

TEST REPORT

Reference No..... : WTD23X02031284W
FCC ID : 2A6P4-KEY-PHONE-LLC
Applicant : KeyPhone LLC
Address..... : 816 Myrtle Ave. Brooklyn, NY US
Manufacturer : ShenZhen SongMing Communication Technology Co.Ltd
Address..... : 2 sets of No.3 Building, Geshan Road, Tangxiachong Community,
YanlouStreetBao'an District, Shenzhen
Product Name : KeyPhone
Model No..... : KP523
FCC Part 2.1093
Standards : IEEE Std C95.1: 2019
IEEE Std C95.3: 2002 + Rev. 2008
IEEE 1528: 2013
Date of Receipt sample : 2023-02-28
Date of Test..... : 2023-03-13 to 2023-03-21
Date of Issue : 2023-03-21
Test Report Form No. : WTX_IEEE_1528_2013W
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	2023-03-21	Original
/	/	/

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT:	
Product Name:	KeyPhone
Trade Name:	/
Model No.:	KP523
Adding Model(s):	/
Rated Voltage:	DC 3.8V
Battery:	2500mAh
Software Version:	keyphone_pk523_Q102_232_v1.0_20230109
Hardware Version:	Q102_MB_V1.1
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT:	
2G	
Support Networks:	GSM, GPRS
Support Band:	GSM850/PCS1900
Uplink Frequency:	GSM/GPRS 850: 824~849MHz GSM/GPRS1900: 1850~1910MHz
Downlink Frequency:	GSM/GPRS 850: 869~894MHz GSM/GPRS 1900: 1930~1990MHz
RF Output Power:	GSM850: 32.67dBm, GSM1900: 32.05dBm
Type of Modulation:	GMSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM850: 2.55dBi; GSM1900: 0.16dBi
GPRS 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: 22.28dBm, WCDMA Band 4: 22.42dBm, WCDMA Band 5: 22.41dBm
Type of Modulation:	BPSK
Antenna Type:	Integral Antenna
Antenna Gain:	WCDMA Band 2: 0.16dBi, WCDMA Band 4: 1.88dBi, WCDMA Band 5: 2.55dBi
4G	
Support Networks:	FDD-LTE
Support Band:	FDD-LTE Band 2, 4, 5, 12, 17, 66
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 12: Tx: 699-716MHz, FDD-LTE Band 17: Tx: 704-716MHz, 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 12: Rx: 729-746MHz, FDD-LTE Band 17: Rx: 734-746MHz, FDD-LTE Band 66: Rx: 2110-2200MHz
RF Output Power:	FDD-LTE Band 2: 25.04dBm FDD-LTE Band 4: 25.38dBm FDD-LTE Band 5: 24.00dBm FDD-LTE Band 12: 23.88dBm FDD-LTE Band 17: 24.03dBm FDD-LTE Band 66: 25.54dBm
Type of Modulation:	QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	FDD-LTE Band 2: 0.16dBi, FDD-LTE Band 4: 1.88dBi, FDD-LTE Band 5: 2.55dBi, FDD-LTE Band 12: 0.99dBi, FDD-LTE Band 17: 0.99dBi, FDD-LTE Band 66: 1.88dBi
WIFI(2.4GHz)	
Support Standards:	802.11b, 802.11g, 802.11n-HT20
Frequency Range:	2412-2462MHz for 11b/g/n(HT20)
RF Output Power:	19.70dBm (Conducted)
Type of Modulation:	DBPSK,BPSK,DQPSK,QPSK,16QAM,64QAM
Quantity of Channels:	11 for 802.11b/g/n(HT20)
Channel Separation:	5MHz
Type of Antenna:	Integral Antenna
Antenna Gain:	1.85dBi
Bluetooth	
Bluetooth Version:	V5.0
Frequency Range:	2402-2480MHz
RF Output Power:	7.83dBm (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:	1.85dBi
WIFI(5GHz)	
Support Standards:	802.11a, 802.11n(HT20), 802.11n-HT40, 802.11ac-HT80
Frequency Range:	5150-5250MHz, 5725-5850MHz
RF Output Power:	16.04dBm (Conducted)
Type of Modulation:	BPSK,QPSK, 16QAM, 64QAM, 256-QAM
Type of Antenna:	Integral Antenna

Antenna Gain:	5150-5250MHz: 2.3dBi 5725-5850MHz: 2.6dBi
<i>Note: The Antenna Gain is provided by the customer and can affect the validity of results.</i>	

1.2 Test Standards

IEEE Std C95.1: 2019, IEEE Std C95.3: 2002 + Rev. 2008, IEEE 1528: 2013, 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 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.

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	0.765	0.603	0.992	1.6
WCDMA	0.652	0.761	0.761	1.6
LTE	0.738	0.750	0.750	1.6
WLAN 2.4GHz	0.443	0.242	0.242	1.6
WLAN 5GHz	0.723	0.339	0.339	1.6
Bluetooth	0.028	0.033	0.033	1.6
Simultaneous Transmission	1.488	1.100	1.331	1.6

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 IEEE 1528: 2013 and 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.

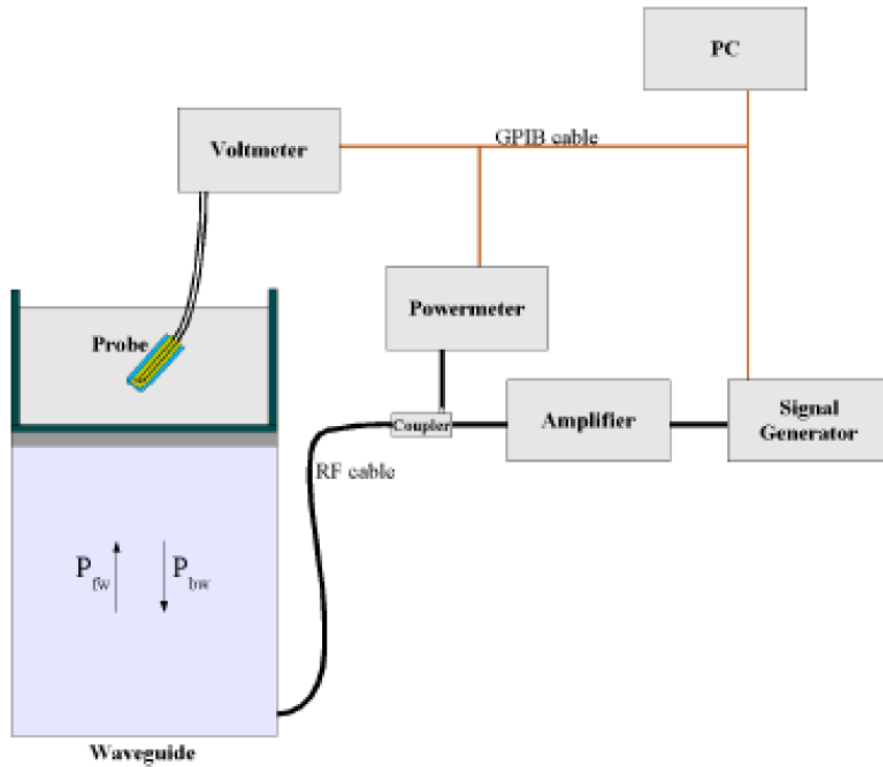


The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 10g mass.

4.2 Probe

For the measurements the Specific Dosimetric E-Field Probe SSE2 SN 18/21 EPG0356, and refer to the calibration report for probe parameters.

Probe calibration is realized, in compliance with EN 62209-1 and IEEE 1528:2013 STD, with CALISAR, Antenna proprietary calibration system. The calibration is performed with the EN 62209-1 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.

Where:

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

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,

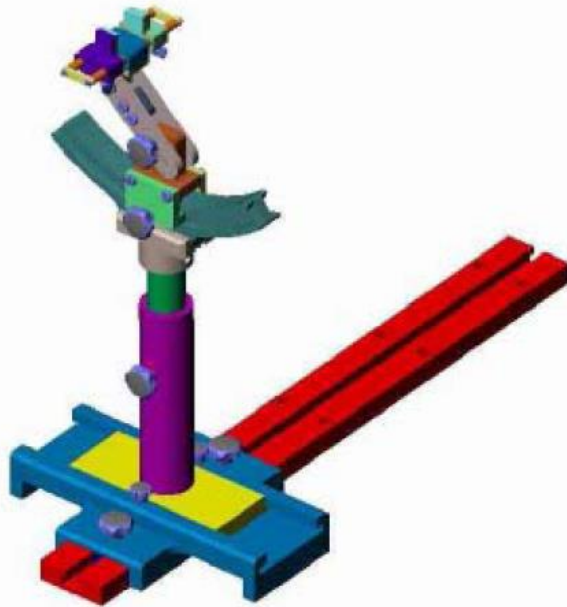
ρ = Tissue density (1.25 g/cm³ for brain tissue)

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

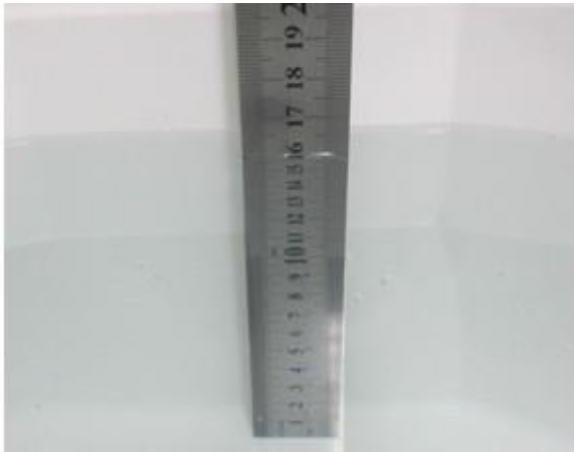
4.6 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
E-Field Probe	MVG	SSE2	SN 18/21 EPGO356	2022-07-08	2023-07-07
750MHz Dipole	MVG	SID750	SN 09/15 DIP 0G750-357	2020-08-29	2023-08-28
835MHz Dipole	MVG	SID835	SN 09/15 DIP 0G835-358	2020-08-29	2023-08-28
1800MHz Dipole	MVG	SID1800	SN 09/15 DIP 1G800-360	2020-08-29	2023-08-28
1900MHz Dipole	MVG	SID1900	SN 09/15 DIP 1G900-361	2020-08-29	2023-08-28
2450MHz Dipole	MVG	SID2450	SN 09/15 DIP 2G450-363	2020-08-29	2023-08-28
5 GHz Dipole	MVG	SWG5500	SN 49/16 WGA45	2020-07-03	2023-07-02
Dielectric Probe	SATIMO	SCLMP	SN 47/12 OCPG49	2023-02-25	2024-02-24
SAM Phantom	SATIMO	SAM	SN/ 47/12 SAM95	N/A	N/A
Multi Meter	Keithley	Keithley 2000	4006367	2023-02-25	2024-02-24
Power meter	Keithley	3500	JC-2017-09-001	2023-02-25	2024-02-24
Power meter	Keithley	3500	JC-2017-09-001	2023-02-25	2024-02-24
Power Sensor	HP	11636B	JC-2017-10-002	2023-02-25	2024-02-24
MXG X-Series RF Vector Signal Generator	KEYSIGHT	N5182B	MY57300664	2023-02-25	2024-02-24
Universal Tester	Rohde & Schwarz	CMU200	112315	2023-02-25	2024-02-24
Universal Radio Communication Tester	Rohde & Schwarz	CMW500	148650	2023-02-25	2024-02-24
Network Analyzer	HP	8753C	2901A00831	2023-02-25	2024-02-24

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 SAR



Liquid Height for Body SAR

The Composition of Tissue Simulating Liquid

Frequency (MHz)	Water (%)	Salt (%)	Sugar (%)	HEC (%)	Preventol (%)	DGBE (%)
Head						
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

Frequency (MHz)	Water (%)	Hexyl Carbitol (%)	Triton X-100 (%)
Head			
5000-6000	65.52	17.24	17.24

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

According to FCC KDBs, IEEE 1528:2013 and CEI/IEC 62209 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	23.4	0.87	0.89	-2.25	42.41	41.9	1.22	±5	2023-03-29
835	22.3	0.88	0.90	-2.22	42.38	41.50	2.12	±5	2023-03-15
1800	22.5	1.41	1.40	0.71	40.69	40.0	1.72	±5	2023-03-17
1900	22.5	1.41	1.40	0.71	40.76	40.0	1.90	±5	2023-03-17
2450	22.5	1.78	1.80	-1.11	39.85	39.20	1.66	±5	2023-03-21
5200	22.8	4.69	4.66	0.64	35.49	36.0	-1.42	±5	2023-03-20
5800	22.8	5.23	5.27	-0.76	35.78	35.3	1.36	±5	2023-03-20

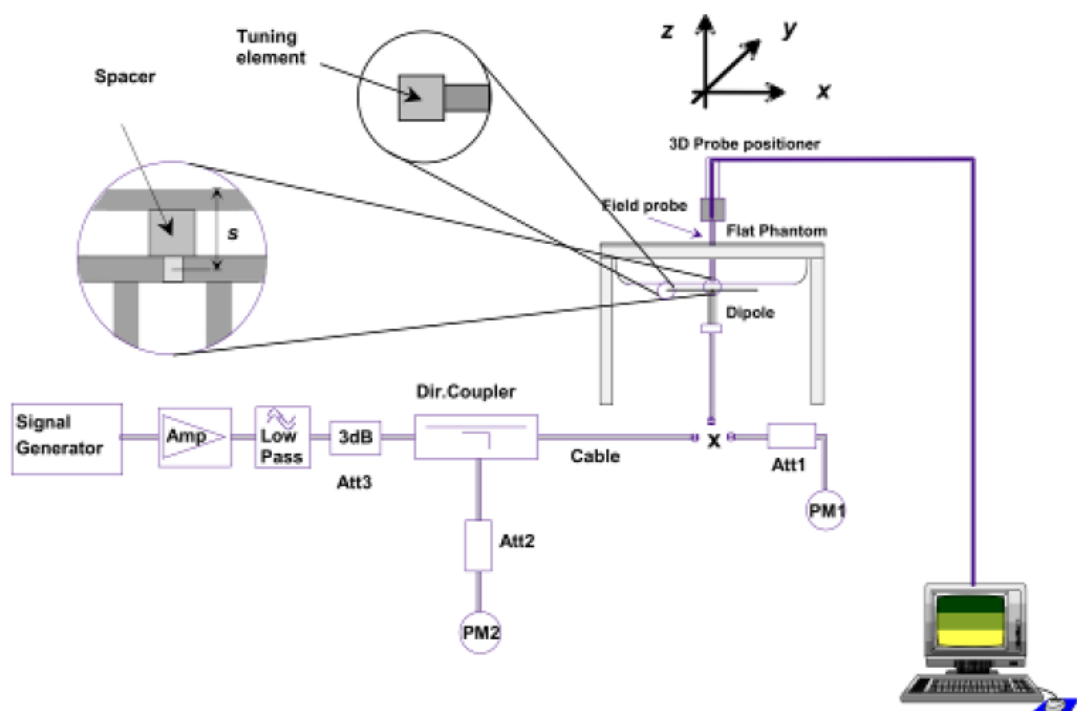
6. SAR Measurement Evaluation

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 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.

The output power on 5 GHz Waveguide must be calibrated to 20 dBm (100mW) before 5 GHz Waveguide 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)	(%)	
Head						
750	250	8.78	2.16	8.64	-1.59	2023-03-29
835	250	9.58	2.47	9.88	3.13	2023-03-15
1800	250	38.76	9.46	37.84	-2.37	2023-03-17
1900	250	39.49	9.97	39.88	0.99	2023-03-17
2450	250	54.31	13.56	54.24	-0.13	2023-03-21
5200	100	161.23	16.746	167.46	3.86	2023-03-20
5800	100	179.32	17.961	179.61	0.16	2023-03-20

Remark: Referring to IEEE 1528: 2013, Section 8.2, The system check shall be performed at a test frequency that is within $\pm 10\%$ 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.

Waltek Testing Group (Shenzhen) Co., Ltd.

[Http://www.waltek.com.cn](http://www.waltek.com.cn)

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.

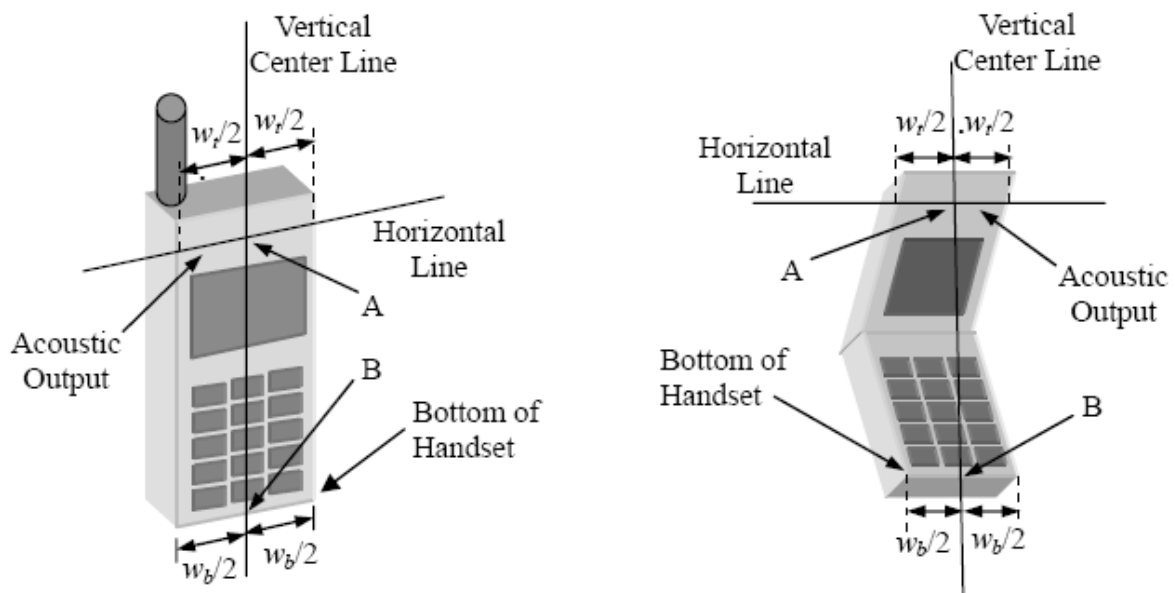


Illustration for Handset Vertical and Horizontal Reference Lines

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).

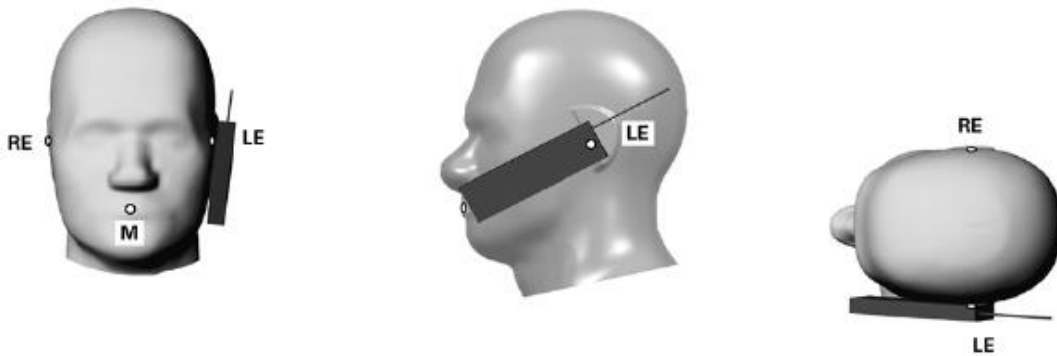


Illustration for Cheek Position

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).

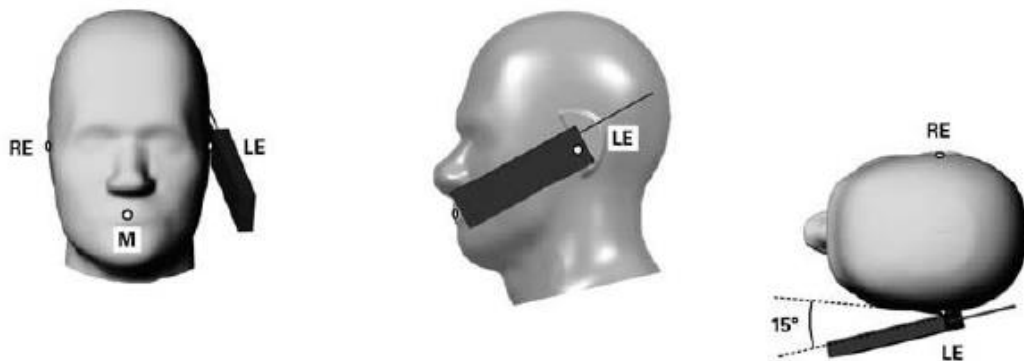


Illustration for Tilted Position

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.

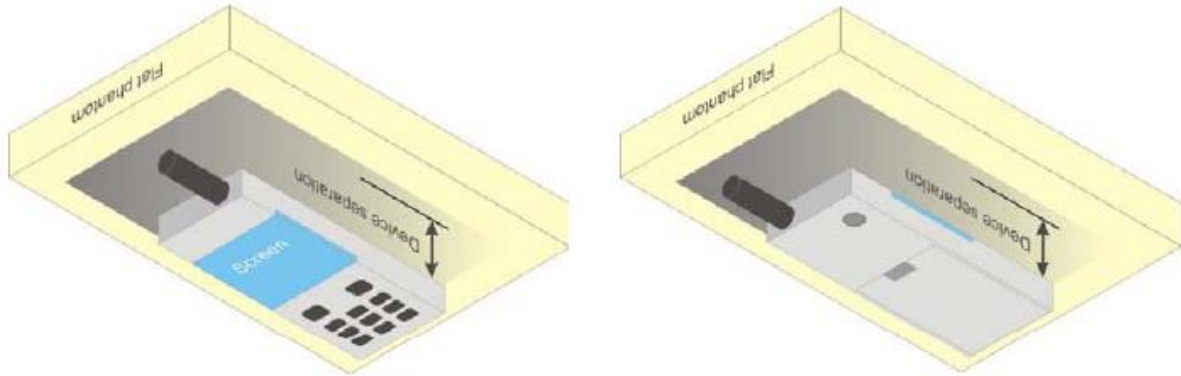
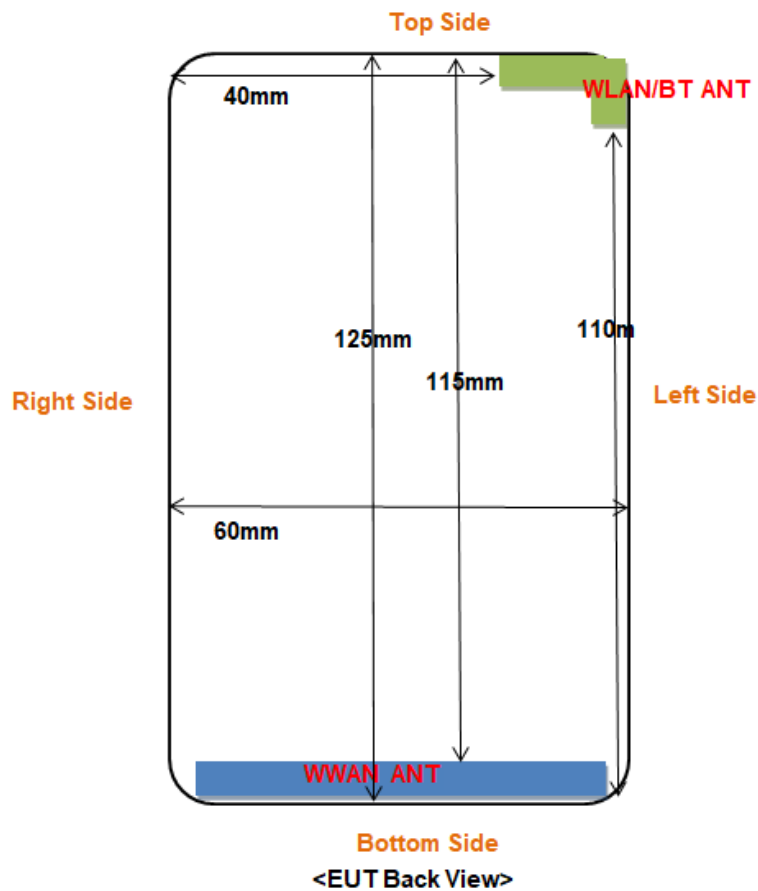


Illustration for Body Position

7.5 EUT Antenna Position



Block Diagram for EUT Antenna Position

Distance of EUT antenna-to-edge/surface(mm), Test distance:10mm						
Antennas	Front	Back	Right Side	Left Side	Top Side	Bottom Side
WWAN	<25	<25	<25	<25	115	<25
WLAN/BT	<25	<25	40	<25	<25	110

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
WLAN/BT	Yes	Yes	Yes	Yes

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

Body-worn SAR tests, Test distance: 10mm		
Antennas	Front	Back
WWAN	Yes	Yes
WLAN/BT	Yes	Yes

Remark:

- 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.
- Referring to KDB 648474 D04 Handset SAR v01r03, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR $> 1.2 \text{ W/kg}$

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	32.60	32.62	32.52	33.0	31.20	31.07	30.77	31.5
GPRS (1 slot)	32.67	32.66	32.59	33.0	32.18	32.05	31.82	32.5
GPRS (2 slots)	31.52	31.59	31.52	32.0	31.15	30.98	30.88	31.5
GPRS (3 slots)	30.24	30.61	30.54	31.0	30.52	29.56	29.67	30.0
GPRS (4 slots)	29.16	29.54	29.76	30.0	29.42	28.79	28.97	29.0

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	23.60	23.62	23.52	24.0	22.20	22.07	21.77	22.5
GPRS (1 slot)	23.67	23.66	23.59	24.0	23.18	23.05	22.82	23.0
GPRS (2 slots)	25.52	25.59	25.52	26.0	25.15	24.98	24.88	25.5
GPRS (3 slots)	25.99	26.36	26.29	26.5	26.27	25.31	25.42	26.5
GPRS (4 slots)	26.16	26.54	26.76	27.0	26.42	25.79	25.97	26.5

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.
4. The DUT do not support DTM function.

WCDMA - Average Power (dBm)								
Band	WCDMA Band II				WCDMA Band V			
Channel	9262	9400	9538	Tune-up power (dBm)	4132	4183	4233	Tune-up power (dBm)
Frequency (MHz)	1852.4	1880.0	1907.6		826.4	836.4	846.6	
RMC 12.2k	22.21	22.28	22.11	22.5	22.07	22.16	22.41	22.5
HSDPA Subtest-1	21.12	21.15	21.01	21.5	21.09	21.16	21.37	21.5
HSDPA Subtest-2	21.05	21.04	20.91	21.5	20.97	21.03	21.22	21.5
HSDPA Subtest-3	20.97	20.95	20.83	21.5	20.85	20.99	21.15	21.5
HSDPA Subtest-4	20.89	20.86	20.77	21.5	20.72	20.87	21.08	21.5
HSUPA Subtest-1	21.17	21.19	21.08	21.5	20.79	20.81	21.00	21.5
HSUPA Subtest-2	21.05	21.07	20.94	21.5	20.62	20.74	20.91	21.5
HSUPA Subtest-3	20.96	20.92	20.81	21.5	20.55	20.65	20.86	21.5
HSUPA Subtest-4	20.86	20.88	20.73	21.5	20.48	20.57	20.72	21.5

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	22.42	22.42	22.39	22.5				
HSDPA Subtest-1	21.38	21.39	21.34	21.5				
HSDPA Subtest-2	21.27	21.30	21.21	21.5				
HSDPA Subtest-3	21.21	21.24	21.17	21.5				
HSDPA Subtest-4	21.16	21.18	21.04	21.5				
HSUPA Subtest-1	20.95	20.95	20.91	21.5				
HSUPA Subtest-2	20.82	20.85	20.82	21.5				
HSUPA Subtest-3	20.77	20.74	20.76	21.5				
HSUPA Subtest-4	20.61	20.64	20.68	21.5				

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 Band2

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
18607	1.4	QPSK	1	LOW	0	33	24.57	Pass
18607	1.4	QPSK	1	MID	0	33	24.71	Pass
18607	1.4	QPSK	1	HIGH	0	33	24.6	Pass
18607	1.4	QPSK	3	LOW	0	33	24.68	Pass
18607	1.4	QPSK	3	MID	0	33	24.69	Pass
18607	1.4	QPSK	3	HIGH	0	33	24.65	Pass
18607	1.4	QPSK	6	LOW	0	33	23.69	Pass
18607	1.4	Q16	1	LOW	0	33	23.65	Pass
18607	1.4	Q16	1	MID	0	33	23.85	Pass
18607	1.4	Q16	1	HIGH	0	33	23.64	Pass
18607	1.4	Q16	3	LOW	0	33	23.54	Pass
18607	1.4	Q16	3	MID	0	33	23.62	Pass
18607	1.4	Q16	3	HIGH	0	33	23.4	Pass
18607	1.4	Q16	6	LOW	0	33	22.81	Pass
18900	1.4	QPSK	1	LOW	0	33	24.84	Pass
18900	1.4	QPSK	1	MID	0	33	25.04	Pass
18900	1.4	QPSK	1	HIGH	0	33	24.83	Pass
18900	1.4	QPSK	3	LOW	0	33	24.88	Pass
18900	1.4	QPSK	3	MID	0	33	24.95	Pass
18900	1.4	QPSK	3	HIGH	0	33	24.91	Pass
18900	1.4	QPSK	6	LOW	0	33	23.85	Pass
18900	1.4	Q16	1	LOW	0	33	24.12	Pass
18900	1.4	Q16	1	MID	0	33	24.13	Pass
18900	1.4	Q16	1	HIGH	0	33	24	Pass
18900	1.4	Q16	3	LOW	0	33	23.76	Pass
18900	1.4	Q16	3	MID	0	33	23.72	Pass
18900	1.4	Q16	3	HIGH	0	33	23.62	Pass
18900	1.4	Q16	6	LOW	0	33	22.5	Pass
19193	1.4	QPSK	1	LOW	0	33	24.45	Pass
19193	1.4	QPSK	1	MID	0	33	24.44	Pass
19193	1.4	QPSK	1	HIGH	0	33	24.24	Pass
19193	1.4	QPSK	3	LOW	0	33	24.33	Pass
19193	1.4	QPSK	3	MID	0	33	24.36	Pass
19193	1.4	QPSK	3	HIGH	0	33	24.35	Pass
19193	1.4	QPSK	6	LOW	0	33	23.31	Pass
19193	1.4	Q16	1	LOW	0	33	23.24	Pass
19193	1.4	Q16	1	MID	0	33	23.39	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19193	1.4	Q16	1	HIGH	0	33	23.23	Pass
19193	1.4	Q16	3	LOW	0	33	23.43	Pass
19193	1.4	Q16	3	MID	0	33	23.45	Pass
19193	1.4	Q16	3	HIGH	0	33	23.4	Pass
19193	1.4	Q16	6	LOW	0	33	22.5	Pass
18615	3	QPSK	1	LOW	0	33	24.16	Pass
18615	3	QPSK	1	MID	0	33	24.11	Pass
18615	3	QPSK	1	HIGH	0	33	24.09	Pass
18615	3	QPSK	8	LOW	0	33	23.2	Pass
18615	3	QPSK	8	MID	0	33	23.2	Pass
18615	3	QPSK	8	HIGH	0	33	23.12	Pass
18615	3	QPSK	15	LOW	0	33	23.17	Pass
18615	3	Q16	1	LOW	0	33	23.06	Pass
18615	3	Q16	1	MID	0	33	23.03	Pass
18615	3	Q16	1	HIGH	0	33	23.02	Pass
18615	3	Q16	8	LOW	0	33	22.3	Pass
18615	3	Q16	8	MID	0	33	22.3	Pass
18615	3	Q16	8	HIGH	0	33	22.27	Pass
18615	3	Q16	15	LOW	0	33	22.21	Pass
18900	3	QPSK	1	LOW	0	33	24.36	Pass
18900	3	QPSK	1	MID	0	33	24.37	Pass
18900	3	QPSK	1	HIGH	0	33	24.35	Pass
18900	3	QPSK	8	LOW	0	33	23.38	Pass
18900	3	QPSK	8	MID	0	33	23.43	Pass
18900	3	QPSK	8	HIGH	0	33	23.39	Pass
18900	3	QPSK	15	LOW	0	33	23.38	Pass
18900	3	Q16	1	LOW	0	33	23.72	Pass
18900	3	Q16	1	MID	0	33	23.71	Pass
18900	3	Q16	1	HIGH	0	33	23.73	Pass
18900	3	Q16	8	LOW	0	33	22.47	Pass
18900	3	Q16	8	MID	0	33	22.49	Pass
18900	3	Q16	8	HIGH	0	33	22.46	Pass
18900	3	Q16	15	LOW	0	33	22.41	Pass
19185	3	QPSK	1	LOW	0	33	24.31	Pass
19185	3	QPSK	1	MID	0	33	24.27	Pass
19185	3	QPSK	1	HIGH	0	33	24.26	Pass
19185	3	QPSK	8	LOW	0	33	23.34	Pass
19185	3	QPSK	8	MID	0	33	23.33	Pass
19185	3	QPSK	8	HIGH	0	33	23.24	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19185	3	QPSK	15	LOW	0	33	23.3	Pass
19185	3	Q16	1	LOW	0	33	23.32	Pass
19185	3	Q16	1	MID	0	33	23.23	Pass
19185	3	Q16	1	HIGH	0	33	23.18	Pass
19185	3	Q16	8	LOW	0	33	22.38	Pass
19185	3	Q16	8	MID	0	33	22.36	Pass
19185	3	Q16	8	HIGH	0	33	22.31	Pass
19185	3	Q16	15	LOW	0	33	22.25	Pass
18625	5	QPSK	1	LOW	0	33	24.05	Pass
18625	5	QPSK	1	MID	0	33	24.17	Pass
18625	5	QPSK	1	HIGH	0	33	24.02	Pass
18625	5	QPSK	12	LOW	0	33	23.17	Pass
18625	5	QPSK	12	MID	0	33	23.2	Pass
18625	5	QPSK	12	HIGH	0	33	23.16	Pass
18625	5	QPSK	25	LOW	0	33	23.16	Pass
18625	5	Q16	1	LOW	0	33	23.23	Pass
18625	5	Q16	1	MID	0	33	23.29	Pass
18625	5	Q16	1	HIGH	0	33	23.21	Pass
18625	5	Q16	12	LOW	0	33	22.23	Pass
18625	5	Q16	12	MID	0	33	22.27	Pass
18625	5	Q16	12	HIGH	0	33	22.19	Pass
18625	5	Q16	25	LOW	0	33	22.18	Pass
18900	5	QPSK	1	LOW	0	33	24.26	Pass
18900	5	QPSK	1	MID	0	33	24.4	Pass
18900	5	QPSK	1	HIGH	0	33	24.3	Pass
18900	5	QPSK	12	LOW	0	33	23.37	Pass
18900	5	QPSK	12	MID	0	33	23.4	Pass
18900	5	QPSK	12	HIGH	0	33	23.42	Pass
18900	5	QPSK	25	LOW	0	33	23.43	Pass
18900	5	Q16	1	LOW	0	33	23.75	Pass
18900	5	Q16	1	MID	0	33	23.87	Pass
18900	5	Q16	1	HIGH	0	33	23.77	Pass
18900	5	Q16	12	LOW	0	33	22.49	Pass
18900	5	Q16	12	MID	0	33	22.53	Pass
18900	5	Q16	12	HIGH	0	33	22.55	Pass
18900	5	Q16	25	LOW	0	33	22.47	Pass
19175	5	QPSK	1	LOW	0	33	24.17	Pass
19175	5	QPSK	1	MID	0	33	24.27	Pass
19175	5	QPSK	1	HIGH	0	33	24.12	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19175	5	QPSK	12	LOW	0	33	23.34	Pass
19175	5	QPSK	12	MID	0	33	23.32	Pass
19175	5	QPSK	12	HIGH	0	33	23.22	Pass
19175	5	QPSK	25	LOW	0	33	23.27	Pass
19175	5	Q16	1	LOW	0	33	23.27	Pass
19175	5	Q16	1	MID	0	33	23.37	Pass
19175	5	Q16	1	HIGH	0	33	23.2	Pass
19175	5	Q16	12	LOW	0	33	22.36	Pass
19175	5	Q16	12	MID	0	33	22.39	Pass
19175	5	Q16	12	HIGH	0	33	22.27	Pass
19175	5	Q16	25	LOW	0	33	22.25	Pass
18650	10	QPSK	1	LOW	0	33	24.2	Pass
18650	10	QPSK	1	MID	0	33	24.33	Pass
18650	10	QPSK	1	HIGH	0	33	24.16	Pass
18650	10	QPSK	25	LOW	0	33	23.21	Pass
18650	10	QPSK	25	MID	0	33	23.23	Pass
18650	10	QPSK	25	HIGH	0	33	23.28	Pass
18650	10	QPSK	50	LOW	0	33	23.25	Pass
18650	10	Q16	1	LOW	0	33	23.11	Pass
18650	10	Q16	1	MID	0	33	23.21	Pass
18650	10	Q16	1	HIGH	0	33	23.09	Pass
18650	10	Q16	25	LOW	0	33	22.26	Pass
18650	10	Q16	25	MID	0	33	22.25	Pass
18650	10	Q16	25	HIGH	0	33	22.31	Pass
18650	10	Q16	50	LOW	0	33	22.26	Pass
18900	10	QPSK	1	LOW	0	33	24.28	Pass
18900	10	QPSK	1	MID	0	33	24.44	Pass
18900	10	QPSK	1	HIGH	0	33	24.32	Pass
18900	10	QPSK	25	LOW	0	33	23.32	Pass
18900	10	QPSK	25	MID	0	33	23.44	Pass
18900	10	QPSK	25	HIGH	0	33	23.39	Pass
18900	10	QPSK	50	LOW	0	33	23.37	Pass
18900	10	Q16	1	LOW	0	33	23.62	Pass
18900	10	Q16	1	MID	0	33	23.84	Pass
18900	10	Q16	1	HIGH	0	33	23.7	Pass
18900	10	Q16	25	LOW	0	33	22.38	Pass
18900	10	Q16	25	MID	0	33	22.45	Pass
18900	10	Q16	25	HIGH	0	33	22.51	Pass
18900	10	Q16	50	LOW	0	33	22.34	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19150	10	QPSK	1	LOW	0	33	24.25	Pass
19150	10	QPSK	1	MID	0	33	24.46	Pass
19150	10	QPSK	1	HIGH	0	33	24.18	Pass
19150	10	QPSK	25	LOW	0	33	23.4	Pass
19150	10	QPSK	25	MID	0	33	23.24	Pass
19150	10	QPSK	25	HIGH	0	33	23.22	Pass
19150	10	QPSK	50	LOW	0	33	23.3	Pass
19150	10	Q16	1	LOW	0	33	23.23	Pass
19150	10	Q16	1	MID	0	33	23.39	Pass
19150	10	Q16	1	HIGH	0	33	23.14	Pass
19150	10	Q16	25	LOW	0	33	22.49	Pass
19150	10	Q16	25	MID	0	33	22.41	Pass
19150	10	Q16	25	HIGH	0	33	22.29	Pass
19150	10	Q16	50	LOW	0	33	22.34	Pass
18675	15	QPSK	1	LOW	0	33	24.11	Pass
18675	15	QPSK	1	MID	0	33	24.25	Pass
18675	15	QPSK	1	HIGH	0	33	24.1	Pass
18675	15	QPSK	36	LOW	0	33	23.31	Pass
18675	15	QPSK	36	MID	0	33	23.32	Pass
18675	15	QPSK	36	HIGH	0	33	23.34	Pass
18675	15	QPSK	75	LOW	0	33	23.34	Pass
18675	15	Q16	1	LOW	0	33	23.08	Pass
18675	15	Q16	1	MID	0	33	23.17	Pass
18675	15	Q16	1	HIGH	0	33	23.03	Pass
18675	15	Q16	36	LOW	0	33	22.26	Pass
18675	15	Q16	36	MID	0	33	22.29	Pass
18675	15	Q16	36	HIGH	0	33	22.3	Pass
18675	15	Q16	75	LOW	0	33	22.35	Pass
18900	15	QPSK	1	LOW	0	33	24.24	Pass
18900	15	QPSK	1	MID	0	33	24.35	Pass
18900	15	QPSK	1	HIGH	0	33	24.18	Pass
18900	15	QPSK	36	LOW	0	33	23.4	Pass
18900	15	QPSK	36	MID	0	33	23.45	Pass
18900	15	QPSK	36	HIGH	0	33	23.46	Pass
18900	15	QPSK	75	LOW	0	33	23.41	Pass
18900	15	Q16	1	LOW	0	33	23.6	Pass
18900	15	Q16	1	MID	0	33	23.7	Pass
18900	15	Q16	1	HIGH	0	33	23.58	Pass
18900	15	Q16	36	LOW	0	33	22.4	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
18900	15	Q16	36	MID	0	33	22.48	Pass
18900	15	Q16	36	HIGH	0	33	22.48	Pass
18900	15	Q16	75	LOW	0	33	22.47	Pass
19125	15	QPSK	1	LOW	0	33	19.63	Pass
19125	15	QPSK	1	MID	0	33	19.8	Pass
19125	15	QPSK	1	HIGH	0	33	19.69	Pass
19125	15	QPSK	36	LOW	0	33	18.93	Pass
19125	15	QPSK	36	MID	0	33	18.94	Pass
19125	15	QPSK	36	HIGH	0	33	18.96	Pass
19125	15	QPSK	75	LOW	0	33	22.37	Pass
19125	15	Q16	1	LOW	0	33	23.56	Pass
19125	15	Q16	1	MID	0	33	23.58	Pass
19125	15	Q16	1	HIGH	0	33	23.36	Pass
19125	15	Q16	36	LOW	0	33	22.26	Pass
19125	15	Q16	36	MID	0	33	22.26	Pass
19125	15	Q16	36	HIGH	0	33	22.2	Pass
19125	15	Q16	75	LOW	0	33	22.22	Pass
18700	20	QPSK	1	LOW	0	33	24.06	Pass
18700	20	QPSK	1	MID	0	33	24.4	Pass
18700	20	QPSK	1	HIGH	0	33	24.06	Pass
18700	20	QPSK	50	LOW	0	33	23.33	Pass
18700	20	QPSK	50	MID	0	33	23.36	Pass
18700	20	QPSK	50	HIGH	0	33	23.4	Pass
18700	20	QPSK	100	LOW	0	33	23.36	Pass
18700	20	Q16	1	LOW	0	33	23.55	Pass
18700	20	Q16	1	MID	0	33	23.97	Pass
18700	20	Q16	1	HIGH	0	33	23.56	Pass
18700	20	Q16	50	LOW	0	33	22.35	Pass
18700	20	Q16	50	MID	0	33	22.38	Pass
18700	20	Q16	50	HIGH	0	33	22.45	Pass
18700	20	Q16	100	LOW	0	33	22.36	Pass
18900	20	QPSK	1	LOW	0	33	24.1	Pass
18900	20	QPSK	1	MID	0	33	24.53	Pass
18900	20	QPSK	1	HIGH	0	33	24.1	Pass
18900	20	QPSK	50	LOW	0	33	23.32	Pass
18900	20	QPSK	50	MID	0	33	23.36	Pass
18900	20	QPSK	50	HIGH	0	33	23.38	Pass
18900	20	QPSK	100	LOW	0	33	23.34	Pass
18900	20	Q16	1	LOW	0	33	23.49	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
18900	20	Q16	1	MID	0	33	23.89	Pass
18900	20	Q16	1	HIGH	0	33	23.48	Pass
18900	20	Q16	50	LOW	0	33	22.37	Pass
18900	20	Q16	50	MID	0	33	22.39	Pass
18900	20	Q16	50	HIGH	0	33	22.43	Pass
18900	20	Q16	100	LOW	0	33	22.36	Pass
19100	20	QPSK	1	LOW	0	33	23.96	Pass
19100	20	QPSK	1	MID	0	33	24.32	Pass
19100	20	QPSK	1	HIGH	0	33	23.81	Pass
19100	20	QPSK	50	LOW	0	33	23.24	Pass
19100	20	QPSK	50	MID	0	33	23.24	Pass
19100	20	QPSK	50	HIGH	0	33	23.09	Pass
19100	20	QPSK	100	LOW	0	33	23.18	Pass
19100	20	Q16	1	LOW	0	33	23.37	Pass
19100	20	Q16	1	MID	0	33	23.68	Pass
19100	20	Q16	1	HIGH	0	33	23.22	Pass
19100	20	Q16	50	LOW	0	33	22.21	Pass
19100	20	Q16	50	MID	0	33	22.25	Pass
19100	20	Q16	50	HIGH	0	33	22.08	Pass
19100	20	Q16	100	LOW	0	33	22.22	Pass

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UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19957	1.4	QPSK	1	LOW	0	30	25.22	Pass
19957	1.4	QPSK	1	MID	0	30	25.38	Pass
19957	1.4	QPSK	1	HIGH	0	30	25.23	Pass
19957	1.4	QPSK	3	LOW	0	30	25.3	Pass
19957	1.4	QPSK	3	MID	0	30	25.36	Pass
19957	1.4	QPSK	3	HIGH	0	30	25.35	Pass
19957	1.4	QPSK	6	LOW	0	30	24.35	Pass
19957	1.4	Q16	1	LOW	0	30	24.35	Pass
19957	1.4	Q16	1	MID	0	30	24.48	Pass
19957	1.4	Q16	1	HIGH	0	30	24.33	Pass
19957	1.4	Q16	3	LOW	0	30	24.34	Pass
19957	1.4	Q16	3	MID	0	30	24.33	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19957	1.4	Q16	3	HIGH	0	30	24.32	Pass
19957	1.4	Q16	6	LOW	0	30	23.51	Pass
20175	1.4	QPSK	1	LOW	0	30	24.92	Pass
20175	1.4	QPSK	1	MID	0	30	25.06	Pass
20175	1.4	QPSK	1	HIGH	0	30	24.9	Pass
20175	1.4	QPSK	3	LOW	0	30	24.98	Pass
20175	1.4	QPSK	3	MID	0	30	25.02	Pass
20175	1.4	QPSK	3	HIGH	0	30	24.93	Pass
20175	1.4	QPSK	6	LOW	0	30	24.02	Pass
20175	1.4	Q16	1	LOW	0	30	24.24	Pass
20175	1.4	Q16	1	MID	0	30	24.38	Pass
20175	1.4	Q16	1	HIGH	0	30	24.23	Pass
20175	1.4	Q16	3	LOW	0	30	24.12	Pass
20175	1.4	Q16	3	MID	0	30	24.1	Pass
20175	1.4	Q16	3	HIGH	0	30	24.09	Pass
20175	1.4	Q16	6	LOW	0	30	22.93	Pass
20393	1.4	QPSK	1	LOW	0	30	24.88	Pass
20393	1.4	QPSK	1	MID	0	30	25.08	Pass
20393	1.4	QPSK	1	HIGH	0	30	24.89	Pass
20393	1.4	QPSK	3	LOW	0	30	24.97	Pass
20393	1.4	QPSK	3	MID	0	30	25.02	Pass
20393	1.4	QPSK	3	HIGH	0	30	24.98	Pass
20393	1.4	QPSK	6	LOW	0	30	23.98	Pass
20393	1.4	Q16	1	LOW	0	30	23.93	Pass
20393	1.4	Q16	1	MID	0	30	24.06	Pass
20393	1.4	Q16	1	HIGH	0	30	23.92	Pass
20393	1.4	Q16	3	LOW	0	30	24.08	Pass
20393	1.4	Q16	3	MID	0	30	24.14	Pass
20393	1.4	Q16	3	HIGH	0	30	24.07	Pass
20393	1.4	Q16	6	LOW	0	30	23.16	Pass
19965	3	QPSK	1	LOW	0	30	25.28	Pass
19965	3	QPSK	1	MID	0	30	25.27	Pass
19965	3	QPSK	1	HIGH	0	30	25.24	Pass
19965	3	QPSK	8	LOW	0	30	24.38	Pass
19965	3	QPSK	8	MID	0	30	24.36	Pass
19965	3	QPSK	8	HIGH	0	30	24.27	Pass
19965	3	QPSK	15	LOW	0	30	24.28	Pass
19965	3	Q16	1	LOW	0	30	24.22	Pass
19965	3	Q16	1	MID	0	30	24.18	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19965	3	Q16	1	HIGH	0	30	24.17	Pass
19965	3	Q16	8	LOW	0	30	23.44	Pass
19965	3	Q16	8	MID	0	30	23.46	Pass
19965	3	Q16	8	HIGH	0	30	23.41	Pass
19965	3	Q16	15	LOW	0	30	23.33	Pass
20175	3	QPSK	1	LOW	0	30	24.95	Pass
20175	3	QPSK	1	MID	0	30	24.94	Pass
20175	3	QPSK	1	HIGH	0	30	24.96	Pass
20175	3	QPSK	8	LOW	0	30	23.98	Pass
20175	3	QPSK	8	MID	0	30	24	Pass
20175	3	QPSK	8	HIGH	0	30	24.01	Pass
20175	3	QPSK	15	LOW	0	30	23.92	Pass
20175	3	Q16	1	LOW	0	30	24.25	Pass
20175	3	Q16	1	MID	0	30	24.26	Pass
20175	3	Q16	1	HIGH	0	30	24.25	Pass
20175	3	Q16	8	LOW	0	30	23.08	Pass
20175	3	Q16	8	MID	0	30	23.05	Pass
20175	3	Q16	8	HIGH	0	30	23.05	Pass
20175	3	Q16	15	LOW	0	30	23.01	Pass
20385	3	QPSK	1	LOW	0	30	24.95	Pass
20385	3	QPSK	1	MID	0	30	24.97	Pass
20385	3	QPSK	1	HIGH	0	30	24.96	Pass
20385	3	QPSK	8	LOW	0	30	23.92	Pass
20385	3	QPSK	8	MID	0	30	23.96	Pass
20385	3	QPSK	8	HIGH	0	30	23.98	Pass
20385	3	QPSK	15	LOW	0	30	23.92	Pass
20385	3	Q16	1	LOW	0	30	23.96	Pass
20385	3	Q16	1	MID	0	30	23.97	Pass
20385	3	Q16	1	HIGH	0	30	23.94	Pass
20385	3	Q16	8	LOW	0	30	23.01	Pass
20385	3	Q16	8	MID	0	30	23.03	Pass
20385	3	Q16	8	HIGH	0	30	23.01	Pass
20385	3	Q16	15	LOW	0	30	22.93	Pass
19975	5	QPSK	1	LOW	0	30	25.18	Pass
19975	5	QPSK	1	MID	0	30	25.3	Pass
19975	5	QPSK	1	HIGH	0	30	25.15	Pass
19975	5	QPSK	12	LOW	0	30	24.28	Pass
19975	5	QPSK	12	MID	0	30	24.34	Pass
19975	5	QPSK	12	HIGH	0	30	24.27	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
19975	5	QPSK	25	LOW	0	30	24.28	Pass
19975	5	Q16	1	LOW	0	30	24.39	Pass
19975	5	Q16	1	MID	0	30	24.45	Pass
19975	5	Q16	1	HIGH	0	30	24.35	Pass
19975	5	Q16	12	LOW	0	30	23.36	Pass
19975	5	Q16	12	MID	0	30	23.41	Pass
19975	5	Q16	12	HIGH	0	30	23.36	Pass
19975	5	Q16	25	LOW	0	30	23.34	Pass
20175	5	QPSK	1	LOW	0	30	24.88	Pass
20175	5	QPSK	1	MID	0	30	25	Pass
20175	5	QPSK	1	HIGH	0	30	24.9	Pass
20175	5	QPSK	12	LOW	0	30	23.94	Pass
20175	5	QPSK	12	MID	0	30	24	Pass
20175	5	QPSK	12	HIGH	0	30	23.97	Pass
20175	5	QPSK	25	LOW	0	30	23.96	Pass
20175	5	Q16	1	LOW	0	30	24.33	Pass
20175	5	Q16	1	MID	0	30	24.43	Pass
20175	5	Q16	1	HIGH	0	30	24.33	Pass
20175	5	Q16	12	LOW	0	30	23.08	Pass
20175	5	Q16	12	MID	0	30	23.13	Pass
20175	5	Q16	12	HIGH	0	30	23.13	Pass
20175	5	Q16	25	LOW	0	30	23.03	Pass
20375	5	QPSK	1	LOW	0	30	24.84	Pass
20375	5	QPSK	1	MID	0	30	24.92	Pass
20375	5	QPSK	1	HIGH	0	30	24.86	Pass
20375	5	QPSK	12	LOW	0	30	23.91	Pass
20375	5	QPSK	12	MID	0	30	23.99	Pass
20375	5	QPSK	12	HIGH	0	30	23.93	Pass
20375	5	QPSK	25	LOW	0	30	23.94	Pass
20375	5	Q16	1	LOW	0	30	23.96	Pass
20375	5	Q16	1	MID	0	30	24.04	Pass
20375	5	Q16	1	HIGH	0	30	23.98	Pass
20375	5	Q16	12	LOW	0	30	22.94	Pass
20375	5	Q16	12	MID	0	30	23.01	Pass
20375	5	Q16	12	HIGH	0	30	22.98	Pass
20375	5	Q16	25	LOW	0	30	22.91	Pass
20000	10	QPSK	1	LOW	0	30	25.24	Pass
20000	10	QPSK	1	MID	0	30	25.33	Pass
20000	10	QPSK	1	HIGH	0	30	25.19	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20000	10	QPSK	25	LOW	0	30	24.25	Pass
20000	10	QPSK	25	MID	0	30	24.24	Pass
20000	10	QPSK	25	HIGH	0	30	24.24	Pass
20000	10	QPSK	50	LOW	0	30	24.26	Pass
20000	10	Q16	1	LOW	0	30	24.19	Pass
20000	10	Q16	1	MID	0	30	24.27	Pass
20000	10	Q16	1	HIGH	0	30	24.13	Pass
20000	10	Q16	25	LOW	0	30	23.32	Pass
20000	10	Q16	25	MID	0	30	23.3	Pass
20000	10	Q16	25	HIGH	0	30	23.28	Pass
20000	10	Q16	50	LOW	0	30	23.27	Pass
20175	10	QPSK	1	LOW	0	30	25	Pass
20175	10	QPSK	1	MID	0	30	25.12	Pass
20175	10	QPSK	1	HIGH	0	30	24.97	Pass
20175	10	QPSK	25	LOW	0	30	23.96	Pass
20175	10	QPSK	25	MID	0	30	23.98	Pass
20175	10	QPSK	25	HIGH	0	30	24.04	Pass
20175	10	QPSK	50	LOW	0	30	24	Pass
20175	10	Q16	1	LOW	0	30	24.28	Pass
20175	10	Q16	1	MID	0	30	24.33	Pass
20175	10	Q16	1	HIGH	0	30	24.25	Pass
20175	10	Q16	25	LOW	0	30	23.03	Pass
20175	10	Q16	25	MID	0	30	23.04	Pass
20175	10	Q16	25	HIGH	0	30	23.12	Pass
20175	10	Q16	50	LOW	0	30	23.04	Pass
20350	10	QPSK	1	LOW	0	30	25.01	Pass
20350	10	QPSK	1	MID	0	30	25.06	Pass
20350	10	QPSK	1	HIGH	0	30	24.99	Pass
20350	10	QPSK	25	LOW	0	30	24.02	Pass
20350	10	QPSK	25	MID	0	30	23.99	Pass
20350	10	QPSK	25	HIGH	0	30	23.97	Pass
20350	10	QPSK	50	LOW	0	30	23.99	Pass
20350	10	Q16	1	LOW	0	30	23.96	Pass
20350	10	Q16	1	MID	0	30	24.1	Pass
20350	10	Q16	1	HIGH	0	30	24.02	Pass
20350	10	Q16	25	LOW	0	30	23.14	Pass
20350	10	Q16	25	MID	0	30	23.11	Pass
20350	10	Q16	25	HIGH	0	30	23.1	Pass
20350	10	Q16	50	LOW	0	30	23.03	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20025	15	QPSK	1	LOW	0	30	25.18	Pass
20025	15	QPSK	1	MID	0	30	25.16	Pass
20025	15	QPSK	1	HIGH	0	30	25.02	Pass
20025	15	QPSK	36	LOW	0	30	24.3	Pass
20025	15	QPSK	36	MID	0	30	24.24	Pass
20025	15	QPSK	36	HIGH	0	30	24.26	Pass
20025	15	QPSK	75	LOW	0	30	24.26	Pass
20025	15	Q16	1	LOW	0	30	24.11	Pass
20025	15	Q16	1	MID	0	30	24.11	Pass
20025	15	Q16	1	HIGH	0	30	23.98	Pass
20025	15	Q16	36	LOW	0	30	23.25	Pass
20025	15	Q16	36	MID	0	30	23.24	Pass
20025	15	Q16	36	HIGH	0	30	23.23	Pass
20025	15	Q16	75	LOW	0	30	23.26	Pass
20175	15	QPSK	1	LOW	0	30	24.92	Pass
20175	15	QPSK	1	MID	0	30	24.98	Pass
20175	15	QPSK	1	HIGH	0	30	24.8	Pass
20175	15	QPSK	36	LOW	0	30	24.02	Pass
20175	15	QPSK	36	MID	0	30	24.07	Pass
20175	15	QPSK	36	HIGH	0	30	24.03	Pass
20175	15	QPSK	75	LOW	0	30	24.08	Pass
20175	15	Q16	1	LOW	0	30	24.23	Pass
20175	15	Q16	1	MID	0	30	24.27	Pass
20175	15	Q16	1	HIGH	0	30	24.1	Pass
20175	15	Q16	36	LOW	0	30	23.07	Pass
20175	15	Q16	36	MID	0	30	23.04	Pass
20175	15	Q16	36	HIGH	0	30	23.03	Pass
20175	15	Q16	75	LOW	0	30	23.05	Pass
20325	15	QPSK	1	LOW	0	30	24.86	Pass
20325	15	QPSK	1	MID	0	30	24.96	Pass
20325	15	QPSK	1	HIGH	0	30	24.85	Pass
20325	15	QPSK	36	LOW	0	30	24.04	Pass
20325	15	QPSK	36	MID	0	30	24.04	Pass
20325	15	QPSK	36	HIGH	0	30	24.04	Pass
20325	15	QPSK	75	LOW	0	30	24.06	Pass
20325	15	Q16	1	LOW	0	30	24.19	Pass
20325	15	Q16	1	MID	0	30	24.29	Pass
20325	15	Q16	1	HIGH	0	30	24.22	Pass
20325	15	Q16	36	LOW	0	30	22.94	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20325	15	Q16	36	MID	0	30	22.96	Pass
20325	15	Q16	36	HIGH	0	30	22.93	Pass
20325	15	Q16	75	LOW	0	30	23.04	Pass
20050	20	QPSK	1	LOW	0	30	24.94	Pass
20050	20	QPSK	1	MID	0	30	25.26	Pass
20050	20	QPSK	1	HIGH	0	30	24.79	Pass
20050	20	QPSK	50	LOW	0	30	24.11	Pass
20050	20	QPSK	50	MID	0	30	24.16	Pass
20050	20	QPSK	50	HIGH	0	30	24.09	Pass
20050	20	QPSK	100	LOW	0	30	24.14	Pass
20050	20	Q16	1	LOW	0	30	24.45	Pass
20050	20	Q16	1	MID	0	30	24.73	Pass
20050	20	Q16	1	HIGH	0	30	24.23	Pass
20050	20	Q16	50	LOW	0	30	23.18	Pass
20050	20	Q16	50	MID	0	30	23.21	Pass
20050	20	Q16	50	HIGH	0	30	23.13	Pass
20050	20	Q16	100	LOW	0	30	23.2	Pass
20175	20	QPSK	1	LOW	0	30	24.81	Pass
20175	20	QPSK	1	MID	0	30	25.1	Pass
20175	20	QPSK	1	HIGH	0	30	24.68	Pass
20175	20	QPSK	50	LOW	0	30	23.93	Pass
20175	20	QPSK	50	MID	0	30	23.99	Pass
20175	20	QPSK	50	HIGH	0	30	23.97	Pass
20175	20	QPSK	100	LOW	0	30	23.95	Pass
20175	20	Q16	1	LOW	0	30	24.14	Pass
20175	20	Q16	1	MID	0	30	24.44	Pass
20175	20	Q16	1	HIGH	0	30	24.04	Pass
20175	20	Q16	50	LOW	0	30	22.96	Pass
20175	20	Q16	50	MID	0	30	22.99	Pass
20175	20	Q16	50	HIGH	0	30	23	Pass
20175	20	Q16	100	LOW	0	30	22.97	Pass
20300	20	QPSK	1	LOW	0	30	24.66	Pass
20300	20	QPSK	1	MID	0	30	25.12	Pass
20300	20	QPSK	1	HIGH	0	30	24.65	Pass
20300	20	QPSK	50	LOW	0	30	23.91	Pass
20300	20	QPSK	50	MID	0	30	23.98	Pass
20300	20	QPSK	50	HIGH	0	30	23.89	Pass
20300	20	QPSK	100	LOW	0	30	23.94	Pass
20300	20	Q16	1	LOW	0	30	24	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20300	20	Q16	1	MID	0	30	24.43	Pass
20300	20	Q16	1	HIGH	0	30	24.06	Pass
20300	20	Q16	50	LOW	0	30	22.89	Pass
20300	20	Q16	50	MID	0	30	22.95	Pass
20300	20	Q16	50	HIGH	0	30	22.89	Pass
20300	20	Q16	100	LOW	0	30	22.93	Pass

LTE Band5

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20407	1.4	QPSK	1	LOW	0	38.45	23.57	Pass
20407	1.4	QPSK	1	MID	0	38.45	23.69	Pass
20407	1.4	QPSK	1	HIGH	0	38.45	23.54	Pass
20407	1.4	QPSK	3	LOW	0	38.45	23.66	Pass
20407	1.4	QPSK	3	MID	0	38.45	23.65	Pass
20407	1.4	QPSK	3	HIGH	0	38.45	23.61	Pass
20407	1.4	QPSK	6	LOW	0	38.45	22.61	Pass
20407	1.4	Q16	1	LOW	0	38.45	22.66	Pass
20407	1.4	Q16	1	MID	0	38.45	22.8	Pass
20407	1.4	Q16	1	HIGH	0	38.45	22.63	Pass
20407	1.4	Q16	3	LOW	0	38.45	22.66	Pass
20407	1.4	Q16	3	MID	0	38.45	22.58	Pass
20407	1.4	Q16	3	HIGH	0	38.45	22.63	Pass
20407	1.4	Q16	6	LOW	0	38.45	21.76	Pass
20525	1.4	QPSK	1	LOW	0	38.45	23.54	Pass
20525	1.4	QPSK	1	MID	0	38.45	23.72	Pass
20525	1.4	QPSK	1	HIGH	0	38.45	23.59	Pass
20525	1.4	QPSK	3	LOW	0	38.45	23.63	Pass
20525	1.4	QPSK	3	MID	0	38.45	23.67	Pass
20525	1.4	QPSK	3	HIGH	0	38.45	23.63	Pass
20525	1.4	QPSK	6	LOW	0	38.45	22.63	Pass
20525	1.4	Q16	1	LOW	0	38.45	22.94	Pass
20525	1.4	Q16	1	MID	0	38.45	23.06	Pass
20525	1.4	Q16	1	HIGH	0	38.45	22.91	Pass
20525	1.4	Q16	3	LOW	0	38.45	22.81	Pass
20525	1.4	Q16	3	MID	0	38.45	22.81	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20525	1.4	Q16	3	HIGH	0	38.45	22.79	Pass
20525	1.4	Q16	6	LOW	0	38.45	21.51	Pass
20643	1.4	QPSK	1	LOW	0	38.45	23.76	Pass
20643	1.4	QPSK	1	MID	0	38.45	24	Pass
20643	1.4	QPSK	1	HIGH	0	38.45	23.78	Pass
20643	1.4	QPSK	3	LOW	0	38.45	23.86	Pass
20643	1.4	QPSK	3	MID	0	38.45	23.96	Pass
20643	1.4	QPSK	3	HIGH	0	38.45	23.92	Pass
20643	1.4	QPSK	6	LOW	0	38.45	22.94	Pass
20643	1.4	Q16	1	LOW	0	38.45	22.91	Pass
20643	1.4	Q16	1	MID	0	38.45	23.05	Pass
20643	1.4	Q16	1	HIGH	0	38.45	22.94	Pass
20643	1.4	Q16	3	LOW	0	38.45	22.94	Pass
20643	1.4	Q16	3	MID	0	38.45	23.03	Pass
20643	1.4	Q16	3	HIGH	0	38.45	23.02	Pass
20643	1.4	Q16	6	LOW	0	38.45	22.04	Pass
20415	3	QPSK	1	LOW	0	38.45	23.67	Pass
20415	3	QPSK	1	MID	0	38.45	23.58	Pass
20415	3	QPSK	1	HIGH	0	38.45	23.53	Pass
20415	3	QPSK	8	LOW	0	38.45	22.64	Pass
20415	3	QPSK	8	MID	0	38.45	22.65	Pass
20415	3	QPSK	8	HIGH	0	38.45	22.6	Pass
20415	3	QPSK	15	LOW	0	38.45	22.58	Pass
20415	3	Q16	1	LOW	0	38.45	22.55	Pass
20415	3	Q16	1	MID	0	38.45	22.53	Pass
20415	3	Q16	1	HIGH	0	38.45	22.49	Pass
20415	3	Q16	8	LOW	0	38.45	21.75	Pass
20415	3	Q16	8	MID	0	38.45	21.77	Pass
20415	3	Q16	8	HIGH	0	38.45	21.72	Pass
20415	3	Q16	15	LOW	0	38.45	21.65	Pass
20525	3	QPSK	1	LOW	0	38.45	23.6	Pass
20525	3	QPSK	1	MID	0	38.45	23.61	Pass
20525	3	QPSK	1	HIGH	0	38.45	23.58	Pass
20525	3	QPSK	8	LOW	0	38.45	22.59	Pass
20525	3	QPSK	8	MID	0	38.45	22.67	Pass
20525	3	QPSK	8	HIGH	0	38.45	22.61	Pass
20525	3	QPSK	15	LOW	0	38.45	22.61	Pass
20525	3	Q16	1	LOW	0	38.45	22.91	Pass
20525	3	Q16	1	MID	0	38.45	22.99	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20525	3	Q16	1	HIGH	0	38.45	22.95	Pass
20525	3	Q16	8	LOW	0	38.45	21.72	Pass
20525	3	Q16	8	MID	0	38.45	21.78	Pass
20525	3	Q16	8	HIGH	0	38.45	21.71	Pass
20525	3	Q16	15	LOW	0	38.45	21.68	Pass
20635	3	QPSK	1	LOW	0	38.45	23.82	Pass
20635	3	QPSK	1	MID	0	38.45	23.84	Pass
20635	3	QPSK	1	HIGH	0	38.45	23.85	Pass
20635	3	QPSK	8	LOW	0	38.45	22.84	Pass
20635	3	QPSK	8	MID	0	38.45	22.9	Pass
20635	3	QPSK	8	HIGH	0	38.45	22.87	Pass
20635	3	QPSK	15	LOW	0	38.45	22.86	Pass
20635	3	Q16	1	LOW	0	38.45	22.94	Pass
20635	3	Q16	1	MID	0	38.45	22.92	Pass
20635	3	Q16	1	HIGH	0	38.45	22.91	Pass
20635	3	Q16	8	LOW	0	38.45	21.93	Pass
20635	3	Q16	8	MID	0	38.45	21.97	Pass
20635	3	Q16	8	HIGH	0	38.45	21.93	Pass
20635	3	Q16	15	LOW	0	38.45	21.82	Pass
20425	5	QPSK	1	LOW	0	38.45	23.53	Pass
20425	5	QPSK	1	MID	0	38.45	23.68	Pass
20425	5	QPSK	1	HIGH	0	38.45	23.54	Pass
20425	5	QPSK	12	LOW	0	38.45	22.56	Pass
20425	5	QPSK	12	MID	0	38.45	22.66	Pass
20425	5	QPSK	12	HIGH	0	38.45	22.6	Pass
20425	5	QPSK	25	LOW	0	38.45	22.63	Pass
20425	5	Q16	1	LOW	0	38.45	22.72	Pass
20425	5	Q16	1	MID	0	38.45	22.82	Pass
20425	5	Q16	1	HIGH	0	38.45	22.72	Pass
20425	5	Q16	12	LOW	0	38.45	21.68	Pass
20425	5	Q16	12	MID	0	38.45	21.78	Pass
20425	5	Q16	12	HIGH	0	38.45	21.79	Pass
20425	5	Q16	25	LOW	0	38.45	21.67	Pass
20525	5	QPSK	1	LOW	0	38.45	23.47	Pass
20525	5	QPSK	1	MID	0	38.45	23.64	Pass
20525	5	QPSK	1	HIGH	0	38.45	23.54	Pass
20525	5	QPSK	12	LOW	0	38.45	22.6	Pass
20525	5	QPSK	12	MID	0	38.45	22.67	Pass
20525	5	QPSK	12	HIGH	0	38.45	22.63	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20525	5	QPSK	25	LOW	0	38.45	22.63	Pass
20525	5	Q16	1	LOW	0	38.45	22.97	Pass
20525	5	Q16	1	MID	0	38.45	23.09	Pass
20525	5	Q16	1	HIGH	0	38.45	23.02	Pass
20525	5	Q16	12	LOW	0	38.45	21.78	Pass
20525	5	Q16	12	MID	0	38.45	21.81	Pass
20525	5	Q16	12	HIGH	0	38.45	21.75	Pass
20525	5	Q16	25	LOW	0	38.45	21.7	Pass
20625	5	QPSK	1	LOW	0	38.45	23.65	Pass
20625	5	QPSK	1	MID	0	38.45	23.84	Pass
20625	5	QPSK	1	HIGH	0	38.45	23.77	Pass
20625	5	QPSK	12	LOW	0	38.45	22.82	Pass
20625	5	QPSK	12	MID	0	38.45	22.87	Pass
20625	5	QPSK	12	HIGH	0	38.45	22.84	Pass
20625	5	QPSK	25	LOW	0	38.45	22.87	Pass
20625	5	Q16	1	LOW	0	38.45	22.85	Pass
20625	5	Q16	1	MID	0	38.45	23.03	Pass
20625	5	Q16	1	HIGH	0	38.45	22.97	Pass
20625	5	Q16	12	LOW	0	38.45	21.83	Pass
20625	5	Q16	12	MID	0	38.45	21.89	Pass
20625	5	Q16	12	HIGH	0	38.45	21.89	Pass
20625	5	Q16	25	LOW	0	38.45	21.78	Pass
20450	10	QPSK	1	LOW	0	38.45	23.66	Pass
20450	10	QPSK	1	MID	0	38.45	23.71	Pass
20450	10	QPSK	1	HIGH	0	38.45	23.51	Pass
20450	10	QPSK	25	LOW	0	38.45	22.72	Pass
20450	10	QPSK	25	MID	0	38.45	22.7	Pass
20450	10	QPSK	25	HIGH	0	38.45	22.69	Pass
20450	10	QPSK	50	LOW	0	38.45	22.69	Pass
20450	10	Q16	1	LOW	0	38.45	22.56	Pass
20450	10	Q16	1	MID	0	38.45	22.77	Pass
20450	10	Q16	1	HIGH	0	38.45	22.5	Pass
20450	10	Q16	25	LOW	0	38.45	21.77	Pass
20450	10	Q16	25	MID	0	38.45	21.72	Pass
20450	10	Q16	25	HIGH	0	38.45	21.73	Pass
20450	10	Q16	50	LOW	0	38.45	21.7	Pass
20525	10	QPSK	1	LOW	0	38.45	23.63	Pass
20525	10	QPSK	1	MID	0	38.45	23.77	Pass
20525	10	QPSK	1	HIGH	0	38.45	23.67	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
20525	10	QPSK	25	LOW	0	38.45	22.65	Pass
20525	10	QPSK	25	MID	0	38.45	22.7	Pass
20525	10	QPSK	25	HIGH	0	38.45	22.72	Pass
20525	10	QPSK	50	LOW	0	38.45	22.73	Pass
20525	10	Q16	1	LOW	0	38.45	22.93	Pass
20525	10	Q16	1	MID	0	38.45	23.12	Pass
20525	10	Q16	1	HIGH	0	38.45	23.06	Pass
20525	10	Q16	25	LOW	0	38.45	21.74	Pass
20525	10	Q16	25	MID	0	38.45	21.77	Pass
20525	10	Q16	25	HIGH	0	38.45	21.81	Pass
20525	10	Q16	50	LOW	0	38.45	21.78	Pass
20600	10	QPSK	1	LOW	0	38.45	23.65	Pass
20600	10	QPSK	1	MID	0	38.45	23.9	Pass
20600	10	QPSK	1	HIGH	0	38.45	23.87	Pass
20600	10	QPSK	25	LOW	0	38.45	22.82	Pass
20600	10	QPSK	25	MID	0	38.45	22.86	Pass
20600	10	QPSK	25	HIGH	0	38.45	22.87	Pass
20600	10	QPSK	50	LOW	0	38.45	22.84	Pass
20600	10	Q16	1	LOW	0	38.45	22.67	Pass
20600	10	Q16	1	MID	0	38.45	22.97	Pass
20600	10	Q16	1	HIGH	0	38.45	22.95	Pass
20600	10	Q16	25	LOW	0	38.45	21.96	Pass
20600	10	Q16	25	MID	0	38.45	21.96	Pass
20600	10	Q16	25	HIGH	0	38.45	21.97	Pass
20600	10	Q16	50	LOW	0	38.45	21.89	Pass

LTE Band12

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23017	1.4	QPSK	1	LOW	0	34.77	23.67	Pass
23017	1.4	QPSK	1	MID	0	34.77	23.83	Pass
23017	1.4	QPSK	1	HIGH	0	34.77	23.7	Pass
23017	1.4	QPSK	3	LOW	0	34.77	23.74	Pass
23017	1.4	QPSK	3	MID	0	34.77	23.76	Pass
23017	1.4	QPSK	3	HIGH	0	34.77	23.72	Pass
23017	1.4	QPSK	6	LOW	0	34.77	22.75	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23017	1.4	Q16	1	LOW	0	34.77	22.76	Pass
23017	1.4	Q16	1	MID	0	34.77	22.92	Pass
23017	1.4	Q16	1	HIGH	0	34.77	22.79	Pass
23017	1.4	Q16	3	LOW	0	34.77	22.77	Pass
23017	1.4	Q16	3	MID	0	34.77	22.72	Pass
23017	1.4	Q16	3	HIGH	0	34.77	22.75	Pass
23017	1.4	Q16	6	LOW	0	34.77	21.86	Pass
23095	1.4	QPSK	1	LOW	0	34.77	23.68	Pass
23095	1.4	QPSK	1	MID	0	34.77	23.81	Pass
23095	1.4	QPSK	1	HIGH	0	34.77	23.67	Pass
23095	1.4	QPSK	3	LOW	0	34.77	23.76	Pass
23095	1.4	QPSK	3	MID	0	34.77	23.77	Pass
23095	1.4	QPSK	3	HIGH	0	34.77	23.75	Pass
23095	1.4	QPSK	6	LOW	0	34.77	22.74	Pass
23095	1.4	Q16	1	LOW	0	34.77	23.08	Pass
23095	1.4	Q16	1	MID	0	34.77	23.18	Pass
23095	1.4	Q16	1	HIGH	0	34.77	23.04	Pass
23095	1.4	Q16	3	LOW	0	34.77	22.94	Pass
23095	1.4	Q16	3	MID	0	34.77	22.91	Pass
23095	1.4	Q16	3	HIGH	0	34.77	22.91	Pass
23095	1.4	Q16	6	LOW	0	34.77	21.66	Pass
23173	1.4	QPSK	1	LOW	0	34.77	23.64	Pass
23173	1.4	QPSK	1	MID	0	34.77	23.88	Pass
23173	1.4	QPSK	1	HIGH	0	34.77	23.66	Pass
23173	1.4	QPSK	3	LOW	0	34.77	23.75	Pass
23173	1.4	QPSK	3	MID	0	34.77	23.79	Pass
23173	1.4	QPSK	3	HIGH	0	34.77	23.74	Pass
23173	1.4	QPSK	6	LOW	0	34.77	22.76	Pass
23173	1.4	Q16	1	LOW	0	34.77	22.69	Pass
23173	1.4	Q16	1	MID	0	34.77	22.83	Pass
23173	1.4	Q16	1	HIGH	0	34.77	22.66	Pass
23173	1.4	Q16	3	LOW	0	34.77	22.88	Pass
23173	1.4	Q16	3	MID	0	34.77	22.9	Pass
23173	1.4	Q16	3	HIGH	0	34.77	22.93	Pass
23173	1.4	Q16	6	LOW	0	34.77	21.92	Pass
23025	3	QPSK	1	LOW	0	34.77	23.74	Pass
23025	3	QPSK	1	MID	0	34.77	23.72	Pass
23025	3	QPSK	1	HIGH	0	34.77	23.66	Pass
23025	3	QPSK	8	LOW	0	34.77	22.76	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23025	3	QPSK	8	MID	0	34.77	22.76	Pass
23025	3	QPSK	8	HIGH	0	34.77	22.77	Pass
23025	3	QPSK	15	LOW	0	34.77	22.76	Pass
23025	3	Q16	1	LOW	0	34.77	22.66	Pass
23025	3	Q16	1	MID	0	34.77	22.62	Pass
23025	3	Q16	1	HIGH	0	34.77	22.64	Pass
23025	3	Q16	8	LOW	0	34.77	21.86	Pass
23025	3	Q16	8	MID	0	34.77	21.91	Pass
23025	3	Q16	8	HIGH	0	34.77	21.86	Pass
23025	3	Q16	15	LOW	0	34.77	21.79	Pass
23095	3	QPSK	1	LOW	0	34.77	23.78	Pass
23095	3	QPSK	1	MID	0	34.77	23.74	Pass
23095	3	QPSK	1	HIGH	0	34.77	23.7	Pass
23095	3	QPSK	8	LOW	0	34.77	22.75	Pass
23095	3	QPSK	8	MID	0	34.77	22.81	Pass
23095	3	QPSK	8	HIGH	0	34.77	22.78	Pass
23095	3	QPSK	15	LOW	0	34.77	22.74	Pass
23095	3	Q16	1	LOW	0	34.77	23.14	Pass
23095	3	Q16	1	MID	0	34.77	23.1	Pass
23095	3	Q16	1	HIGH	0	34.77	23.06	Pass
23095	3	Q16	8	LOW	0	34.77	21.83	Pass
23095	3	Q16	8	MID	0	34.77	21.88	Pass
23095	3	Q16	8	HIGH	0	34.77	21.84	Pass
23095	3	Q16	15	LOW	0	34.77	21.77	Pass
23165	3	QPSK	1	LOW	0	34.77	23.77	Pass
23165	3	QPSK	1	MID	0	34.77	23.69	Pass
23165	3	QPSK	1	HIGH	0	34.77	23.74	Pass
23165	3	QPSK	8	LOW	0	34.77	22.78	Pass
23165	3	QPSK	8	MID	0	34.77	22.78	Pass
23165	3	QPSK	8	HIGH	0	34.77	22.74	Pass
23165	3	QPSK	15	LOW	0	34.77	22.73	Pass
23165	3	Q16	1	LOW	0	34.77	22.74	Pass
23165	3	Q16	1	MID	0	34.77	22.69	Pass
23165	3	Q16	1	HIGH	0	34.77	22.69	Pass
23165	3	Q16	8	LOW	0	34.77	21.77	Pass
23165	3	Q16	8	MID	0	34.77	21.83	Pass
23165	3	Q16	8	HIGH	0	34.77	21.79	Pass
23165	3	Q16	15	LOW	0	34.77	21.7	Pass
23035	5	QPSK	1	LOW	0	34.77	23.64	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23035	5	QPSK	1	MID	0	34.77	23.75	Pass
23035	5	QPSK	1	HIGH	0	34.77	23.6	Pass
23035	5	QPSK	12	LOW	0	34.77	22.76	Pass
23035	5	QPSK	12	MID	0	34.77	22.79	Pass
23035	5	QPSK	12	HIGH	0	34.77	22.73	Pass
23035	5	QPSK	25	LOW	0	34.77	22.76	Pass
23035	5	Q16	1	LOW	0	34.77	22.82	Pass
23035	5	Q16	1	MID	0	34.77	22.91	Pass
23035	5	Q16	1	HIGH	0	34.77	22.83	Pass
23035	5	Q16	12	LOW	0	34.77	21.78	Pass
23035	5	Q16	12	MID	0	34.77	21.85	Pass
23035	5	Q16	12	HIGH	0	34.77	21.75	Pass
23035	5	Q16	25	LOW	0	34.77	21.74	Pass
23095	5	QPSK	1	LOW	0	34.77	23.65	Pass
23095	5	QPSK	1	MID	0	34.77	23.76	Pass
23095	5	QPSK	1	HIGH	0	34.77	23.62	Pass
23095	5	QPSK	12	LOW	0	34.77	22.74	Pass
23095	5	QPSK	12	MID	0	34.77	22.8	Pass
23095	5	QPSK	12	HIGH	0	34.77	22.82	Pass
23095	5	QPSK	25	LOW	0	34.77	22.79	Pass
23095	5	Q16	1	LOW	0	34.77	23.17	Pass
23095	5	Q16	1	MID	0	34.77	23.3	Pass
23095	5	Q16	1	HIGH	0	34.77	23.11	Pass
23095	5	Q16	12	LOW	0	34.77	21.84	Pass
23095	5	Q16	12	MID	0	34.77	21.92	Pass
23095	5	Q16	12	HIGH	0	34.77	21.91	Pass
23095	5	Q16	25	LOW	0	34.77	21.87	Pass
23155	5	QPSK	1	LOW	0	34.77	23.63	Pass
23155	5	QPSK	1	MID	0	34.77	23.75	Pass
23155	5	QPSK	1	HIGH	0	34.77	23.63	Pass
23155	5	QPSK	12	LOW	0	34.77	22.84	Pass
23155	5	QPSK	12	MID	0	34.77	22.81	Pass
23155	5	QPSK	12	HIGH	0	34.77	22.7	Pass
23155	5	QPSK	25	LOW	0	34.77	22.72	Pass
23155	5	Q16	1	LOW	0	34.77	22.76	Pass
23155	5	Q16	1	MID	0	34.77	22.88	Pass
23155	5	Q16	1	HIGH	0	34.77	22.76	Pass
23155	5	Q16	12	LOW	0	34.77	21.83	Pass
23155	5	Q16	12	MID	0	34.77	21.85	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23155	5	Q16	12	HIGH	0	34.77	21.72	Pass
23155	5	Q16	25	LOW	0	34.77	21.71	Pass
23060	10	QPSK	1	LOW	0	34.77	23.7	Pass
23060	10	QPSK	1	MID	0	34.77	23.83	Pass
23060	10	QPSK	1	HIGH	0	34.77	23.67	Pass
23060	10	QPSK	25	LOW	0	34.77	22.82	Pass
23060	10	QPSK	25	MID	0	34.77	22.78	Pass
23060	10	QPSK	25	HIGH	0	34.77	22.88	Pass
23060	10	QPSK	50	LOW	0	34.77	22.85	Pass
23060	10	Q16	1	LOW	0	34.77	22.61	Pass
23060	10	Q16	1	MID	0	34.77	22.81	Pass
23060	10	Q16	1	HIGH	0	34.77	22.62	Pass
23060	10	Q16	25	LOW	0	34.77	21.86	Pass
23060	10	Q16	25	MID	0	34.77	21.81	Pass
23060	10	Q16	25	HIGH	0	34.77	21.88	Pass
23060	10	Q16	50	LOW	0	34.77	21.81	Pass
23095	10	QPSK	1	LOW	0	34.77	23.7	Pass
23095	10	QPSK	1	MID	0	34.77	23.86	Pass
23095	10	QPSK	1	HIGH	0	34.77	23.66	Pass
23095	10	QPSK	25	LOW	0	34.77	22.79	Pass
23095	10	QPSK	25	MID	0	34.77	22.8	Pass
23095	10	QPSK	25	HIGH	0	34.77	22.84	Pass
23095	10	QPSK	50	LOW	0	34.77	22.89	Pass
23095	10	Q16	1	LOW	0	34.77	23.04	Pass
23095	10	Q16	1	MID	0	34.77	23.21	Pass
23095	10	Q16	1	HIGH	0	34.77	23.04	Pass
23095	10	Q16	25	LOW	0	34.77	21.85	Pass
23095	10	Q16	25	MID	0	34.77	21.84	Pass
23095	10	Q16	25	HIGH	0	34.77	21.91	Pass
23095	10	Q16	50	LOW	0	34.77	21.89	Pass
23130	10	QPSK	1	LOW	0	34.77	23.71	Pass
23130	10	QPSK	1	MID	0	34.77	23.83	Pass
23130	10	QPSK	1	HIGH	0	34.77	23.74	Pass
23130	10	QPSK	25	LOW	0	34.77	22.66	Pass
23130	10	QPSK	25	MID	0	34.77	22.77	Pass
23130	10	QPSK	25	HIGH	0	34.77	22.65	Pass
23130	10	QPSK	50	LOW	0	34.77	22.68	Pass
23130	10	Q16	1	LOW	0	34.77	22.72	Pass
23130	10	Q16	1	MID	0	34.77	22.87	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23130	10	Q16	1	HIGH	0	34.77	22.71	Pass
23130	10	Q16	25	LOW	0	34.77	21.72	Pass
23130	10	Q16	25	MID	0	34.77	21.87	Pass
23130	10	Q16	25	HIGH	0	34.77	21.72	Pass
23130	10	Q16	50	LOW	0	34.77	21.72	Pass

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UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23755	5	QPSK	1	LOW	0	34.77	23.84	Pass
23755	5	QPSK	1	MID	0	34.77	23.98	Pass
23755	5	QPSK	1	HIGH	0	34.77	23.85	Pass
23755	5	QPSK	12	LOW	0	34.77	22.95	Pass
23755	5	QPSK	12	MID	0	34.77	22.99	Pass
23755	5	QPSK	12	HIGH	0	34.77	23.01	Pass
23755	5	QPSK	25	LOW	0	34.77	22.98	Pass
23755	5	Q16	1	LOW	0	34.77	23.37	Pass
23755	5	Q16	1	MID	0	34.77	23.48	Pass
23755	5	Q16	1	HIGH	0	34.77	23.28	Pass
23755	5	Q16	12	LOW	0	34.77	22.02	Pass
23755	5	Q16	12	MID	0	34.77	22.1	Pass
23755	5	Q16	12	HIGH	0	34.77	22.11	Pass
23755	5	Q16	25	LOW	0	34.77	22.04	Pass
23790	5	QPSK	1	LOW	0	34.77	23.81	Pass
23790	5	QPSK	1	MID	0	34.77	23.89	Pass
23790	5	QPSK	1	HIGH	0	34.77	23.77	Pass
23790	5	QPSK	12	LOW	0	34.77	22.83	Pass
23790	5	QPSK	12	MID	0	34.77	22.96	Pass
23790	5	QPSK	12	HIGH	0	34.77	22.92	Pass
23790	5	QPSK	25	LOW	0	34.77	22.85	Pass
23790	5	Q16	1	LOW	0	34.77	22.95	Pass
23790	5	Q16	1	MID	0	34.77	22.99	Pass
23790	5	Q16	1	HIGH	0	34.77	22.89	Pass
23790	5	Q16	12	LOW	0	34.77	21.88	Pass
23790	5	Q16	12	MID	0	34.77	21.94	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23790	5	Q16	12	HIGH	0	34.77	21.95	Pass
23790	5	Q16	25	LOW	0	34.77	21.86	Pass
23825	5	QPSK	1	LOW	0	34.77	23.78	Pass
23825	5	QPSK	1	MID	0	34.77	23.9	Pass
23825	5	QPSK	1	HIGH	0	34.77	23.74	Pass
23825	5	QPSK	12	LOW	0	34.77	22.9	Pass
23825	5	QPSK	12	MID	0	34.77	22.95	Pass
23825	5	QPSK	12	HIGH	0	34.77	22.87	Pass
23825	5	QPSK	25	LOW	0	34.77	22.88	Pass
23825	5	Q16	1	LOW	0	34.77	22.89	Pass
23825	5	Q16	1	MID	0	34.77	23.07	Pass
23825	5	Q16	1	HIGH	0	34.77	22.91	Pass
23825	5	Q16	12	LOW	0	34.77	21.96	Pass
23825	5	Q16	12	MID	0	34.77	21.98	Pass
23825	5	Q16	12	HIGH	0	34.77	21.9	Pass
23825	5	Q16	25	LOW	0	34.77	21.92	Pass
23780	10	QPSK	1	LOW	0	34.77	23.81	Pass
23780	10	QPSK	1	MID	0	34.77	24.03	Pass
23780	10	QPSK	1	HIGH	0	34.77	23.81	Pass
23780	10	QPSK	25	LOW	0	34.77	22.83	Pass
23780	10	QPSK	25	MID	0	34.77	22.9	Pass
23780	10	QPSK	25	HIGH	0	34.77	22.9	Pass
23780	10	QPSK	50	LOW	0	34.77	22.88	Pass
23780	10	Q16	1	LOW	0	34.77	22.75	Pass
23780	10	Q16	1	MID	0	34.77	22.93	Pass
23780	10	Q16	1	HIGH	0	34.77	22.7	Pass
23780	10	Q16	25	LOW	0	34.77	21.84	Pass
23780	10	Q16	25	MID	0	34.77	21.94	Pass
23780	10	Q16	25	HIGH	0	34.77	21.92	Pass
23780	10	Q16	50	LOW	0	34.77	21.86	Pass
23790	10	QPSK	1	LOW	0	34.77	23.8	Pass
23790	10	QPSK	1	MID	0	34.77	23.96	Pass
23790	10	QPSK	1	HIGH	0	34.77	23.83	Pass
23790	10	QPSK	25	LOW	0	34.77	22.72	Pass
23790	10	QPSK	25	MID	0	34.77	22.89	Pass
23790	10	QPSK	25	HIGH	0	34.77	22.78	Pass
23790	10	QPSK	50	LOW	0	34.77	22.81	Pass
23790	10	Q16	1	LOW	0	34.77	23.17	Pass
23790	10	Q16	1	MID	0	34.77	23.34	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
23790	10	Q16	1	HIGH	0	34.77	23.16	Pass
23790	10	Q16	25	LOW	0	34.77	21.78	Pass
23790	10	Q16	25	MID	0	34.77	21.95	Pass
23790	10	Q16	25	HIGH	0	34.77	21.82	Pass
23790	10	Q16	50	LOW	0	34.77	21.83	Pass
23800	10	QPSK	1	LOW	0	34.77	23.9	Pass
23800	10	QPSK	1	MID	0	34.77	24.01	Pass
23800	10	QPSK	1	HIGH	0	34.77	23.87	Pass
23800	10	QPSK	25	LOW	0	34.77	22.82	Pass
23800	10	QPSK	25	MID	0	34.77	22.94	Pass
23800	10	QPSK	25	HIGH	0	34.77	22.78	Pass
23800	10	QPSK	50	LOW	0	34.77	22.81	Pass
23800	10	Q16	1	LOW	0	34.77	22.99	Pass
23800	10	Q16	1	MID	0	34.77	22.98	Pass
23800	10	Q16	1	HIGH	0	34.77	22.83	Pass
23800	10	Q16	25	LOW	0	34.77	21.89	Pass
23800	10	Q16	25	MID	0	34.77	21.99	Pass
23800	10	Q16	25	HIGH	0	34.77	21.86	Pass
23800	10	Q16	50	LOW	0	34.77	21.85	Pass

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UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
131979	1.4	QPSK	1	LOW	0	30	25.37	Pass
131979	1.4	QPSK	1	MID	0	30	25.54	Pass
131979	1.4	QPSK	1	HIGH	0	30	25.36	Pass
131979	1.4	QPSK	3	LOW	0	30	25.46	Pass
131979	1.4	QPSK	3	MID	0	30	25.48	Pass
131979	1.4	QPSK	3	HIGH	0	30	25.42	Pass
131979	1.4	QPSK	6	LOW	0	30	24.45	Pass
131979	1.4	Q16	1	LOW	0	30	24.49	Pass
131979	1.4	Q16	1	MID	0	30	24.63	Pass
131979	1.4	Q16	1	HIGH	0	30	24.44	Pass
131979	1.4	Q16	3	LOW	0	30	24.46	Pass
131979	1.4	Q16	3	MID	0	30	24.49	Pass
131979	1.4	Q16	3	HIGH	0	30	24.42	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
131979	1.4	Q16	6	LOW	0	30	23.6	Pass
132322	1.4	QPSK	1	LOW	0	30	24.99	Pass
132322	1.4	QPSK	1	MID	0	30	25.19	Pass
132322	1.4	QPSK	1	HIGH	0	30	25.03	Pass
132322	1.4	QPSK	3	LOW	0	30	25.07	Pass
132322	1.4	QPSK	3	MID	0	30	25.14	Pass
132322	1.4	QPSK	3	HIGH	0	30	25.15	Pass
132322	1.4	QPSK	6	LOW	0	30	24.13	Pass
132322	1.4	Q16	1	LOW	0	30	24.36	Pass
132322	1.4	Q16	1	MID	0	30	24.53	Pass
132322	1.4	Q16	1	HIGH	0	30	24.34	Pass
132322	1.4	Q16	3	LOW	0	30	24.2	Pass
132322	1.4	Q16	3	MID	0	30	24.22	Pass
132322	1.4	Q16	3	HIGH	0	30	24.21	Pass
132322	1.4	Q16	6	LOW	0	30	23.05	Pass
132665	1.4	QPSK	1	LOW	0	30	25	Pass
132665	1.4	QPSK	1	MID	0	30	25.2	Pass
132665	1.4	QPSK	1	HIGH	0	30	25.02	Pass
132665	1.4	QPSK	3	LOW	0	30	25.07	Pass
132665	1.4	QPSK	3	MID	0	30	25.12	Pass
132665	1.4	QPSK	3	HIGH	0	30	25.08	Pass
132665	1.4	QPSK	6	LOW	0	30	24.09	Pass
132665	1.4	Q16	1	LOW	0	30	23.95	Pass
132665	1.4	Q16	1	MID	0	30	24.12	Pass
132665	1.4	Q16	1	HIGH	0	30	23.99	Pass
132665	1.4	Q16	3	LOW	0	30	24.15	Pass
132665	1.4	Q16	3	MID	0	30	24.22	Pass
132665	1.4	Q16	3	HIGH	0	30	24.09	Pass
132665	1.4	Q16	6	LOW	0	30	23.25	Pass
131987	3	QPSK	1	LOW	0	30	25.4	Pass
131987	3	QPSK	1	MID	0	30	25.36	Pass
131987	3	QPSK	1	HIGH	0	30	25.36	Pass
131987	3	QPSK	8	LOW	0	30	24.39	Pass
131987	3	QPSK	8	MID	0	30	24.45	Pass
131987	3	QPSK	8	HIGH	0	30	24.37	Pass
131987	3	QPSK	15	LOW	0	30	24.39	Pass
131987	3	Q16	1	LOW	0	30	24.33	Pass
131987	3	Q16	1	MID	0	30	24.29	Pass
131987	3	Q16	1	HIGH	0	30	24.29	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
131987	3	Q16	8	LOW	0	30	23.52	Pass
131987	3	Q16	8	MID	0	30	23.54	Pass
131987	3	Q16	8	HIGH	0	30	23.49	Pass
131987	3	Q16	15	LOW	0	30	23.39	Pass
132322	3	QPSK	1	LOW	0	30	25.08	Pass
132322	3	QPSK	1	MID	0	30	25.09	Pass
132322	3	QPSK	1	HIGH	0	30	25.07	Pass
132322	3	QPSK	8	LOW	0	30	24.11	Pass
132322	3	QPSK	8	MID	0	30	24.1	Pass
132322	3	QPSK	8	HIGH	0	30	24.08	Pass
132322	3	QPSK	15	LOW	0	30	24.05	Pass
132322	3	Q16	1	LOW	0	30	24.34	Pass
132322	3	Q16	1	MID	0	30	24.38	Pass
132322	3	Q16	1	HIGH	0	30	24.37	Pass
132322	3	Q16	8	LOW	0	30	23.15	Pass
132322	3	Q16	8	MID	0	30	23.18	Pass
132322	3	Q16	8	HIGH	0	30	23.13	Pass
132322	3	Q16	15	LOW	0	30	23.07	Pass
132657	3	QPSK	1	LOW	0	30	25.05	Pass
132657	3	QPSK	1	MID	0	30	25.04	Pass
132657	3	QPSK	1	HIGH	0	30	25.03	Pass
132657	3	QPSK	8	LOW	0	30	24	Pass
132657	3	QPSK	8	MID	0	30	24.07	Pass
132657	3	QPSK	8	HIGH	0	30	24.03	Pass
132657	3	QPSK	15	LOW	0	30	24.01	Pass
132657	3	Q16	1	LOW	0	30	23.99	Pass
132657	3	Q16	1	MID	0	30	23.95	Pass
132657	3	Q16	1	HIGH	0	30	23.97	Pass
132657	3	Q16	8	LOW	0	30	23.03	Pass
132657	3	Q16	8	MID	0	30	23.1	Pass
132657	3	Q16	8	HIGH	0	30	23.07	Pass
132657	3	Q16	15	LOW	0	30	22.95	Pass
131997	5	QPSK	1	LOW	0	30	25.27	Pass
131997	5	QPSK	1	MID	0	30	25.43	Pass
131997	5	QPSK	1	HIGH	0	30	25.23	Pass
131997	5	QPSK	12	LOW	0	30	24.35	Pass
131997	5	QPSK	12	MID	0	30	24.38	Pass
131997	5	QPSK	12	HIGH	0	30	24.36	Pass
131997	5	QPSK	25	LOW	0	30	24.37	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
131997	5	Q16	1	LOW	0	30	24.44	Pass
131997	5	Q16	1	MID	0	30	24.55	Pass
131997	5	Q16	1	HIGH	0	30	24.45	Pass
131997	5	Q16	12	LOW	0	30	23.39	Pass
131997	5	Q16	12	MID	0	30	23.48	Pass
131997	5	Q16	12	HIGH	0	30	23.44	Pass
131997	5	Q16	25	LOW	0	30	23.4	Pass
132322	5	QPSK	1	LOW	0	30	24.94	Pass
132322	5	QPSK	1	MID	0	30	25.06	Pass
132322	5	QPSK	1	HIGH	0	30	24.93	Pass
132322	5	QPSK	12	LOW	0	30	24.01	Pass
132322	5	QPSK	12	MID	0	30	24.07	Pass
132322	5	QPSK	12	HIGH	0	30	24.05	Pass
132322	5	QPSK	25	LOW	0	30	24.02	Pass
132322	5	Q16	1	LOW	0	30	24.37	Pass
132322	5	Q16	1	MID	0	30	24.52	Pass
132322	5	Q16	1	HIGH	0	30	24.41	Pass
132322	5	Q16	12	LOW	0	30	23.14	Pass
132322	5	Q16	12	MID	0	30	23.18	Pass
132322	5	Q16	12	HIGH	0	30	23.18	Pass
132322	5	Q16	25	LOW	0	30	23.1	Pass
132647	5	QPSK	1	LOW	0	30	24.82	Pass
132647	5	QPSK	1	MID	0	30	25.02	Pass
132647	5	QPSK	1	HIGH	0	30	24.9	Pass
132647	5	QPSK	12	LOW	0	30	23.93	Pass
132647	5	QPSK	12	MID	0	30	24.03	Pass
132647	5	QPSK	12	HIGH	0	30	23.99	Pass
132647	5	QPSK	25	LOW	0	30	23.92	Pass
132647	5	Q16	1	LOW	0	30	23.87	Pass
132647	5	Q16	1	MID	0	30	24.04	Pass
132647	5	Q16	1	HIGH	0	30	23.97	Pass
132647	5	Q16	12	LOW	0	30	22.95	Pass
132647	5	Q16	12	MID	0	30	23.01	Pass
132647	5	Q16	12	HIGH	0	30	23.01	Pass
132647	5	Q16	25	LOW	0	30	22.9	Pass
132022	10	QPSK	1	LOW	0	30	25.23	Pass
132022	10	QPSK	1	MID	0	30	25.38	Pass
132022	10	QPSK	1	HIGH	0	30	25.18	Pass
132022	10	QPSK	25	LOW	0	30	24.27	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
132022	10	QPSK	25	MID	0	30	24.31	Pass
132022	10	QPSK	25	HIGH	0	30	24.28	Pass
132022	10	QPSK	50	LOW	0	30	24.27	Pass
132022	10	Q16	1	LOW	0	30	24.15	Pass
132022	10	Q16	1	MID	0	30	24.31	Pass
132022	10	Q16	1	HIGH	0	30	24.08	Pass
132022	10	Q16	25	LOW	0	30	23.32	Pass
132022	10	Q16	25	MID	0	30	23.36	Pass
132022	10	Q16	25	HIGH	0	30	23.35	Pass
132022	10	Q16	50	LOW	0	30	23.27	Pass
132322	10	QPSK	1	LOW	0	30	24.97	Pass
132322	10	QPSK	1	MID	0	30	25.17	Pass
132322	10	QPSK	1	HIGH	0	30	25	Pass
132322	10	QPSK	25	LOW	0	30	24.02	Pass
132322	10	QPSK	25	MID	0	30	24.02	Pass
132322	10	QPSK	25	HIGH	0	30	24.05	Pass
132322	10	QPSK	50	LOW	0	30	24.04	Pass
132322	10	Q16	1	LOW	0	30	24.28	Pass
132322	10	Q16	1	MID	0	30	24.44	Pass
132322	10	Q16	1	HIGH	0	30	24.32	Pass
132322	10	Q16	25	LOW	0	30	23.05	Pass
132322	10	Q16	25	MID	0	30	23.06	Pass
132322	10	Q16	25	HIGH	0	30	23.07	Pass
132322	10	Q16	50	LOW	0	30	23.04	Pass
132622	10	QPSK	1	LOW	0	30	24.9	Pass
132622	10	QPSK	1	MID	0	30	25.14	Pass
132622	10	QPSK	1	HIGH	0	30	24.99	Pass
132622	10	QPSK	25	LOW	0	30	23.92	Pass
132622	10	QPSK	25	MID	0	30	23.94	Pass
132622	10	QPSK	25	HIGH	0	30	24	Pass
132622	10	QPSK	50	LOW	0	30	23.96	Pass
132622	10	Q16	1	LOW	0	30	23.84	Pass
132622	10	Q16	1	MID	0	30	23.98	Pass
132622	10	Q16	1	HIGH	0	30	23.94	Pass
132622	10	Q16	25	LOW	0	30	22.98	Pass
132622	10	Q16	25	MID	0	30	23.04	Pass
132622	10	Q16	25	HIGH	0	30	23.07	Pass
132622	10	Q16	50	LOW	0	30	22.99	Pass
132047	15	QPSK	1	LOW	0	30	25.14	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
132047	15	QPSK	1	MID	0	30	25.23	Pass
132047	15	QPSK	1	HIGH	0	30	25.05	Pass
132047	15	QPSK	36	LOW	0	30	24.28	Pass
132047	15	QPSK	36	MID	0	30	24.32	Pass
132047	15	QPSK	36	HIGH	0	30	24.3	Pass
132047	15	QPSK	75	LOW	0	30	24.3	Pass
132047	15	Q16	1	LOW	0	30	24.09	Pass
132047	15	Q16	1	MID	0	30	24.12	Pass
132047	15	Q16	1	HIGH	0	30	23.96	Pass
132047	15	Q16	36	LOW	0	30	23.23	Pass
132047	15	Q16	36	MID	0	30	23.28	Pass
132047	15	Q16	36	HIGH	0	30	23.27	Pass
132047	15	Q16	75	LOW	0	30	23.28	Pass
132322	15	QPSK	1	LOW	0	30	24.87	Pass
132322	15	QPSK	1	MID	0	30	24.99	Pass
132322	15	QPSK	1	HIGH	0	30	24.85	Pass
132322	15	QPSK	36	LOW	0	30	24.04	Pass
132322	15	QPSK	36	MID	0	30	24.07	Pass
132322	15	QPSK	36	HIGH	0	30	24.06	Pass
132322	15	QPSK	75	LOW	0	30	24.03	Pass
132322	15	Q16	1	LOW	0	30	24.18	Pass
132322	15	Q16	1	MID	0	30	24.29	Pass
132322	15	Q16	1	HIGH	0	30	24.21	Pass
132322	15	Q16	36	LOW	0	30	23.03	Pass
132322	15	Q16	36	MID	0	30	23.06	Pass
132322	15	Q16	36	HIGH	0	30	23.06	Pass
132322	15	Q16	75	LOW	0	30	23.03	Pass
132597	15	QPSK	1	LOW	0	30	24.84	Pass
132597	15	QPSK	1	MID	0	30	24.97	Pass
132597	15	QPSK	1	HIGH	0	30	24.88	Pass
132597	15	QPSK	36	LOW	0	30	24.01	Pass
132597	15	QPSK	36	MID	0	30	24.03	Pass
132597	15	QPSK	36	HIGH	0	30	24.02	Pass
132597	15	QPSK	75	LOW	0	30	24.03	Pass
132597	15	Q16	1	LOW	0	30	24.18	Pass
132597	15	Q16	1	MID	0	30	24.23	Pass
132597	15	Q16	1	HIGH	0	30	24.16	Pass
132597	15	Q16	36	LOW	0	30	22.92	Pass
132597	15	Q16	36	MID	0	30	22.94	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
132597	15	Q16	36	HIGH	0	30	22.95	Pass
132597	15	Q16	75	LOW	0	30	22.97	Pass
132072	20	QPSK	1	LOW	0	30	24.94	Pass
132072	20	QPSK	1	MID	0	30	25.24	Pass
132072	20	QPSK	1	HIGH	0	30	24.78	Pass
132072	20	QPSK	50	LOW	0	30	24.12	Pass
132072	20	QPSK	50	MID	0	30	24.11	Pass
132072	20	QPSK	50	HIGH	0	30	24.06	Pass
132072	20	QPSK	100	LOW	0	30	24.12	Pass
132072	20	Q16	1	LOW	0	30	24.41	Pass
132072	20	Q16	1	MID	0	30	24.72	Pass
132072	20	Q16	1	HIGH	0	30	24.25	Pass
132072	20	Q16	50	LOW	0	30	23.16	Pass
132072	20	Q16	50	MID	0	30	23.19	Pass
132072	20	Q16	50	HIGH	0	30	23.11	Pass
132072	20	Q16	100	LOW	0	30	23.15	Pass
132322	20	QPSK	1	LOW	0	30	24.66	Pass
132322	20	QPSK	1	MID	0	30	25.17	Pass
132322	20	QPSK	1	HIGH	0	30	24.68	Pass
132322	20	QPSK	50	LOW	0	30	23.91	Pass
132322	20	QPSK	50	MID	0	30	23.97	Pass
132322	20	QPSK	50	HIGH	0	30	23.97	Pass
132322	20	QPSK	100	LOW	0	30	23.9	Pass
132322	20	Q16	1	LOW	0	30	24.02	Pass
132322	20	Q16	1	MID	0	30	24.43	Pass
132322	20	Q16	1	HIGH	0	30	24.1	Pass
132322	20	Q16	50	LOW	0	30	22.95	Pass
132322	20	Q16	50	MID	0	30	22.99	Pass
132322	20	Q16	50	HIGH	0	30	22.98	Pass
132322	20	Q16	100	LOW	0	30	22.96	Pass
132572	20	QPSK	1	LOW	0	30	24.55	Pass
132572	20	QPSK	1	MID	0	30	25.02	Pass
132572	20	QPSK	1	HIGH	0	30	24.6	Pass
132572	20	QPSK	50	LOW	0	30	23.89	Pass
132572	20	QPSK	50	MID	0	30	23.89	Pass
132572	20	QPSK	50	HIGH	0	30	23.95	Pass
132572	20	QPSK	100	LOW	0	30	23.89	Pass
132572	20	Q16	1	LOW	0	30	23.95	Pass
132572	20	Q16	1	MID	0	30	24.32	Pass

UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (dBm)	Upper Limit (dBm)	Measured (dBm)	Verdict
132572	20	Q16	1	HIGH	0	30	23.99	Pass
132572	20	Q16	50	LOW	0	30	22.87	Pass
132572	20	Q16	50	MID	0	30	22.87	Pass
132572	20	Q16	50	HIGH	0	30	22.9	Pass
132572	20	Q16	100	LOW	0	30	22.93	Pass

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	17.59	18.0
		CH 06	2437	17.23	17.5
		CH 11	2462	17.45	17.5
802.11g	54Mbps	CH 01	2412	19.70	20.0
		CH 06	2437	19.24	19.5
		CH 11	2462	19.57	20.0
802.11n (20MHz)	MCS7	CH 01	2412	19.44	19.5
		CH 06	2437	19.04	19.5
		CH 11	2462	19.36	19.5
802.11n (40MHz)	MCS7	CH 03	2422	18.82	19.0
		CH 06	2437	18.46	18.5
		CH 09	2452	18.52	19.0

WLAN(5.2GHz)				
Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-up power (dBm)
802.11a	CH 36	5180	16.04	16.5
	CH 40	5200	15.70	16.0
	CH 48	5240	15.23	15.5
802.11n (HT20)	CH 36	5180	15.72	16.0
	CH 40	5200	15.46	15.5
	CH 48	5240	15.15	15.5
802.11n (HT40)	CH 38	5190	15.65	16.0
	CH 46	5230	15.45	15.5
802.11ac (VHT20)	CH 36	5180	15.70	16.0
	CH 40	5200	15.54	16.0
	CH 48	5240	15.10	15.5
802.11ac (VHT40)	CH 38	5190	15.73	16.0
	CH 46	5230	15.48	15.5
802.11ac (VHT80)	CH42	5210	15.65	16.0

WLAN(5.8GHz)				
Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-up power (dBm)
802.11a	CH 149	5745	12.84	13.0
	CH 157	5785	13.33	13.5
	CH 165	5825	13.78	14.0
802.11n (HT20)	CH 149	5745	12.63	13.0
	CH 157	5785	13.18	13.5
	CH 165	5825	13.68	14.0
802.11n (HT40)	CH 151	5755	12.81	13.0
	CH 159	5795	13.27	13.5
802.11ac (VHT20)	CH 149	5745	12.70	13.0
	CH 157	5785	13.16	13.5
	CH 165	5825	13.75	14.0
802.11ac (VHT40)	CH 151	5755	12.76	13.0
	CH 159	5795	13.33	13.5
802.11ac (VHT80)	CH155	5775	13.20	13.5

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	Channel	Frequency (MHz)	Average Power(dBm)	Tune-up power (dBm)
GFSK	1Mbps	CH 00	2402	7.83	8.0
		CH 39	2441	6.29	6.5
		CH 78	2480	3.82	4.0
Pi/4 QDPSK	2Mbps	CH 00	2402	7.09	7.5
		CH 39	2441	5.61	6.0
		CH 78	2480	3.60	4.0
8DPSK	3Mbps	CH 00	2402	7.03	7.5
		CH 39	2441	5.33	5.5
		CH 78	2480	3.53	4.0

Bluetooth - Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
BLE	1Mbps	CH 00	2402	-4.64	-4.0
		CH 19	2440	-5.93	-5.0
		CH 39	2480	-5.62	-5.0

9.2 Test Results for Standalone SAR Test

Head SAR

GSM850 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
1.	GSM	Right Cheek	190	836.6	32.62	33.0	1.091	0.661	0.721
	GSM	Right Tilted	190	836.6	32.62	33.0	1.091	0.556	0.607
	GSM	Left Cheek	190	836.6	32.62	33.0	1.091	0.643	0.702
	GSM	Left Tilted	190	836.6	32.62	33.0	1.091	0.542	0.592

GPRS850 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	GPRS_4TX	Right Cheek	251	848.8	29.76	30.0	1.057	0.717	0.758
	GPRS_4TX	Right Tilted	251	848.8	29.76	30.0	1.057	0.607	0.641
2.	GPRS_4TX	Left Cheek	251	848.8	29.76	30.0	1.057	0.724	0.765
	GPRS_4TX	Left Tilted	251	848.8	29.76	30.0	1.057	0.611	0.646

GSM1900 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	M Hz					
3.	GSM	Right Cheek	512	1850.2	31.20	31.5	1.072	0.282	0.302
	GSM	Right Tilted	512	1850.2	31.20	31.5	1.072	0.179	0.192
	GSM	Left Cheek	512	1850.2	31.20	31.5	1.072	0.145	0.155
	GSM	Left Tilted	512	1850.2	31.20	31.5	1.072	0.086	0.092

GPRS1900 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	M Hz					
4.	GPRS_4TX	Right Cheek	810	1909.8	28.97	29.0	1.007	0.362	0.365
	GPRS_4TX	Right Tilted	810	1909.8	28.97	29.0	1.007	0.247	0.249
	GPRS_4TX	Left Cheek	810	1909.8	28.97	29.0	1.007	0.297	0.299
	GPRS_4TX	Left Tilted	810	1909.8	28.97	29.0	1.007	0.212	0.213

WCDMA Band 2 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
5.	RMC	Right Cheek	9400	1880.0	22.28	22.5	1.052	0.422	0.444
	RMC	Right Tilted	9400	1880.0	22.28	22.5	1.052	0.317	0.333
	RMC	Left Cheek	9400	1880.0	22.28	22.5	1.052	0.172	0.181
	RMC	Left Tilted	9400	1880.0	22.28	22.5	1.052	0.103	0.108

WCDMA Band 4 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
6.	RMC	Right Cheek	1413	1732.6	22.42	22.5	1.019	0.349	0.355
	RMC	Right Tilted	1413	1732.6	22.42	22.5	1.019	0.238	0.242
	RMC	Left Cheek	1413	1732.6	22.42	22.5	1.019	0.305	0.311
	RMC	Left Tilted	1413	1732.6	22.42	22.5	1.019	0.217	0.221

WCDMA Band 5 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	RMC	Right Cheek	4233	846.6	22.41	22.5	1.021	0.592	0.604
	RMC	Right Tilted	4233	846.6	22.41	22.5	1.021	0.489	0.499
7.	RMC	Left Cheek	4233	846.6	22.41	22.5	1.021	0.639	0.652
	RMC	Left Tilted	4233	846.6	22.41	22.5	1.021	0.517	0.528

LTE Band 2– Head SAR Test								
Plot No.	Mode	Test Position Head	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	1880	25.04	25.5	1.112	0.166	0.185
	QPSK 1.4MHz 1RB	Right Tilted	1880	25.04	25.5	1.112	0.114	0.127
	QPSK 1.4MHz 1RB	Left Cheek	1880	25.04	25.5	1.112	0.123	0.137
	QPSK 1.4MHz 1RB	Left Tilted	1880	25.04	25.5	1.112	0.085	0.094
	QPSK 1.4MHz 50%RB	Right Cheek	1880	25.04	25.5	1.112	0.149	0.166
	QPSK 1.4MHz 50%RB	Right Tilted	1880	25.04	25.5	1.112	0.093	0.103
	QPSK 1.4MHz 50%RB	Left Cheek	1880	25.04	25.5	1.112	0.120	0.133
	QPSK 1.4MHz 50%RB	Left Tilted	1880	25.04	25.5	1.112	0.087	0.097
8.	QPSK 20MHz 1RB	Right Cheek	1880	24.53	25.0	1.114	0.190	0.212
	QPSK 20MHz 1RB	Right Tilted	1880	24.53	25.0	1.114	0.104	0.116
	QPSK 20MHz 1RB	Left Cheek	1880	24.53	25.0	1.114	0.115	0.128
	QPSK 20MHz 1RB	Left Tilted	1880	24.53	25.0	1.114	0.078	0.087
	QPSK 20MHz 50%RB	Right Cheek	1880	24.53	25.0	1.114	0.167	0.186
	QPSK 20MHz 50%RB	Right Tilted	1880	24.53	25.0	1.114	0.097	0.108
	QPSK 20MHz 50%RB	Left Cheek	1880	24.53	25.0	1.114	0.108	0.120
	QPSK 20MHz 50%RB	Left Tilted	1880	24.53	25.0	1.114	0.073	0.081

LTE Band 4– Head SAR Test								
Plot No.	Mode	Test Position Head	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	25.38	25.5	1.028	0.132	0.136
	QPSK 1.4MHz 1RB	Right Tilted	1710.7	25.38	25.5	1.028	0.074	0.076
	QPSK 1.4MHz 1RB	Left Cheek	1710.7	25.38	25.5	1.028	0.165	0.170
	QPSK 1.4MHz 1RB	Left Tilted	1710.7	25.38	25.5	1.028	0.098	0.101
	QPSK 1.4MHz 50%RB	Right Cheek	1710.7	25.38	25.5	1.028	0.120	0.123
	QPSK 1.4MHz 50%RB	Right Tilted	1710.7	25.38	25.5	1.028	0.072	0.074
	QPSK 1.4MHz 50%RB	Left Cheek	1710.7	25.38	25.5	1.028	0.152	0.156
	QPSK 1.4MHz 50%RB	Left Tilted	1710.7	25.38	25.5	1.028	0.094	0.097
	QPSK 20MHz 1RB	Right Cheek	1720.0	25.26	25.5	1.057	0.143	0.151
	QPSK 20MHz 1RB	Right Tilted	1720.0	25.26	25.5	1.057	0.089	0.094
9.	QPSK 20MHz 1RB	Left Cheek	1720.0	25.26	25.5	1.057	0.180	0.190
	QPSK 20MHz 1RB	Left Tilted	1720.0	25.26	25.5	1.057	0.112	0.118
	QPSK 20MHz 50%RB	Right Cheek	1720.0	25.26	25.5	1.057	0.122	0.129
	QPSK 20MHz 50%RB	Right Tilted	1720.0	25.26	25.5	1.057	0.068	0.072
	QPSK 20MHz 50%RB	Left Cheek	1720.0	25.26	25.5	1.057	0.168	0.178
	QPSK 20MHz 50%RB	Left Tilted	1720.0	25.26	25.5	1.057	0.107	0.113

LTE Band 5– Head SAR Test								
Plot No.	Mode	Test Position Head	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	848.3	24	24.5	1.122	0.523	0.587
	QPSK 1.4MHz 1RB	Right Tilted	848.3	24	24.5	1.122	0.414	0.465
	QPSK 1.4MHz 1RB	Left Cheek	848.3	24	24.5	1.122	0.637	0.715
	QPSK 1.4MHz 1RB	Left Tilted	848.3	24	24.5	1.122	0.521	0.585
	QPSK 1.4MHz 50%RB	Right Cheek	848.3	24	24.5	1.122	0.420	0.471
	QPSK 1.4MHz 50%RB	Right Tilted	848.3	24	24.5	1.122	0.314	0.352
	QPSK 1.4MHz 50%RB	Left Cheek	848.3	24	24.5	1.122	0.513	0.576
	QPSK 1.4MHz 50%RB	Left Tilted	848.3	24	24.5	1.122	0.416	0.467
	QPSK 10MHz 1RB	Right Cheek	844	23.9	24.0	1.023	0.544	0.557
	QPSK 10MHz 1RB	Right Tilted	844	23.9	24.0	1.023	0.428	0.438
10.	QPSK 10MHz 1RB	Left Cheek	844	23.9	24.0	1.023	0.721	0.738
	QPSK 10MHz 1RB	Left Tilted	844	23.9	24.0	1.023	0.607	0.621
	QPSK 10MHz 50%RB	Right Cheek	844	23.9	24.0	1.023	0.444	0.454
	QPSK 10MHz 50%RB	Right Tilted	844	23.9	24.0	1.023	0.327	0.335
	QPSK 10MHz 50%RB	Left Cheek	844	23.9	24.0	1.023	0.621	0.635
	QPSK 10MHz 50%RB	Left Tilted	844	23.9	24.0	1.023	0.507	0.519

LTE Band 12– Head SAR Test								
Plot No.	Mode	Test Position Head	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	715.3	23.88	24.0	1.028	0.452	0.465
	QPSK 1.4MHz 1RB	Right Tilted	715.3	23.88	24.0	1.028	0.348	0.358
	QPSK 1.4MHz 1RB	Left Cheek	715.3	23.88	24.0	1.028	0.514	0.528
	QPSK 1.4MHz 1RB	Left Tilted	715.3	23.88	24.0	1.028	0.408	0.419
	QPSK 1.4MHz 50%RB	Right Cheek	715.3	23.88	24.0	1.028	0.357	0.367
	QPSK 1.4MHz 50%RB	Right Tilted	715.3	23.88	24.0	1.028	0.249	0.256
	QPSK 1.4MHz 50%RB	Left Cheek	715.3	23.88	24.0	1.028	0.426	0.438
	QPSK 1.4MHz 50%RB	Left Tilted	715.3	23.88	24.0	1.028	0.317	0.326
	QPSK 10MHz 1RB	Right Cheek	707.5	23.86	24.0	1.033	0.483	0.499
	QPSK 10MHz 1RB	Right Tilted	707.5	23.86	24.0	1.033	0.396	0.409
11.	QPSK 10MHz 1RB	Left Cheek	707.5	23.86	24.0	1.033	0.575	0.594
	QPSK 10MHz 1RB	Left Tilted	707.5	23.86	24.0	1.033	0.488	0.504
	QPSK 10MHz 50%RB	Right Cheek	707.5	23.86	24.0	1.033	0.314	0.324
	QPSK 10MHz 50%RB	Right Tilted	707.5	23.86	24.0	1.033	0.227	0.234
	QPSK 10MHz 50%RB	Left Cheek	707.5	23.86	24.0	1.033	0.146	0.151
	QPSK 10MHz 50%RB	Left Tilted	707.5	23.86	24.0	1.033	0.079	0.082

LTE Band 17– Head SAR Test								
Plot No.	Mode	Test Position Head	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	709	24.03	24.5	1.114	0.378	0.421
	QPSK 10MHz 1RB	Right Tilted	709	24.03	24.5	1.114	0.264	0.294
12.	QPSK 10MHz 1RB	Left Cheek	709	24.03	24.5	1.114	0.595	0.663
	QPSK 10MHz 1RB	Left Tilted	709	24.03	24.5	1.114	0.487	0.543
	QPSK 10MHz 50%RB	Right Cheek	709	24.03	24.5	1.114	0.248	0.276
	QPSK 10MHz 50%RB	Right Tilted	709	24.03	24.5	1.114	0.168	0.187
	QPSK 10MHz 50%RB	Left Cheek	709	24.03	24.5	1.114	0.429	0.478
	QPSK 10MHz 50%RB	Left Tilted	709	24.03	24.5	1.114	0.317	0.353

LTE Band 66– Head SAR Test								
Plot No.	Mode	Test Position Head	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	1709.3	25.54	26.0	1.112	0.134	0.149
	QPSK 1.4MHz 1RB	Right Tilted	1709.3	25.54	26.0	1.112	0.081	0.090
	QPSK 1.4MHz 1RB	Left Cheek	1709.3	25.54	26.0	1.112	0.175	0.195
	QPSK 1.4MHz 1RB	Left Tilted	1709.3	25.54	26.0	1.112	0.113	0.126
	QPSK 1.4MHz 50%RB	Right Cheek	1709.3	25.54	26.0	1.112	0.122	0.136
	QPSK 1.4MHz 50%RB	Right Tilted	1709.3	25.54	26.0	1.112	0.072	0.080
	QPSK 1.4MHz 50%RB	Left Cheek	1709.3	25.54	26.0	1.112	0.154	0.171
	QPSK 1.4MHz 50%RB	Left Tilted	1709.3	25.54	26.0	1.112	0.094	0.105
	QPSK 20MHz 1RB	Right Cheek	1720	25.24	25.5	1.062	0.145	0.154
	QPSK 20MHz 1RB	Right Tilted	1720	25.24	25.5	1.062	0.088	0.093
13.	QPSK 20MHz 1RB	Left Cheek	1720	25.24	25.5	1.062	0.196	0.208
	QPSK 20MHz 1RB	Left Tilted	1720	25.24	25.5	1.062	0.103	0.109
	QPSK 20MHz 50%RB	Right Cheek	1720	25.24	25.5	1.062	0.132	0.140
	QPSK 20MHz 50%RB	Right Tilted	1720	25.24	25.5	1.062	0.084	0.089
	QPSK 20MHz 50%RB	Left Cheek	1720	25.24	25.5	1.062	0.167	0.177
	QPSK 20MHz 50%RB	Left Tilted	1720	25.24	25.5	1.062	0.103	0.109

WLAN 2.4GHz – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
14.	802.11b	Right Cheek	01	2412	17.59	18.0	1.099	0.215	0.236
	802.11b	Right Tilted	01	2412	17.59	18.0	1.099	0.118	0.130
	802.11b	Left Cheek	01	2412	17.59	18.0	1.099	0.146	0.160
	802.11b	Left Tilted	01	2412	17.59	18.0	1.099	0.097	0.107
	802.11g	Right Cheek	01	2412	19.70	20.0	1.072	0.212	0.227
	802.11g	Right Tilted	01	2412	19.70	20.0	1.072	0.107	0.115
	802.11g	Left Cheek	01	2412	19.70	20.0	1.072	0.413	0.443
	802.11g	Left Tilted	01	2412	19.70	20.0	1.072	0.311	0.333

Bluetooth– Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
15.	GFSK	Right Cheek	00	2402	7.83	8.0	1.040	0.027	0.028
	GFSK	Right Tilted	00	2402	7.83	8.0	1.040	0.018	0.019
	GFSK	Left Cheek	00	2402	7.83	8.0	1.040	0.021	0.022
	GFSK	Left Tilted	00	2402	7.83	8.0	1.040	0.017	0.018

WLAN 5.2GHz – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11a	Right Cheek	36	5180	16.04	16.5	1.112	0.344	0.382
	802.11a	Right Tilted	36	5180	16.04	16.5	1.112	0.237	0.263
16.	802.11a	Left Cheek	36	5180	16.04	16.5	1.112	0.360	0.400
	802.11a	Left Tilted	36	5180	16.04	16.5	1.112	0.243	0.270

WLAN 5.8GHz – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11a	Right Cheek	165	5825	13.78	14.0	1.052	0.589	0.620
	802.11a	Right Tilted	165	5825	13.78	14.0	1.052	0.465	0.489
17.	802.11a	Left Cheek	165	5825	13.78	14.0	1.052	0.687	0.723
	802.11a	Left Tilted	165	5825	13.78	14.0	1.052	0.572	0.602

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.

Waltek Testing Group (Shenzhen) Co., Ltd.

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Body-worn SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
18.	GSM	Back	190	836.6	32.62	33.0	1.091	0.407	0.444
	GSM	Front	190	836.6	32.62	33.0	1.091	0.208	0.227

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
19.	GSM	Back	512	1850.2	31.20	31.5	1.072	0.563	0.603
	GSM	Front	512	1850.2	31.20	31.5	1.072	0.307	0.329

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
20.	RMC 12.2k	Back Face	9400	1880.0	22.28	22.5	1.052	0.723	0.761
	RMC 12.2k	Front Face	9400	1880.0	22.28	22.5	1.052	0.383	0.403

WCDMA Band 4 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
21.	RMC 12.2k	Back Face	1413	1732.6	22.42	22.5	1.019	0.718	0.731
	RMC 12.2k	Front Face	1413	1732.6	22.42	22.5	1.019	0.465	0.474

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
22.	RMC 12.2k	Back Face	4233	846.6	22.41	22.5	1.021	0.415	0.424
	RMC 12.2k	Front Face	4233	846.6	22.41	22.5	1.021	0.392	0.400

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	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	Back Side	1880	25.04	25.5	1.112	0.356	0.396
	QPSK 1.4MHz 1RB	Front Side	1880	25.04	25.5	1.112	0.224	0.249
	QPSK 1.4MHz 50%RB	Back Side	1880	25.04	25.5	1.112	0.331	0.368
	QPSK 1.4MHz 50%RB	Front Side	1880	25.04	25.5	1.112	0.206	0.229
23.	QPSK 20MHz 1RB	Back Side	1880	24.53	25.0	1.114	0.367	0.409
	QPSK 20MHz 1RB	Front Side	1880	24.53	25.0	1.114	0.243	0.271
	QPSK 20MHz 50%RB	Back Side	1880	24.53	25.0	1.114	0.345	0.384
	QPSK 20MHz 50%RB	Front Side	1880	24.53	25.0	1.114	0.214	0.238

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Back Side	1710.7	25.38	25.5	1.028	0.687	0.706
	QPSK 20MHz 1RB	Front Side	1710.7	25.38	25.5	1.028	0.241	0.248
	QPSK 20MHz 50%RB	Back Side	1710.7	25.38	25.5	1.028	0.645	0.663
	QPSK 20MHz 50%RB	Front Side	1710.7	25.38	25.5	1.028	0.231	0.237
24.	QPSK 20MHz 1RB	Back Side	1720.0	25.26	25.5	1.057	0.710	0.750
	QPSK 20MHz 1RB	Front Side	1720.0	25.26	25.5	1.057	0.270	0.285
	QPSK 20MHz 50%RB	Back Side	1720.0	25.26	25.5	1.057	0.645	0.682
	QPSK 20MHz 50%RB	Front Side	1720.0	25.26	25.5	1.057	0.215	0.227

LTE Band 5–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
25.	QPSK 1.4MHz 1RB	Back Side	848.3	24	24.5	1.122	0.435	0.488
	QPSK 1.4MHz 1RB	Front Side	848.3	24	24.5	1.122	0.219	0.246
	QPSK 1.4MHz 50%RB	Back Side	848.3	24	24.5	1.122	0.412	0.462
	QPSK 1.4MHz 50%RB	Front Side	848.3	24	24.5	1.122	0.204	0.229
	QPSK 10MHz 1RB	Back Side	844	23.9	24.0	1.023	0.471	0.482
	QPSK 10MHz 1RB	Front Side	844	23.9	24.0	1.023	0.249	0.255
	QPSK 10MHz 50%RB	Back Side	844	23.9	24.0	1.023	0.365	0.374
	QPSK 10MHz 50%RB	Front Side	844	23.9	24.0	1.023	0.224	0.229

LTE Band 12–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	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	Back Side	715.3	23.88	24.0	1.028	0.398	0.409
	QPSK 1.4MHz 1RB	Front Side	715.3	23.88	24.0	1.028	0.155	0.159
	QPSK 1.4MHz 50%RB	Back Side	715.3	23.88	24.0	1.028	0.288	0.296
	QPSK 1.4MHz 50%RB	Front Side	715.3	23.88	24.0	1.028	0.132	0.136
26.	QPSK 10MHz 1RB	Back Side	707.5	23.86	24.0	1.033	0.420	0.434
	QPSK 10MHz 1RB	Front Side	707.5	23.86	24.0	1.033	0.172	0.178
	QPSK 10MHz 50%RB	Back Side	707.5	23.86	24.0	1.033	0.410	0.423
	QPSK 10MHz 50%RB	Front Side	707.5	23.86	24.0	1.033	0.165	0.170

LTE Band 17–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
27.	QPSK 10MHz 1RB	Back Side	709	24.03	24.5	1.114	0.353	0.393
	QPSK 10MHz 1RB	Front Side	709	24.03	24.5	1.114	0.140	0.156
	QPSK 10MHz 50%RB	Back Side	709	24.03	24.5	1.114	0.312	0.348
	QPSK 10MHz 50%RB	Front Side	709	24.03	24.5	1.114	0.112	0.125

LTE Band 66–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	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	Back Side	1709.3	25.54	26.0	1.112	0.478	0.531
	QPSK 1.4MHz 1RB	Front Side	1709.3	25.54	26.0	1.112	0.196	0.218
	QPSK 1.4MHz 50%RB	Back Side	1709.3	25.54	26.0	1.112	0.347	0.386
	QPSK 1.4MHz 50%RB	Front Side	1709.3	25.54	26.0	1.112	0.165	0.183
28.	QPSK 20MHz 1RB	Back Side	1720	25.24	25.5	1.062	0.627	0.666
	QPSK 20MHz 1RB	Front Side	1720	25.24	25.5	1.062	0.296	0.314
	QPSK 20MHz 50%RB	Back Side	1720	25.24	25.5	1.062	0.569	0.604
	QPSK 20MHz 50%RB	Front Side	1720	25.24	25.5	1.062	0.213	0.226

WLAN 2.4GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
29.	802.11b	Back Side	01	2412	17.59	18.0	1.099	0.220	0.242
	802.11b	Front Side	01	2412	17.59	18.0	1.099	0.068	0.075
	802.11g	Back Side	01	2412	19.70	20.0	1.072	0.221	0.237
	802.11g	Front Side	01	2412	19.70	20.0	1.072	0.069	0.074

Bluetooth–Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
30.	GFSK	Back Side	00	2402	7.83	8.0	1.040	0.032	0.033
	GFSK	Front Side	00	2402	7.83	8.0	1.040	0.023	0.024

WLAN 5.2GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
31.	802.11a	Back Side	36	5180	16.04	16.5	1.112	0.228	0.253
	802.11a	Front Side	36	5180	16.04	16.5	1.112	0.122	0.136

WLAN 5.8GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
32.	802.11a	Back Side	165	5825	13.78	14.0	1.052	0.322	0.339
	802.11a	Front Side	165	5825	13.78	14.0	1.052	0.187	0.197

Hotspot SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plo t No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
33.	GPRS_4TX	Back Face	251	848.8	29.76	30.0	1.057	0.712	0.712
	GPRS_4TX	Front Face	251	848.8	29.76	30.0	1.057	0.559	0.559
	GPRS_4TX	Right Side	251	848.8	29.76	30.0	1.057	0.235	0.235
	GPRS_4TX	Left Side	251	848.8	29.76	30.0	1.057	0.342	0.342
	GPRS_4TX	Bottom Side	251	848.8	29.76	30.0	1.057	0.453	0.453

GSM1900–Body SAR Test (Gap: 10mm)									
Plo t No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
34.	GPRS_4TX	Back Face	810	1909.8	28.97	29.0	1.007	0.985	0.992
	GPRS_4TX	Front Face	810	1909.8	28.97	29.0	1.007	0.622	0.626
	GPRS_4TX	Right Side	810	1909.8	28.97	29.0	1.007	0.356	0.358
	GPRS_4TX	Left Side	810	1909.8	28.97	29.0	1.007	0.248	0.250
	GPRS_4TX	Bottom Side	810	1909.8	28.97	29.0	1.007	0.412	0.415
	GPRS_4TX	Back Face	512	1850.2	29.42	29.0	0.908	0.829	0.753
	GPRS_4TX	Back Face	661	1880.0	28.79	29.0	1.050	0.701	0.736

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plo t No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
35.	RMC 12.2k	Back Face	9400	1880.0	22.28	22.5	1.052	0.723	0.761
	RMC 12.2k	Front Face	9400	1880.0	22.28	22.5	1.052	0.383	0.403
	RMC 12.2k	Right Side	9400	1880.0	22.28	22.5	1.052	0.325	0.342
	RMC 12.2k	Left Side	9400	1880.0	22.28	22.5	1.052	0.256	0.269
	RMC 12.2k	Bottom Side	9400	1880.0	22.28	22.5	1.052	0.412	0.433

WCDMA Band 4– Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
36.	RMC 12.2k	Back Face	1413	1732.6	22.42	22.5	1.019	0.718	0.731
	RMC 12.2k	Front Face	1413	1732.6	22.42	22.5	1.019	0.465	0.474
	RMC 12.2k	Right Side	1413	1732.6	22.42	22.5	1.019	0.357	0.364
	RMC 12.2k	Left Side	1413	1732.6	22.42	22.5	1.019	0.238	0.242
	RMC 12.2k	Bottom Side	1413	1732.6	22.42	22.5	1.019	0.413	0.421

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
37.	RMC 12.2k	Back Face	4233	846.6	22.41	22.5	1.021	0.415	0.424
	RMC 12.2k	Front Face	4233	846.6	22.41	22.5	1.021	0.392	0.400
	RMC 12.2k	Right Side	4233	846.6	22.41	22.5	1.021	0.223	0.228
	RMC 12.2k	Left Side	4233	846.6	22.41	22.5	1.021	0.120	0.123
	RMC 12.2k	Bottom Side	4233	846.6	22.41	22.5	1.021	0.318	0.325

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	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	Back Side	1880	25.04	25.5	1.112	0.356	0.396
	QPSK 1.4MHz 1RB	Front Side	1880	25.04	25.5	1.112	0.224	0.249
	QPSK 1.4MHz 1RB	Right side	1880	25.04	25.5	1.112	0.286	0.318
	QPSK 1.4MHz 1RB	Left side	1880	25.04	25.5	1.112	0.167	0.186
	QPSK 1.4MHz 1RB	Bottom side	1880	25.04	25.5	1.112	0.302	0.336
	QPSK 1.4MHz 50%RB	Back Side	1880	25.04	25.5	1.112	0.331	0.368
	QPSK 1.4MHz 50%RB	Front Side	1880	25.04	25.5	1.112	0.206	0.229
	QPSK 1.4MHz 50%RB	Right side	1880	25.04	25.5	1.112	0.245	0.272
	QPSK 1.4MHz 50%RB	Left side	1880	25.04	25.5	1.112	0.132	0.147
	QPSK 1.4MHz 50%RB	Bottom side	1880	25.04	25.5	1.112	0.254	0.282
38.	QPSK 20MHz 1RB	Back Side	1880	24.53	25.0	1.114	0.367	0.409
	QPSK 20MHz 1RB	Front Side	1880	24.53	25.0	1.114	0.243	0.271
	QPSK 20MHz 1RB	Right side	1880	24.53	25.0	1.114	0.302	0.337
	QPSK 20MHz 1RB	Left side	1880	24.53	25.0	1.114	0.208	0.232
	QPSK 20MHz 1RB	Bottom side	1880	24.53	25.0	1.114	0.310	0.345
	QPSK 20MHz 50%RB	Back Side	1880	24.53	25.0	1.114	0.345	0.384
	QPSK 20MHz 50%RB	Front Side	1880	24.53	25.0	1.114	0.214	0.238
	QPSK 20MHz 50%RB	Right side	1880	24.53	25.0	1.114	0.298	0.332
	QPSK 20MHz 50%RB	Left side	1880	24.53	25.0	1.114	0.184	0.205
	QPSK 20MHz 50%RB	Bottom side	1880	24.53	25.0	1.114	0.285	0.318

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Back Side	1710.7	25.38	25.5	1.028	0.687	0.706
	QPSK 20MHz 1RB	Front Side	1710.7	25.38	25.5	1.028	0.241	0.248
	QPSK 20MHz 1RB	Right side	1710.7	25.38	25.5	1.028	0.315	0.324
	QPSK 20MHz 1RB	Left side	1710.7	25.38	25.5	1.028	0.368	0.378
	QPSK 20MHz 1RB	Bottom side	1710.7	25.38	25.5	1.028	0.408	0.419
	QPSK 20MHz 50%RB	Back Side	1710.7	25.38	25.5	1.028	0.645	0.663
	QPSK 20MHz 50%RB	Front Side	1710.7	25.38	25.5	1.028	0.231	0.237
	QPSK 20MHz 50%RB	Right side	1710.7	25.38	25.5	1.028	0.298	0.306
	QPSK 20MHz 50%RB	Left side	1710.7	25.38	25.5	1.028	0.334	0.343
	QPSK 20MHz 50%RB	Bottom side	1710.7	25.38	25.5	1.028	0.397	0.408
39.	QPSK 20MHz 1RB	Back Side	1720.0	25.26	25.5	1.057	0.710	0.750
	QPSK 20MHz 1RB	Front Side	1720.0	25.26	25.5	1.057	0.270	0.285
	QPSK 20MHz 1RB	Right side	1720.0	25.26	25.5	1.057	0.345	0.365
	QPSK 20MHz 1RB	Left side	1720.0	25.26	25.5	1.057	0.412	0.435
	QPSK 20MHz 1RB	Bottom side	1720.0	25.26	25.5	1.057	0.425	0.449
	QPSK 20MHz 50%RB	Back Side	1720.0	25.26	25.5	1.057	0.645	0.682
	QPSK 20MHz 50%RB	Front Side	1720.0	25.26	25.5	1.057	0.215	0.227
	QPSK 20MHz 50%RB	Right side	1720.0	25.26	25.5	1.057	0.324	0.342
	QPSK 20MHz 50%RB	Left side	1720.0	25.26	25.5	1.057	0.402	0.425
	QPSK 20MHz 50%RB	Bottom side	1720.0	25.26	25.5	1.057	0.405	0.428

LTE Band 5–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
40.	QPSK 1.4MHz 1RB	Back Side	848.3	24	24.5	1.122	0.435	0.488
	QPSK 1.4MHz 1RB	Front Side	848.3	24	24.5	1.122	0.219	0.246
	QPSK 1.4MHz 1RB	Right side	848.3	24	24.5	1.122	0.302	0.339
	QPSK 1.4MHz 1RB	Left side	848.3	24	24.5	1.122	0.234	0.263
	QPSK 1.4MHz 1RB	Bottom side	848.3	24	24.5	1.122	0.306	0.343
	QPSK 1.4MHz 50%RB	Back Side	848.3	24	24.5	1.122	0.412	0.462
	QPSK 1.4MHz 50%RB	Front Side	848.3	24	24.5	1.122	0.204	0.229
	QPSK 1.4MHz 50%RB	Right side	848.3	24	24.5	1.122	0.298	0.334
	QPSK 1.4MHz 50%RB	Left side	848.3	24	24.5	1.122	0.210	0.236
	QPSK 1.4MHz 50%RB	Bottom side	848.3	24	24.5	1.122	0.288	0.323
	QPSK 10MHz 1RB	Back Side	844	23.9	24.0	1.023	0.471	0.482
	QPSK 10MHz 1RB	Front Side	844	23.9	24.0	1.023	0.249	0.255
	QPSK 10MHz 1RB	Right side	844	23.9	24.0	1.023	0.312	0.319
	QPSK 10MHz 1RB	Left side	844	23.9	24.0	1.023	0.257	0.263
	QPSK 10MHz 1RB	Bottom side	844	23.9	24.0	1.023	0.326	0.334
	QPSK 10MHz 50%RB	Back Side	844	23.9	24.0	1.023	0.365	0.374
	QPSK 10MHz 50%RB	Front Side	844	23.9	24.0	1.023	0.224	0.229
	QPSK 10MHz 50%RB	Right side	844	23.9	24.0	1.023	0.301	0.308
	QPSK 10MHz 50%RB	Left side	844	23.9	24.0	1.023	0.233	0.238
	QPSK 10MHz 50%RB	Bottom side	844	23.9	24.0	1.023	0.301	0.308

LTE Band 12–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	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	Back Side	715.3	23.88	24.0	1.028	0.398	0.409
	QPSK 1.4MHz 1RB	Front Side	715.3	23.88	24.0	1.028	0.155	0.159
	QPSK 1.4MHz 1RB	Right side	715.3	23.88	24.0	1.028	0.185	0.190
	QPSK 1.4MHz 1RB	Left side	715.3	23.88	24.0	1.028	0.258	0.265
	QPSK 1.4MHz 1RB	Bottom side	715.3	23.88	24.0	1.028	0.215	0.221
	QPSK 1.4MHz 50%RB	Back Side	715.3	23.88	24.0	1.028	0.288	0.296
	QPSK 1.4MHz 50%RB	Front Side	715.3	23.88	24.0	1.028	0.132	0.136
	QPSK 1.4MHz 50%RB	Right side	715.3	23.88	24.0	1.028	0.164	0.169
	QPSK 1.4MHz 50%RB	Left side	715.3	23.88	24.0	1.028	0.231	0.237
	QPSK 1.4MHz 50%RB	Bottom side	715.3	23.88	24.0	1.028	0.200	0.206
41.	QPSK 10MHz 1RB	Back Side	705.5	23.86	24.0	1.033	0.420	0.434
	QPSK 10MHz 1RB	Front Side	705.5	23.86	24.0	1.033	0.172	0.178
	QPSK 10MHz 1RB	Right side	705.5	23.86	24.0	1.033	0.210	0.217
	QPSK 10MHz 1RB	Left side	705.5	23.86	24.0	1.033	0.312	0.322
	QPSK 10MHz 1RB	Bottom side	705.5	23.86	24.0	1.033	0.245	0.253
	QPSK 10MHz 50%RB	Back Side	705.5	23.86	24.0	1.033	0.410	0.423
	QPSK 10MHz 50%RB	Front Side	705.5	23.86	24.0	1.033	0.165	0.170
	QPSK 10MHz 50%RB	Right side	705.5	23.86	24.0	1.033	0.201	0.208
	QPSK 10MHz 50%RB	Left side	705.5	23.86	24.0	1.033	0.298	0.308
	QPSK 10MHz 50%RB	Bottom side	705.5	23.86	24.0	1.033	0.213	0.220

LTE Band 17–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
42.	QPSK 10MHz 1RB	Back Side	709	24.03	24.5	1.114	0.353	0.393
	QPSK 10MHz 1RB	Front Side	709	24.03	24.5	1.114	0.140	0.156
	QPSK 10MHz 1RB	Right side	709	24.03	24.5	1.114	0.213	0.237
	QPSK 10MHz 1RB	Left side	709	24.03	24.5	1.114	0.201	0.224
	QPSK 10MHz 1RB	Bottom side	709	24.03	24.5	1.114	0.198	0.221
	QPSK 10MHz 50%RB	Back Side	709	24.03	24.5	1.114	0.312	0.348
	QPSK 10MHz 50%RB	Front Side	709	24.03	24.5	1.114	0.112	0.125
	QPSK 10MHz 50%RB	Right side	709	24.03	24.5	1.114	0.195	0.217
	QPSK 10MHz 50%RB	Left side	709	24.03	24.5	1.114	0.156	0.174
	QPSK 10MHz 50%RB	Bottom side	709	24.03	24.5	1.114	0.123	0.137

LTE Band 66–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	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	Back Side	1709.3	25.54	26.0	1.112	0.478	0.531
	QPSK 1.4MHz 1RB	Front Side	1709.3	25.54	26.0	1.112	0.196	0.218
	QPSK 1.4MHz 1RB	Right side	1709.3	25.54	26.0	1.112	0.231	0.257
	QPSK 1.4MHz 1RB	Left side	1709.3	25.54	26.0	1.112	0.222	0.247
	QPSK 1.4MHz 1RB	Bottom side	1709.3	25.54	26.0	1.112	0.210	0.233
	QPSK 1.4MHz 50%RB	Back Side	1709.3	25.54	26.0	1.112	0.347	0.386
	QPSK 1.4MHz 50%RB	Front Side	1709.3	25.54	26.0	1.112	0.165	0.183
	QPSK 1.4MHz 50%RB	Right side	1709.3	25.54	26.0	1.112	0.213	0.237
	QPSK 1.4MHz 50%RB	Left side	1709.3	25.54	26.0	1.112	0.201	0.223
	QPSK 1.4MHz 50%RB	Bottom side	1709.3	25.54	26.0	1.112	0.195	0.217
43.	QPSK 20MHz 1RB	Back Side	1720	25.24	25.5	1.062	0.627	0.666
	QPSK 20MHz 1RB	Front Side	1720	25.24	25.5	1.062	0.296	0.314
	QPSK 20MHz 1RB	Right side	1720	25.24	25.5	1.062	0.312	0.331
	QPSK 20MHz 1RB	Left side	1720	25.24	25.5	1.062	0.253	0.269
	QPSK 20MHz 1RB	Bottom side	1720	25.24	25.5	1.062	0.255	0.271
	QPSK 20MHz 50%RB	Back Side	1720	25.24	25.5	1.062	0.569	0.604
	QPSK 20MHz 50%RB	Front Side	1720	25.24	25.5	1.062	0.213	0.226
	QPSK 20MHz 50%RB	Right side	1720	25.24	25.5	1.062	0.268	0.285
	QPSK 20MHz 50%RB	Left side	1720	25.24	25.5	1.062	0.234	0.248
	QPSK 20MHz 50%RB	Bottom side	1720	25.24	25.5	1.062	0.251	0.266

WLAN 2.4GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
44.	802.11b	Back Side	01	2412	17.59	18.0	1.099	0.220	0.242
	802.11b	Front Side	01	2412	17.59	18.0	1.099	0.068	0.075
	802.11b	Left side	01	2412	19.70	20.0	1.072	0.086	0.092
	802.11b	Top side	01	2412	19.70	20.0	1.072	0.057	0.061
	802.11g	Back Side	01	2412	19.70	20.0	1.072	0.221	0.237
	802.11g	Front Side	01	2412	19.70	20.0	1.072	0.069	0.074
	802.11g	Left side	01	2412	19.70	20.0	1.072	0.095	0.102
	802.11g	Top side	01	2412	19.70	20.0	1.072	0.068	0.073

Bluetooth–Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
45.	GFSK	Back Side	00	2402	7.83	8.0	1.040	0.032	0.033
	GFSK	Front Side	00	2402	7.83	8.0	1.040	0.023	0.024
	GFSK	Left side	00	2402	7.83	8.0	1.040	0.021	0.022
	GFSK	Top side	00	2402	7.83	8.0	1.040	0.015	0.016

WLAN 5.2GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
46.	802.11a	Back Side	36	5180	16.04	16.5	1.112	0.228	0.253
	802.11a	Front Side	36	5180	16.04	16.5	1.112	0.122	0.136
	802.11a	Left side	36	5180	16.04	16.5	1.112	0.135	0.150
	802.11a	Top side	36	5180	16.04	16.5	1.112	0.085	0.094

WLAN 5.8GHz –Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
47.	802.11a	Back Side	165	5825	13.78	14.0	1.052	0.322	0.339
	802.11a	Front Side	165	5825	13.78	14.0	1.052	0.187	0.197
	802.11a	Left side	165	5825	13.78	14.0	1.052	0.156	0.164
	802.11a	Top side	165	5825	13.78	14.0	1.052	0.093	0.098

Repeated SAR

Waltek Testing Group (Shenzhen) Co., Ltd.

[Http://www.waltek.com.cn](http://www.waltek.com.cn)

GSM1900–Body SAR Test (Gap: 10mm)								
Mode	Test Position Body	Frequency		SAR1g (W/kg)	Repeated SAR		Ratio	
		CH.	MHz		1	2	1	2
GPRS_4TX	Back Face	810	1909.8	0.985	0.963	/	1.023	/
GPRS_4TX	Back Face	512	1850.2	0.829	0.801	/	1.035	/

Remark:

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

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(Voice/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(Voice/Data)+ WLAN (5GHz)(Data)	Yes	Yes
7	GSM(Voice/Data) + Bluetooth(Data)	Yes	Yes
8	WCDMA (Voice/Data) + Bluetooth(Data)	Yes	Yes
9	LTE(Voice/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.
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	0.758	0.236	0.994
Right Tilted	GSM	0.641	0.130	0.771
Left Cheek	GSM	0.765	0.443	1.208
Left Tilted	GSM	0.646	0.333	0.979
Right Cheek	WCDMA	0.604	0.236	0.840
Right Tilted	WCDMA	0.499	0.130	0.629
Left Cheek	WCDMA	0.652	0.443	1.095
Left Tilted	WCDMA	0.528	0.333	0.861
Right Cheek	LTE	0.587	0.236	0.823
Right Tilted	LTE	0.465	0.130	0.595
Left Cheek	LTE	0.738	0.443	1.181
Left Tilted	LTE	0.621	0.333	0.954

	WWAN		WLAN(5GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Right Cheek	GSM	0.758	0.620	1.378
Right Tilted	GSM	0.641	0.489	1.130
Left Cheek	GSM	0.765	0.723	1.488
Left Tilted	GSM	0.646	0.602	1.248
Right Cheek	WCDMA	0.604	0.620	1.224
Right Tilted	WCDMA	0.499	0.489	0.988
Left Cheek	WCDMA	0.652	0.723	1.375
Left Tilted	WCDMA	0.528	0.602	1.130
Right Cheek	LTE	0.587	0.620	1.207
Right Tilted	LTE	0.465	0.489	0.954
Left Cheek	LTE	0.738	0.723	1.461
Left Tilted	LTE	0.621	0.602	1.223

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Right Cheek	GSM	0.758	0.028	0.786
Right Tilted	GSM	0.641	0.019	0.660
Left Cheek	GSM	0.765	0.022	0.787
Left Tilted	GSM	0.646	0.018	0.664
Right Cheek	WCDMA	0.604	0.028	0.632
Right Tilted	WCDMA	0.499	0.019	0.518
Left Cheek	WCDMA	0.652	0.022	0.674
Left Tilted	WCDMA	0.528	0.018	0.546
Right Cheek	LTE	0.587	0.028	0.615
Right Tilted	LTE	0.465	0.019	0.484
Left Cheek	LTE	0.738	0.022	0.760
Left Tilted	LTE	0.621	0.018	0.639

Body-worn SAR**WWAN and WLAN**

	WWAN		WLAN(2.4GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.603	0.242	0.845
Front	GSM	0.329	0.075	0.404
Back	WCDMA	0.761	0.242	1.003
Front	WCDMA	0.474	0.075	0.549
Back	LTE	0.750	0.242	0.992
Front	LTE	0.314	0.075	0.389

	WWAN		WLAN(5GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.603	0.339	0.942
Front	GSM	0.329	0.197	0.526
Back	WCDMA	0.761	0.339	1.100
Front	WCDMA	0.474	0.197	0.671
Back	LTE	0.750	0.339	1.089
Front	LTE	0.314	0.197	0.511

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.603	0.033	0.636
Front	GSM	0.329	0.024	0.353
Back	WCDMA	0.761	0.033	0.794
Front	WCDMA	0.474	0.024	0.498
Back	LTE	0.750	0.033	0.783
Front	LTE	0.314	0.024	0.338

Hotspot SAR**WWAN and WLAN**

	WWAN		WLAN(2.4GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.992	0.242	1.234
Front	GSM	0.626	0.075	0.701
Right side	GSM	0.358	--	0.358
Left side	GSM	0.342	0.102	0.444
Top side	GSM	--	0.073	0.073
Bottom side	GSM	0.453	--	0.453
Back	WCDMA	0.761	0.242	1.003
Front	WCDMA	0.474	0.075	0.549
Right side	WCDMA	0.364	--	0.364
Left side	WCDMA	0.269	0.102	0.371
Top side	WCDMA	--	0.073	0.073
Bottom side	WCDMA	0.433	--	0.433
Back	LTE	0.750	0.242	0.992
Front	LTE	0.314	0.075	0.389
Right side	LTE	0.365	--	0.365
Left side	LTE	0.435	0.102	0.537
Top side	LTE	--	0.073	0.073
Bottom side	LTE	0.449	--	0.449

	WWAN		WLAN(5GHz)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.992	0.339	1.331
Front	GSM	0.626	0.197	0.823
Right side	GSM	0.358	--	0.358
Left side	GSM	0.342	0.164	0.506
Top side	GSM	--	0.098	0.098
Bottom side	GSM	0.453	--	0.453
Back	WCDMA	0.761	0.339	1.100
Front	WCDMA	0.474	0.197	0.671
Right side	WCDMA	0.364	--	0.364
Left side	WCDMA	0.269	0.164	0.433
Top side	WCDMA	--	0.098	0.098
Bottom side	WCDMA	0.433	--	0.433
Back	LTE	0.750	0.339	1.089
Front	LTE	0.314	0.197	0.511
Right side	LTE	0.365	--	0.365
Left side	LTE	0.435	0.164	0.599
Top side	LTE	--	0.098	0.098
Bottom side	LTE	0.449	--	0.449

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.992	0.033	1.025
Front	GSM	0.626	0.024	0.650
Right side	GSM	0.358	--	0.358
Left side	GSM	0.342	0.022	0.364
Top side	GSM	--	0.016	0.016
Bottom side	GSM	0.453	--	0.453
Back	WCDMA	0.761	0.033	0.794
Front	WCDMA	0.474	0.024	0.498
Right side	WCDMA	0.364	--	0.364
Left side	WCDMA	0.269	0.022	0.291
Top side	WCDMA	--	0.016	0.016
Bottom side	WCDMA	0.433	--	0.433
Back	LTE	0.750	0.033	0.783
Front	LTE	0.314	0.024	0.338
Right side	LTE	0.365	--	0.365
Left side	LTE	0.435	0.022	0.457
Top side	LTE	--	0.016	0.016
Bottom side	LTE	0.449	--	0.449

10. Measurement Uncertainty

10.1 Uncertainty for SAR Test

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	$(1_{Cp})^{1/2}$	$(1_{Cp})^{1/2}$	1.02	1.02	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	$(Cp)^{1/2}$	$(Cp)^{1/2}$	1.63	1.63	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	∞
Reponse Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
RF ambient Conditions – Noise	E.6.1	0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient Conditions - Reflections	E.6.1	0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	E.5	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Test Sample Related									
Test sample positioning	E.4.2	0.03	N	1	1	1	0.03	0.03	N-1
Device Holder Uncertainty	E.4.1	5.00	N	1	1	1	5.00	5.00	
Output power Variation - SAR drift measurement	E.2.9	12.02	R	$\sqrt{3}$	1	1	6.94	6.94	∞
SAR scaling	E6.5	0.0	R	$\sqrt{3}$	1	1	0.0	0.0	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E3.2	1.9	R	$\sqrt{3}$	1	0.84	1.10	0.90	∞

Liquid conductivity - deviation from target value	E.3.2	5.00	R	$\sqrt{3}$	0.64	0.43	1.85	1.24	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	∞
Liquid permittivity - deviation from target value	E.3.2	0.37	R	$\sqrt{3}$	0.6	0.49	0.13	0.10	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	∞
Combined Standard Uncertainty			RSS				10.20	10.00	
Expanded Uncertainty (95% Confidence interval)			K=2				20.40	20.00	

Annex A. Plots of System Performance Check

MEASUREMENT 1

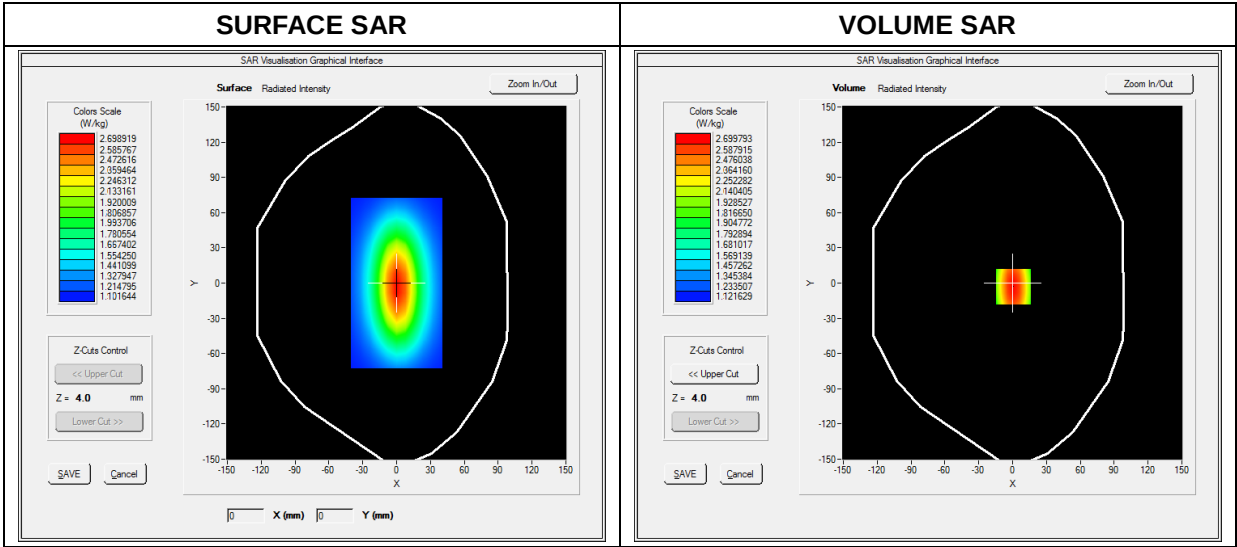
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2023-03-29
Measurement duration: 7 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 1.66; Calibrated: 2022-07-08

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
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)	42.410574
Conductivity (S/m)	0.872373
Power Variation (%)	0.038363
Ambient Temperature	23.4
Liquid Temperature	23.4

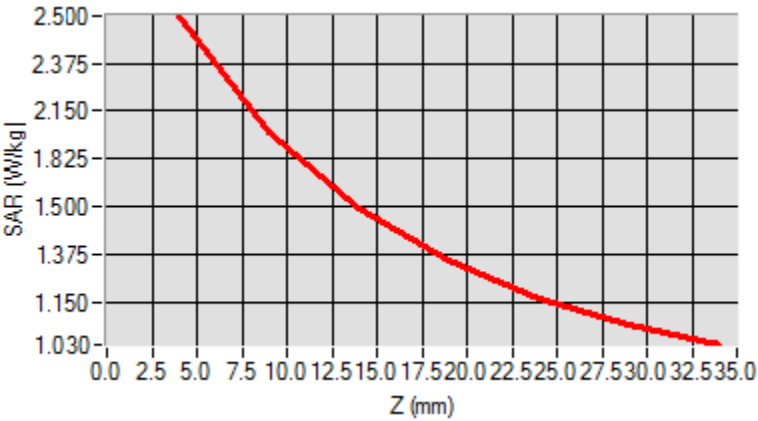


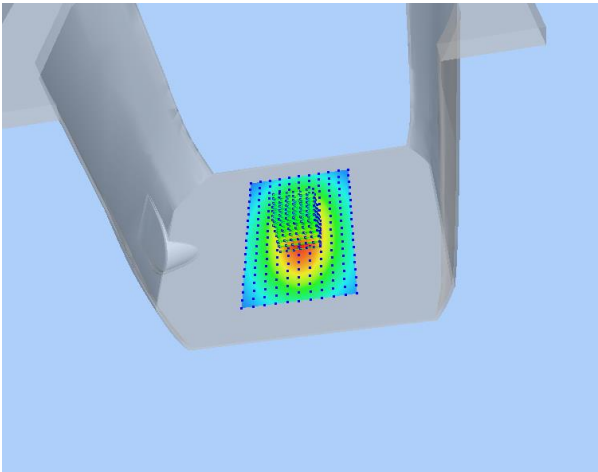
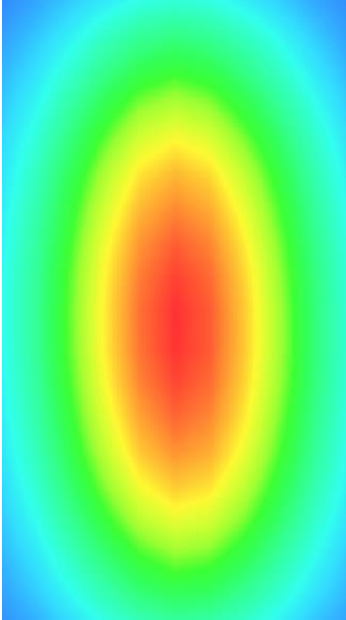
Maximum location: X=0.00, Y=0.00

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



3D screen shot	Hot spot position
	

MEASUREMENT 2

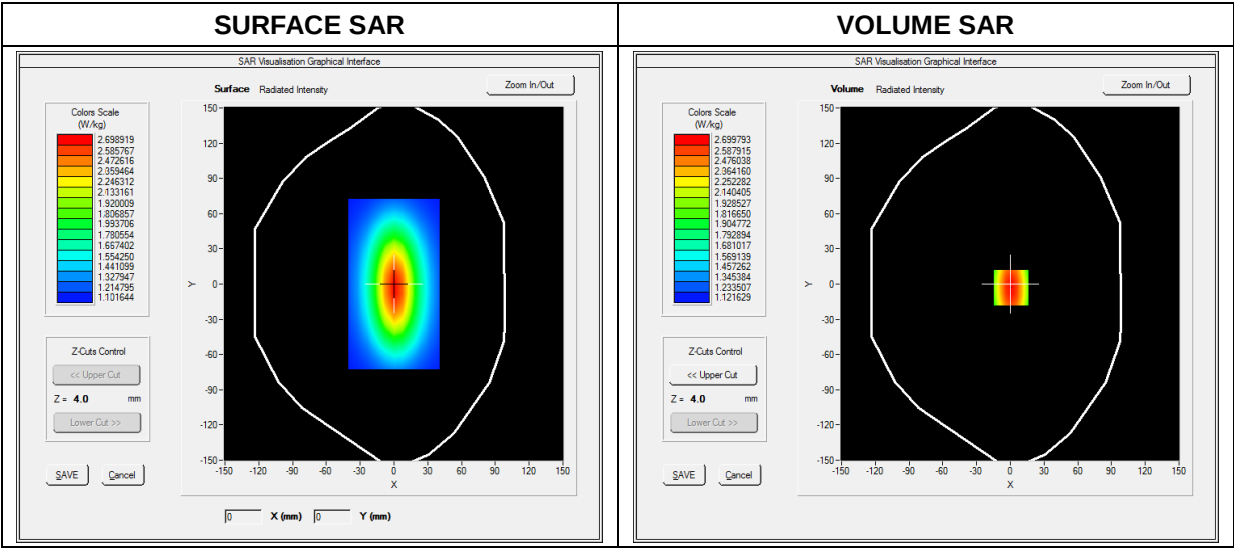
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 1.71; Calibrated: 2022-07-08

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)	42.382156
Conductivity (S/m)	0.880439
Power Variation (%)	1.420000
Ambient Temperature	22.3
Liquid Temperature	22.3

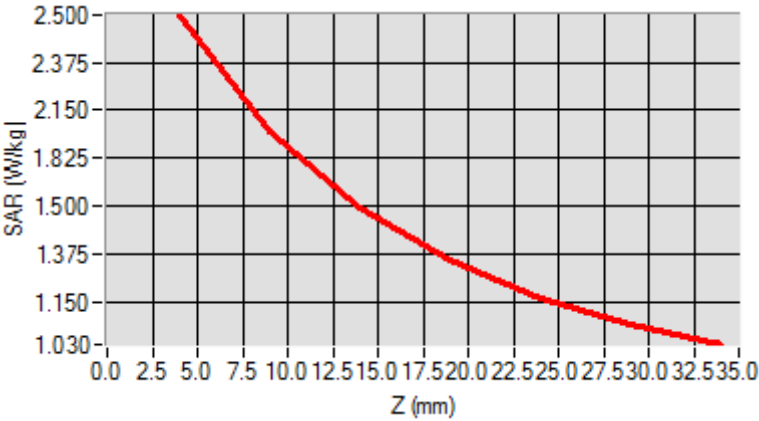


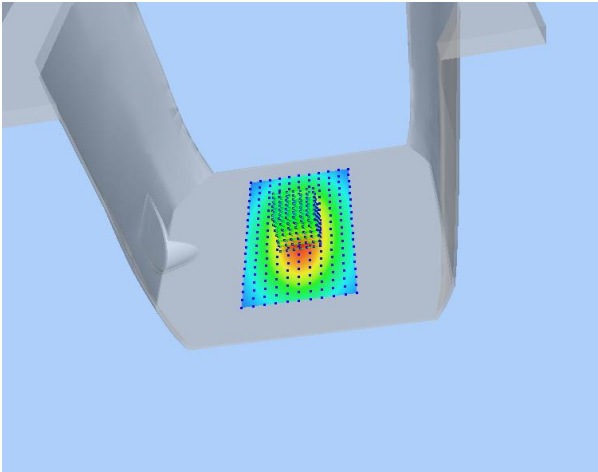
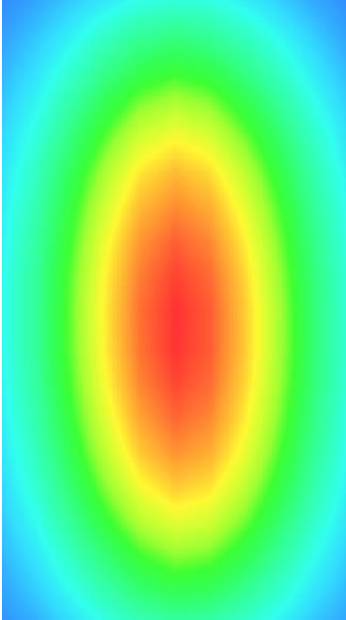
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.581074
SAR 1g (W/Kg)	2.470352

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

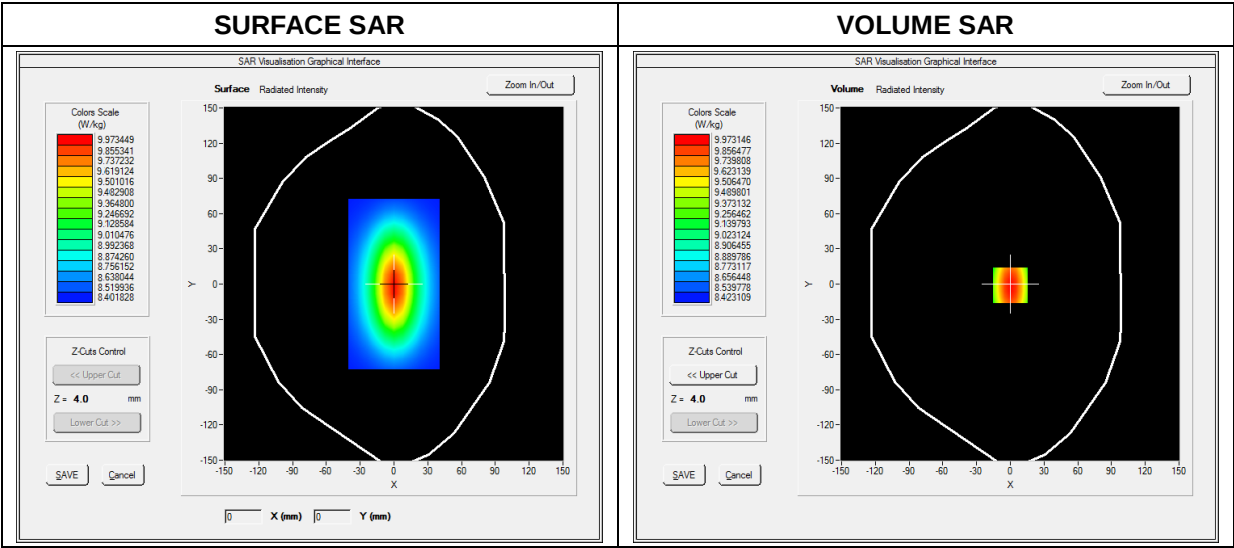
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.11; Calibrated: 2022-07-08

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)	40.691709
Conductivity (S/m)	1.412510
Power Variation (%)	1.041232
Ambient Temperature	22.5
Liquid Temperature	22.5

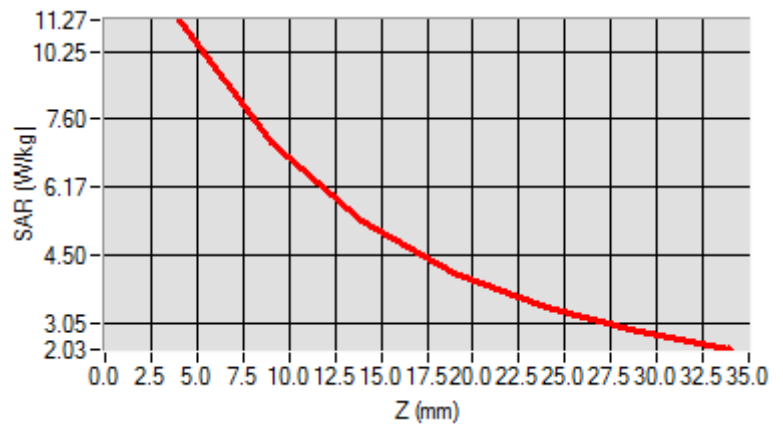


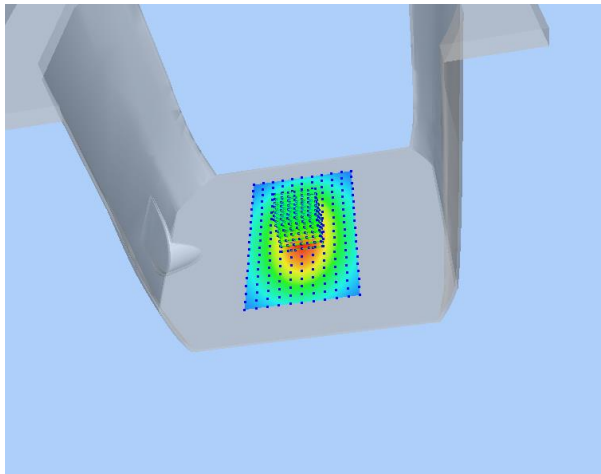
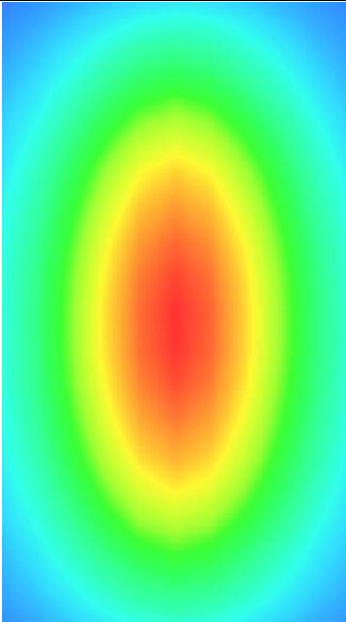
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.081252
SAR 1g (W/Kg)	9.461217

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

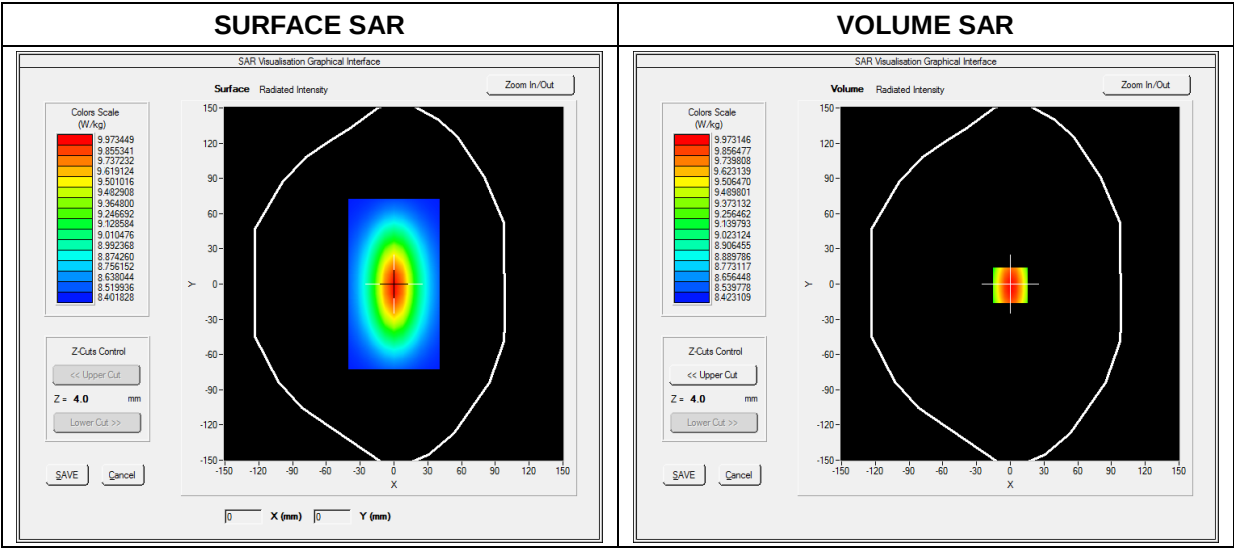
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.21; Calibrated: 2022-07-08

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	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	40.764379
Conductivity (S/m)	1.413746
Power Variation (%)	-1.710000
Ambient Temperature	22.5
Liquid Temperature	22.5

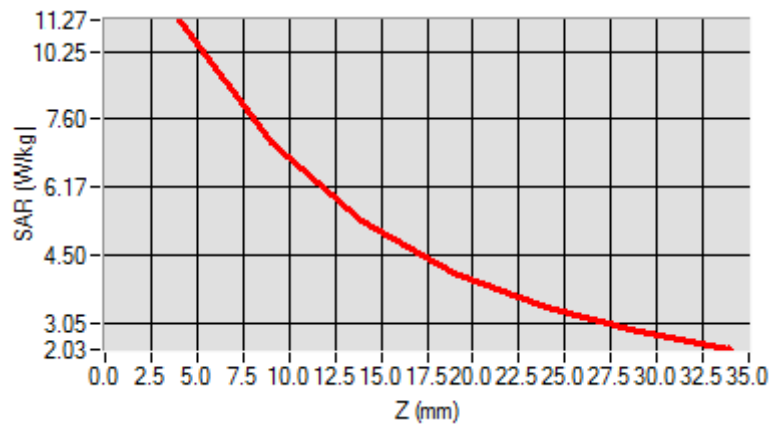


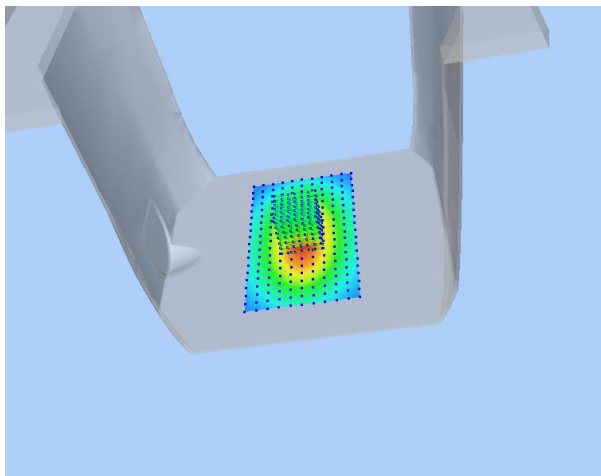
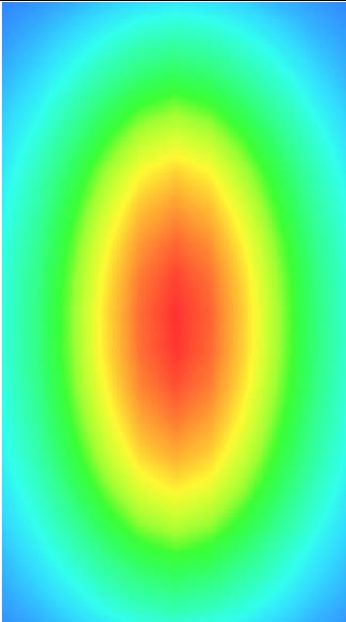
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.281504
SAR 1g (W/Kg)	9.970523

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 5

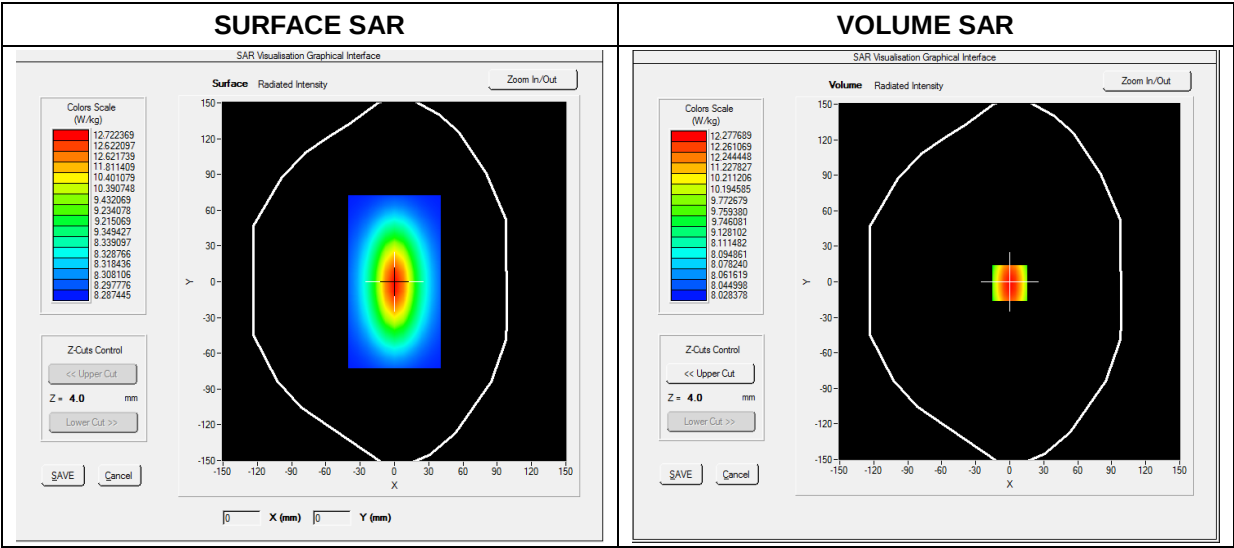
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2023-03-21
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.29; Calibrated: 2022-07-08

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	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	39.850317
Conductivity (S/m)	1.783504
Power Variation (%)	-1.220000
Ambient Temperature	22.5
Liquid Temperature	22.5

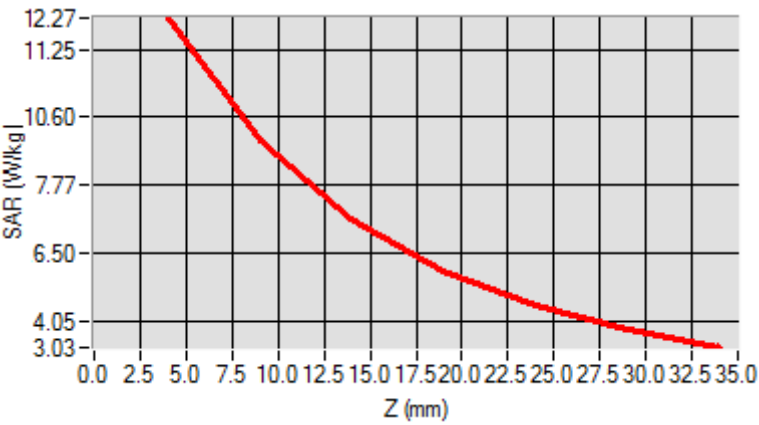


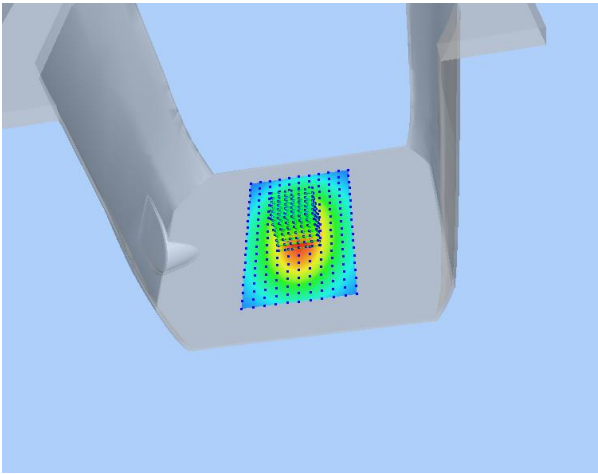
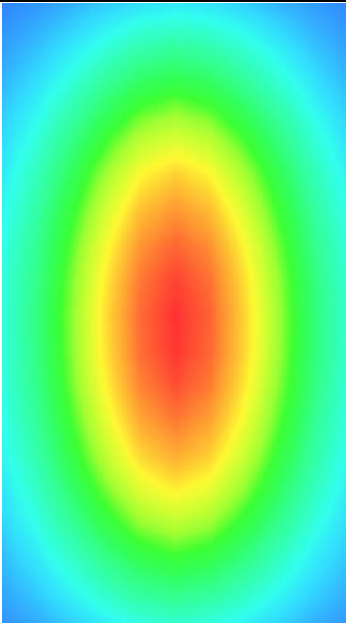
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	6.053726
SAR 1g (W/Kg)	13.561382

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	12.2365	10.3321	8.4512	6.4365	5.6123	3.5621



3D screen shot	Hot spot position
	

MEASUREMENT 6

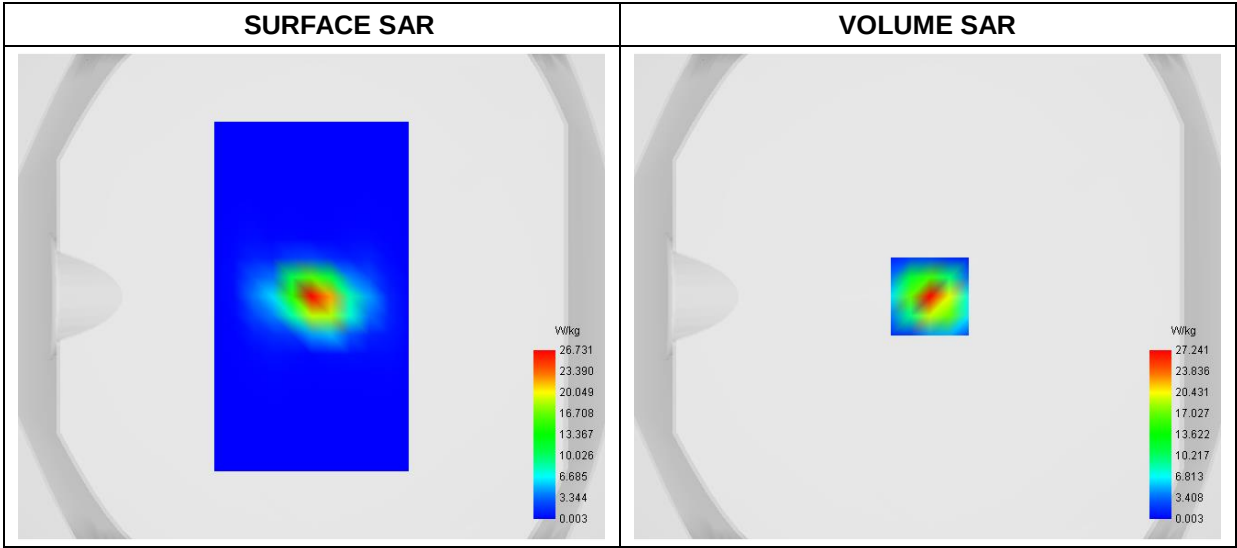
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2023-03-20
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 1.91; Calibrated: 2022-07-08

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

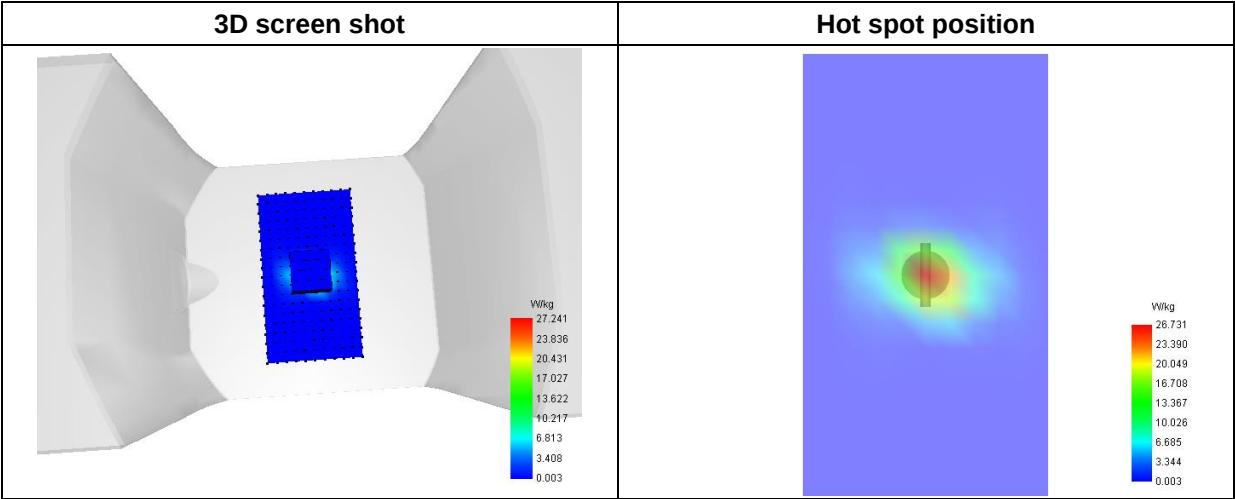
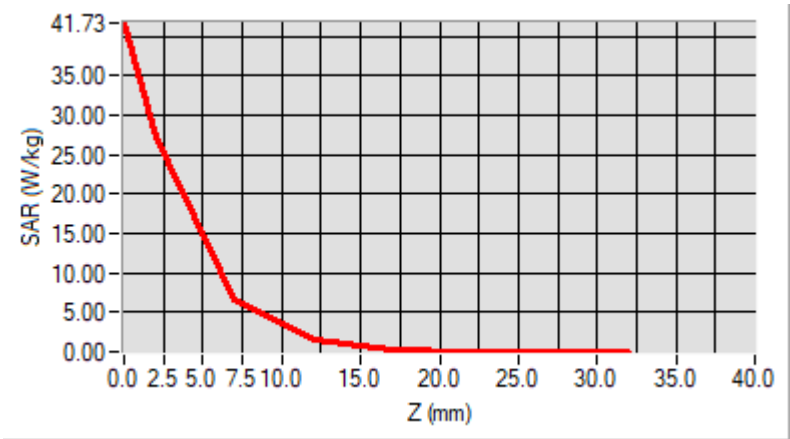
Frequency (MHz)	5200.000000
Relative Permittivity (real part)	35.492911
Conductivity (S/m)	4.693426
Power Variation (%)	-0.940000
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	5.910334
SAR 1g (W/Kg)	16.746226

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	41.7264	27.2408	6.5746	1.6234	0.3765	0.0793	0.0129



MEASUREMENT 7

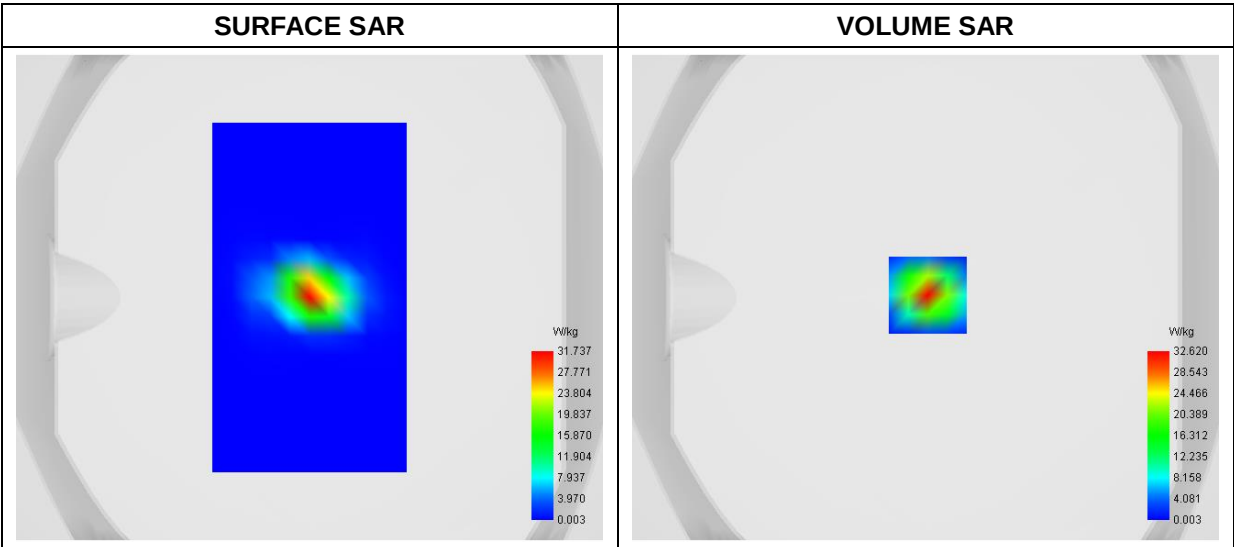
Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2023-03-20
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.14; Calibrated: 2022-07-08

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

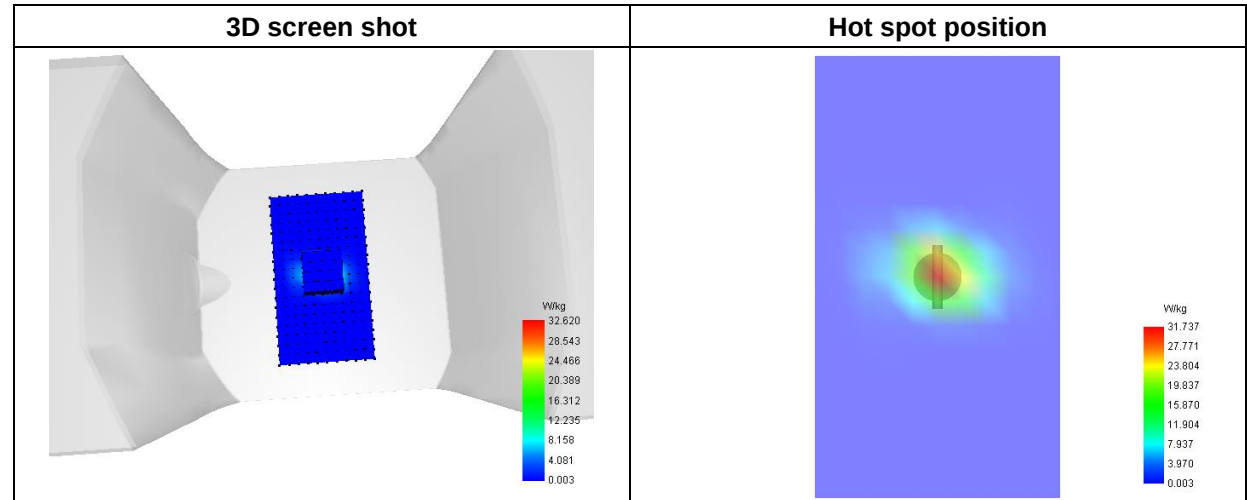
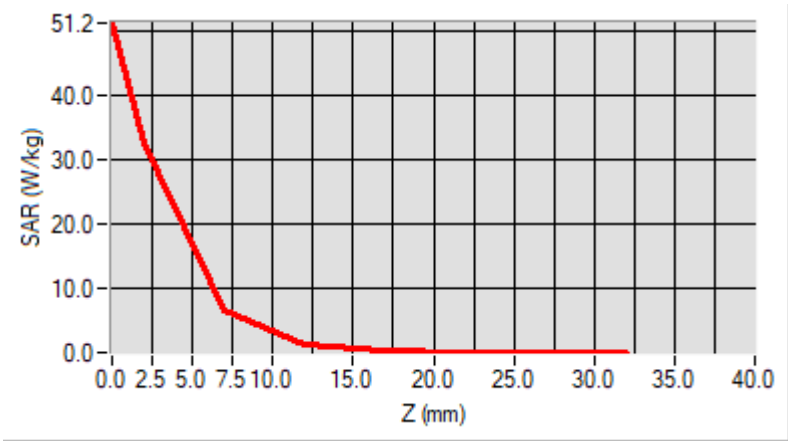
Frequency (MHz)	5800.000000
Relative Permittivity (real part)	35.783814
Conductivity (S/m)	5.232705
Power Variation (%)	-1.640000
Ambient Temperature	22.8
Liquid Temperature	22.8



Maximum location: X=1.00, Y=1.00

SAR 10g (W/Kg)	5.983506
SAR 1g (W/Kg)	17.960742

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	51.2061	32.6198	6.6166	1.3486	0.2638	0.0509	0.0050



Annex B. Plots of SAR Measurement

MEASUREMENT 1

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 3 seconds

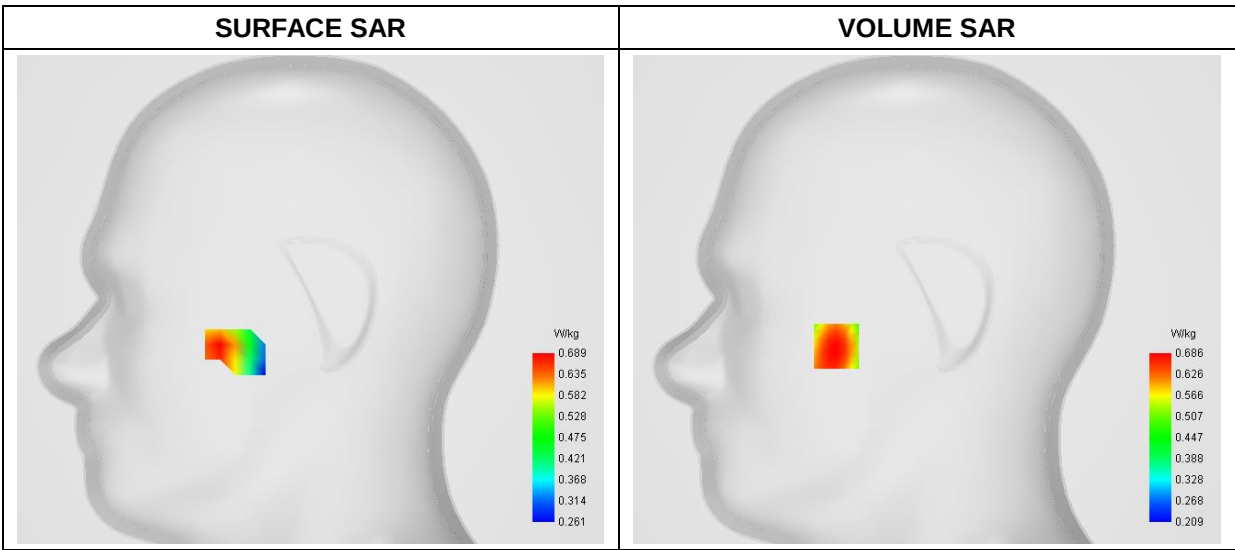
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Right 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)	42.380415
Conductivity (S/m)	0.884808
Power Variation (%)	-0.640000
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume



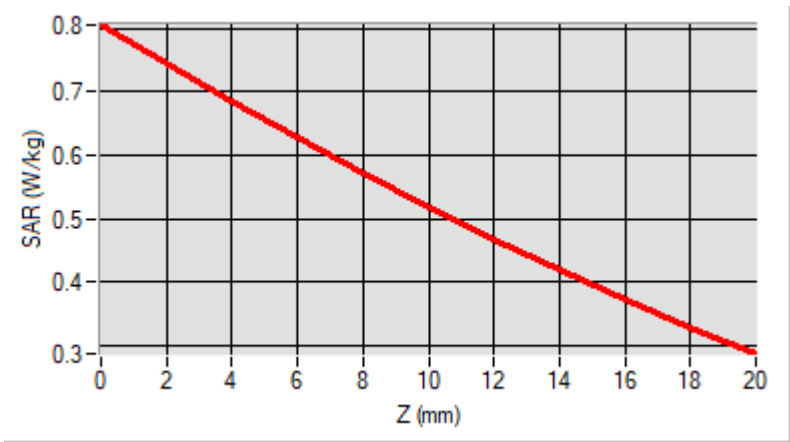
Maximum location: X=-48.00, Y=-25.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.476087
SAR 1g (W/Kg)	0.660706

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.8060	0.6857	0.6281	0.5725	0.5189	0.4675	0.4185	0.3719	0.3280



F. 3D Image

3D screen shot	Hot spot position
A 3D model of a human head showing the SAR distribution. A color scale on the right indicates the SAR values in W/kg, ranging from 0.209 (blue) to 0.689 (red).	A hot spot position image showing the SAR distribution. A color scale on the right indicates the SAR values in W/kg, ranging from 0.261 (blue) to 0.689 (red).

MEASUREMENT 2

Type: Phone measurement (Complete)

Date of measurement: 2022-03-15

Measurement duration: 12 minutes 3 seconds

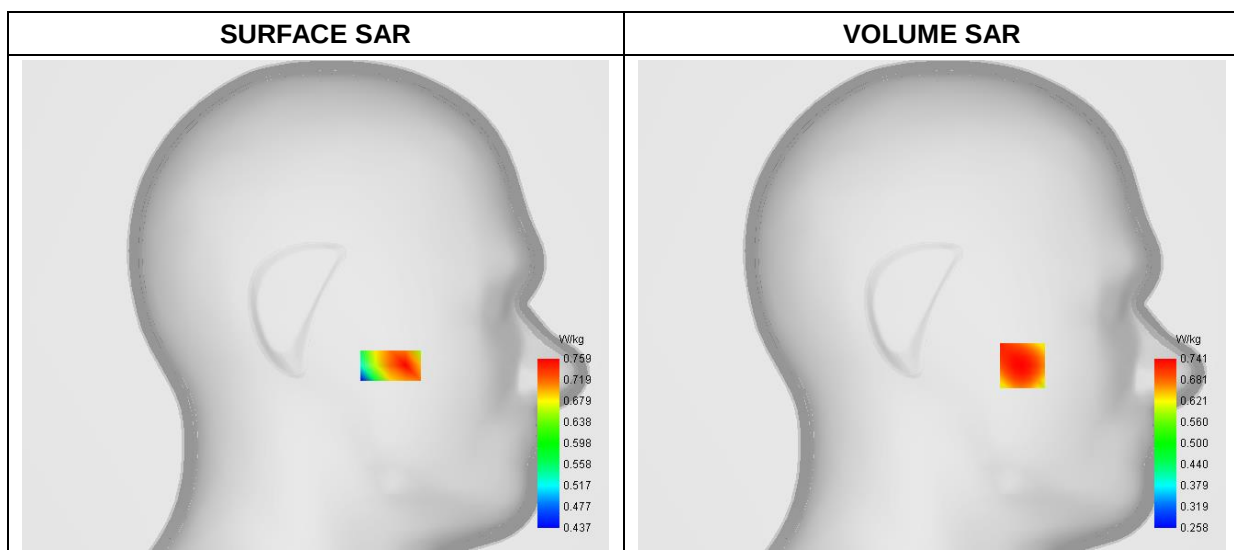
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left head
Device Position	Cheek
Band	GPRS850_4TX
Channels	High
Signal	Duty Cycle: 1:2

B. SAR Measurement Results

Frequency (MHz)	848.800000
Relative Permittivity (real part)	42.380438
Conductivity (S/m)	0.884828
Power Variation (%)	2.530000
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



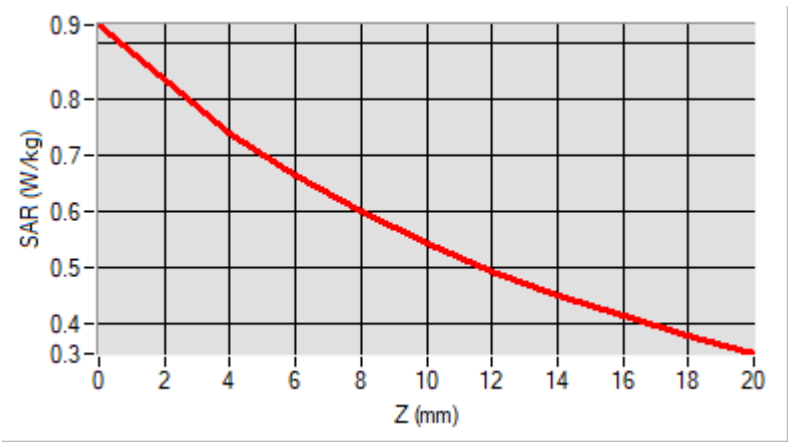
Maximum location: X=-48.00, Y=-32.00

D. SAR 1g & 10g

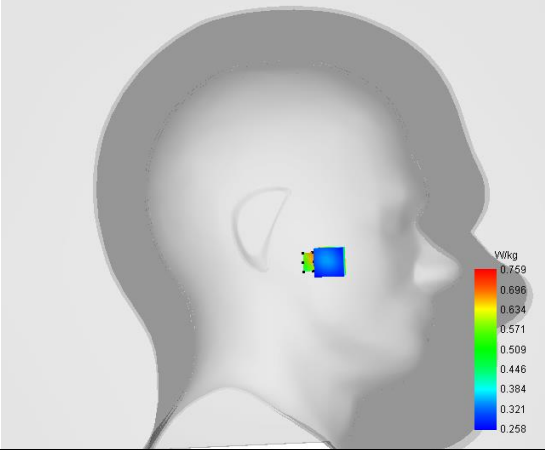
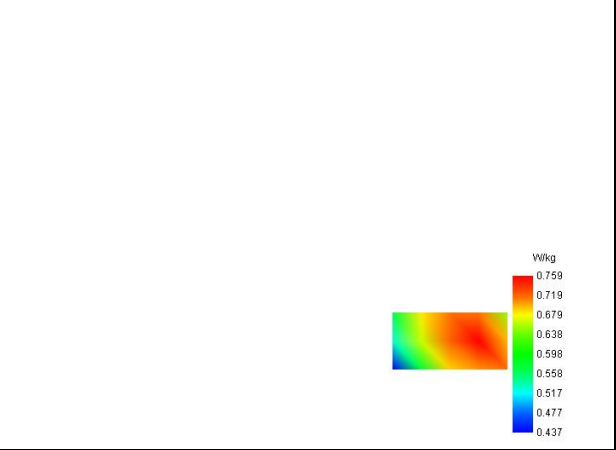
SAR 10g (W/Kg)	0.535267
SAR 1g (W/Kg)	0.724361

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.9336	0.7414	0.6651	0.5991	0.5426	0.4937	0.4509	0.4126	0.3778



F. 3D Image

3D screen shot	Hot spot position
	

MEASUREMENT 3

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 21 seconds

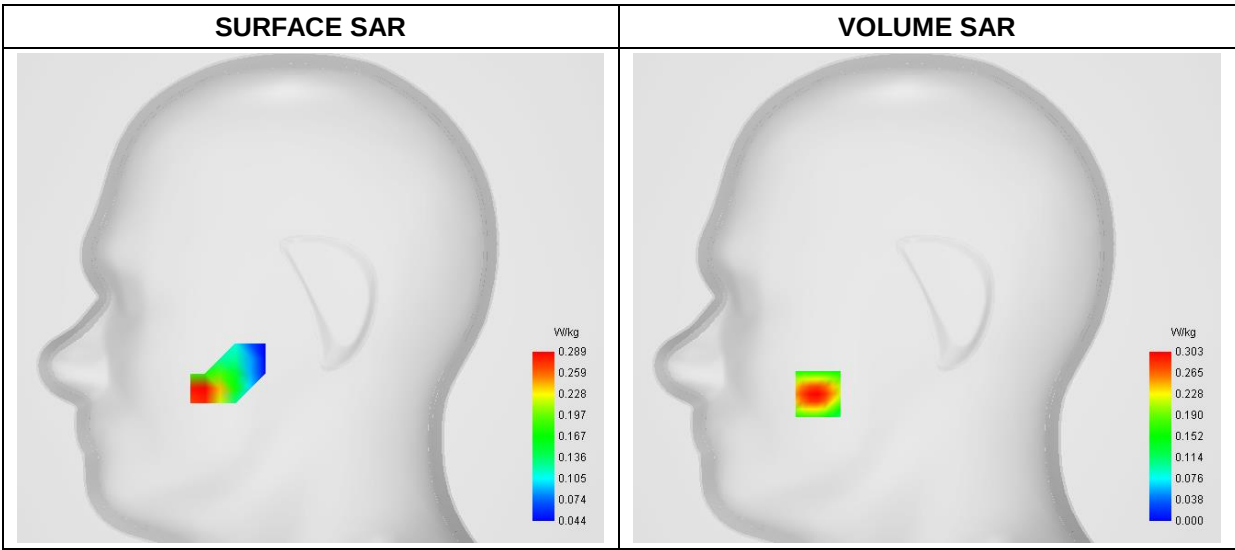
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
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)	40.691854
Conductivity (S/m)	1.414017
Power Variation (%)	-0.520000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



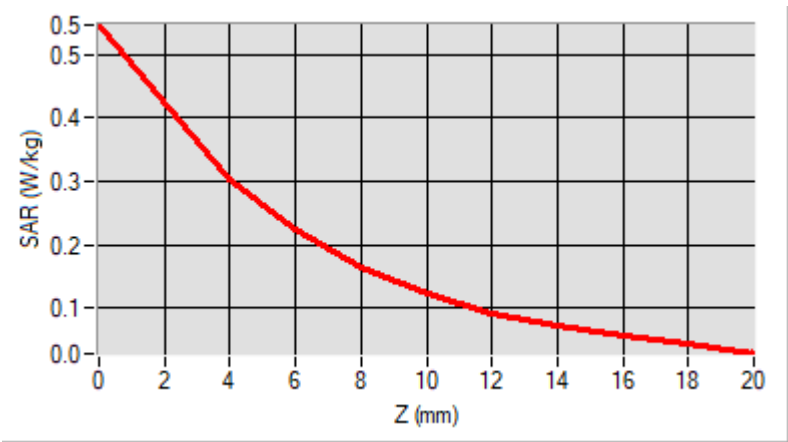
Maximum location: X=-58.00, Y=-51.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.140829
SAR 1g (W/Kg)	0.282359

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.5469	0.3033	0.2225	0.1633	0.1216	0.0921	0.0709	0.0552	0.0432



F. 3D Image

3D screen shot	Hot spot position
A 3D model of a human head in profile, showing the distribution of SAR (W/kg) on the surface. A color bar on the right indicates the SAR values, ranging from 0.000 (blue) to 0.303 (red). The highest SAR values are concentrated in the ear area.	A diagram showing the hot spot position of the SAR distribution. A color bar on the right indicates the SAR values, ranging from 0.044 (blue) to 0.289 (red). The highest SAR values are concentrated in the ear area.

MEASUREMENT 4

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

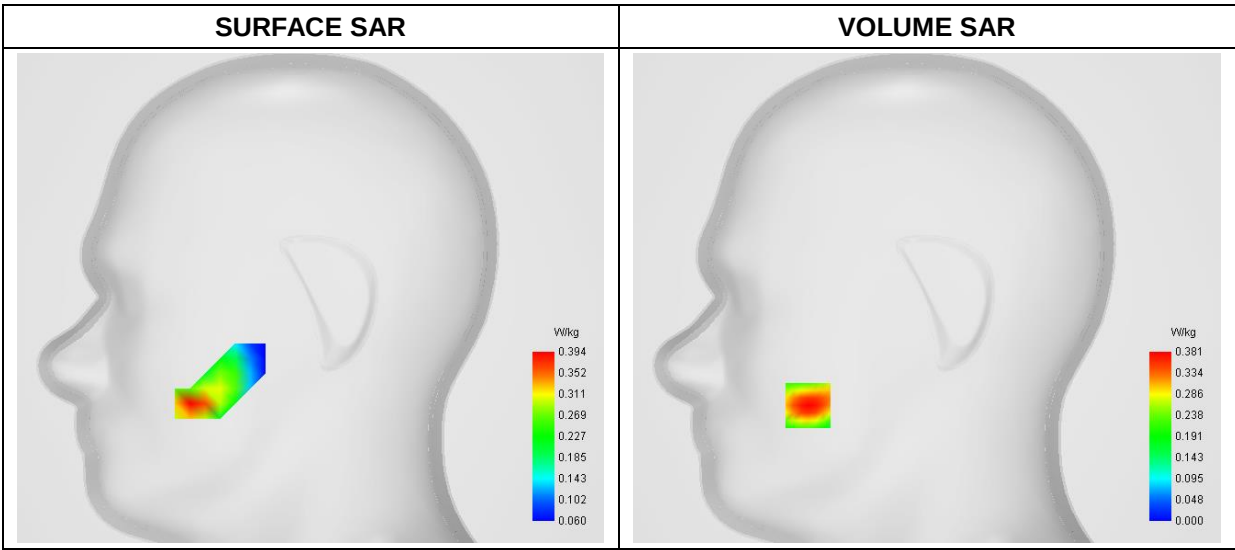
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Cheek
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle: 1:2

B. SAR Measurement Results

Frequency (MHz)	1909.800000
Relative Permittivity (real part)	40.761828
Conductivity (S/m)	1.411778
Power Variation (%)	2.130000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



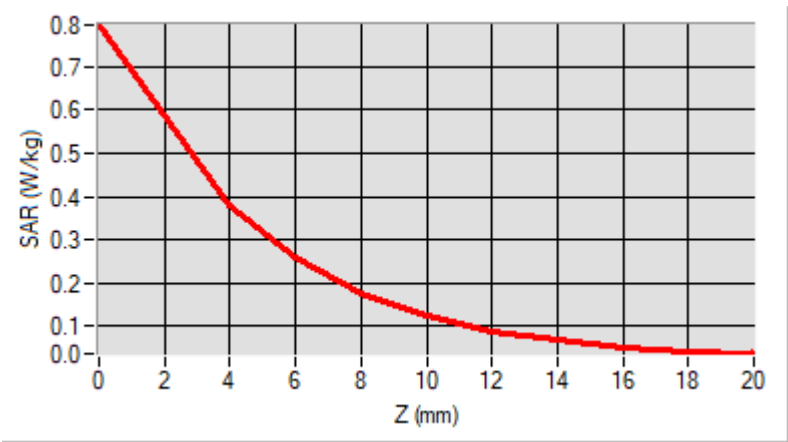
Maximum location: X=-63.00, Y=-57.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.177717
SAR 1g (W/Kg)	0.361842

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.7961	0.3812	0.2605	0.1779	0.1244	0.0899	0.0676	0.0529	0.0426



F. 3D Image

3D screen shot	Hot spot position
A 3D model of a human head in profile, showing the distribution of SAR (W/kg) on the surface. A color scale on the right indicates values from 0.000 (blue) to 0.394 (red). The highest SAR values are concentrated in the ear area.	A 3D model of a human head in profile, showing the distribution of SAR (W/kg) on the surface. A color scale on the right indicates values from 0.060 (blue) to 0.394 (red). The highest SAR values are concentrated in the ear area.

MEASUREMENT 5

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 21 seconds

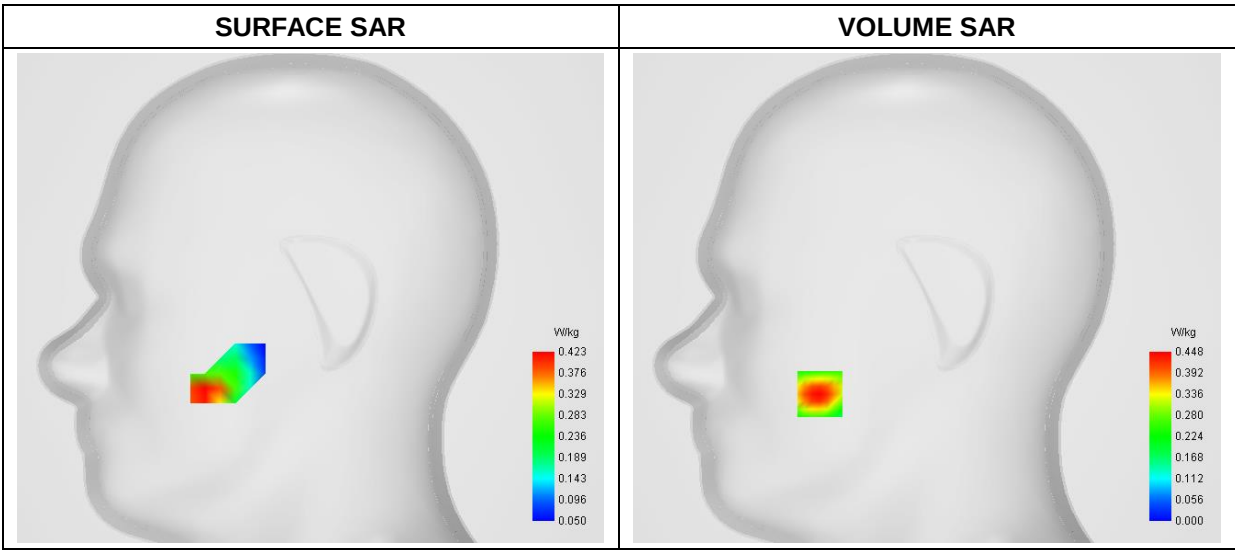
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Right 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)	40.761854
Conductivity (S/m)	1.412517
Power Variation (%)	-1.400000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



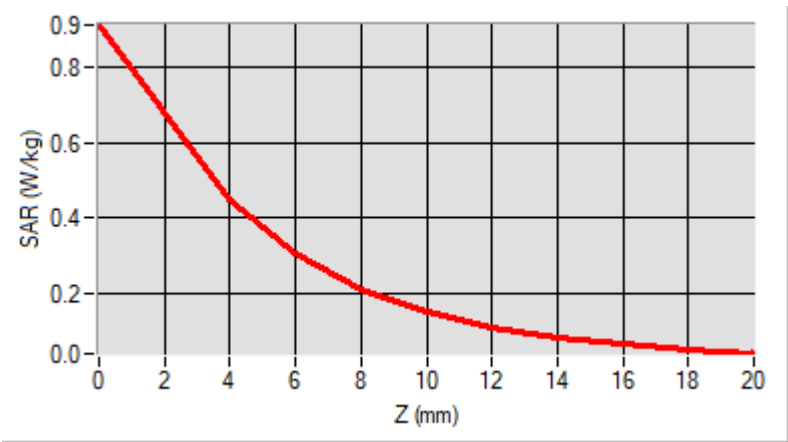
Maximum location: X=-57.00, Y=-51.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.202248
SAR 1g (W/Kg)	0.421626

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.9113	0.4477	0.3090	0.2135	0.1511	0.1107	0.0843	0.0667	0.0543



F. 3D Image

3D screen shot	Hot spot position
A 3D rendering of a human head model. A small, localized area of high SAR (red) is visible on the side of the head, near the ear. A color scale bar on the right indicates SAR values from 0.000 to 0.448 W/kg.	A 3D rendering of a human head model. A small, localized area of high SAR (red) is visible on the side of the head, near the ear. A color scale bar on the right indicates SAR values from 0.050 to 0.423 W/kg.

MEASUREMENT 6

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

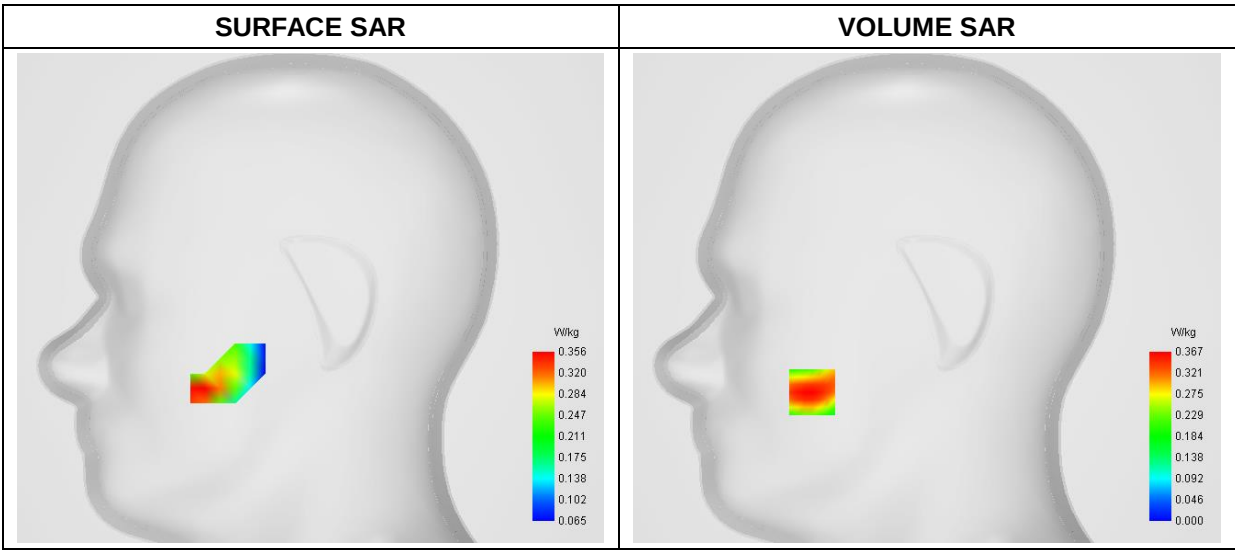
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Cheek
Band	WCDMA1700_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative Permittivity (real part)	40.691248
Conductivity (S/m)	1.410478
Power Variation (%)	1.280000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



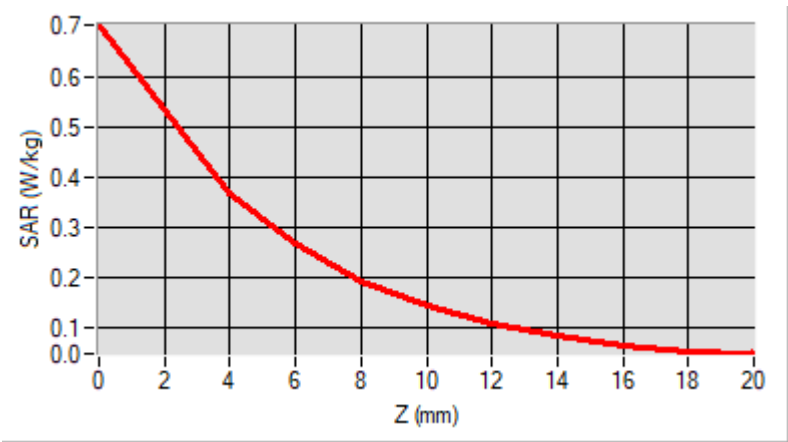
Maximum location: X=-61.00, Y=-50.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.181407
SAR 1g (W/Kg)	0.348587

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.7017	0.3671	0.2665	0.1940	0.1440	0.1093	0.0850	0.0675	0.0544



F. 3D Image

3D screen shot	Hot spot position
A 3D rendering of a human head model. A small, localized area on the side of the head is highlighted with a color gradient from blue to red, indicating the SAR distribution. A color scale legend on the right shows values from 0.000 to 0.367 W/kg.	A 3D rendering of a human head model. A small, localized area on the side of the head is highlighted with a color gradient from blue to red, indicating the SAR distribution. A color scale legend on the right shows values from 0.065 to 0.356 W/kg.

MEASUREMENT 7

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 3 seconds

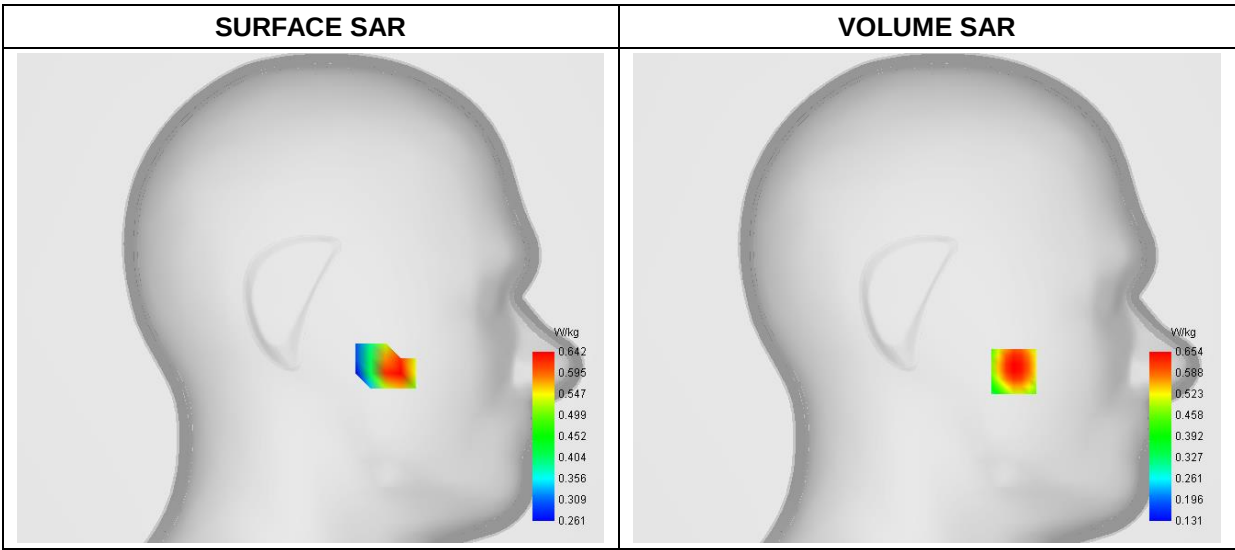
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left head
Device Position	Cheek
Band	WCDMA850_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	846.600000
Relative Permittivity (real part)	42.383288
Conductivity (S/m)	0.882168
Power Variation (%)	-1.870000
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume



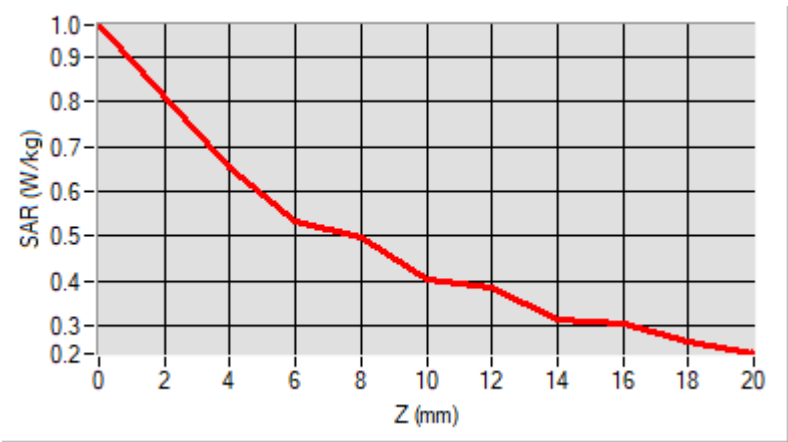
Maximum location: X=-46.00, Y=-39.00

D. SAR 1g & 10g

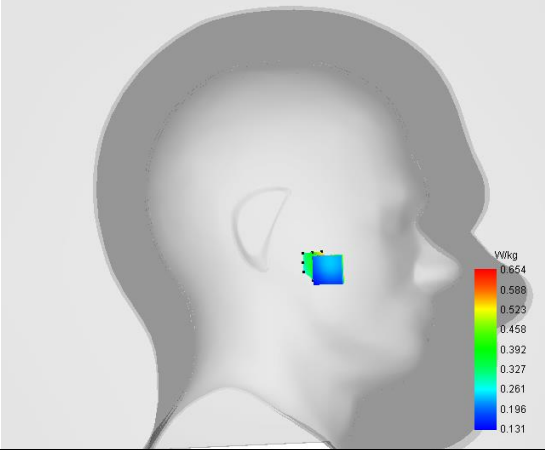
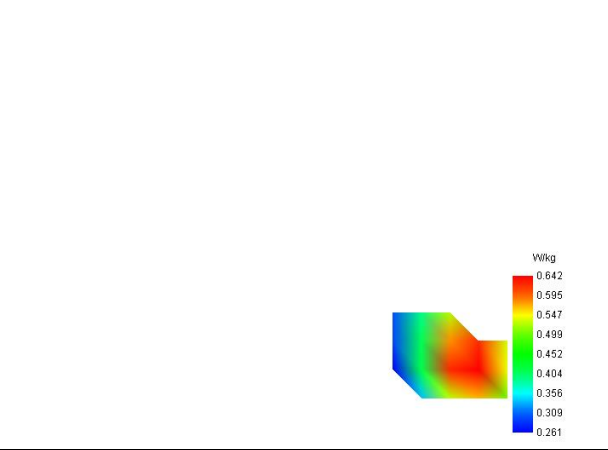
SAR 10g (W/Kg)	0.421975
SAR 1g (W/Kg)	0.638605

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.9715	0.6538	0.5337	0.4961	0.4046	0.3849	0.3132	0.3034	0.2647



F. 3D Image

3D screen shot	Hot spot position
	

MEASUREMENT 8

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

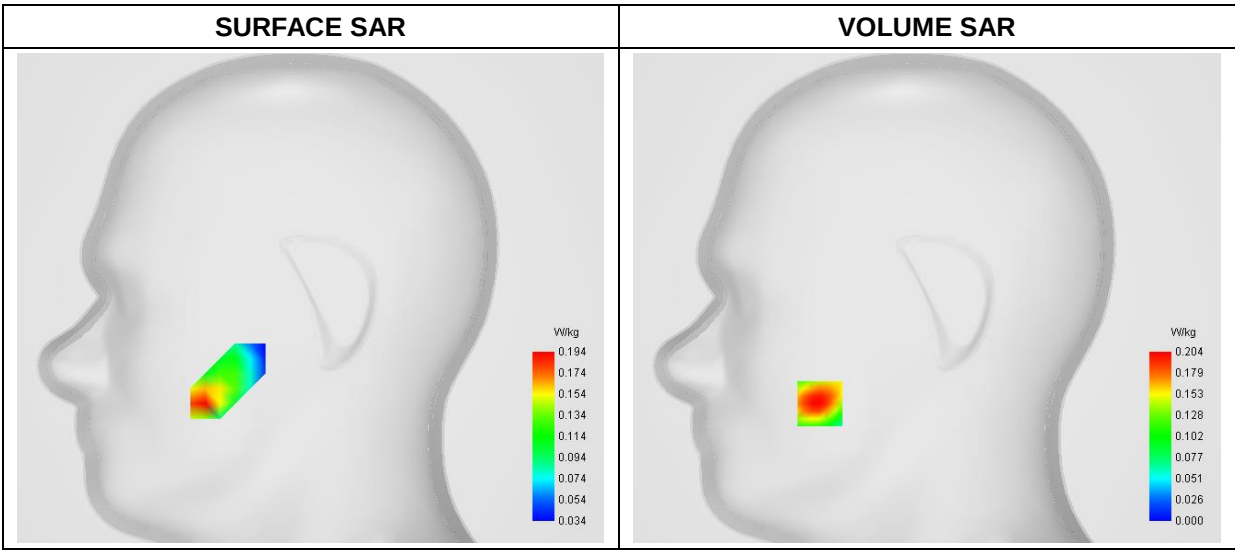
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Right 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)	40.761854
Conductivity (S/m)	1.412517
Power Variation (%)	1.536214
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



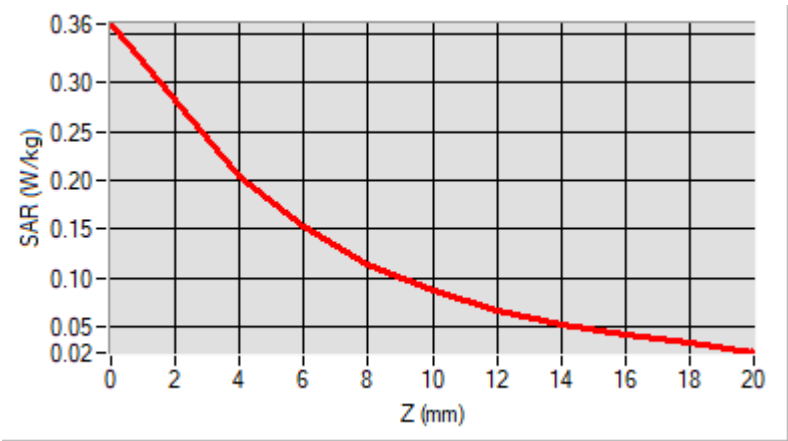
Maximum location: X=-57.00, Y=-56.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.098817
SAR 1g (W/Kg)	0.190387

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.3594	0.2042	0.1528	0.1146	0.0872	0.0674	0.0529	0.0420	0.0335



F. 3D Image

3D screen shot	Hot spot position
A 3D model of a human head in profile, showing the distribution of SAR (W/kg) on the surface. A color scale on the right indicates values from 0.000 (blue) to 0.204 (red). The highest SAR values are concentrated in the ear area.	A close-up view of the hot spot position on the 3D model. A color scale on the right indicates values from 0.034 (blue) to 0.194 (red). The hot spot is located in the ear area.

MEASUREMENT 9

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

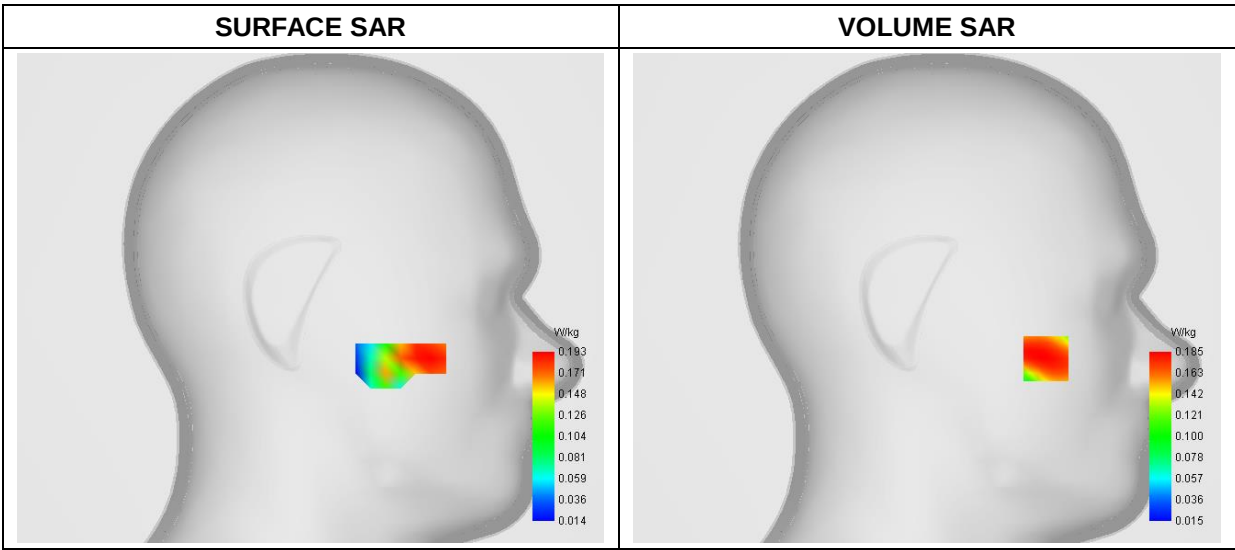
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 4
Channels	QPSK, 20MHz, 1RB,Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1720.000000
Relative Permittivity (real part)	40.694890
Conductivity (S/m)	1.411250
Power Variation (%)	1.374628
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

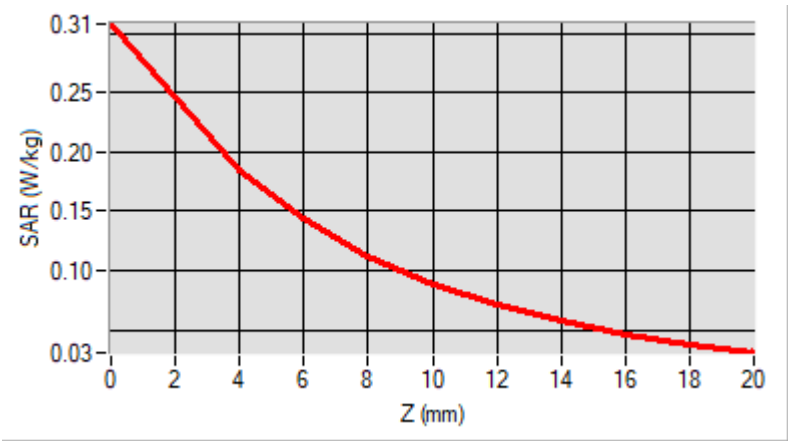


Maximum location: X=-63.00, Y=-32.00
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.101433
SAR 1g (W/Kg)	0.180226

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.3082	0.1848	0.1434	0.1117	0.0881	0.0704	0.0570	0.0464	0.0379



F. 3D Image

3D screen shot	Hot spot position
A 3D rendering of a human head model in profile, facing right. A small rectangular area on the side of the head is highlighted with a color gradient, indicating the SAR distribution. A color scale on the right ranges from 0.014 (blue) to 0.193 (red) W/kg.	A 2D color-coded image showing the hot spot position. The color gradient ranges from blue (low SAR) to red (high SAR). A color scale on the right ranges from 0.014 (blue) to 0.193 (red) W/kg.

MEASUREMENT 10

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 3 seconds

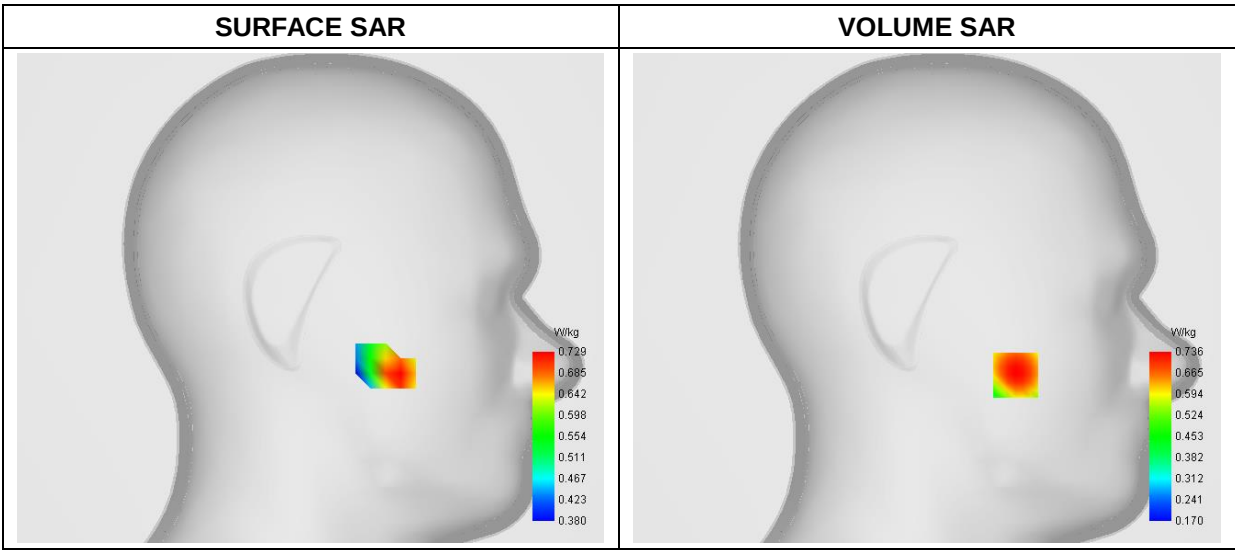
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 5
Channels	QPSK, 10MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	844.000000
Relative Permittivity (real part)	42.381092
Conductivity (S/m)	0.880182
Power Variation (%)	0.924535
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume

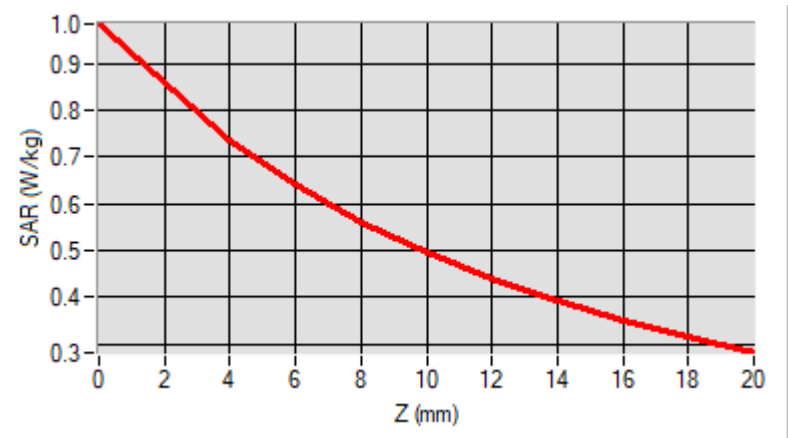


Maximum location: X=-47.00, Y=-41.00
D. SAR 1g & 10g

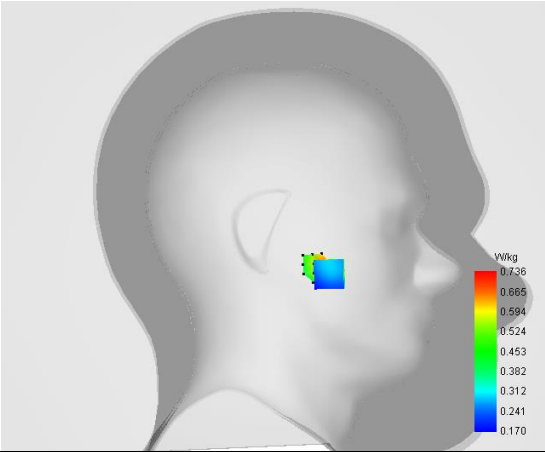
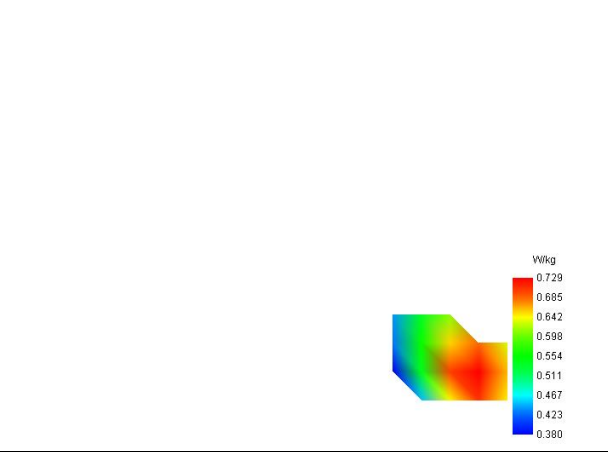
SAR 10g (W/Kg)	0.495685
SAR 1g (W/Kg)	0.721399

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.9835	0.7357	0.6412	0.5616	0.4955	0.4400	0.3927	0.3516	0.3150



F. 3D Image

3D screen shot	Hot spot position
	

MEASUREMENT 11

Type: Phone measurement (Complete)
Date of measurement: 2023-03-29
Measurement duration: 12 minutes 3 seconds

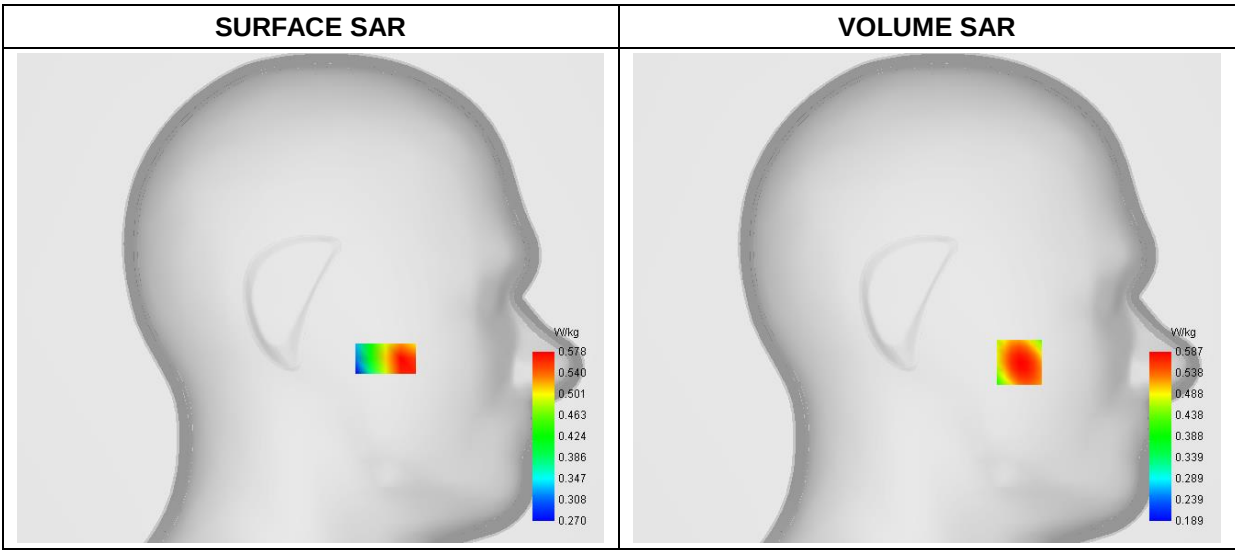
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 12
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	707.500000
Relative Permittivity (real part)	42.410245
Conductivity (S/m)	0.871245
Power Variation (%)	0.924535
Ambient Temperature	23.4
Liquid Temperature	23.4

C. SAR Surface and Volume

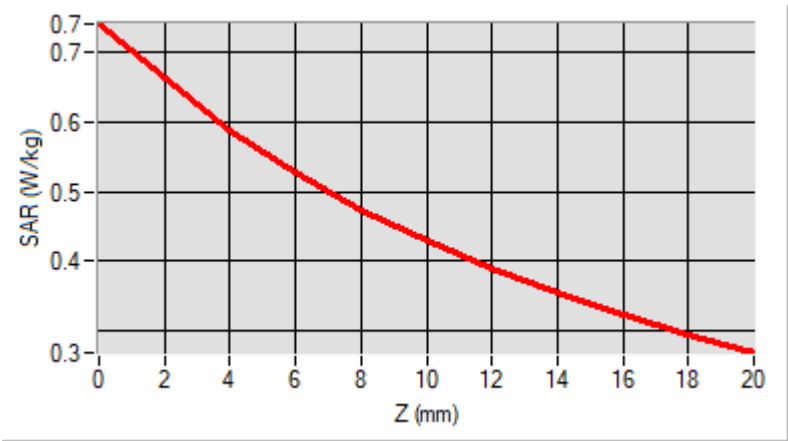


Maximum location: X=-49.00, Y=-34.00
D. SAR 1g & 10g

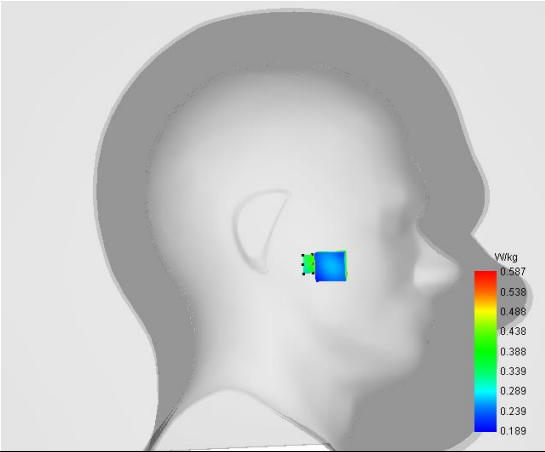
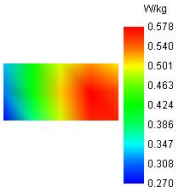
SAR 10g (W/Kg)	0.418185
SAR 1g (W/Kg)	0.574838

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.7401	0.5875	0.5267	0.4739	0.4285	0.3892	0.3546	0.3236	0.2953



F. 3D Image

3D screen shot	Hot spot position
	

MEASUREMENT 12

Type: Phone measurement (Complete)
Date of measurement: 2023-03-29
Measurement duration: 12 minutes 3 seconds

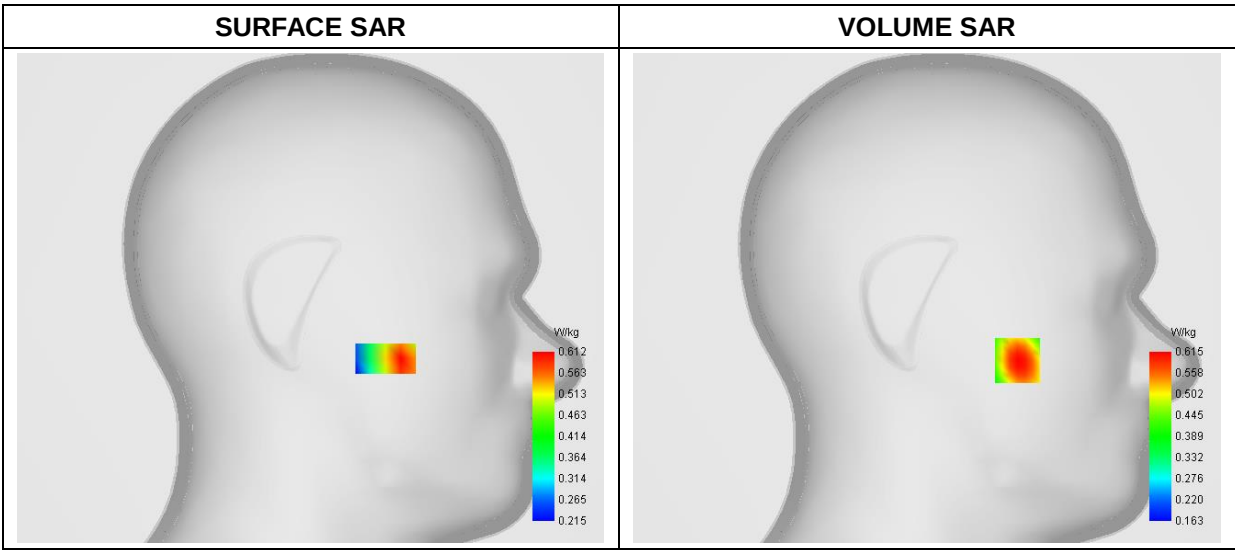
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 17
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	709.000000
Relative Permittivity (real part)	42.410245
Conductivity (S/m)	0.872459
Power Variation (%)	0.924535
Ambient Temperature	23.4
Liquid Temperature	23.4

C. SAR Surface and Volume

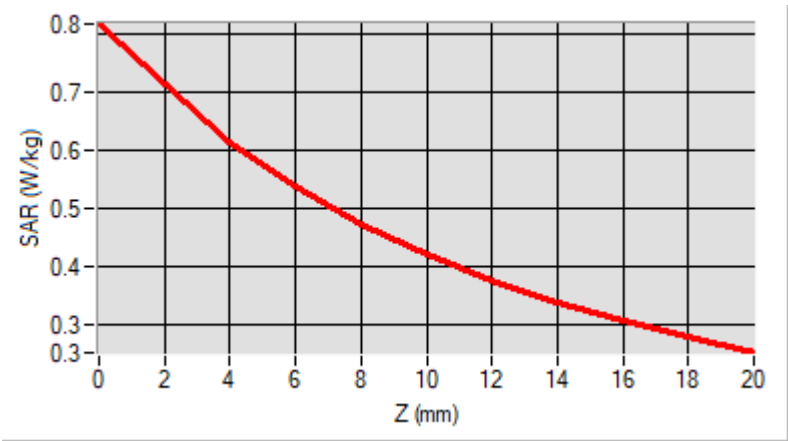


Maximum location: X=-48.00, Y=-33.00
D. SAR 1g & 10g

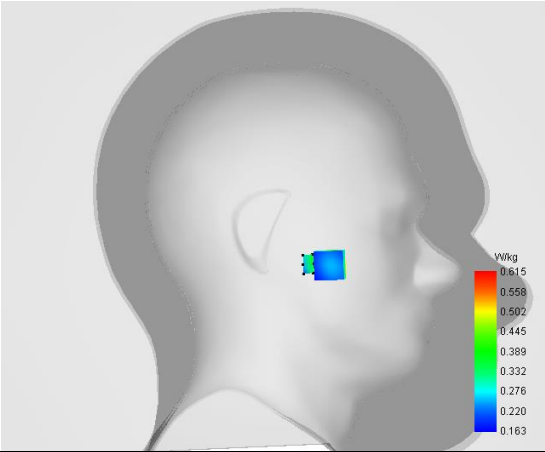
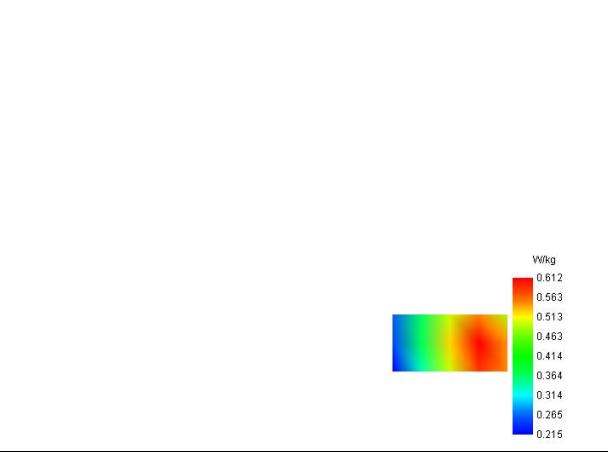
SAR 10g (W/Kg)	0.410322
SAR 1g (W/Kg)	0.594734

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.8185	0.6145	0.5374	0.4728	0.4196	0.3753	0.3379	0.3055	0.2767



F. 3D Image

3D screen shot	Hot spot position
	

MEASUREMENT 13

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

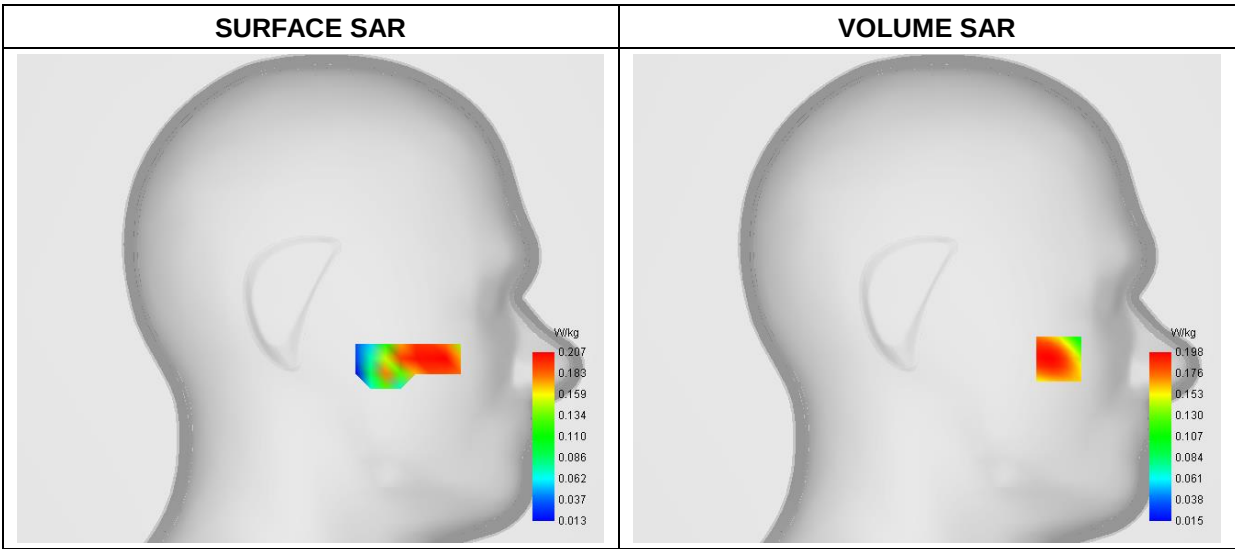
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left head
Device Position	Cheek
Band	LTE Band 66
Channels	QPSK, 20MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1720.000000
Relative Permittivity (real part)	40.694890
Conductivity (S/m)	1.411250
Power Variation (%)	-1.480000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



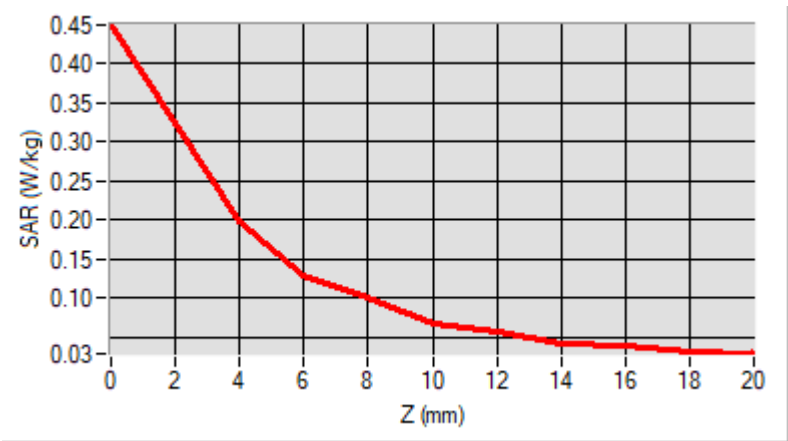
Maximum location: X=-70.00, Y=-32.00

D. SAR 1g & 10g

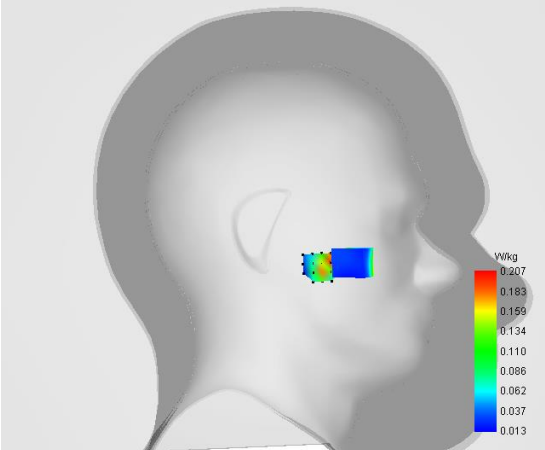
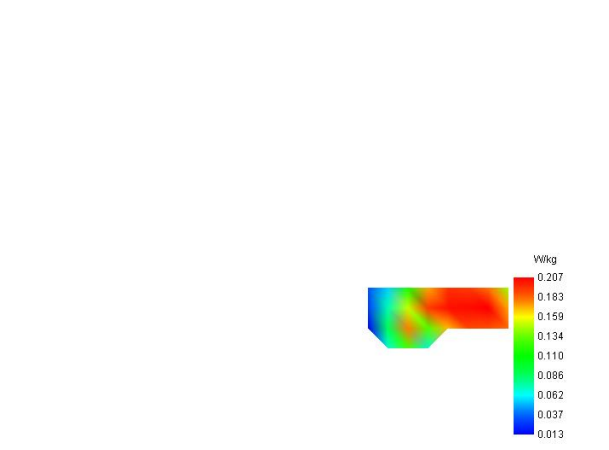
SAR 10g (W/Kg)	0.104461
SAR 1g (W/Kg)	0.196163

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.4488	0.1984	0.1280	0.1001	0.0678	0.0566	0.0421	0.0381	0.0306



F. 3D Image

3D screen shot	Hot spot position
	

MEASUREMENT 14

Type: Phone measurement (Complete)
Date of measurement: 2023-03-21
Measurement duration: 12 minutes 21 seconds

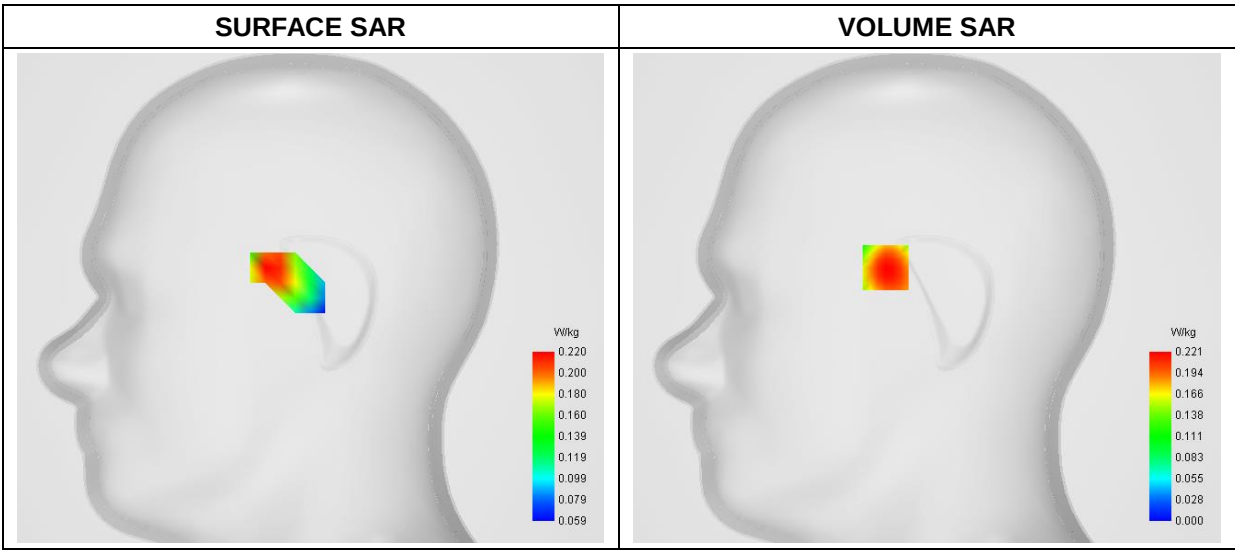
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Cheek
Band	WiFi_802.11b
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	39.852654
Conductivity (S/m)	1.781248
Power Variation (%)	-1.760000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



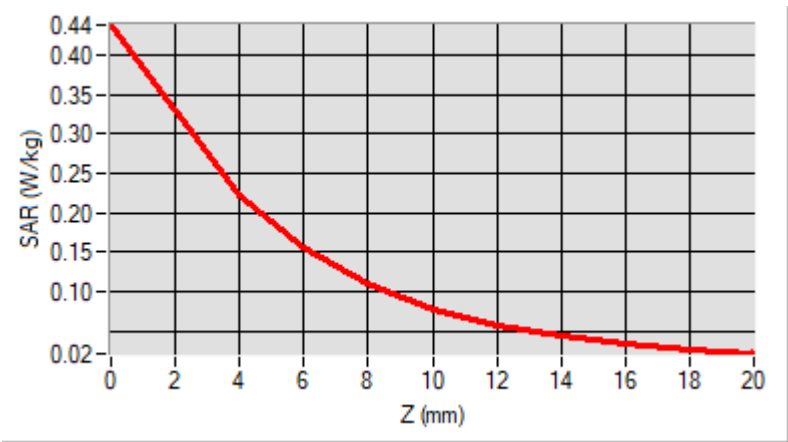
Maximum location: X=-22.00, Y=16.00

D. SAR 1g & 10g

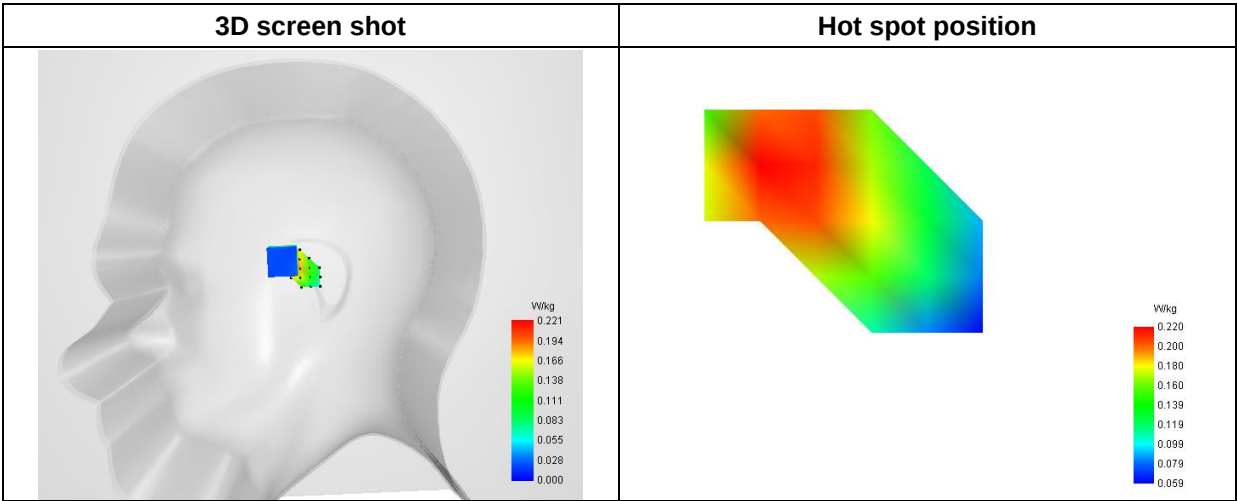
SAR 10g (W/Kg)	0.109889
SAR 1g (W/Kg)	0.214670

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.4383	0.2215	0.1555	0.1092	0.0782	0.0575	0.0435	0.0339	0.0272



F. 3D Image



MEASUREMENT 15

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 3 seconds

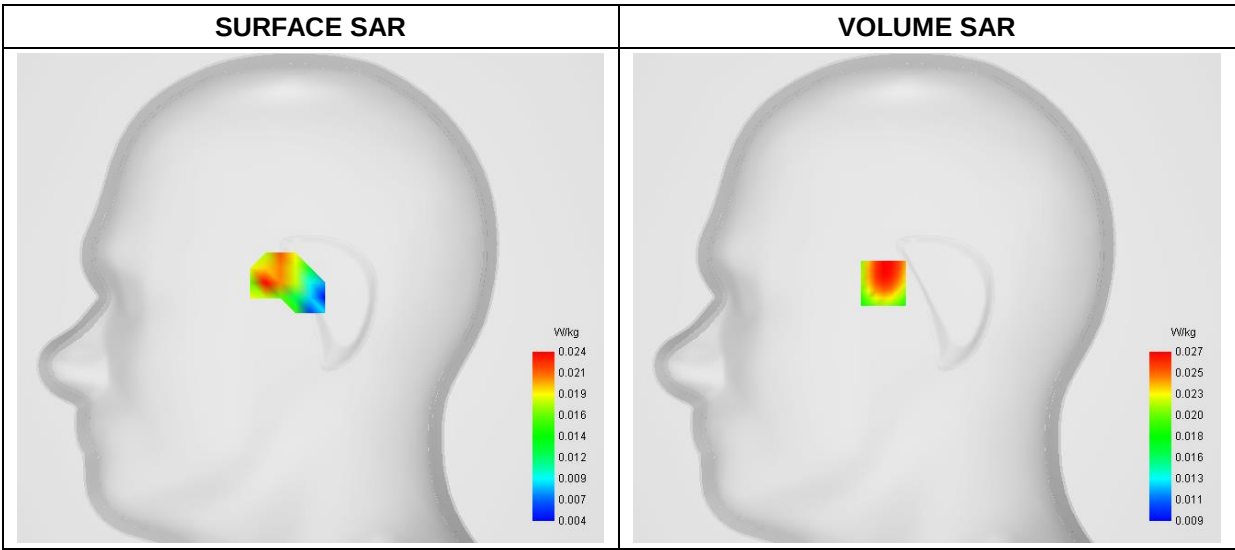
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Right head
Device Position	Cheek
Band	Bluetooth_ GFSK
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2402.000000
Relative Permittivity (real part)	42.382528
Conductivity (S/m)	0.8813847
Power Variation (%)	1.580000
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume



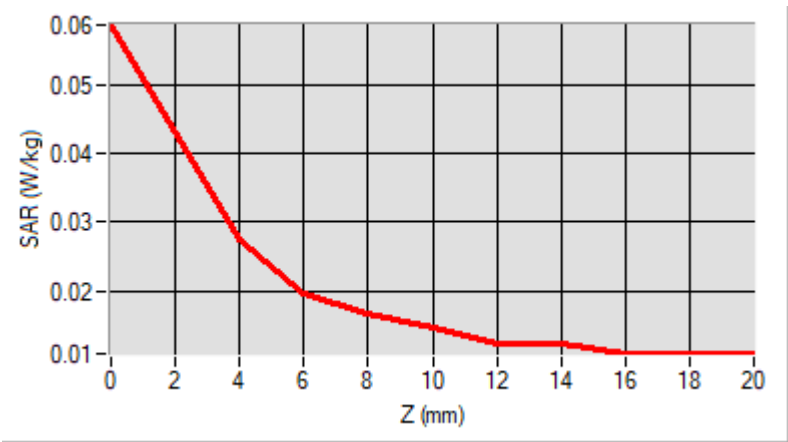
Maximum location: X=-23.00, Y=8.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.017906
SAR 1g (W/Kg)	0.027162

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.0587	0.0274	0.0196	0.0167	0.0148	0.0122	0.0125	0.0109	0.0109



F. 3D Image

3D screen shot	Hot spot position
A 3D rendering of a human head model showing the SAR distribution. A color scale on the right indicates SAR values from 0.004 to 0.027 W/kg. The highest SAR values are concentrated in the ear region.	A 2D color map showing the hot spot position of the SAR distribution. A color scale on the right indicates SAR values from 0.004 to 0.024 W/kg. The highest SAR values are concentrated in the ear region.

MEASUREMENT 16

Type: Phone measurement (Complete)
Date of measurement: 2023-03-20
Measurement duration: 12 minutes 3 seconds

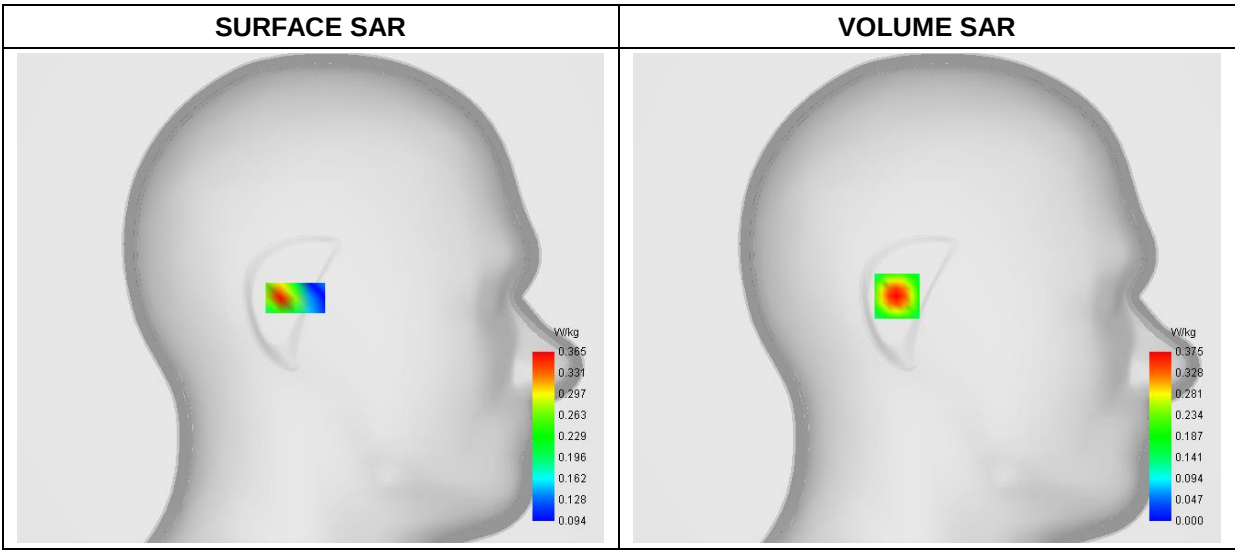
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left Head
Device Position	Cheek
Band	WiFi(5.2GHz)_802.11a
Channels	Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5180.000000
Relative Permittivity (real part)	35.493978
Conductivity (S/m)	4.691686
Power Variation (%)	-1.570000
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



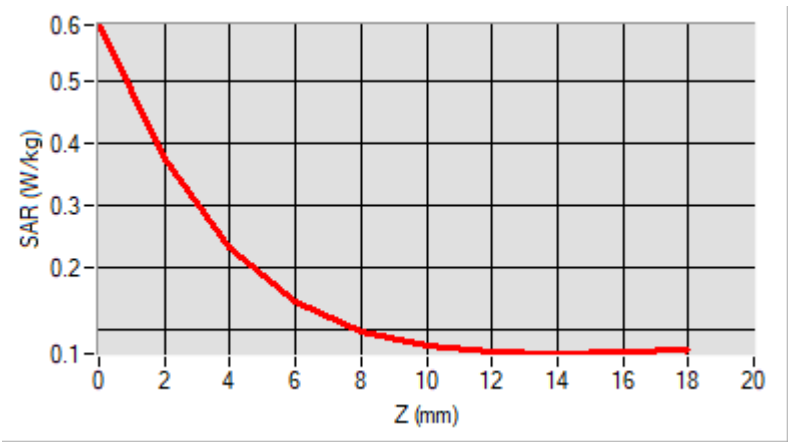
Maximum location: X=16.00, Y=1.00

D. SAR 1g & 10g

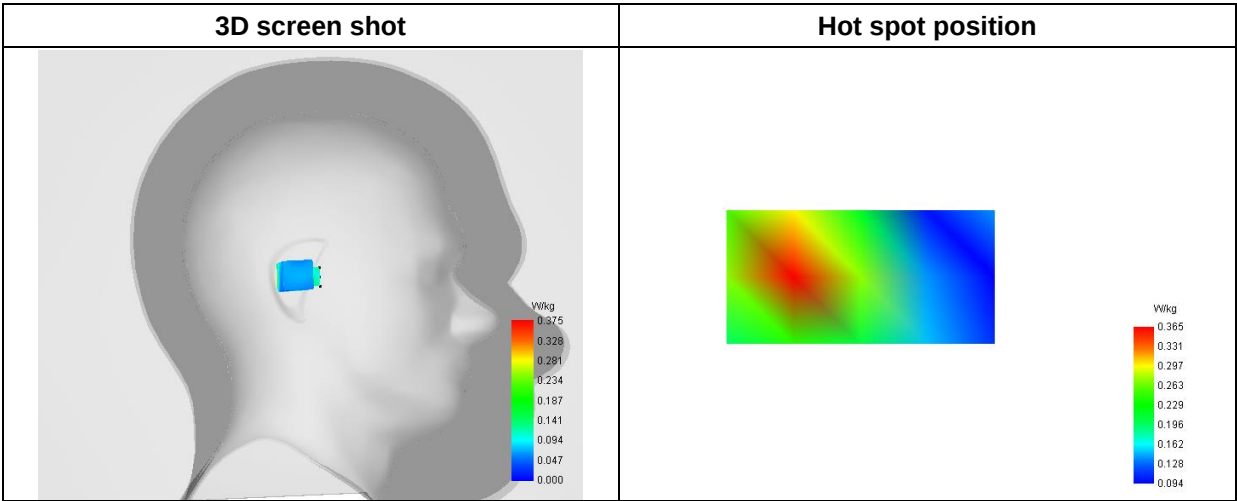
SAR 10g (W/Kg)	0.165055
SAR 1g (W/Kg)	0.360003

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.5912	0.3750	0.2329	0.1467	0.0994	0.0751	0.0646	0.0627	0.0661



F. 3D Image



MEASUREMENT 17

Type: Phone measurement (Complete)
Date of measurement: 2023-03-20
Measurement duration: 12 minutes 3 seconds

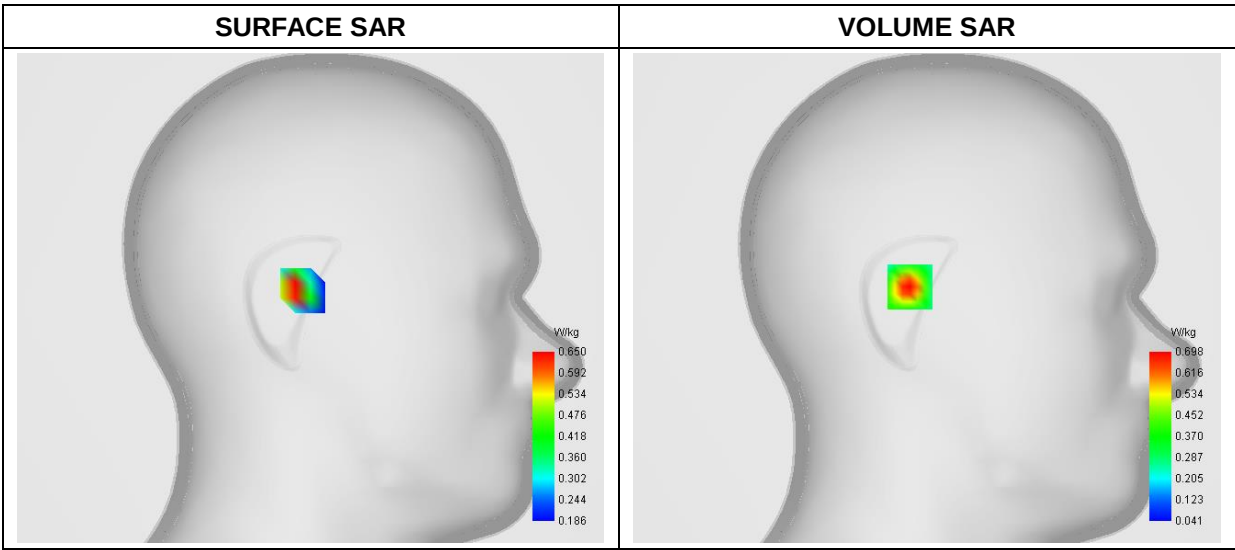
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Left Head
Device Position	Cheek
Band	WiFi(5.8GHz)_802.11a
Channels	High
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5825.000000
Relative Permittivity (real part)	35.782839
Conductivity (S/m)	5.231926
Power Variation (%)	0.460000
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



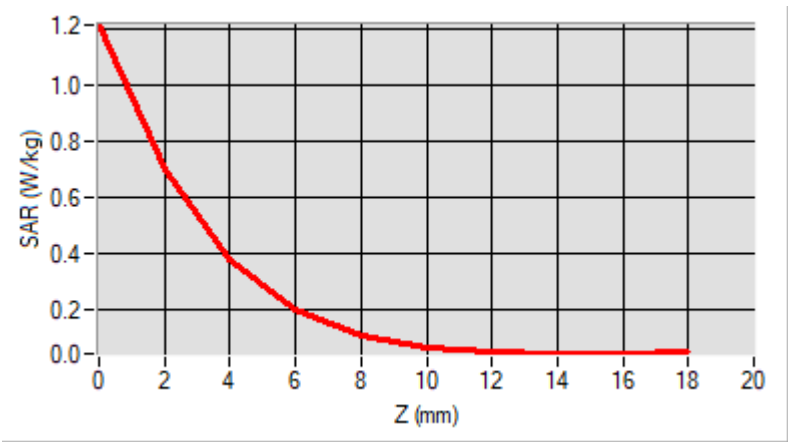
Maximum location: X=9.00, Y=6.00

D. SAR 1g & 10g

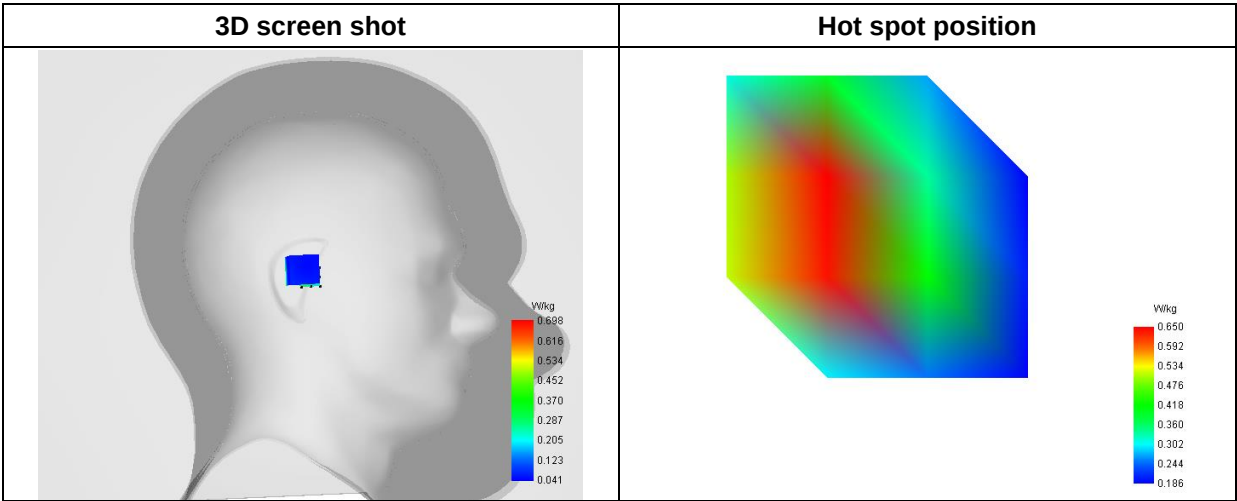
SAR 10g (W/Kg)	0.271668
SAR 1g (W/Kg)	0.687340

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	1.2116	0.6980	0.3774	0.1966	0.1060	0.0635	0.0458	0.0410	0.0435



F. 3D Image



MEASUREMENT 18

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 3 seconds

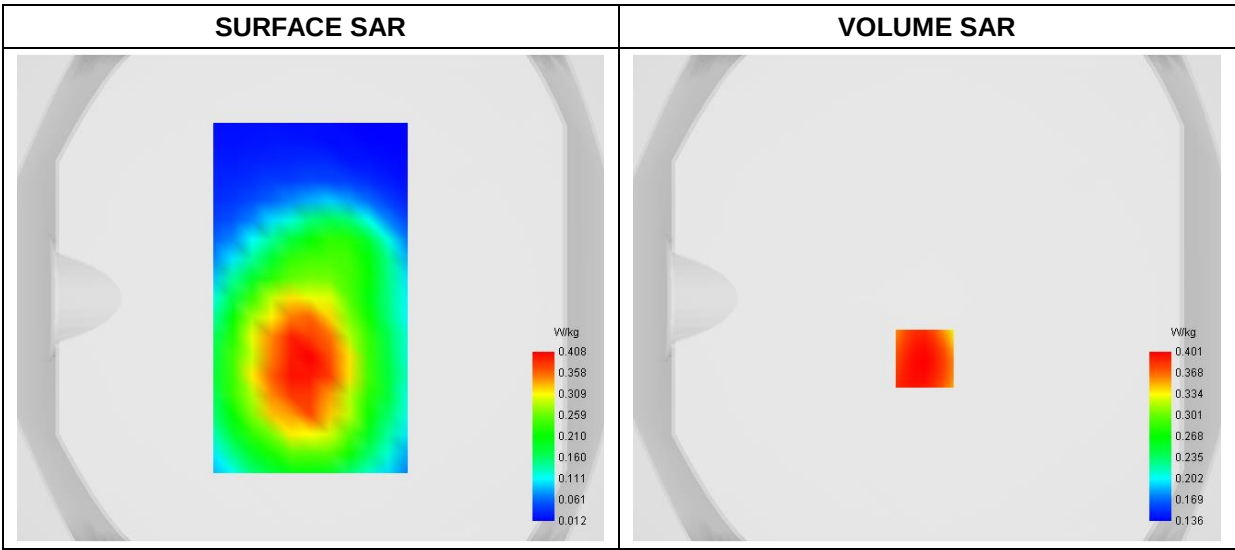
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
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)	42.380415
Conductivity (S/m)	0.884808
Power Variation (%)	1.260000
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume



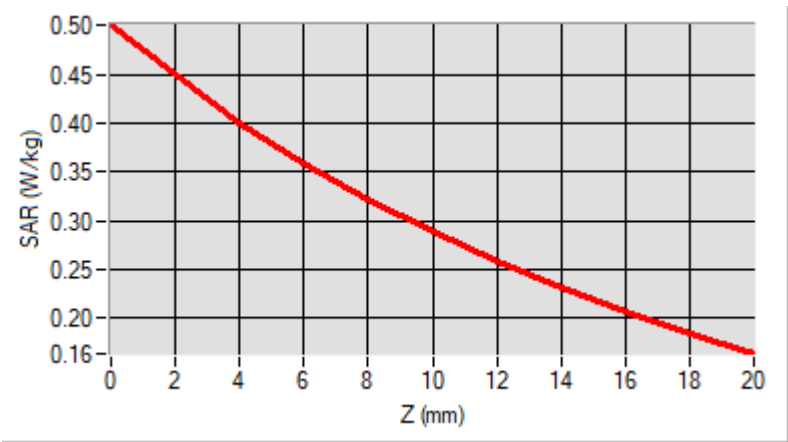
Maximum location: X=-1.00, Y=-25.00

D. SAR 1g & 10g

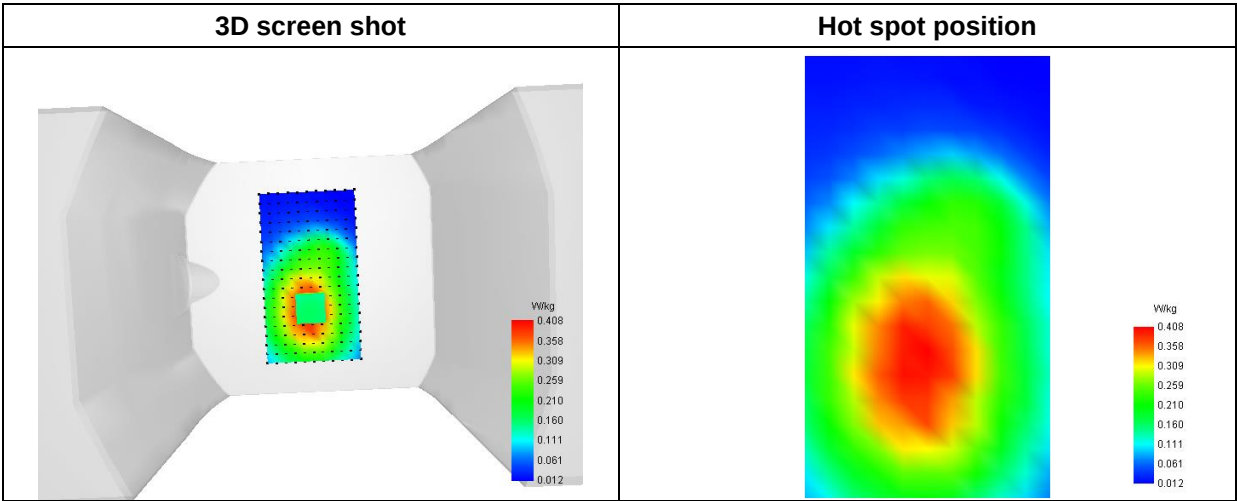
SAR 10g (W/Kg)	0.282748
SAR 1g (W/Kg)	0.407181

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.5009	0.4008	0.3590	0.3216	0.2883	0.2585	0.2315	0.2069	0.1843



F. 3D Image



MEASUREMENT 19

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 21 seconds

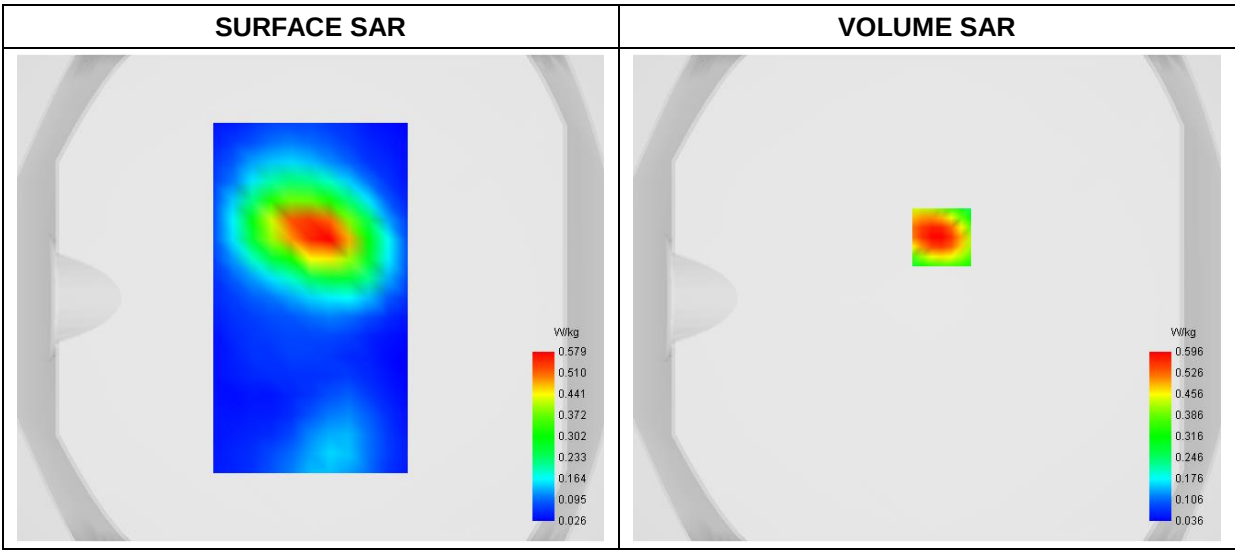
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

Frequency (MHz)	1850.200000
Relative Permittivity (real part)	40.691854
Conductivity (S/m)	1.414017
Power Variation (%)	0.430000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



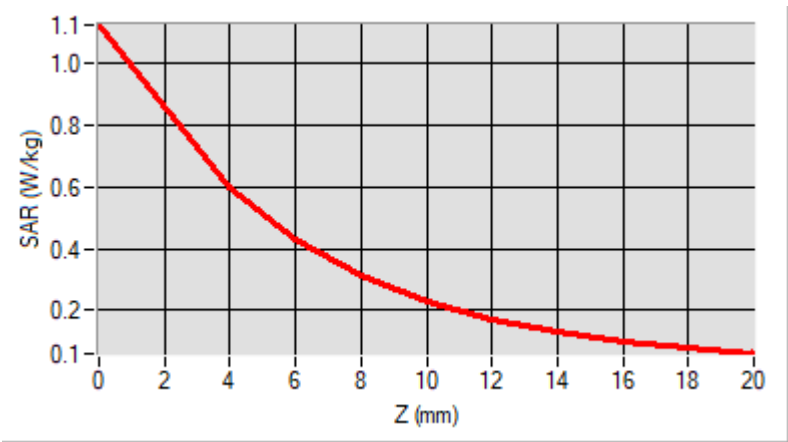
Maximum location: X=6.00, Y=25.00

D. SAR 1g & 10g

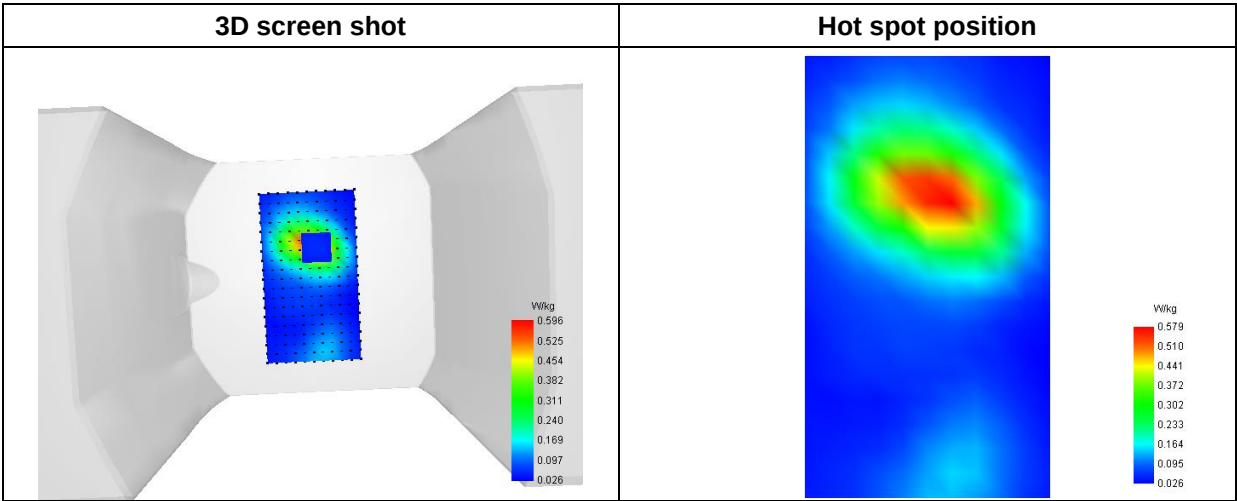
SAR 10g (W/Kg)	0.279593
SAR 1g (W/Kg)	0.563058

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.1232	0.5963	0.4313	0.3119	0.2288	0.1708	0.1298	0.1002	0.0777



F. 3D Image



MEASUREMENT 20/35

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 21 seconds

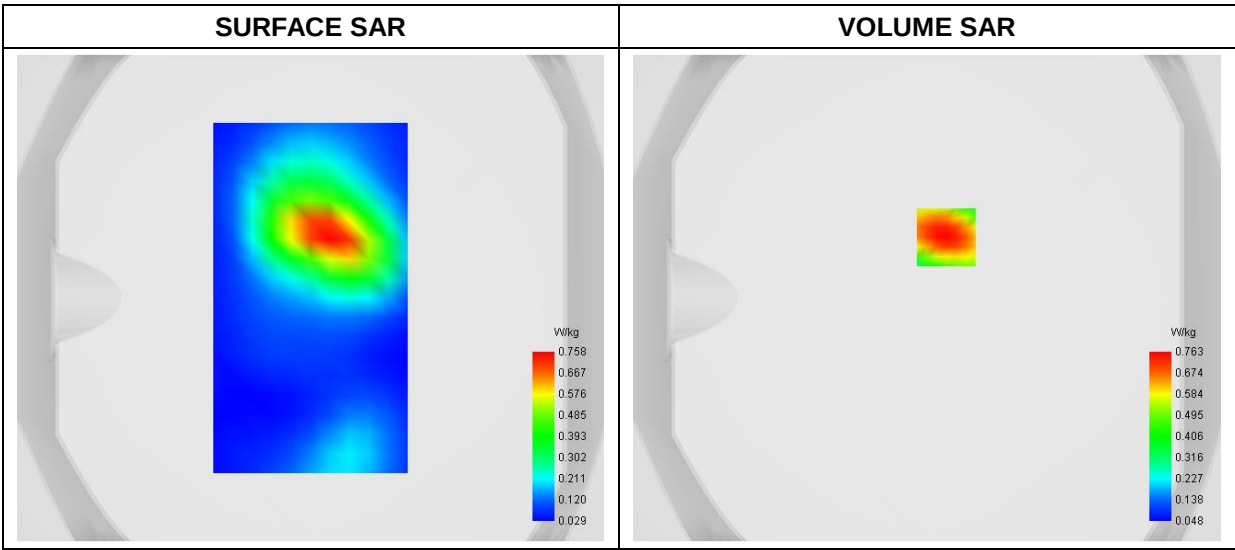
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	WCDMA1900_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative Permittivity (real part)	40.761854
Conductivity (S/m)	1.412517
Power Variation (%)	-1.710000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



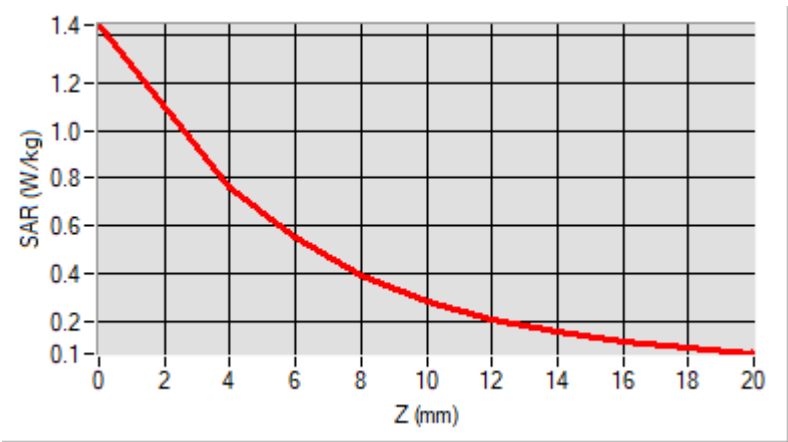
Maximum location: X=8.00, Y=25.00

D. SAR 1g & 10g

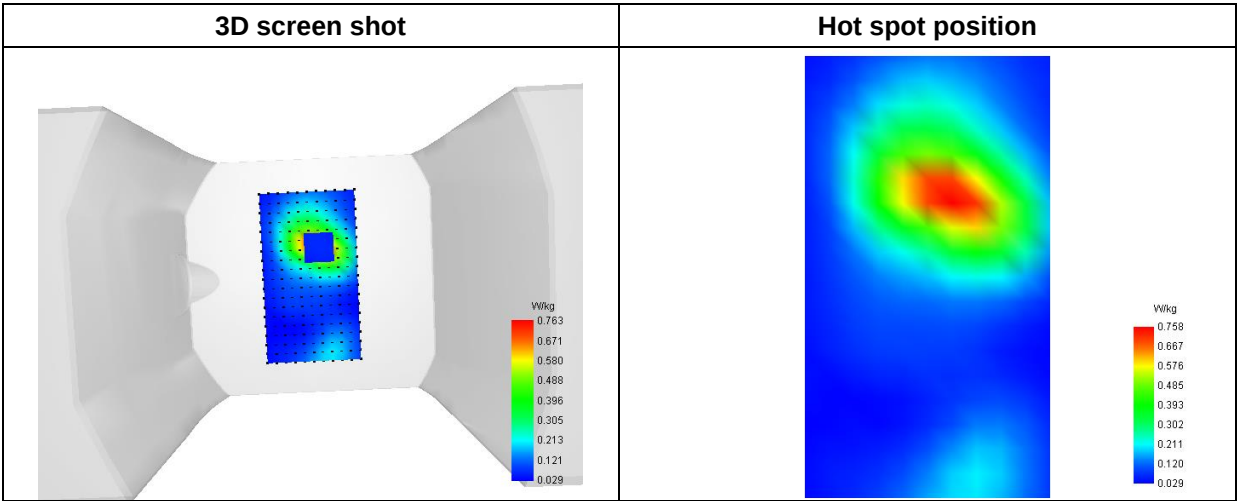
SAR 10g (W/Kg)	0.361890
SAR 1g (W/Kg)	0.723471

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.4384	0.7631	0.5511	0.3973	0.2899	0.2147	0.1614	0.1227	0.0934



F. 3D Image



MEASUREMENT 21/36

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

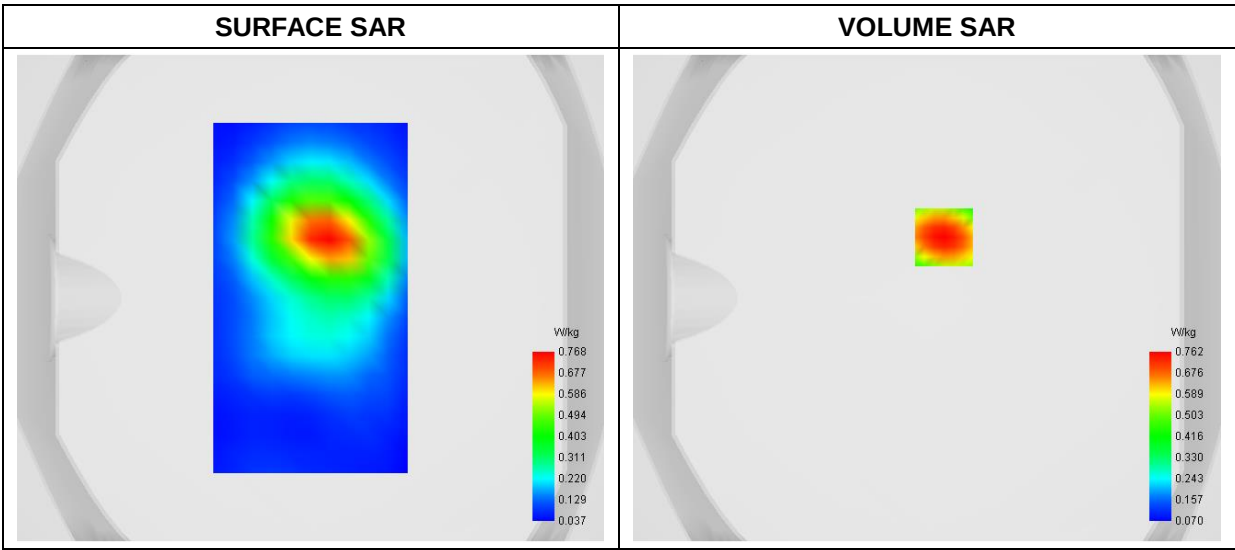
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	WCDMA1700_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative Permittivity (real part)	40.691248
Conductivity (S/m)	1.410478
Power Variation (%)	-1.540000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



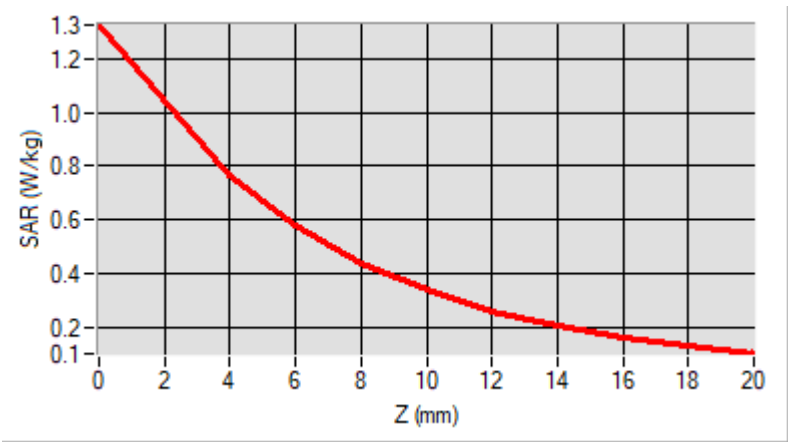
Maximum location: X=7.00, Y=25.00

D. SAR 1g & 10g

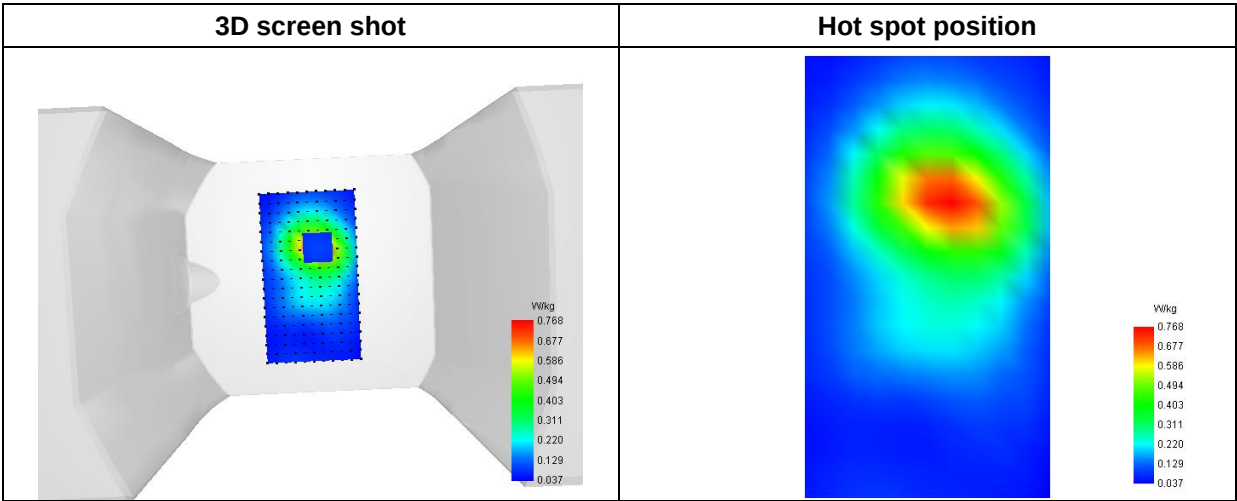
SAR 10g (W/Kg)	0.383284
SAR 1g (W/Kg)	0.717690

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.3248	0.7622	0.5776	0.4384	0.3368	0.2621	0.2064	0.1638	0.1300



F. 3D Image



MEASUREMENT 22/37

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 3 seconds

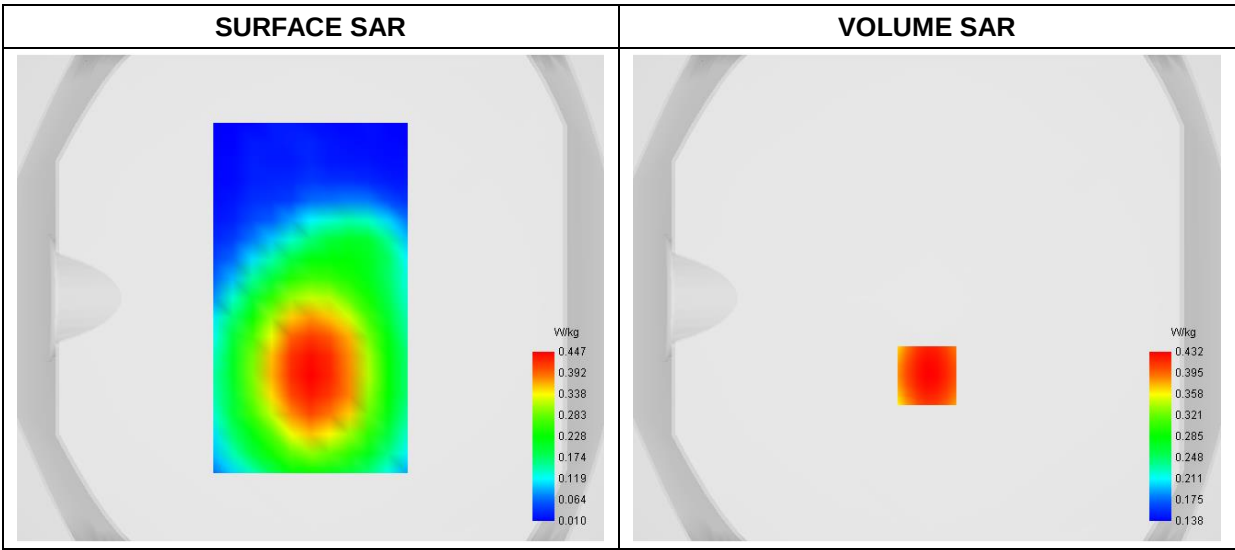
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	WCDMA850_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	846.600000
Relative Permittivity (real part)	42.383288
Conductivity (S/m)	0.882168
Power Variation (%)	-0.540000
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume



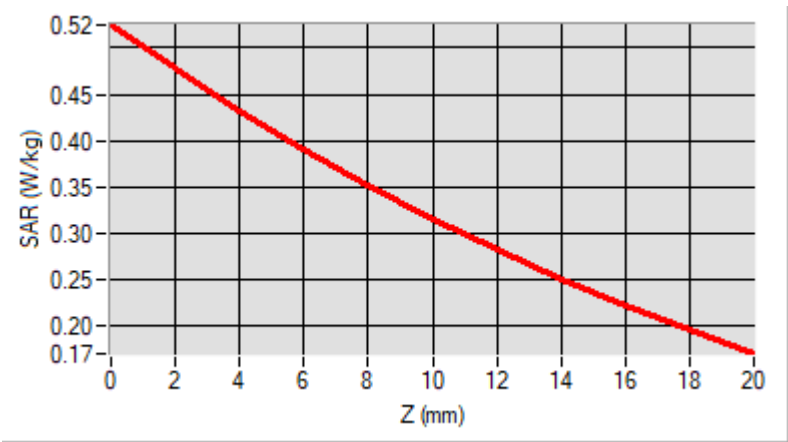
Maximum location: X=0.00, Y=-32.00

D. SAR 1g & 10g

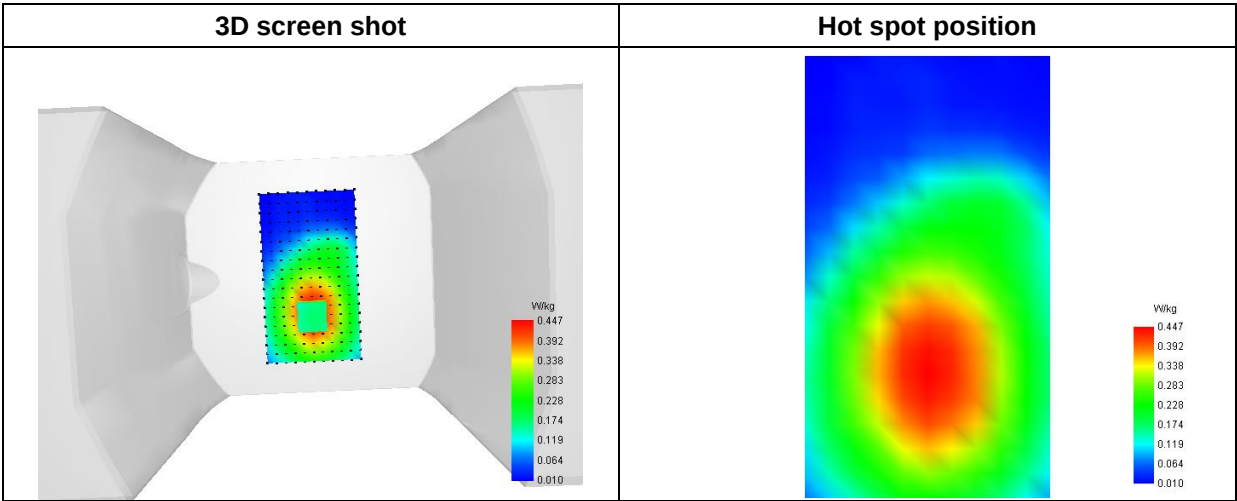
SAR 10g (W/Kg)	0.301288
SAR 1g (W/Kg)	0.415366

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.5248	0.4316	0.3900	0.3513	0.3154	0.2821	0.2511	0.2223	0.1954



F. 3D Image



MEASUREMENT 23/38

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

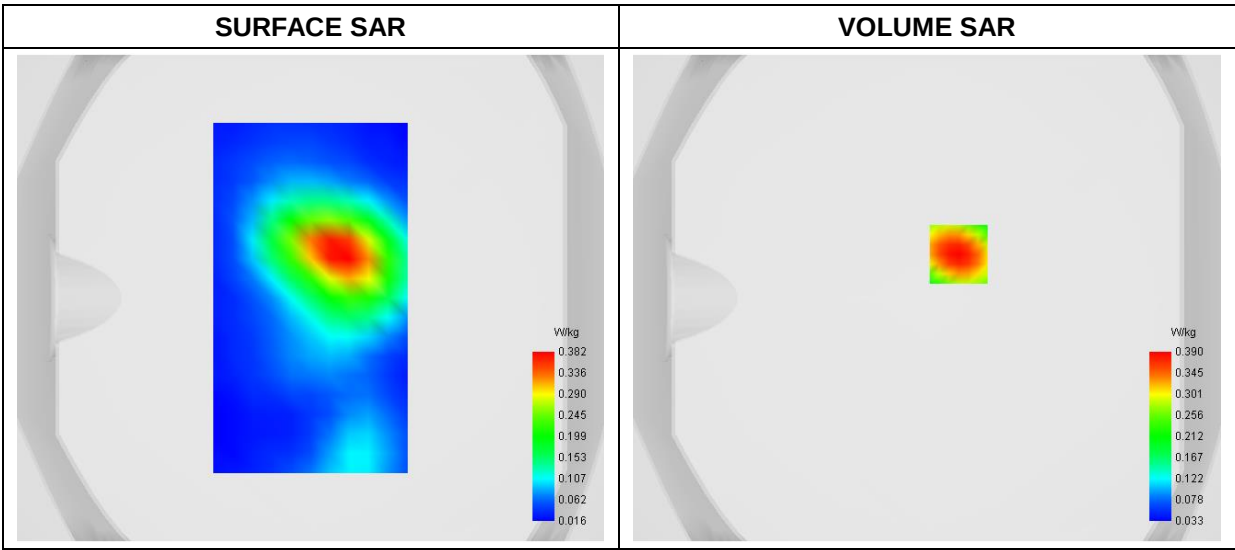
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
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)	40.761854
Conductivity (S/m)	1.412517
Power Variation (%)	-0.510000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

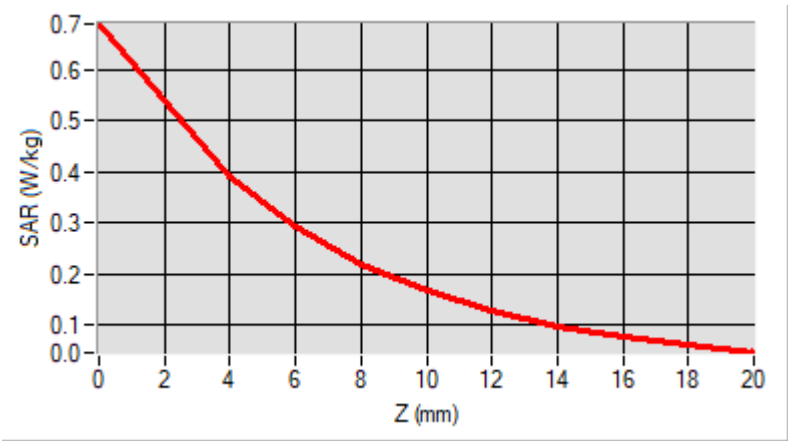


Maximum location: X=13.00, Y=18.00
D. SAR 1g & 10g

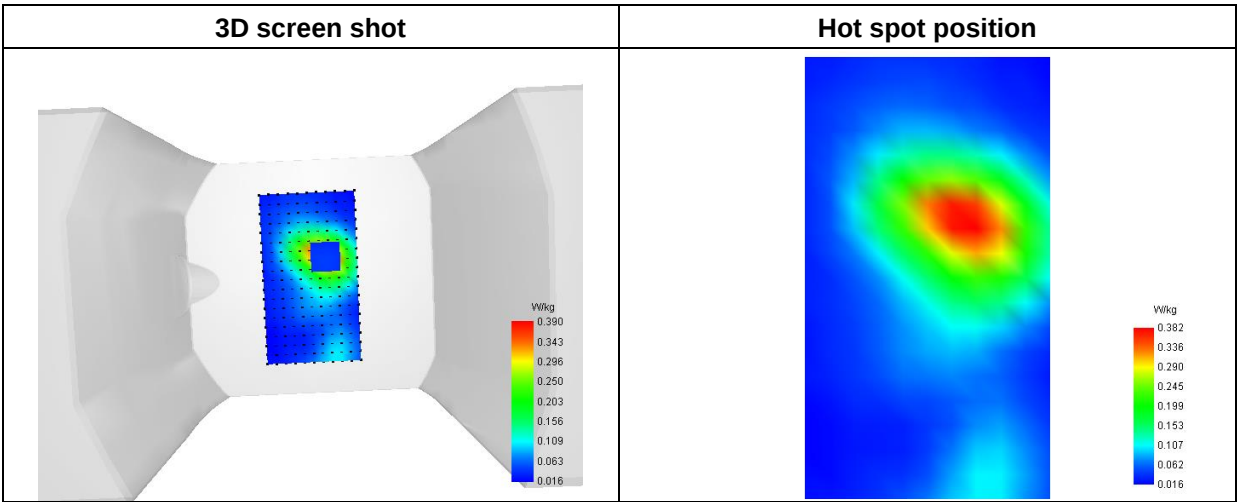
SAR 10g (W/Kg)	0.191518
SAR 1g (W/Kg)	0.366719

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.6905	0.3900	0.2921	0.2187	0.1654	0.1265	0.0978	0.0760	0.0588



F. 3D Image



MEASUREMENT 24/39

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

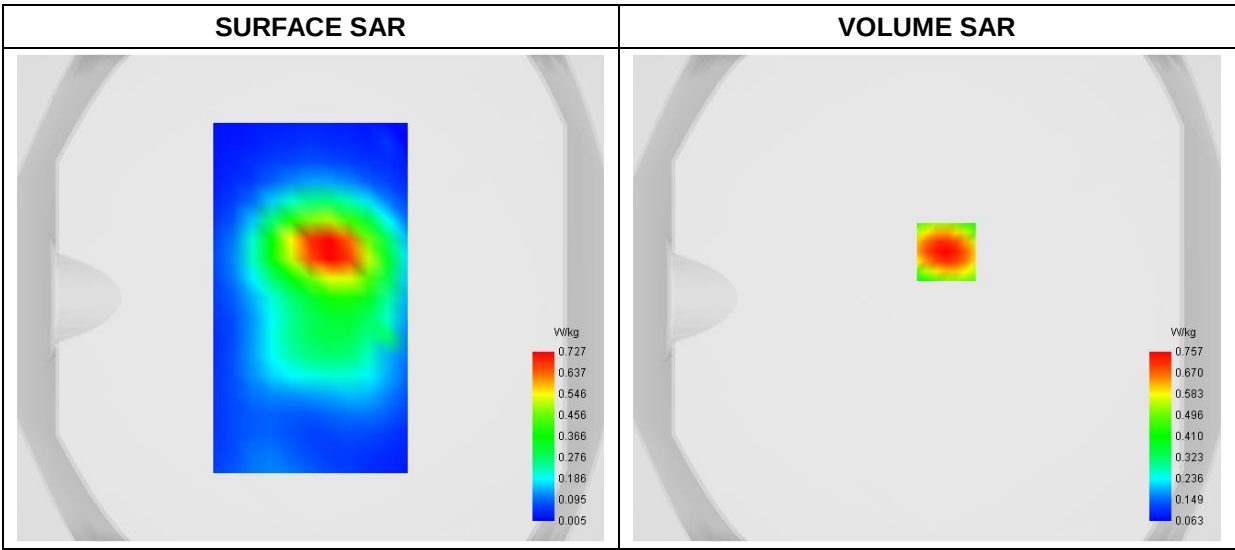
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 4
Channels	QPSK, 20MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1720.000000
Relative Permittivity (real part)	40.694890
Conductivity (S/m)	1.411250
Power Variation (%)	1.374628
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

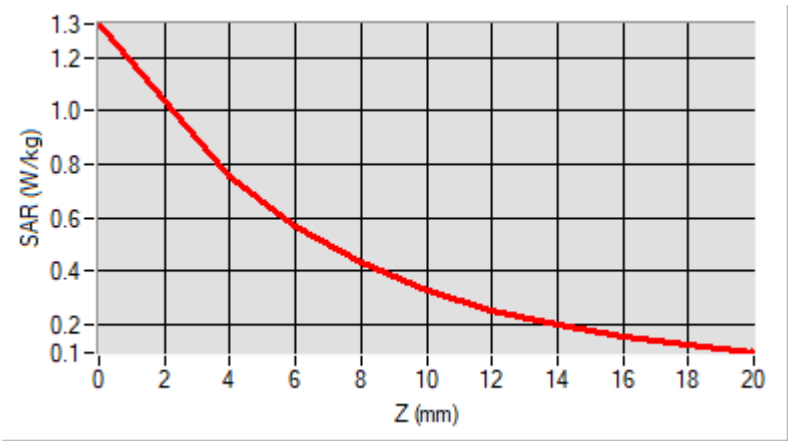


Maximum location: X=8.00, Y=19.00
D. SAR 1g & 10g

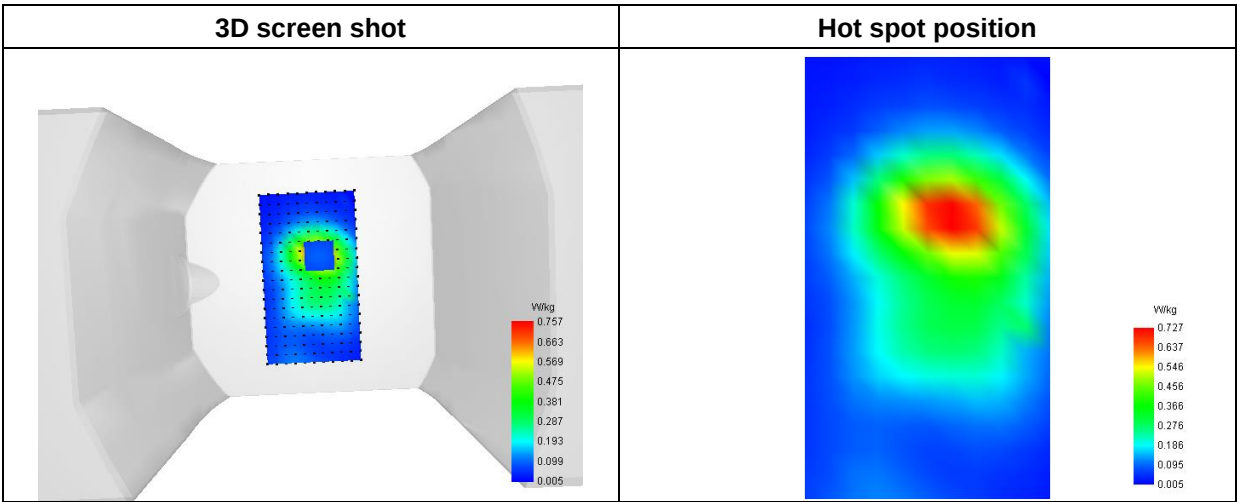
SAR 10g (W/Kg)	0.370368
SAR 1g (W/Kg)	0.709976

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.3245	0.7567	0.5710	0.4313	0.3297	0.2553	0.2000	0.1578	0.1244



F. 3D Image



MEASUREMENT 25/40

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 3 seconds

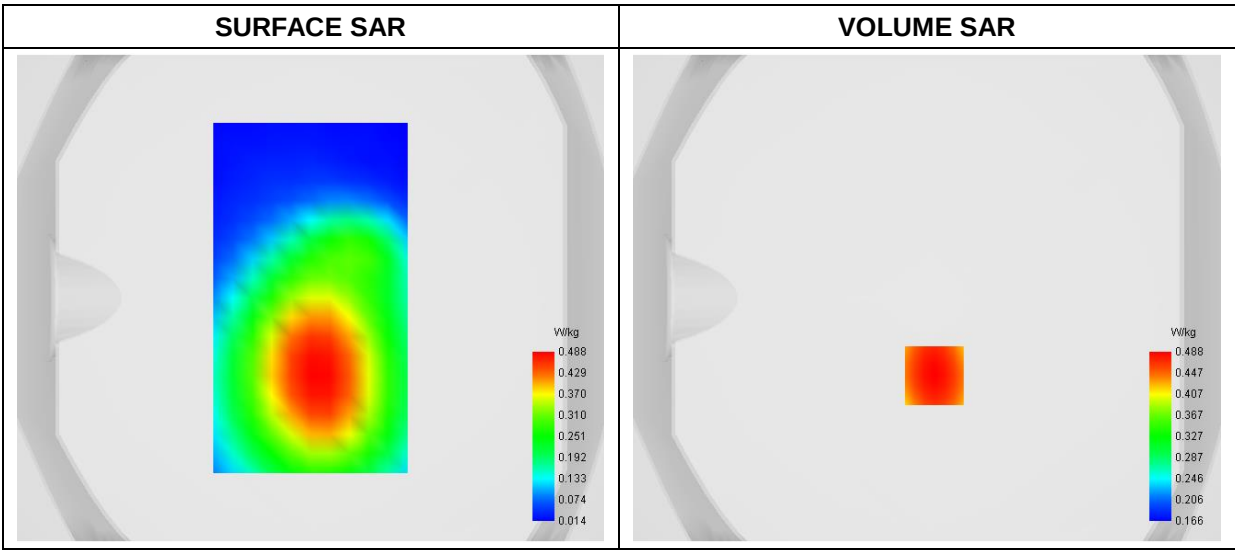
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 5
Channels	QPSK, 1.4MHz, 1RB,High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	848.300000
Relative Permittivity (real part)	42.382874
Conductivity (S/m)	0.882264
Power Variation (%)	1.462857
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume

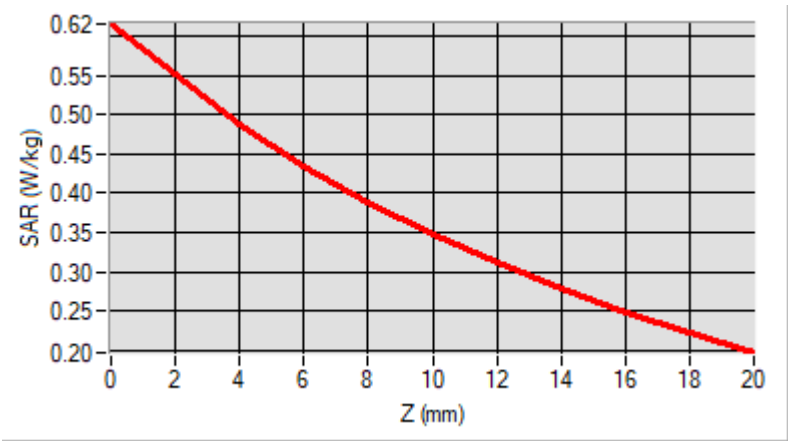


Maximum location: X=3.00, Y=-32.00
D. SAR 1g & 10g

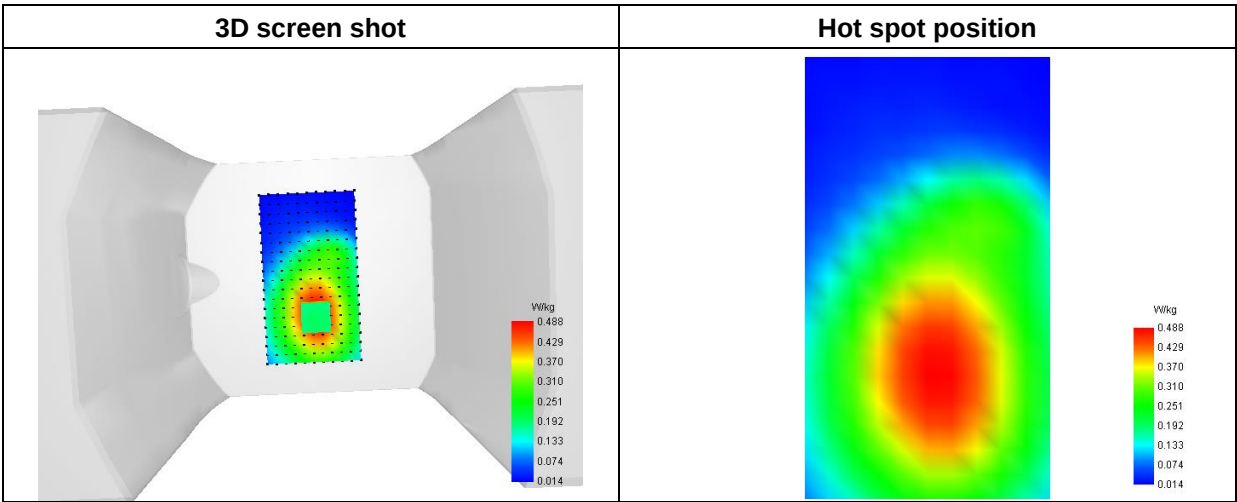
SAR 10g (W/Kg)	0.338980
SAR 1g (W/Kg)	0.435199

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.6146	0.4856	0.4250	0.3854	0.3455	0.3101	0.2776	0.2482	0.2122



F. 3D Image



MEASUREMENT 26/41

Type: Phone measurement (Complete)
Date of measurement: 2023-03-29
Measurement duration: 12 minutes 3 seconds

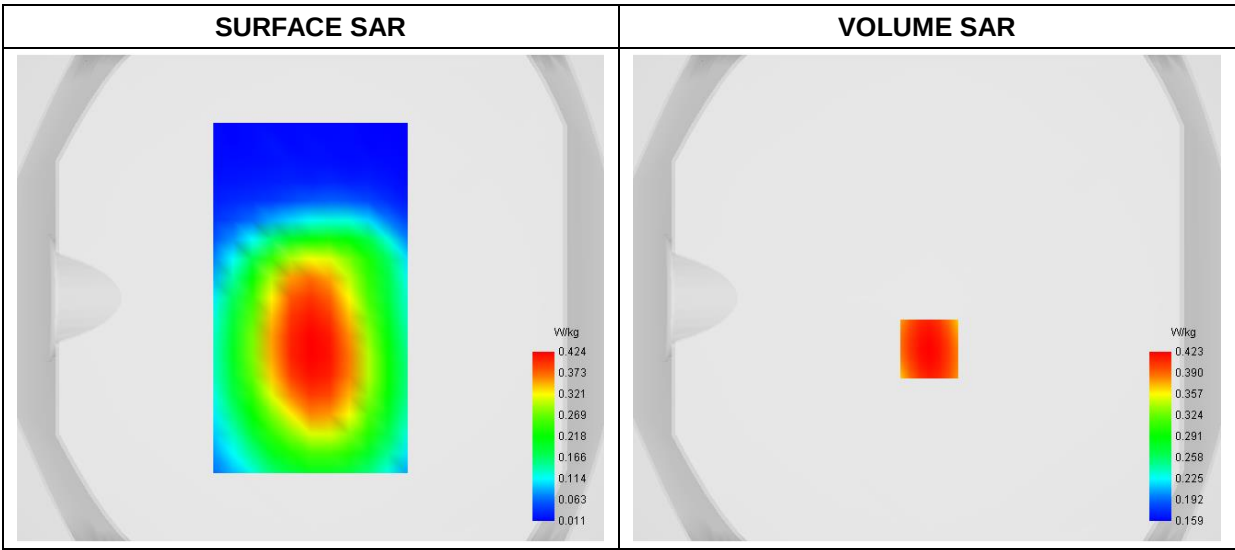
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
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)	707.500000
Relative Permittivity (real part)	42.410245
Conductivity (S/m)	0.871245
Power Variation (%)	-0.420000
Ambient Temperature	23.4
Liquid Temperature	23.4

C. SAR Surface and Volume

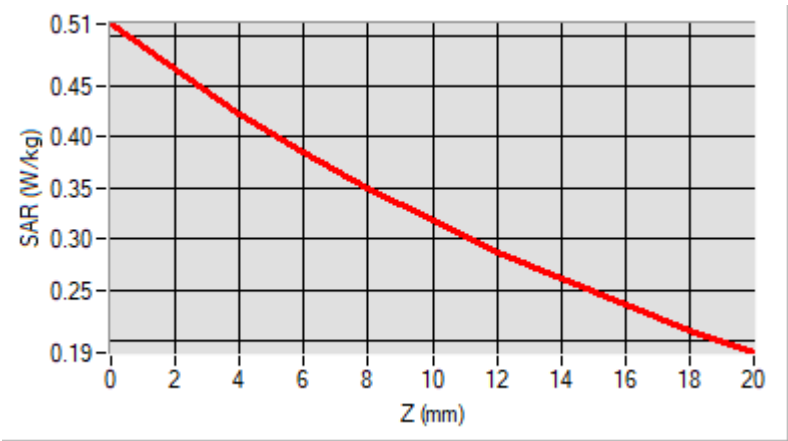


Maximum location: X=1.00, Y=-21.00
D. SAR 1g & 10g

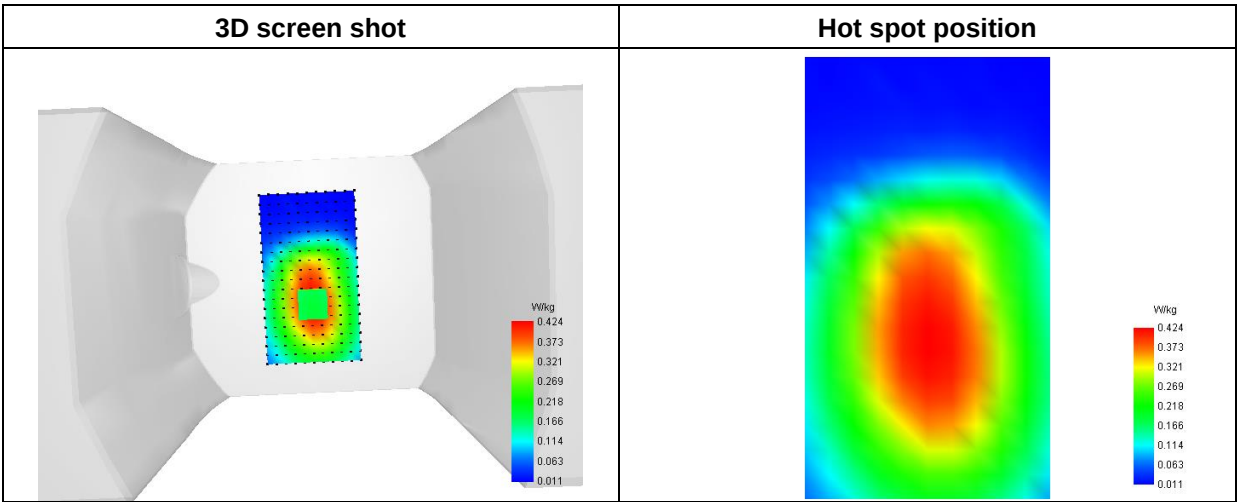
SAR 10g (W/Kg)	0.311654
SAR 1g (W/Kg)	0.420139

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.5109	0.4232	0.3849	0.3497	0.3174	0.2878	0.2603	0.2348	0.2110



F. 3D Image



MEASUREMENT 27/42

Type: Phone measurement (Complete)
Date of measurement: 2023-03-29
Measurement duration: 12 minutes 3 seconds

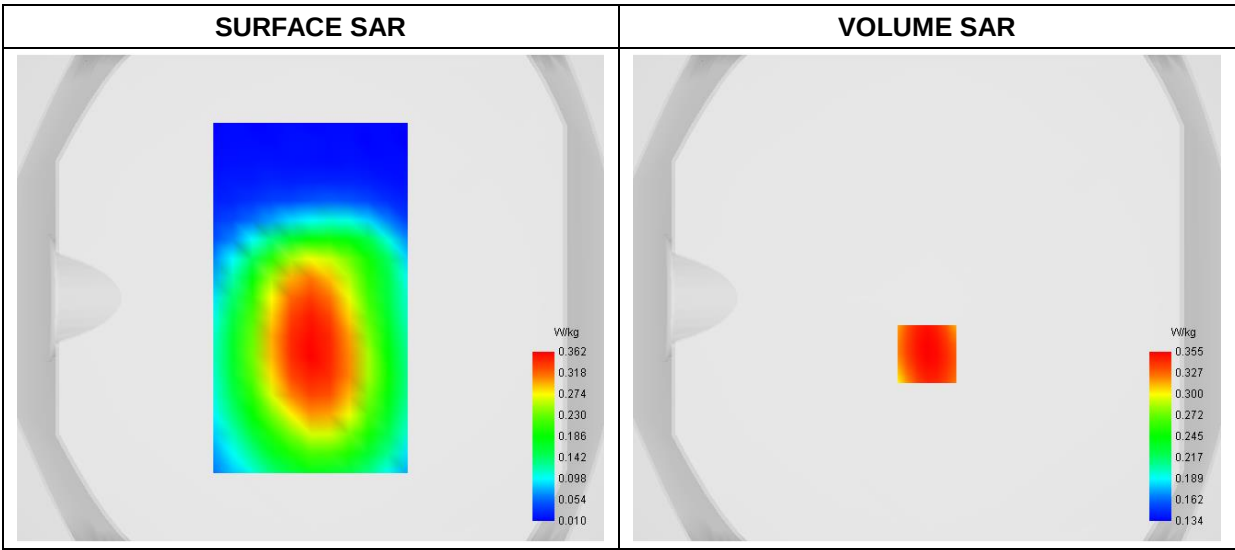
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 17
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	709.000000
Relative Permittivity (real part)	42.410245
Conductivity (S/m)	0.872459
Power Variation (%)	0.924535
Ambient Temperature	23.4
Liquid Temperature	23.4

C. SAR Surface and Volume

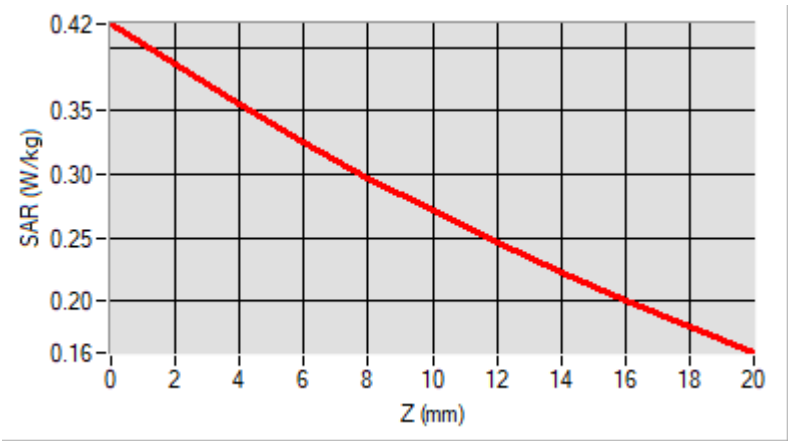


Maximum location: X=0.00, Y=-23.00
D. SAR 1g & 10g

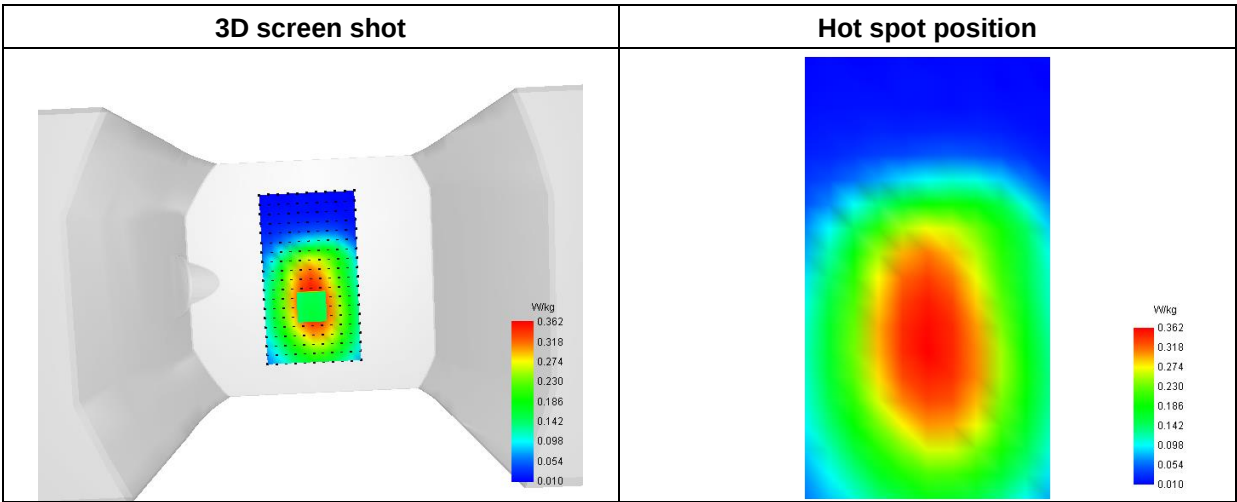
SAR 10g (W/Kg)	0.262991
SAR 1g (W/Kg)	0.352579

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.4190	0.3551	0.3256	0.2976	0.2711	0.2460	0.2223	0.1999	0.1787



F. 3D Image



MEASUREMENT 28/43

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 3 seconds

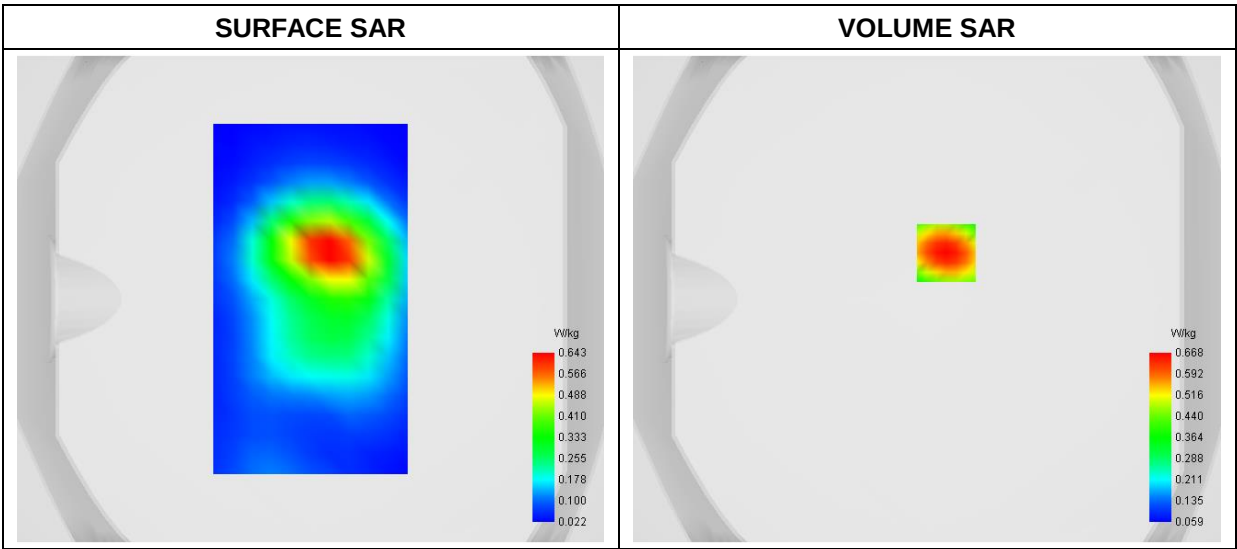
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 66
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1720.000000
Relative Permittivity (real part)	40.694890
Conductivity (S/m)	1.411250
Power Variation (%)	0.924535
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

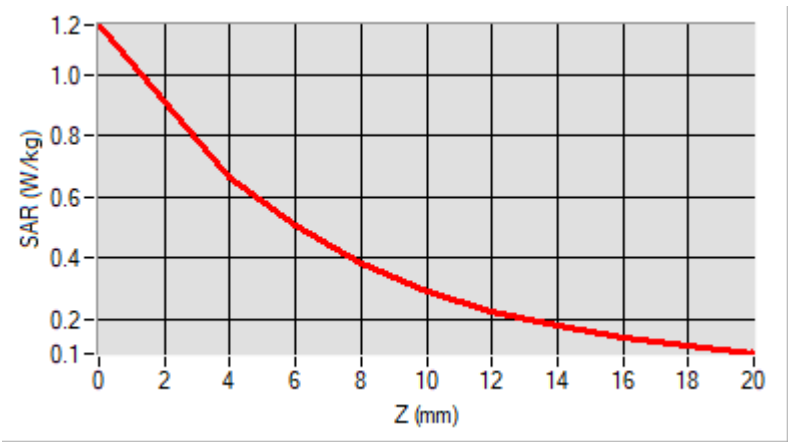


Maximum location: X=8.00, Y=19.00
D. SAR 1g & 10g

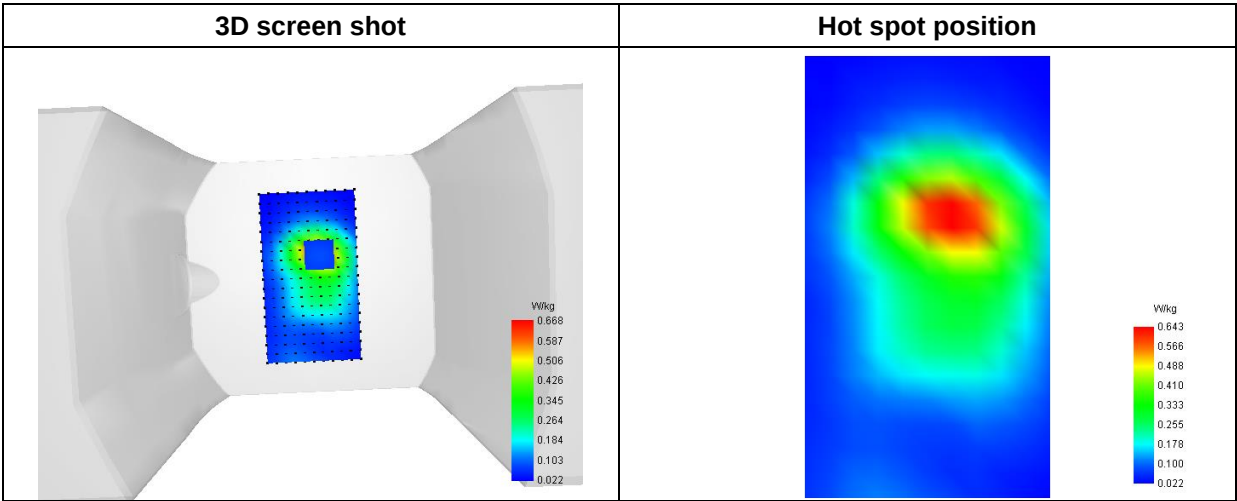
SAR 10g (W/Kg)	0.331131
SAR 1g (W/Kg)	0.626842

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.1633	0.6679	0.5055	0.3831	0.2939	0.2284	0.1797	0.1424	0.1128



F. 3D Image



MEASUREMENT 29/44

Type: Phone measurement (Complete)
Date of measurement: 2023-03-21
Measurement duration: 12 minutes 21 seconds

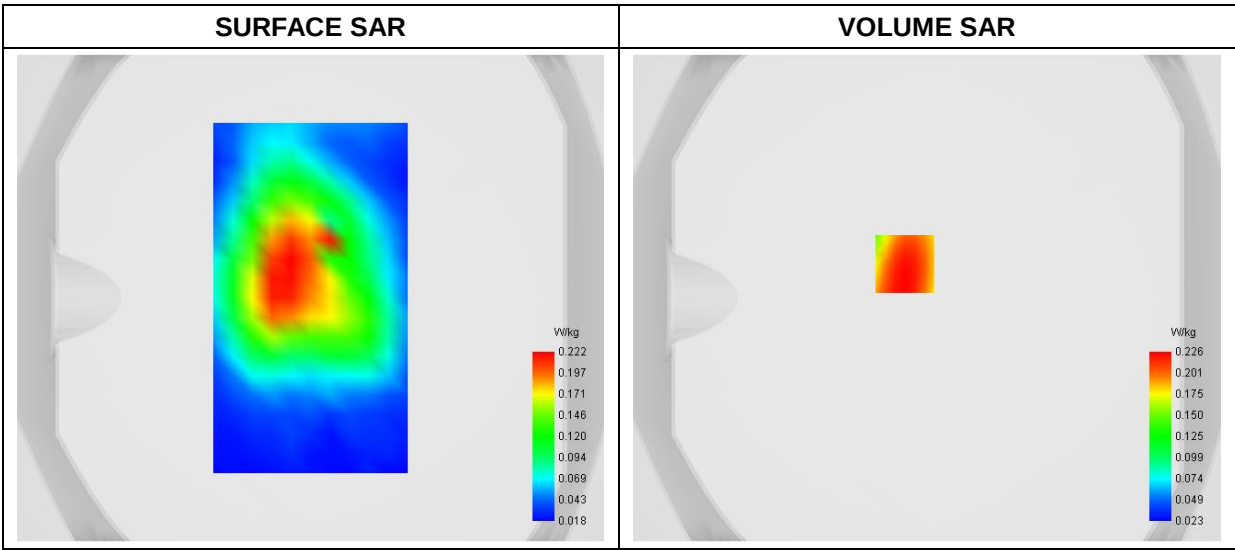
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	WiFi_802.11b
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	39.852654
Conductivity (S/m)	1.781248
Power Variation (%)	1.980000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



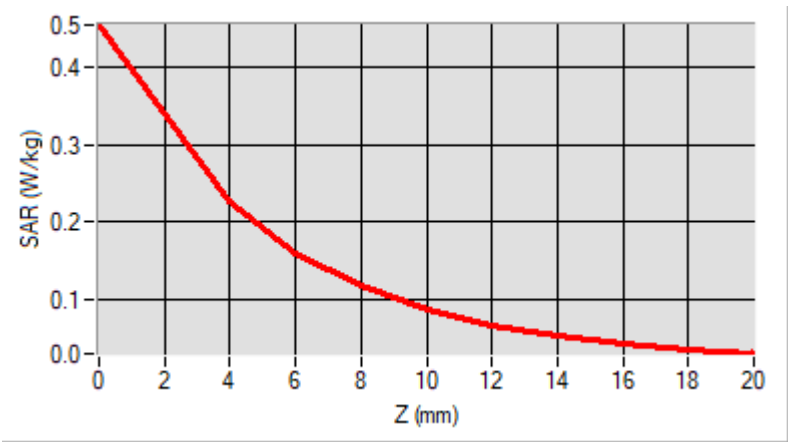
Maximum location: X=-9.00, Y=14.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.118501
SAR 1g (W/Kg)	0.220057

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.4543	0.2259	0.1585	0.1169	0.0867	0.0658	0.0527	0.0420	0.0349



F. 3D Image

3D screen shot	Hot spot position
A 3D model of a device with a color-coded SAR distribution. The color scale ranges from 0.018 (blue) to 0.226 (red) W/kg. The highest SAR values are concentrated in the center of the device.	A 2D heatmap showing the hot spot position. The color scale ranges from 0.018 (blue) to 0.222 (red) W/kg. The highest SAR values are concentrated in the center of the device.

MEASUREMENT 30/45

Type: Phone measurement (Complete)
Date of measurement: 2023-03-15
Measurement duration: 12 minutes 21 seconds

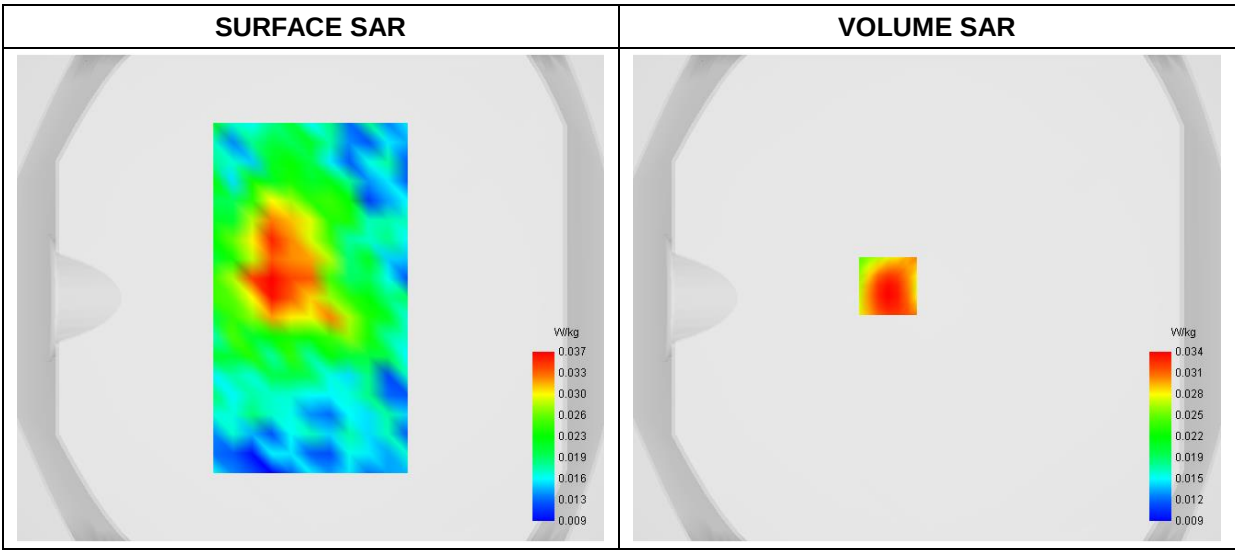
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	Bluetooth _GFSK
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2402.000000
Relative Permittivity (real part)	42.382528
Conductivity (S/m)	0.8813847
Power Variation (%)	1.690000
Ambient Temperature	22.3
Liquid Temperature	22.3

C. SAR Surface and Volume



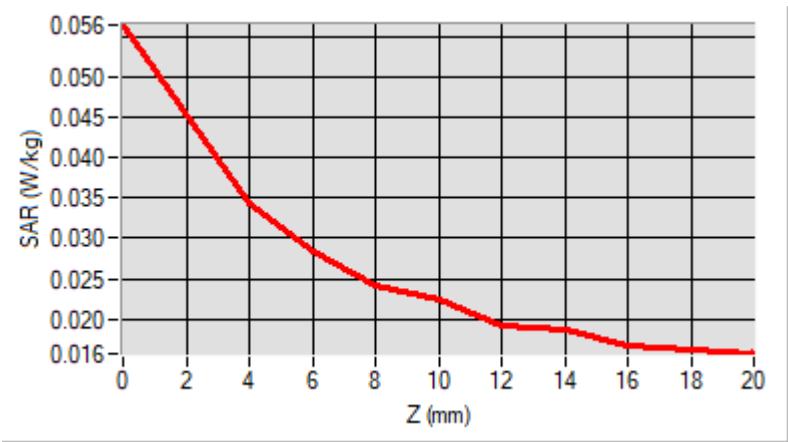
Maximum location: X=-16.00, Y=5.00

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.024282
SAR 1g (W/Kg)	0.032395

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	0.0564	0.0344	0.0283	0.0242	0.0223	0.0191	0.0187	0.0168	0.0162



F. 3D Image

3D screen shot	Hot spot position

MEASUREMENT 31/46

Type: Phone measurement (Complete)
Date of measurement: 2023-03-20
Measurement duration: 12 minutes 3 seconds

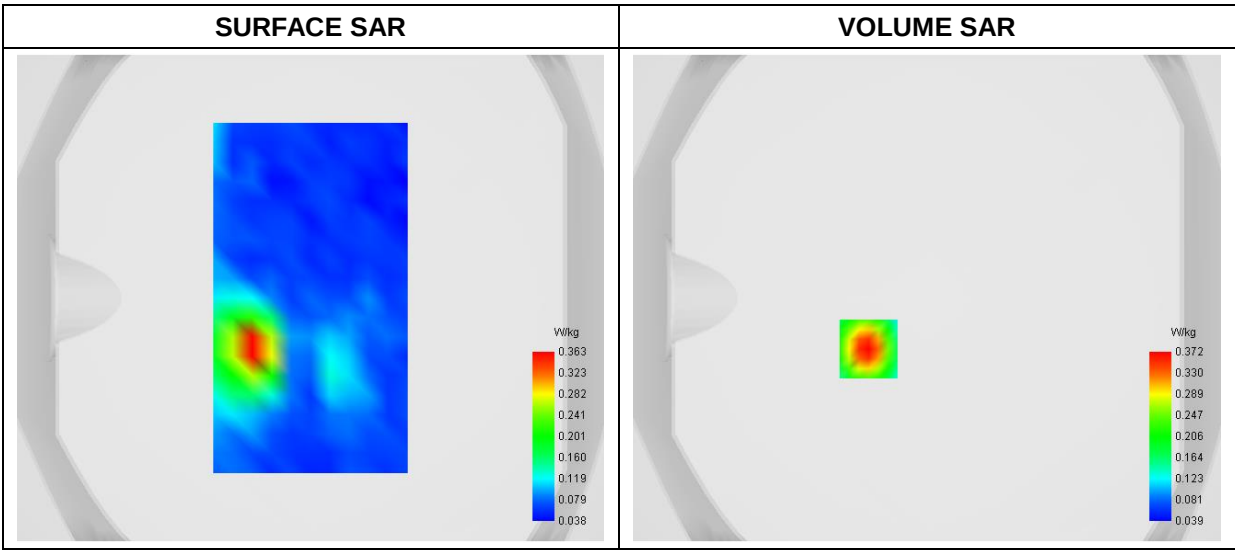
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Back
Band	WiFi(5.2GHz)_802.11a
Channels	Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5180.000000
Relative Permittivity (real part)	35.493978
Conductivity (S/m)	4.691686
Power Variation (%)	0.520000
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



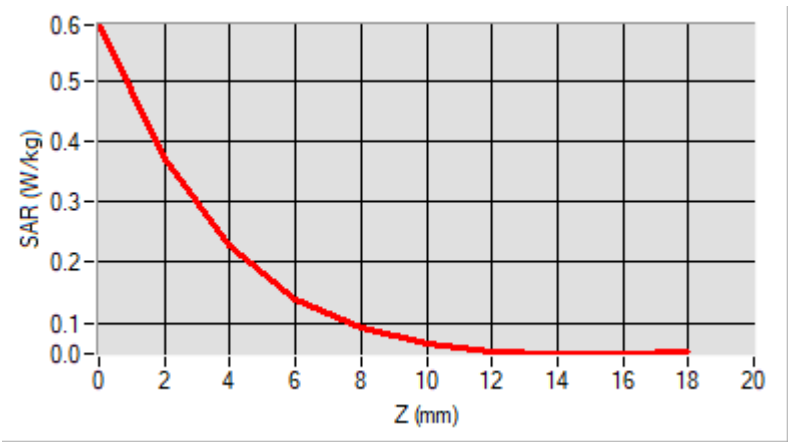
Maximum location: X=-24.00, Y=-21.00

D. SAR 1g & 10g

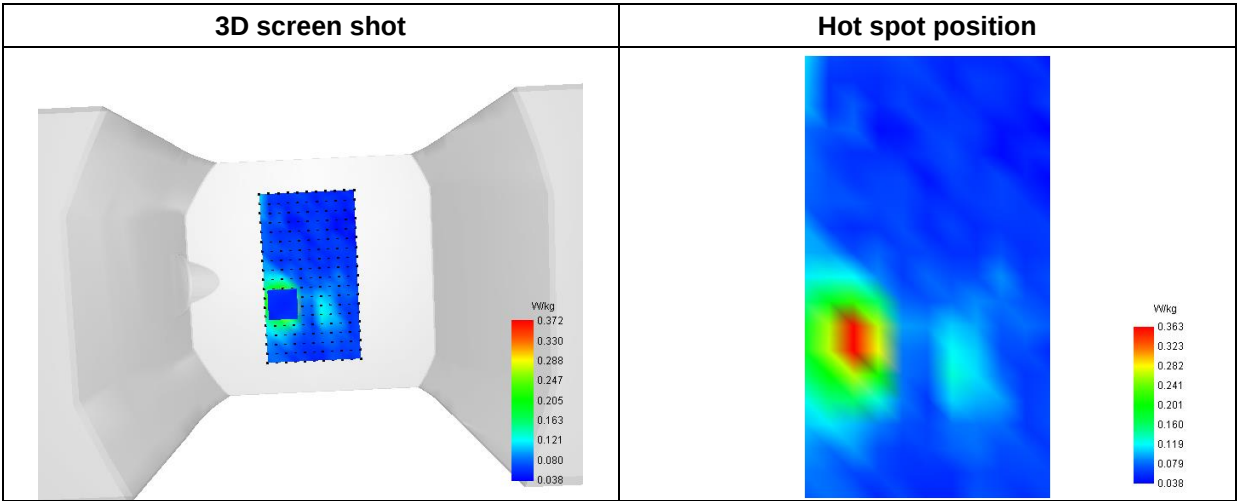
SAR 10g (W/Kg)	0.110463
SAR 1g (W/Kg)	0.227727

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.5935	0.3718	0.2274	0.1394	0.0908	0.0652	0.0530	0.0487	0.0491



F. 3D Image



MEASUREMENT 32/47

Type: Phone measurement (Complete)
Date of measurement: 2023-03-20
Measurement duration: 12 minutes 3 seconds

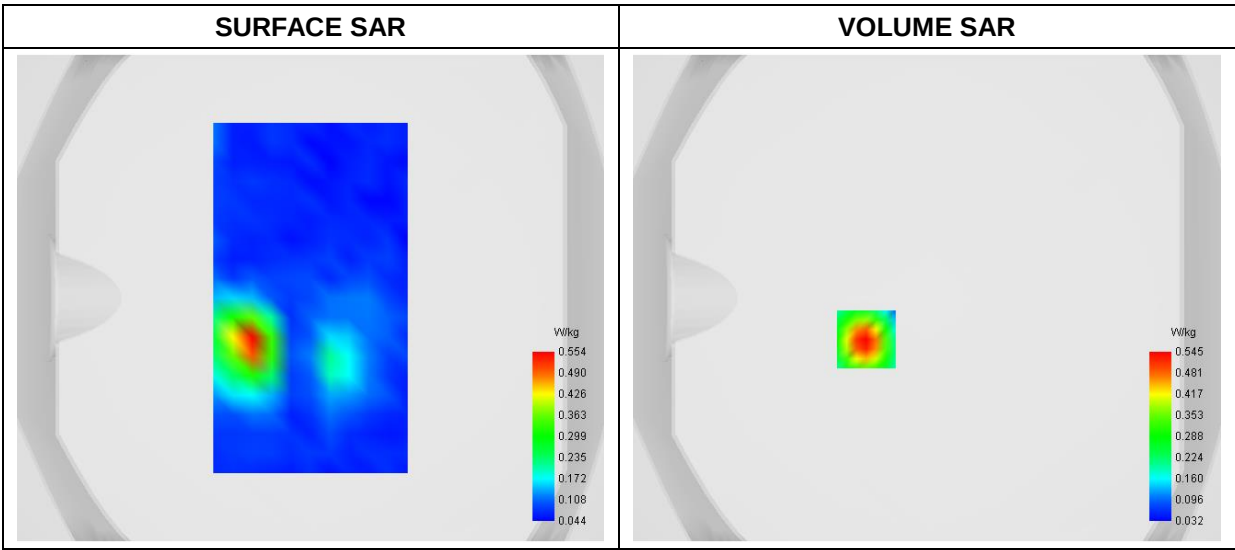
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Back
Band	WiFi(5.8GHz)_ 802.11a
Channels	High
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5825.000000
Relative Permittivity (real part)	35.782839
Conductivity (S/m)	5.231926
Power Variation (%)	1.110000
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



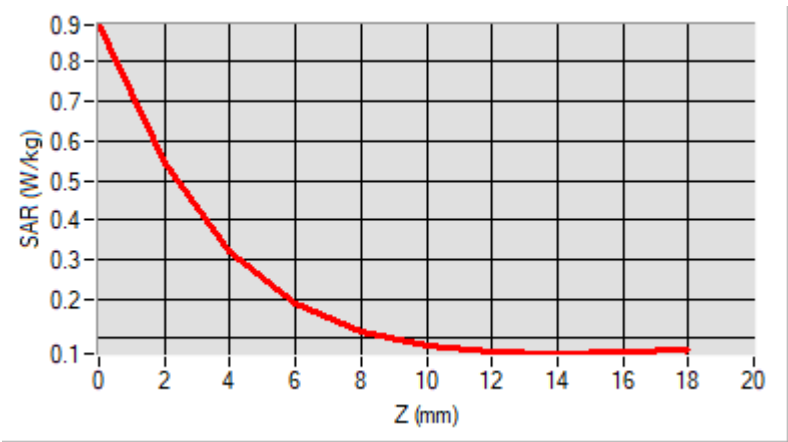
Maximum location: X=-25.00, Y=-17.00

D. SAR 1g & 10g

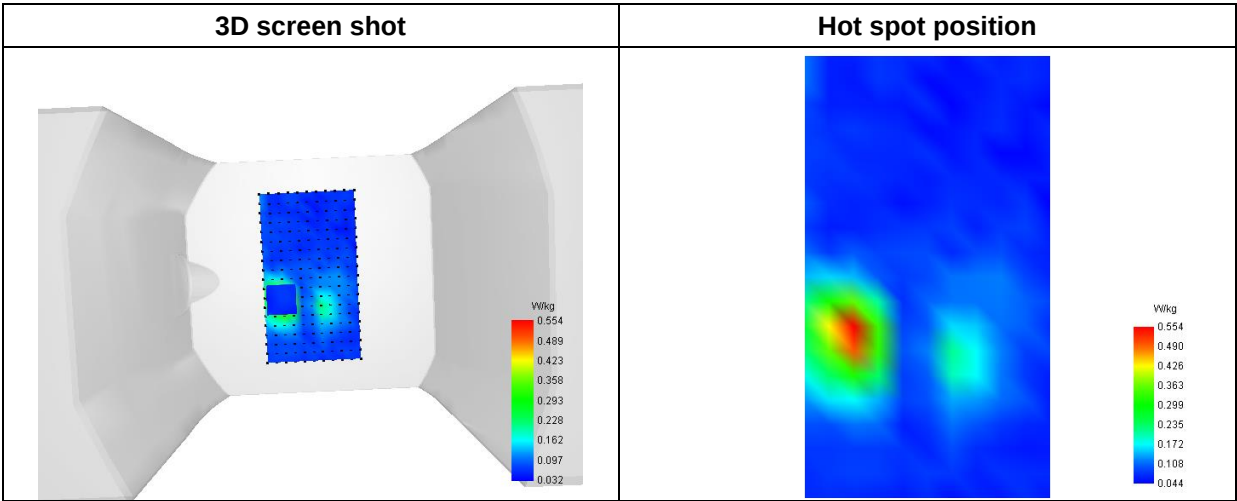
SAR 10g (W/Kg)	0.140636
SAR 1g (W/Kg)	0.321976

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.8927	0.5449	0.3214	0.1889	0.1180	0.0822	0.0663	0.0619	0.0644



F. 3D Image



MEASUREMENT 33

Type: Phone measurement (Complete)

Date of measurement: 2022-03-15

Measurement duration: 12 minutes 3 seconds

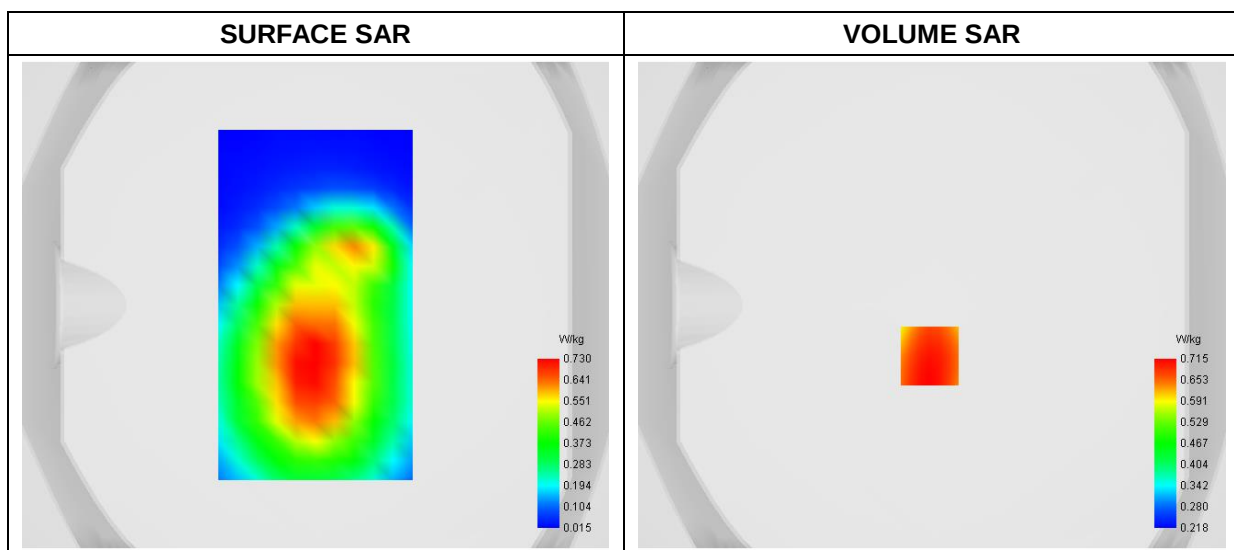
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	GPRS850_4TX
Channels	High
Signal	Duty Cycle 1:2

B. SAR Measurement Results

Frequency (MHz)	848.800000
Relative Permittivity (real part)	42.380438
Conductivity (S/m)	0.884828
Power Variation (%)	-1.910000
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



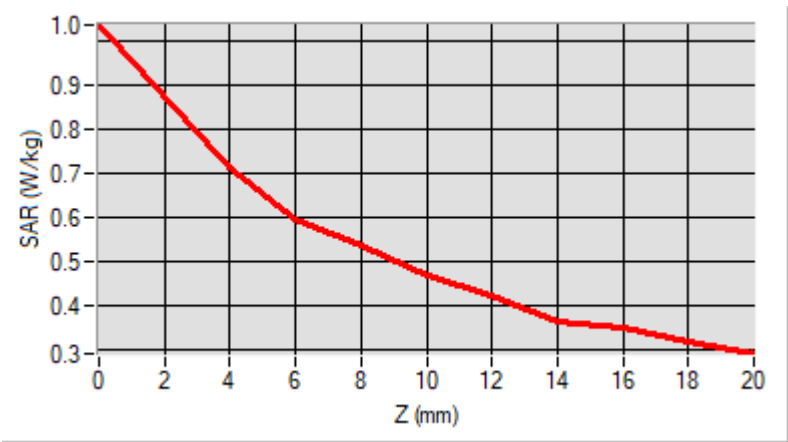
Maximum location: X=-1.00, Y=-21.00

D. SAR 1g & 10g

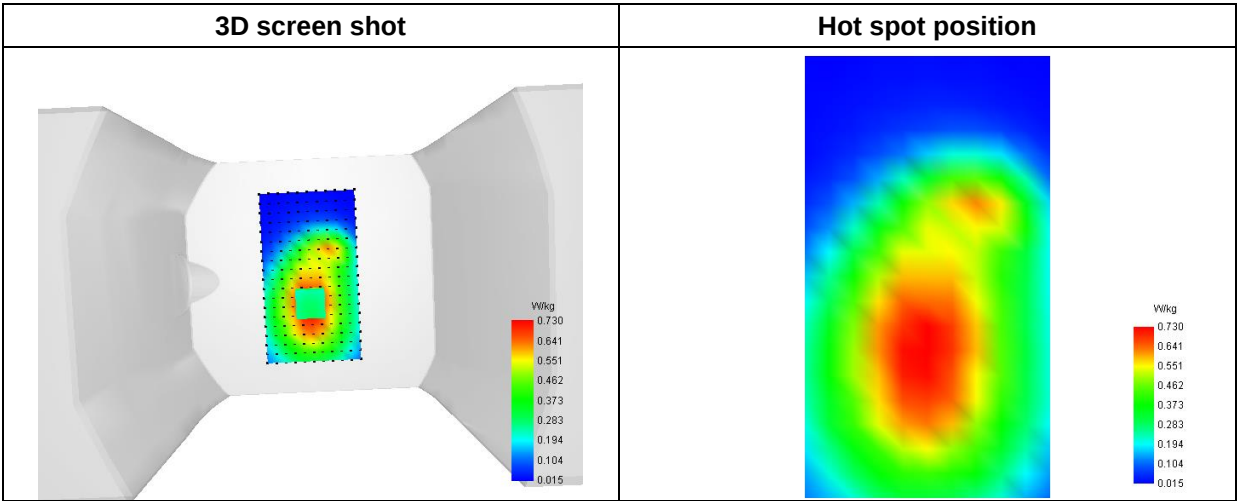
SAR 10g (W/Kg)	0.497955
SAR 1g (W/Kg)	0.711663

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.0378	0.7154	0.5951	0.5383	0.4672	0.4245	0.3634	0.3487	0.3189



F. 3D Image



MEASUREMENT 34

Type: Phone measurement (Complete)
Date of measurement: 2023-03-17
Measurement duration: 12 minutes 21 seconds

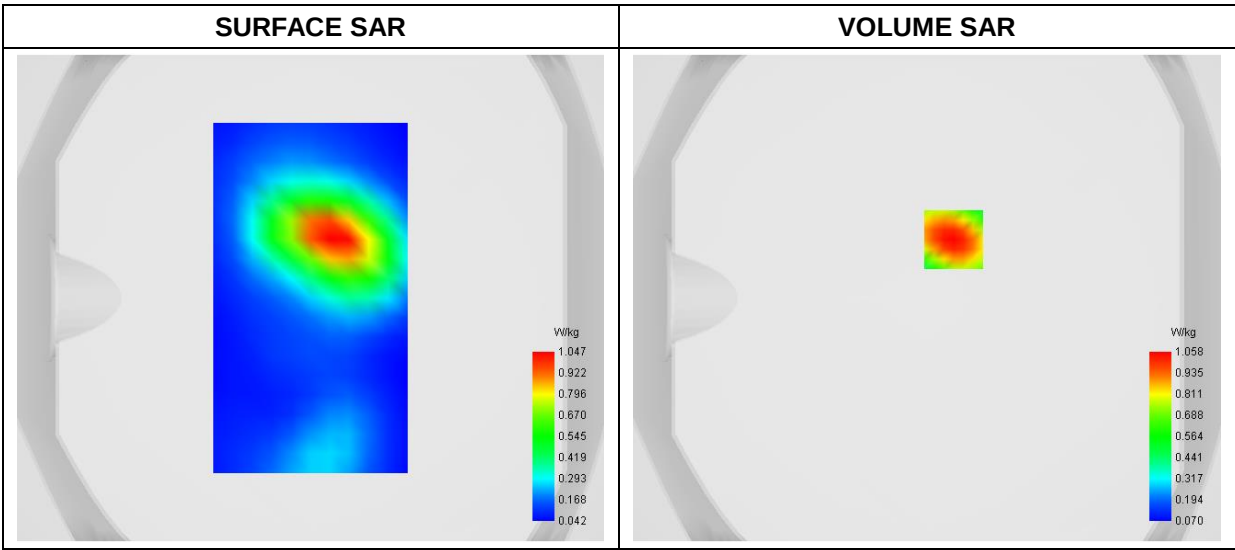
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat plane
Device Position	Back
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle 1:2

B. SAR Measurement Results

Frequency (MHz)	1909.800000
Relative Permittivity (real part)	40.761828
Conductivity (S/m)	1.411778
Power Variation (%)	1.210000
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



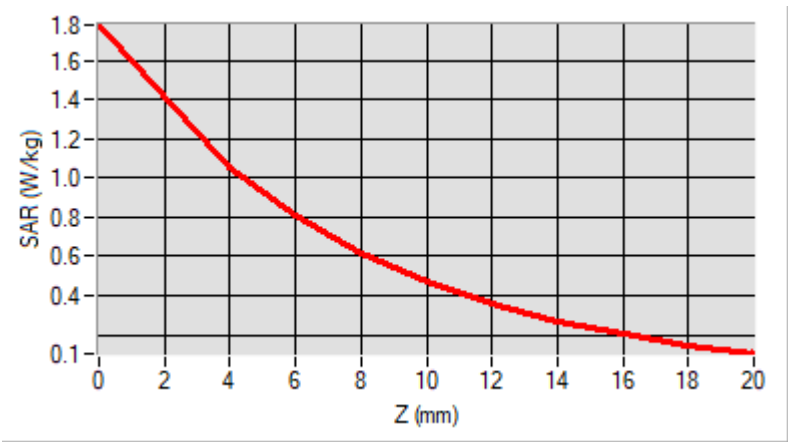
Maximum location: X=11.00, Y=24.00

D. SAR 1g & 10g

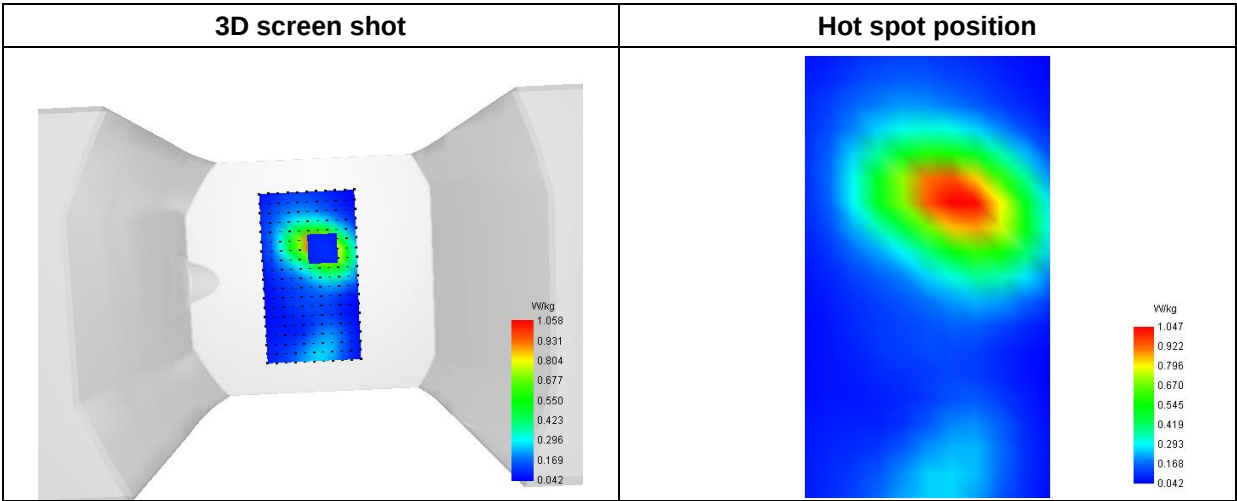
SAR 10g (W/Kg)	0.507287
SAR 1g (W/Kg)	0.985058

E. Z Axis Scan

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.7804	1.0584	0.8108	0.6177	0.4709	0.3585	0.2715	0.2031	0.1484



F. 3D Image

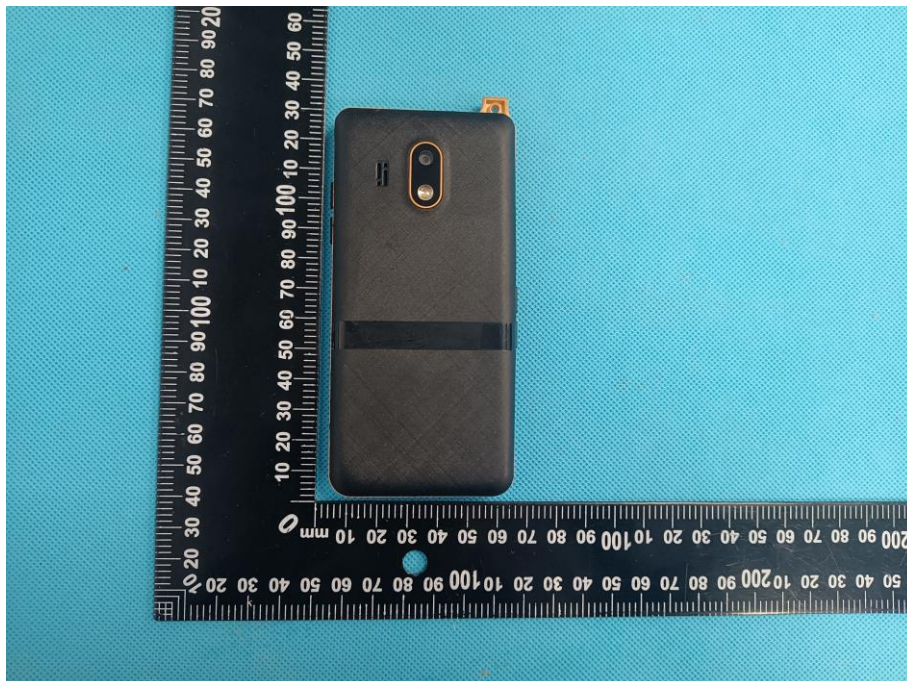


Annex C. EUT Photos

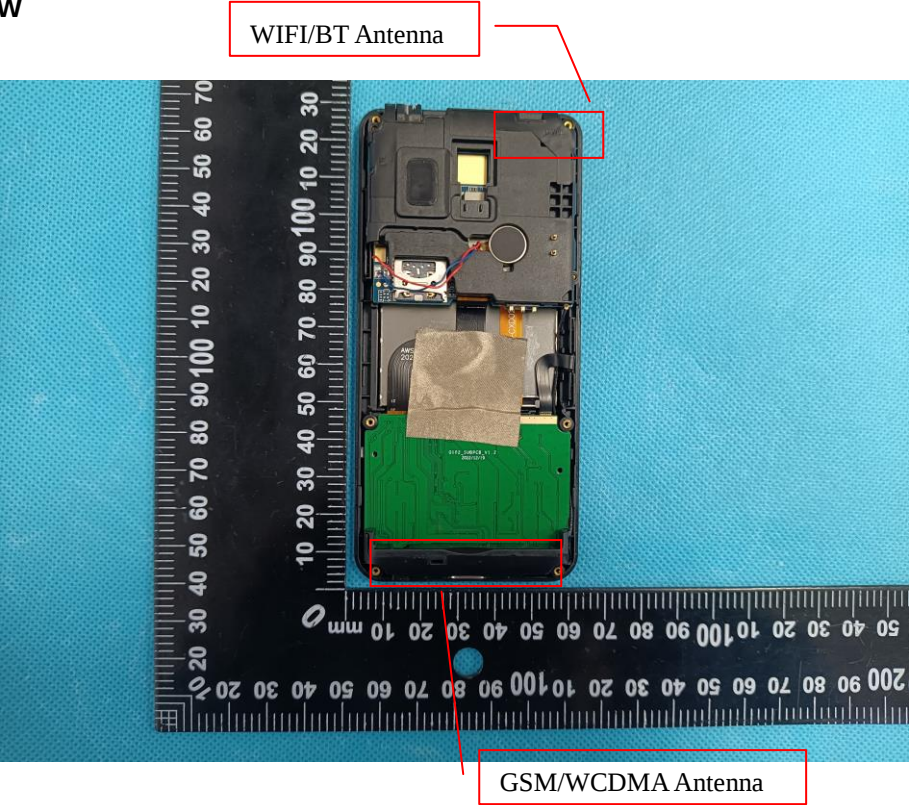
EUT View 1



EUT View 2



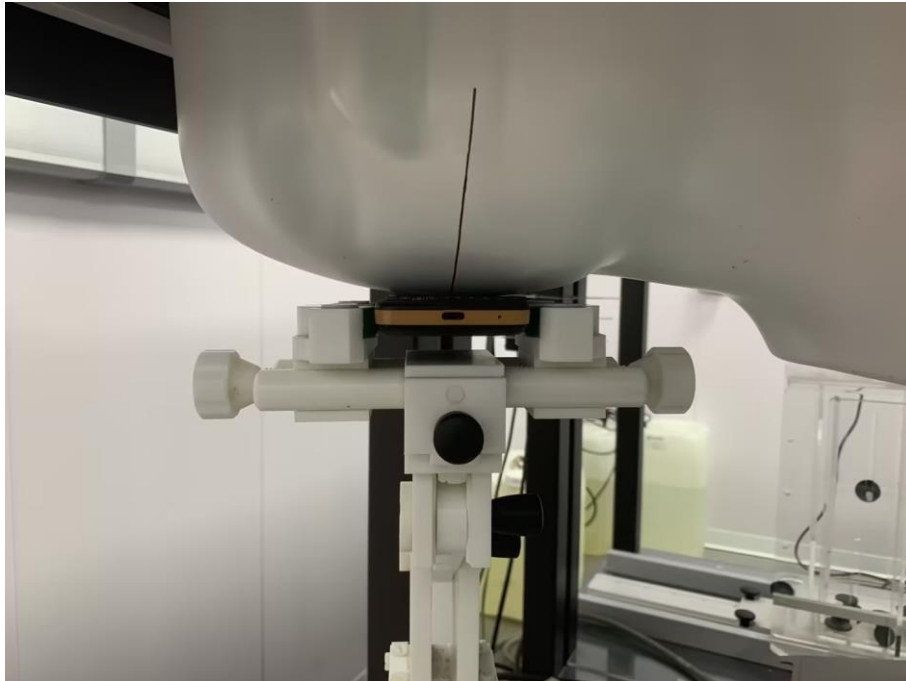
Antenna View



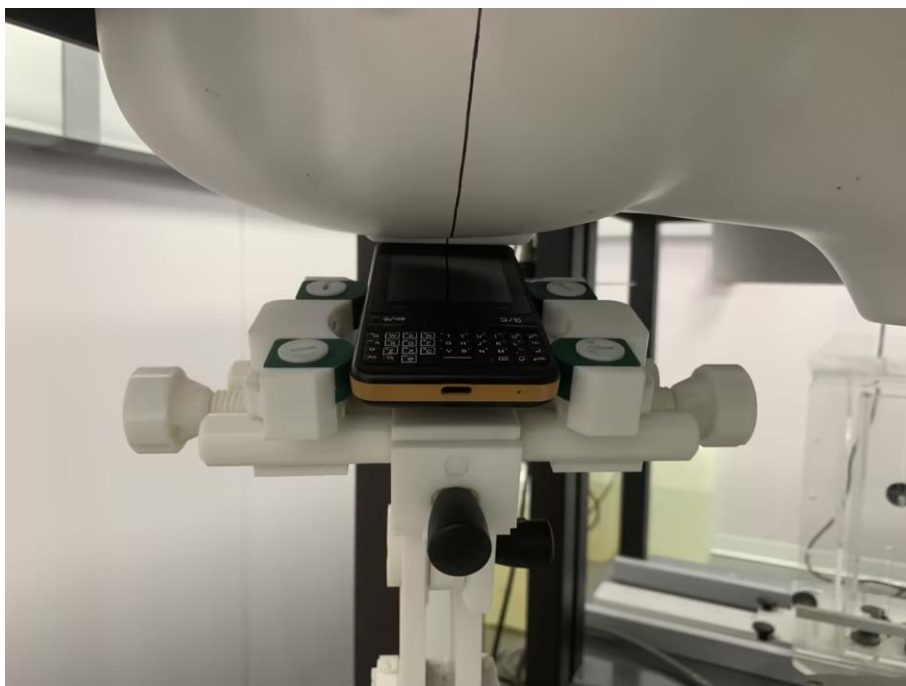
Annex D. Test Setup Photos

Head Exposure Conditions

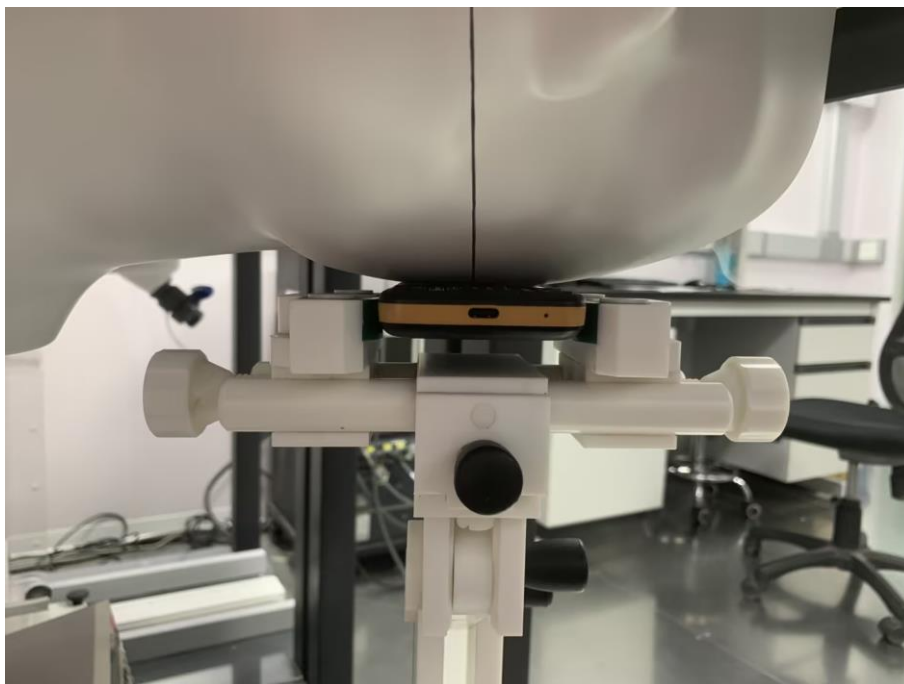
Right Cheek



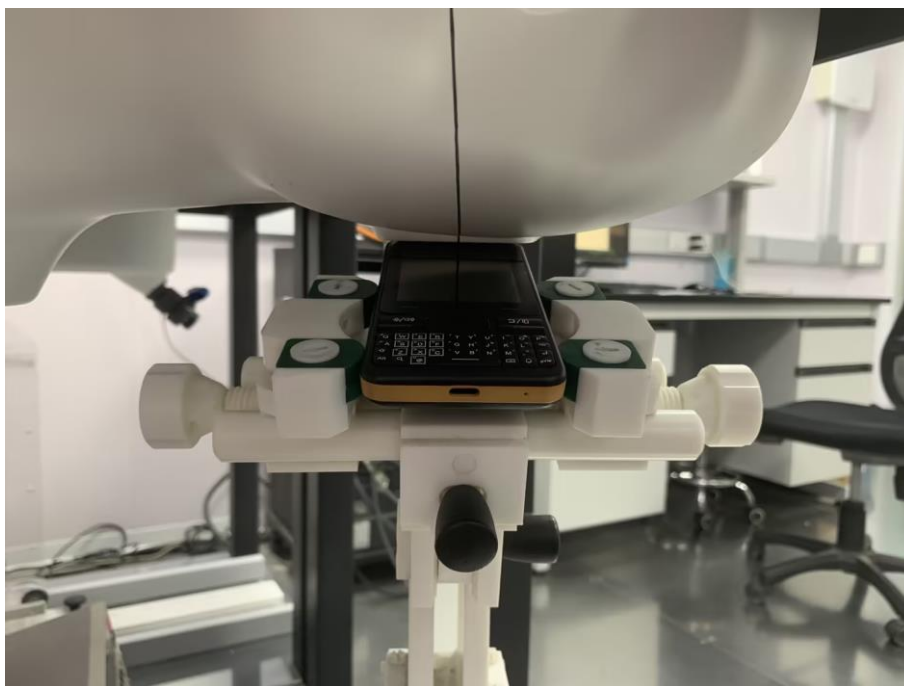
Tilt



Left Cheek



Tilt



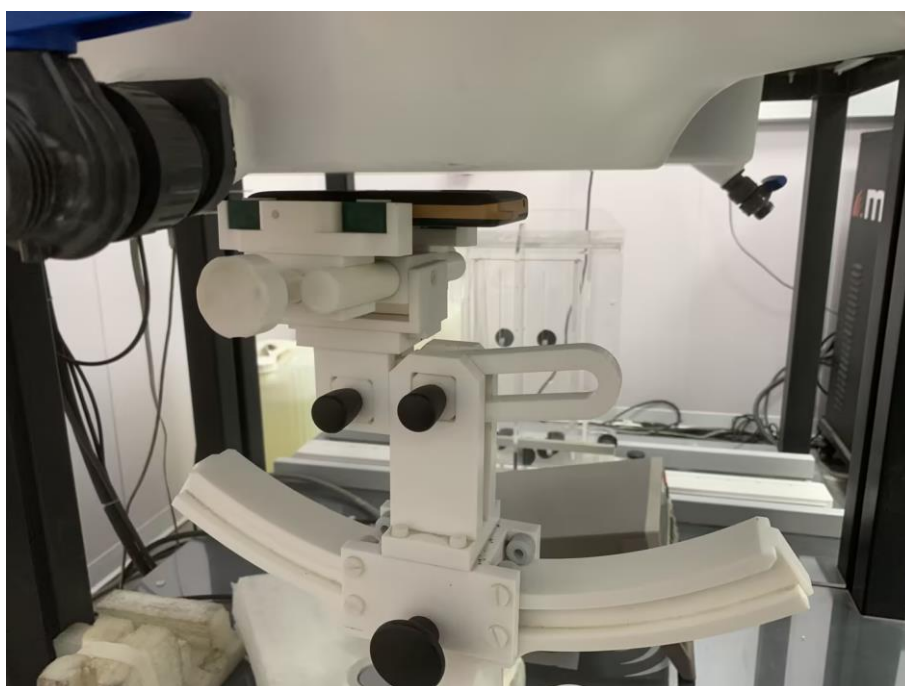
Body mode Exposure Conditions

Test distance: 10mm

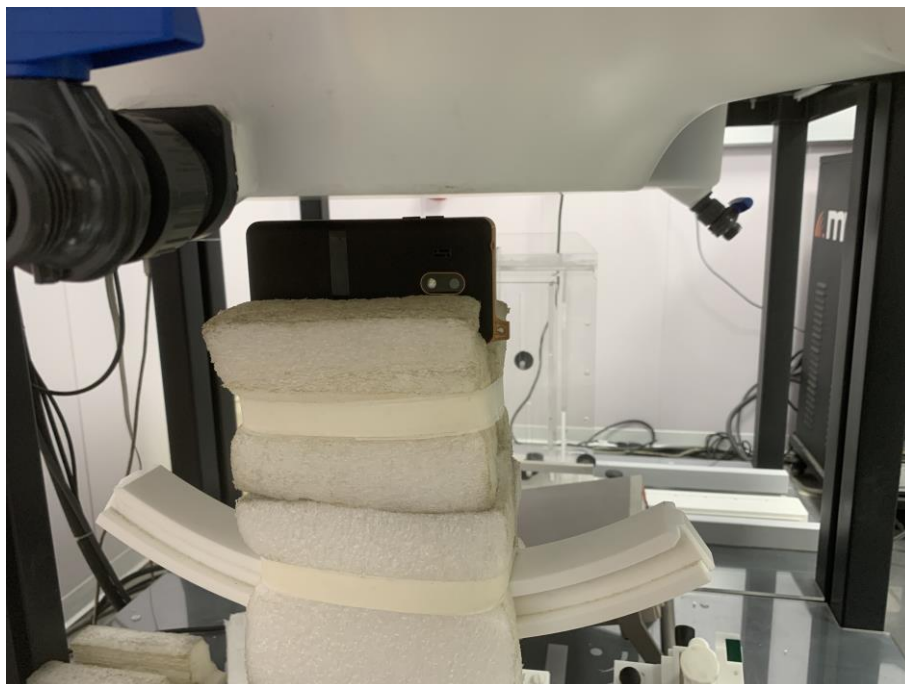
Body Front



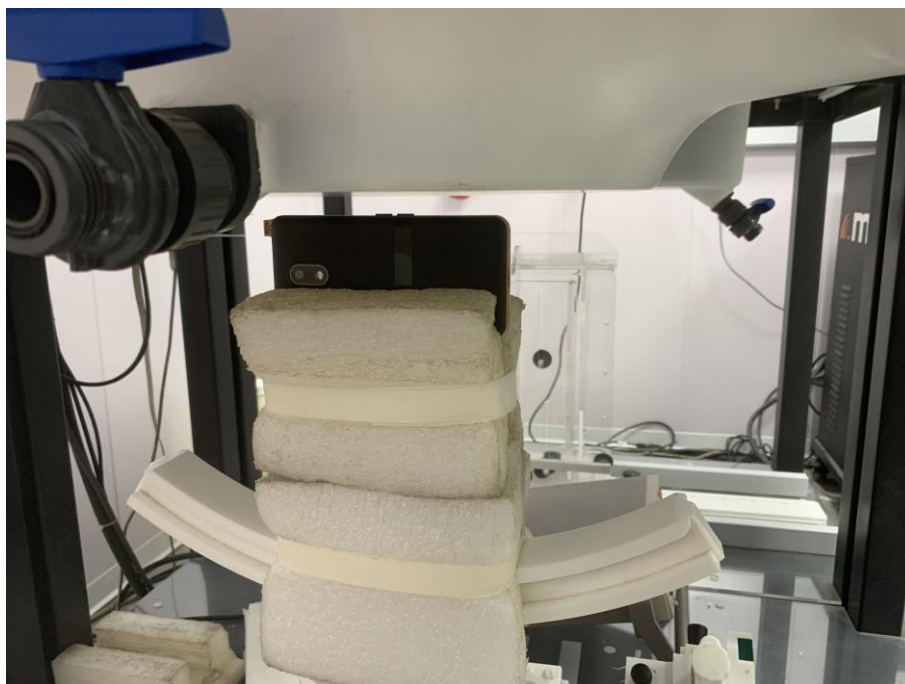
Body Back



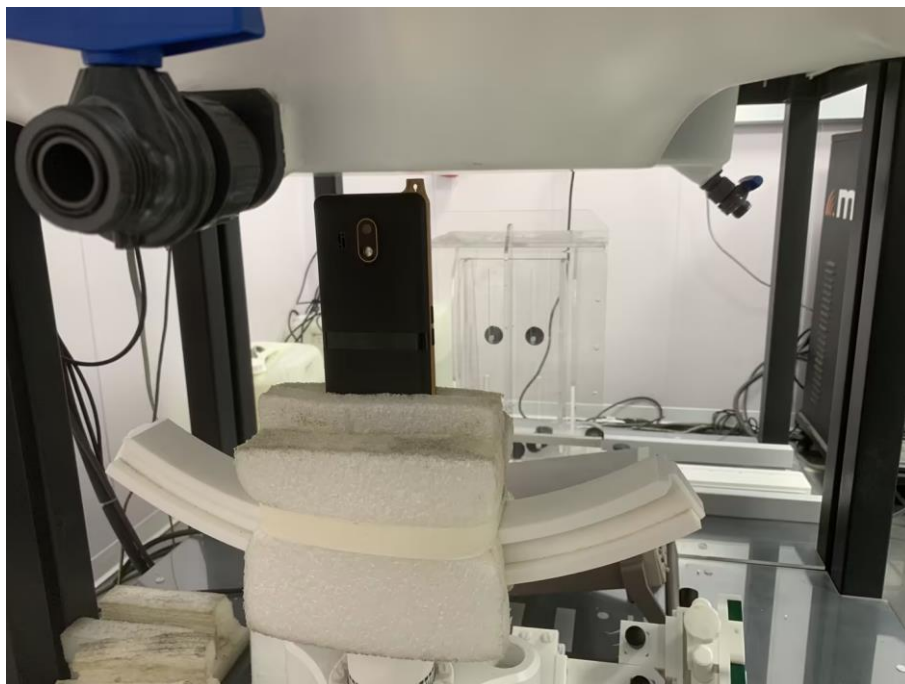
Body Right



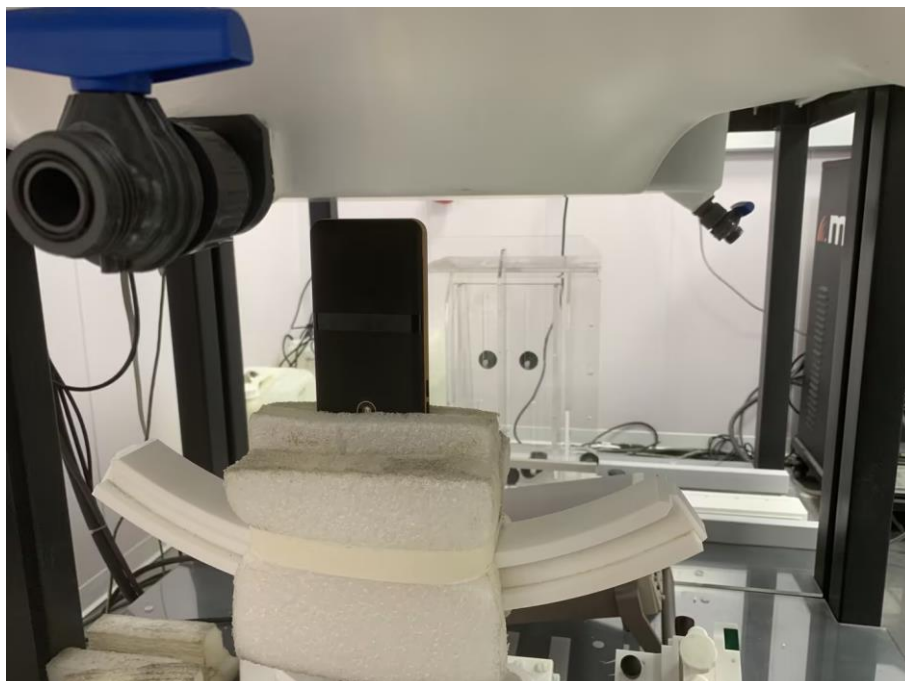
Body Left



Body Top



Body Bottom



Annex E. Calibration Certificate

Please refer to the exhibit for the calibration certificate

******* END OF REPORT *******