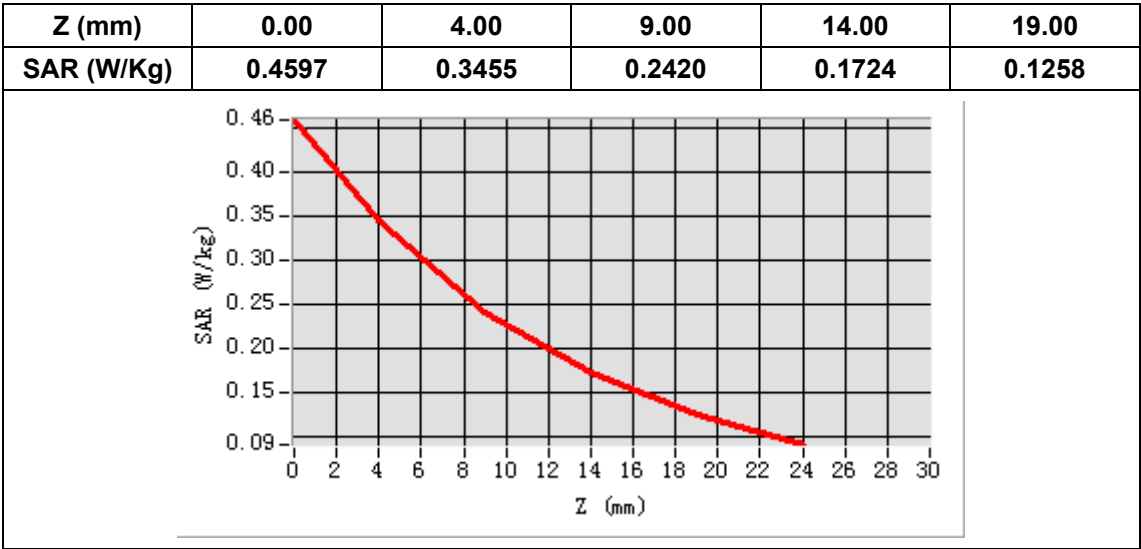
B. SAR Measurement Results

Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.143224
Conductivity (S/m)	0.892451
Power Variation (%)	1.108200
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=-1.00, Y=0.00
SAR Peak: 0.46 W/kg

SAR 10g (W/Kg)	0.232244
SAR 1g (W/Kg)	0.340765



MEASUREMENT 30

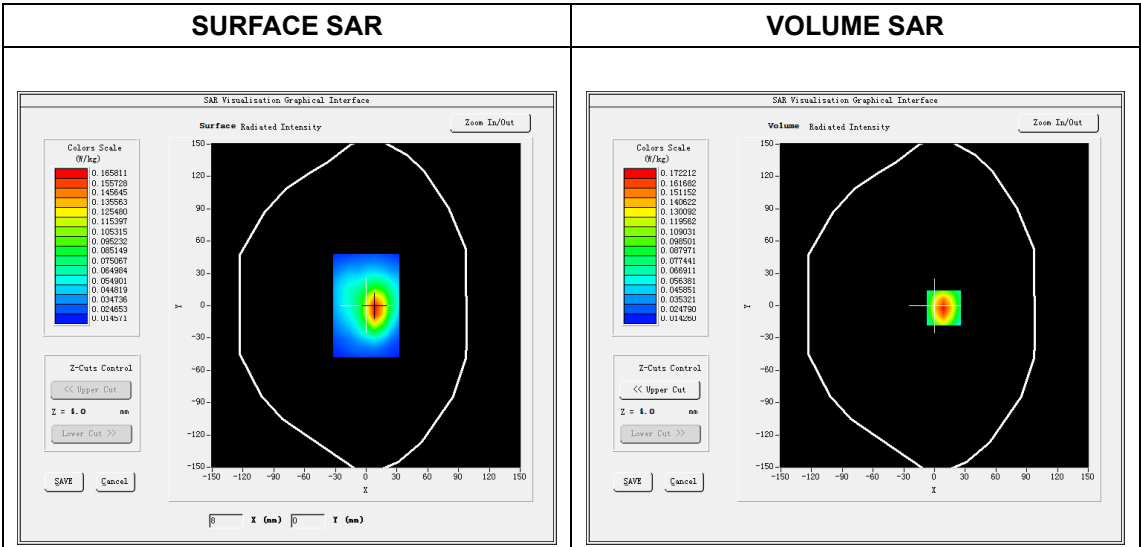
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat plane
Device Position	Back
Band	GPRS1900_4TX
Channels	Middle
Signal	Duty Cycle: 1:2

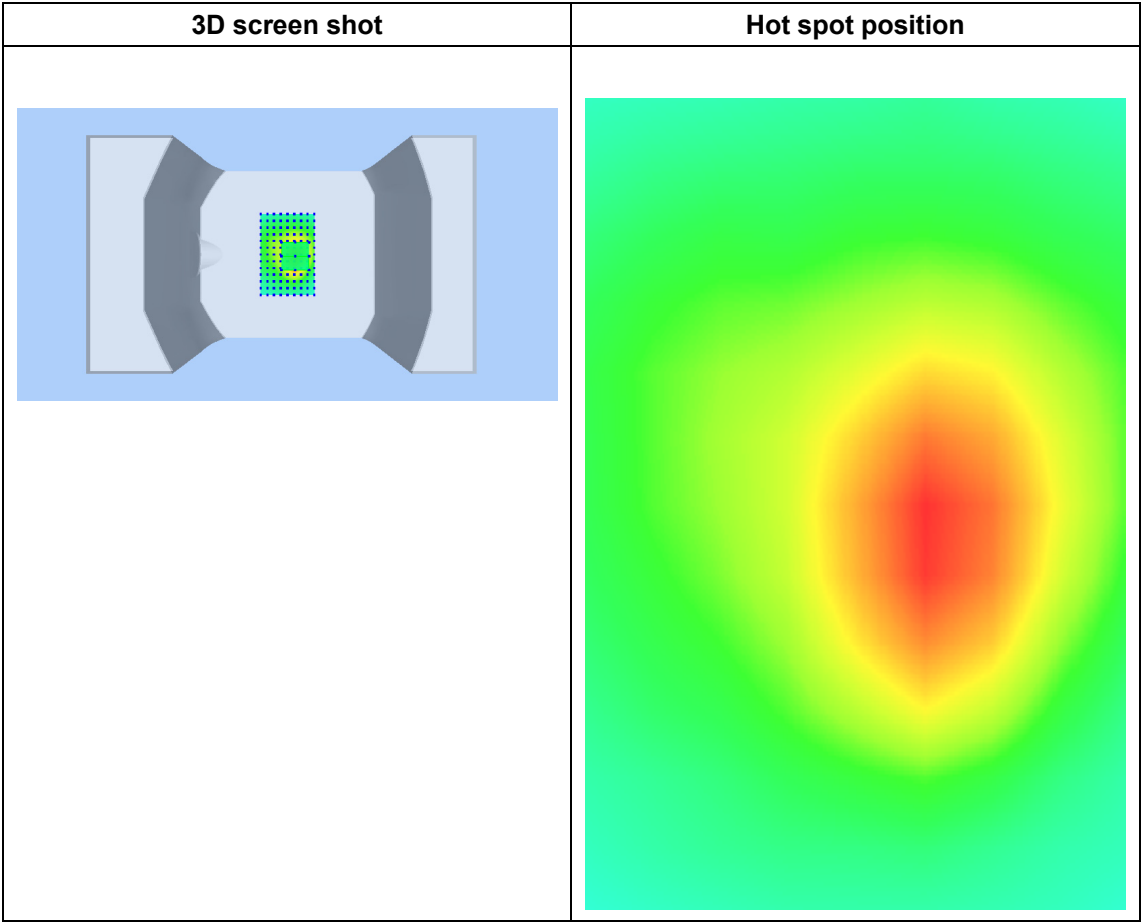
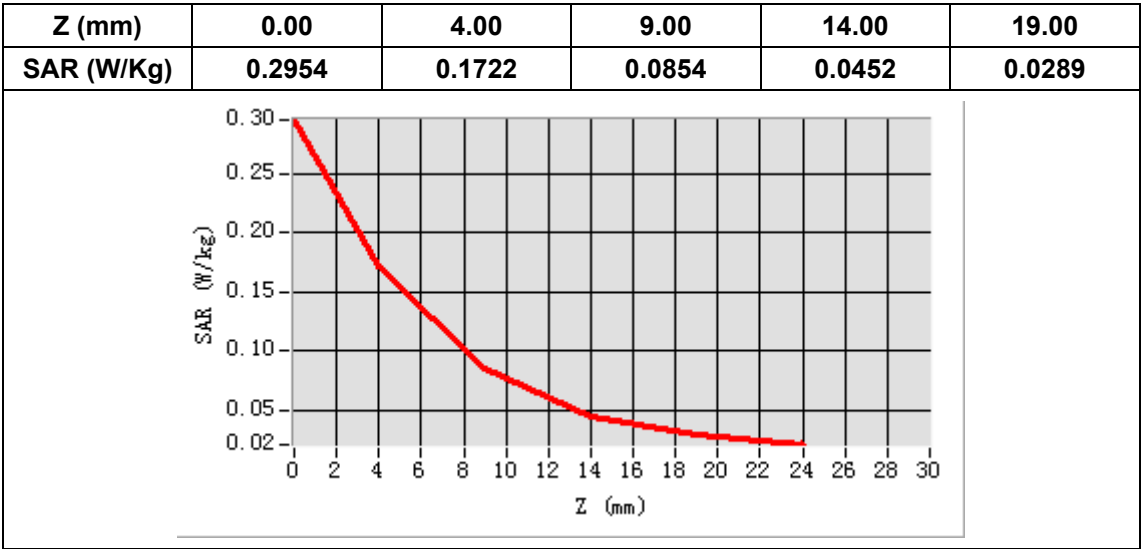
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative Permittivity (real part)	39.281248
Conductivity (S/m)	1.373671
Power Variation (%)	1.737400
Ambient Temperature	23.0
Liquid Temperature	23.0



Maximum location: X=9.00, Y=-2.00
SAR Peak: 0.30 W/kg

SAR 10g (W/Kg)	0.084994
SAR 1g (W/Kg)	0.158379



MEASUREMENT 32

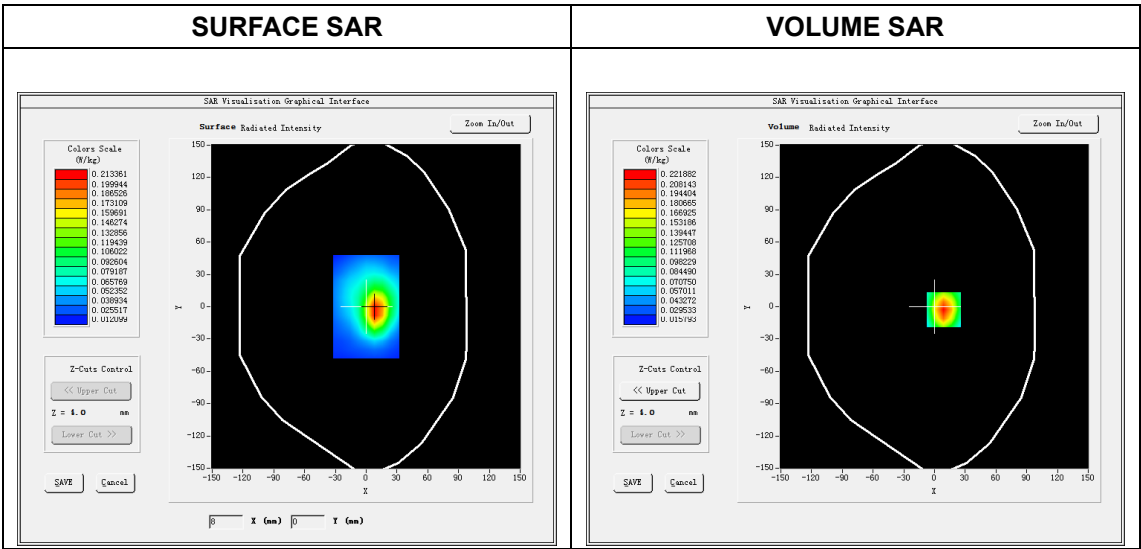
Type: Measurement (Complete)
Date of measurement: 2025-08-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.23; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Bottom
Band	WCDMA1700_RMC
Channels	Low
Signal	Duty Cycle 1:1

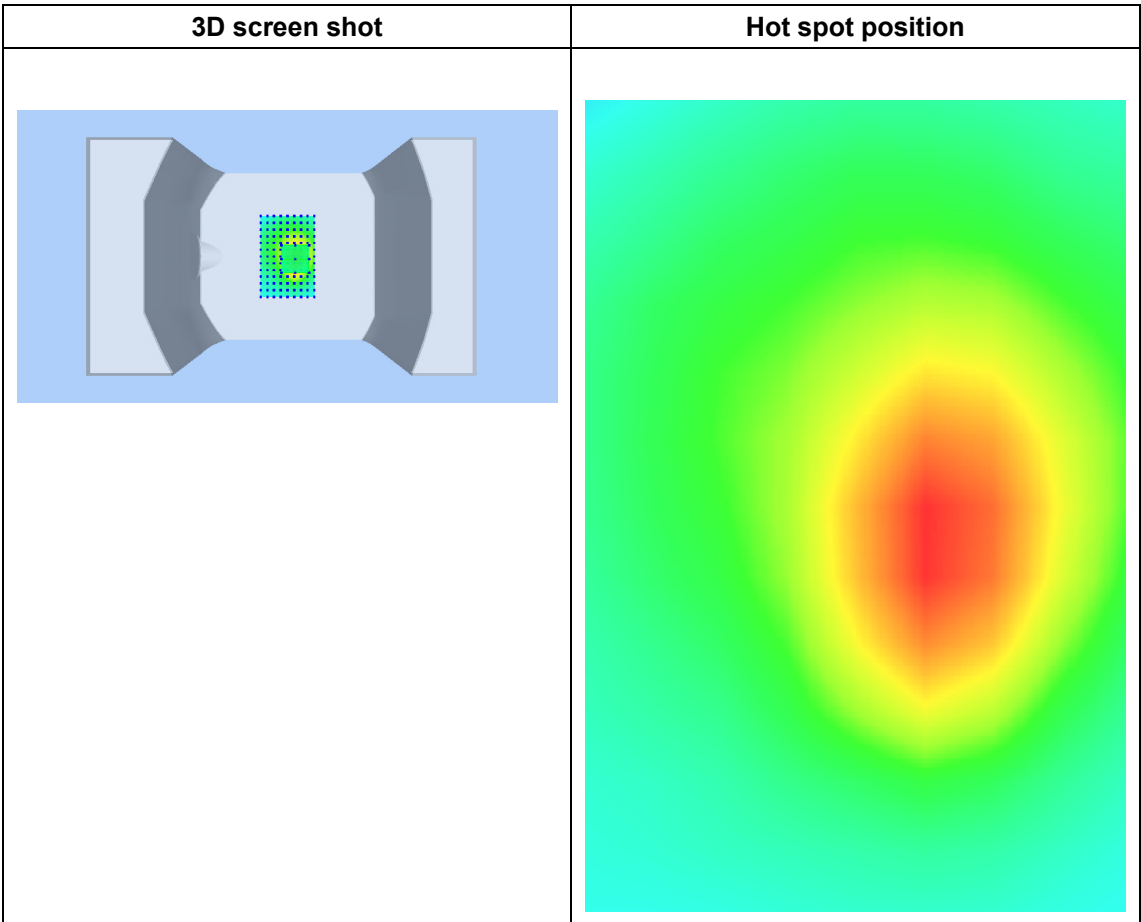
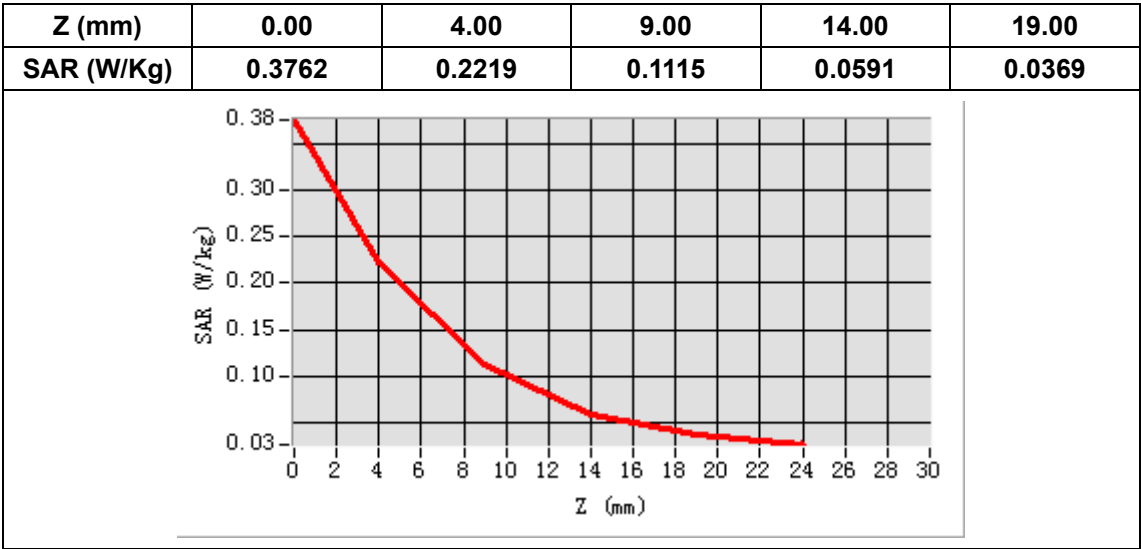
B. SAR Measurement Results

Frequency (MHz)	1712.400000
Relative Permittivity (real part)	39.281275
Conductivity (S/m)	1.374607
Power Variation (%)	0.821700
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=9.00, Y=-3.00
SAR Peak: 0.38 W/kg

SAR 10g (W/Kg)	0.108248
SAR 1g (W/Kg)	0.206598



MEASUREMENT 33

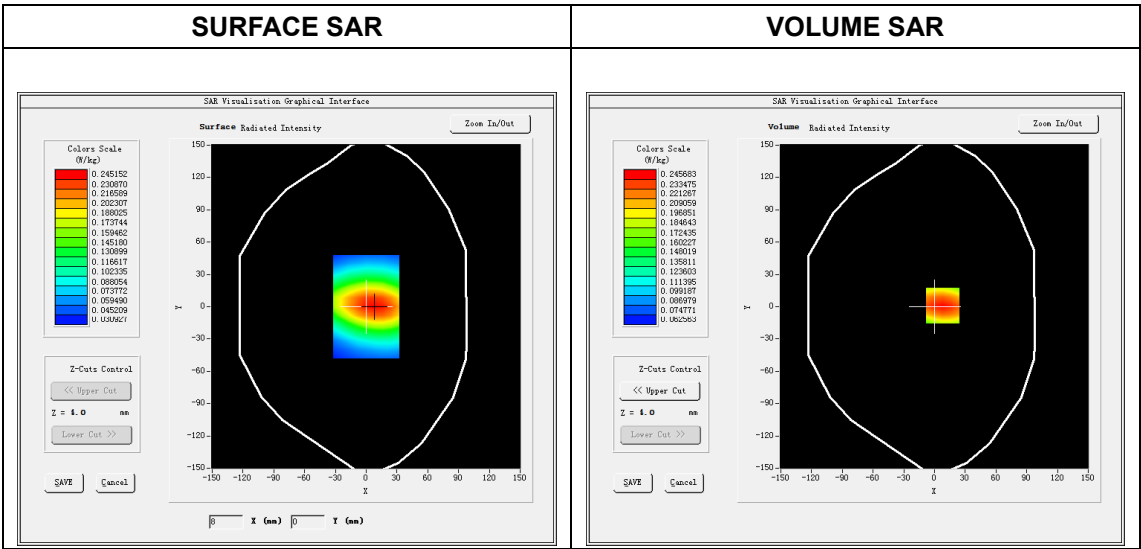
Type: Measurement (Complete)
Date of measurement: 2025-08-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 0.99; Calibrated: 2025-02-12

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Right
Band	WCDMA850_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.143224
Conductivity (S/m)	0.892451
Power Variation (%)	0.108248
Ambient Temperature	23.2
Liquid Temperature	23.2



Maximum location: X=8.00, Y=1.00
SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	0.167925
SAR 1g (W/Kg)	0.235822

