

TEST REPORT

Reference No...... : WTX21X10116929W
FCC ID : 2A3MS-DM20
Applicant : Xiamen Best Fortune Import And Export Co., Ltd.
Address : Room401, No.2368, Fangzhong Road, Huli District, Xiamen, Fujian, China.
Product Name : Smart watch
Test Model. : DM20
FCC Part 2.1093
Standards : ANSI / IEEE C95.1 : 2005+A1:2010
ANSI / IEEE C95.3 : 2002(R2008)
IEEE 62209-1528: 2020
Date of Receipt sample : Oct. 29, 2021
Date of Test..... : Oct. 29, 2021 to Nov. 09, 2021
Date of Issue : Nov. 10, 2021
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 compiler and approver.

Prepared By:

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

Tel.: +86-755-33663308

Fax.: +86-755-33663309

Tested by:

Reviewed By:

Approved & Authorized By:

Jack Sun

Jason Su

Silin Chen

Jack Sun / Project Engineer

Jason Su / RF Manager

Silin Chen / Manager

TABLE OF CONTENTS

1. General Information	3
1.1 Product Description for Equipment Under Test (EUT)	3
1.2 Test Standards	6
1.3 Test Methodology	6
1.4 Test Facility	6
2. Summary of Test Results	7
3. Specific Absorption Rate (SAR)	8
3.1 Introduction	8
3.2 SAR Definition	8
4. SAR Measurement System	9
4.1 The Measurement System	9
4.2 Probe	9
4.3 Probe Calibration Process	11
4.4 Phantom	12
4.5 Device Holder	12
4.6 Test Equipment List	13
5. Tissue Simulating Liquids	14
5.1 Composition of Tissue Simulating Liquid	14
5.2 Tissue Dielectric Parameters for Head and Body Phantoms	15
5.3 Tissue Calibration Result	17
6. SAR Measurement Evaluation	18
6.1 Purpose of System Performance Check	18
6.2 System Setup	18
6.3 Validation Results	19
7. EUT Testing Position	21
7.1 Wrist-worn device	21
7.2 EUT Antenna Position	21
8. SAR Measurement Procedures	23
8.1 Measurement Procedures	23
8.2 Spatial Peak SAR Evaluation	23
8.3 Area & Zoom Scan Procedures	24
8.4 Volume Scan Procedures	24
8.5 SAR Averaged Methods	24
8.6 Power Drift Monitoring	24
9. SAR Test Result	25
9.1 Conducted RF Output Power	25
9.2 Test Results for Standalone SAR Test	55
9.3 Simultaneous Multi-band Transmission SAR Analysis	62
10. Measurement Uncertainty	66
10.1 Uncertainty for EUT SAR Test	66
10.2 Uncertainty for System Performance Check	67
Annex A. Plots of System Performance Check	69
Annex B. Plots of SAR Measurement	109
Annex C. EUT Photos	173
Annex E. Calibration Certificate	176

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Xiamen Best Fortune Import And Export Co., Ltd.
Address of applicant: Room401, No.2368, Fangzhong Road, Huli District, Xiamen, Fujian, China.

Manufacturer: Shenzhen Domino Times Technology Co., Ltd
Address of manufacturer: Room809, Taibang Tech. Building, Yuehai Street, Nanshan District, Shenzhen, China.

General Description of EUT:	
Product Name:	Smart watch
Trade Name:	/
Model No.:	DM20
Adding Model(s):	DM101, DM100, DM30, DM28, DM19
Rated Voltage:	DC 3.8V
Battery Capacity:	1200mAh
Software Version:	DM20A_C10_EN_V1.2_20210706
Hardware Version:	C10-MB-V1.2
<i>Note: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model DM20, but the circuit and the electronic construction do not change, declared by the manufacturer.</i>	

Technical Characteristics of EUT:	
2G	
Support Networks:	GSM, GPRS, EDGE
Support Band:	GSM850/PCS1900
Uplink Frequency:	GSM/GPRS/EDGE 850: 824~849MHz GSM/GPRS/EDGE 1900: 1850~1910MHz
Downlink Frequency:	GSM/GPRS/EDGE 850: 869~894MHz GSM/GPRS/EDGE 1900: 1930~1990MHz
Max RF Output Power:	GSM850: 32.42dBm, GSM1900: 30.08dBm EDGE850: 26.16dBm, EDGE1900: 25.93dBm
Type of Modulation:	GMSK, 8PSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM850: -11.71dBi; GSM1900: -5.94dBi
GPRS/EDGE Class:	Class 12
3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Band:	WCDMA Band 2, WCDMA Band 5
Uplink Frequency:	WCDMA Band 2: 1850~1910MHz WCDMA Band 5: 824~849MHz
Downlink Frequency:	WCDMA Band 2: 1930~1990MHz WCDMA Band 5: 869~894MHz
RF Output Power:	WCDMA Band 2: 23.16dBm, WCDMA Band 5: 23.26dBm
Type of Modulation:	BPSK, QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	WCDMA Band 2: -7.23dBi, WCDMA Band 5: -11.17dBi
4G	
Support Networks:	FDD-LTE, TDD-LTE
Support Band:	FDD-LTE Band 2, 5, 7, 12, 38, 40, 41
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 7: Tx: 2500-2570MHz, FDD-LTE Band 12: Tx: 699-716MHz, TDD-LTE Band 38: Tx: 2570-2620MHz TDD-LTE Band 40: Tx: 2305~2315MHz & 2350~2360MHz TDD-LTE Band 41: Tx: 2555-2655MHz
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz, FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 7: Rx: 2620-2690MHz, FDD-LTE Band 12: Rx: 729-746MHz, TDD-LTE Band 38: Rx: 2570-2620MHz

	TDD-LTE Band 40: Rx: 2305~2315MHz & 2350~2360MHz TDD-LTE Band 41: Rx: 2555-2655MHz
RF Output Power:	FDD-LTE Band 2: 20.24dBm, FDD-LTE Band 5: 22.49dBm, FDD-LTE Band 7: 19.91dBm, FDD-LTE Band 12: 23.99dBm, TDD-LTE Band 38: 18.99dBm, TDD-LTE Band 40(2305~2315MHz): 21.78dBm, TDD-LTE Band 40(2350~2360MHz): 21.71dBm, TDD-LTE Band 41: 19.99dBm
Type of Modulation:	QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	FDD-LTE Band 2: -7.26dBi, FDD-LTE Band 5: -10.86dBi, FDD-LTE Band 7: -7.51dBi, FDD-LTE Band 12: -11.17dBi, TDD-LTE Band 38: -7.27dBi, TDD-LTE Band 40: -7.21dBi, TDD-LTE Band 41: -7.03dBi
WIFI(5G)	
Support Standards:	802.11a, 802.11n-HT20/40, 802.11ac-HT20/40
Frequency Range:	Band 1: 5180-5240MHz, Band 4: 5745-5825MHz
RF Output Power:	7.915dBm
Type of Modulation:	BPSK,QPSK, 16QAM, 64QAM, 256-QAM
Type of Antenna:	Integral Antenna
Antenna Gain:	1.29dBi
WIFI(2.4G)	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
RF Output Power:	7.591dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Quantity of Channels:	11/7
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	1.29dBi
Bluetooth	
Bluetooth Version:	V4.0
Frequency Range:	2402-2480MHz
RF Output Power:	3.057dBm (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:	1.29dBi

1.2 Test Standards

The following report is accordance with FCC 47 CFR Part 2.1093, ANSI/IEEE C95.1-2005, ANSI / IEEE C95.3 :2002, IEEE 62209-1528: 2020, 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:

Near to Mouth(10mm Gap)

Frequency Band	Maximum SAR _{1g} (W/kg)	SAR _{1g} Limit (W/kg)
GSM	0.283	1.6
WCDMA	0.811	1.6
FDD-LTE	0.560	1.6
WLAN 5G	0.254	1.6
WLAN 2.4G	0.014	1.6
Simultaneous Transmission	1.065	1.6

Wrist-worn(0mm Gap)

Frequency Band	Maximum SAR _{10g} (W/kg)	SAR _{10g} Limit (W/kg)
GSM	0.353	4.0
WCDMA	0.599	4.0
FDD-LTE	0.496	4.0
WLAN 5G	0.108	4.0
WLAN 2.4G	0.013	4.0
Simultaneous Transmission	0.707	4.0

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 ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedure specified in IEEE 62209-1528: 2020 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:

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

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

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

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

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

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

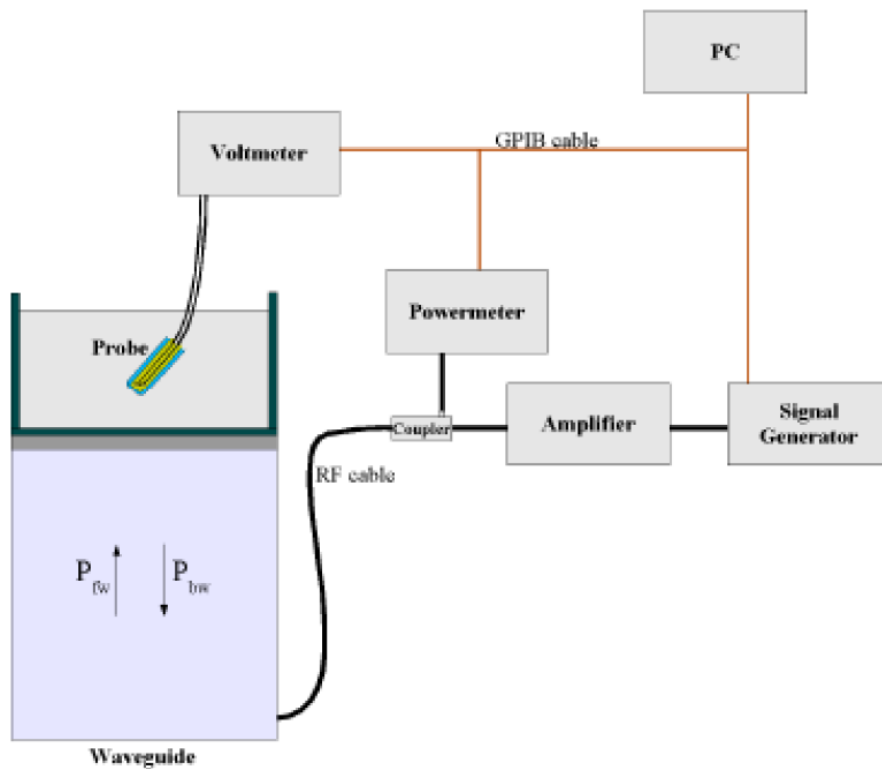
For the measurements the Specific Dosimetric E-Field Probe SSE2 SN 45/15 EPGO280 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Probe Length: 330 mm
- Length of Individual Dipoles: 4.5 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter : 5 mm

Waltek Testing Group (Shenzhen) Co., Ltd.
[Http://www.waltek.com.cn](http://www.waltek.com.cn)

- Distance between dipoles / probe extremity: 2.7mm
 - Probe linearity: <0.25 dB
 - Axial Isotropy: <0.25 dB
 - Spherical Isotropy: <0.50 dB
 - Calibration range: 700 to 3000MHz for head & body simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°

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

Waltek Testing Group (Shenzhen) Co., Ltd.

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

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,

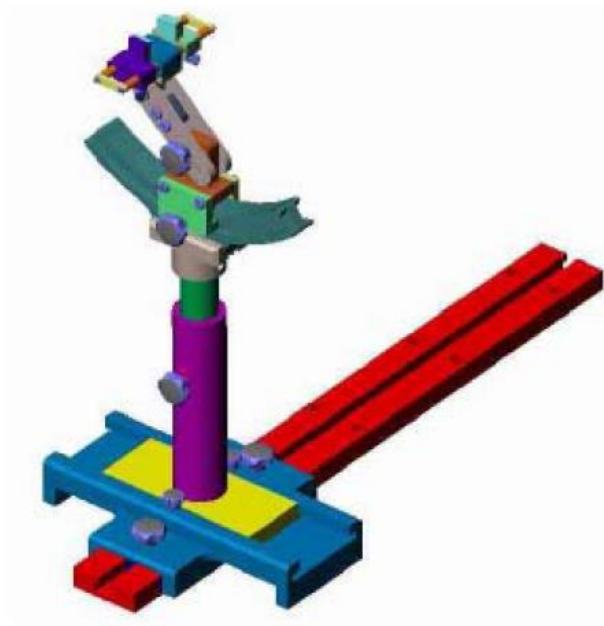
ρ = Tissue density (1.25 g/cm³ for brain tissue)

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

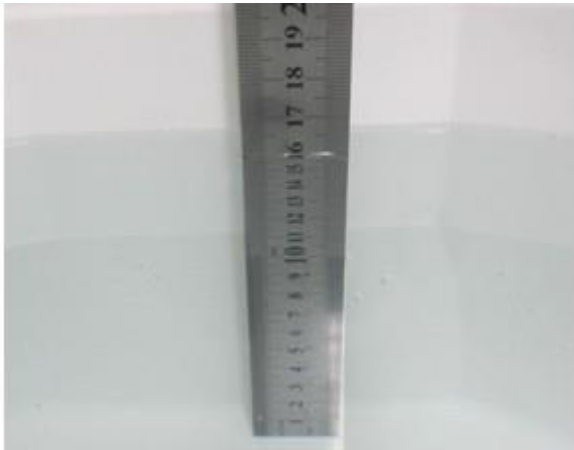
4.6 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
E-Field Probe	MVG	SSE5	SN 09/13 EP168	2020-05-22	2022-05-21
E-Field Probe	MVG	SSE2	SN 18/21 EPGO356	2021-07-16	2022-07-15
750MHz Dipole	MVG	SID750	SN 47/12 DIP 0G750-203	2020-03-11	2022-03-10
835MHz Dipole	MVG	SID835	SN 47/12 DIP 0G835-204	2020-03-11	2022-03-10
1800MHz Dipole	MVG	SID1800	SN 47/12 DIP 1G800-206	2020-03-11	2022-03-10
1900MHz Dipole	MVG	SID1900	SN 47/12 DIP 1G900-207	2020-03-11	2022-03-10
2300MHz Dipole	MVG	SID2300	SN 50/20 DIP 2G300-513	2021-01-14	2023-01-13
2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2020-03-11	2022-03-10
2600MHz Dipole	MVG	SID2600	SN 28/21 DIP 2G600-590	2021-07-16	2024-07-15
3300MHz Dipole	MVG	SID3300	SN 28/21 DIP 3G300-591	2021-07-19	2024-07-18
3500MHz Dipole	MVG	SID3500	SN 28/21 DIP 3G500-592	2021-07-19	2024-07-18
3700MHz Dipole	MVG	SID3700	SN 28/21 DIP 3G700-593	2021-07-19	2024-07-18
3900MHz Dipole	MVG	SID3900	SN 28/21 DIP 3G900-594	2021-07-19	2024-07-18
4200MHz Dipole	MVG	SID4200	SN 28/21 DIP 4G200-595	2021-07-19	2024-07-18
4600MHz Dipole	MVG	SID4600	SN 28/21 DIP 4G600-596	2021-07-19	2024-07-18
4900MHz Dipole	MVG	SID4900	SN 28/21 DIP 4G900-597	2021-07-19	2024-07-18
5 GHz Dipole	MVG	SWG5500	SN 49/16 WGA45	2020-07-03	2022-07-02
Dielectric Probe	SATIMO	SCLMP	SN 47/12 OCPG49	2020-03-11	2022-03-10
SAM Phantom	SATIMO	SAM	SN/ 47/12 SAM95	N/A	N/A
Multi Meter	Keithley	Keithley 2000	4006367	2021-03-27	2022-03-26
Power meter	Keithley	3500	JC-2017-09-001	2021-03-27	2022-03-26
Power meter	Keithley	3500	JC-2017-09-001	2021-03-27	2022-03-26
Power Sensor	HP	11636B	JC-2017-10-002	2021-03-27	2022-03-26
MXG X-Series RF Vector Signal Generato	KEYSIGHT	N5182B	MY57300664	2021-04-14	2022-04-13
Universal Tester	Rohde & Schwarz	CMU200	112315	2021-03-27	2022-03-26
Communications Tester	Rohde & Schwarz	CMW500	148650	2021-03-27	2022-03-26
Network Analyzer	HP	8753C	2901A00831	2021-03-27	2022-03-26
Directional Couplers	Agilent	778D	20160	2021-03-27	2022-03-26

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
2300	55.0	0.2	0	0	0	44.8
2450	55.0	0.1	0	0	0	44.9
2600	54.9	0.1	0	0	0	45.0
Body						
750	50.0	0.8	48.8	0.2	0.2	0
835	50.8	0.9	48.1	0.1	0.1	0
1700-1900	70.2	0.4	0	0	0	29.4
2300	68.6	0.3	0	0	0	31.1
2450	68.6	0.1	0	0	0	31.3
2600	68.2	0.1	0	0	0	31.7

Frequency (MHz)	Water (%)	Hexyl Carbitol (%)	Triton X-100 (%)
Head			
5000-6000	65.52	17.24	17.24
Body			
5000-6000	78.6	10.7	10.7

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Target Frequency (MHz)	Head	
	Conductivity (σ)	Permittivity (ϵ_r)
150	0.76	52.3
300	0.87	45.3
450	0.87	43.5
750	0.89	41.9
835	0.90	41.5
900	0.97	41.5
915	0.98	41.5
1450	1.20	40.5
1610	1.29	40.3
1750	1.37	40.1
1800-2000	1.40	40.0
2300	1.67	39.5
2450	1.80	39.2
2600	1.96	39.0
3000	2.40	38.5
5200	4.66	36.0
5800	5.27	35.3

Target Frequency (MHz)	Body	
	Conductivity (σ)	Permittivity (ϵ_r)
150	0.80	61.9
300	0.92	58.2
450	0.94	56.7
750	0.96	55.5
835	0.97	55.2
900	1.05	55.0
915	1.06	55.0
1450	1.30	54.0
1610	1.40	53.8
1750	1.49	53.4
1800-2000	1.52	53.3
2300	1.81	52.9
2450	1.95	52.7
2600	2.16	52.5
3000	2.73	52.0
5200	5.30	49.0
5800	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	21.2	0.86	0.89	-3.37	41.32	41.90	-1.38	±5	2021-11-03
835	21.2	0.87	0.90	-3.33	41.11	41.50	-0.94	±5	2021-11-03
900	21.2	1.01	0.97	4.12	39.51	41.5	-4.80	±5	2021-11-04
1750	21.3	1.37	1.37	0.00	39.02	40.1	-2.69	±5	2021-11-04
1900	21.3	1.38	1.40	-1.43	38.56	40.0	-3.60	±5	2021-11-05
2300	21.3	1.65	1.67	-1.20	38.38	39.5	-2.84	±5	2021-11-05
2450	21.3	1.74	1.80	-3.33	38.15	39.20	-2.68	±5	2021-11-08
2600	21.3	1.99	1.96	1.53	39.22	39.0	0.56	±5	2021-11-08
5200	21.3	4.87	4.66	4.51	35.6	36.0	-1.11	±5	2021-11-09
5800	21.3	5.17	5.27	-1.90	35.6	35.3	0.85	±5	2021-11-09

Body Tissue Simulating Liquid									
Freq. MHz.	Temp. (°C)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ϵ_r)	Target (ϵ_r)	Delta (%)		
750	21.2	0.93	0.96	-3.12	54.96	55.5	-0.97	±5	2021-11-03
835	21.2	0.95	0.97	-2.06	54.85	55.2	-0.63	±5	2021-11-03
900	21.2	1.01	1.05	-3.81	53.64	55.0	-2.47	±5	2021-11-04
1750	21.3	1.46	1.49	-2.01	51.22	53.40	-4.08	±5	2021-11-04
1900	21.3	1.50	1.52	-1.32	52.42	53.30	-1.65	±5	2021-11-05
2300	21.3	1.78	1.81	-1.66	52.31	52.9	-1.12	±5	2021-11-05
2450	21.3	1.91	1.95	-2.05	52.01	52.70	-1.31	±5	2021-11-08
2600	21.3	2.12	2.16	-1.85	52.24	52.50	-0.50	±5	2021-11-08
5200	21.3	5.16	5.30	-2.64	48.50	49.0	-1.02	±5	2021-11-09
5800	21.3	5.76	6.00	-4.00	48.50	48.2	0.62	±5	2021-11-09

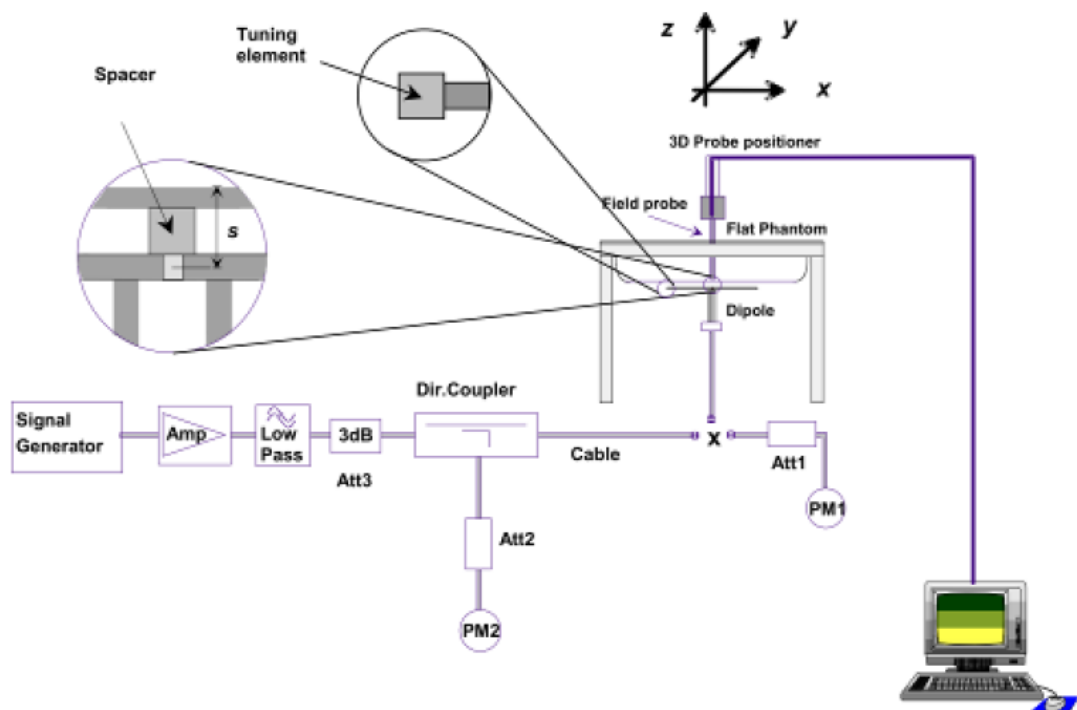
6. SAR Measurement Evaluation

6.1 Purpose of System Performance Check

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

6.2 System Setup

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



System Verification Setup Block Diagram



Setup Photo of Dipole Antenna

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

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	Targeted SAR _{1g}	Measured SAR _{1g}	Normalized SAR _{1g}	Tolerance	Date
MHz	(W/kg)	(W/kg)	(W/kg)	(%)	
Head					
750	8.40	2.16	8.64	2.86	2021-11-03
835	9.65	2.41	9.64	-0.31	2021-11-03
900	10.81	2.52	10.08	-6.75	2021-11-04
1800	38.49	9.61	38.44	-0.13	2021-11-04
1900	39.59	9.91	39.64	0.13	2021-11-05
2300	49.27	12.68	50.72	2.94	2021-11-05
2450	53.76	13.45	53.8	0.07	2021-11-08
2600	56.81	13.67	54.68	-0.71	2021-11-08
5200	161.23	16.946	169.95	5.41	2021-11-09
5800	179.32	18.604	186.04	3.75	2021-11-09

Frequency	Targeted SAR _{10g}	Measured SAR _{10g}	Normalized SAR _{10g}	Tolerance	Date
MHz	(W/kg)	(W/kg)	(W/kg)	(%)	
Body					
750	5.51	1.30	5.2	-5.63	2021-11-03
835	6.19	1.53	6.12	-1.13	2021-11-03
900	6.98	1.70	6.8	-2.58	2021-11-04
1800	20.88	5.22	20.88	0.00	2021-11-04
1900	20.62	5.13	20.52	-0.48	2021-11-05
2300	22.61	6.11	24.44	8.09	2021-11-05
2450	23.38	6.12	24.48	4.70	2021-11-08
2600	23.42	6.08	24.32	3.84	2021-11-08
5200	50.01	5.02	50.2	0.38	2021-11-09
5800	59.17	6.05	60.5	2.25	2021-11-09

Remark: Referring to IEEE 62209-1528: 2020, 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

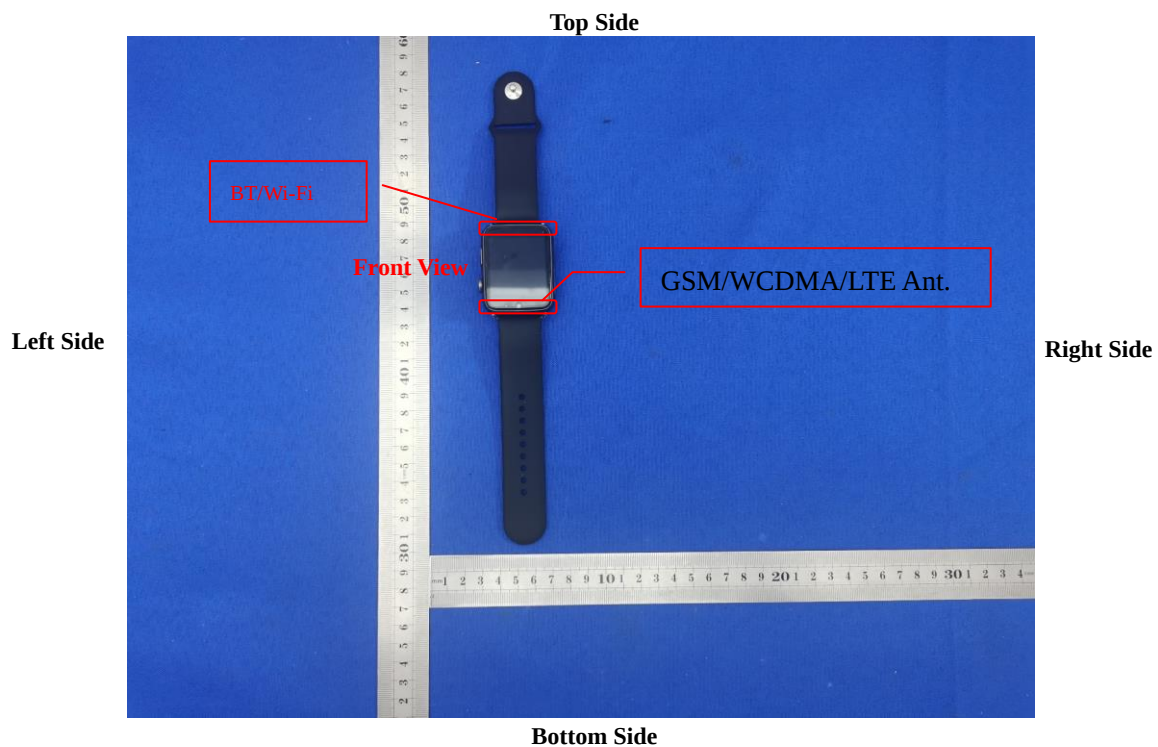
Please refer to Annex A for the plots of system performance check.

7. EUT Testing Position

7.1 Wrist-worn device

- (a) Transmitters that are built-in within a wrist watch or similar wrist-worn devices typically operate in speaker mode for voice communication, with the device worn on the wrist and positioned next to the mouth. Next to the mouth exposure requires 1-g SAR, and the wrist-worn condition requires 10-g extremity SAR.
- (b) The 10-g extremity and 1-g SAR test exclusions may be applied to the wrist and face exposure conditions. When SAR evaluation is required, next to the mouth use is evaluated with the front of the device positioned at 10 mm from a flat phantom filled with head tissue-equivalent medium.
- (c) For wrist-worn condition, 10g SAR value should be measured for the inner wrist band at a separation of 0mm. The design of the hard wrist band prevents opening it to a flat shape to be placed under the flat phantom.
- (d) Next to the mouth use is evaluated with the front of the device positioned at 10 mm from a flat phantom filled with head tissue-equivalent medium. SAR for wrist exposure is evaluated with the back of the devices positioned in direct contact against a flat phantom fill with body tissue-equivalent medium.

7.2 EUT Antenna Position



Block Diagram for EUT Antenna Position

Body SAR tests, Wrist-worn SAR Test distance: 0mm						
Antennas	Front	Back	Right Side	Left Side	Top Side	Bottom
WWAN	No	Yes	No	No	No	No
WLAN	No	Yes	No	No	No	No
Body SAR tests, Near to Mouth SAR, Test distance: 10mm						
Antennas	Front	Back	Right Side	Left Side	Top Side	Bottom
WWAN	Yes	No	No	No	No	No
WLAN	Yes	No	No	No	No	No

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	32.42	32.32	32.21	32.5	30.08	30.05	29.96	30.5
GPRS (1 slot)	32.40	32.29	32.21	32.5	30.02	30.03	29.96	30.5
GPRS (2 slots)	31.32	31.12	31.14	31.5	29.17	29.04	29.01	29.5
GPRS (3 slots)	30.29	30.08	30.02	30.5	28.08	28.11	28.08	28.5
GPRS (4 slots)	29.17	29.28	29.16	29.5	27.14	27.08	27.46	28.0
EDGE (1 slot)	25.55	26.02	26.16	26.5	25.93	25.71	25.81	26.0
EDGE (2 slots)	25.03	25.41	25.18	25.5	24.84	24.95	24.76	25.0
EDGE (3 slots)	24.63	24.86	24.91	25.0	23.96	23.93	23.97	24.0
EDGE (4 slots)	24.09	24.18	24.24	25.0	22.85	22.89	22.95	23.0

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	23.42	23.32	23.21	23.5	21.08	21.05	20.96	21.5
GPRS (1 slot)	23.40	23.29	23.21	23.5	21.02	21.03	20.96	21.5
GPRS (2 slots)	25.32	25.12	25.14	25.5	23.17	23.04	23.01	23.5
GPRS (3 slots)	26.04	25.83	25.77	26.5	23.83	23.86	23.83	24.0
GPRS (4 slots)	26.17	26.28	26.16	26.5	24.14	24.08	24.46	24.5
EDGE (1 slot)	16.55	17.02	17.16	17.5	16.93	16.71	16.81	17.0
EDGE (2 slots)	19.03	19.41	19.18	19.5	18.84	18.95	18.76	19.0
EDGE (3 slots)	20.38	20.61	20.66	21.0	19.71	19.68	19.72	20.0
EDGE (4 slots)	21.09	21.18	21.24	21.5	19.85	19.89	19.95	20.0

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

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

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

Remark:

1. For Near to Mouth 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 Wrist-worn SAR testing, GPRS should be evaluated; therefore the EUT was set in GPRS (4TX slots) for GSM850

Waltek Testing Group (Shenzhen) Co., Ltd.

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

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	23.08	23.11	23.16	23.5	23.26	23.15	23.21	23.5
HSDPA Subtest-1	22.27	21.88	21.94	22.5	22.08	22.17	21.75	22.5
HSDPA Subtest-2	21.13	21.59	21.62	22.0	21.65	21.59	21.58	22.0
HSDPA Subtest-3	21.15	21.56	21.55	22.0	21.48	21.23	21.63	22.0
HSDPA Subtest-4	21.67	21.69	21.68	22.0	21.35	21.53	21.72	22.0
HSUPA Subtest-1	21.25	21.17	21.26	22.0	21.23	21.41	21.08	22.0
HSUPA Subtest-2	21.31	21.62	21.47	22.0	21.42	21.32	21.62	22.0
HSUPA Subtest-3	21.52	21.41	21.39	22.0	21.33	21.35	21.23	22.0
HSUPA Subtest-4	21.33	21.35	21.29	22.0	21.49	21.38	21.52	22.0
HSUPA Subtest-5	21.22	21.51	21.53	22.0	21.42	21.39	21.37	22.0

Remark:

- per KDB 941225 D01 v03, The 12.2kbps RMC mode was selected for SAR testing(the primary mode).
- 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

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	high Limit (dBm)	Verdict
Band12	1.4	23017	1	#0	QPSK	23.63	37	PASS
Band12	1.4	23017	1	#Mid	QPSK	23.79	37	PASS
Band12	1.4	23017	1	#Max	QPSK	23.60	37	PASS
Band12	1.4	23017	3	#0	QPSK	23.70	37	PASS
Band12	1.4	23017	3	#Max	QPSK	23.60	37	PASS
Band12	1.4	23017	6	#0	QPSK	23.62	37	PASS
Band12	1.4	23017	1	#0	QAM16	23.45	37	PASS
Band12	1.4	23017	1	#Mid	QAM16	23.61	37	PASS
Band12	1.4	23017	1	#Max	QAM16	23.40	37	PASS
Band12	1.4	23017	3	#0	QAM16	23.63	37	PASS
Band12	1.4	23017	3	#Max	QAM16	23.57	37	PASS
Band12	1.4	23017	6	#0	QAM16	22.59	37	PASS
Band12	1.4	23095	1	#0	QPSK	23.38	37	PASS
Band12	1.4	23095	1	#Mid	QPSK	23.61	37	PASS
Band12	1.4	23095	1	#Max	QPSK	23.47	37	PASS
Band12	1.4	23095	3	#0	QPSK	23.38	37	PASS
Band12	1.4	23095	3	#Max	QPSK	23.42	37	PASS
Band12	1.4	23095	6	#0	QPSK	23.35	37	PASS
Band12	1.4	23095	1	#0	QAM16	23.23	37	PASS
Band12	1.4	23095	1	#Mid	QAM16	23.50	37	PASS
Band12	1.4	23095	1	#Max	QAM16	23.31	37	PASS
Band12	1.4	23095	3	#0	QAM16	23.52	37	PASS
Band12	1.4	23095	3	#Max	QAM16	23.57	37	PASS
Band12	1.4	23095	6	#0	QAM16	22.31	37	PASS
Band12	1.4	23173	1	#0	QPSK	23.23	37	PASS
Band12	1.4	23173	1	#Mid	QPSK	23.43	37	PASS
Band12	1.4	23173	1	#Max	QPSK	23.23	37	PASS
Band12	1.4	23173	3	#0	QPSK	23.31	37	PASS
Band12	1.4	23173	3	#Max	QPSK	23.30	37	PASS
Band12	1.4	23173	6	#0	QPSK	23.32	37	PASS
Band12	1.4	23173	1	#0	QAM16	23.36	37	PASS
Band12	1.4	23173	1	#Mid	QAM16	23.53	37	PASS
Band12	1.4	23173	1	#Max	QAM16	23.36	37	PASS
Band12	1.4	23173	3	#0	QAM16	23.29	37	PASS
Band12	1.4	23173	3	#Max	QAM16	23.30	37	PASS
Band12	1.4	23173	6	#0	QAM16	22.20	37	PASS
Band12	3	23025	1	#0	QPSK	23.70	37	PASS
Band12	3	23025	1	#Mid	QPSK	23.59	37	PASS
Band12	3	23025	1	#Max	QPSK	23.59	37	PASS

Band12	3	23025	8	#0	QPSK	23.70	37	PASS
Band12	3	23025	8	#Max	QPSK	23.65	37	PASS
Band12	3	23025	15	#0	QPSK	23.62	37	PASS
Band12	3	23025	1	#0	QAM16	23.92	37	PASS
Band12	3	23025	1	#Mid	QAM16	23.85	37	PASS
Band12	3	23025	1	#Max	QAM16	23.84	37	PASS
Band12	3	23025	8	#0	QAM16	22.69	37	PASS
Band12	3	23025	8	#Max	QAM16	22.67	37	PASS
Band12	3	23025	15	#0	QAM16	22.57	37	PASS
Band12	3	23095	1	#0	QPSK	23.35	37	PASS
Band12	3	23095	1	#Mid	QPSK	23.27	37	PASS
Band12	3	23095	1	#Max	QPSK	23.23	37	PASS
Band12	3	23095	8	#0	QPSK	23.11	37	PASS
Band12	3	23095	8	#Max	QPSK	23.16	37	PASS
Band12	3	23095	15	#0	QPSK	23.04	37	PASS
Band12	3	23095	1	#0	QAM16	23.04	37	PASS
Band12	3	23095	1	#Mid	QAM16	23.06	37	PASS
Band12	3	23095	1	#Max	QAM16	23.17	37	PASS
Band12	3	23095	8	#0	QAM16	21.94	37	PASS
Band12	3	23095	8	#Max	QAM16	21.96	37	PASS
Band12	3	23095	15	#0	QAM16	21.80	37	PASS
Band12	3	23165	1	#0	QPSK	23.91	37	PASS
Band12	3	23165	1	#Mid	QPSK	23.97	37	PASS
Band12	3	23165	1	#Max	QPSK	23.99	37	PASS
Band12	3	23165	8	#0	QPSK	22.90	37	PASS
Band12	3	23165	8	#Max	QPSK	22.90	37	PASS
Band12	3	23165	15	#0	QPSK	22.88	37	PASS
Band12	3	23165	1	#0	QAM16	22.70	37	PASS
Band12	3	23165	1	#Mid	QAM16	22.71	37	PASS
Band12	3	23165	1	#Max	QAM16	22.71	37	PASS
Band12	3	23165	8	#0	QAM16	21.89	37	PASS
Band12	3	23165	8	#Max	QAM16	21.85	37	PASS
Band12	3	23165	15	#0	QAM16	21.86	37	PASS
Band12	5	23035	1	#0	QPSK	23.04	37	PASS
Band12	5	23035	1	#Mid	QPSK	23.06	37	PASS
Band12	5	23035	1	#Max	QPSK	23.80	37	PASS
Band12	5	23035	12	#0	QPSK	23.04	37	PASS
Band12	5	23035	12	#Max	QPSK	22.88	37	PASS
Band12	5	23035	25	#0	QPSK	22.98	37	PASS
Band12	5	23035	1	#0	QAM16	23.31	37	PASS
Band12	5	23035	1	#Mid	QAM16	23.34	37	PASS
Band12	5	23035	1	#Max	QAM16	23.09	37	PASS
Band12	5	23035	12	#0	QAM16	22.08	37	PASS

Band12	5	23035	12	#Max	QAM16	21.86	37	PASS
Band12	5	23035	25	#0	QAM16	22.00	37	PASS
Band12	5	23095	1	#0	QPSK	23.28	37	PASS
Band12	5	23095	1	#Mid	QPSK	23.36	37	PASS
Band12	5	23095	1	#Max	QPSK	23.43	37	PASS
Band12	5	23095	12	#0	QPSK	23.29	37	PASS
Band12	5	23095	12	#Max	QPSK	23.51	37	PASS
Band12	5	23095	25	#0	QPSK	23.40	37	PASS
Band12	5	23095	1	#0	QAM16	23.55	37	PASS
Band12	5	23095	1	#Mid	QAM16	23.65	37	PASS
Band12	5	23095	1	#Max	QAM16	23.66	37	PASS
Band12	5	23095	12	#0	QAM16	22.30	37	PASS
Band12	5	23095	12	#Max	QAM16	22.48	37	PASS
Band12	5	23095	25	#0	QAM16	22.40	37	PASS
Band12	5	23155	1	#0	QPSK	23.46	37	PASS
Band12	5	23155	1	#Mid	QPSK	23.35	37	PASS
Band12	5	23155	1	#Max	QPSK	23.29	37	PASS
Band12	5	23155	12	#0	QPSK	23.47	37	PASS
Band12	5	23155	12	#Max	QPSK	23.21	37	PASS
Band12	5	23155	25	#0	QPSK	23.35	37	PASS
Band12	5	23155	1	#0	QAM16	23.62	37	PASS
Band12	5	23155	1	#Mid	QAM16	23.50	37	PASS
Band12	5	23155	1	#Max	QAM16	23.37	37	PASS
Band12	5	23155	12	#0	QAM16	22.45	37	PASS
Band12	5	23155	12	#Max	QAM16	22.20	37	PASS
Band12	5	23155	25	#0	QAM16	22.34	37	PASS
Band12	10	23060	1	#0	QPSK	23.54	37	PASS
Band12	10	23060	1	#Mid	QPSK	23.50	37	PASS
Band12	10	23060	1	#Max	QPSK	23.33	37	PASS
Band12	10	23060	25	#0	QPSK	23.72	37	PASS
Band12	10	23060	25	#Max	QPSK	23.46	37	PASS
Band12	10	23060	50	#0	QPSK	23.57	37	PASS
Band12	10	23060	1	#0	QAM16	23.78	37	PASS
Band12	10	23060	1	#Mid	QAM16	23.84	37	PASS
Band12	10	23060	1	#Max	QAM16	23.58	37	PASS
Band12	10	23060	25	#0	QAM16	22.76	37	PASS
Band12	10	23060	25	#Max	QAM16	22.52	37	PASS
Band12	10	23060	50	#0	QAM16	22.53	37	PASS
Band12	10	23095	1	#0	QPSK	23.39	37	PASS
Band12	10	23095	1	#Mid	QPSK	23.51	37	PASS
Band12	10	23095	1	#Max	QPSK	23.38	37	PASS
Band12	10	23095	25	#0	QPSK	23.46	37	PASS
Band12	10	23095	25	#Max	QPSK	23.59	37	PASS

Band12	10	23095	50	#0	QPSK	23.49	37	PASS
Band12	10	23095	1	#0	QAM16	23.53	37	PASS
Band12	10	23095	1	#Mid	QAM16	23.68	37	PASS
Band12	10	23095	1	#Max	QAM16	23.52	37	PASS
Band12	10	23095	25	#0	QAM16	22.42	37	PASS
Band12	10	23095	25	#Max	QAM16	22.61	37	PASS
Band12	10	23095	50	#0	QAM16	22.37	37	PASS
Band12	10	23130	1	#0	QPSK	23.22	37	PASS
Band12	10	23130	1	#Mid	QPSK	23.67	37	PASS
Band12	10	23130	1	#Max	QPSK	23.96	37	PASS
Band12	10	23130	25	#0	QPSK	22.97	37	PASS
Band12	10	23130	25	#Max	QPSK	22.79	37	PASS
Band12	10	23130	50	#0	QPSK	22.86	37	PASS
Band12	10	23130	1	#0	QAM16	22.65	37	PASS
Band12	10	23130	1	#Mid	QAM16	23.14	37	PASS
Band12	10	23130	1	#Max	QAM16	22.63	37	PASS
Band12	10	23130	25	#0	QAM16	21.90	37	PASS
Band12	10	23130	25	#Max	QAM16	21.76	37	PASS
Band12	10	23130	50	#0	QAM16	21.83	37	PASS
Band2	1.4	18607	1	#0	QPSK	19.99	37	PASS
Band2	1.4	18607	1	#Mid	QPSK	20.24	37	PASS
Band2	1.4	18607	1	#Max	QPSK	19.96	37	PASS
Band2	1.4	18607	3	#0	QPSK	20.05	37	PASS
Band2	1.4	18607	3	#Max	QPSK	20.03	37	PASS
Band2	1.4	18607	6	#0	QPSK	19.03	37	PASS
Band2	1.4	18607	1	#0	QAM16	19.18	37	PASS
Band2	1.4	18607	1	#Mid	QAM16	19.42	37	PASS
Band2	1.4	18607	1	#Max	QAM16	19.16	37	PASS
Band2	1.4	18607	3	#0	QAM16	19.12	37	PASS
Band2	1.4	18607	3	#Max	QAM16	19.14	37	PASS
Band2	1.4	18607	6	#0	QAM16	18.04	37	PASS
Band2	1.4	18900	1	#0	QPSK	19.70	37	PASS
Band2	1.4	18900	1	#Mid	QPSK	19.87	37	PASS
Band2	1.4	18900	1	#Max	QPSK	19.71	37	PASS
Band2	1.4	18900	3	#0	QPSK	19.74	37	PASS
Band2	1.4	18900	3	#Max	QPSK	19.78	37	PASS
Band2	1.4	18900	6	#0	QPSK	18.68	37	PASS
Band2	1.4	18900	1	#0	QAM16	18.54	37	PASS
Band2	1.4	18900	1	#Mid	QAM16	18.76	37	PASS
Band2	1.4	18900	1	#Max	QAM16	18.58	37	PASS
Band2	1.4	18900	3	#0	QAM16	18.71	37	PASS
Band2	1.4	18900	3	#Max	QAM16	18.73	37	PASS
Band2	1.4	18900	6	#0	QAM16	18.71	37	PASS

Band2	1.4	19193	1	#0	QPSK	19.84	37	PASS
Band2	1.4	19193	1	#Mid	QPSK	20.09	37	PASS
Band2	1.4	19193	1	#Max	QPSK	19.87	37	PASS
Band2	1.4	19193	3	#0	QPSK	19.85	37	PASS
Band2	1.4	19193	3	#Max	QPSK	19.87	37	PASS
Band2	1.4	19193	6	#0	QPSK	18.81	37	PASS
Band2	1.4	19193	1	#0	QAM16	18.79	37	PASS
Band2	1.4	19193	1	#Mid	QAM16	19.08	37	PASS
Band2	1.4	19193	1	#Max	QAM16	18.82	37	PASS
Band2	1.4	19193	3	#0	QAM16	19.03	37	PASS
Band2	1.4	19193	3	#Max	QAM16	19.05	37	PASS
Band2	1.4	19193	6	#0	QAM16	18.86	37	PASS
Band2	3	18615	1	#0	QPSK	20.14	37	PASS
Band2	3	18615	1	#Mid	QPSK	20.11	37	PASS
Band2	3	18615	1	#Max	QPSK	20.06	37	PASS
Band2	3	18615	8	#0	QPSK	19.14	37	PASS
Band2	3	18615	8	#Max	QPSK	19.14	37	PASS
Band2	3	18615	15	#0	QPSK	19.12	37	PASS
Band2	3	18615	1	#0	QAM16	19.47	37	PASS
Band2	3	18615	1	#Mid	QAM16	19.42	37	PASS
Band2	3	18615	1	#Max	QAM16	19.37	37	PASS
Band2	3	18615	8	#0	QAM16	18.20	37	PASS
Band2	3	18615	8	#Max	QAM16	18.18	37	PASS
Band2	3	18615	15	#0	QAM16	18.12	37	PASS
Band2	3	18900	1	#0	QPSK	19.83	37	PASS
Band2	3	18900	1	#Mid	QPSK	19.83	37	PASS
Band2	3	18900	1	#Max	QPSK	19.83	37	PASS
Band2	3	18900	8	#0	QPSK	18.81	37	PASS
Band2	3	18900	8	#Max	QPSK	18.82	37	PASS
Band2	3	18900	15	#0	QPSK	18.78	37	PASS
Band2	3	18900	1	#0	QAM16	19.02	37	PASS
Band2	3	18900	1	#Mid	QAM16	18.99	37	PASS
Band2	3	18900	1	#Max	QAM16	19.01	37	PASS
Band2	3	18900	8	#0	QAM16	18.82	37	PASS
Band2	3	18900	8	#Max	QAM16	18.84	37	PASS
Band2	3	18900	15	#0	QAM16	18.71	37	PASS
Band2	3	19185	1	#0	QPSK	19.97	37	PASS
Band2	3	19185	1	#Mid	QPSK	20.00	37	PASS
Band2	3	19185	1	#Max	QPSK	20.00	37	PASS
Band2	3	19185	8	#0	QPSK	18.91	37	PASS
Band2	3	19185	8	#Max	QPSK	18.93	37	PASS
Band2	3	19185	15	#0	QPSK	18.90	37	PASS
Band2	3	19185	1	#0	QAM16	18.82	37	PASS

Band2	3	19185	1	#Mid	QAM16	18.83	37	PASS
Band2	3	19185	1	#Max	QAM16	18.82	37	PASS
Band2	3	19185	8	#0	QAM16	18.96	37	PASS
Band2	3	19185	8	#Max	QAM16	18.98	37	PASS
Band2	3	19185	15	#0	QAM16	18.99	37	PASS
Band2	5	18625	1	#0	QPSK	19.99	37	PASS
Band2	5	18625	1	#Mid	QPSK	20.06	37	PASS
Band2	5	18625	1	#Max	QPSK	19.94	37	PASS
Band2	5	18625	12	#0	QPSK	19.01	37	PASS
Band2	5	18625	12	#Max	QPSK	19.02	37	PASS
Band2	5	18625	25	#0	QPSK	19.08	37	PASS
Band2	5	18625	1	#0	QAM16	19.32	37	PASS
Band2	5	18625	1	#Mid	QAM16	19.39	37	PASS
Band2	5	18625	1	#Max	QAM16	19.22	37	PASS
Band2	5	18625	12	#0	QAM16	18.10	37	PASS
Band2	5	18625	12	#Max	QAM16	18.08	37	PASS
Band2	5	18625	25	#0	QAM16	18.14	37	PASS
Band2	5	18900	1	#0	QPSK	19.66	37	PASS
Band2	5	18900	1	#Mid	QPSK	19.76	37	PASS
Band2	5	18900	1	#Max	QPSK	19.64	37	PASS
Band2	5	18900	12	#0	QPSK	18.78	37	PASS
Band2	5	18900	12	#Max	QPSK	18.72	37	PASS
Band2	5	18900	25	#0	QPSK	18.76	37	PASS
Band2	5	18900	1	#0	QAM16	18.87	37	PASS
Band2	5	18900	1	#Mid	QAM16	19.00	37	PASS
Band2	5	18900	1	#Max	QAM16	18.87	37	PASS
Band2	5	18900	12	#0	QAM16	18.79	37	PASS
Band2	5	18900	12	#Max	QAM16	18.75	37	PASS
Band2	5	18900	25	#0	QAM16	18.76	37	PASS
Band2	5	19175	1	#0	QPSK	19.76	37	PASS
Band2	5	19175	1	#Mid	QPSK	19.86	37	PASS
Band2	5	19175	1	#Max	QPSK	19.73	37	PASS
Band2	5	19175	12	#0	QPSK	18.88	37	PASS
Band2	5	19175	12	#Max	QPSK	18.88	37	PASS
Band2	5	19175	25	#0	QPSK	18.89	37	PASS
Band2	5	19175	1	#0	QAM16	19.03	37	PASS
Band2	5	19175	1	#Mid	QAM16	19.15	37	PASS
Band2	5	19175	1	#Max	QAM16	19.05	37	PASS
Band2	5	19175	12	#0	QAM16	18.00	37	PASS
Band2	5	19175	12	#Max	QAM16	18.00	37	PASS
Band2	5	19175	25	#0	QAM16	18.94	37	PASS
Band2	10	18650	1	#0	QPSK	20.07	37	PASS
Band2	10	18650	1	#Mid	QPSK	20.20	37	PASS

Band2	10	18650	1	#Max	QPSK	19.96	37	PASS
Band2	10	18650	25	#0	QPSK	19.17	37	PASS
Band2	10	18650	25	#Max	QPSK	19.17	37	PASS
Band2	10	18650	50	#0	QPSK	19.16	37	PASS
Band2	10	18650	1	#0	QAM16	19.36	37	PASS
Band2	10	18650	1	#Mid	QAM16	19.44	37	PASS
Band2	10	18650	1	#Max	QAM16	19.22	37	PASS
Band2	10	18650	25	#0	QAM16	18.30	37	PASS
Band2	10	18650	25	#Max	QAM16	18.28	37	PASS
Band2	10	18650	50	#0	QAM16	18.18	37	PASS
Band2	10	18900	1	#0	QPSK	19.75	37	PASS
Band2	10	18900	1	#Mid	QPSK	19.97	37	PASS
Band2	10	18900	1	#Max	QPSK	19.74	37	PASS
Band2	10	18900	25	#0	QPSK	18.95	37	PASS
Band2	10	18900	25	#Max	QPSK	18.84	37	PASS
Band2	10	18900	50	#0	QPSK	18.89	37	PASS
Band2	10	18900	1	#0	QAM16	18.90	37	PASS
Band2	10	18900	1	#Mid	QAM16	19.14	37	PASS
Band2	10	18900	1	#Max	QAM16	18.89	37	PASS
Band2	10	18900	25	#0	QAM16	18.98	37	PASS
Band2	10	18900	25	#Max	QAM16	18.94	37	PASS
Band2	10	18900	50	#0	QAM16	18.89	37	PASS
Band2	10	19150	1	#0	QPSK	19.90	37	PASS
Band2	10	19150	1	#Mid	QPSK	20.14	37	PASS
Band2	10	19150	1	#Max	QPSK	19.88	37	PASS
Band2	10	19150	25	#0	QPSK	19.08	37	PASS
Band2	10	19150	25	#Max	QPSK	18.98	37	PASS
Band2	10	19150	50	#0	QPSK	19.02	37	PASS
Band2	10	19150	1	#0	QAM16	18.72	37	PASS
Band2	10	19150	1	#Mid	QAM16	18.93	37	PASS
Band2	10	19150	1	#Max	QAM16	18.73	37	PASS
Band2	10	19150	25	#0	QAM16	18.14	37	PASS
Band2	10	19150	25	#Max	QAM16	18.99	37	PASS
Band2	10	19150	50	#0	QAM16	18.06	37	PASS
Band2	15	18675	1	#0	QPSK	19.90	37	PASS
Band2	15	18675	1	#Mid	QPSK	20.01	37	PASS
Band2	15	18675	1	#Max	QPSK	19.69	37	PASS
Band2	15	18675	36	#0	QPSK	19.02	37	PASS
Band2	15	18675	36	#Max	QPSK	19.05	37	PASS
Band2	15	18675	75	#0	QPSK	19.06	37	PASS
Band2	15	18675	1	#0	QAM16	19.20	37	PASS
Band2	15	18675	1	#Mid	QAM16	19.30	37	PASS
Band2	15	18675	1	#Max	QAM16	18.97	37	PASS

Band2	15	18675	36	#0	QAM16	18.10	37	PASS
Band2	15	18675	36	#Max	QAM16	18.13	37	PASS
Band2	15	18675	75	#0	QAM16	18.12	37	PASS
Band2	15	18900	1	#0	QPSK	19.62	37	PASS
Band2	15	18900	1	#Mid	QPSK	19.80	37	PASS
Band2	15	18900	1	#Max	QPSK	19.55	37	PASS
Band2	15	18900	36	#0	QPSK	18.85	37	PASS
Band2	15	18900	36	#Max	QPSK	18.76	37	PASS
Band2	15	18900	75	#0	QPSK	18.80	37	PASS
Band2	15	18900	1	#0	QAM16	18.68	37	PASS
Band2	15	18900	1	#Mid	QAM16	18.87	37	PASS
Band2	15	18900	1	#Max	QAM16	18.63	37	PASS
Band2	15	18900	36	#0	QAM16	18.79	37	PASS
Band2	15	18900	36	#Max	QAM16	18.64	37	PASS
Band2	15	18900	75	#0	QAM16	18.65	37	PASS
Band2	15	19125	1	#0	QPSK	19.41	37	PASS
Band2	15	19125	1	#Mid	QPSK	19.57	37	PASS
Band2	15	19125	1	#Max	QPSK	19.26	37	PASS
Band2	15	19125	36	#0	QPSK	18.54	37	PASS
Band2	15	19125	36	#Max	QPSK	18.39	37	PASS
Band2	15	19125	75	#0	QPSK	18.44	37	PASS
Band2	15	19125	1	#0	QAM16	18.11	37	PASS
Band2	15	19125	1	#Mid	QAM16	18.48	37	PASS
Band2	15	19125	1	#Max	QAM16	18.26	37	PASS
Band2	15	19125	36	#0	QAM16	18.55	37	PASS
Band2	15	19125	36	#Max	QAM16	18.41	37	PASS
Band2	15	19125	75	#0	QAM16	18.48	37	PASS
Band2	20	18700	1	#0	QPSK	19.25	37	PASS
Band2	20	18700	1	#Mid	QPSK	19.62	37	PASS
Band2	20	18700	1	#Max	QPSK	18.97	37	PASS
Band2	20	18700	50	#0	QPSK	18.51	37	PASS
Band2	20	18700	50	#Max	QPSK	18.52	37	PASS
Band2	20	18700	100	#0	QPSK	18.51	37	PASS
Band2	20	18700	1	#0	QAM16	18.47	37	PASS
Band2	20	18700	1	#Mid	QAM16	18.81	37	PASS
Band2	20	18700	1	#Max	QAM16	18.17	37	PASS
Band2	20	18700	50	#0	QAM16	18.55	37	PASS
Band2	20	18700	50	#Max	QAM16	18.58	37	PASS
Band2	20	18700	100	#0	QAM16	18.52	37	PASS
Band2	20	18900	1	#0	QPSK	19.06	37	PASS
Band2	20	18900	1	#Mid	QPSK	19.47	37	PASS
Band2	20	18900	1	#Max	QPSK	18.85	37	PASS
Band2	20	18900	50	#0	QPSK	18.51	37	PASS

Band2	20	18900	50	#Max	QPSK	18.34	37	PASS
Band2	20	18900	100	#0	QPSK	18.45	37	PASS
Band2	20	18900	1	#0	QAM16	18.86	37	PASS
Band2	20	18900	1	#Mid	QAM16	18.29	37	PASS
Band2	20	18900	1	#Max	QAM16	18.76	37	PASS
Band2	20	18900	50	#0	QAM16	18.52	37	PASS
Band2	20	18900	50	#Max	QAM16	18.36	37	PASS
Band2	20	18900	100	#0	QAM16	18.47	37	PASS
Band2	20	19100	1	#0	QPSK	18.69	37	PASS
Band2	20	19100	1	#Mid	QPSK	19.54	37	PASS
Band2	20	19100	1	#Max	QPSK	19.09	37	PASS
Band2	20	19100	50	#0	QPSK	18.34	37	PASS
Band2	20	19100	50	#Max	QPSK	18.32	37	PASS
Band2	20	19100	100	#0	QPSK	18.36	37	PASS
Band2	20	19100	1	#0	QAM16	18.55	37	PASS
Band2	20	19100	1	#Mid	QAM16	18.36	37	PASS
Band2	20	19100	1	#Max	QAM16	18.89	37	PASS
Band2	20	19100	50	#0	QAM16	18.41	37	PASS
Band2	20	19100	50	#Max	QAM16	18.42	37	PASS
Band2	20	19100	100	#0	QAM16	18.39	37	PASS
Band38	5	37775	1	#0	QPSK	18.04	37	PASS
Band38	5	37775	1	#Mid	QPSK	18.84	37	PASS
Band38	5	37775	1	#Max	QPSK	18.56	37	PASS
Band38	5	37775	12	#0	QPSK	18.01	37	PASS
Band38	5	37775	12	#Max	QPSK	18.71	37	PASS
Band38	5	37775	25	#0	QPSK	18.88	37	PASS
Band38	5	37775	1	#0	QAM16	18.28	37	PASS
Band38	5	37775	1	#Mid	QAM16	18.10	37	PASS
Band38	5	37775	1	#Max	QAM16	18.82	37	PASS
Band38	5	37775	12	#0	QAM16	18.98	37	PASS
Band38	5	37775	12	#Max	QAM16	18.68	37	PASS
Band38	5	37775	25	#0	QAM16	18.79	37	PASS
Band38	5	38000	1	#0	QPSK	18.13	37	PASS
Band38	5	38000	1	#Mid	QPSK	18.21	37	PASS
Band38	5	38000	1	#Max	QPSK	18.09	37	PASS
Band38	5	38000	12	#0	QPSK	18.18	37	PASS
Band38	5	38000	12	#Max	QPSK	18.12	37	PASS
Band38	5	38000	25	#0	QPSK	18.16	37	PASS
Band38	5	38000	1	#0	QAM16	18.40	37	PASS
Band38	5	38000	1	#Mid	QAM16	18.46	37	PASS
Band38	5	38000	1	#Max	QAM16	18.36	37	PASS
Band38	5	38000	12	#0	QAM16	18.23	37	PASS
Band38	5	38000	12	#Max	QAM16	18.19	37	PASS

Band38	5	38000	25	#0	QAM16	18.14	37	PASS
Band38	5	38225	1	#0	QPSK	18.05	37	PASS
Band38	5	38225	1	#Mid	QPSK	18.14	37	PASS
Band38	5	38225	1	#Max	QPSK	18.03	37	PASS
Band38	5	38225	12	#0	QPSK	18.15	37	PASS
Band38	5	38225	12	#Max	QPSK	18.11	37	PASS
Band38	5	38225	25	#0	QPSK	18.17	37	PASS
Band38	5	38225	1	#0	QAM16	18.44	37	PASS
Band38	5	38225	1	#Mid	QAM16	18.55	37	PASS
Band38	5	38225	1	#Max	QAM16	18.41	37	PASS
Band38	5	38225	12	#0	QAM16	18.14	37	PASS
Band38	5	38225	12	#Max	QAM16	18.10	37	PASS
Band38	5	38225	25	#0	QAM16	18.13	37	PASS
Band38	10	37800	1	#0	QPSK	18.08	37	PASS
Band38	10	37800	1	#Mid	QPSK	18.88	37	PASS
Band38	10	37800	1	#Max	QPSK	18.48	37	PASS
Band38	10	37800	25	#0	QPSK	18.99	37	PASS
Band38	10	37800	25	#Max	QPSK	18.64	37	PASS
Band38	10	37800	50	#0	QPSK	18.82	37	PASS
Band38	10	37800	1	#0	QAM16	17.45	37	PASS
Band38	10	37800	1	#Mid	QAM16	17.25	37	PASS
Band38	10	37800	1	#Max	QAM16	18.89	37	PASS
Band38	10	37800	25	#0	QAM16	18.01	37	PASS
Band38	10	37800	25	#Max	QAM16	18.69	37	PASS
Band38	10	37800	50	#0	QAM16	18.76	37	PASS
Band38	10	38000	1	#0	QPSK	17.27	37	PASS
Band38	10	38000	1	#Mid	QPSK	17.48	37	PASS
Band38	10	38000	1	#Max	QPSK	17.19	37	PASS
Band38	10	38000	25	#0	QPSK	18.38	37	PASS
Band38	10	38000	25	#Max	QPSK	18.18	37	PASS
Band38	10	38000	50	#0	QPSK	18.31	37	PASS
Band38	10	38000	1	#0	QAM16	18.35	37	PASS
Band38	10	38000	1	#Mid	QAM16	18.47	37	PASS
Band38	10	38000	1	#Max	QAM16	18.21	37	PASS
Band38	10	38000	25	#0	QAM16	18.36	37	PASS
Band38	10	38000	25	#Max	QAM16	18.20	37	PASS
Band38	10	38000	50	#0	QAM16	18.23	37	PASS
Band38	10	38200	1	#0	QPSK	18.16	37	PASS
Band38	10	38200	1	#Mid	QPSK	18.43	37	PASS
Band38	10	38200	1	#Max	QPSK	18.08	37	PASS
Band38	10	38200	25	#0	QPSK	18.33	37	PASS
Band38	10	38200	25	#Max	QPSK	18.23	37	PASS
Band38	10	38200	50	#0	QPSK	18.29	37	PASS

Band38	10	38200	1	#0	QAM16	18.12	37	PASS
Band38	10	38200	1	#Mid	QAM16	18.39	37	PASS
Band38	10	38200	1	#Max	QAM16	18.07	37	PASS
Band38	10	38200	25	#0	QAM16	18.31	37	PASS
Band38	10	38200	25	#Max	QAM16	18.20	37	PASS
Band38	10	38200	50	#0	QAM16	18.24	37	PASS
Band38	15	37825	1	#0	QPSK	17.92	37	PASS
Band38	15	37825	1	#Mid	QPSK	17.56	37	PASS
Band38	15	37825	1	#Max	QPSK	17.40	37	PASS
Band38	15	37825	36	#0	QPSK	18.77	37	PASS
Band38	15	37825	36	#Max	QPSK	18.58	37	PASS
Band38	15	37825	75	#0	QPSK	18.67	37	PASS
Band38	15	37825	1	#0	QAM16	18.95	37	PASS
Band38	15	37825	1	#Mid	QAM16	18.65	37	PASS
Band38	15	37825	1	#Max	QAM16	18.43	37	PASS
Band38	15	37825	36	#0	QAM16	18.77	37	PASS
Band38	15	37825	36	#Max	QAM16	18.57	37	PASS
Band38	15	37825	75	#0	QAM16	18.62	37	PASS
Band38	15	38000	1	#0	QPSK	17.29	37	PASS
Band38	15	38000	1	#Mid	QPSK	17.26	37	PASS
Band38	15	38000	1	#Max	QPSK	17.03	37	PASS
Band38	15	38000	36	#0	QPSK	18.30	37	PASS
Band38	15	38000	36	#Max	QPSK	18.12	37	PASS
Band38	15	38000	75	#0	QPSK	18.24	37	PASS
Band38	15	38000	1	#0	QAM16	18.33	37	PASS
Band38	15	38000	1	#Mid	QAM16	18.26	37	PASS
Band38	15	38000	1	#Max	QAM16	18.01	37	PASS
Band38	15	38000	36	#0	QAM16	18.32	37	PASS
Band38	15	38000	36	#Max	QAM16	18.14	37	PASS
Band38	15	38000	75	#0	QAM16	18.18	37	PASS
Band38	15	38175	1	#0	QPSK	18.68	37	PASS
Band38	15	38175	1	#Mid	QPSK	17.17	37	PASS
Band38	15	38175	1	#Max	QPSK	18.91	37	PASS
Band38	15	38175	36	#0	QPSK	18.18	37	PASS
Band38	15	38175	36	#Max	QPSK	18.18	37	PASS
Band38	15	38175	75	#0	QPSK	18.21	37	PASS
Band38	15	38175	1	#0	QAM16	18.01	37	PASS
Band38	15	38175	1	#Mid	QAM16	18.57	37	PASS
Band38	15	38175	1	#Max	QAM16	17.29	37	PASS
Band38	15	38175	36	#0	QAM16	18.20	37	PASS
Band38	15	38175	36	#Max	QAM16	18.19	37	PASS
Band38	15	38175	75	#0	QAM16	18.16	37	PASS
Band38	20	37850	1	#0	QPSK	18.69	37	PASS

Band38	20	37850	1	#Mid	QPSK	17.66	37	PASS
Band38	20	37850	1	#Max	QPSK	18.16	37	PASS
Band38	20	37850	50	#0	QPSK	18.85	37	PASS
Band38	20	37850	50	#Max	QPSK	18.54	37	PASS
Band38	20	37850	100	#0	QPSK	18.68	37	PASS
Band38	20	37850	1	#0	QAM16	18.92	37	PASS
Band38	20	37850	1	#Mid	QAM16	18.89	37	PASS
Band38	20	37850	1	#Max	QAM16	18.34	37	PASS
Band38	20	37850	50	#0	QAM16	18.82	37	PASS
Band38	20	37850	50	#Max	QAM16	18.54	37	PASS
Band38	20	37850	100	#0	QAM16	18.61	37	PASS
Band38	20	38000	1	#0	QPSK	18.21	37	PASS
Band38	20	38000	1	#Mid	QPSK	18.37	37	PASS
Band38	20	38000	1	#Max	QPSK	18.75	37	PASS
Band38	20	38000	50	#0	QPSK	18.51	37	PASS
Band38	20	38000	50	#Max	QPSK	18.11	37	PASS
Band38	20	38000	100	#0	QPSK	18.31	37	PASS
Band38	20	38000	1	#0	QAM16	18.21	37	PASS
Band38	20	38000	1	#Mid	QAM16	18.31	37	PASS
Band38	20	38000	1	#Max	QAM16	18.69	37	PASS
Band38	20	38000	50	#0	QAM16	18.48	37	PASS
Band38	20	38000	50	#Max	QAM16	18.05	37	PASS
Band38	20	38000	100	#0	QAM16	18.28	37	PASS
Band38	20	38150	1	#0	QPSK	18.85	37	PASS
Band38	20	38150	1	#Mid	QPSK	17.36	37	PASS
Band38	20	38150	1	#Max	QPSK	18.89	37	PASS
Band38	20	38150	50	#0	QPSK	18.20	37	PASS
Band38	20	38150	50	#Max	QPSK	18.16	37	PASS
Band38	20	38150	100	#0	QPSK	18.22	37	PASS
Band38	20	38150	1	#0	QAM16	18.51	37	PASS
Band38	20	38150	1	#Mid	QAM16	18.09	37	PASS
Band38	20	38150	1	#Max	QAM16	18.60	37	PASS
Band38	20	38150	50	#0	QAM16	18.22	37	PASS
Band38	20	38150	50	#Max	QAM16	18.15	37	PASS
Band38	20	38150	100	#0	QAM16	18.16	37	PASS
Band41(2555-2655)	5	40265	1	#0	QPSK	17.60	37	PASS
Band41(2555-2655)	5	40265	1	#Mid	QPSK	17.70	37	PASS
Band41(2555-2655)	5	40265	1	#Max	QPSK	17.60	37	PASS
Band41(2555-2655)	5	40265	12	#0	QPSK	18.74	37	PASS
Band41(2555-2655)	5	40265	12	#Max	QPSK	18.73	37	PASS
Band41(2555-2655)	5	40265	25	#0	QPSK	18.77	37	PASS
Band41(2555-2655)	5	40265	1	#0	QAM16	18.95	37	PASS
Band41(2555-2655)	5	40265	1	#Mid	QAM16	17.05	37	PASS

Band41(2555-2655)	5	40265	1	#Max	QAM16	18.92	37	PASS
Band41(2555-2655)	5	40265	12	#0	QAM16	18.80	37	PASS
Band41(2555-2655)	5	40265	12	#Max	QAM16	18.78	37	PASS
Band41(2555-2655)	5	40265	25	#0	QAM16	18.73	37	PASS
Band41(2555-2655)	5	40740	1	#0	QPSK	17.10	37	PASS
Band41(2555-2655)	5	40740	1	#Mid	QPSK	17.19	37	PASS
Band41(2555-2655)	5	40740	1	#Max	QPSK	17.05	37	PASS
Band41(2555-2655)	5	40740	12	#0	QPSK	18.16	37	PASS
Band41(2555-2655)	5	40740	12	#Max	QPSK	17.08	37	PASS
Band41(2555-2655)	5	40740	25	#0	QPSK	17.13	37	PASS
Band41(2555-2655)	5	40740	1	#0	QAM16	17.45	37	PASS
Band41(2555-2655)	5	40740	1	#Mid	QAM16	17.51	37	PASS
Band41(2555-2655)	5	40740	1	#Max	QAM16	17.38	37	PASS
Band41(2555-2655)	5	40740	12	#0	QAM16	17.15	37	PASS
Band41(2555-2655)	5	40740	12	#Max	QAM16	17.06	37	PASS
Band41(2555-2655)	5	40740	25	#0	QAM16	17.10	37	PASS
Band41(2555-2655)	5	41215	1	#0	QPSK	17.87	37	PASS
Band41(2555-2655)	5	41215	1	#Mid	QPSK	17.95	37	PASS
Band41(2555-2655)	5	41215	1	#Max	QPSK	17.80	37	PASS
Band41(2555-2655)	5	41215	12	#0	QPSK	17.98	37	PASS
Band41(2555-2655)	5	41215	12	#Max	QPSK	17.85	37	PASS
Band41(2555-2655)	5	41215	25	#0	QPSK	17.94	37	PASS
Band41(2555-2655)	5	41215	1	#0	QAM16	17.11	37	PASS
Band41(2555-2655)	5	41215	1	#Mid	QAM16	18.17	37	PASS
Band41(2555-2655)	5	41215	1	#Max	QAM16	18.04	37	PASS
Band41(2555-2655)	5	41215	12	#0	QAM16	18.95	37	PASS
Band41(2555-2655)	5	41215	12	#Max	QAM16	18.83	37	PASS
Band41(2555-2655)	5	41215	25	#0	QAM16	19.87	37	PASS
Band41(2555-2655)	10	40290	1	#0	QPSK	19.69	37	PASS
Band41(2555-2655)	10	40290	1	#Mid	QPSK	19.99	37	PASS
Band41(2555-2655)	10	40290	1	#Max	QPSK	19.62	37	PASS
Band41(2555-2655)	10	40290	25	#0	QPSK	18.87	37	PASS
Band41(2555-2655)	10	40290	25	#Max	QPSK	19.84	37	PASS
Band41(2555-2655)	10	40290	50	#0	QPSK	19.87	37	PASS
Band41(2555-2655)	10	40290	1	#0	QAM16	19.07	37	PASS
Band41(2555-2655)	10	40290	1	#Mid	QAM16	19.37	37	PASS
Band41(2555-2655)	10	40290	1	#Max	QAM16	19.00	37	PASS
Band41(2555-2655)	10	40290	25	#0	QAM16	19.92	37	PASS
Band41(2555-2655)	10	40290	25	#Max	QAM16	19.89	37	PASS
Band41(2555-2655)	10	40290	50	#0	QAM16	18.80	37	PASS
Band41(2555-2655)	10	40740	1	#0	QPSK	19.24	37	PASS
Band41(2555-2655)	10	40740	1	#Mid	QPSK	19.45	37	PASS
Band41(2555-2655)	10	40740	1	#Max	QPSK	18.11	37	PASS

Band41(2555-2655)	10	40740	25	#0	QPSK	19.32	37	PASS
Band41(2555-2655)	10	40740	25	#Max	QPSK	19.16	37	PASS
Band41(2555-2655)	10	40740	50	#0	QPSK	19.25	37	PASS
Band41(2555-2655)	10	40740	1	#0	QAM16	16.24	37	PASS
Band41(2555-2655)	10	40740	1	#Mid	QAM16	19.45	37	PASS
Band41(2555-2655)	10	40740	1	#Max	QAM16	19.11	37	PASS
Band41(2555-2655)	10	40740	25	#0	QAM16	18.31	37	PASS
Band41(2555-2655)	10	40740	25	#Max	QAM16	18.18	37	PASS
Band41(2555-2655)	10	40740	50	#0	QAM16	19.18	37	PASS
Band41(2555-2655)	10	41190	1	#0	QPSK	18.92	37	PASS
Band41(2555-2655)	10	41190	1	#Mid	QPSK	19.23	37	PASS
Band41(2555-2655)	10	41190	1	#Max	QPSK	18.87	37	PASS
Band41(2555-2655)	10	41190	25	#0	QPSK	19.13	37	PASS
Band41(2555-2655)	10	41190	25	#Max	QPSK	19.95	37	PASS
Band41(2555-2655)	10	41190	50	#0	QPSK	18.02	37	PASS
Band41(2555-2655)	10	41190	1	#0	QAM16	19.88	37	PASS
Band41(2555-2655)	10	41190	1	#Mid	QAM16	19.19	37	PASS
Band41(2555-2655)	10	41190	1	#Max	QAM16	18.82	37	PASS
Band41(2555-2655)	10	41190	25	#0	QAM16	19.13	37	PASS
Band41(2555-2655)	10	41190	25	#Max	QAM16	18.92	37	PASS
Band41(2555-2655)	10	41190	50	#0	QAM16	19.00	37	PASS
Band41(2555-2655)	15	40315	1	#0	QPSK	19.53	37	PASS
Band41(2555-2655)	15	40315	1	#Mid	QPSK	18.66	37	PASS
Band41(2555-2655)	15	40315	1	#Max	QPSK	19.36	37	PASS
Band41(2555-2655)	15	40315	36	#0	QPSK	18.77	37	PASS
Band41(2555-2655)	15	40315	36	#Max	QPSK	19.66	37	PASS
Band41(2555-2655)	15	40315	75	#0	QPSK	18.75	37	PASS
Band41(2555-2655)	15	40315	1	#0	QAM16	19.92	37	PASS
Band41(2555-2655)	15	40315	1	#Mid	QAM16	18.07	37	PASS
Band41(2555-2655)	15	40315	1	#Max	QAM16	18.73	37	PASS
Band41(2555-2655)	15	40315	36	#0	QAM16	18.79	37	PASS
Band41(2555-2655)	15	40315	36	#Max	QAM16	18.69	37	PASS
Band41(2555-2655)	15	40315	75	#0	QAM16	18.70	37	PASS
Band41(2555-2655)	15	40740	1	#0	QPSK	19.08	37	PASS
Band41(2555-2655)	15	40740	1	#Mid	QPSK	18.21	37	PASS
Band41(2555-2655)	15	40740	1	#Max	QPSK	19.93	37	PASS
Band41(2555-2655)	15	40740	36	#0	QPSK	19.22	37	PASS
Band41(2555-2655)	15	40740	36	#Max	QPSK	18.08	37	PASS
Band41(2555-2655)	15	40740	75	#0	QPSK	19.15	37	PASS
Band41(2555-2655)	15	40740	1	#0	QAM16	18.10	37	PASS
Band41(2555-2655)	15	40740	1	#Mid	QAM16	19.21	37	PASS
Band41(2555-2655)	15	40740	1	#Max	QAM16	18.94	37	PASS
Band41(2555-2655)	15	40740	36	#0	QAM16	19.23	37	PASS

Band41(2555-2655)	15	40740	36	#Max	QAM16	19.10	37	PASS
Band41(2555-2655)	15	40740	75	#0	QAM16	19.10	37	PASS
Band41(2555-2655)	15	41165	1	#0	QPSK	18.76	37	PASS
Band41(2555-2655)	15	41165	1	#Mid	QPSK	18.05	37	PASS
Band41(2555-2655)	15	41165	1	#Max	QPSK	19.76	37	PASS
Band41(2555-2655)	15	41165	36	#0	QPSK	19.99	37	PASS
Band41(2555-2655)	15	41165	36	#Max	QPSK	18.93	37	PASS
Band41(2555-2655)	15	41165	75	#0	QPSK	18.98	37	PASS
Band41(2555-2655)	15	41165	1	#0	QAM16	19.78	37	PASS
Band41(2555-2655)	15	41165	1	#Mid	QAM16	18.09	37	PASS
Band41(2555-2655)	15	41165	1	#Max	QAM16	18.81	37	PASS
Band41(2555-2655)	15	41165	36	#0	QAM16	19.99	37	PASS
Band41(2555-2655)	15	41165	36	#Max	QAM16	18.91	37	PASS
Band41(2555-2655)	15	41165	75	#0	QAM16	19.99	37	PASS
Band41(2555-2655)	20	40340	1	#0	QPSK	19.43	37	PASS
Band41(2555-2655)	20	40340	1	#Mid	QPSK	18.83	37	PASS
Band41(2555-2655)	20	40340	1	#Max	QPSK	19.18	37	PASS
Band41(2555-2655)	20	40340	50	#0	QPSK	18.87	37	PASS
Band41(2555-2655)	20	40340	50	#Max	QPSK	19.69	37	PASS
Band41(2555-2655)	20	40340	100	#0	QPSK	18.79	37	PASS
Band41(2555-2655)	20	40340	1	#0	QAM16	19.68	37	PASS
Band41(2555-2655)	20	40340	1	#Mid	QAM16	18.05	37	PASS
Band41(2555-2655)	20	40340	1	#Max	QAM16	18.44	37	PASS
Band41(2555-2655)	20	40340	50	#0	QAM16	18.85	37	PASS
Band41(2555-2655)	20	40340	50	#Max	QAM16	18.67	37	PASS
Band41(2555-2655)	20	40340	100	#0	QAM16	18.73	37	PASS
Band41(2555-2655)	20	40740	1	#0	QPSK	18.95	37	PASS
Band41(2555-2655)	20	40740	1	#Mid	QPSK	17.34	37	PASS
Band41(2555-2655)	20	40740	1	#Max	QPSK	16.79	37	PASS
Band41(2555-2655)	20	40740	50	#0	QPSK	16.35	37	PASS
Band41(2555-2655)	20	40740	50	#Max	QPSK	16.11	37	PASS
Band41(2555-2655)	20	40740	100	#0	QPSK	16.22	37	PASS
Band41(2555-2655)	20	40740	1	#0	QAM16	18.91	37	PASS
Band41(2555-2655)	20	40740	1	#Mid	QAM16	18.29	37	PASS
Band41(2555-2655)	20	40740	1	#Max	QAM16	18.74	37	PASS
Band41(2555-2655)	20	40740	50	#0	QAM16	18.30	37	PASS
Band41(2555-2655)	20	40740	50	#Max	QAM16	18.05	37	PASS
Band41(2555-2655)	20	40740	100	#0	QAM16	18.17	37	PASS
Band41(2555-2655)	20	41140	1	#0	QPSK	18.47	37	PASS
Band41(2555-2655)	20	41140	1	#Mid	QPSK	18.08	37	PASS
Band41(2555-2655)	20	41140	1	#Max	QPSK	18.63	37	PASS
Band41(2555-2655)	20	41140	50	#0	QPSK	18.02	37	PASS
Band41(2555-2655)	20	41140	50	#Max	QPSK	18.90	37	PASS

Band41(2555-2655)	20	41140	100	#0	QPSK	18.96	37	PASS
Band41(2555-2655)	20	41140	1	#0	QAM16	18.13	37	PASS
Band41(2555-2655)	20	41140	1	#Mid	QAM16	18.80	37	PASS
Band41(2555-2655)	20	41140	1	#Max	QAM16	19.36	37	PASS
Band41(2555-2655)	20	41140	50	#0	QAM16	17.08	37	PASS
Band41(2555-2655)	20	41140	50	#Max	QAM16	18.89	37	PASS
Band41(2555-2655)	20	41140	100	#0	QAM16	18.94	37	PASS
Band5	1.4	20407	1	#0	QPSK	22.31	37	PASS
Band5	1.4	20407	1	#Mid	QPSK	22.49	37	PASS
Band5	1.4	20407	1	#Max	QPSK	22.26	37	PASS
Band5	1.4	20407	3	#0	QPSK	22.33	37	PASS
Band5	1.4	20407	3	#Max	QPSK	22.28	37	PASS
Band5	1.4	20407	6	#0	QPSK	21.27	37	PASS
Band5	1.4	20407	1	#0	QAM16	21.08	37	PASS
Band5	1.4	20407	1	#Mid	QAM16	21.22	37	PASS
Band5	1.4	20407	1	#Max	QAM16	21.03	37	PASS
Band5	1.4	20407	3	#0	QAM16	21.24	37	PASS
Band5	1.4	20407	3	#Max	QAM16	21.23	37	PASS
Band5	1.4	20407	6	#0	QAM16	20.20	37	PASS
Band5	1.4	20525	1	#0	QPSK	21.93	37	PASS
Band5	1.4	20525	1	#Mid	QPSK	22.09	37	PASS
Band5	1.4	20525	1	#Max	QPSK	21.92	37	PASS
Band5	1.4	20525	3	#0	QPSK	21.91	37	PASS
Band5	1.4	20525	3	#Max	QPSK	21.94	37	PASS
Band5	1.4	20525	6	#0	QPSK	20.85	37	PASS
Band5	1.4	20525	1	#0	QAM16	20.86	37	PASS
Band5	1.4	20525	1	#Mid	QAM16	21.11	37	PASS
Band5	1.4	20525	1	#Max	QAM16	20.86	37	PASS
Band5	1.4	20525	3	#0	QAM16	21.07	37	PASS
Band5	1.4	20525	3	#Max	QAM16	21.14	37	PASS
Band5	1.4	20525	6	#0	QAM16	19.88	37	PASS
Band5	1.4	20643	1	#0	QPSK	21.76	37	PASS
Band5	1.4	20643	1	#Mid	QPSK	21.98	37	PASS
Band5	1.4	20643	1	#Max	QPSK	21.77	37	PASS
Band5	1.4	20643	3	#0	QPSK	21.86	37	PASS
Band5	1.4	20643	3	#Max	QPSK	21.85	37	PASS
Band5	1.4	20643	6	#0	QPSK	20.81	37	PASS
Band5	1.4	20643	1	#0	QAM16	20.92	37	PASS
Band5	1.4	20643	1	#Mid	QAM16	21.08	37	PASS
Band5	1.4	20643	1	#Max	QAM16	20.94	37	PASS
Band5	1.4	20643	3	#0	QAM16	20.91	37	PASS
Band5	1.4	20643	3	#Max	QAM16	20.90	37	PASS
Band5	1.4	20643	6	#0	QAM16	19.75	37	PASS

Band5	3	20415	1	#0	QPSK	22.30	37	PASS
Band5	3	20415	1	#Mid	QPSK	22.26	37	PASS
Band5	3	20415	1	#Max	QPSK	22.21	37	PASS
Band5	3	20415	8	#0	QPSK	21.34	37	PASS
Band5	3	20415	8	#Max	QPSK	21.29	37	PASS
Band5	3	20415	15	#0	QPSK	21.27	37	PASS
Band5	3	20415	1	#0	QAM16	21.55	37	PASS
Band5	3	20415	1	#Mid	QAM16	21.45	37	PASS
Band5	3	20415	1	#Max	QAM16	21.40	37	PASS
Band5	3	20415	8	#0	QAM16	20.28	37	PASS
Band5	3	20415	8	#Max	QAM16	20.23	37	PASS
Band5	3	20415	15	#0	QAM16	20.21	37	PASS
Band5	3	20525	1	#0	QPSK	21.95	37	PASS
Band5	3	20525	1	#Mid	QPSK	22.00	37	PASS
Band5	3	20525	1	#Max	QPSK	21.94	37	PASS
Band5	3	20525	8	#0	QPSK	20.90	37	PASS
Band5	3	20525	8	#Max	QPSK	20.96	37	PASS
Band5	3	20525	15	#0	QPSK	20.91	37	PASS
Band5	3	20525	1	#0	QAM16	21.11	37	PASS
Band5	3	20525	1	#Mid	QAM16	21.13	37	PASS
Band5	3	20525	1	#Max	QAM16	21.13	37	PASS
Band5	3	20525	8	#0	QAM16	19.94	37	PASS
Band5	3	20525	8	#Max	QAM16	19.93	37	PASS
Band5	3	20525	15	#0	QAM16	19.79	37	PASS
Band5	3	20635	1	#0	QPSK	21.97	37	PASS
Band5	3	20635	1	#Mid	QPSK	21.98	37	PASS
Band5	3	20635	1	#Max	QPSK	21.99	37	PASS
Band5	3	20635	8	#0	QPSK	20.93	37	PASS
Band5	3	20635	8	#Max	QPSK	20.92	37	PASS
Band5	3	20635	15	#0	QPSK	20.89	37	PASS
Band5	3	20635	1	#0	QAM16	20.79	37	PASS
Band5	3	20635	1	#Mid	QAM16	20.81	37	PASS
Band5	3	20635	1	#Max	QAM16	20.81	37	PASS
Band5	3	20635	8	#0	QAM16	19.90	37	PASS
Band5	3	20635	8	#Max	QAM16	19.90	37	PASS
Band5	3	20635	15	#0	QAM16	19.88	37	PASS
Band5	5	20425	1	#0	QPSK	22.17	37	PASS
Band5	5	20425	1	#Mid	QPSK	22.18	37	PASS
Band5	5	20425	1	#Max	QPSK	22.01	37	PASS
Band5	5	20425	12	#0	QPSK	21.19	37	PASS
Band5	5	20425	12	#Max	QPSK	21.15	37	PASS
Band5	5	20425	25	#0	QPSK	21.17	37	PASS
Band5	5	20425	1	#0	QAM16	21.38	37	PASS

Band5	5	20425	1	#Mid	QAM16	21.40	37	PASS
Band5	5	20425	1	#Max	QAM16	21.23	37	PASS
Band5	5	20425	12	#0	QAM16	21.23	37	PASS
Band5	5	20425	12	#Max	QAM16	21.24	37	PASS
Band5	5	20425	25	#0	QAM16	20.98	37	PASS
Band5	5	20525	1	#0	QPSK	21.75	37	PASS
Band5	5	20525	1	#Mid	QPSK	21.85	37	PASS
Band5	5	20525	1	#Max	QPSK	21.82	37	PASS
Band5	5	20525	12	#0	QPSK	20.83	37	PASS
Band5	5	20525	12	#Max	QPSK	20.86	37	PASS
Band5	5	20525	25	#0	QPSK	20.88	37	PASS
Band5	5	20525	1	#0	QAM16	20.98	37	PASS
Band5	5	20525	1	#Mid	QAM16	21.16	37	PASS
Band5	5	20525	1	#Max	QAM16	21.09	37	PASS
Band5	5	20525	12	#0	QAM16	19.91	37	PASS
Band5	5	20525	12	#Max	QAM16	19.93	37	PASS
Band5	5	20525	25	#0	QAM16	19.89	37	PASS
Band5	5	20625	1	#0	QPSK	21.74	37	PASS
Band5	5	20625	1	#Mid	QPSK	21.84	37	PASS
Band5	5	20625	1	#Max	QPSK	21.75	37	PASS
Band5	5	20625	12	#0	QPSK	20.85	37	PASS
Band5	5	20625	12	#Max	QPSK	20.75	37	PASS
Band5	5	20625	25	#0	QPSK	20.84	37	PASS
Band5	5	20625	1	#0	QAM16	21.01	37	PASS
Band5	5	20625	1	#Mid	QAM16	21.16	37	PASS
Band5	5	20625	1	#Max	QAM16	21.02	37	PASS
Band5	5	20625	12	#0	QAM16	19.84	37	PASS
Band5	5	20625	12	#Max	QAM16	19.75	37	PASS
Band5	5	20625	25	#0	QAM16	19.86	37	PASS
Band5	10	20450	1	#0	QPSK	22.20	37	PASS
Band5	10	20450	1	#Mid	QPSK	22.19	37	PASS
Band5	10	20450	1	#Max	QPSK	21.83	37	PASS
Band5	10	20450	25	#0	QPSK	21.20	37	PASS
Band5	10	20450	25	#Max	QPSK	21.03	37	PASS
Band5	10	20450	50	#0	QPSK	21.09	37	PASS
Band5	10	20450	1	#0	QAM16	21.37	37	PASS
Band5	10	20450	1	#Mid	QAM16	21.44	37	PASS
Band5	10	20450	1	#Max	QAM16	21.13	37	PASS
Band5	10	20450	25	#0	QAM16	20.21	37	PASS
Band5	10	20450	25	#Max	QAM16	20.08	37	PASS
Band5	10	20450	50	#0	QAM16	20.07	37	PASS
Band5	10	20525	1	#0	QPSK	20.53	37	PASS
Band5	10	20525	1	#Mid	QPSK	20.63	37	PASS

Band5	10	20525	1	#Max	QPSK	21.12	37	PASS
Band5	10	20525	25	#0	QPSK	21.35	37	PASS
Band5	10	20525	25	#Max	QPSK	20.85	37	PASS
Band5	10	20525	50	#0	QPSK	20.68	37	PASS
Band5	10	20525	1	#0	QAM16	20.61	37	PASS
Band5	10	20525	1	#Mid	QAM16	21.34	37	PASS
Band5	10	20525	1	#Max	QAM16	21.29	37	PASS
Band5	10	20525	25	#0	QAM16	20.13	37	PASS
Band5	10	20525	25	#Max	QAM16	20.08	37	PASS
Band5	10	20525	50	#0	QAM16	20.00	37	PASS
Band5	10	20600	1	#0	QPSK	21.98	37	PASS
Band5	10	20600	1	#Mid	QPSK	22.02	37	PASS
Band5	10	20600	1	#Max	QPSK	21.81	37	PASS
Band5	10	20600	25	#0	QPSK	21.15	37	PASS
Band5	10	20600	25	#Max	QPSK	20.84	37	PASS
Band5	10	20600	50	#0	QPSK	20.98	37	PASS
Band5	10	20600	1	#0	QAM16	21.13	37	PASS
Band5	10	20600	1	#Mid	QAM16	21.18	37	PASS
Band5	10	20600	1	#Max	QAM16	20.93	37	PASS
Band5	10	20600	25	#0	QAM16	20.15	37	PASS
Band5	10	20600	25	#Max	QAM16	19.84	37	PASS
Band5	10	20600	50	#0	QAM16	19.94	37	PASS
Band7	5	20775	1	#0	QPSK	19.83	37	PASS
Band7	5	20775	1	#Mid	QPSK	19.71	37	PASS
Band7	5	20775	1	#Max	QPSK	19.40	37	PASS
Band7	5	20775	12	#0	QPSK	18.76	37	PASS
Band7	5	20775	12	#Max	QPSK	18.56	37	PASS
Band7	5	20775	25	#0	QPSK	18.70	37	PASS
Band7	5	20775	1	#0	QAM16	19.08	37	PASS
Band7	5	20775	1	#Mid	QAM16	18.98	37	PASS
Band7	5	20775	1	#Max	QAM16	18.68	37	PASS
Band7	5	20775	12	#0	QAM16	18.76	37	PASS
Band7	5	20775	12	#Max	QAM16	18.57	37	PASS
Band7	5	20775	25	#0	QAM16	18.73	37	PASS
Band7	5	21100	1	#0	QPSK	18.84	37	PASS
Band7	5	21100	1	#Mid	QPSK	18.88	37	PASS
Band7	5	21100	1	#Max	QPSK	18.79	37	PASS
Band7	5	21100	12	#0	QPSK	18.88	37	PASS
Band7	5	21100	12	#Max	QPSK	19.86	37	PASS
Band7	5	21100	25	#0	QPSK	18.87	37	PASS
Band7	5	21100	1	#0	QAM16	18.01	37	PASS
Band7	5	21100	1	#Mid	QAM16	18.04	37	PASS
Band7	5	21100	1	#Max	QAM16	17.96	37	PASS

Band7	5	21100	12	#0	QAM16	17.88	37	PASS
Band7	5	21100	12	#Max	QAM16	17.89	37	PASS
Band7	5	21100	25	#0	QAM16	18.88	37	PASS
Band7	5	21425	1	#0	QPSK	19.00	37	PASS
Band7	5	21425	1	#Mid	QPSK	19.08	37	PASS
Band7	5	21425	1	#Max	QPSK	18.96	37	PASS
Band7	5	21425	12	#0	QPSK	18.00	37	PASS
Band7	5	21425	12	#Max	QPSK	18.03	37	PASS
Band7	5	21425	25	#0	QPSK	18.06	37	PASS
Band7	5	21425	1	#0	QAM16	18.23	37	PASS
Band7	5	21425	1	#Mid	QAM16	18.33	37	PASS
Band7	5	21425	1	#Max	QAM16	18.22	37	PASS
Band7	5	21425	12	#0	QAM16	18.14	37	PASS
Band7	5	21425	12	#Max	QAM16	18.15	37	PASS
Band7	5	21425	25	#0	QAM16	18.09	37	PASS
Band7	10	20800	1	#0	QPSK	19.81	37	PASS
Band7	10	20800	1	#Mid	QPSK	19.64	37	PASS
Band7	10	20800	1	#Max	QPSK	19.30	37	PASS
Band7	10	20800	25	#0	QPSK	18.76	37	PASS
Band7	10	20800	25	#Max	QPSK	18.43	37	PASS
Band7	10	20800	50	#0	QPSK	18.58	37	PASS
Band7	10	20800	1	#0	QAM16	19.07	37	PASS
Band7	10	20800	1	#Mid	QAM16	18.87	37	PASS
Band7	10	20800	1	#Max	QAM16	18.57	37	PASS
Band7	10	20800	25	#0	QAM16	18.85	37	PASS
Band7	10	20800	25	#Max	QAM16	18.51	37	PASS
Band7	10	20800	50	#0	QAM16	18.58	37	PASS
Band7	10	21100	1	#0	QPSK	18.94	37	PASS
Band7	10	21100	1	#Mid	QPSK	19.11	37	PASS
Band7	10	21100	1	#Max	QPSK	18.87	37	PASS
Band7	10	21100	25	#0	QPSK	18.98	37	PASS
Band7	10	21100	25	#Max	QPSK	18.96	37	PASS
Band7	10	21100	50	#0	QPSK	18.95	37	PASS
Band7	10	21100	1	#0	QAM16	18.07	37	PASS
Band7	10	21100	1	#Mid	QAM16	18.18	37	PASS
Band7	10	21100	1	#Max	QAM16	18.01	37	PASS
Band7	10	21100	25	#0	QAM16	18.03	37	PASS
Band7	10	21100	25	#Max	QAM16	18.00	37	PASS
Band7	10	21100	50	#0	QAM16	18.98	37	PASS
Band7	10	21400	1	#0	QPSK	19.14	37	PASS
Band7	10	21400	1	#Mid	QPSK	19.36	37	PASS
Band7	10	21400	1	#Max	QPSK	19.08	37	PASS
Band7	10	21400	25	#0	QPSK	18.20	37	PASS

Band7	10	21400	25	#Max	QPSK	18.19	37	PASS
Band7	10	21400	50	#0	QPSK	18.18	37	PASS
Band7	10	21400	1	#0	QAM16	18.96	37	PASS
Band7	10	21400	1	#Mid	QAM16	18.19	37	PASS
Band7	10	21400	1	#Max	QAM16	18.90	37	PASS
Band7	10	21400	25	#0	QAM16	18.23	37	PASS
Band7	10	21400	25	#Max	QAM16	18.21	37	PASS
Band7	10	21400	50	#0	QAM16	18.20	37	PASS
Band7	15	20825	1	#0	QPSK	19.65	37	PASS
Band7	15	20825	1	#Mid	QPSK	19.38	37	PASS
Band7	15	20825	1	#Max	QPSK	19.09	37	PASS
Band7	15	20825	36	#0	QPSK	18.62	37	PASS
Band7	15	20825	36	#Max	QPSK	18.27	37	PASS
Band7	15	20825	75	#0	QPSK	18.43	37	PASS
Band7	15	20825	1	#0	QAM16	18.90	37	PASS
Band7	15	20825	1	#Mid	QAM16	18.65	37	PASS
Band7	15	20825	1	#Max	QAM16	18.37	37	PASS
Band7	15	20825	36	#0	QAM16	17.65	37	PASS
Band7	15	20825	36	#Max	QAM16	17.33	37	PASS
Band7	15	20825	75	#0	QAM16	17.47	37	PASS
Band7	15	21100	1	#0	QPSK	18.88	37	PASS
Band7	15	21100	1	#Mid	QPSK	18.90	37	PASS
Band7	15	21100	1	#Max	QPSK	18.72	37	PASS
Band7	15	21100	36	#0	QPSK	17.94	37	PASS
Band7	15	21100	36	#Max	QPSK	17.84	37	PASS
Band7	15	21100	75	#0	QPSK	17.91	37	PASS
Band7	15	21100	1	#0	QAM16	17.98	37	PASS
Band7	15	21100	1	#Mid	QAM16	18.02	37	PASS
Band7	15	21100	1	#Max	QAM16	17.84	37	PASS
Band7	15	21100	36	#0	QAM16	17.01	37	PASS
Band7	15	21100	36	#Max	QAM16	19.91	37	PASS
Band7	15	21100	75	#0	QAM16	19.91	37	PASS
Band7	15	21375	1	#0	QPSK	18.97	37	PASS
Band7	15	21375	1	#Mid	QPSK	19.18	37	PASS
Band7	15	21375	1	#Max	QPSK	18.90	37	PASS
Band7	15	21375	36	#0	QPSK	18.13	37	PASS
Band7	15	21375	36	#Max	QPSK	18.05	37	PASS
Band7	15	21375	75	#0	QPSK	18.13	37	PASS
Band7	15	21375	1	#0	QAM16	18.95	37	PASS
Band7	15	21375	1	#Mid	QAM16	18.14	37	PASS
Band7	15	21375	1	#Max	QAM16	17.87	37	PASS
Band7	15	21375	36	#0	QAM16	17.17	37	PASS
Band7	15	21375	36	#Max	QAM16	17.09	37	PASS

Band7	15	21375	75	#0	QAM16	17.13	37	PASS
Band7	20	20850	1	#0	QPSK	19.54	37	PASS
Band7	20	20850	1	#Mid	QPSK	19.42	37	PASS
Band7	20	20850	1	#Max	QPSK	18.98	37	PASS
Band7	20	20850	50	#0	QPSK	19.62	37	PASS
Band7	20	20850	50	#Max	QPSK	18.51	37	PASS
Band7	20	20850	100	#0	QPSK	18.32	37	PASS
Band7	20	20850	1	#0	QAM16	18.62	37	PASS
Band7	20	20850	1	#Mid	QAM16	18.92	37	PASS
Band7	20	20850	1	#Max	QAM16	18.52	37	PASS
Band7	20	20850	50	#0	QAM16	18.62	37	PASS
Band7	20	20850	50	#Max	QAM16	19.68	37	PASS
Band7	20	20850	100	#0	QAM16	19.76	37	PASS
Band7	20	21100	1	#0	QPSK	19.28	37	PASS
Band7	20	21100	1	#Mid	QPSK	19.49	37	PASS
Band7	20	21100	1	#Max	QPSK	19.05	37	PASS
Band7	20	21100	50	#0	QPSK	18.48	37	PASS
Band7	20	21100	50	#Max	QPSK	18.39	37	PASS
Band7	20	21100	100	#0	QPSK	18.44	37	PASS
Band7	20	21100	1	#0	QAM16	18.47	37	PASS
Band7	20	21100	1	#Mid	QAM16	18.69	37	PASS
Band7	20	21100	1	#Max	QAM16	18.24	37	PASS
Band7	20	21100	50	#0	QAM16	17.57	37	PASS
Band7	20	21100	50	#Max	QAM16	17.44	37	PASS
Band7	20	21100	100	#0	QAM16	17.44	37	PASS
Band7	20	21350	1	#0	QPSK	18.72	37	PASS
Band7	20	21350	1	#Mid	QPSK	19.30	37	PASS
Band7	20	21350	1	#Max	QPSK	18.80	37	PASS
Band7	20	21350	50	#0	QPSK	18.20	37	PASS
Band7	20	21350	50	#Max	QPSK	18.08	37	PASS
Band7	20	21350	100	#0	QPSK	18.15	37	PASS
Band7	20	21350	1	#0	QAM16	17.29	37	PASS
Band7	20	21350	1	#Mid	QAM16	18.05	37	PASS
Band7	20	21350	1	#Max	QAM16	17.63	37	PASS
Band7	20	21350	50	#0	QAM16	17.23	37	PASS
Band7	20	21350	50	#Max	QAM16	17.11	37	PASS
Band7	20	21350	100	#0	QAM16	17.18	37	PASS

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	high Limit (dBm)	Verdict
Band40a	5	38725	1	#0	QPSK	21.15	37	PASS
Band40a	5	38725	1	#Mid	QPSK	21.38	37	PASS
Band40a	5	38725	1	#Max	QPSK	21.41	37	PASS

Band40a	5	38725	12	#0	QPSK	20.61	37	PASS
Band40a	5	38725	12	#Max	QPSK	20.65	37	PASS
Band40a	5	38725	25	#0	QPSK	20.65	37	PASS
Band40a	5	38725	1	#0	QAM16	21.07	37	PASS
Band40a	5	38725	1	#Mid	QAM16	21.22	37	PASS
Band40a	5	38725	1	#Max	QAM16	20.95	37	PASS
Band40a	5	38725	12	#0	QAM16	19.56	37	PASS
Band40a	5	38725	12	#Max	QAM16	19.55	37	PASS
Band40a	5	38725	25	#0	QAM16	19.65	37	PASS
Band40a	5	38750	1	#0	QPSK	21.36	37	PASS
Band40a	5	38750	1	#Mid	QPSK	21.43	37	PASS
Band40a	5	38750	1	#Max	QPSK	21.54	37	PASS
Band40a	5	38750	12	#0	QPSK	20.62	37	PASS
Band40a	5	38750	12	#Max	QPSK	20.76	37	PASS
Band40a	5	38750	25	#0	QPSK	20.77	37	PASS
Band40a	5	38750	1	#0	QAM16	20.54	37	PASS
Band40a	5	38750	1	#Mid	QAM16	20.78	37	PASS
Band40a	5	38750	1	#Max	QAM16	21.15	37	PASS
Band40a	5	38750	12	#0	QAM16	19.56	37	PASS
Band40a	5	38750	12	#Max	QAM16	19.51	37	PASS
Band40a	5	38750	25	#0	QAM16	19.68	37	PASS
Band40a	5	38775	1	#0	QPSK	21.60	37	PASS
Band40a	5	38775	1	#Mid	QPSK	21.63	37	PASS
Band40a	5	38775	1	#Max	QPSK	21.72	37	PASS
Band40a	5	38775	12	#0	QPSK	20.82	37	PASS
Band40a	5	38775	12	#Max	QPSK	20.85	37	PASS
Band40a	5	38775	25	#0	QPSK	20.85	37	PASS
Band40a	5	38775	1	#0	QAM16	20.73	37	PASS
Band40a	5	38775	1	#Mid	QAM16	20.80	37	PASS
Band40a	5	38775	1	#Max	QAM16	20.42	37	PASS
Band40a	5	38775	12	#0	QAM16	19.76	37	PASS
Band40a	5	38775	12	#Max	QAM16	19.74	37	PASS
Band40a	5	38775	25	#0	QAM16	19.98	37	PASS
Band40a	10	38750	1	#0	QPSK	21.54	37	PASS
Band40a	10	38750	1	#Mid	QPSK	21.56	37	PASS
Band40a	10	38750	1	#Max	QPSK	21.78	37	PASS
Band40a	10	38750	25	#0	QPSK	20.71	37	PASS
Band40a	10	38750	25	#Max	QPSK	20.87	37	PASS
Band40a	10	38750	50	#0	QPSK	20.69	37	PASS
Band40a	10	38750	1	#0	QAM16	20.72	37	PASS
Band40a	10	38750	1	#Mid	QAM16	20.92	37	PASS
Band40a	10	38750	1	#Max	QAM16	20.90	37	PASS
Band40a	10	38750	25	#0	QAM16	19.71	37	PASS

Band40a	10	38750	25	#Max	QAM16	19.86	37	PASS
Band40a	10	38750	50	#0	QAM16	19.93	37	PASS
Band40b	5	39175	1	#0	QPSK	21.13	37	PASS
Band40b	5	39175	1	#Mid	QPSK	21.21	37	PASS
Band40b	5	39175	1	#Max	QPSK	21.36	37	PASS
Band40b	5	39175	12	#0	QPSK	20.56	37	PASS
Band40b	5	39175	12	#Max	QPSK	20.62	37	PASS
Band40b	5	39175	25	#0	QPSK	20.60	37	PASS
Band40b	5	39175	1	#0	QAM16	20.81	37	PASS
Band40b	5	39175	1	#Mid	QAM16	21.19	37	PASS
Band40b	5	39175	1	#Max	QAM16	20.93	37	PASS
Band40b	5	39175	12	#0	QAM16	19.41	37	PASS
Band40b	5	39175	12	#Max	QAM16	19.35	37	PASS
Band40b	5	39175	25	#0	QAM16	19.47	37	PASS
Band40b	5	39200	1	#0	QPSK	21.34	37	PASS
Band40b	5	39200	1	#Mid	QPSK	21.46	37	PASS
Band40b	5	39200	1	#Max	QPSK	21.46	37	PASS
Band40b	5	39200	12	#0	QPSK	20.55	37	PASS
Band40b	5	39200	12	#Max	QPSK	20.73	37	PASS
Band40b	5	39200	25	#0	QPSK	20.63	37	PASS
Band40b	5	39200	1	#0	QAM16	20.47	37	PASS
Band40b	5	39200	1	#Mid	QAM16	20.93	37	PASS
Band40b	5	39200	1	#Max	QAM16	20.86	37	PASS
Band40b	5	39200	12	#0	QAM16	19.48	37	PASS
Band40b	5	39200	12	#Max	QAM16	19.46	37	PASS
Band40b	5	39200	25	#0	QAM16	19.60	37	PASS
Band40b	5	39225	1	#0	QPSK	21.46	37	PASS
Band40b	5	39225	1	#Mid	QPSK	21.62	37	PASS
Band40b	5	39225	1	#Max	QPSK	21.60	37	PASS
Band40b	5	39225	12	#0	QPSK	20.80	37	PASS
Band40b	5	39225	12	#Max	QPSK	20.80	37	PASS
Band40b	5	39225	25	#0	QPSK	20.89	37	PASS
Band40b	5	39225	1	#0	QAM16	20.56	37	PASS
Band40b	5	39225	1	#Mid	QAM16	20.71	37	PASS
Band40b	5	39225	1	#Max	QAM16	20.69	37	PASS
Band40b	5	39225	12	#0	QAM16	19.59	37	PASS
Band40b	5	39225	12	#Max	QAM16	19.64	37	PASS
Band40b	5	39225	25	#0	QAM16	19.69	37	PASS
Band40b	10	39200	1	#0	QPSK	21.47	37	PASS
Band40b	10	39200	1	#Mid	QPSK	21.52	37	PASS
Band40b	10	39200	1	#Max	QPSK	21.71	37	PASS
Band40b	10	39200	25	#0	QPSK	20.57	37	PASS
Band40b	10	39200	25	#Max	QPSK	20.76	37	PASS

Band40b	10	39200	50	#0	QPSK	20.74	37	PASS
Band40b	10	39200	1	#0	QAM16	20.30	37	PASS
Band40b	10	39200	1	#Mid	QAM16	20.84	37	PASS
Band40b	10	39200	1	#Max	QAM16	20.82	37	PASS
Band40b	10	39200	25	#0	QAM16	19.65	37	PASS
Band40b	10	39200	25	#Max	QAM16	19.81	37	PASS
Band40b	10	39200	50	#0	QAM16	19.68	37	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.
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(2.4G) - Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11b	1Mbps	CH 01	2412	7.591	8.0
		CH 06	2437	7.467	7.5
		CH 11	2462	7.031	7.5
802.11g	6Mbps	CH 01	2412	6.719	7.0
		CH 06	2437	6.782	7.0
		CH 11	2462	6.988	7.0
802.11n (20MHz)	MCS0	CH 01	2412	6.383	6.5
		CH 06	2437	6.413	6.5
		CH 11	2462	7.036	7.5
802.11n (40MHz)	MCS0	CH 03	2422	5.201	5.5
		CH 06	2437	5.409	5.5
		CH 09	2452	5.571	6.0

WLAN(5.2G) – Conducted Power				
Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11a	CH 36	5180	7.805	8.0
	CH 40	5200	7.718	8.0
	CH 48	5240	7.685	8.0
802.11n (HT20)	CH 36	5180	7.669	8.0
	CH 40	5200	7.915	8.0
	CH 48	5240	7.511	8.0
802.11n (HT40)	CH 38	5190	6.468	7.0
	CH 46	5230	6.778	7.0
802.11 ac (HT20)	CH 36	5180	7.645	8.0
	CH 40	5200	7.913	8.0
	CH 48	5240	7.515	8.0
802.11 ac (HT40)	CH 38	5190	6.624	7.0
	CH 46	5230	6.81	7.0

WLAN(5.8G) – Conducted Power				
Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11a	CH 149	5745	7.316	7.5
	CH 157	5785	7.350	7.5
	CH 165	5825	7.798	8.0
802.11n (HT20)	CH 149	5745	7.572	8.0
	CH 157	5785	7.508	8.0
	CH 165	5825	7.838	8.0
802.11n (HT40)	CH 151	5755	6.699	7.0
	CH 159	5795	6.931	7.0
802.11 ac (HT20)	CH 149	5745	7.673	8.0
	CH 157	5785	7.282	7.5
	CH 165	5825	7.845	8.0
802.11 ac (HT40)	CH 151	5755	6.451	6.5
	CH 159	5795	6.986	7.0

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	Average Power(dBm)	Tune-up power (dBm)
GFSK	1Mbps	3.057	3.5
Pi/4 QDPSK	2Mbps	2.076	3.0
8DPSK	3Mbps	2.368	3.0

Bluetooth - Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
BLE	1Mbps	CH 00	2402	1.365	1.5
		CH 19	2440	0.663	1.0
		CH 39	2480	-1.128	0

Remark:

Bluetooth maximum output power is 1.767dBm and Maximum Tune-Up output power is 2.0dBm,. Per KDB 447498 D01 V06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,¹⁶ where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	Result	Limit
3.5	2.24	5	2.48	0.71	3

The exclusion thresholds is $0.71 < 3$, therefore, the RF exposure evaluation is not required.

9.2 Test Results for Standalone SAR Test

Near to Mouth 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					
1.	GSM	Front side	128	824.2	32.42	32.5	1.019	0.206	0.210

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					
2.	GSM	Front side	512	1850.2	30.08	30.5	1.102	0.257	0.283

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					
3.	RMC 12.2k	Front Side	9538	1907.6	23.1	23.5	1.096	0.740	0.811

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					
4.	RMC 12.2k	Front Side	4132	826.4	23.26	23.5	1.057	0.191	0.202

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Freque ncy	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Bandwidth, RB		MHz					
5.	QPSK 1.4MHz 1RB	Front Side	1850.7	20.24	20.5	1.062	0.430	0.457
	QPSK 1.4MHz 50%RB	Front Side	1850.7	20.24	20.5	1.062	0.429	0.455

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Freque ncy	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Bandwidth, RB		MHz					
6.	QPSK 20MHz 1RB	Front Side	1860.0	19.62	20.0	1.091	0.513	0.560
	QPSK 20MHz 50%RB	Front Side	1860.0	19.62	20.0	1.091	0.459	0.501

LTE 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)
	Bandwidth, RB		MHz					
7.	QPSK 10MHz 1RB	Front Side	829	22.2	22.5	1.072	0.186	0.199
	QPSK 10MHz 50%RB	Front Side	829	22.2	22.5	1.072	0.152	0.163

LTE Band 7–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)
	Bandwidth, RB		MHz					
8.	QPSK 20MHz 1RB	Front Side	2510	19.76	20.0	1.057	0.288	0.304
	QPSK 20MHz 50%RB	Front Side	2510	19.76	20.0	1.057	0.255	0.269

LTE Band 12–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)
	Bandwidth, RB		MHz					
9.	QPSK 10MHz 1RB	Front Side	711.0	23.96	24.0	1.009	0.128	0.129
	QPSK 10MHz 50%RB	Front Side	711.0	23.96	24.0	1.009	0.100	0.101

LTE Band 38–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)
	Bandwidth, RB		MHz					
10.	QPSK 20MHz 1RB	Front Side	2580	18.92	19.0	1.019	0.073	0.074
	QPSK 20MHz 50%RB	Front Side	2580	18.92	19.0	1.019	0.048	0.049

LTE Band 40(2305~2315MHz)–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)
	Bandwidth, RB		MHz					
11.	QPSK 10MHz 1RB	Front Side	2310	21.78	22.0	1.069	0.124	0.133
	QPSK 10MHz 50%RB	Front Side	2310	21.78	22.0	1.069	0.073	0.078

LTE Band 40(2350~2360MHz)–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)
	Bandwidth, RB		MHz					
12.	QPSK 10MHz 1RB	Front Side	2355	21.71	22.0	1.069	0.090	0.096
	QPSK 10MHz 50%RB	Front Side	2355	21.71	22.0	1.069	0.068	0.073

LTE Band 41–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)
	Bandwidth, RB		MHz					
	QPSK 20MHz 1RB	Front Side	2605	19.69	20.0	1.074	0.080	0.086
13.	QPSK 20MHz 50%RB	Front Side	2605	19.69	20.0	1.074	0.081	0.087

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					
14.	802.11n (HT20)	Front Side	40	5200	7.915	8.0	1.020	0.096	0.098

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					
15.	802.11a	Front Side	165	5825	7.798	8.0	1.048	0.242	0.254

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					
16.	802.11b	Front Side	01	2412	7.591	8.0	1.099	0.013	0.014

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.

Wrist-worn SAR

GSM850 –Wrist-worn SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
			CH.	MHz					
17.	GPRS_4TX	Back Side	190	836.6	29.28	29.5	1.052	0.248	0.261

GSM1900 –Wrist-worn SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
			CH.	MHz					
18.	GPRS_4TX	Back Side	810	1909.8	27.46	28.0	1.132	0.312	0.353

WCDMA Band 2 –Wrist-worn SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
			CH.	MHz					
19.	RMC 12.2k	Back Side	9538	1907.6	23.10	23.5	1.096	0.546	0.599

WCDMA Band 5 –Wrist-worn SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
			CH.	MHz					
20.	RMC 12.2k	Back Side	4132	826.4	23.26	23.5	1.057	0.229	0.242

LTE Band 2–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
	Bandwidth, RB		MHz					
21.	QPSK 1.4MHz 1RB	Back Side	1850.7	20.24	20.5	1.062	0.416	0.442
	QPSK 1.4MHz 50%RB	Back Side	1850.7	20.24	20.5	1.062	0.364	0.386

LTE Band 2–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
	Bandwidth, RB		MHz					
22.	QPSK 20MHz 1RB	Back Side	1860	19.62	20.0	1.091	0.454	0.496
	QPSK 20MHz 50%RB	Back Side	1860	19.62	20.0	1.091	0.376	0.410

LTE Band 5–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
	Bandwidth, RB		MHz					
23.	QPSK 10MHz 1RB	Back Side	829	22.2	22.5	1.072	0.235	0.252
	QPSK 10MHz 50%RB	Back Side	829	22.2	22.5	1.072	0.178	0.191

LTE Band 7–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
	Bandwidth, RB		MHz					
24.	QPSK 20MHz 1RB	Back Side	2510	19.76	20.0	1.057	0.217	0.229
	QPSK 20MHz 50%RB	Back Side	2510	19.76	20.0	1.057	0.185	0.196

LTE Band 12–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
	Bandwidth, RB		MHz					
25.	QPSK 10MHz 1RB	Back Side	711.0	23.96	24.0	1.009	0.148	0.149
	QPSK 10MHz 50%RB	Back Side	711.0	23.96	24.0	1.009	0.118	0.119

LTE Band 38–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10 g (W/kg)	Scaled SAR10 g (W/kg)
	Bandwidth, RB		MHz					
26.	QPSK 20MHz 1RB	Back Side	2580	18.92	19.0	1.019	0.070	0.071
	QPSK 20MHz 50%RB	Back Side	2580	18.92	19.0	1.019	0.042	0.043

LTE Band 40(2305~2315MHz)–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10g (W/kg)	Scaled SAR10g (W/kg)
	Bandwidth, RB		MHz					
27.	QPSK 10MHz 1RB	Back Side	2310	21.78	22.0	1.052	0.097	0.102
	QPSK 10MHz 50%RB	Back Side	2310	21.78	22.0	1.052	0.078	0.082

LTE Band 40(2350~2360MHz)–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10g (W/kg)	Scaled SAR10g (W/kg)
	Bandwidth, RB		MHz					
28.	QPSK 10MHz 1RB	Back Side	2355	21.71	22.0	1.069	0.109	0.117
	QPSK 10MHz 50%RB	Back Side	2355	21.71	22.0	1.069	0.105	0.112

LTE Band 41–Wrist-worn SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10g (W/kg)	Scaled SAR10g (W/kg)
	Bandwidth, RB		MHz					
29.	QPSK 20MHz 1RB	Back Side	2605	19.69	20.0	1.074	0.084	0.090
	QPSK 20MHz 50%RB	Back Side	2605	19.69	20.0	1.074	0.082	0.088

WLAN 5.2GHz –Wrist-worn SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10g (W/kg)	Scaled SAR10g (W/kg)
			CH.	MHz					
30.	802.11n (HT20)	Back Side	40	5200	7.915	8.0	1.020	0.084	0.086

WLAN 5.8GHz –Wrist-worn SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10g (W/kg)	Scaled SAR10g (W/kg)
			CH.	MHz					
31.	802.11a	Back Side	165	5825	7.798	8.0	1.048	0.103	0.108

WLAN 2.4GHz –Wrist-worn SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR10g (W/kg)	Scaled SAR10g (W/kg)
			CH.	MHz					
32.	802.11b	Back Side	01	2412	7.591	8.0	1.099	0.012	0.013

Remark: Per 447498 D01 General RF Exposure Guidance v06, if the highest output channel SAR for each exposure position ≤ 2.0 W/kg other channels SAR tests are not necessary.

Repeated SAR

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 ($\sim 10\%$ 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	Near to Mouth SAR	Wrist-worn SAR
1	GSM(Voice/Data) + WLAN(2.4G)(Data)	Yes	Yes
2	WCDMA (Voice/Data)+ (2.4G)(Data)	Yes	Yes
3	LTE(Data) + (2.4G)(Data)	Yes	Yes
4	GSM(Voice/Data) + WLAN(5G)(Data)	Yes	Yes
5	WCDMA (Voice/Data)+ (5G)(Data)	Yes	Yes
6	LTE(Data) + (5G)(Data)	Yes	Yes
7	GSM(Voice/Data) + Bluetooth(Data)	Yes	Yes
8	WCDMA (Voice/Data) + Bluetooth(Data)	Yes	Yes
9	LTE(Data) + Bluetooth(Data)	Yes	Yes

Remark:

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

$$(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})}/x] \text{ W/kg for test separation distances } \leq 50 \text{ mm};$$
 where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.
 For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01 v06 as below:

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	X	SAR(1g) 10mm
3.5	2.24	5/10	2.48	7.5	0.047

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	X	SAR(10g) 5mm
3.5	2.24	5/10	2.48	18.75	0.038

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

Near to Mouth SAR**WWAN and WLAN**

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM850	0.210	0.014	0.224
Front	GSM1900	0.283	0.014	0.297
Front	WCDMA Band 2	0.811	0.014	0.825
Front	WCDMA Band 5	0.202	0.014	0.216
Front	LTE Band 2	0.560	0.014	0.574
Front	LTE Band 5	0.199	0.014	0.213
Front	LTE Band 7	0.304	0.014	0.318
Front	LTE Band 12	0.129	0.014	0.143
Front	LTE Band 38	0.074	0.014	0.088
Front	LTE Band 40	0.133	0.014	0.147
Front	LTE Band 41	0.087	0.014	0.101

WWAN and WLAN

	WWAN		WLAN(5G)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM850	0.210	0.254	0.464
Front	GSM1900	0.283	0.254	0.537
Front	WCDMA Band 2	0.811	0.254	1.065
Front	WCDMA Band 5	0.202	0.254	0.456
Front	LTE Band 2	0.560	0.254	0.814
Front	LTE Band 5	0.199	0.254	0.453
Front	LTE Band 7	0.304	0.254	0.558
Front	LTE Band 12	0.129	0.254	0.383
Front	LTE Band 38	0.074	0.254	0.328
Front	LTE Band 40	0.133	0.254	0.387
Front	LTE Band 41	0.087	0.254	0.341

WWAN and BT

	WWAN		BT	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Front	GSM850	0.210	0.047	0.257
Front	GSM1900	0.283	0.047	0.330
Front	WCDMA Band 2	0.811	0.047	0.858
Front	WCDMA Band 5	0.202	0.047	0.249
Front	LTE Band 2	0.560	0.047	0.607
Front	LTE Band 5	0.199	0.047	0.246
Front	LTE Band 7	0.304	0.047	0.351
Front	LTE Band 12	0.129	0.047	0.176
Front	LTE Band 38	0.074	0.047	0.121
Front	LTE Band 40	0.133	0.047	0.180
Front	LTE Band 41	0.087	0.047	0.134

Wrist-worn SAR**WWAN and WLAN**

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM850	0.261	0.013	0.274
Back	GSM1900	0.353	0.013	0.366
Back	WCDMA Band 2	0.599	0.013	0.612
Back	WCDMA Band 5	0.242	0.013	0.255
Back	LTE Band 2	0.496	0.013	0.509
Back	LTE Band 5	0.252	0.013	0.265
Back	LTE Band 7	0.229	0.013	0.242
Back	LTE Band 12	0.149	0.013	0.162
Back	LTE Band 38	0.071	0.013	0.084
Back	LTE Band 40	0.117	0.013	0.130
Back	LTE Band 41	0.090	0.013	0.103

WWAN and WLAN

	WWAN		WLAN(5G)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM850	0.261	0.108	0.369
Back	GSM1900	0.353	0.108	0.461
Back	WCDMA Band 2	0.599	0.108	0.707
Back	WCDMA Band 5	0.242	0.108	0.350
Back	LTE Band 2	0.496	0.108	0.604
Back	LTE Band 5	0.252	0.108	0.360
Back	LTE Band 7	0.229	0.108	0.337
Back	LTE Band 12	0.149	0.108	0.257
Back	LTE Band 38	0.071	0.108	0.179
Back	LTE Band 40	0.117	0.108	0.225
Back	LTE Band 41	0.090	0.108	0.198

WWAN and BT

	WWAN		BT	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM850	0.261	0.038	0.299
Back	GSM1900	0.353	0.038	0.391
Back	WCDMA Band 2	0.599	0.038	0.637
Back	WCDMA Band 5	0.242	0.038	0.280
Back	LTE Band 2	0.496	0.038	0.534
Back	LTE Band 5	0.252	0.038	0.290
Back	LTE Band 7	0.229	0.038	0.267
Back	LTE Band 12	0.149	0.038	0.187
Back	LTE Band 38	0.071	0.038	0.109
Back	LTE Band 40	0.117	0.038	0.155
Back	LTE Band 41	0.090	0.038	0.128

10. Measurement Uncertainty

10.1 Uncertainty for EUT 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	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient Conditions - Reflections	E.6.1	3.0	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				12.98	12.53	
Expanded Uncertainty (95% Confidence interval)			K=2				25.32	24.43	

10.2 Uncertainty for System Performance Check

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	∞
Modulation response	E.2.5	0	R	$\sqrt{3}$	0	0	0.0	0.0	∞
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	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient Conditions - Reflections	E.6.1	3.0	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	E.5.2	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞

integration Algorithms for Max. SAR Evaluation									
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	$\sqrt{3}$	1	1	0.58	0.58	N-1
Input power and SAR drift measurement	8,6.6.2	12.02	R	$\sqrt{3}$	1	1	6.94	6.94	∞
Deviation of experimental dipole from numerical dipole	E.6.4	5.5	R	$\sqrt{3}$	1	1	3.20	3.20	∞
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	2.0	R	$\sqrt{3}$	1	0.84	1.10	1.10	∞
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	M
Combined Standard Uncertainty			RSS				12.00	11.50	
Expanded Uncertainty (95% Confidence interval)			K=2				23.39	22.43	

Annex A. Plots of System Performance Check

MEASUREMENT 1

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

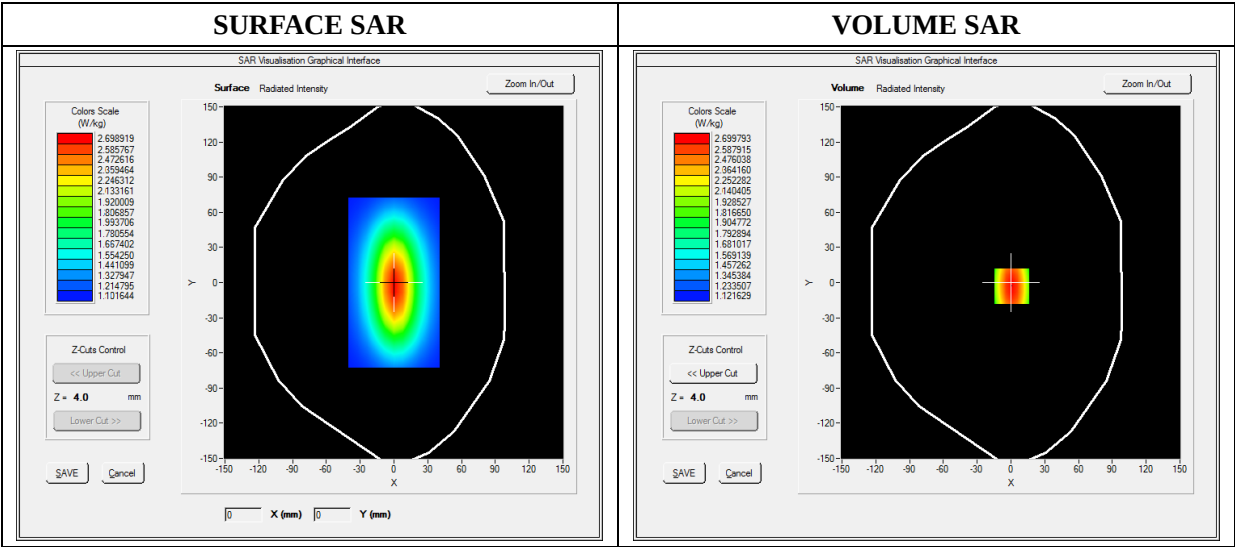
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative Permittivity (real part)	41.320574
Conductivity (S/m)	0.862373
Power Variation (%)	0.038363
Ambient Temperature	21.1
Liquid Temperature	21.3

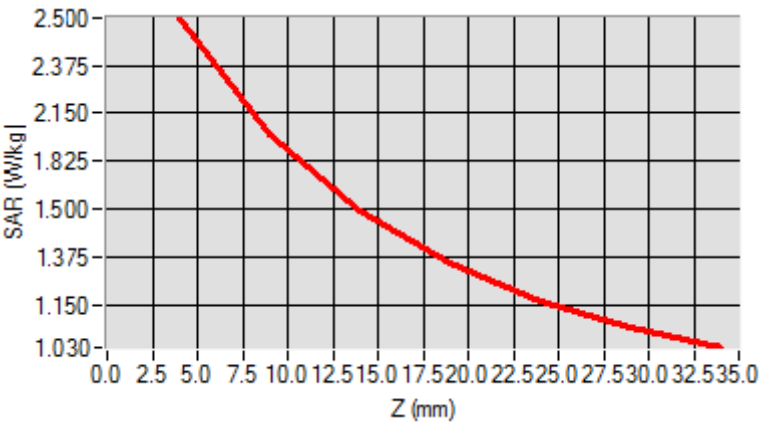


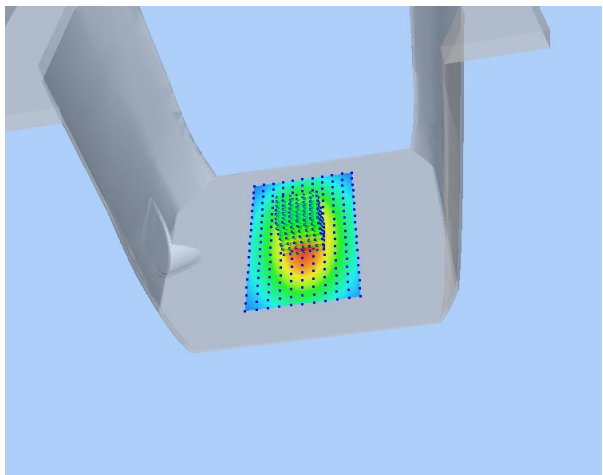
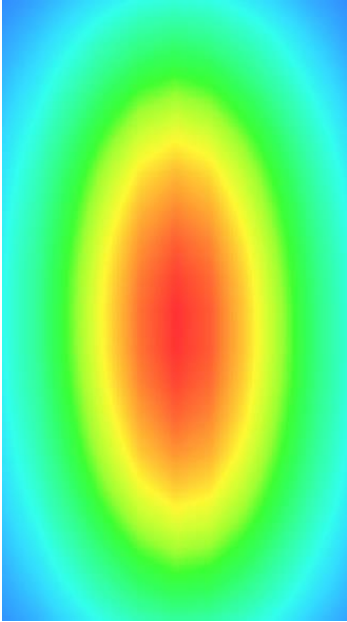
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.342744
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

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

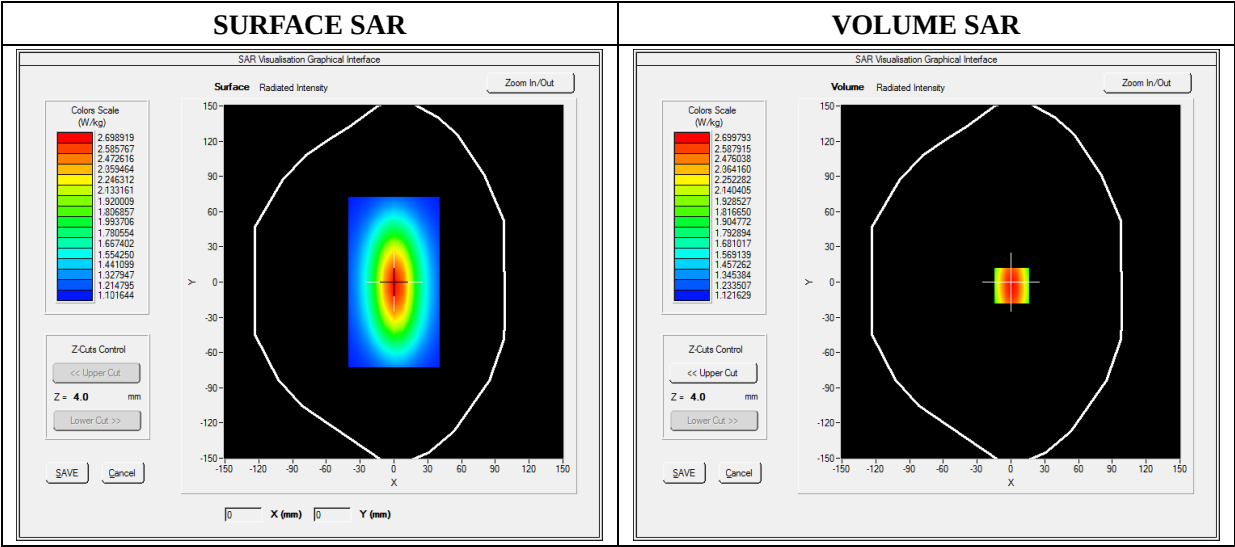
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	0.038437
Ambient Temperature	21.1
Liquid Temperature	21.3

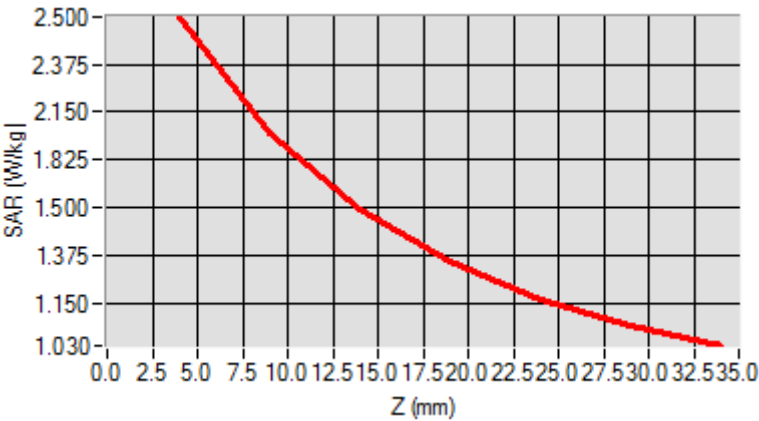


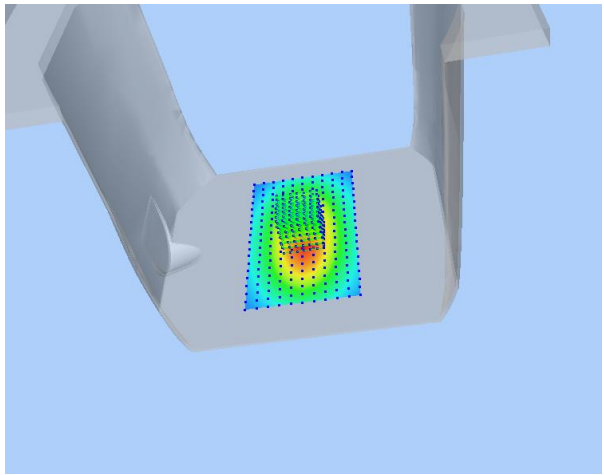
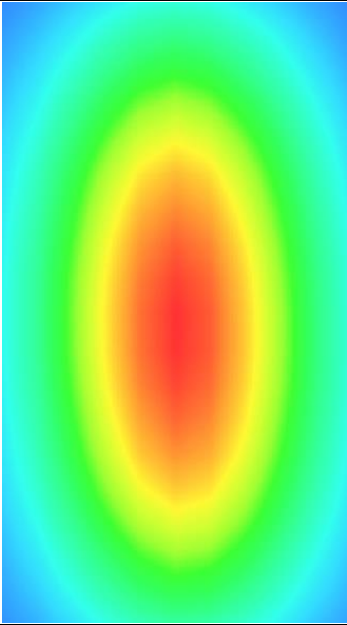
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.449489
SAR 1g (W/Kg)	2.411253

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 3

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

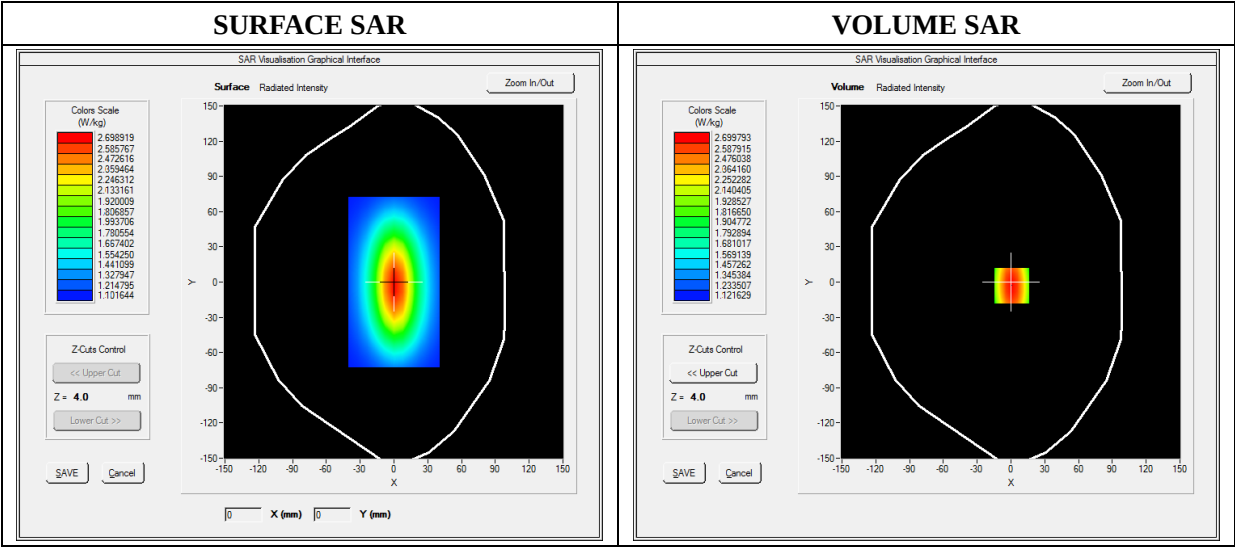
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW900
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	900.000000
Relative Permittivity (real part)	39.510245
Conductivity (S/m)	1.011245
Power Variation (%)	0.038437
Ambient Temperature	21.1
Liquid Temperature	21.3

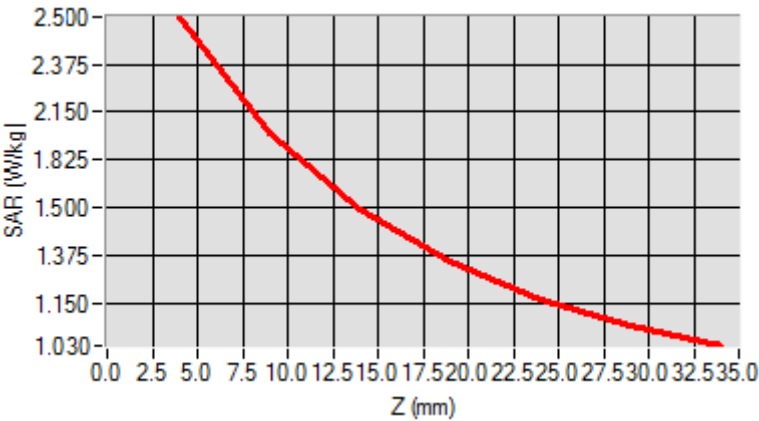


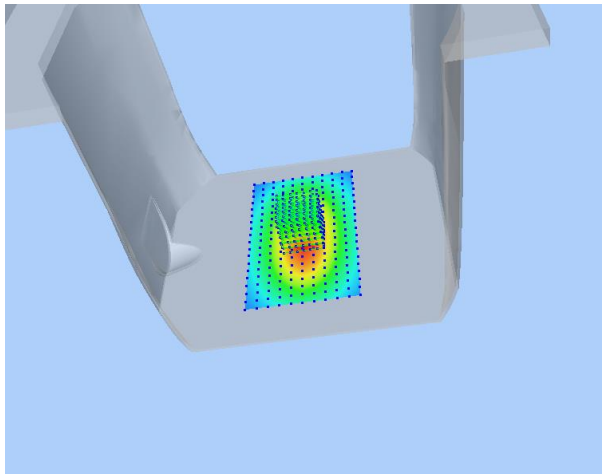
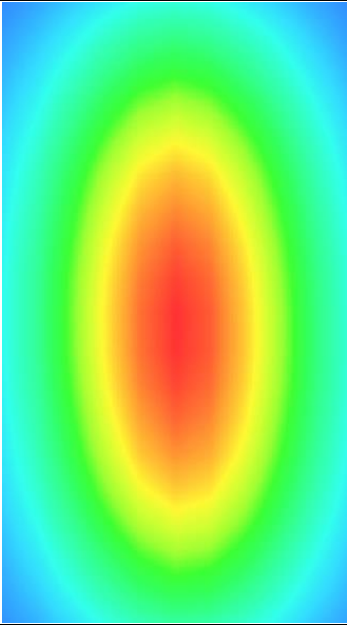
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.448489
SAR 1g (W/Kg)	2.521253

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	1.9952	1.5861	1.4531	1.2173	1.1519



3D screen shot	Hot spot position
	

MEASUREMENT 4

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

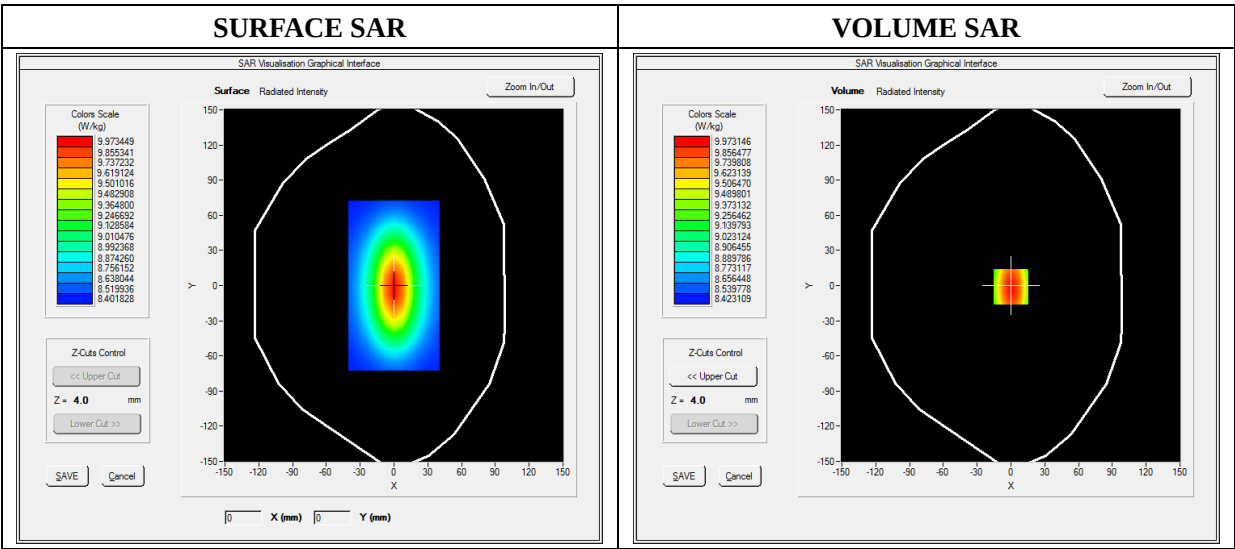
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative Permittivity (real part)	39.024890
Conductivity (S/m)	1.371250
Power Variation (%)	1.401232
Ambient Temperature	21.1
Liquid Temperature	21.2

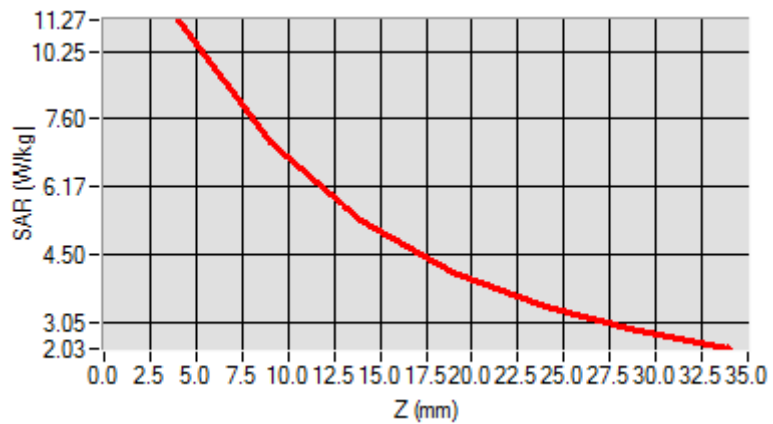


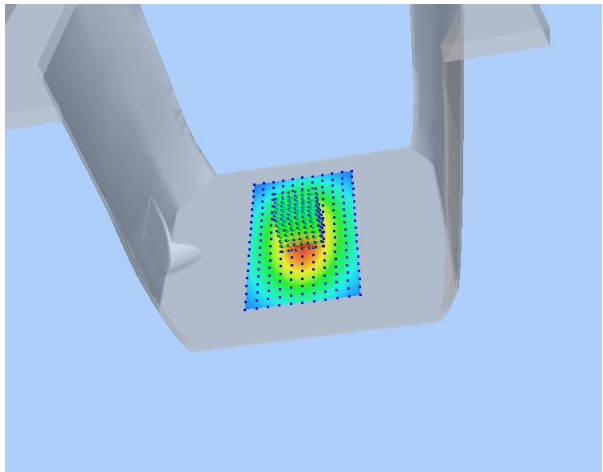
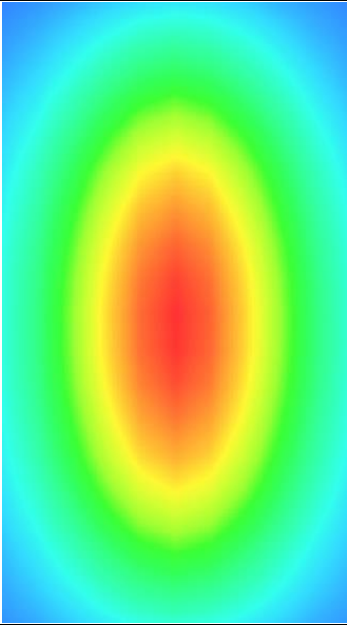
Maximum location: X=0.00, Y=0.00

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

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 5

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

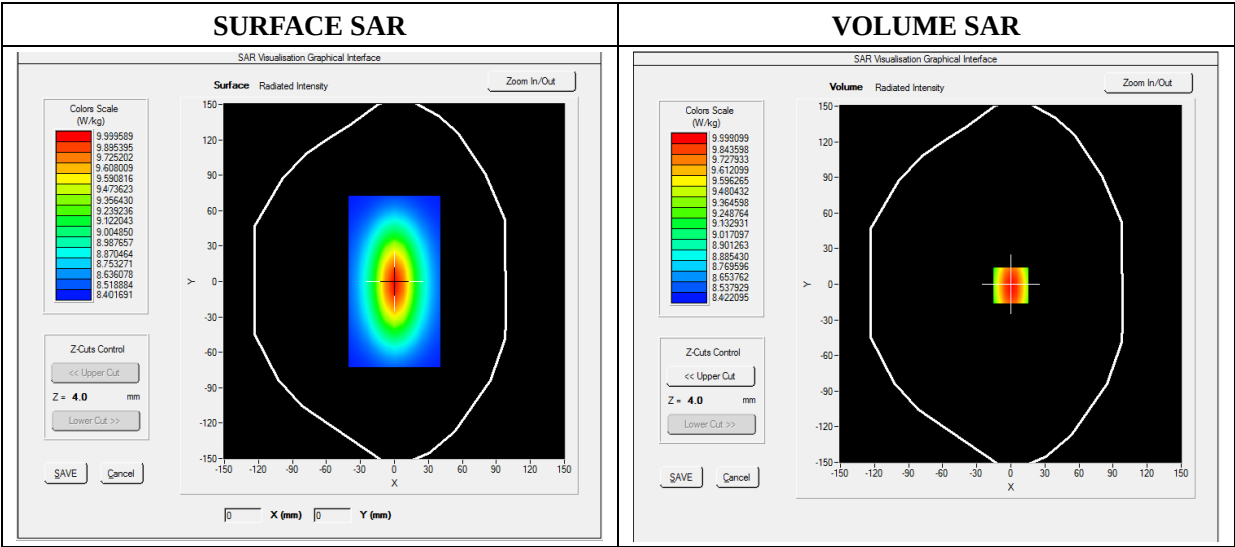
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.022540
Ambient Temperature	21.1
Liquid Temperature	21.3

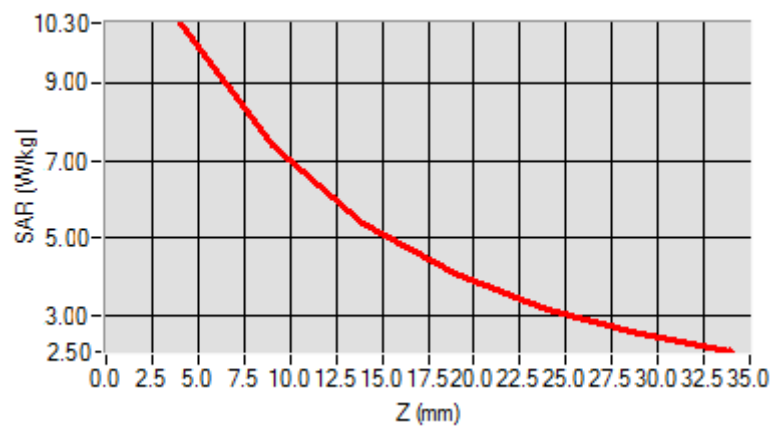


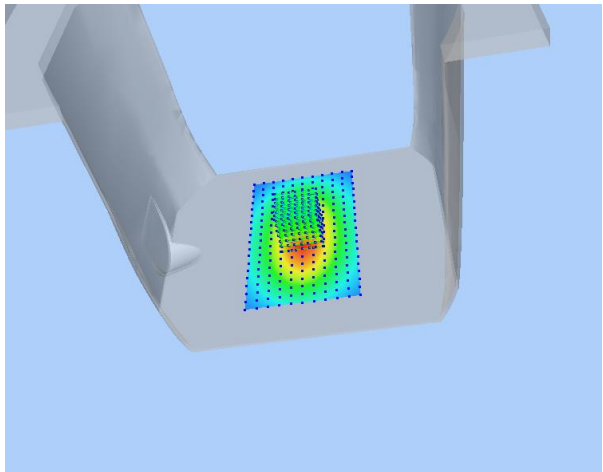
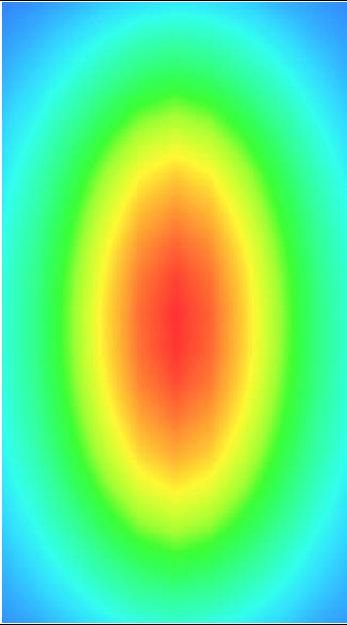
Maximum location: X=0.00, Y=0.00

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

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 6

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

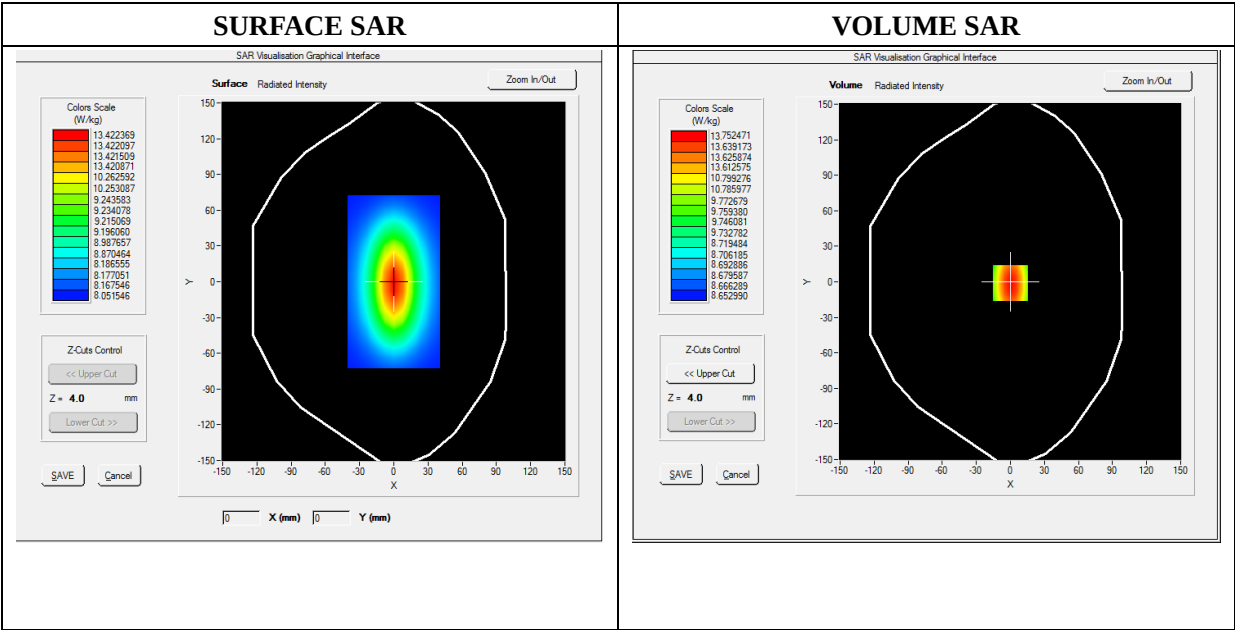
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2300
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2300.000000
Relative Permittivity (real part)	38.383660
Conductivity (S/m)	1.650236
Power Variation (%)	1.141452
Ambient Temperature	21.1
Liquid Temperature	21.2

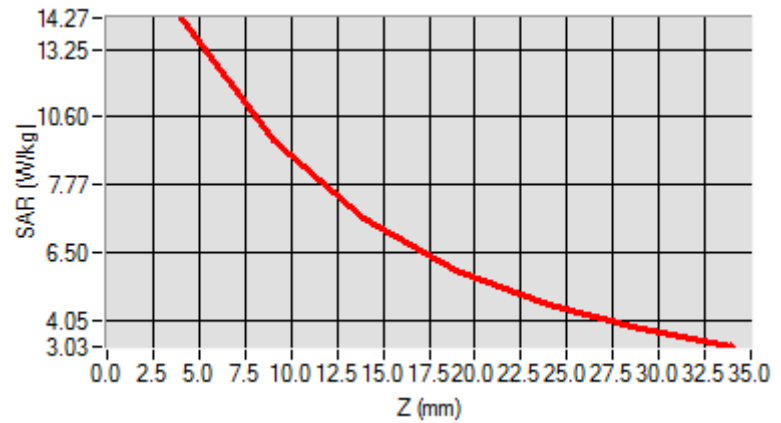


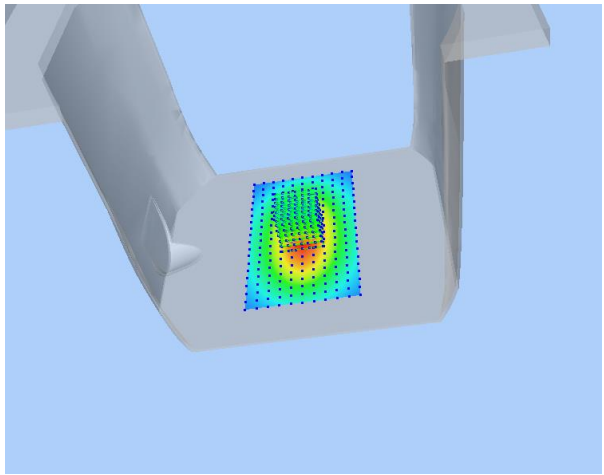
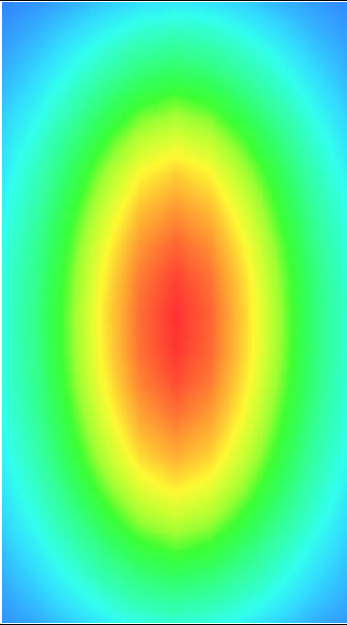
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.020417
SAR 1g (W/Kg)	12.682457

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	13.1034	11.0012	10.1624	6.4715	5.1022	4.1114



3D screen shot	Hot spot position
	

MEASUREMENT 7

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

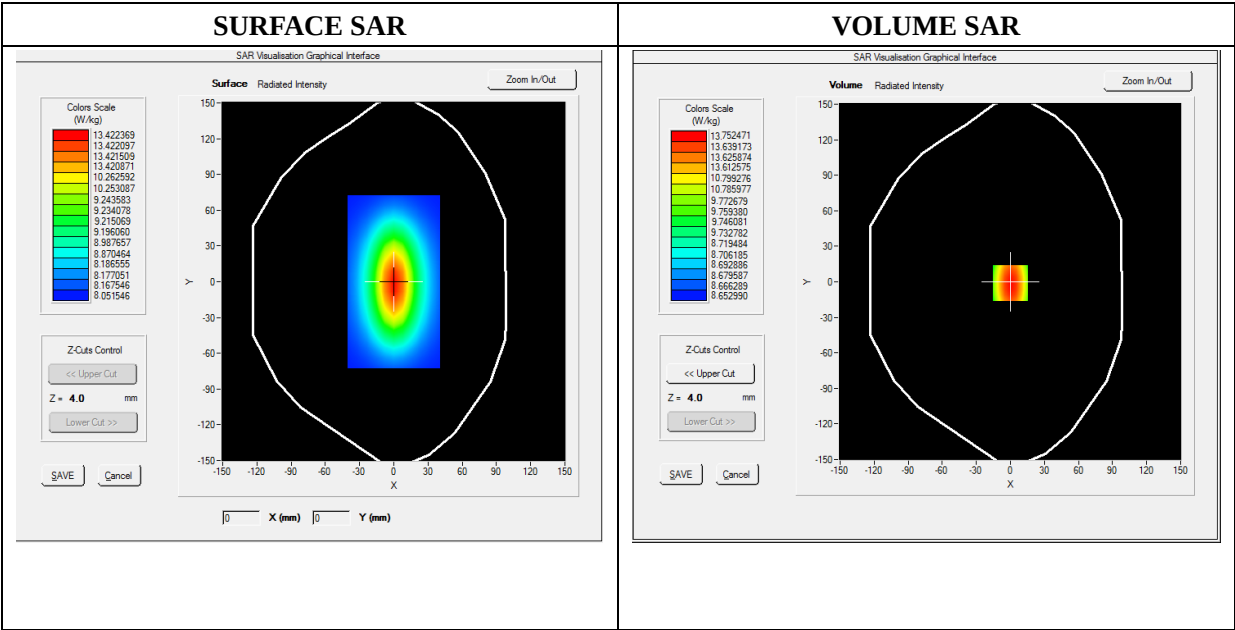
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	38.153660
Conductivity (S/m)	1.740236
Power Variation (%)	1.141452
Ambient Temperature	21.1
Liquid Temperature	21.2

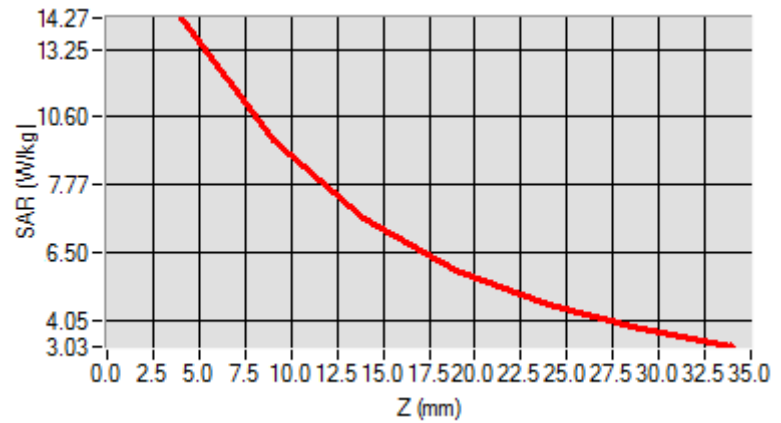


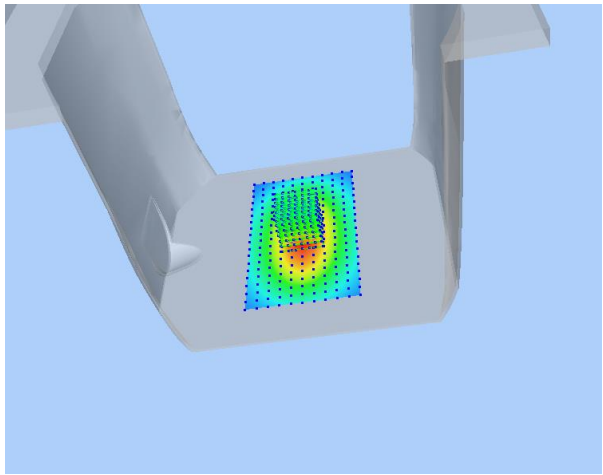
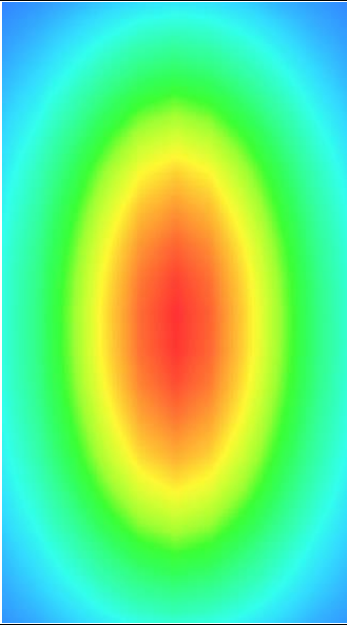
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	6.020427
SAR 1g (W/Kg)	13.452457

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 8

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

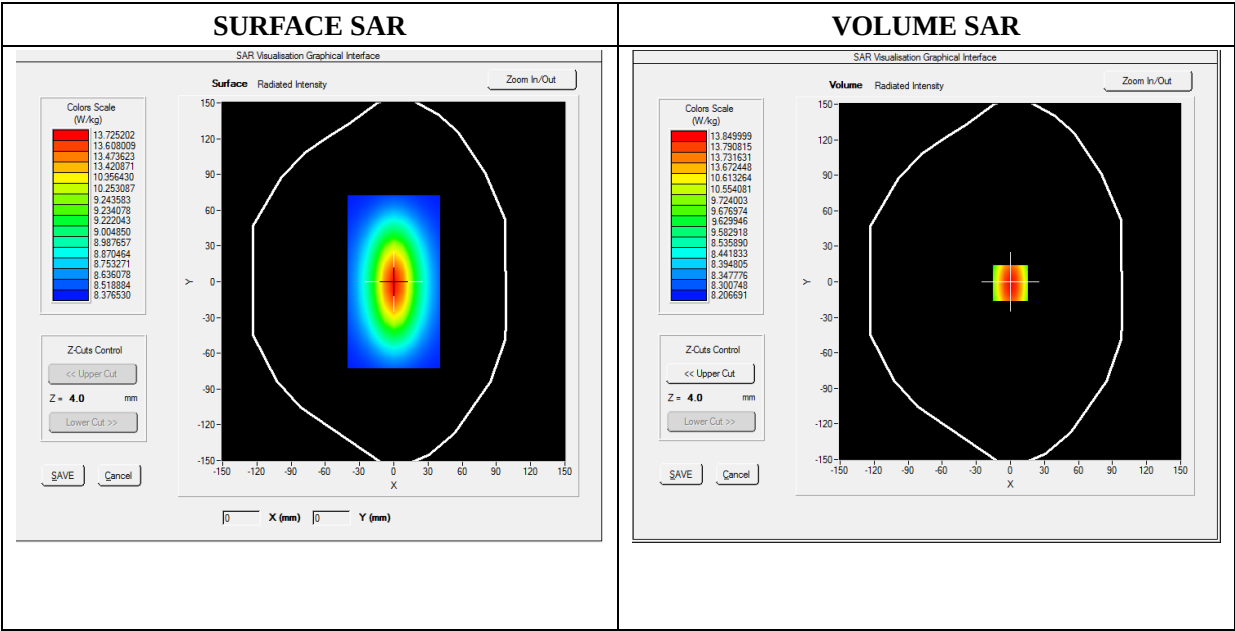
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative Permittivity (real part)	39.221092
Conductivity (S/m)	1.990182
Power Variation (%)	1.028221
Ambient Temperature	21.1
Liquid Temperature	21.2

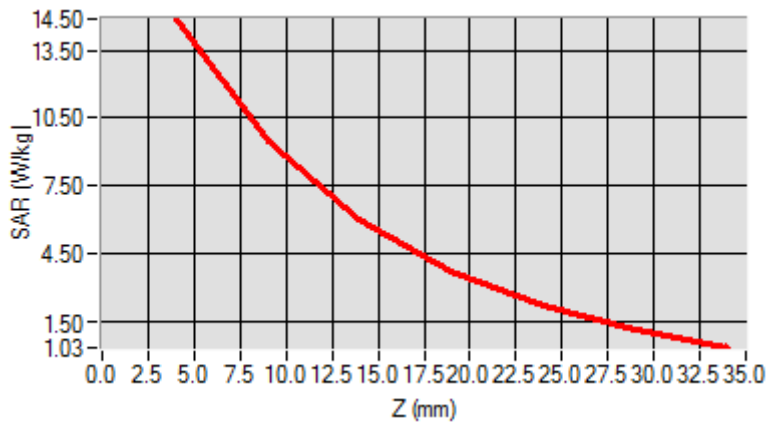


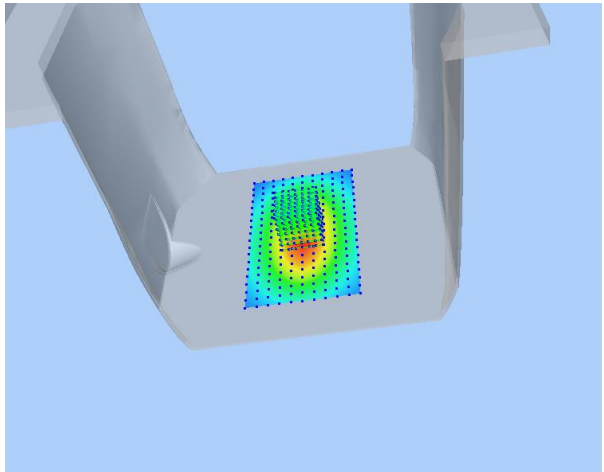
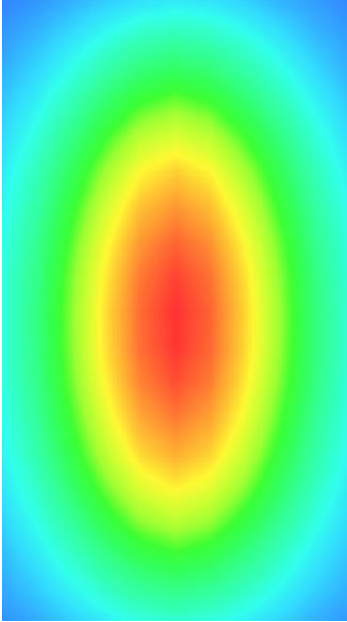
Maximum location: X=0.00, Y=0.00

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

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 9

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

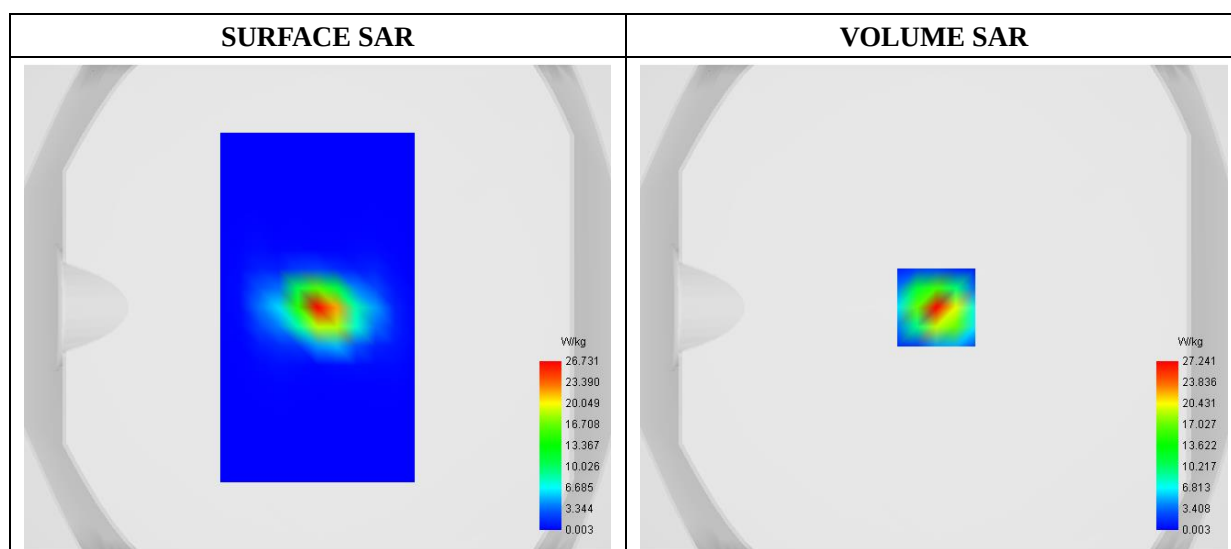
A. Experimental conditions

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)	35.602911
Conductivity (S/m)	4.871483
Power Variation (%)	0.943782
Ambient Temperature	22.0
Liquid Temperature	22.3

C. SAR Surface and Volume



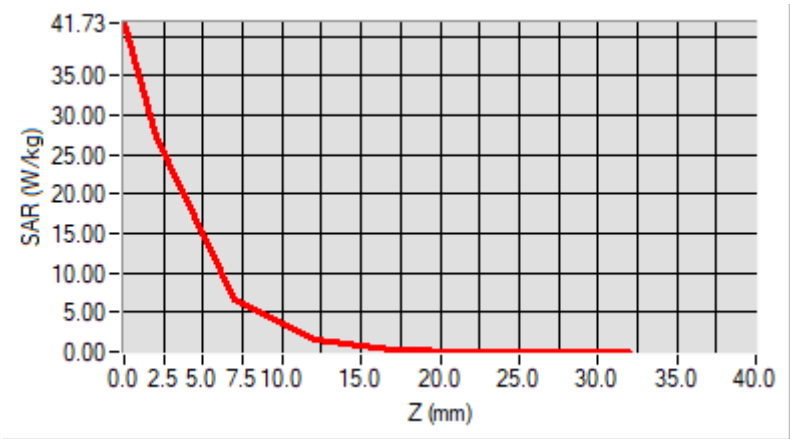
Maximum location: X=1.00, Y=0.00

D. SAR 1g & 10g

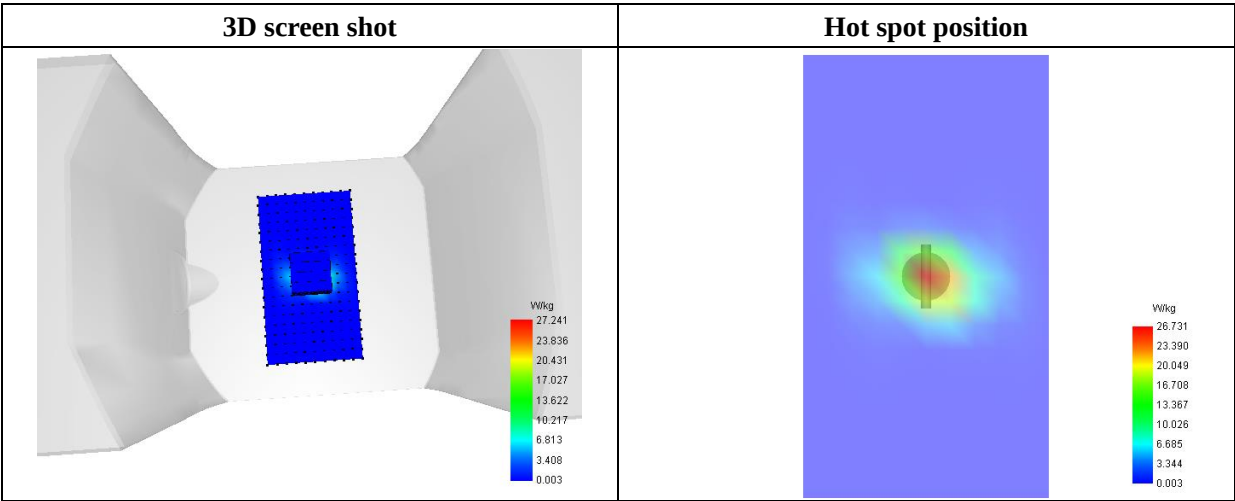
SAR 10g (W/Kg)	5.310334
SAR 1g (W/Kg)	16.946226

E. Z Axis Scan

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



F. 3D Image



MEASUREMENT 10

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

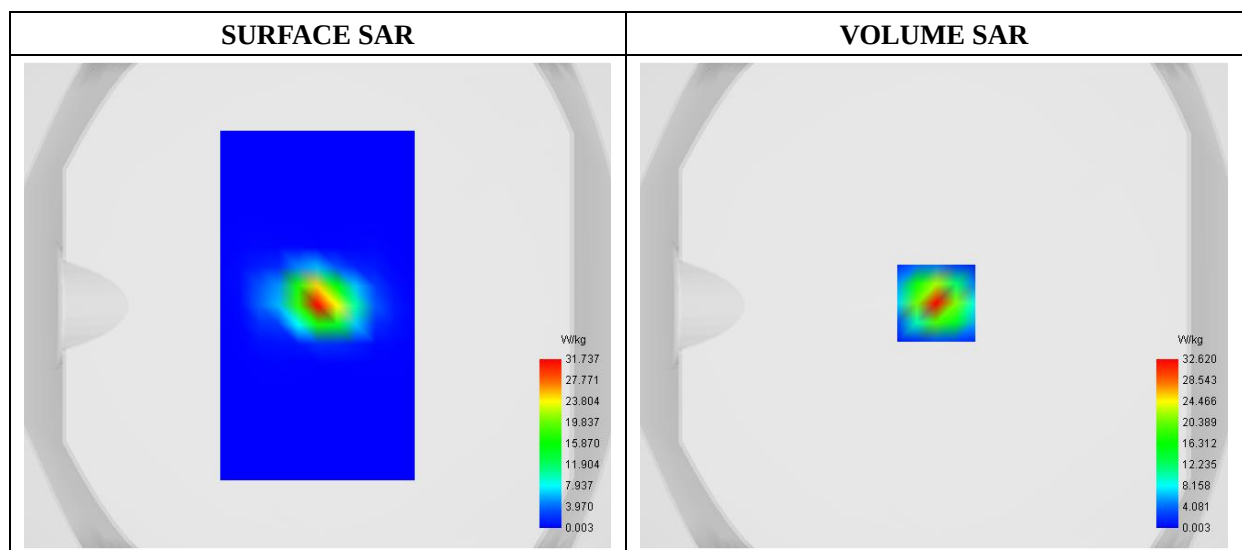
A. Experimental conditions

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)	35.601254
Conductivity (S/m)	5.170512
Power Variation (%)	1.643281
Ambient Temperature	22.0
Liquid Temperature	22.3

C. SAR Surface and Volume



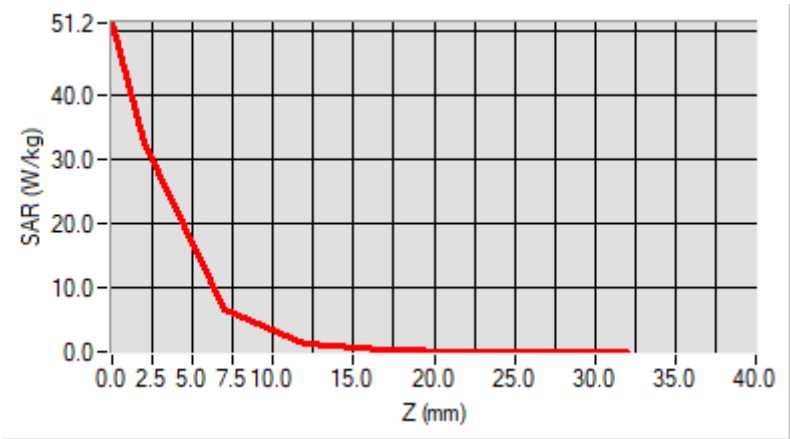
Maximum location: X=1.00, Y=1.00

D. SAR 1g & 10g

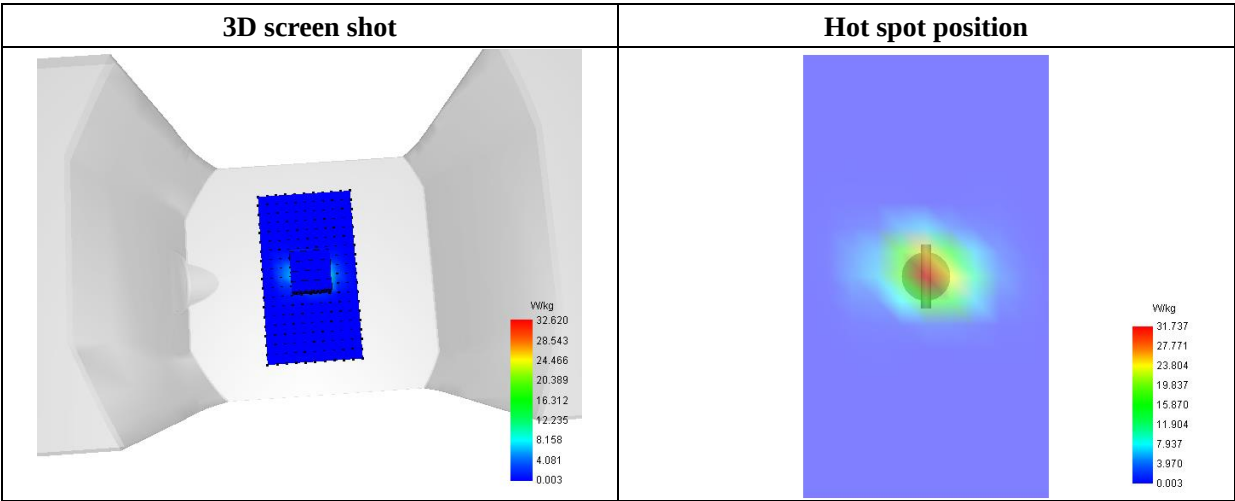
SAR 10g (W/Kg)	5.922791
SAR 1g (W/Kg)	18.604052

E. Z Axis Scan

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



F. 3D Image



MEASUREMENT 11

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

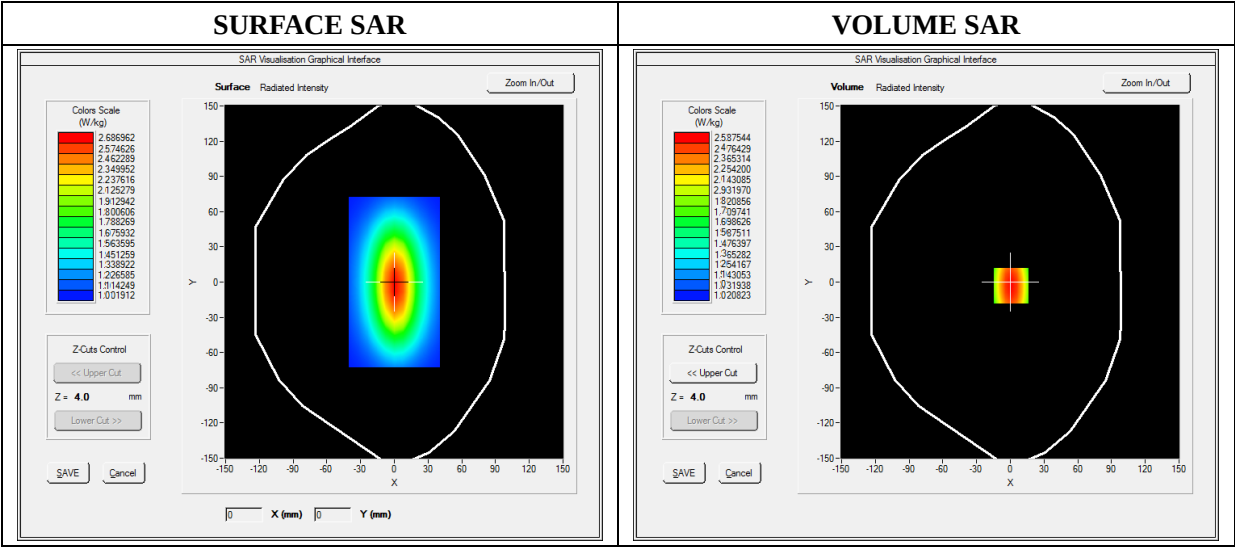
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative Permittivity (real part)	54.964739
Conductivity (S/m)	0.931048
Power Variation (%)	0.034745
Ambient Temperature	21.1
Liquid Temperature	21.3

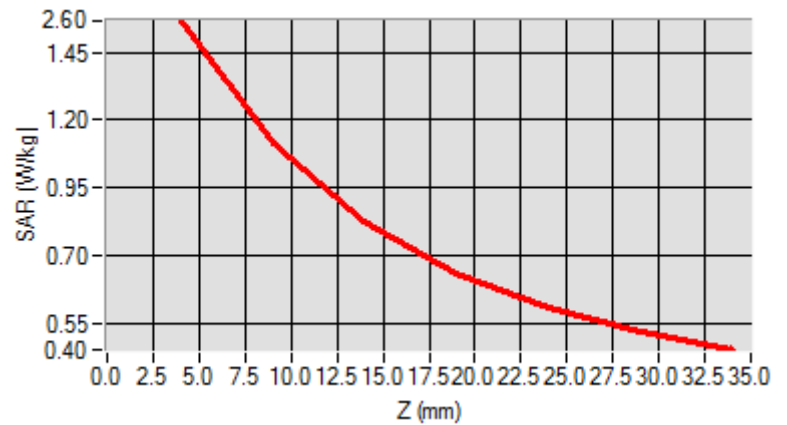


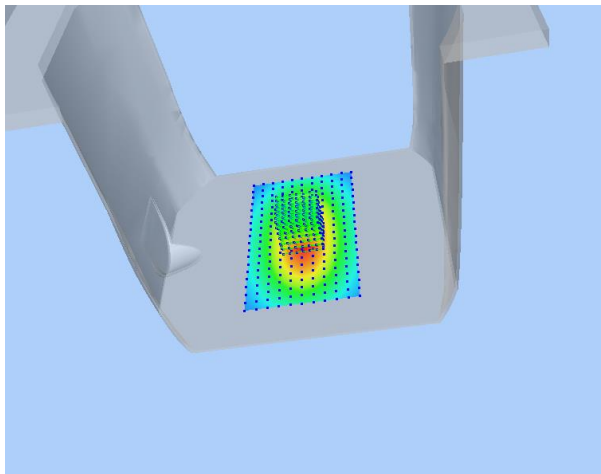
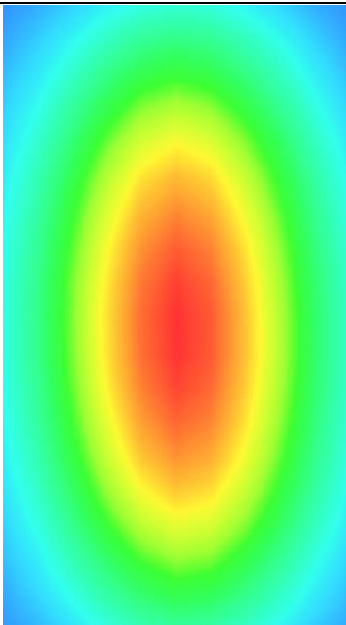
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.300865
SAR 1g (W/Kg)	2.124211

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5132	1.1087	0.8214	0.5160	0.4875	0.4864



3D screen shot	Hot spot position
	

MEASUREMENT 12

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

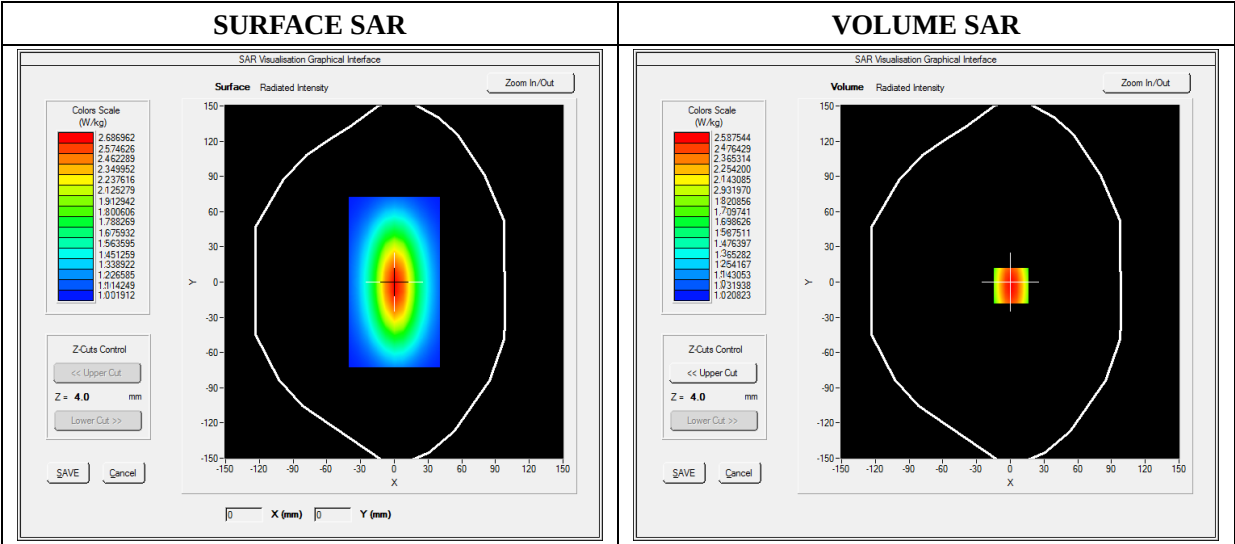
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
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)	54.850245
Conductivity (S/m)	0.951245
Power Variation (%)	0.038437
Ambient Temperature	21.1
Liquid Temperature	21.3

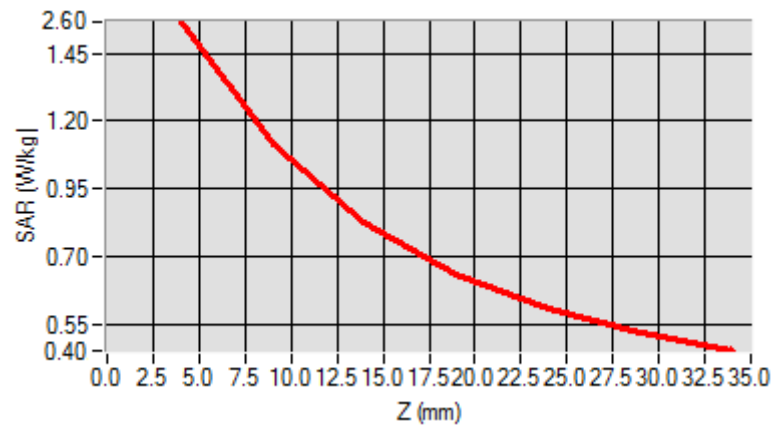


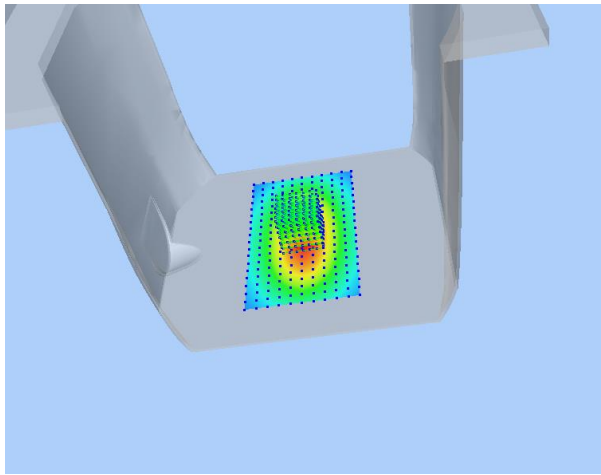
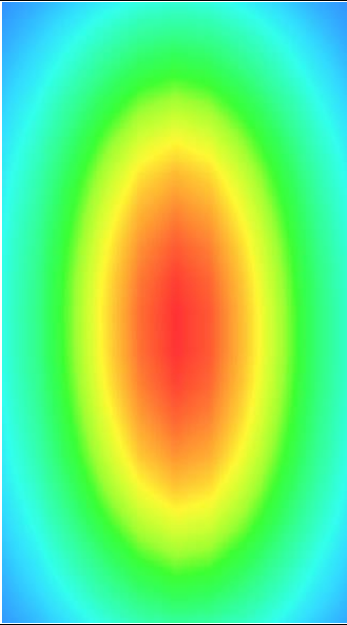
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.528956
SAR 1g (W/Kg)	2.354211

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5789	1.1300	0.8795	0.5940	0.5011	0.5100



3D screen shot	Hot spot position
	

MEASUREMENT 13

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

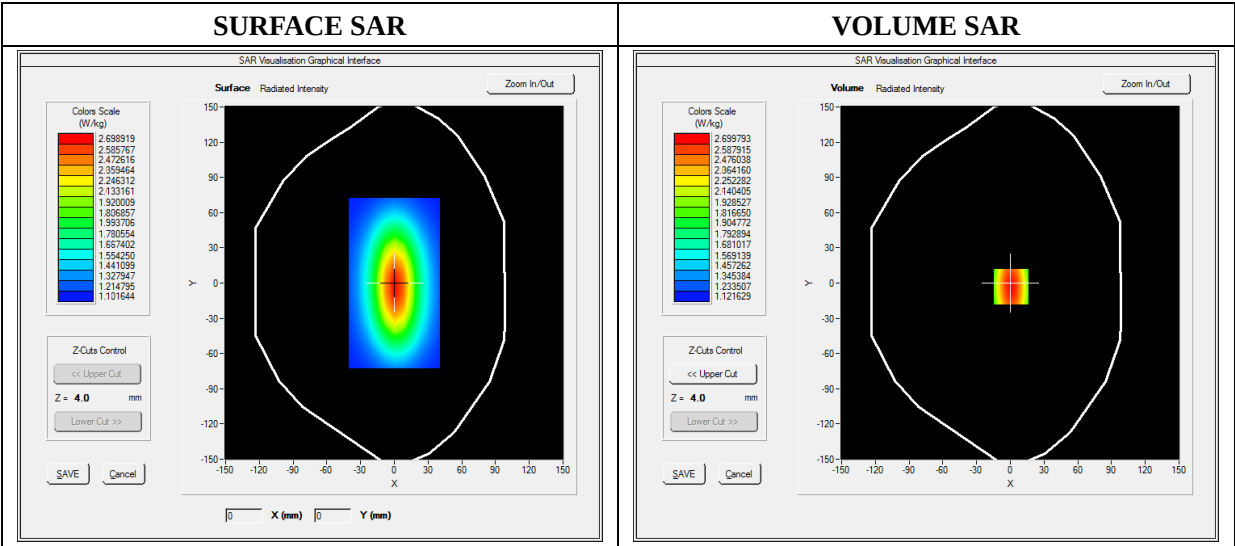
Measurement duration: 12 minutes 21 seconds

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW900
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	900.000000
Relative Permittivity (real part)	53.642501
Conductivity (S/m)	1.010456
Power Variation (%)	1.800540
Ambient Temperature	21.1
Liquid Temperature	21.2

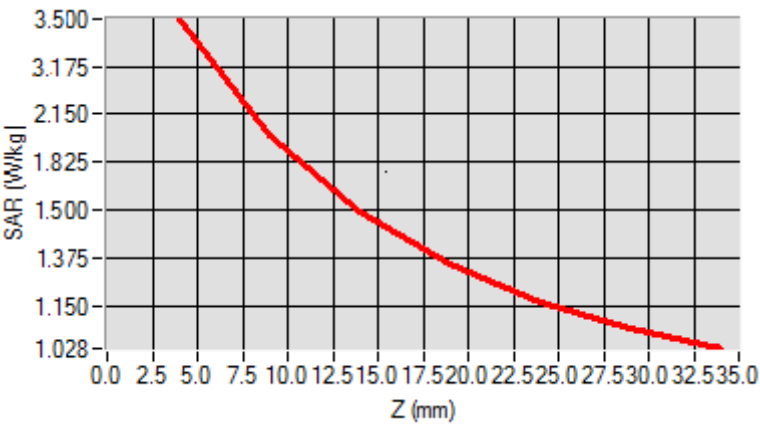


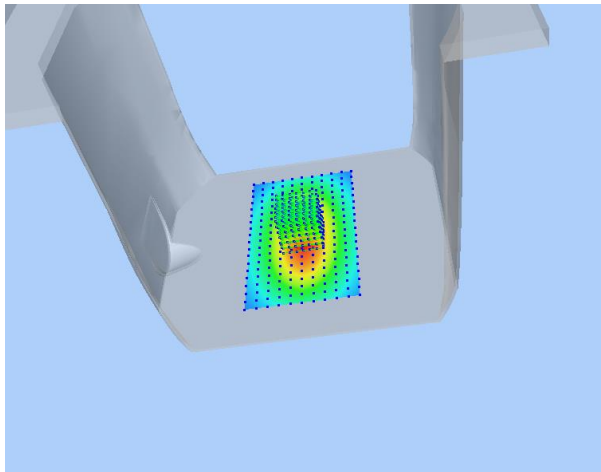
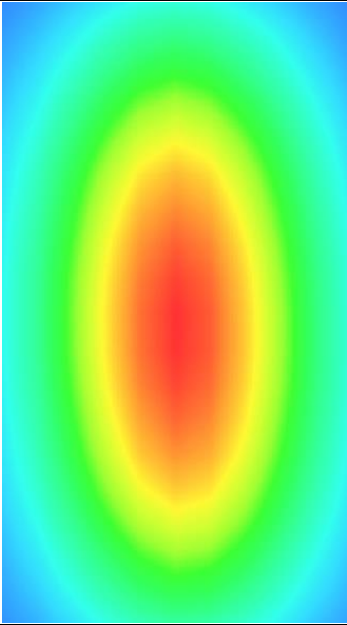
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.702021
SAR 1g (W/Kg)	2.742150

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	3.2725	2.6125	2.01258	1.6112	1.1210	1.0492s



3D screen shot	Hot spot position
	

MEASUREMENT 14

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

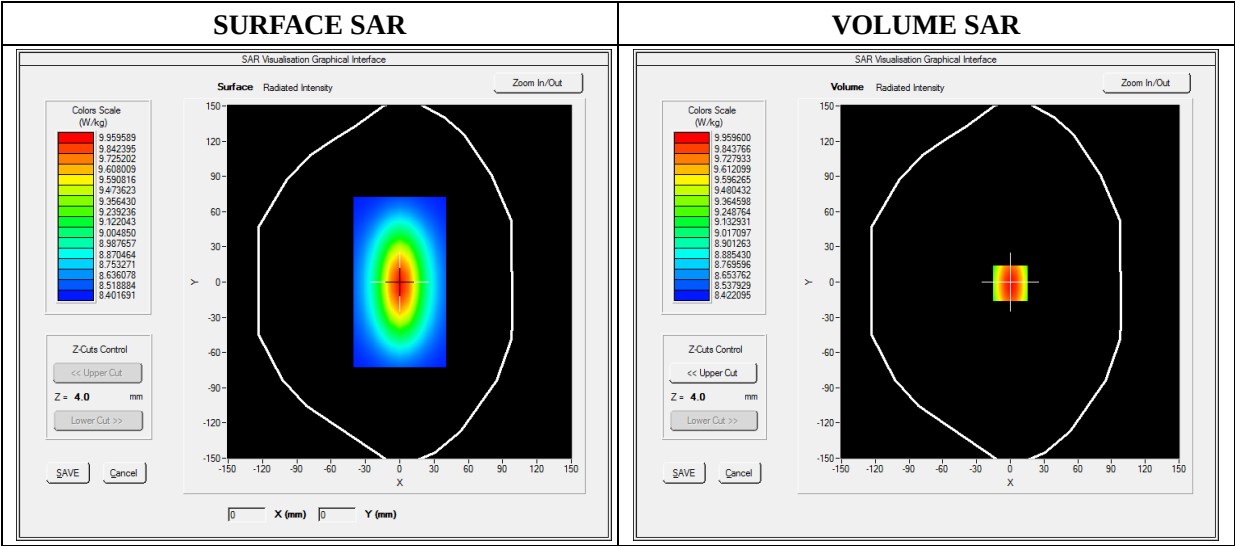
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
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)	51.224510
Conductivity (S/m)	1.461261
Power Variation (%)	0.845690
Ambient Temperature	21.1
Liquid Temperature	21.2

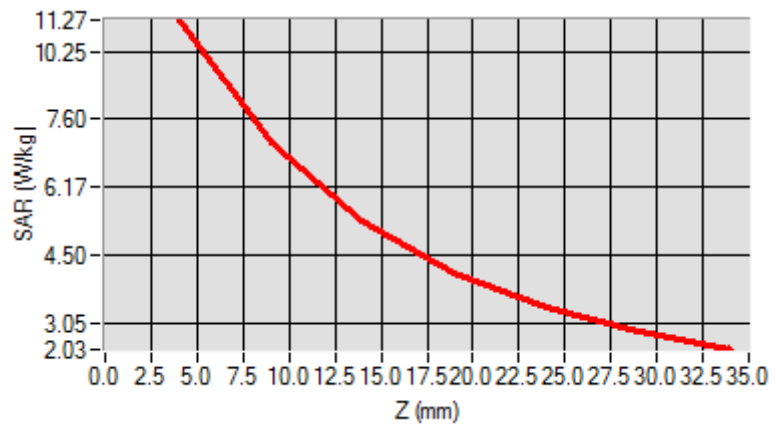


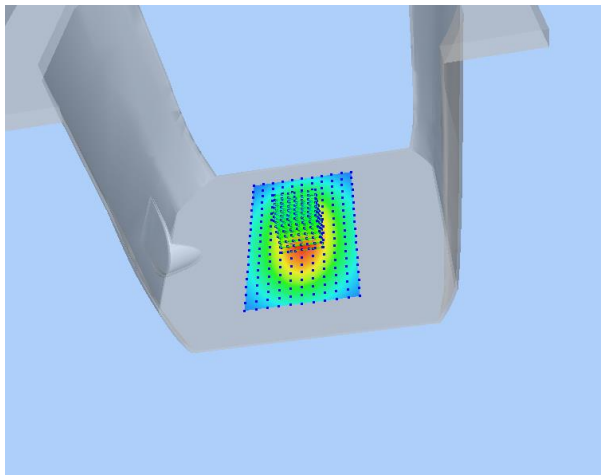
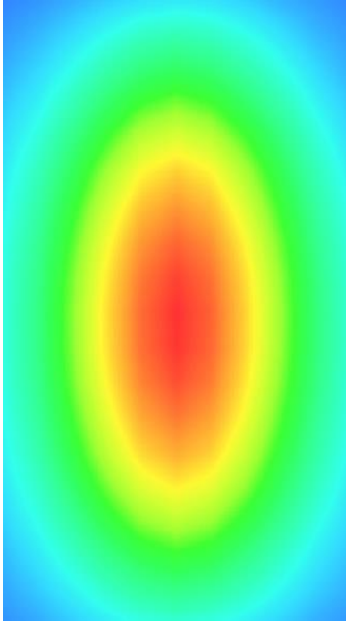
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.221202
SAR 1g (W/Kg)	9.582560

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	11.2425	9.4123	8.0345	6.9125	6.3092	3.9460



3D screen shot	Hot spot position
	

MEASUREMENT 15

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

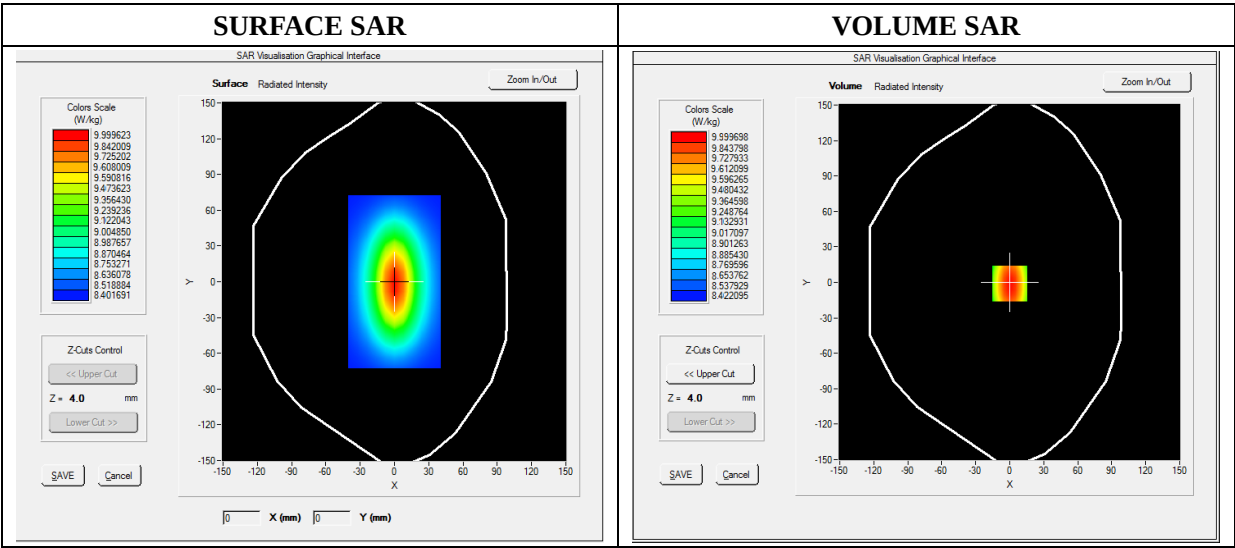
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	52.420124
Conductivity (S/m)	1.500369
Power Variation (%)	1.022540
Ambient Temperature	21.1
Liquid Temperature	21.3

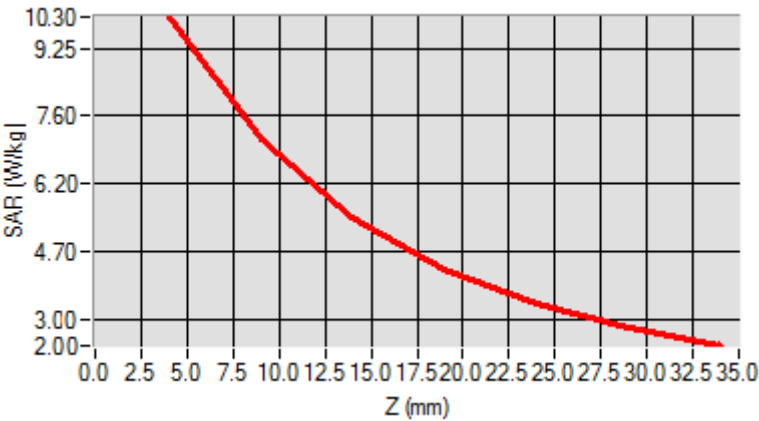


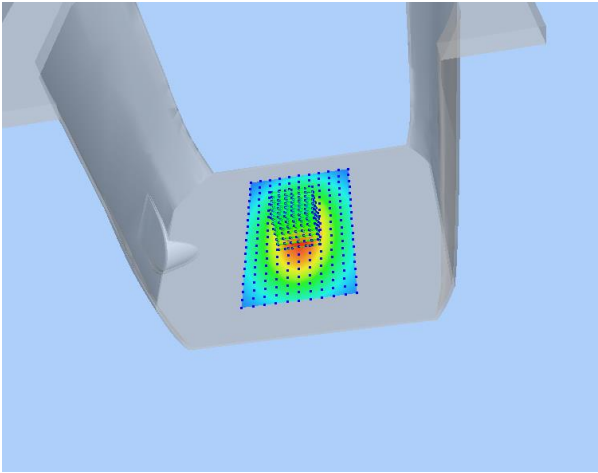
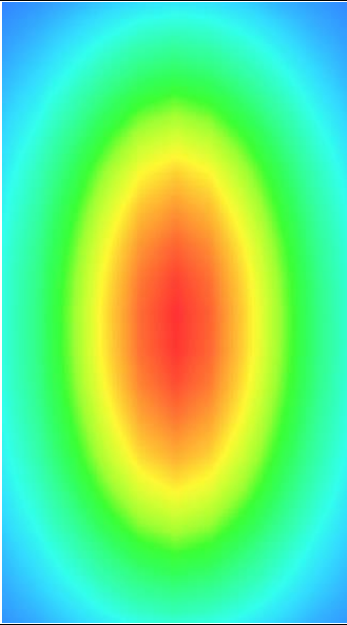
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.134651
SAR 1g (W/Kg)	9.781550

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.2031	6.43001	4.9011	4.5325	3.1201	2.5024



3D screen shot	Hot spot position
	

MEASUREMENT 16

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

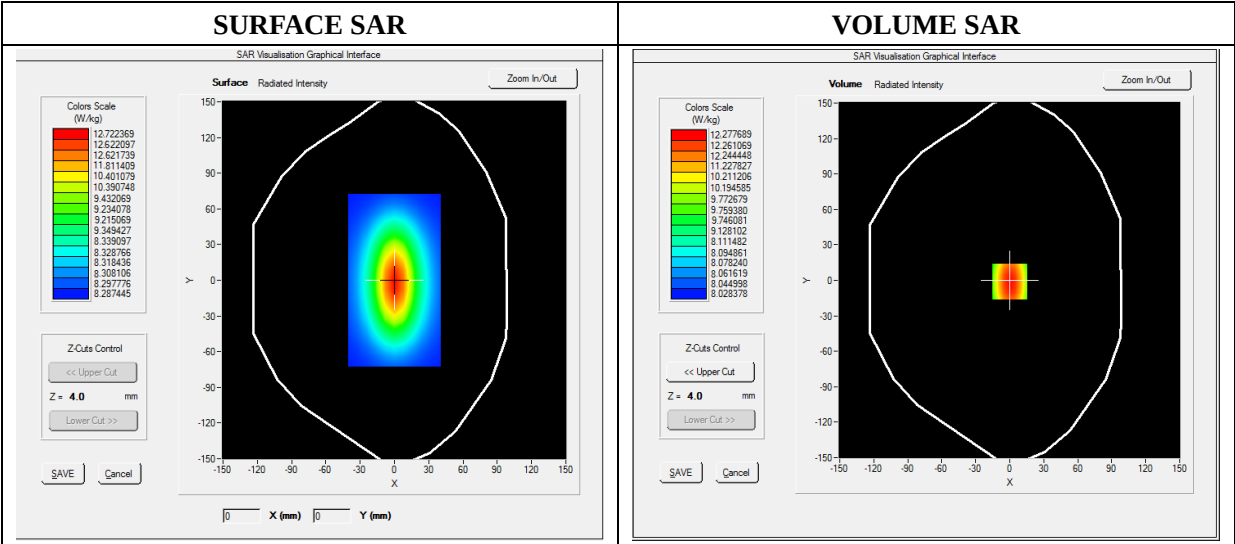
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2300
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2300.000000
Relative Permittivity (real part)	52.310212
Conductivity (S/m)	1.780255
Power Variation (%)	1.009745
Ambient Temperature	21.1
Liquid Temperature	21.2

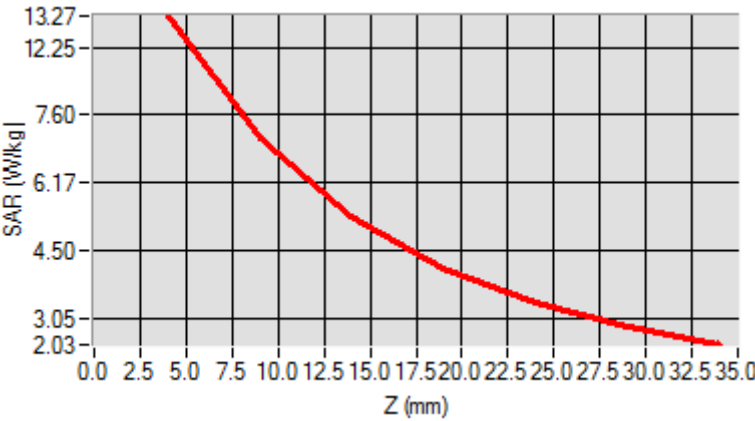


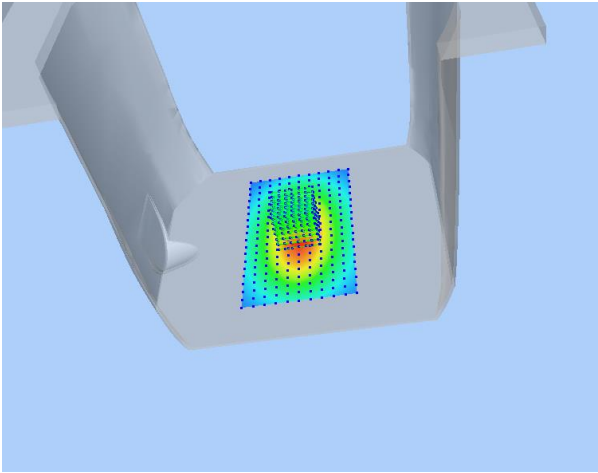
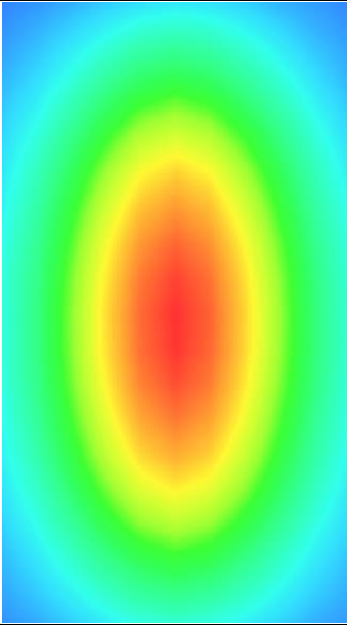
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	6.114210
SAR 1g (W/Kg)	12.505243

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	13.1891	11.7779	9.2852	8.5315	6.3698	4.6231



3D screen shot	Hot spot position
	

MEASUREMENT 17

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

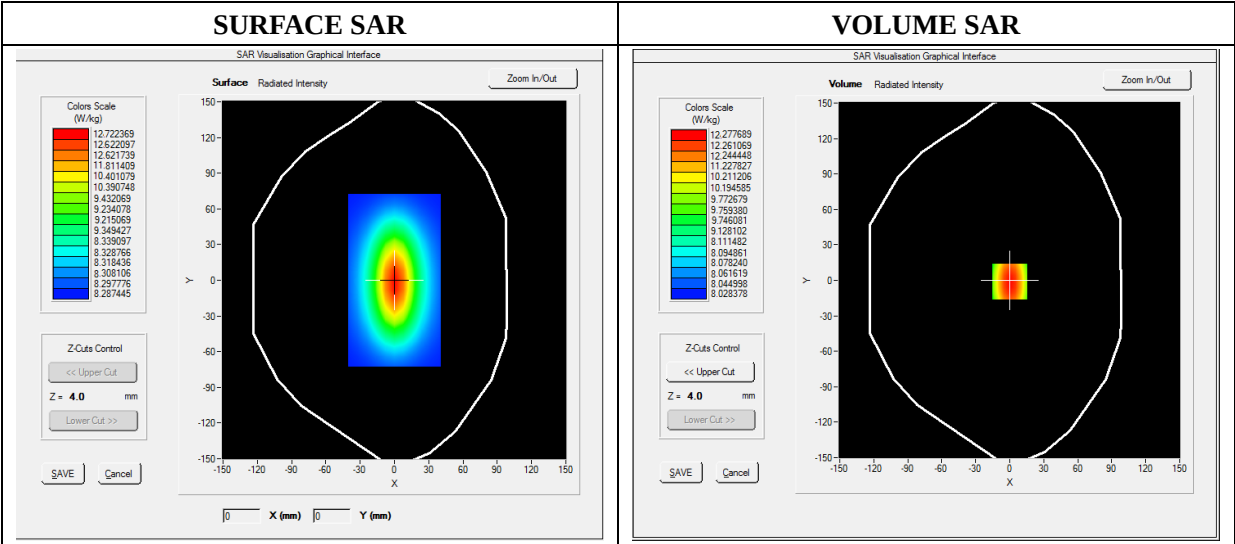
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	52.010212
Conductivity (S/m)	1.910255
Power Variation (%)	1.369745
Ambient Temperature	21.1
Liquid Temperature	21.2

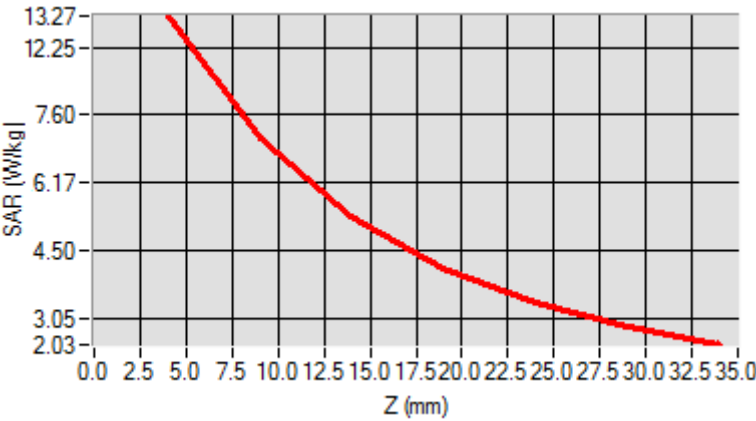


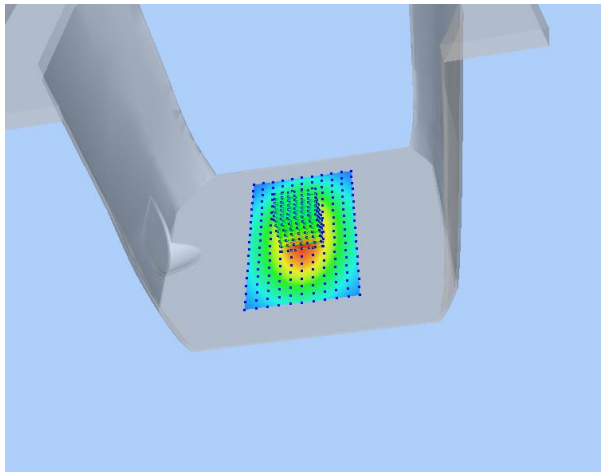
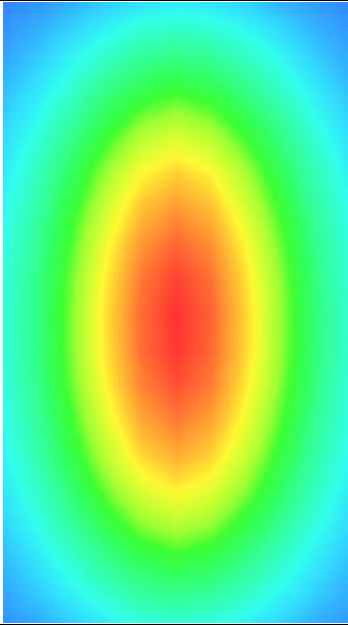
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	6.119522
SAR 1g (W/Kg)	12.592360

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	13.1911	11.7951	9.2945	8.5400	6.3712	4.6225



3D screen shot	Hot spot position
	

MEASUREMENT 18

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

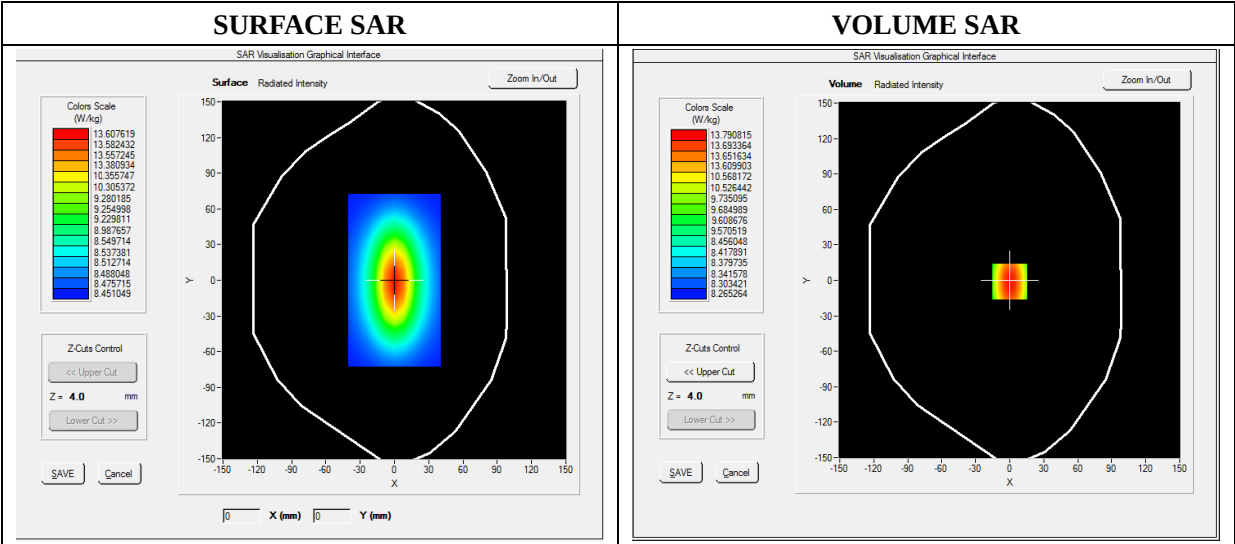
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative Permittivity (real part)	52.241092
Conductivity (S/m)	2.120182
Power Variation (%)	1.028221
Ambient Temperature	21.1
Liquid Temperature	21.2

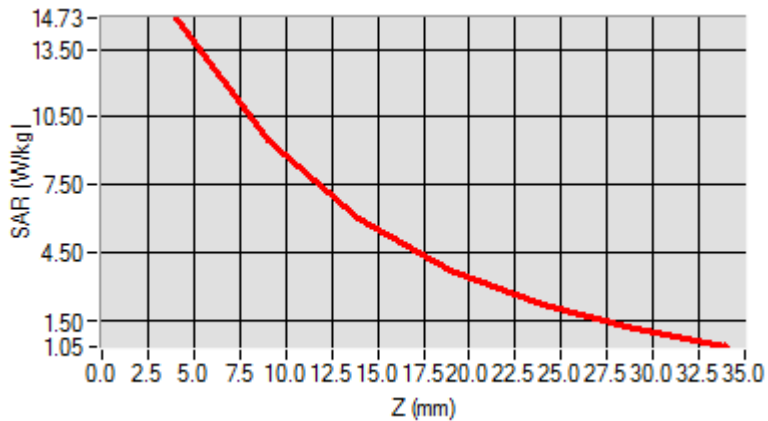


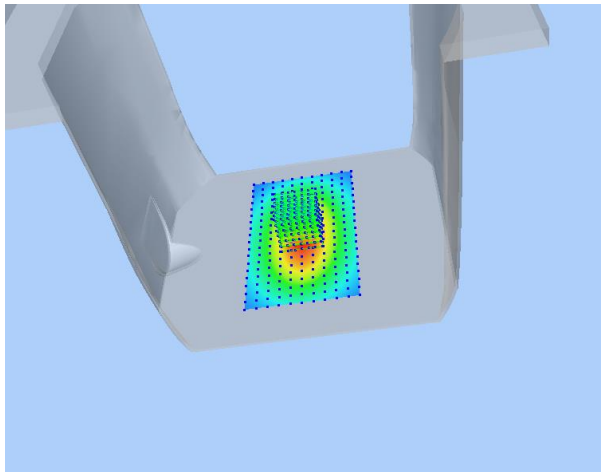
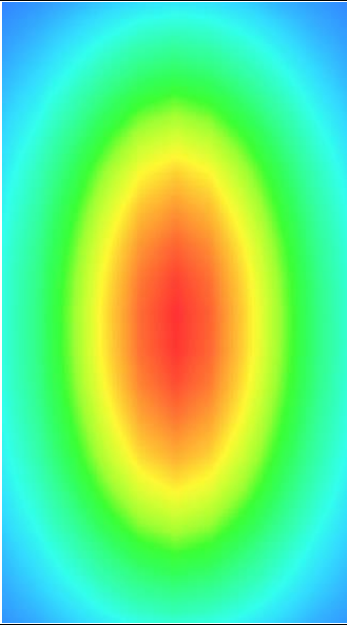
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	6.083781
SAR 1g (W/Kg)	13.430481

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	13.6473	11.8441	9.3627	8.5782	6.4357	4.6342



3D screen shot	Hot spot position
	

MEASUREMENT 19

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

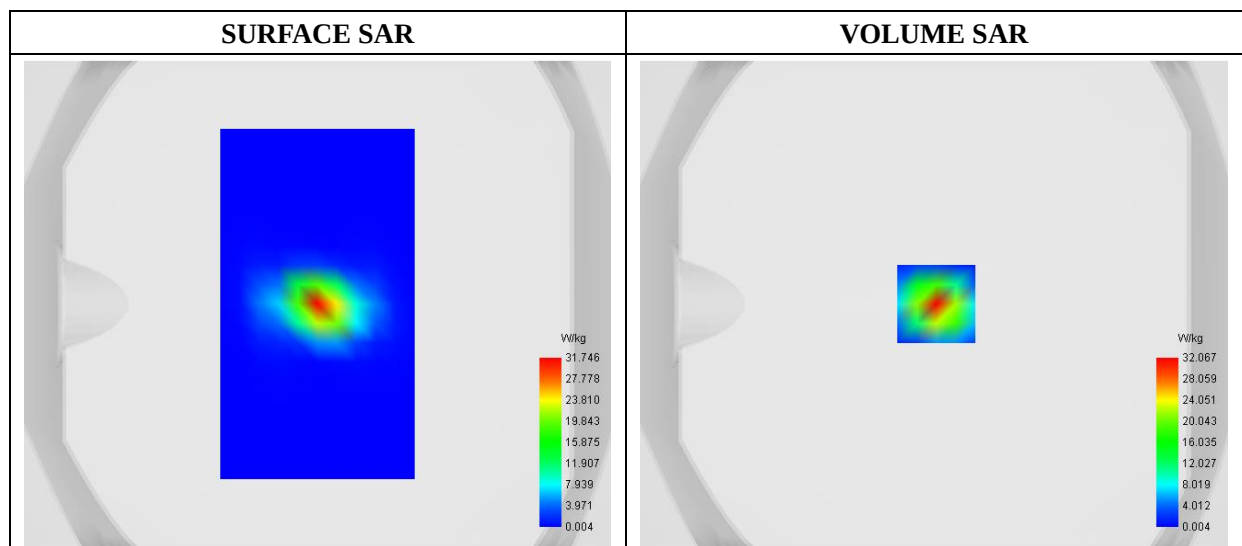
E-field Probe: SSE5 - SN 18/21 EPGO356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Signal	Duty Cycle 1:1

B. SAR Measurement Results

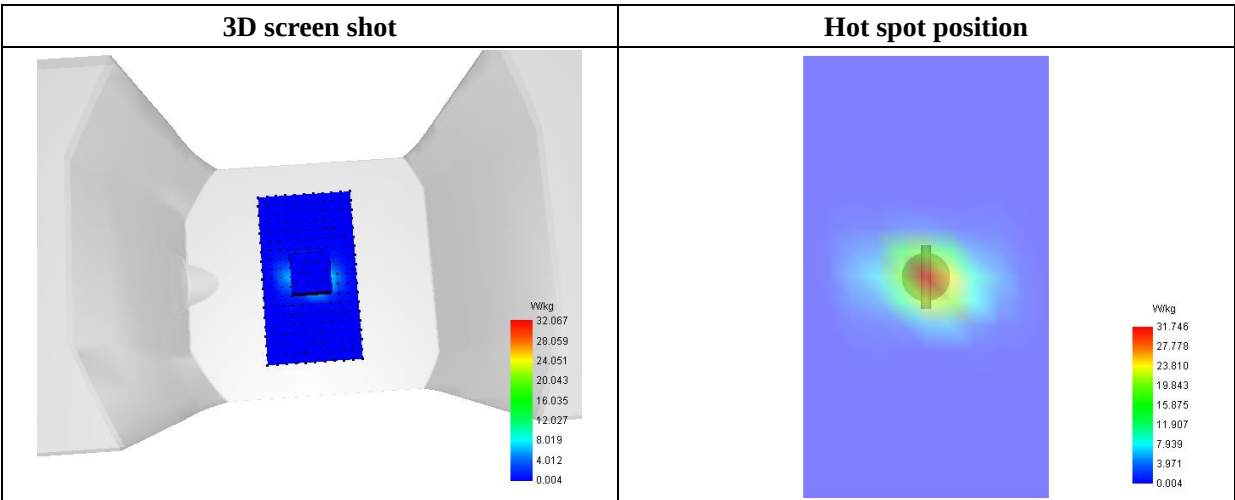
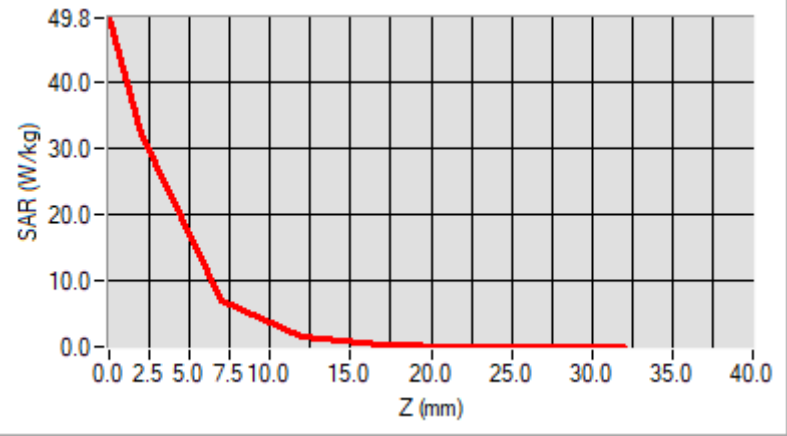
Frequency (MHz)	5200.000000
Relative Permittivity (real part)	48.501241
Conductivity (S/m)	5.160213
Power Variation (%)	0.749201
Ambient Temperature	21.1
Liquid Temperature	21.2



Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	5.017588
SAR 1g (W/Kg)	14.681175

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	49.8193	32.0669	7.0244	1.5969	0.3410	0.0635	0.0070



MEASUREMENT 20

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

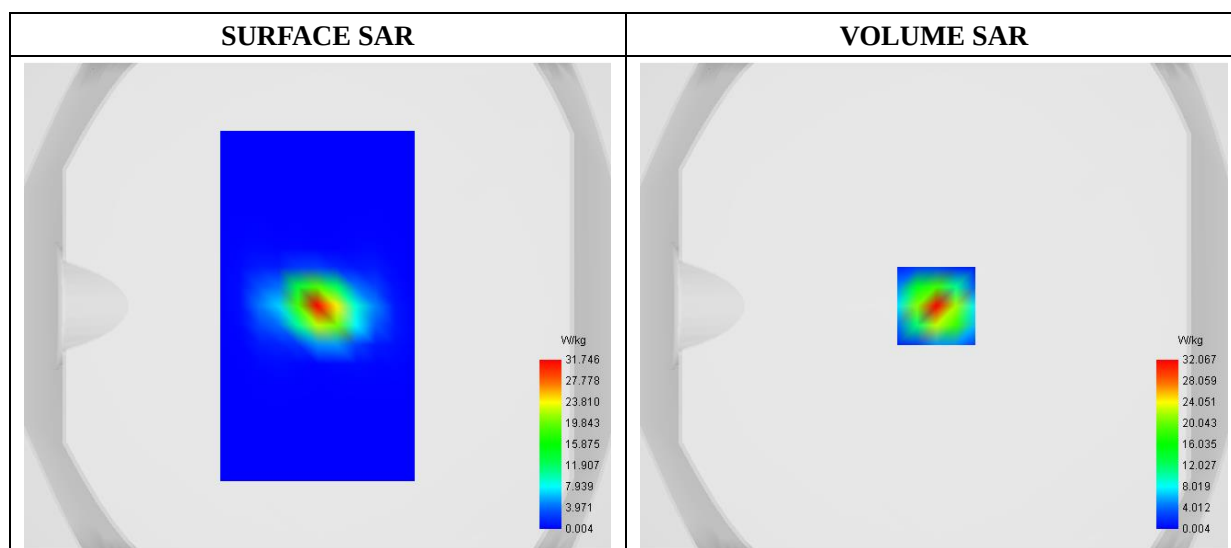
E-field Probe: SSE5 - SN 18/21 EPG0356; ConvF: 1.67; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Signal	Duty Cycle 1:1

B. SAR Measurement Results

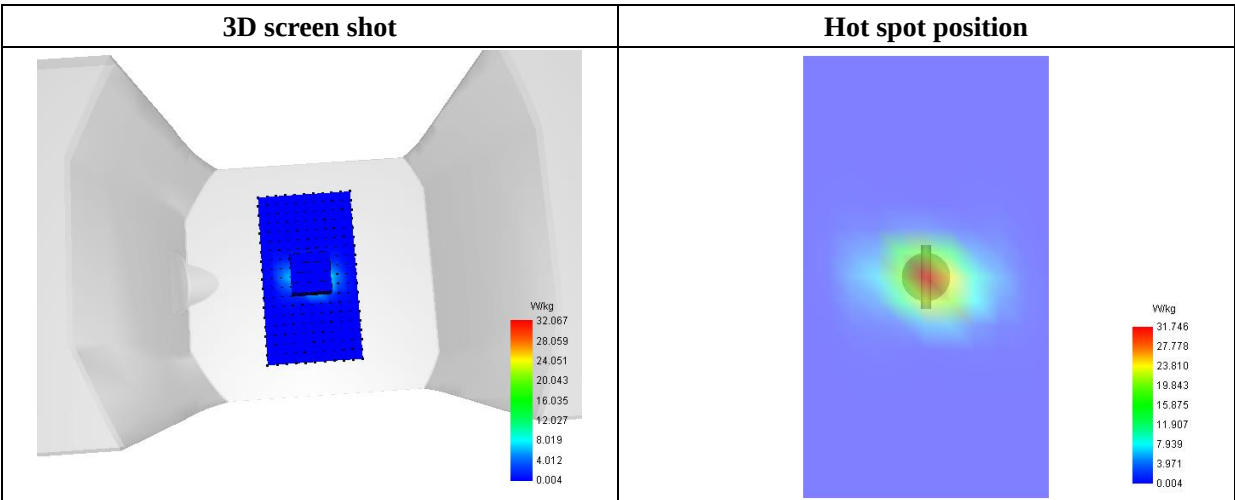
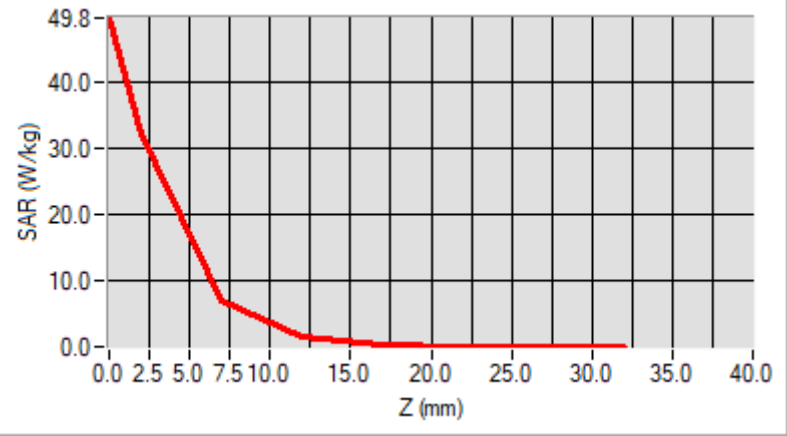
Frequency (MHz)	5800.000000
Relative Permittivity (real part)	48.501939
Conductivity (S/m)	5.761487
Power Variation (%)	0.749201
Ambient Temperature	21.1
Liquid Temperature	21.2



Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	6.047588
SAR 1g (W/Kg)	16.681175

Z (mm)	0.00	2.00	7.00	12.00	17.00	22.00	27.00
SAR (W/Kg)	49.8193	32.0669	7.0244	1.5969	0.3410	0.0635	0.0070



Annex B. Plots of SAR Measurement

MEASUREMENT 1

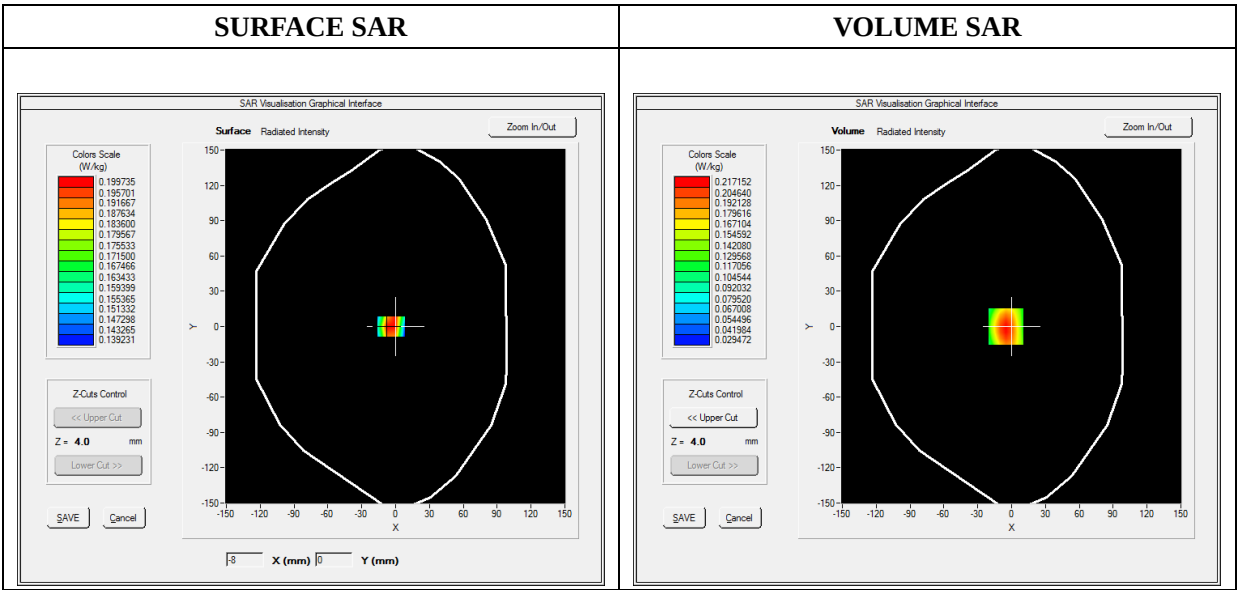
Type: Phone measurement (Complete)
Date of measurement: 2021-11-09
Measurement duration: 11 minutes 48 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	GSM850
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

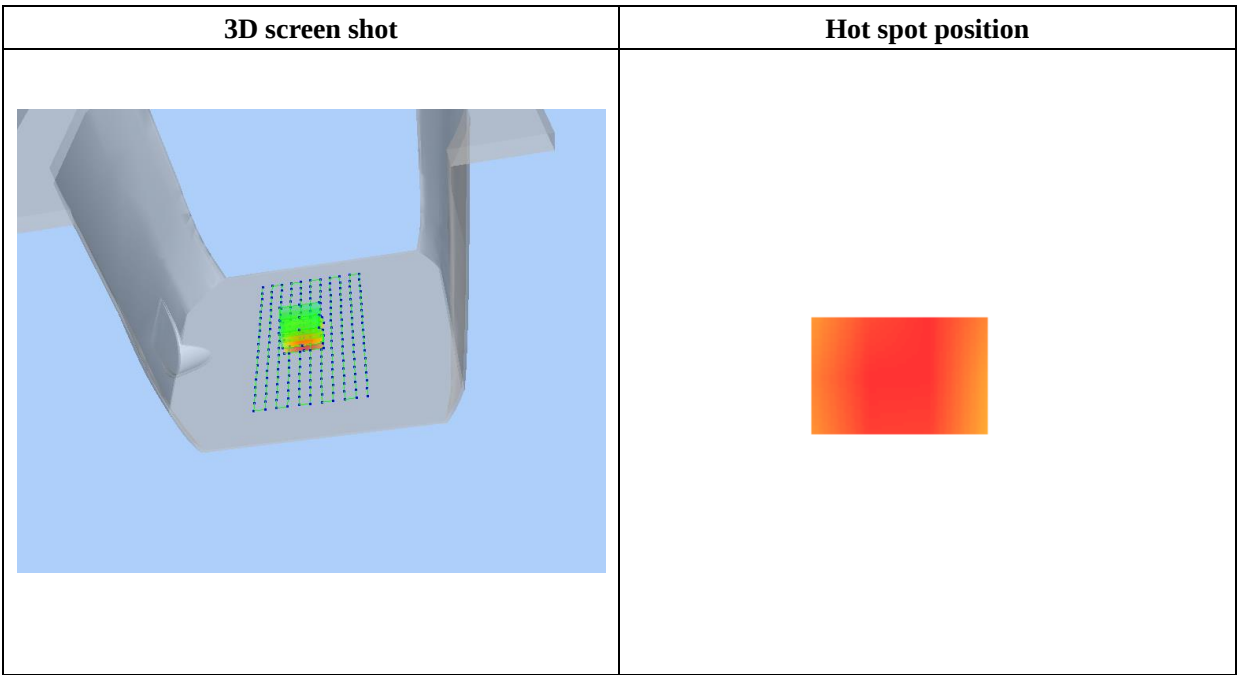
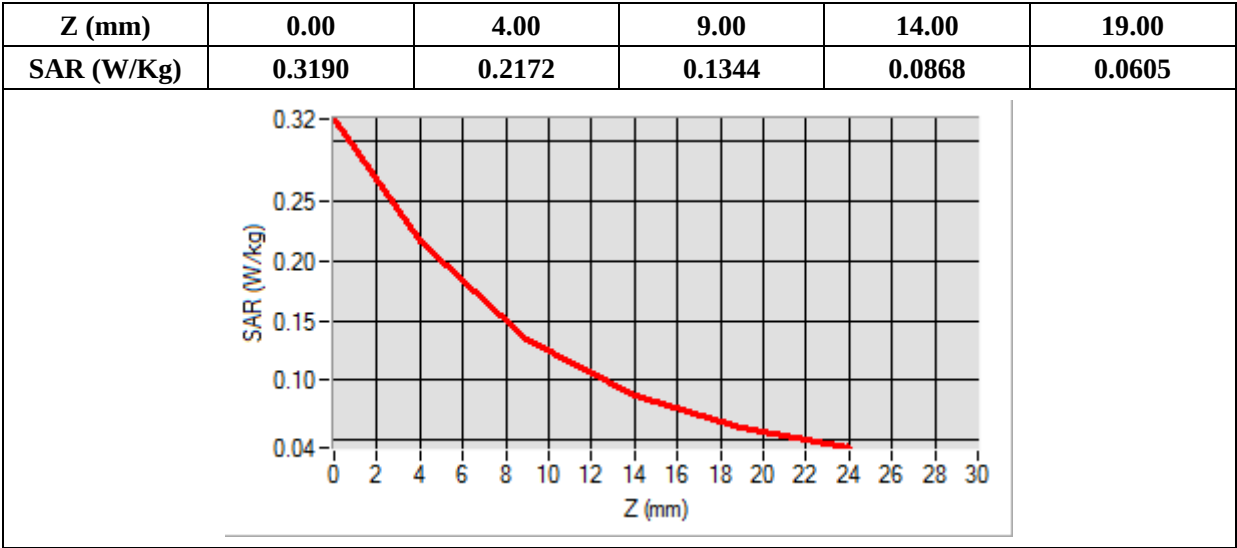
Frequency (MHz)	824.200000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	1.144536
Ambient Temperature	21.1
Liquid Temperature	21.3



Maximum location: X=-5.00, Y=0.00

SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.128184
SAR 1g (W/Kg)	0.205564



MEASUREMENT 2

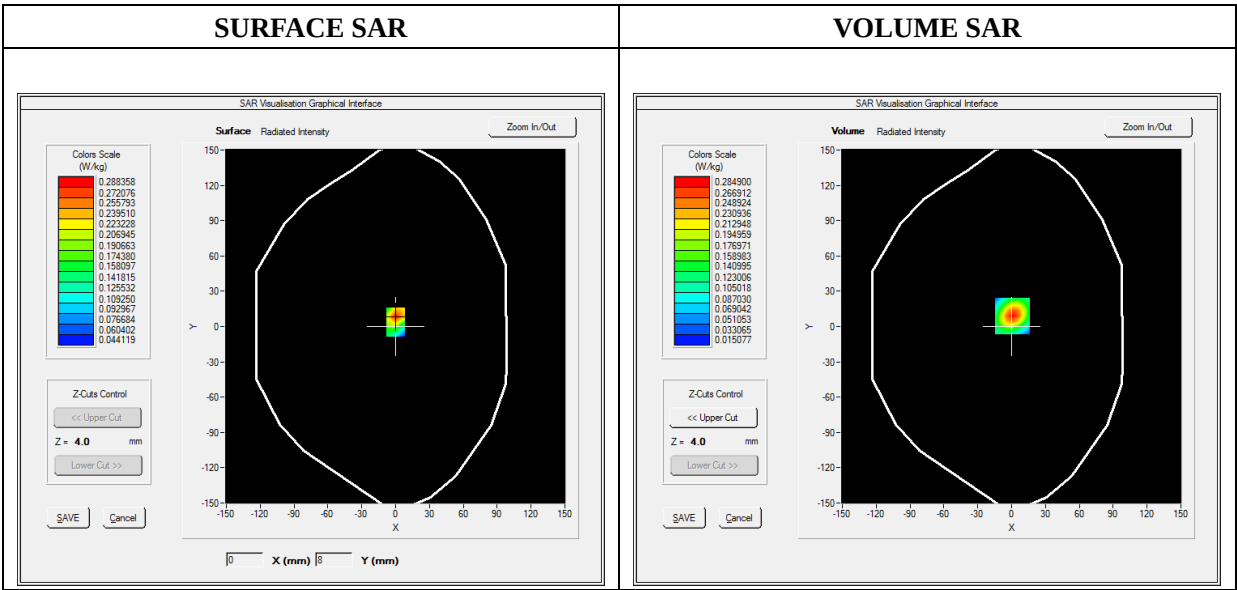
Type: Phone measurement (Complete)
Date of measurement: 2021-11-09
Measurement duration: 11 minutes 48 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

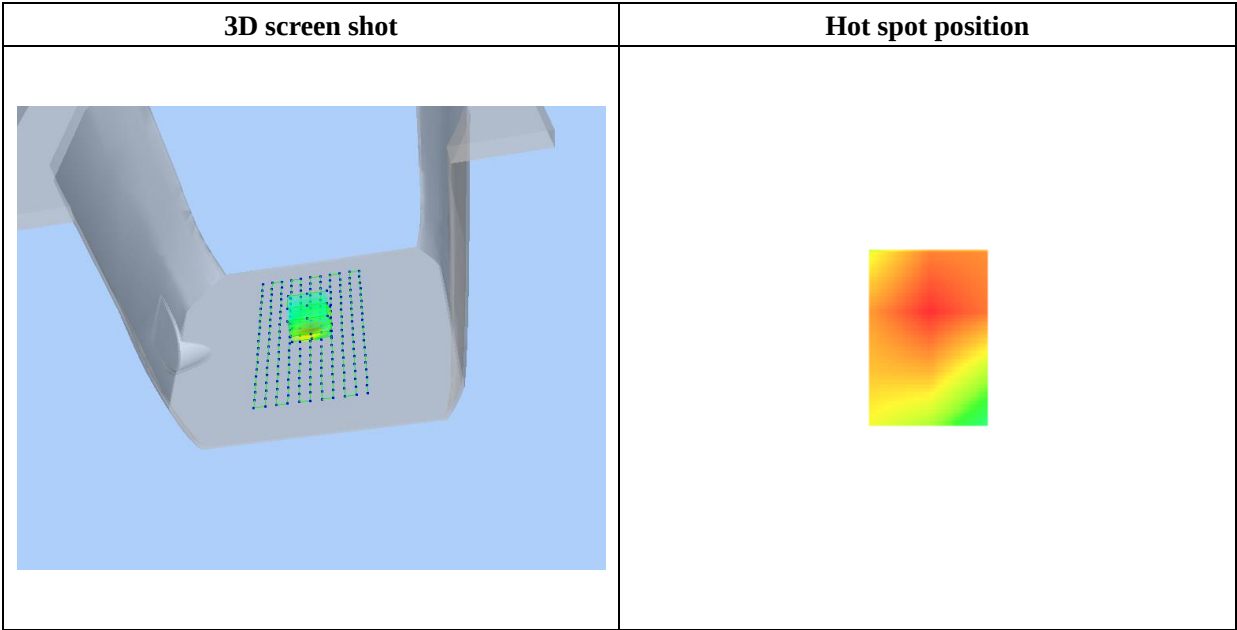
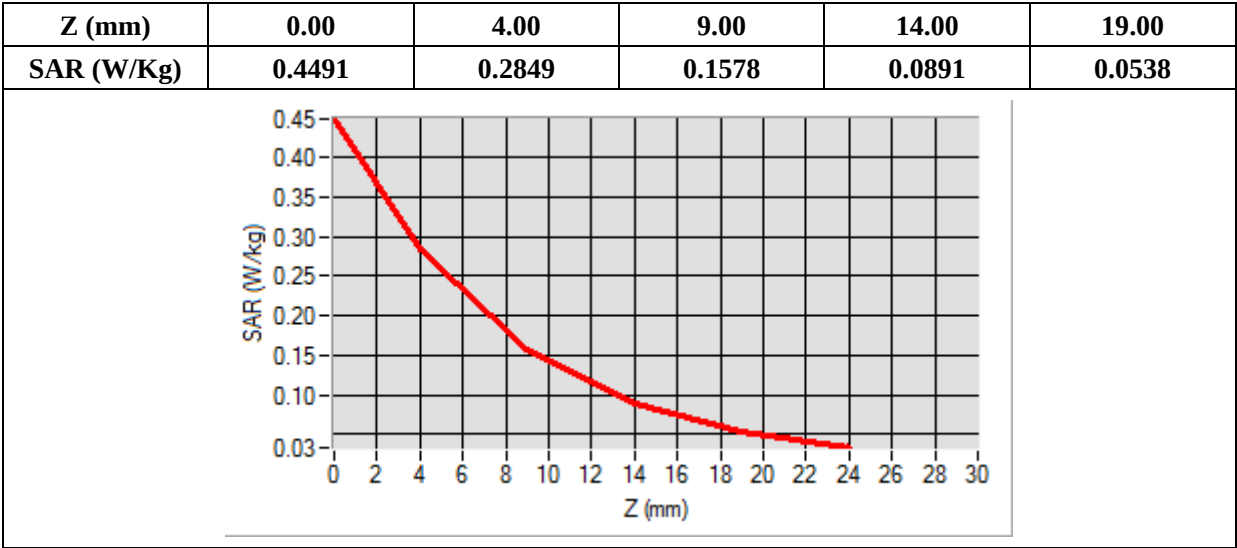
Frequency (MHz)	1850.200000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.442440
Ambient Temperature	21.1
Liquid Temperature	21.3



Maximum location: X=1.00, Y=9.00

SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	0.132895
SAR 1g (W/Kg)	0.257172



MEASUREMENT 3

Type: Phone measurement (Complete)

Date of measurement: 2021-11-08

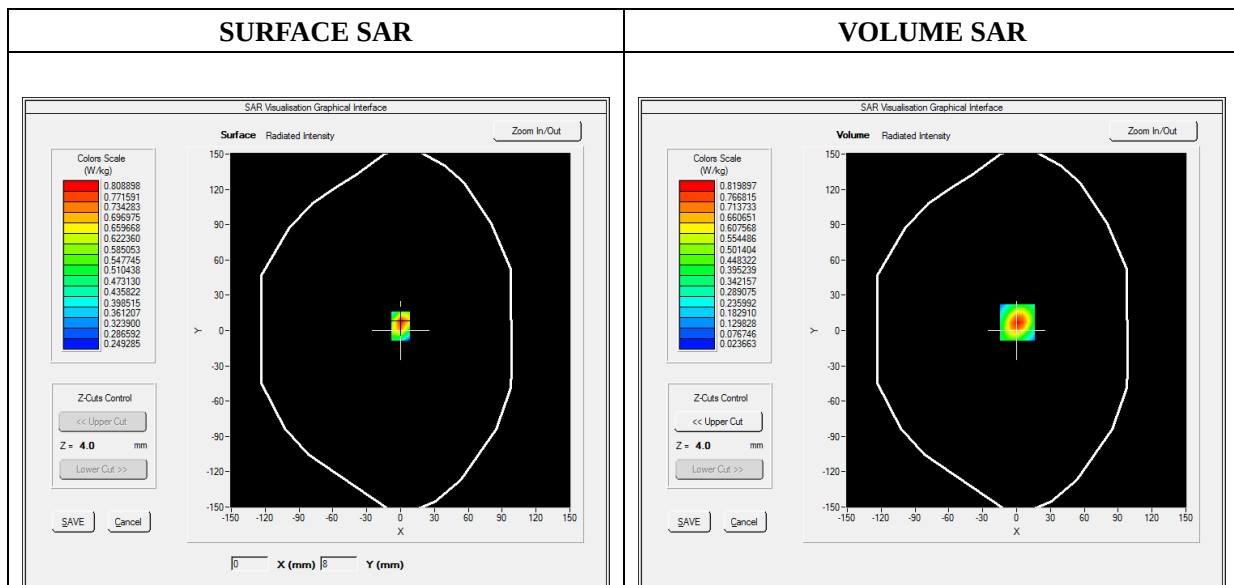
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

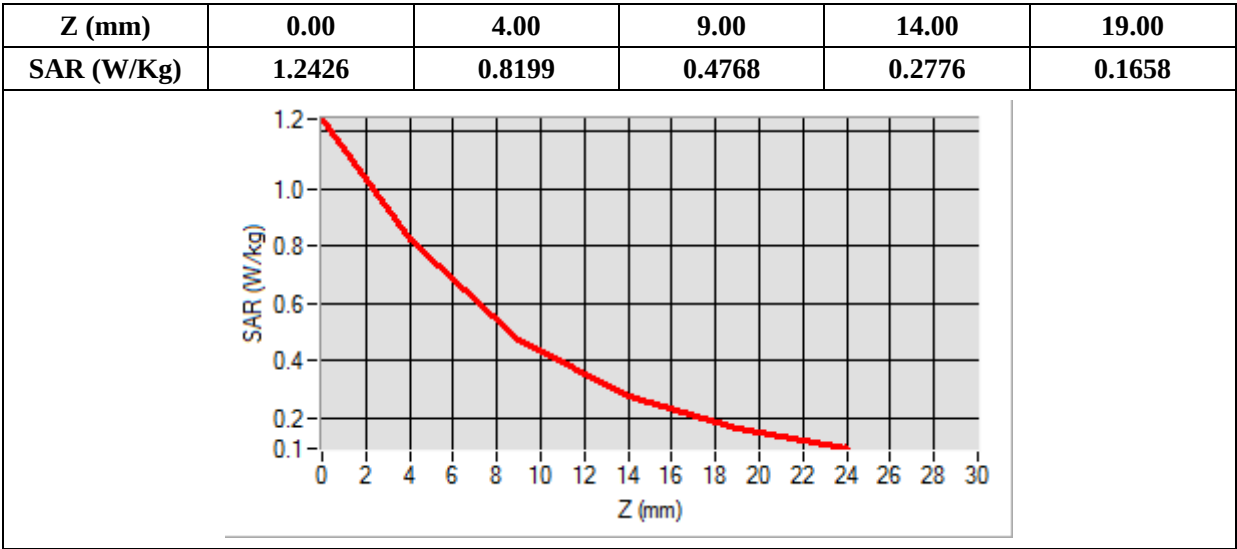
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.524540
Ambient Temperature	21.1
Liquid Temperature	21.3

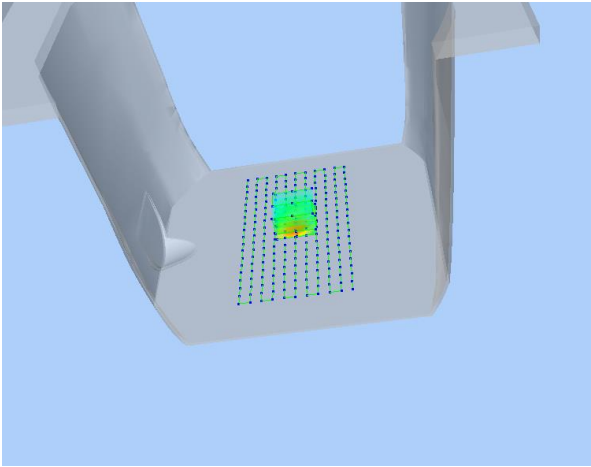


Maximum location: X=1.00, Y=7.00

SAR Peak: 1.24 W/kg

SAR 10g (W/Kg)	0.389672
SAR 1g (W/Kg)	0.739866



3D screen shot	Hot spot position
	

MEASUREMENT 4

Type: Phone measurement (Complete)

Date of measurement: 2021-11-08

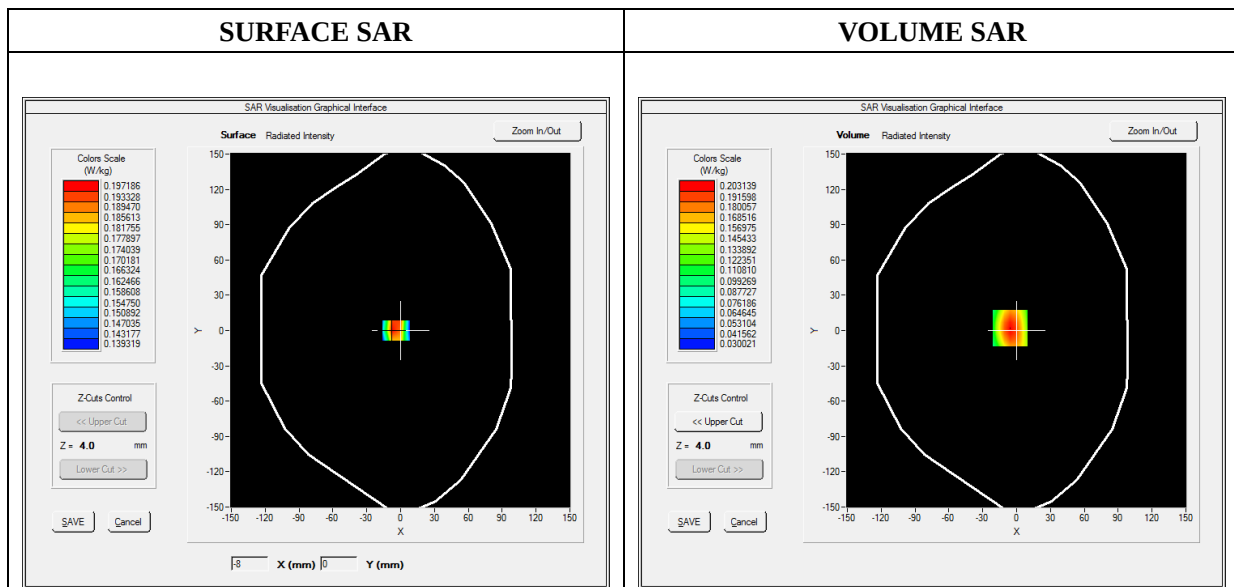
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	WCDMA850_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

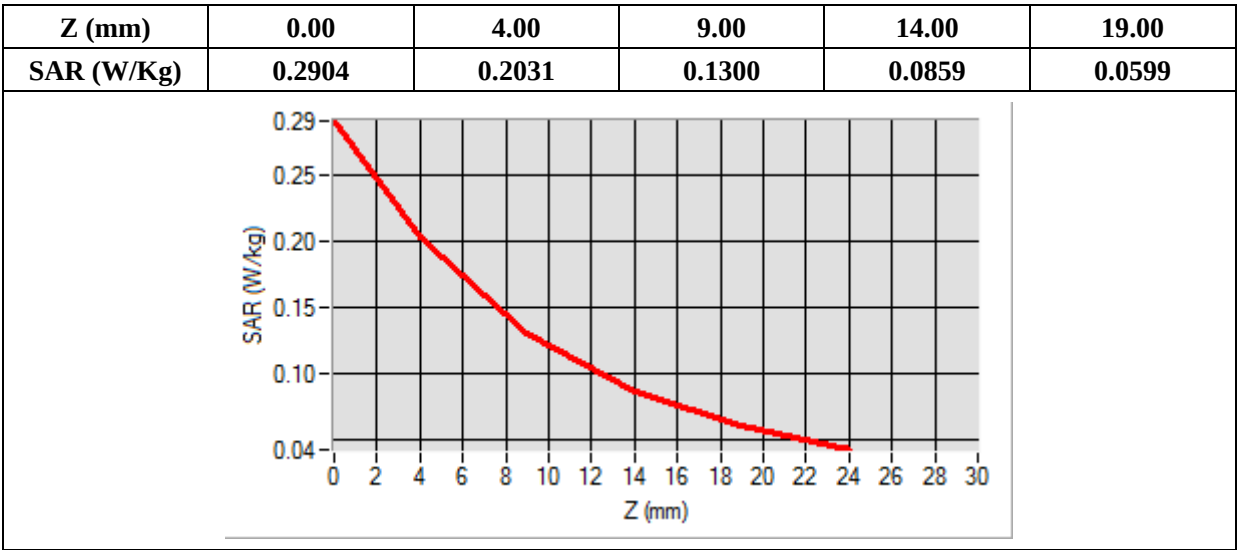
Frequency (MHz)	826.400000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	1.342427
Ambient Temperature	21.1
Liquid Temperature	21.3

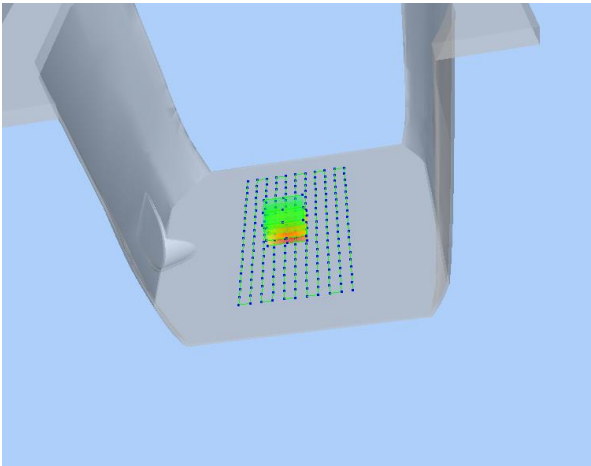


Maximum location: X=-6.00, Y=2.00

SAR Peak: 0.29 W/kg

SAR 10g (W/Kg)	0.120161
SAR 1g (W/Kg)	0.190887



3D screen shot	Hot spot position
	

MEASUREMENT 5

Type: Phone measurement (Complete)

Date of measurement: 2021-11-05

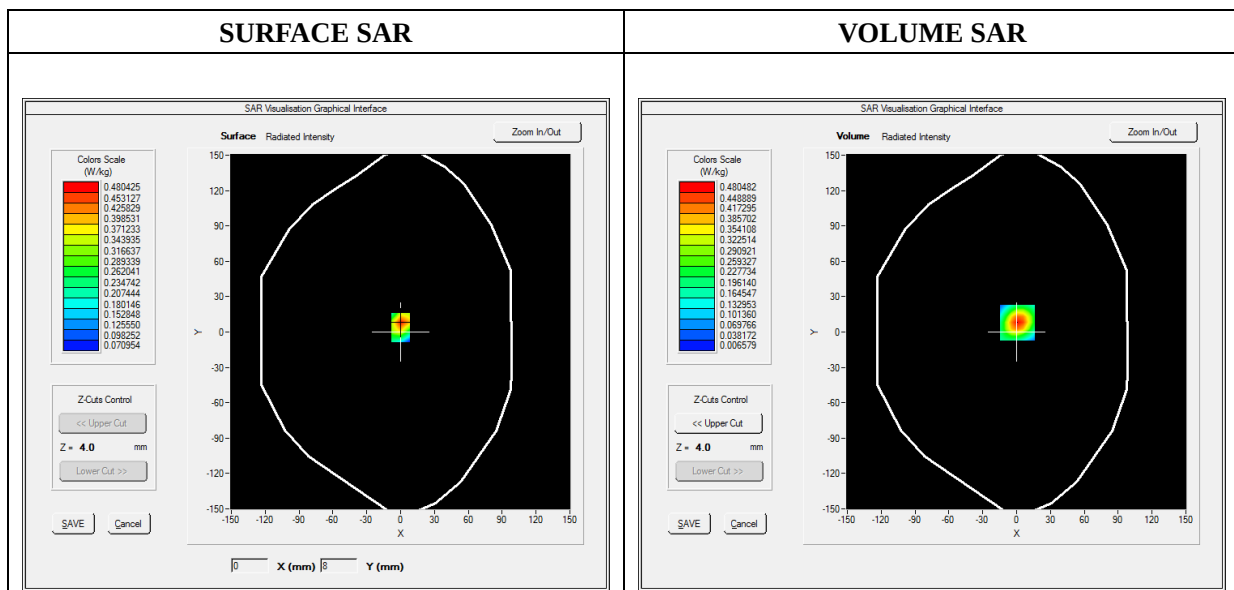
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 2
Channels	QPSK, 1.4MHz, 1RB, Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

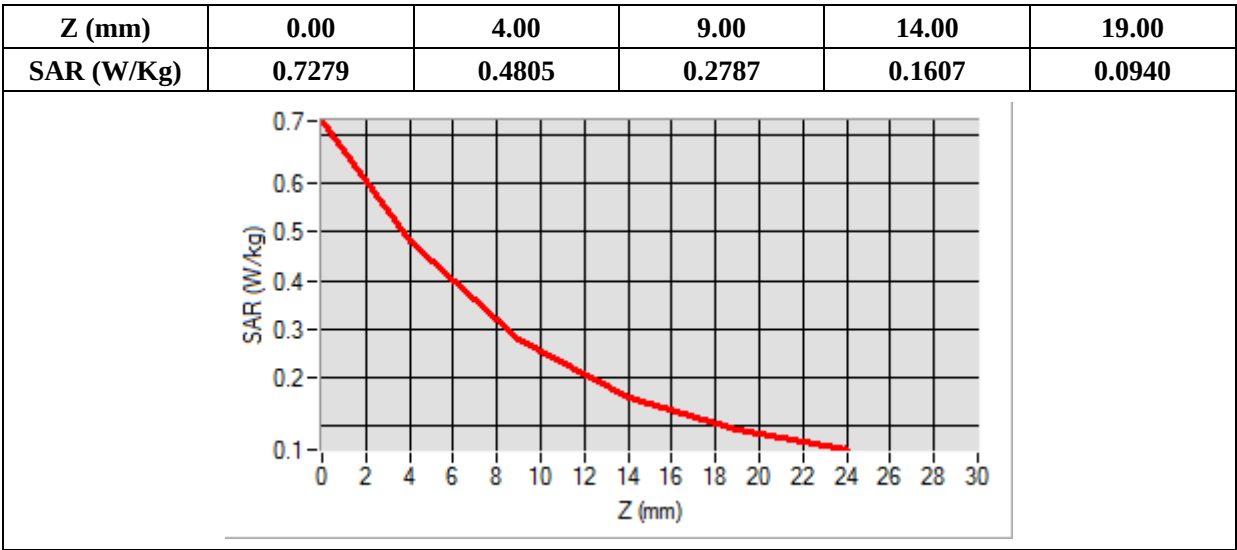
Frequency (MHz)	1850.700000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.536272
Ambient Temperature	21.1
Liquid Temperature	21.3

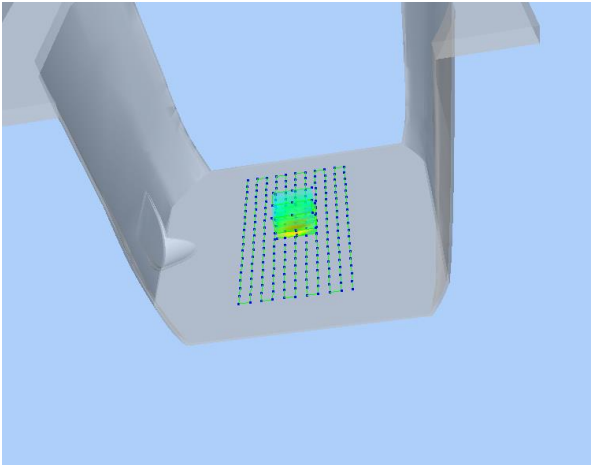


Maximum location: X=1.00, Y=8.00

SAR Peak: 0.73 W/kg

SAR 10g (W/Kg)	0.220210
SAR 1g (W/Kg)	0.430407



3D screen shot	Hot spot position
	

MEASUREMENT 6

Type: Phone measurement (Complete)

Date of measurement: 2021-11-05

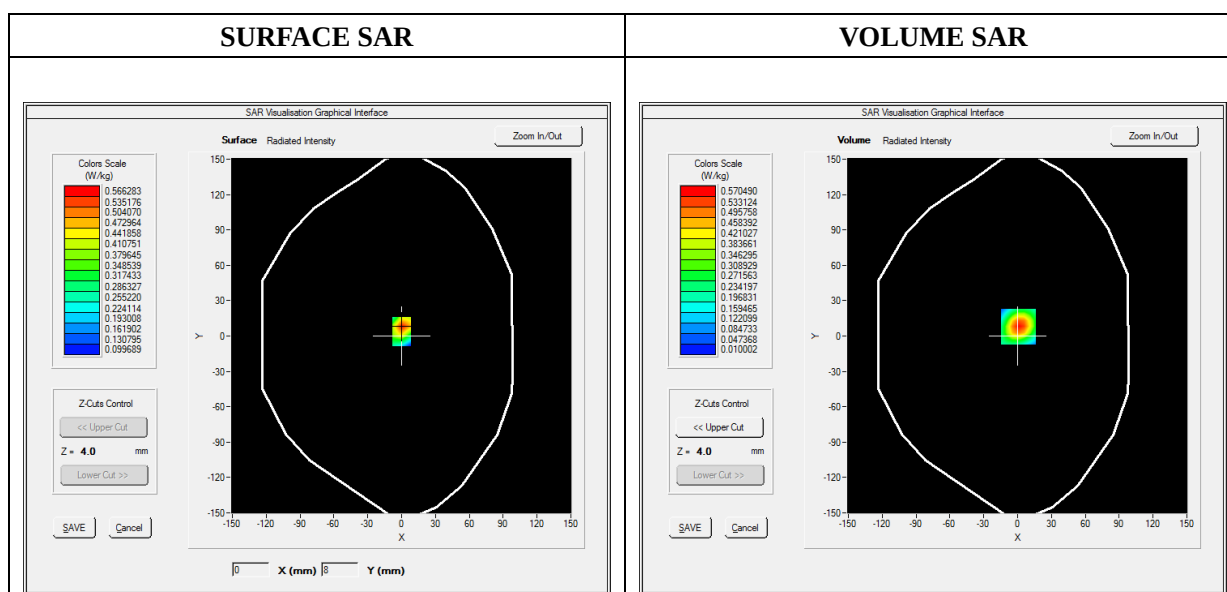
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 2
Channels	QPSK, 20MHz, 1RB, Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	1860.000000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.536272
Ambient Temperature	21.1
Liquid Temperature	21.3

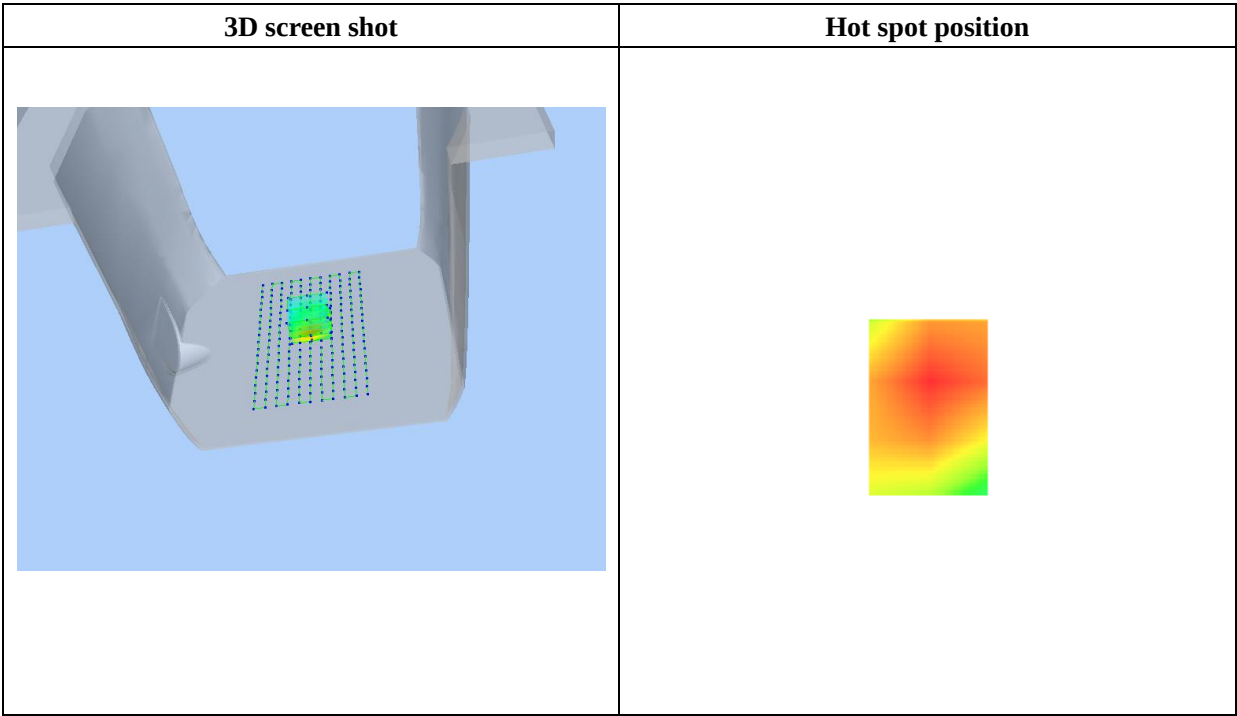
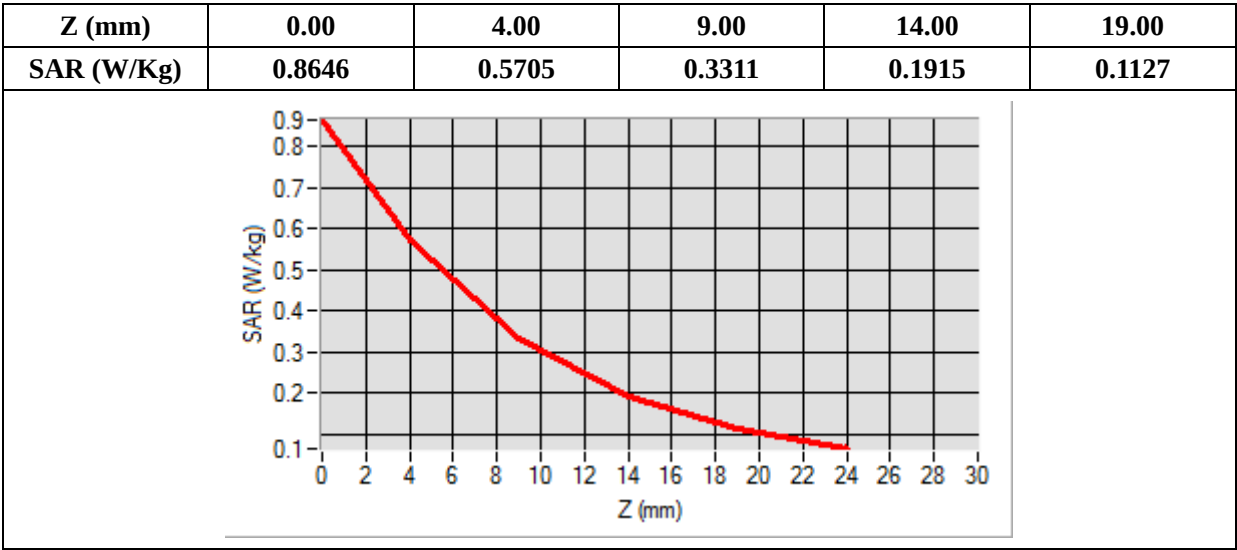


Maximum location: X=1.00, Y=8.00

SAR Peak: 0.87 W/kg

SAR 10g (W/Kg)	0.264307
----------------	----------

SAR 1g (W/Kg)	0.512729
---------------	----------



MEASUREMENT 7

Type: Phone measurement (Complete)

Date of measurement: 2021-11-04

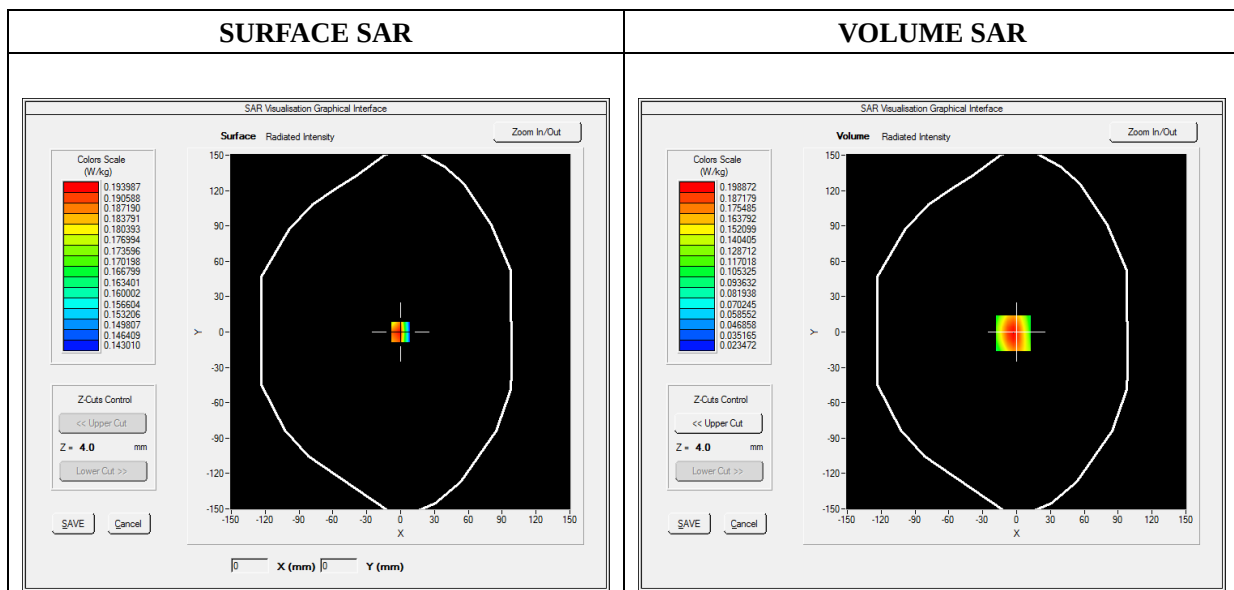
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 5
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

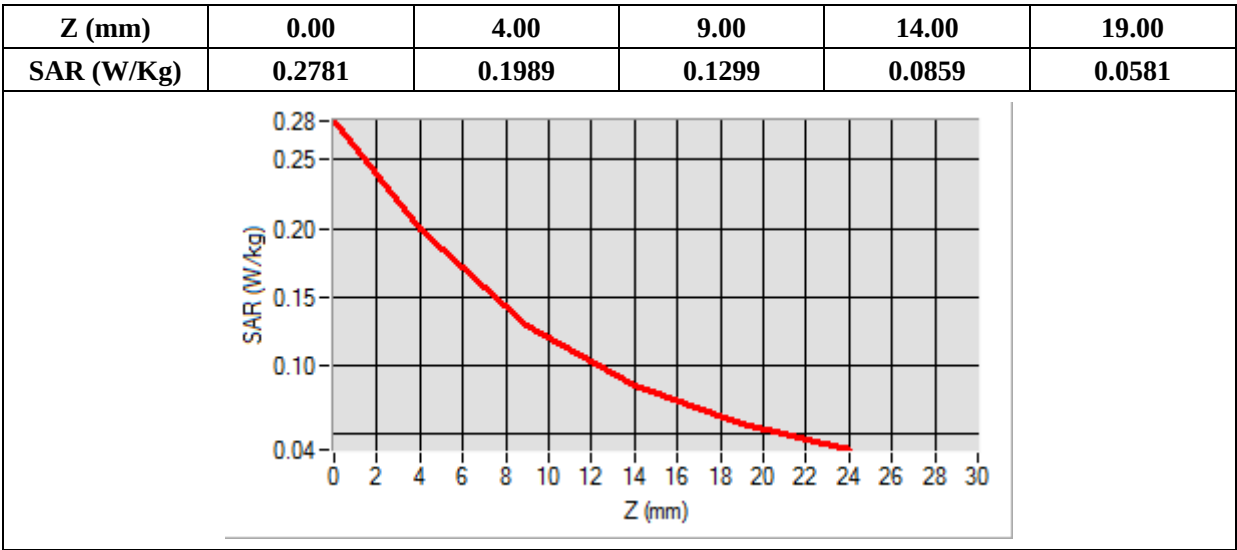
Frequency (MHz)	829.000000
Relative Permittivity (real part)	41.114890
Conductivity (S/m)	0.871250
Power Variation (%)	1.074628
Ambient Temperature	21.1
Liquid Temperature	21.2

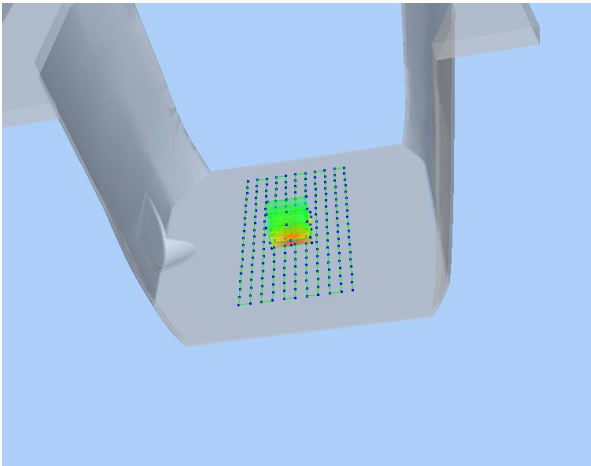


Maximum location: X=-3.00, Y=-1.00

SAR Peak: 0.28 W/kg

SAR 10g (W/Kg)	0.117491
SAR 1g (W/Kg)	0.186250



3D screen shot	Hot spot position
	

MEASUREMENT 8

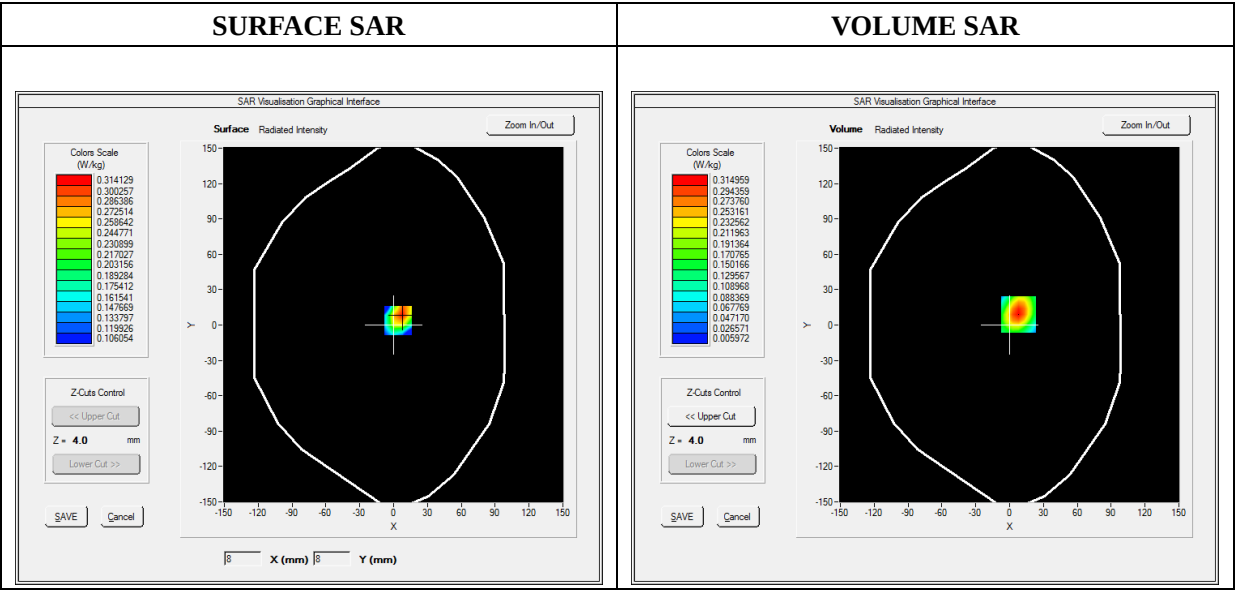
Type: Phone measurement (Complete)
Date of measurement: 2021-11-08
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 7
Channels	QPSK, 20MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

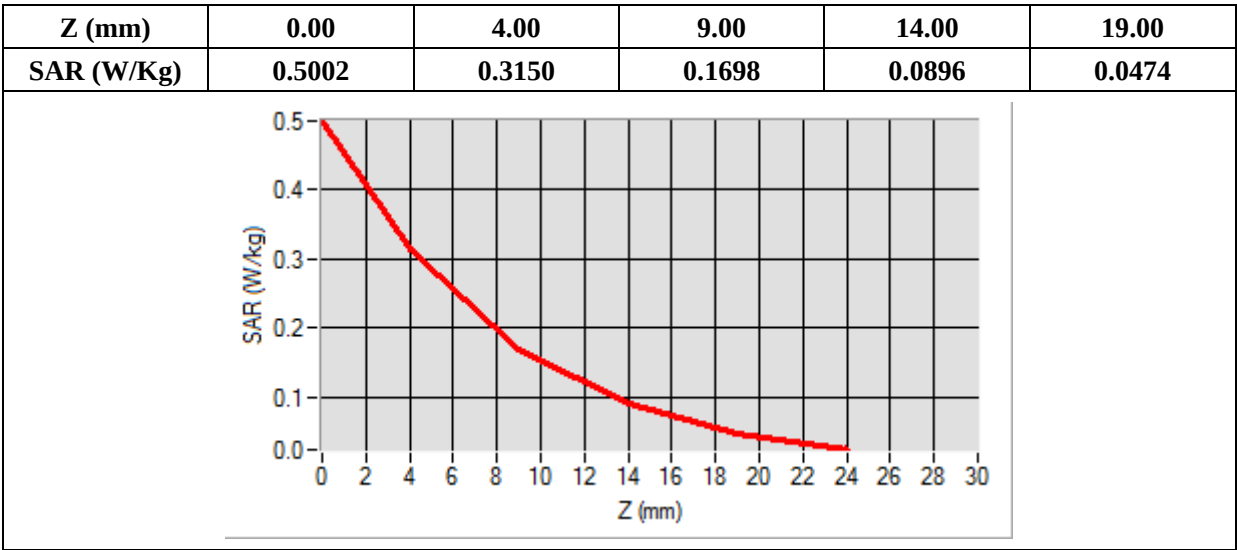
Frequency (MHz)	2510.000000
Relative Permittivity (real part)	38.351092
Conductivity (S/m)	1.740182
Power Variation (%)	0.924535
Ambient Temperature	21.1
Liquid Temperature	21.2

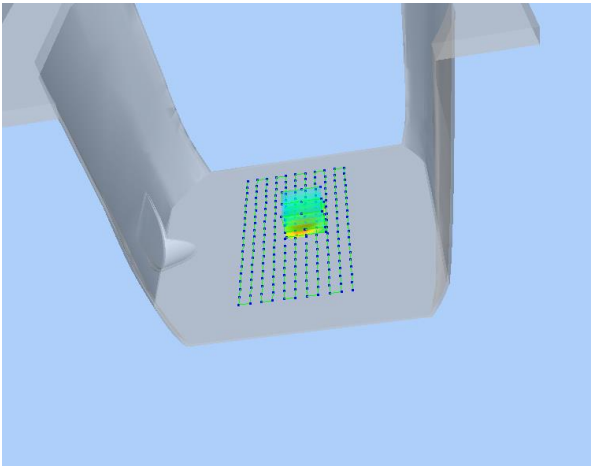
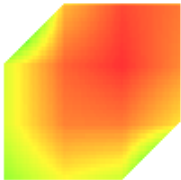


Maximum location: X=8.00, Y=9.00

SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.146452
SAR 1g (W/Kg)	0.287949



3D screen shot	Hot spot position
	

MEASUREMENT 9

Type: Phone measurement (Complete)

Date of measurement: 2021-11-04

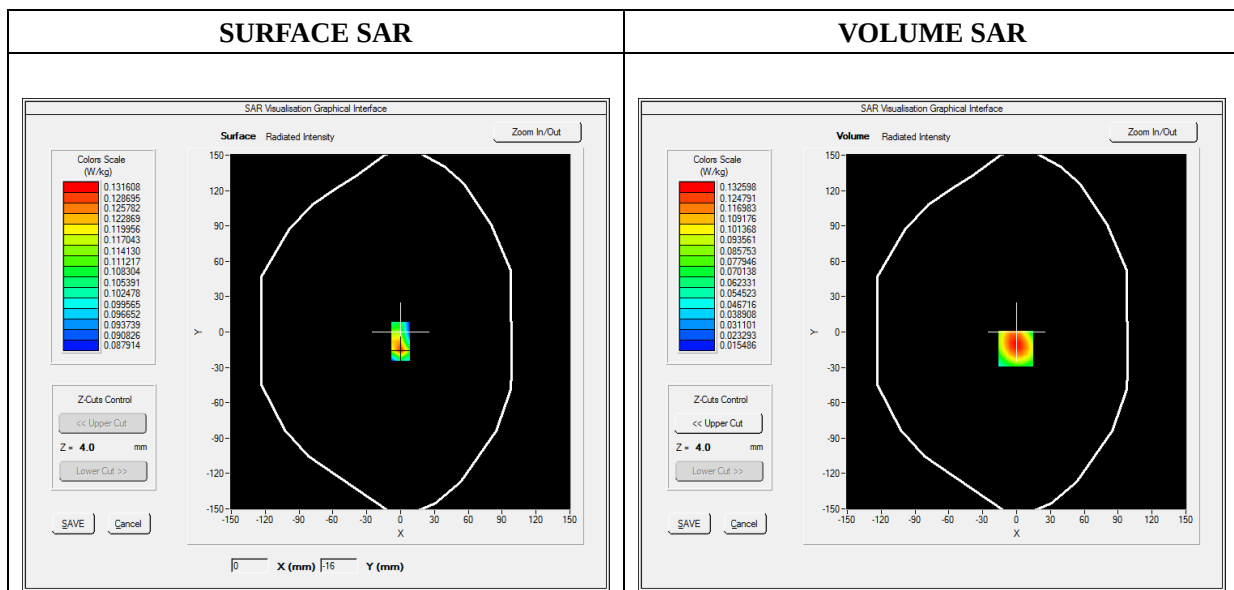
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 12
Channels	QPSK, 10MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

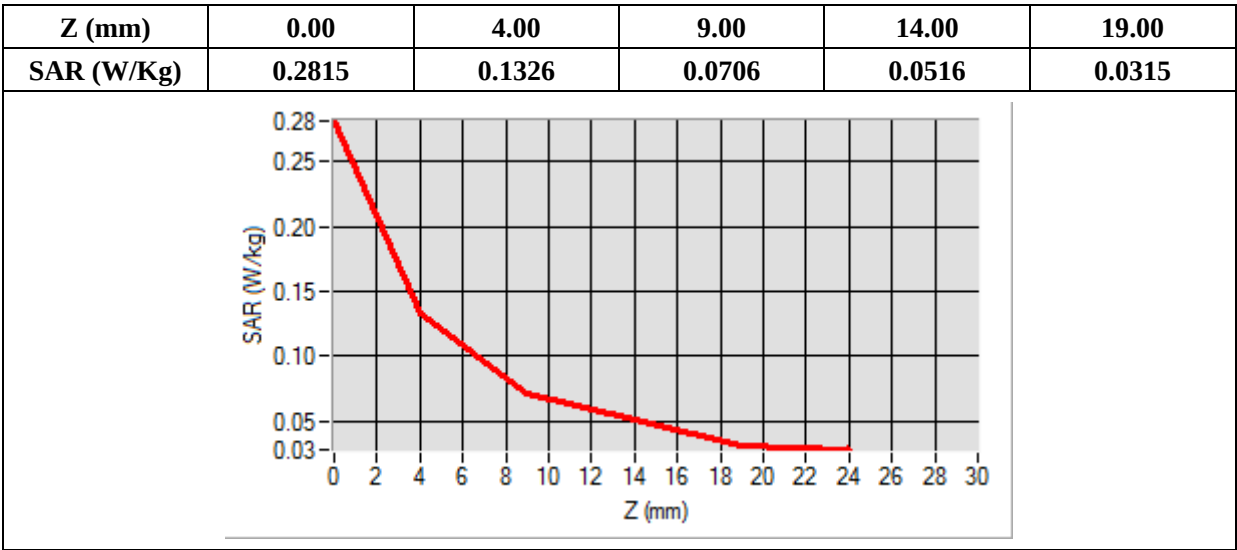
Frequency (MHz)	711.000000
Relative Permittivity (real part)	41.320245
Conductivity (S/m)	0.861245
Power Variation (%)	0.924535
Ambient Temperature	21.1
Liquid Temperature	21.2

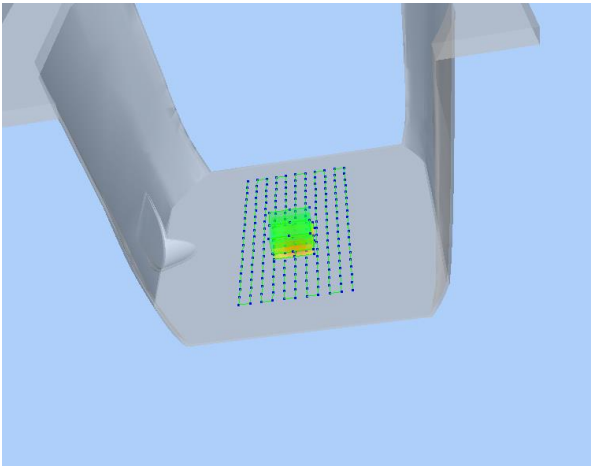


Maximum location: X=-1.00, Y=-14.00

SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.077860
SAR 1g (W/Kg)	0.127507



3D screen shot	Hot spot position
	

MEASUREMENT 10

Type: Phone measurement (Complete)

Date of measurement: 2021-11-04

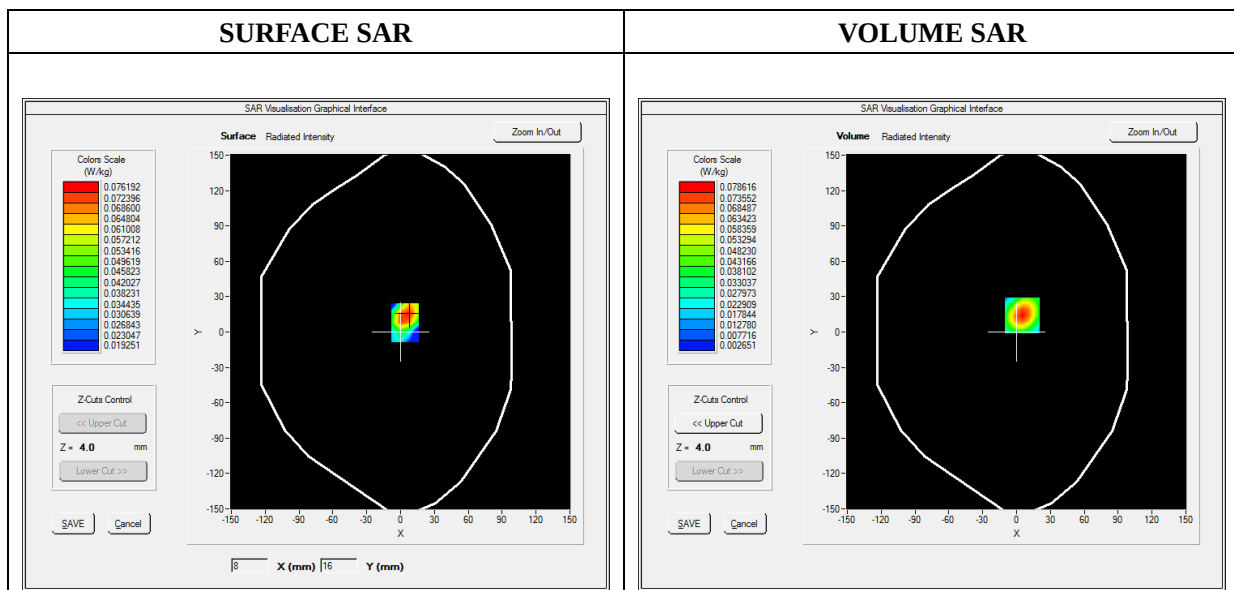
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 38
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

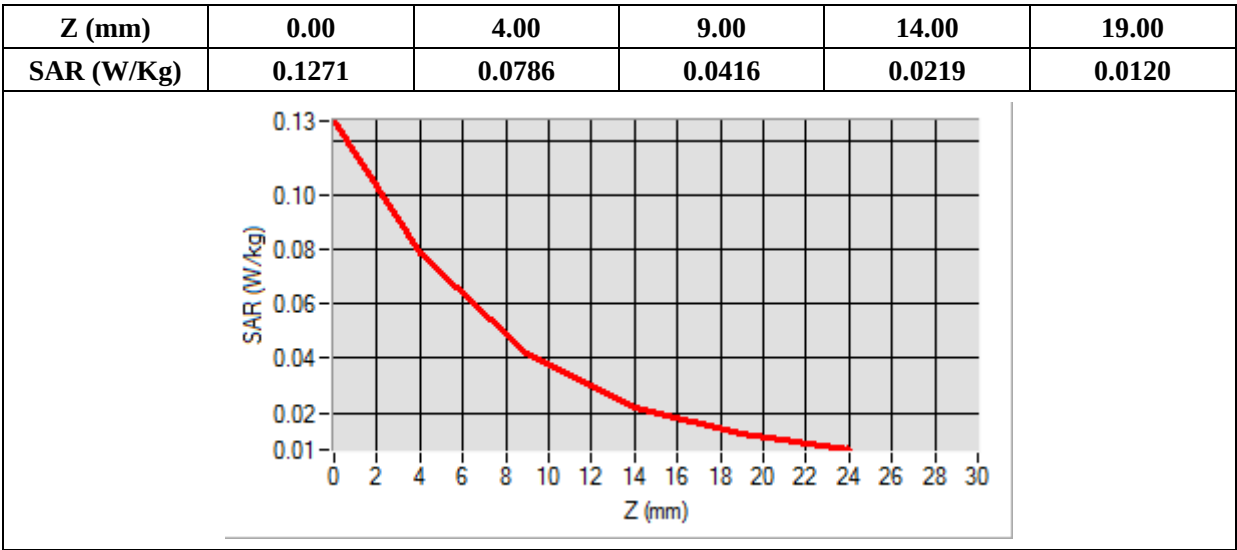
B. SAR Measurement Results

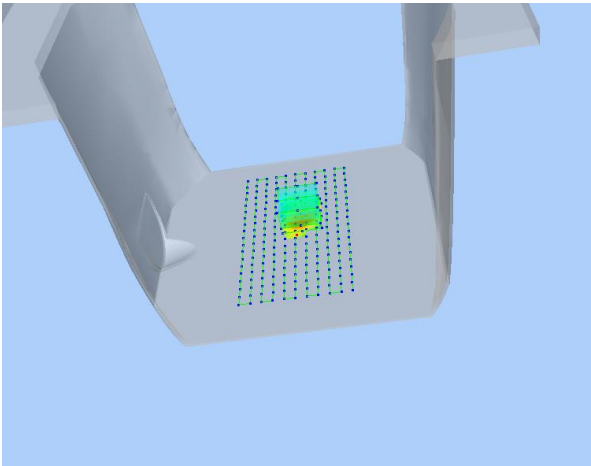
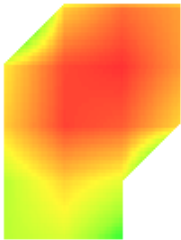
Frequency (MHz)	2580.000000
Relative Permittivity (real part)	39.2260245
Conductivity (S/m)	1.9916245
Power Variation (%)	0.924535
Ambient Temperature	21.1
Liquid Temperature	21.2



SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.036674
SAR 1g (W/Kg)	0.073206



3D screen shot	Hot spot position
	

MEASUREMENT 11

Type: Phone measurement (Complete)

Date of measurement: 2021-11-03

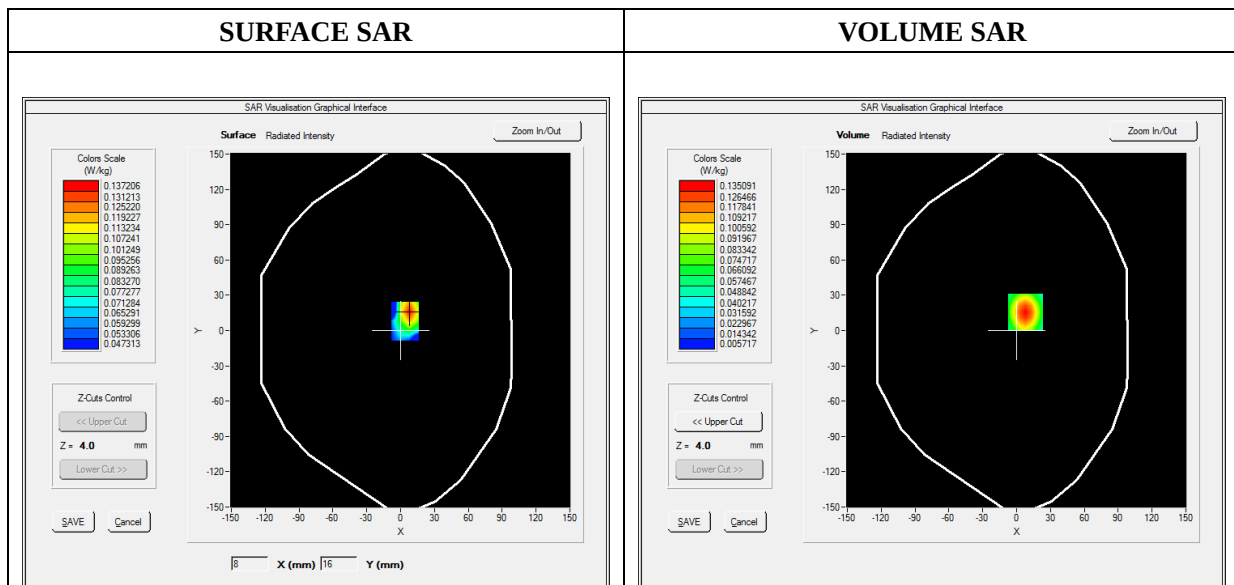
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 40(2305~2315MHz)
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

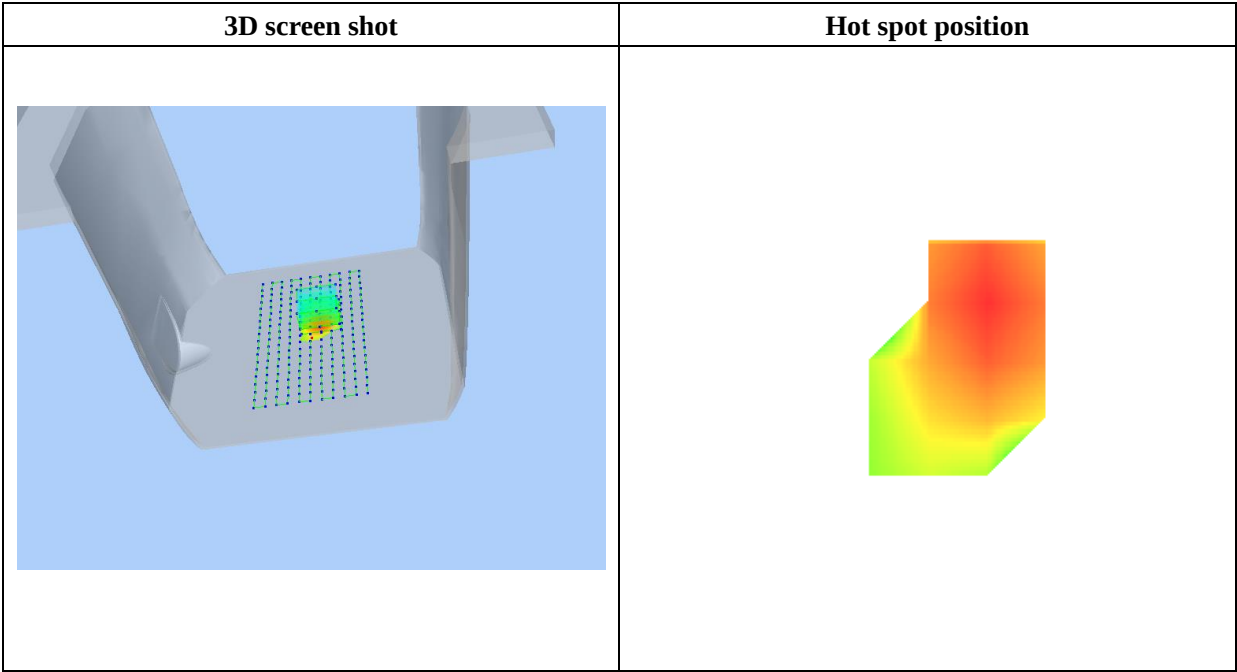
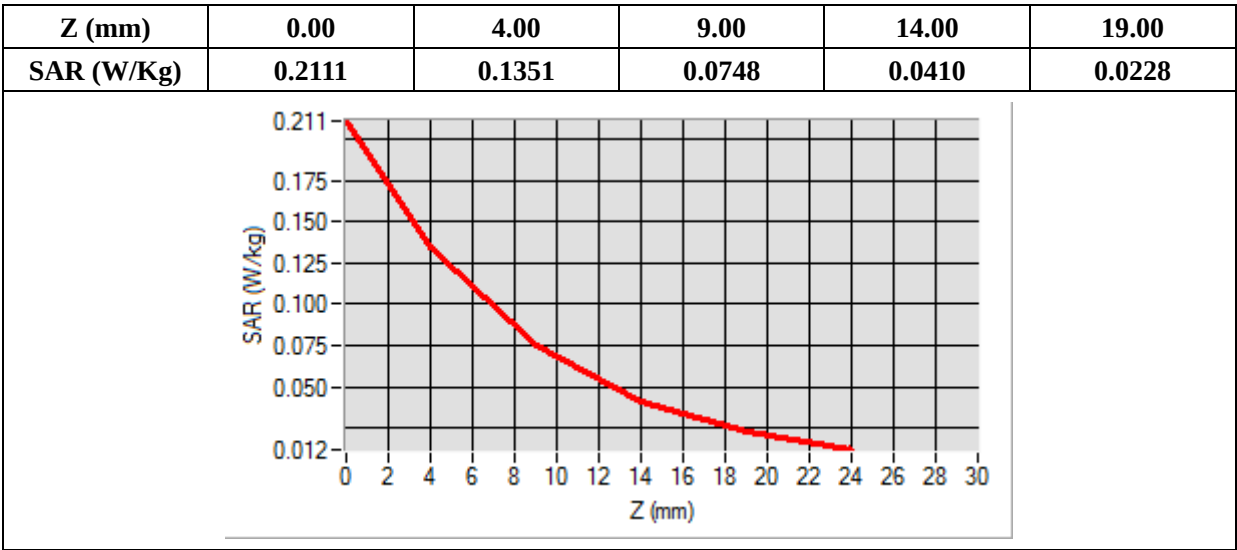
Frequency (MHz)	2310.000000
Relative Permittivity (real part)	38.381668
Conductivity (S/m)	1.653696
Power Variation (%)	-1.480000
Ambient Temperature	21.1
Liquid Temperature	21.2



Maximum location: X=8.00, Y=16.00

SAR Peak: 0.21 W/kg

SAR 10g (W/Kg)	0.065860
SAR 1g (W/Kg)	0.124005



MEASUREMENT 12

Type: Phone measurement (Complete)

Date of measurement: 2021-11-03

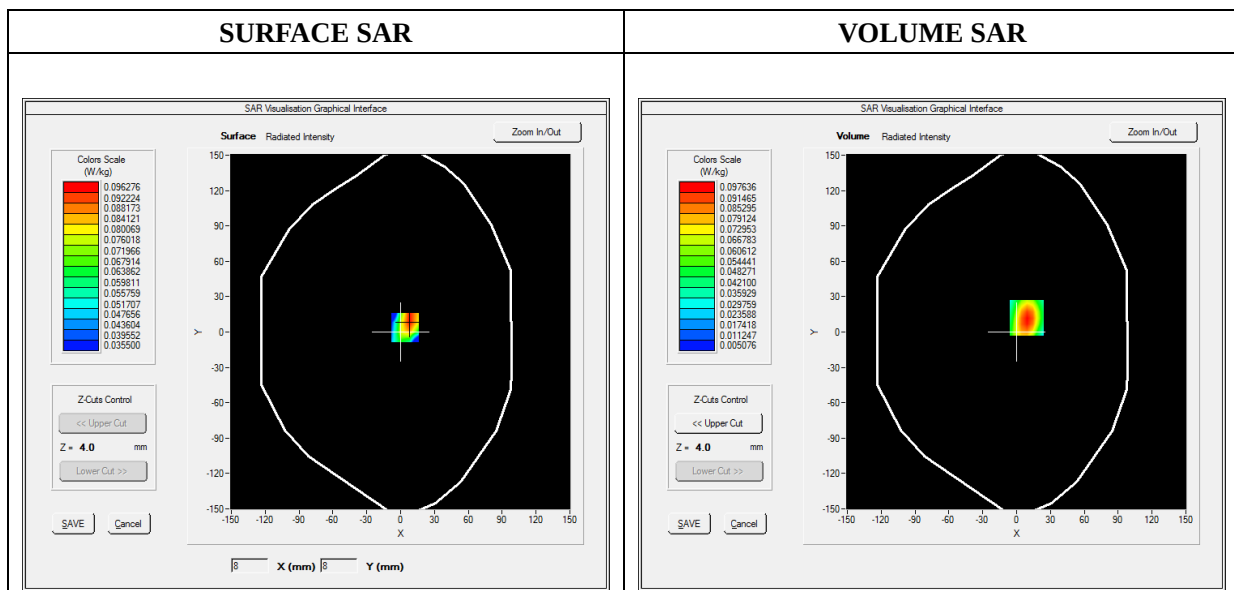
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 40(2350~2360MHz)
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2355.000000
Relative Permittivity (real part)	38.384668
Conductivity (S/m)	1.651696
Power Variation (%)	-1.480000
Ambient Temperature	21.1
Liquid Temperature	21.2

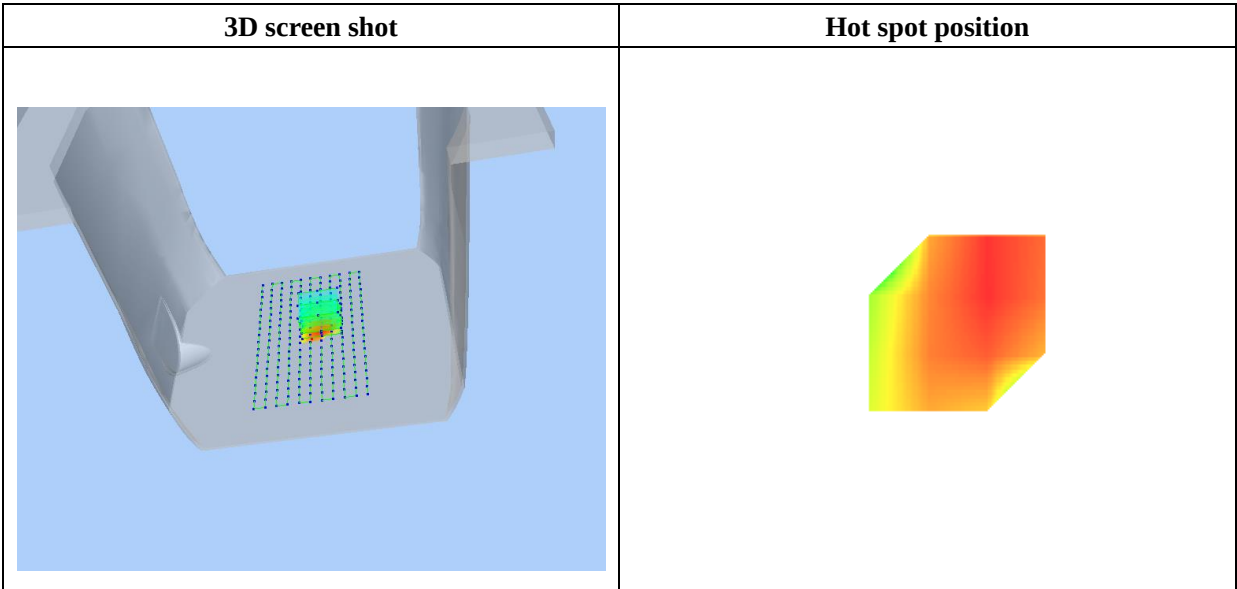
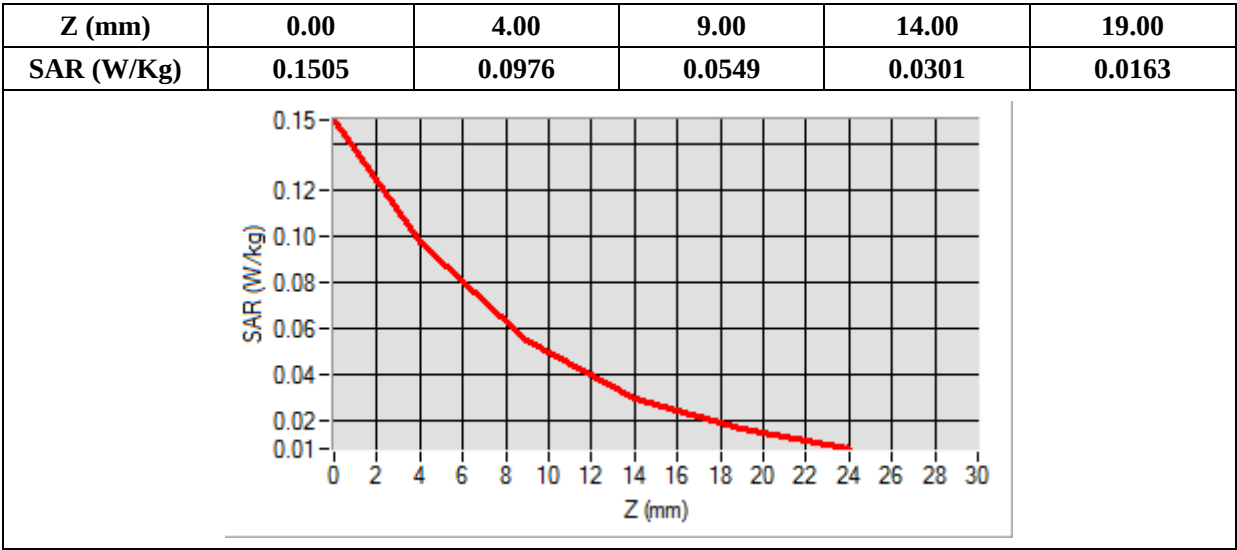


Maximum location: X=9.00, Y=12.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.047631
-----------------------	-----------------

SAR 1g (W/Kg)	0.090047
---------------	----------



MEASUREMENT 13

Type: Phone measurement (Complete)

Date of measurement: 2021-11-04

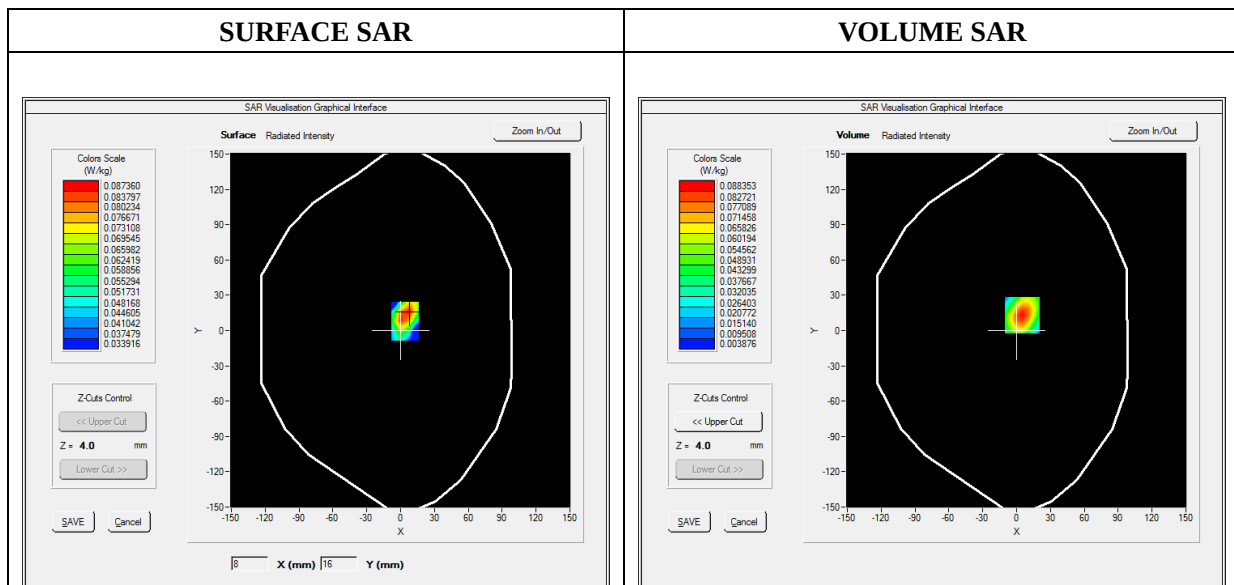
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	LTE Band 41
Channels	QPSK, 20MHz, 50%RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

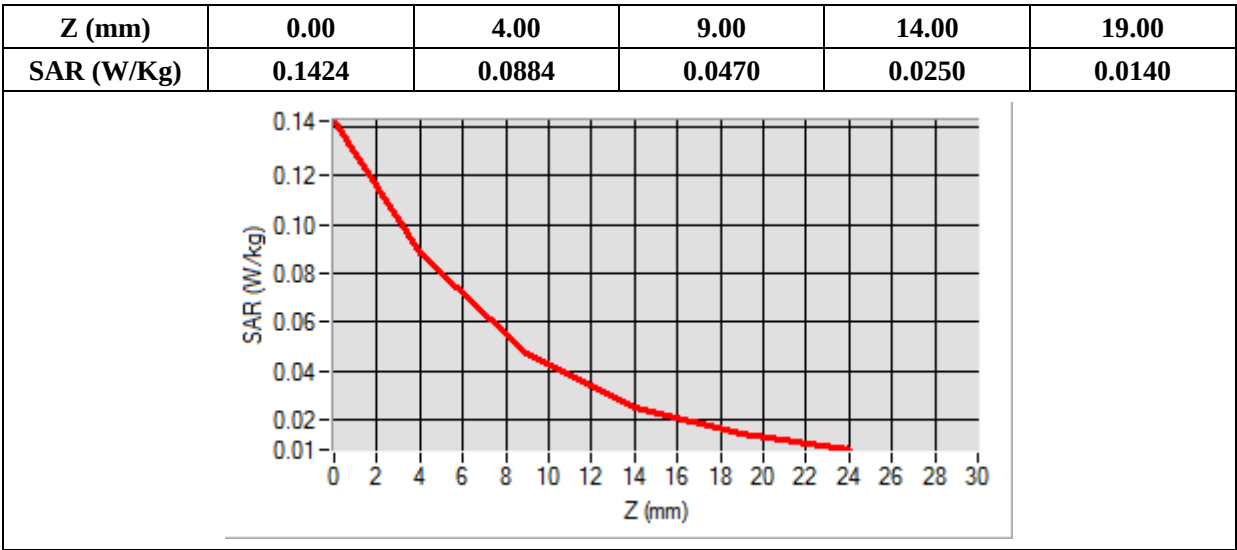
Frequency (MHz)	2605.000000
Relative Permittivity (real part)	39.220000
Conductivity (S/m)	1.991301
Power Variation (%)	0.520000
Ambient Temperature	21.1
Liquid Temperature	21.2

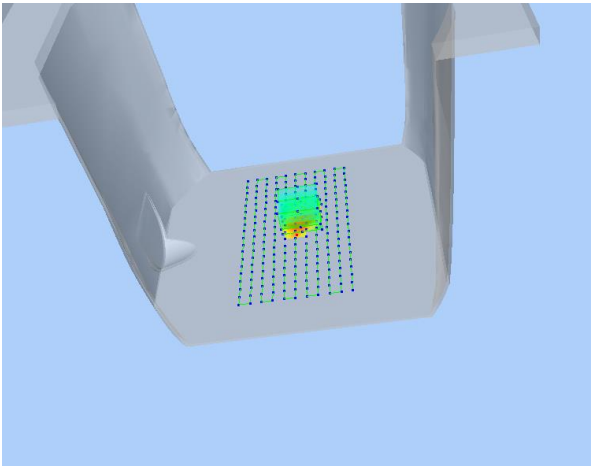
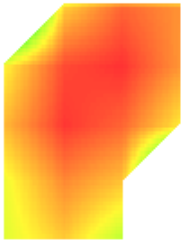


Maximum location: X=5.00, Y=13.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.041819
SAR 1g (W/Kg)	0.080988



3D screen shot	Hot spot position
	

MEASUREMENT 14

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

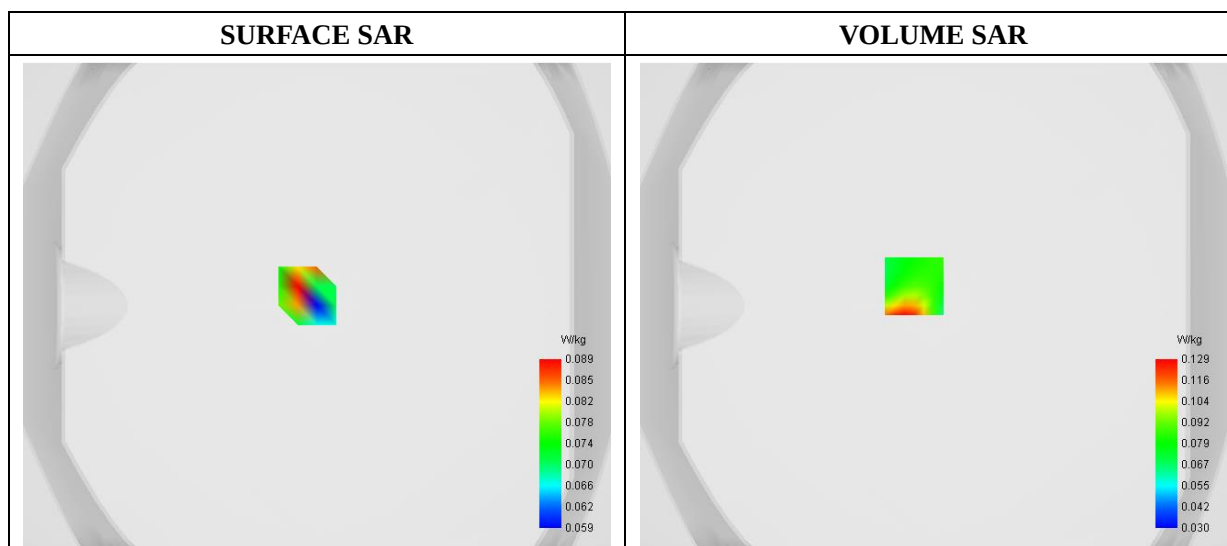
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	WiFi(5.2GHz)_ 802.11n (HT20)
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative Permittivity (real part)	35.602911
Conductivity (S/m)	4.871483
Power Variation (%)	4.162660
Ambient Temperature	22.0
Liquid Temperature	22.3



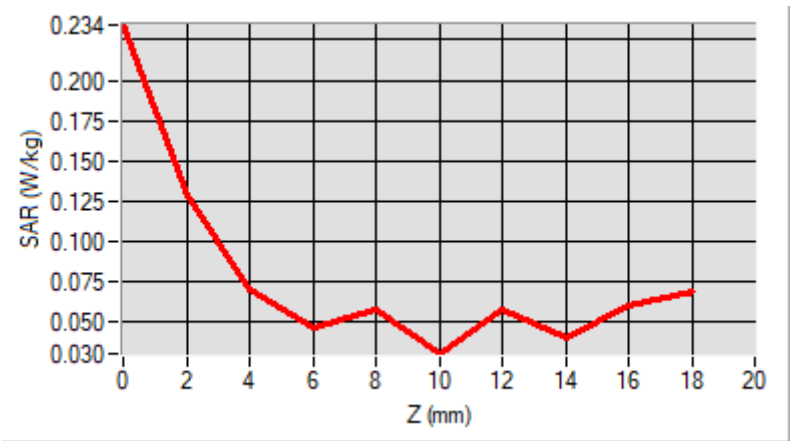
Maximum location: X=-8.00, Y=8.00

D. SAR 1g & 10g

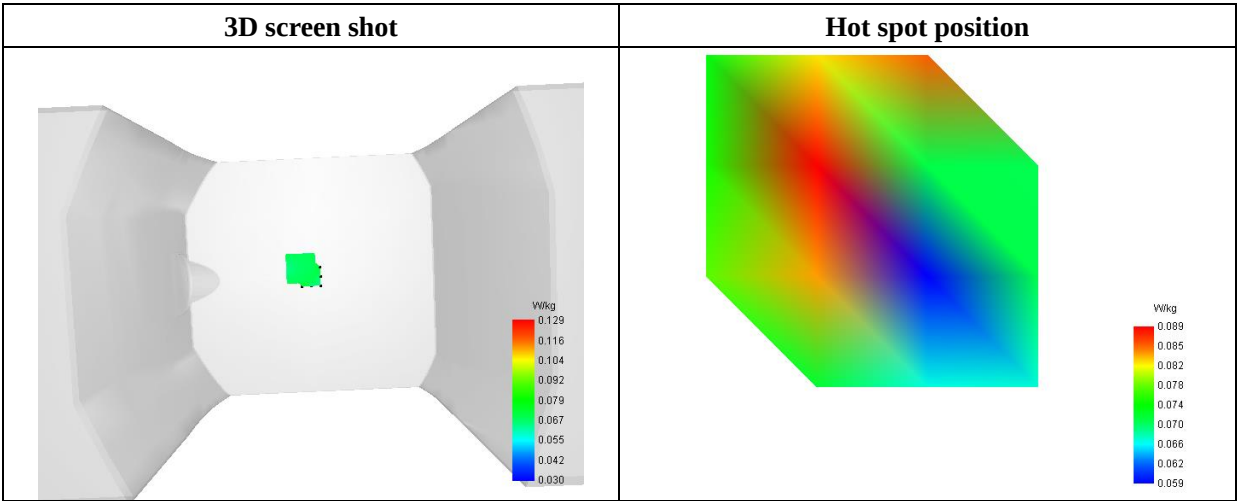
SAR 10g (W/Kg)	0.076018
SAR 1g (W/Kg)	0.095504

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)	0.2343	0.1288	0.0699	0.0467	0.0573	0.0300	0.0569	0.0402	0.0595



F. 3D Image



MEASUREMENT 15

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

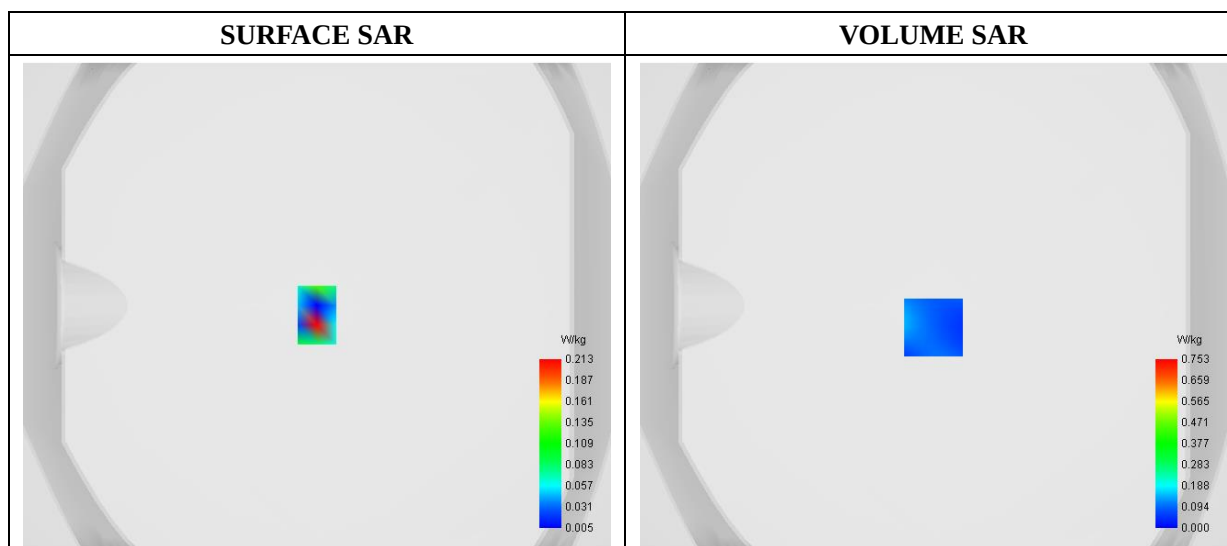
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
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)	35.600839
Conductivity (S/m)	5.1701254
Power Variation (%)	4.210512
Ambient Temperature	22.0
Liquid Temperature	22.3



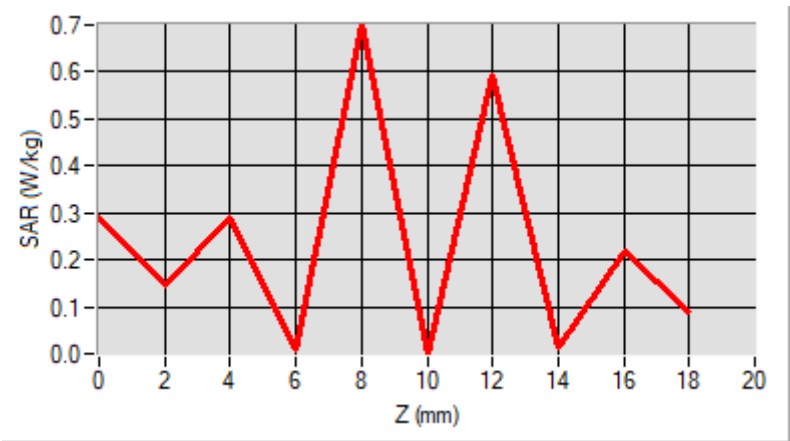
Maximum location: X=0.00, Y=-9.00

D. SAR 1g & 10g

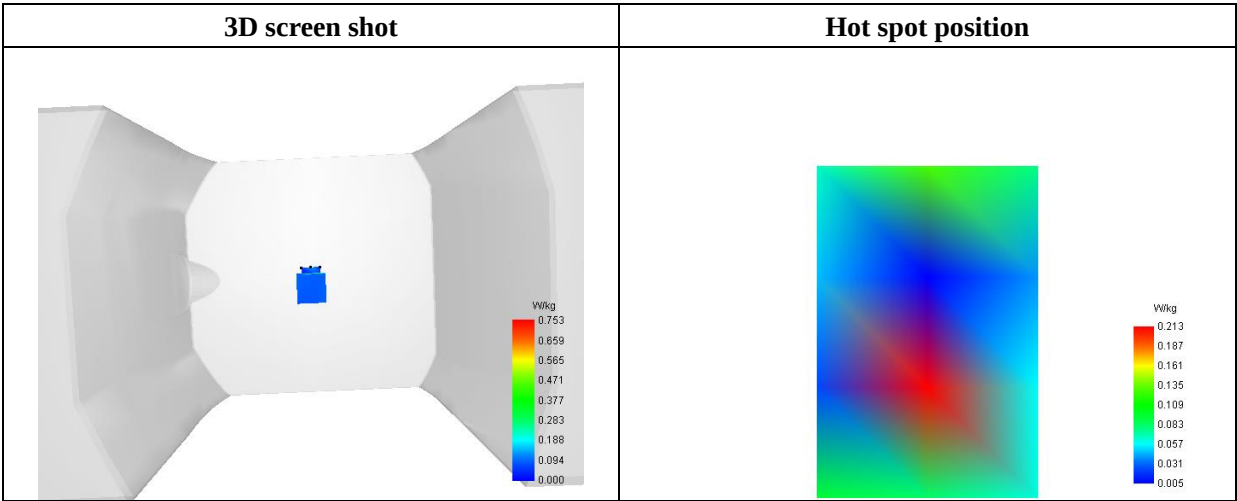
SAR 10g (W/Kg)	0.116482
SAR 1g (W/Kg)	0.241752

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)	0.2876	0.1447	0.2902	0.0069	0.6982	0.0004	0.5909	0.0143	0.2172



F. 3D Image



MEASUREMENT 16

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

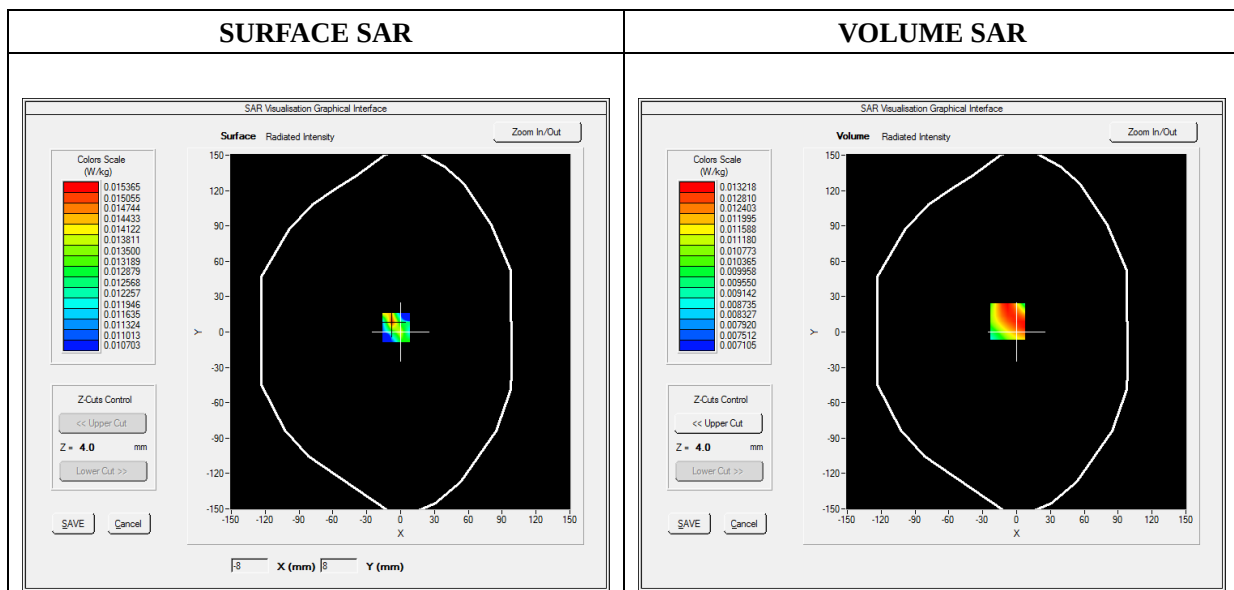
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Near to Mouth)
Band	WiFi(2.4GHz)_802.11b
Channels	Low
Signal	Duty Cycle: 1:1

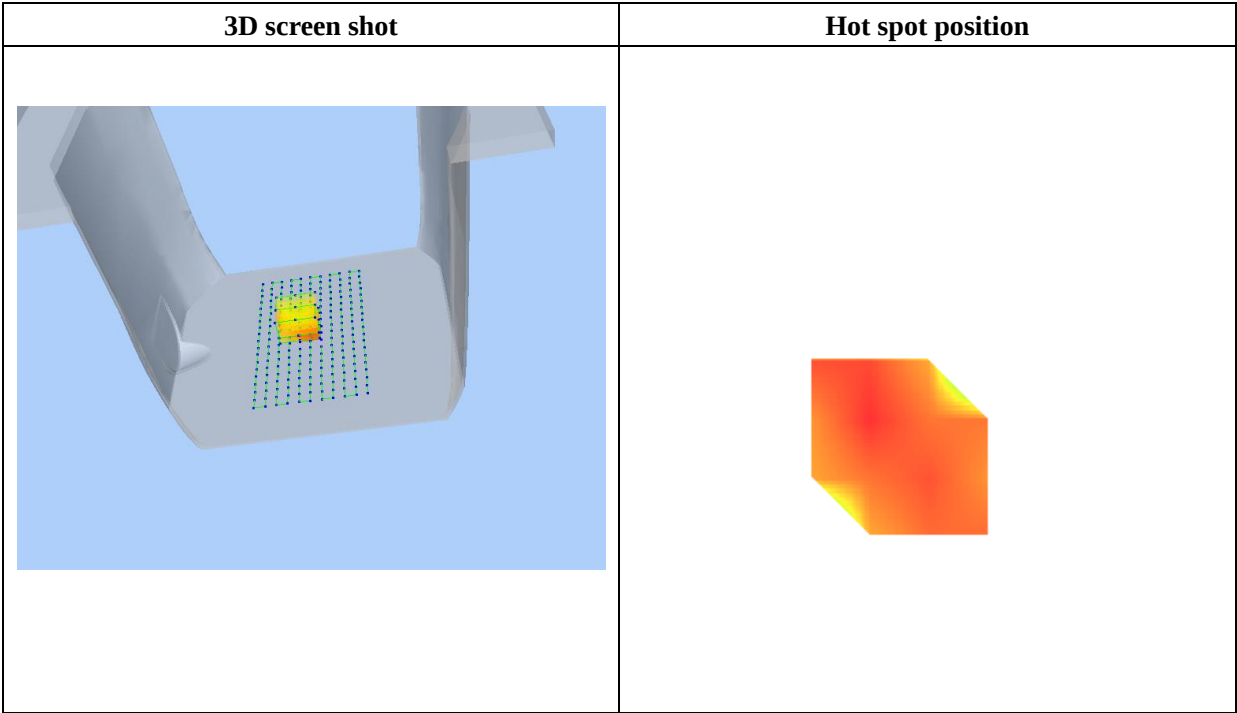
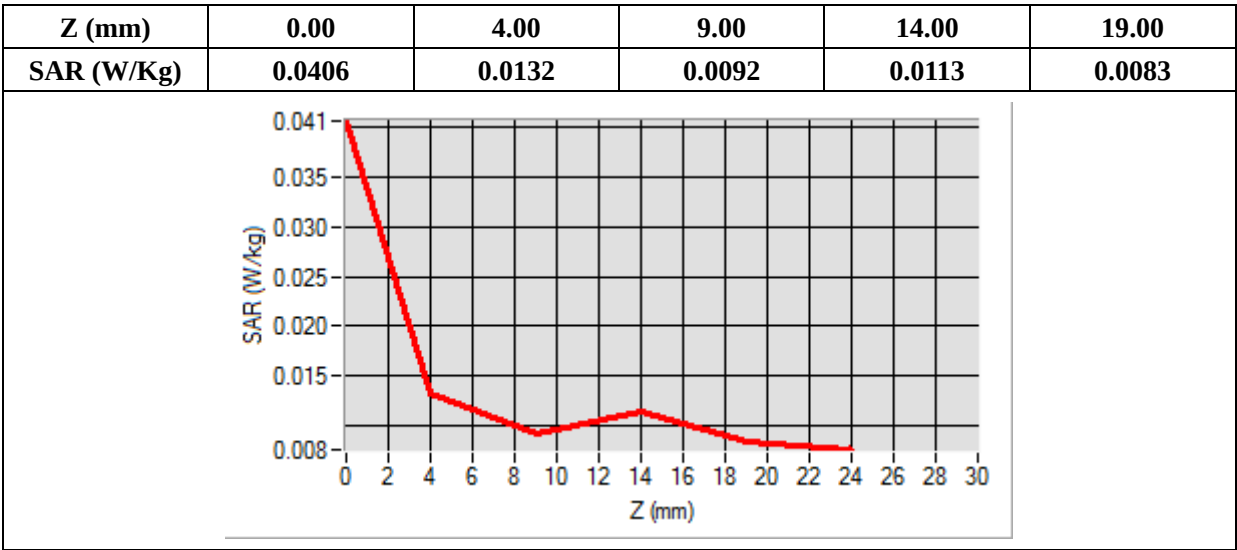
B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	38.150839
Conductivity (S/m)	1.741254
Power Variation (%)	5.210512
Ambient Temperature	22.0
Liquid Temperature	22.3



SAR Peak: 0.02 W/kg

SAR 10g (W/Kg)	0.010472
SAR 1g (W/Kg)	0.013237



MEASUREMENT 17

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

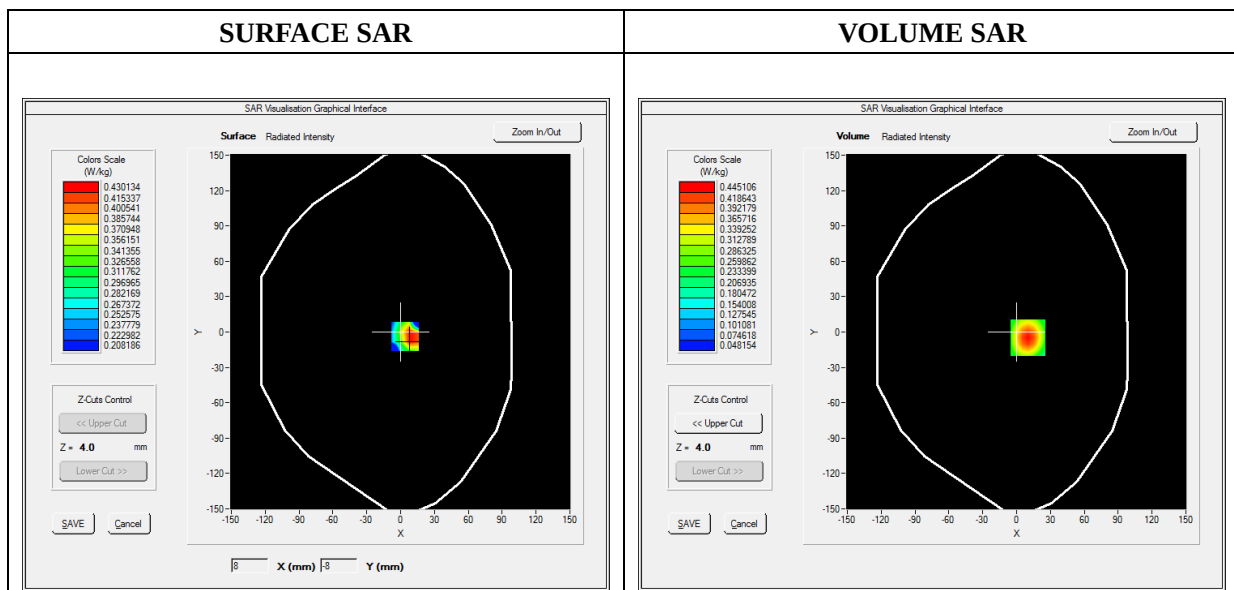
Measurement duration: 11 minutes 48 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	GPRS850_4TX
Channels	Middle
Signal	Duty Cycle: 1:2

B. SAR Measurement Results

Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.852695
Conductivity (S/m)	0.951145
Power Variation (%)	-3.720000
Ambient Temperature	21.1
Liquid Temperature	21.3



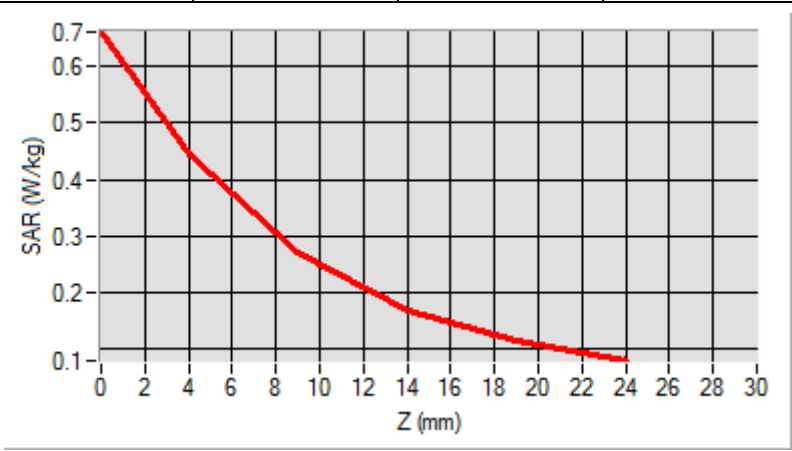
Maximum location: X=10.00, Y=-5.00

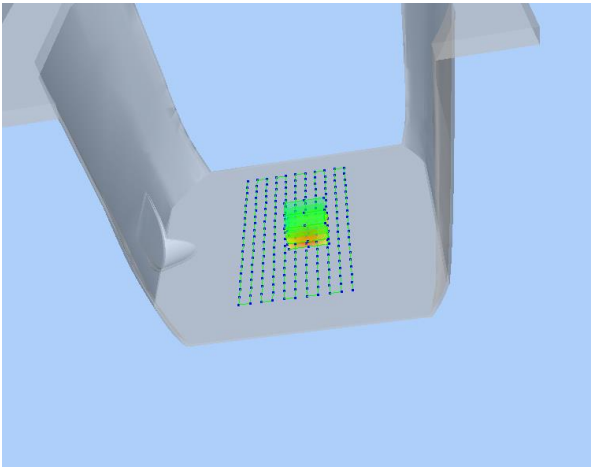
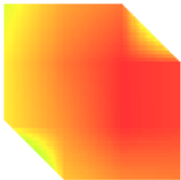
SAR Peak: 0.66 W/kg

SAR 10g (W/Kg)	0.248491
----------------	----------

SAR 1g (W/Kg)	0.413171
---------------	----------

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6610	0.4451	0.2706	0.1705	0.1155



3D screen shot	Hot spot position
	

MEASUREMENT 18

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

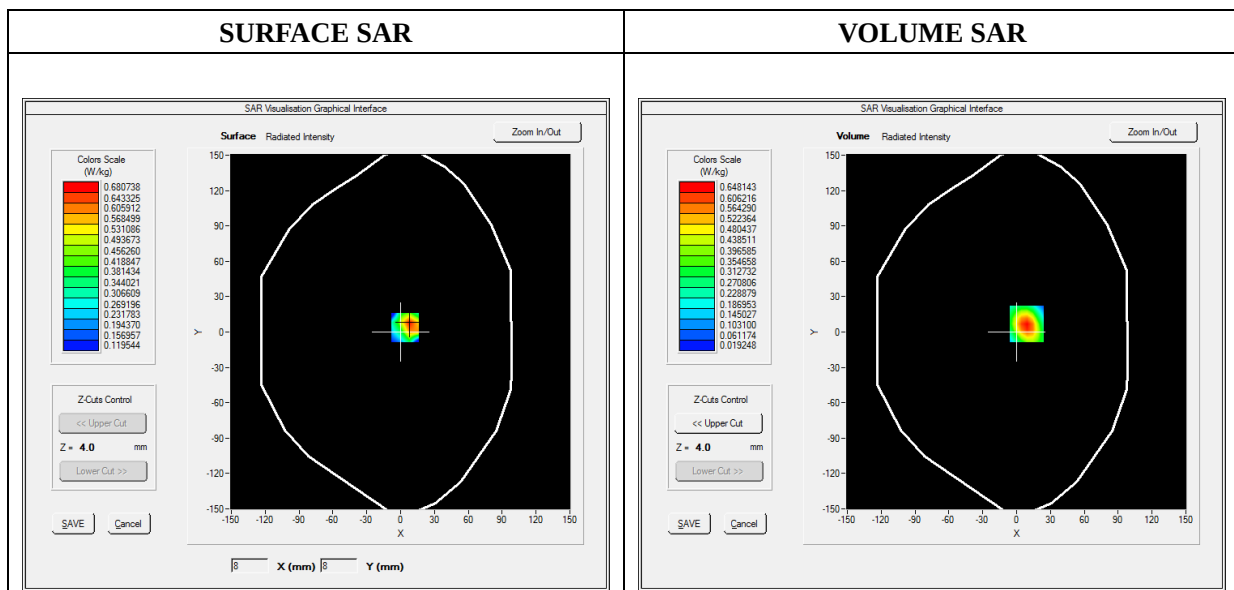
Measurement duration: 11 minutes 48 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
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)	52.4196545
Conductivity (S/m)	1.502584
Power Variation (%)	-1.080000
Ambient Temperature	21.1
Liquid Temperature	21.3



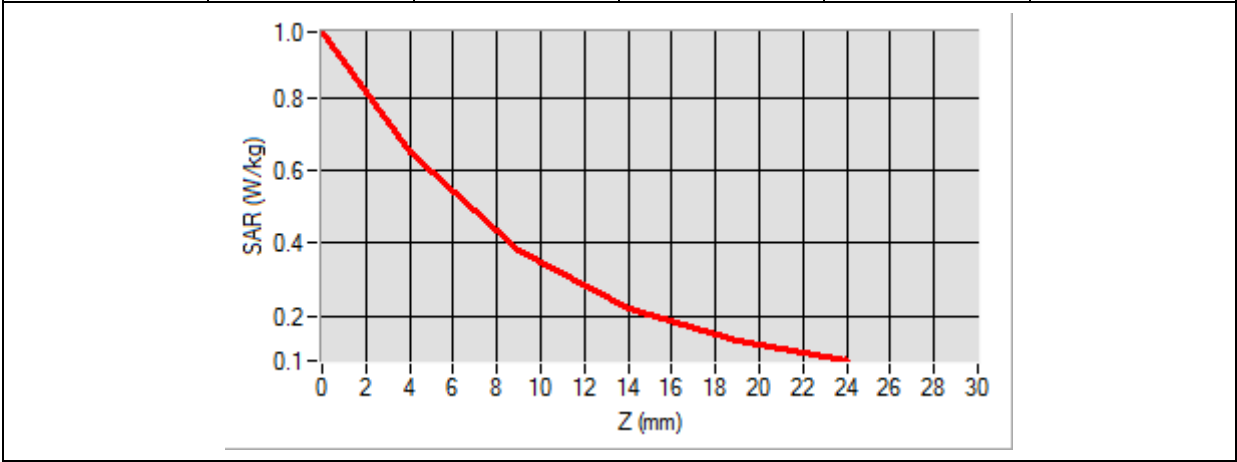
Maximum location: X=9.00, Y=7.00

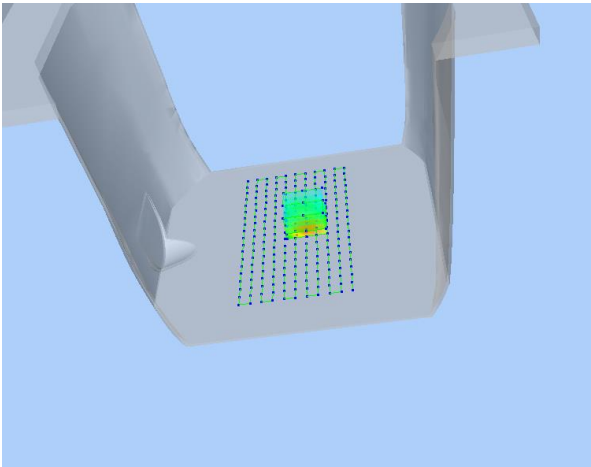
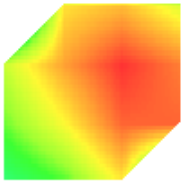
SAR Peak: 0.99 W/kg

SAR 10g (W/Kg)	0.312006
-----------------------	-----------------

SAR 1g (W/Kg)	0.587652
---------------	----------

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.9791	0.6481	0.3790	0.2222	0.1339



3D screen shot	Hot spot position
	

MEASUREMENT 19

Type: Phone measurement (Complete)

Date of measurement: 2021-11-08

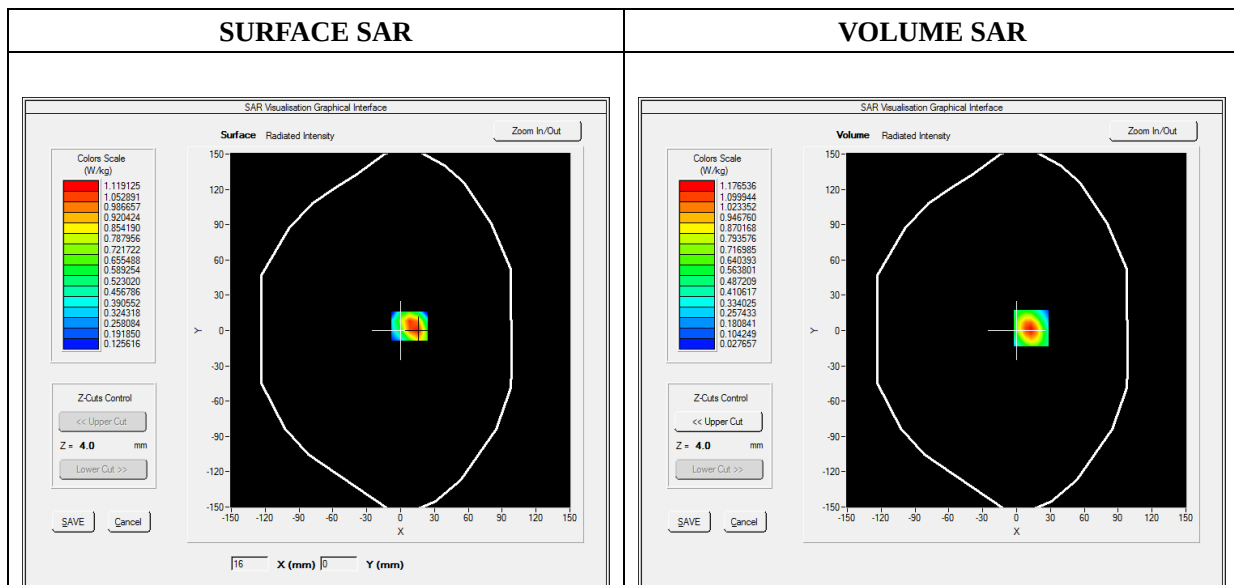
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1907.600000
Relative Permittivity (real part)	52.4196545
Conductivity (S/m)	1.502584
Power Variation (%)	1.524540
Ambient Temperature	21.1
Liquid Temperature	21.3



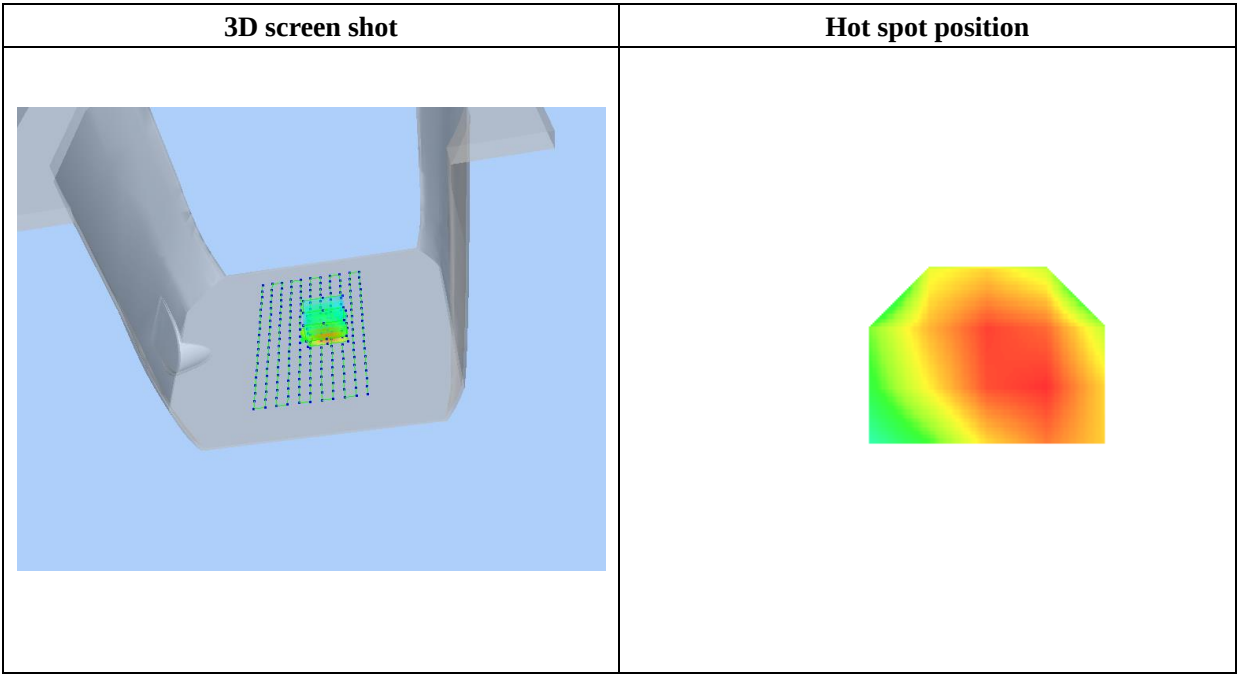
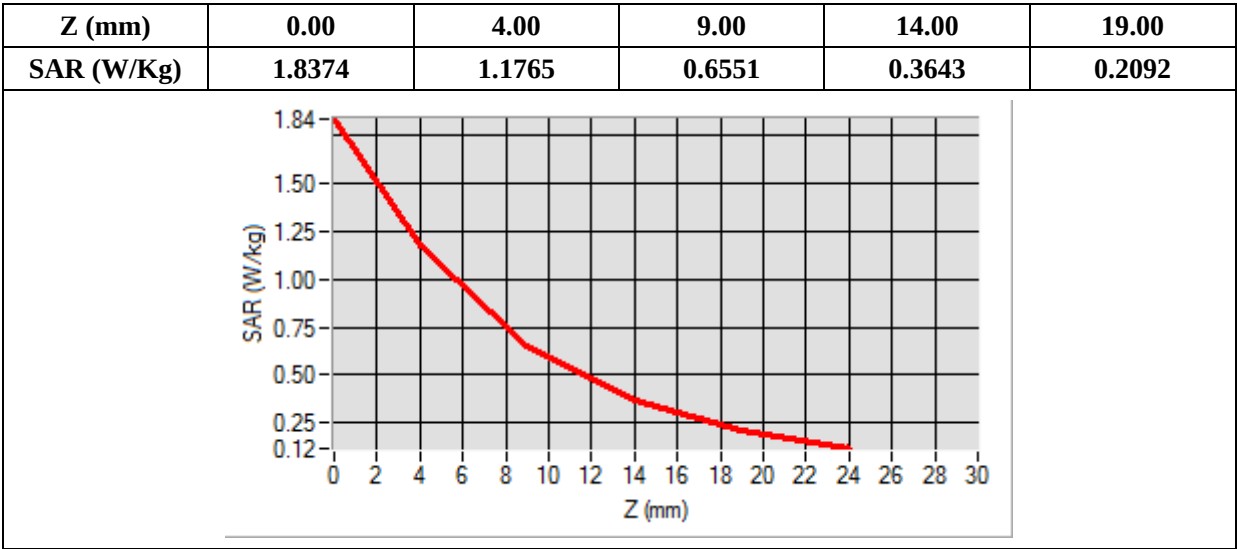
Maximum location: X=13.00, Y=2.00

SAR Peak: 1.85 W/kg

Waltek Testing Group (Shenzhen) Co., Ltd.

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

SAR 10g (W/Kg)	0.546121
SAR 1g (W/Kg)	1.065927



MEASUREMENT 20

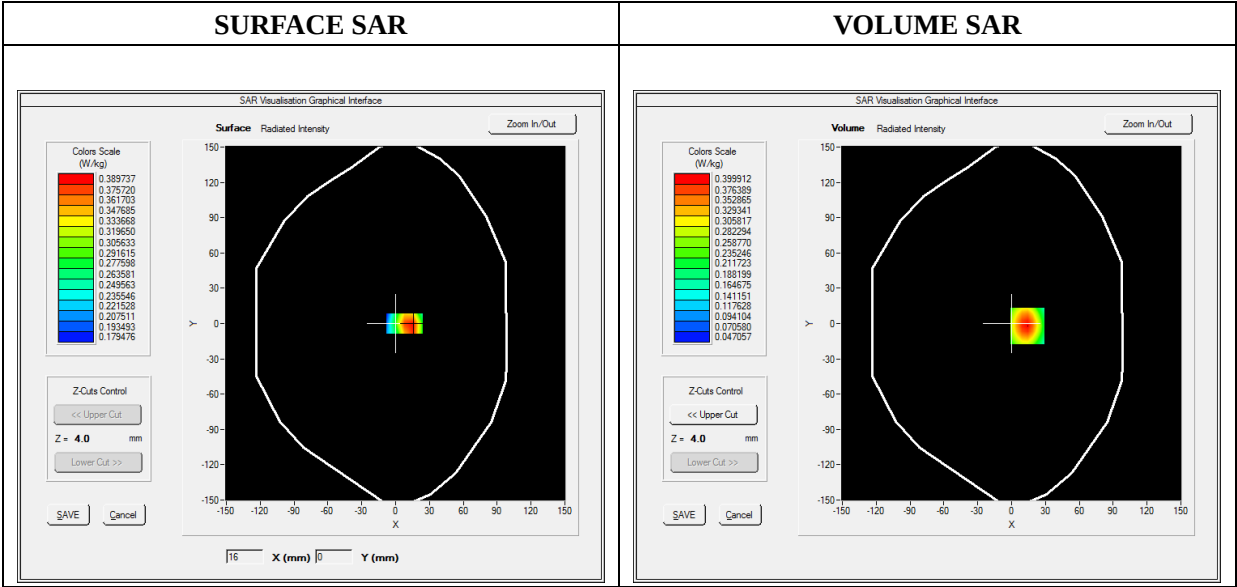
Type: Phone measurement (Complete)
Date of measurement: 2021-11-08
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WCDMA850_RMC
Channels	Low
Signal	Duty Cycle 1:1

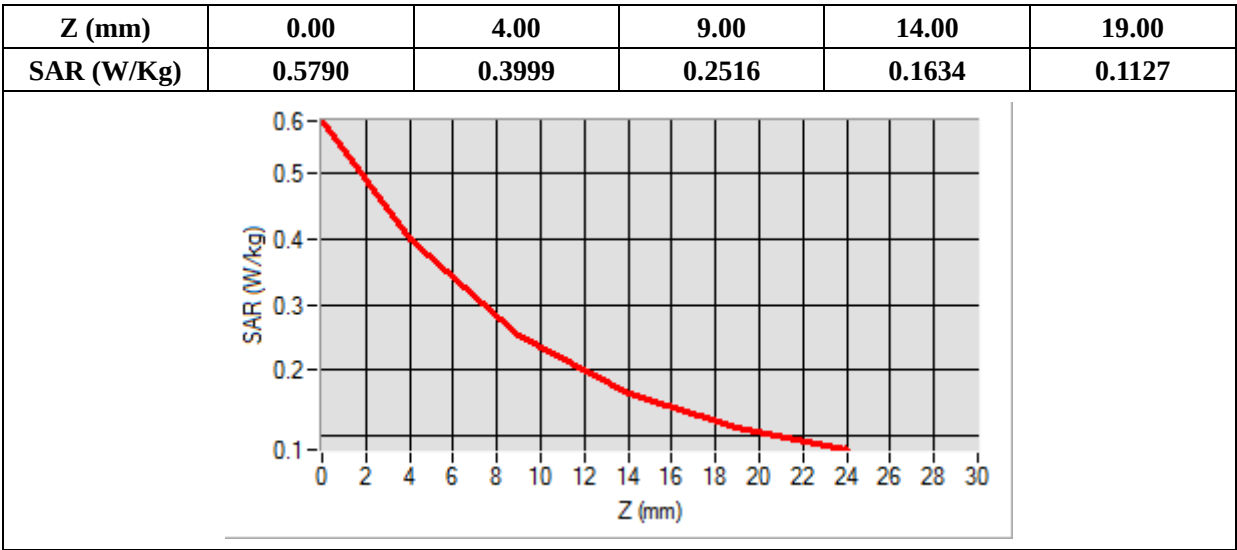
B. SAR Measurement Results

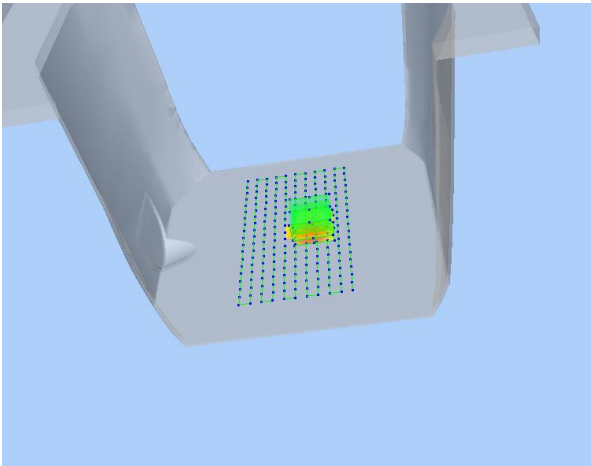
Frequency (MHz)	826.400000
Relative Permittivity (real part)	54.852695
Conductivity (S/m)	0.951145
Power Variation (%)	1.342427
Ambient Temperature	21.1
Liquid Temperature	21.3



SAR Peak: 0.58 W/kg

SAR 10g (W/Kg)	0.228861
SAR 1g (W/Kg)	0.373771



3D screen shot	Hot spot position
	

MEASUREMENT 21

Type: Phone measurement (Complete)

Date of measurement: 2021-11-05

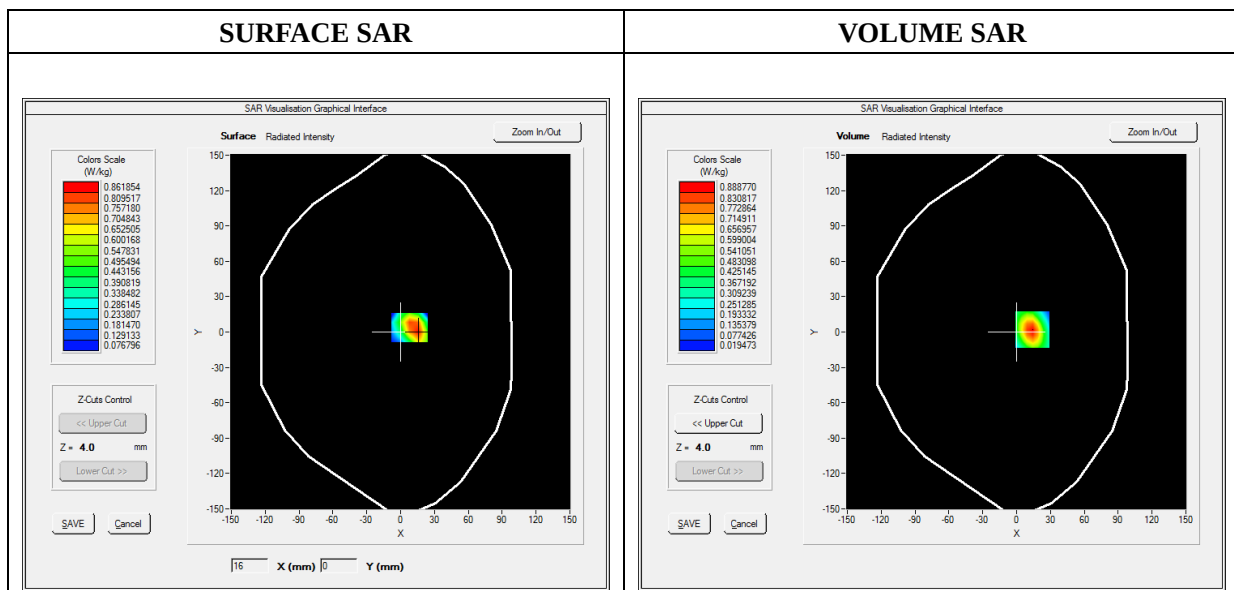
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 2
Channels	QPSK, 1.4MHz, 1RB, Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

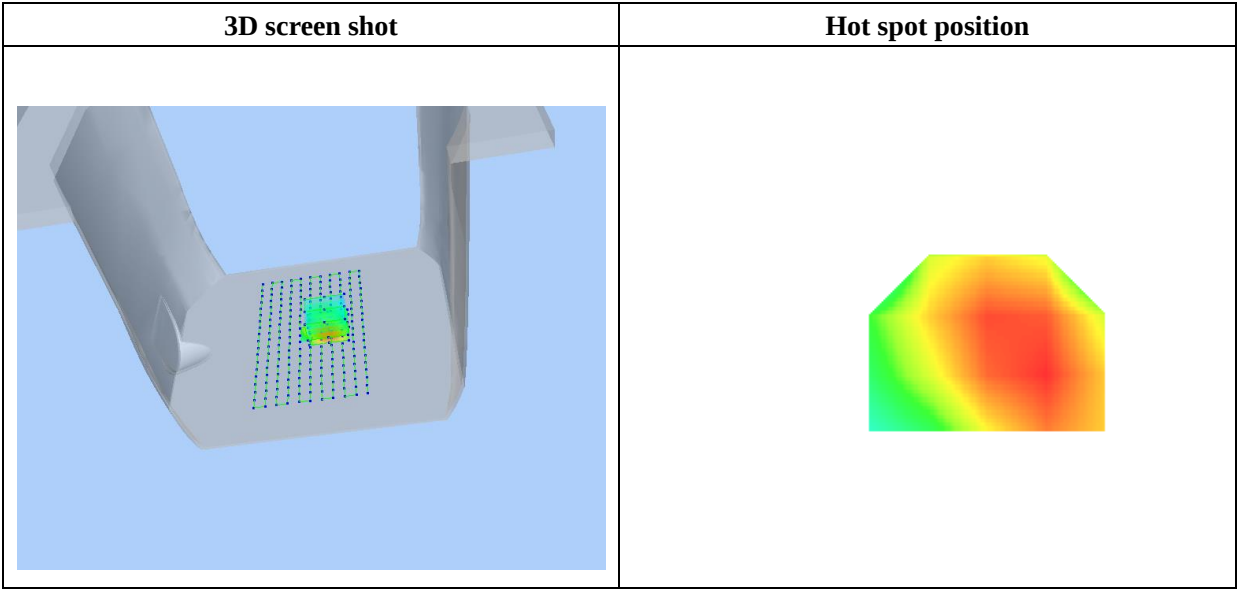
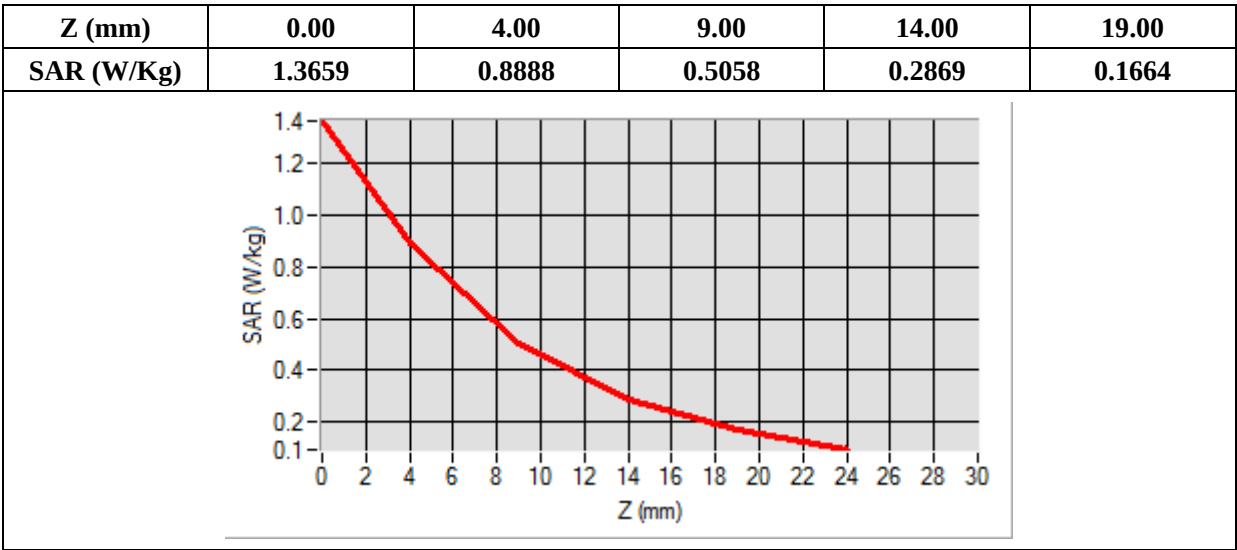
Frequency (MHz)	1850.700000
Relative Permittivity (real part)	52.424521
Conductivity (S/m)	1.501412
Power Variation (%)	1.536272
Ambient Temperature	21.1
Liquid Temperature	21.3



Maximum location: X=14.00, Y=2.00

SAR Peak: 1.38 W/kg

SAR 10g (W/Kg)	0.415581
SAR 1g (W/Kg)	0.804843



MEASUREMENT 22

Type: Phone measurement (Complete)

Date of measurement: 2021-11-05

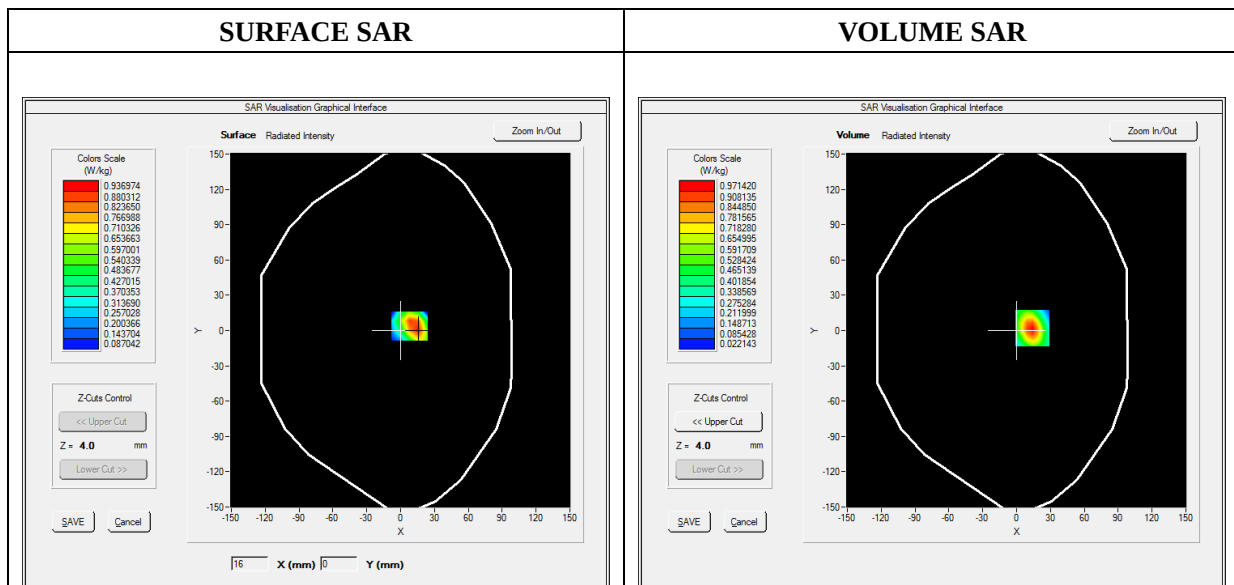
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 2
Channels	QPSK, 20MHz, 1RB, Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

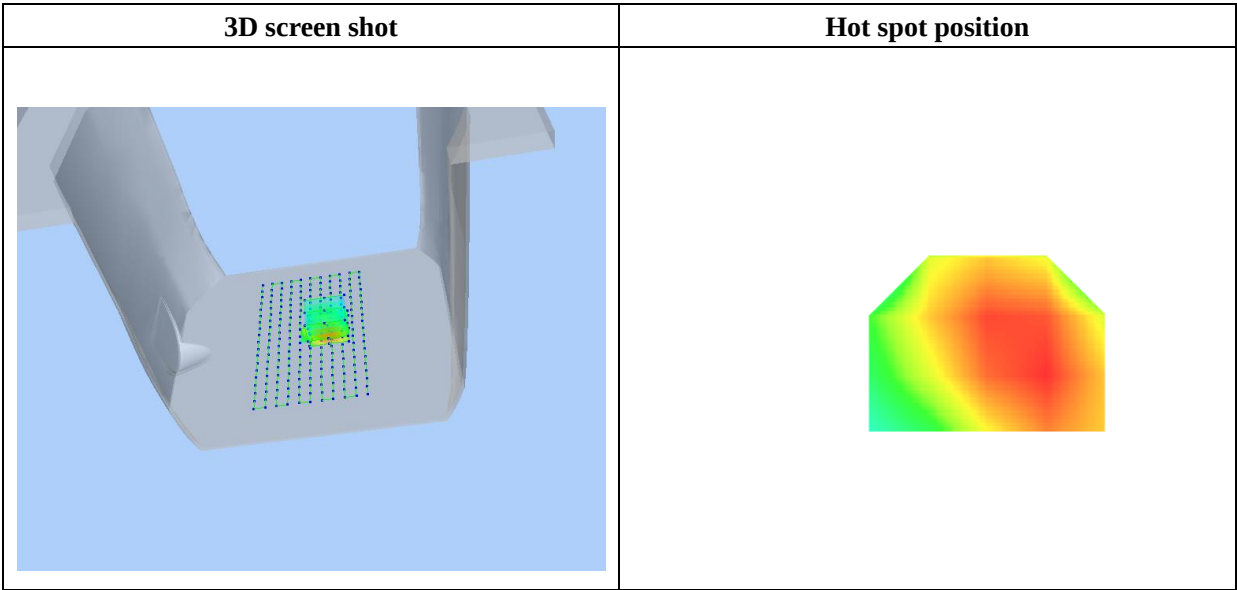
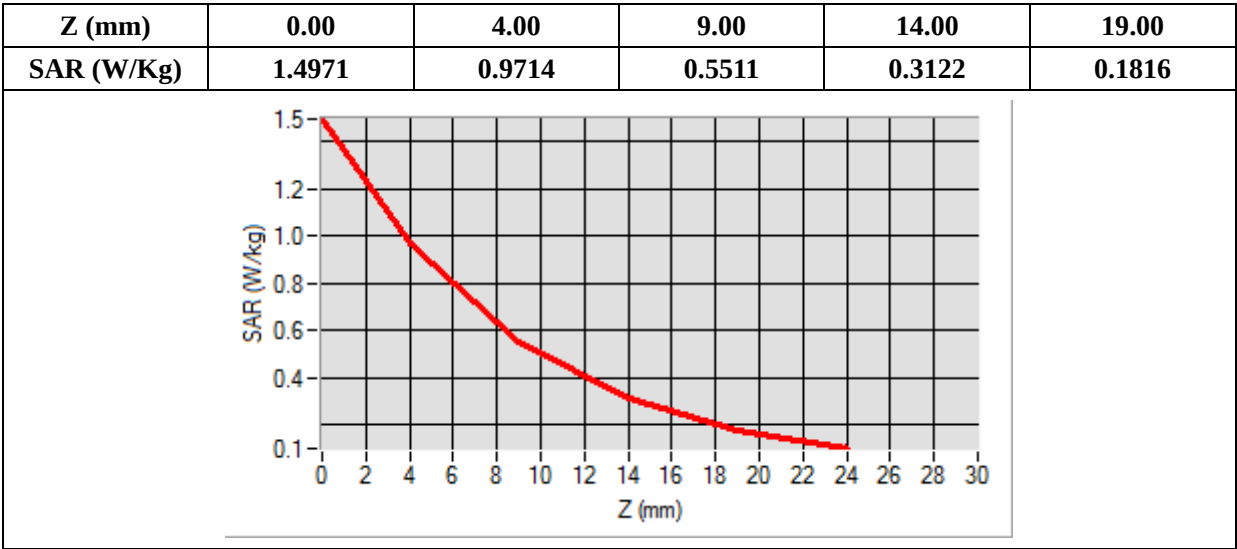
Frequency (MHz)	1860.00000
Relative Permittivity (real part)	52.42452
Conductivity (S/m)	1.501412
Power Variation (%)	1.536272
Ambient Temperature	21.1
Liquid Temperature	21.3



Maximum location: X=14.00, Y=2.00

SAR Peak: 1.51 W/kg

SAR 10g (W/Kg)	0.454399
SAR 1g (W/Kg)	0.879197



MEASUREMENT 23

Type: Phone measurement (Complete)

Date of measurement: 2021-11-04

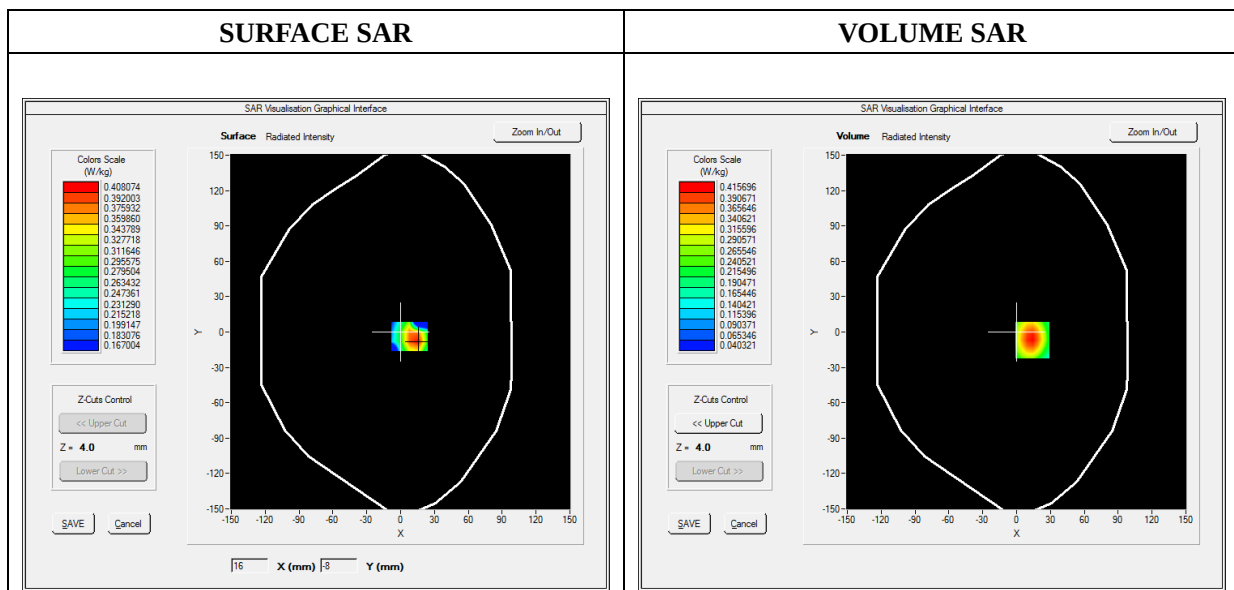
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 5
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

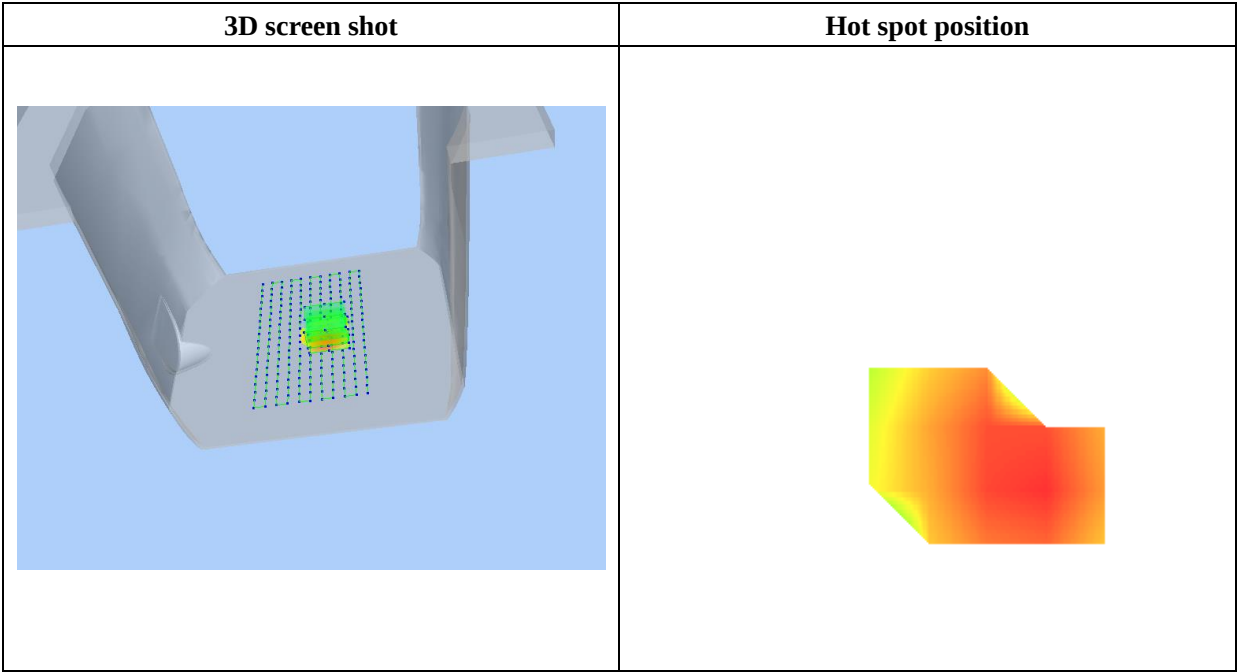
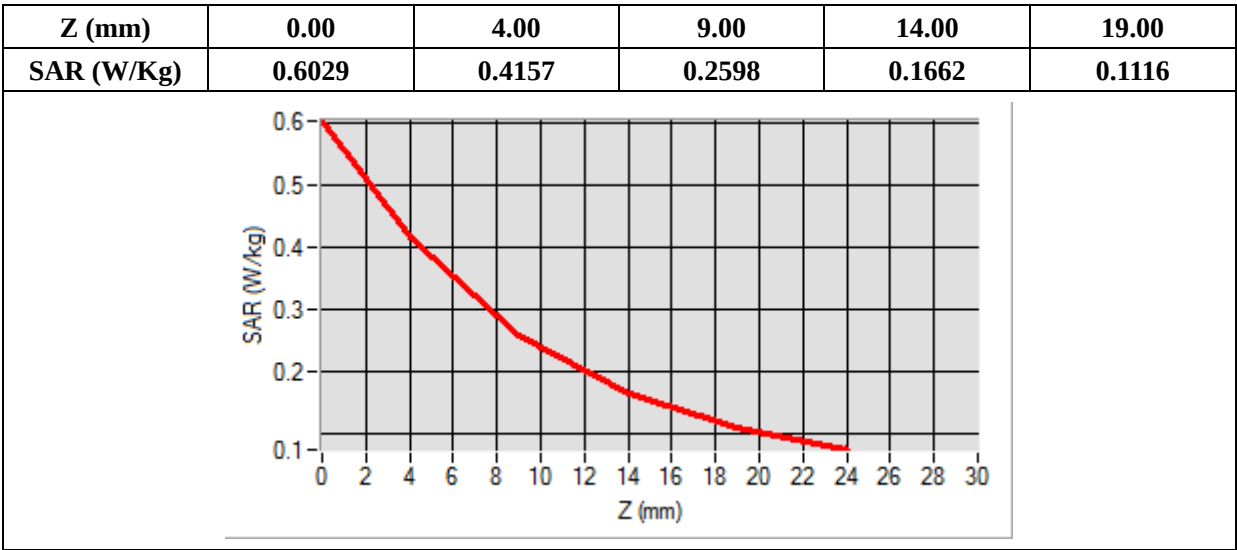
B. SAR Measurement Results

Frequency (MHz)	829.000000
Relative Permittivity (real part)	54.852695
Conductivity (S/m)	0.951145
Power Variation (%)	1.374628
Ambient Temperature	21.1
Liquid Temperature	21.2



SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.235186
SAR 1g (W/Kg)	0.388369



MEASUREMENT 24

Type: Phone measurement (Complete)

Date of measurement: 2021-11-08

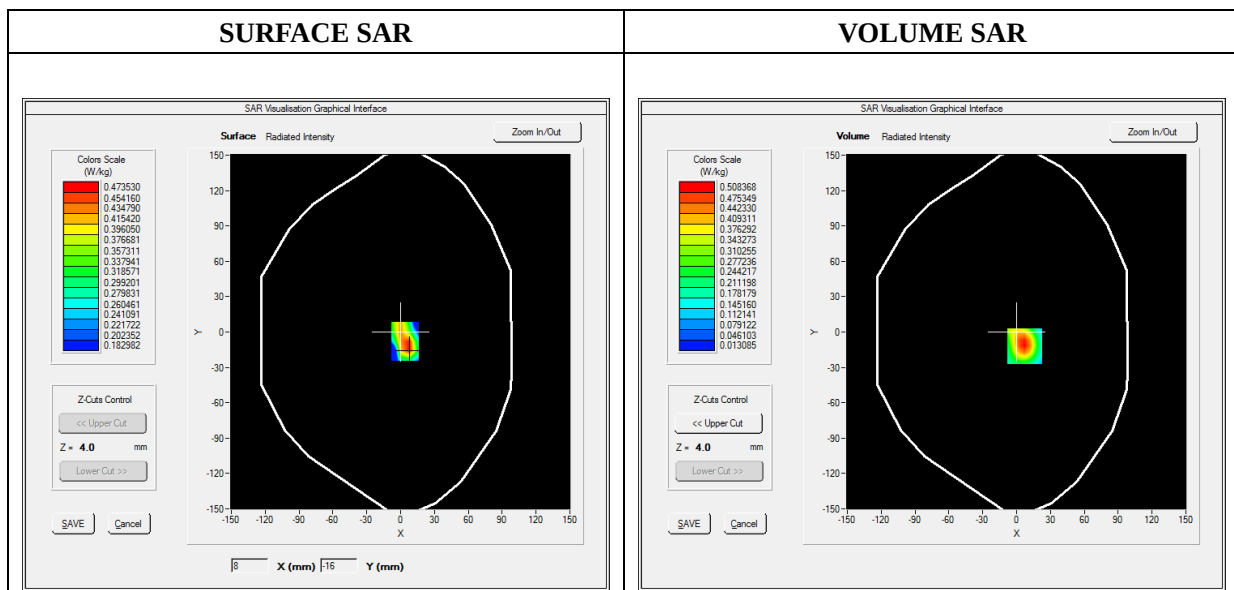
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 7
Channels	QPSK, 20MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

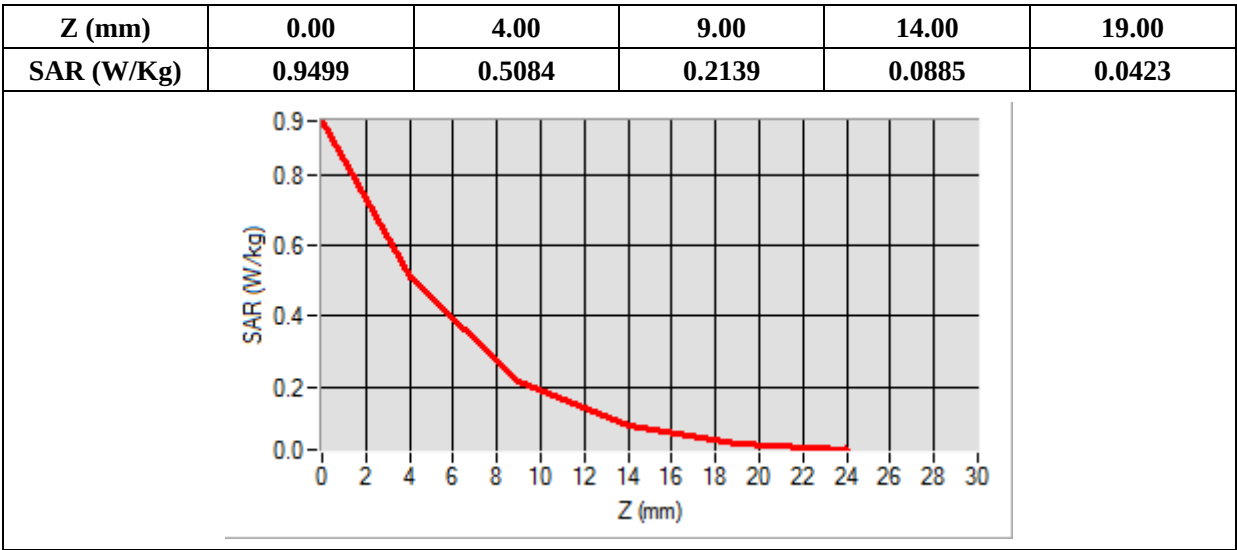
Frequency (MHz)	2510.000000
Relative Permittivity (real part)	52.014534
Conductivity (S/m)	1.912458
Power Variation (%)	0.924535
Ambient Temperature	21.1
Liquid Temperature	21.2

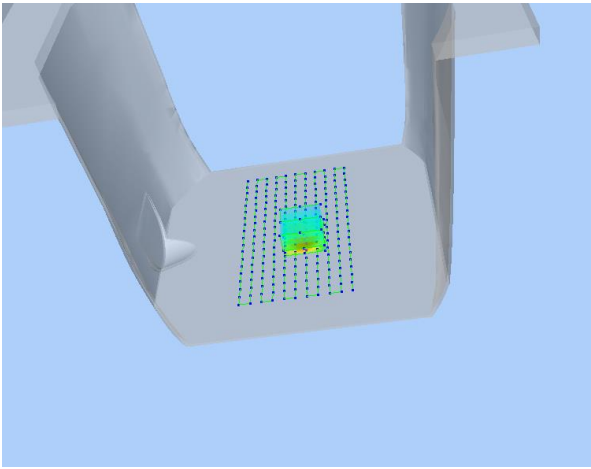
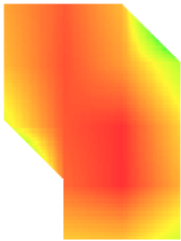


Maximum location: X=7.00, Y=-12.00

SAR Peak: 0.95 W/kg

SAR 10g (W/Kg)	0.217079
SAR 1g (W/Kg)	0.470029



3D screen shot	Hot spot position
	

MEASUREMENT 25

Type: Phone measurement (Complete)

Date of measurement: 2021-11-04

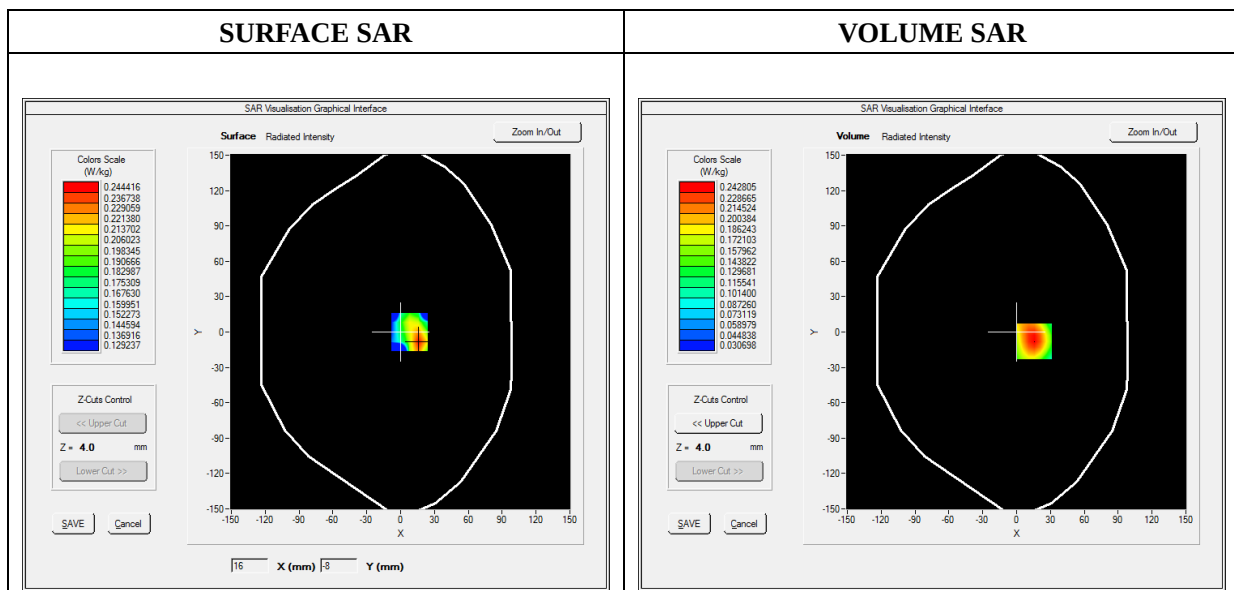
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 12
Channels	QPSK, 10MHz, 1RB, High
Signal	Duty Cycle 1:1

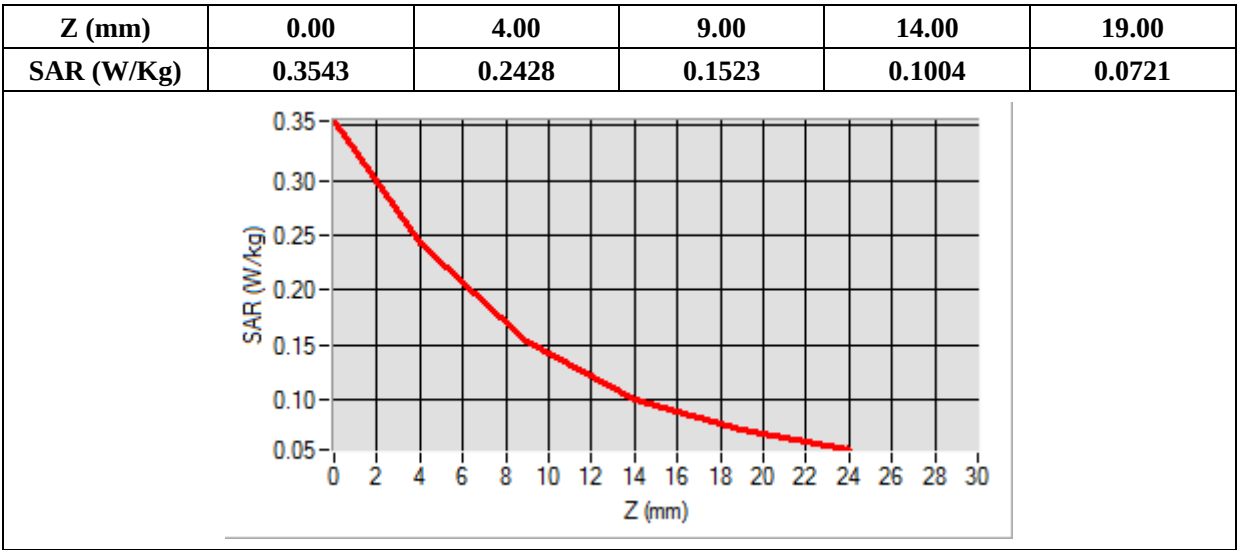
B. SAR Measurement Results

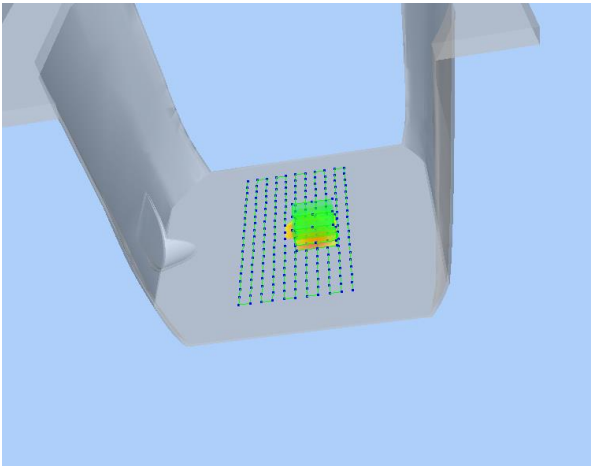
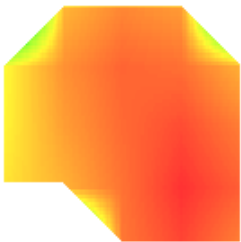
Frequency (MHz)	711.000000
Relative Permittivity (real part)	54.964412
Conductivity (S/m)	0.931145
Power Variation (%)	0.924535
Ambient Temperature	21.1
Liquid Temperature	21.2



SAR Peak: 0.35 W/kg

SAR 10g (W/Kg)	0.147646
SAR 1g (W/Kg)	0.234032



3D screen shot	Hot spot position
	

MEASUREMENT 26

Type: Phone measurement (Complete)

Date of measurement: 2021-11-04

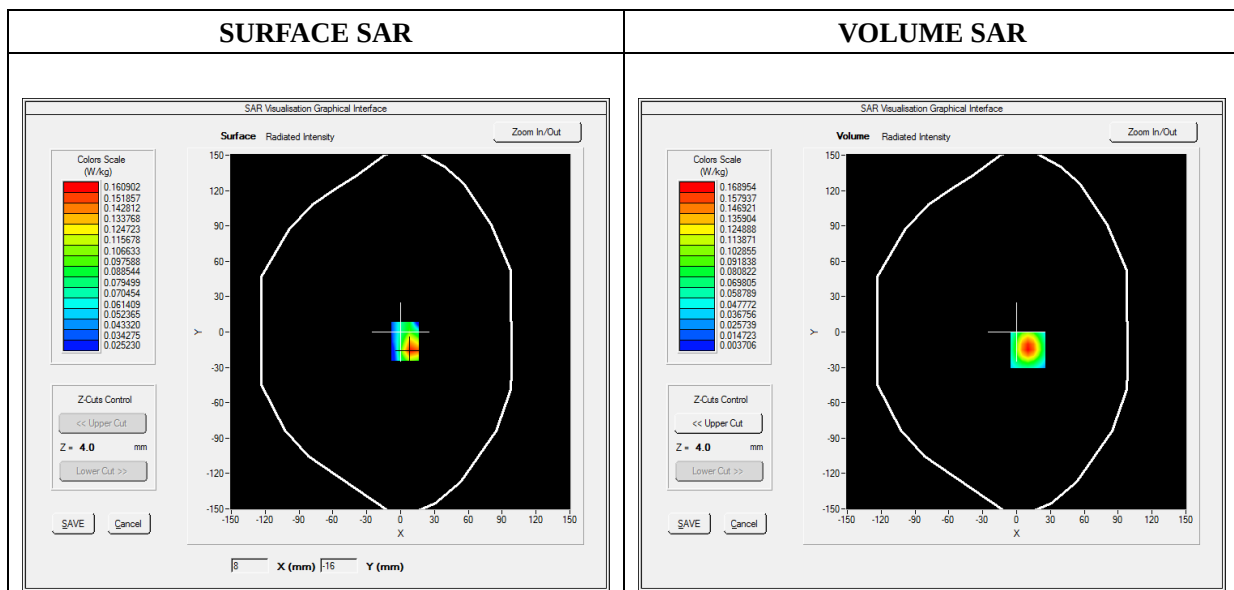
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 38
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

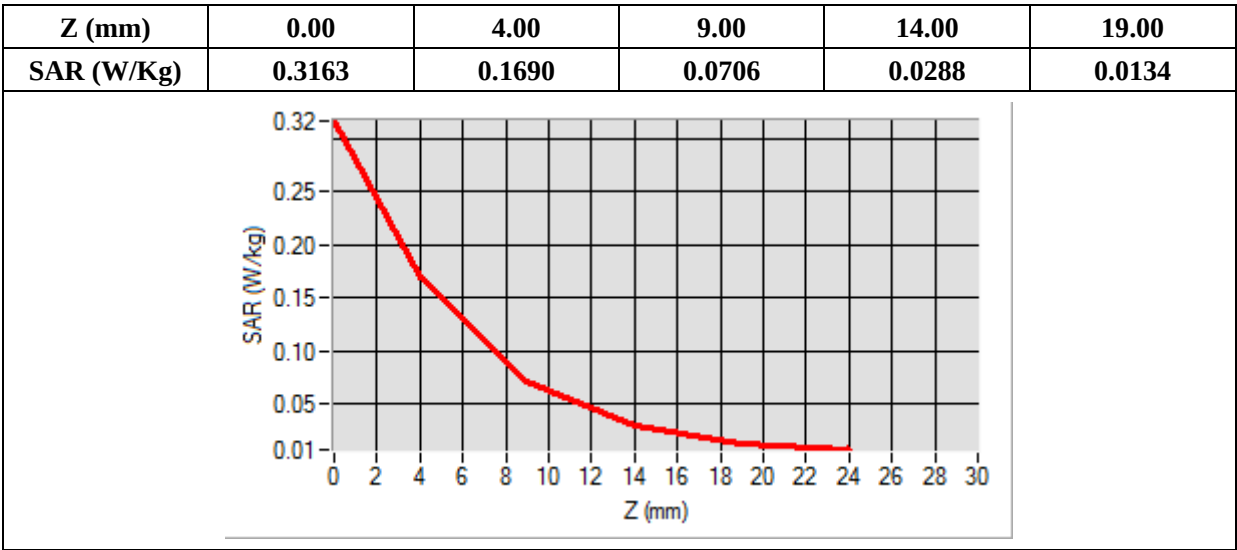
Frequency (MHz)	2580.000000
Relative Permittivity (real part)	52.240545
Conductivity (S/m)	2.1244416
Power Variation (%)	0.924535
Ambient Temperature	21.1
Liquid Temperature	21.2

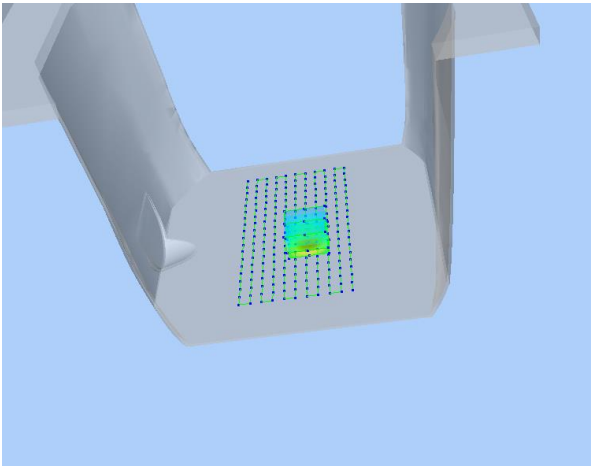
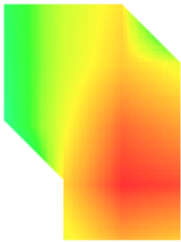


Maximum location: X=10.00, Y=-15.00

SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.069878
SAR 1g (W/Kg)	0.158256



3D screen shot	Hot spot position
	

MEASUREMENT 27

Type: Phone measurement (Complete)

Date of measurement: 2021-11-03

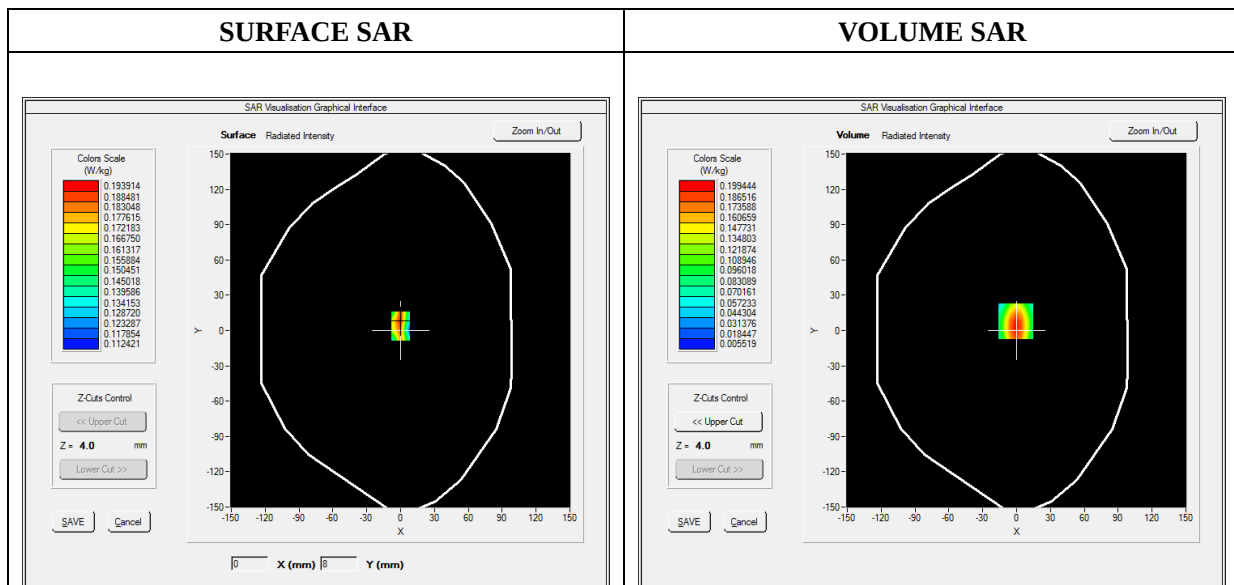
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 40(2305~2315MHz)
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2310.000000
Relative Permittivity (real part)	52.310668
Conductivity (S/m)	1.783696
Power Variation (%)	-1.480000
Ambient Temperature	21.1
Liquid Temperature	21.2



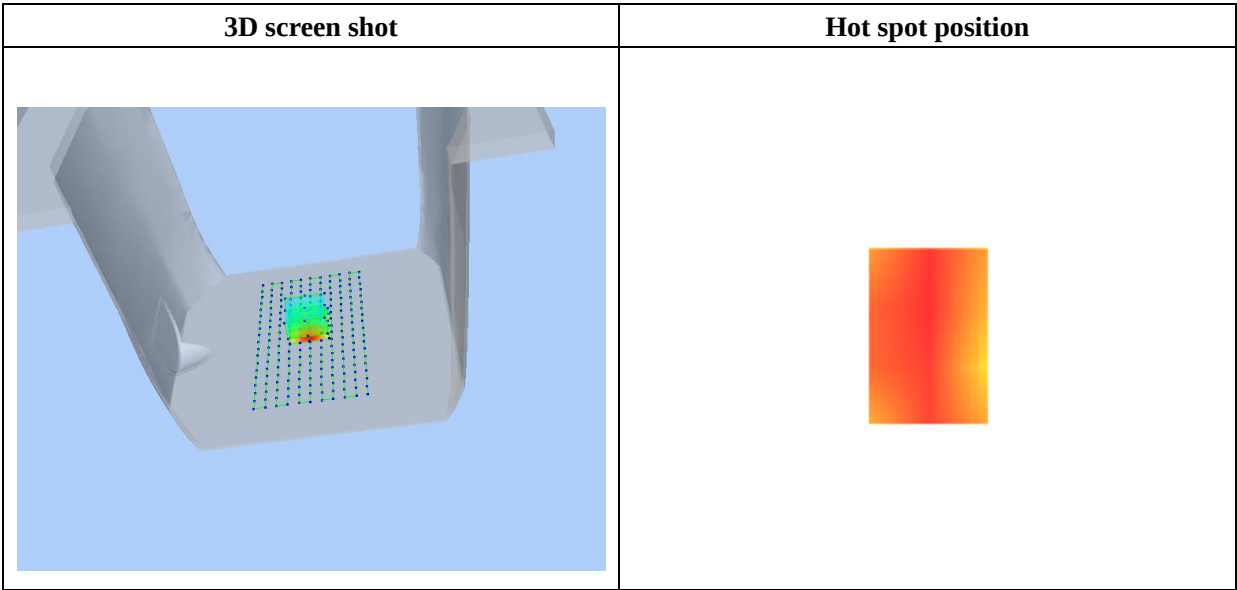
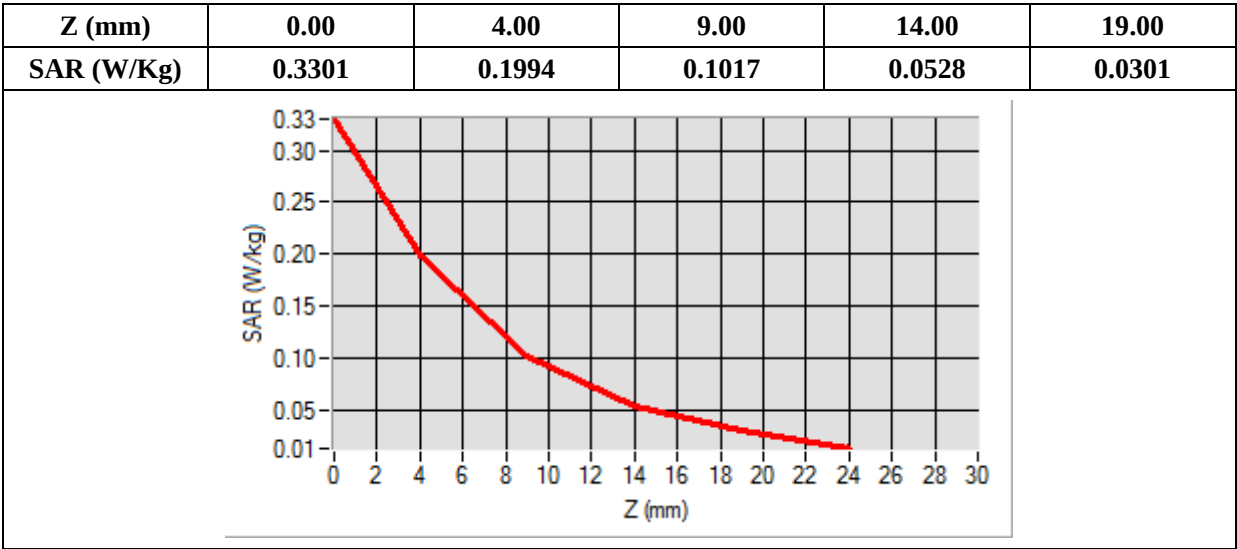
Maximum location: X=-1.00, Y=8.00

SAR Peak: 0.34 W/kg

Waltek Testing Group (Shenzhen) Co., Ltd.

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

SAR 10g (W/Kg)	0.096805
SAR 1g (W/Kg)	0.186469



MEASUREMENT 28

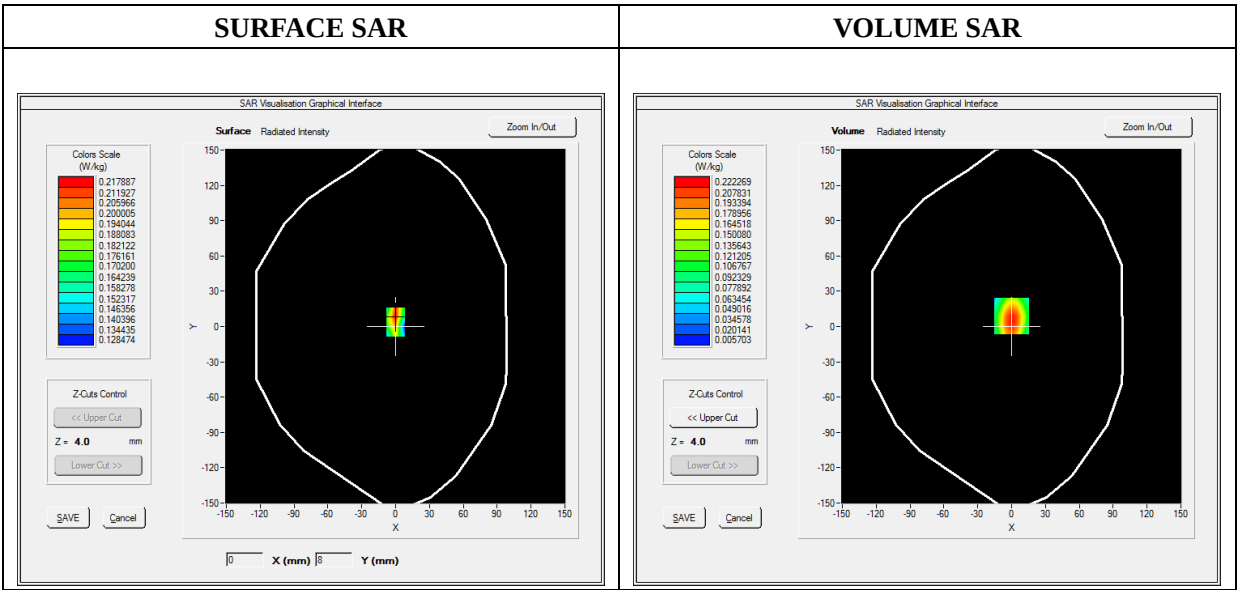
Type: Phone measurement (Complete)
Date of measurement: 2021-11-03
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 40(2305~2315MHz)
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

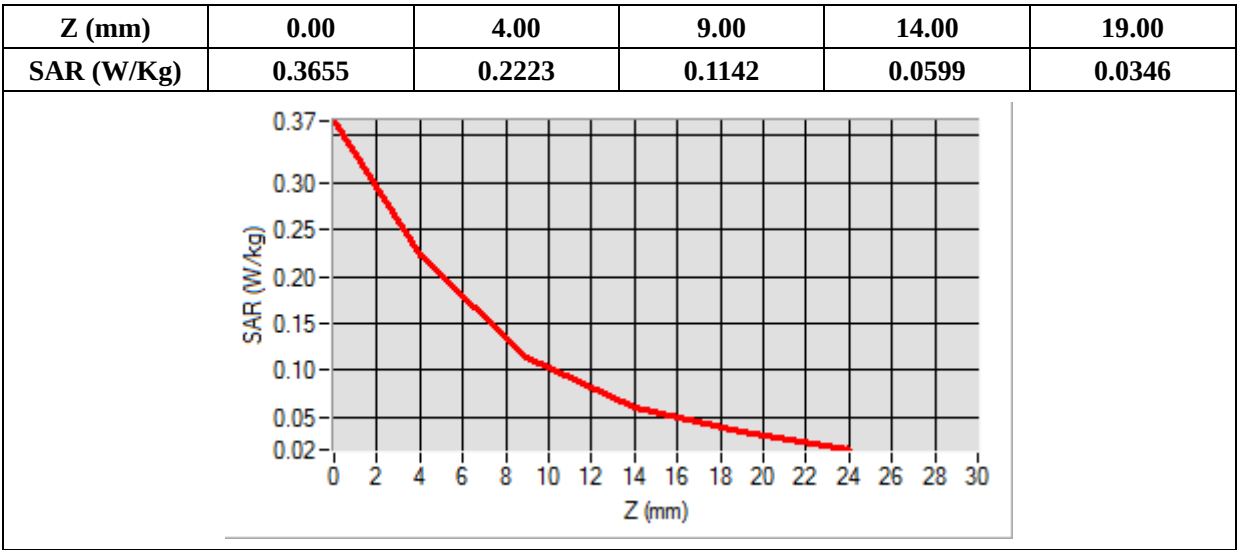
Frequency (MHz)	2355.000000
Relative Permittivity (real part)	52.3114068
Conductivity (S/m)	1.7811496
Power Variation (%)	-1.480000
Ambient Temperature	21.1
Liquid Temperature	21.2

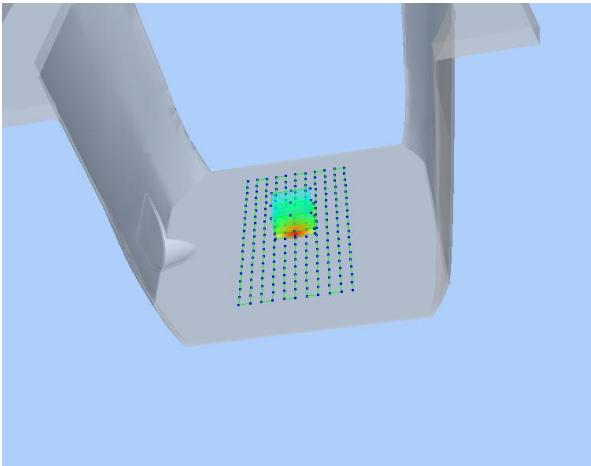


Maximum location: X=0.00, Y=9.00

SAR Peak: 0.36 W/kg

SAR 10g (W/Kg)	0.108548
SAR 1g (W/Kg)	0.207366



3D screen shot	Hot spot position
	

MEASUREMENT 29

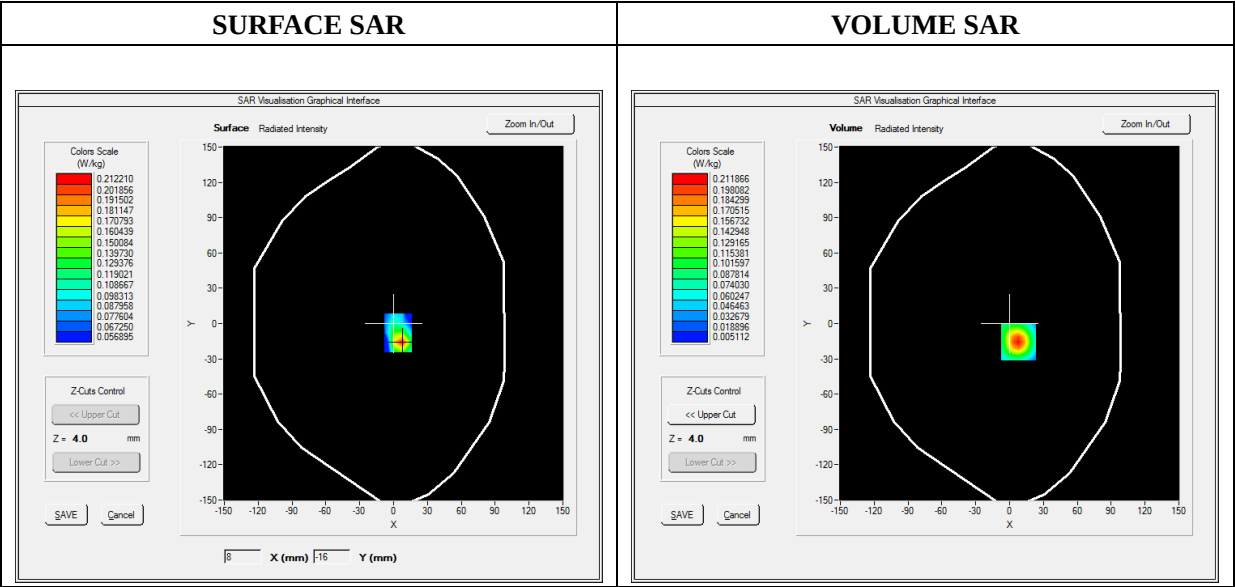
Type: Phone measurement (Complete)
Date of measurement: 2021-11-04
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 41
Channels	QPSK, 20MHz, 1%RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

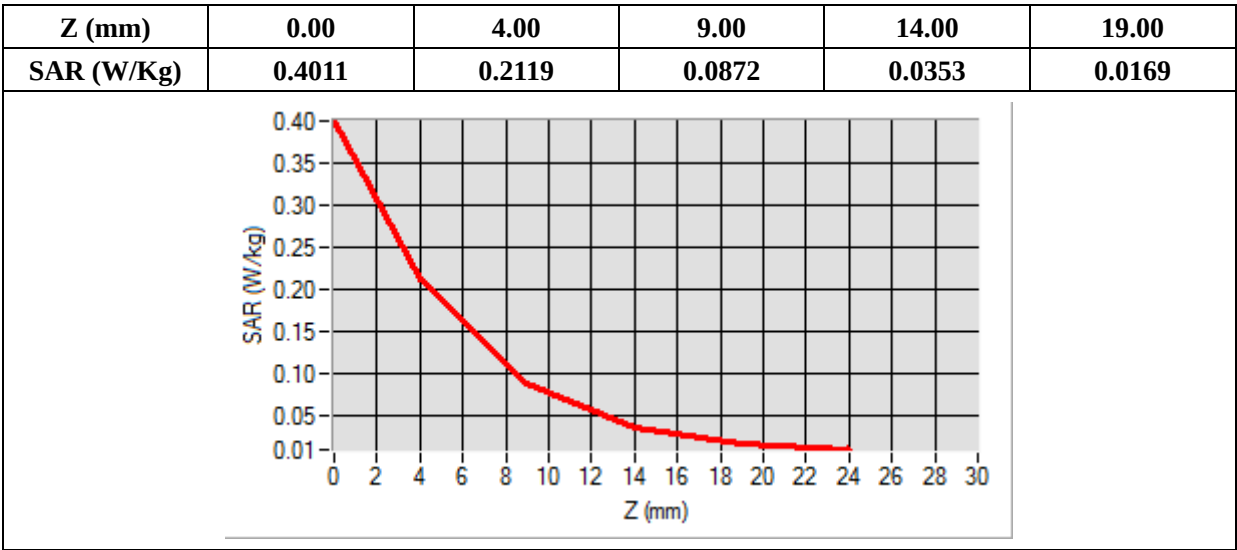
Frequency (MHz)	2605.000000
Relative Permittivity (real part)	52.240000
Conductivity (S/m)	2.121301
Power Variation (%)	0.520000
Ambient Temperature	21.1
Liquid Temperature	21.2

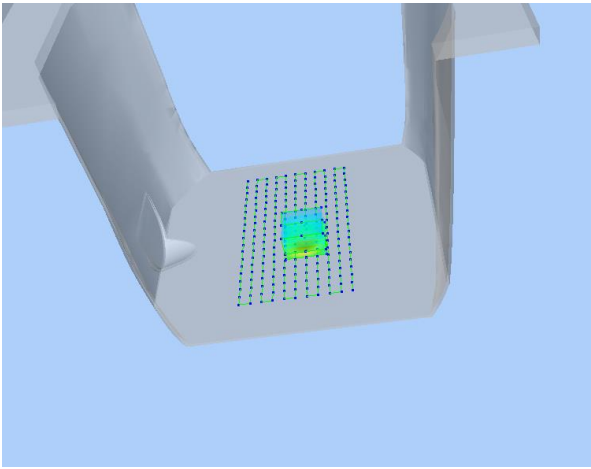
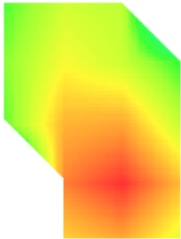


Maximum location: X=8.00, Y=-16.00

SAR Peak: 0.40 W/kg

SAR 10g (W/Kg)	0.084024
SAR 1g (W/Kg)	0.191584



3D screen shot	Hot spot position
	

MEASUREMENT 30

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

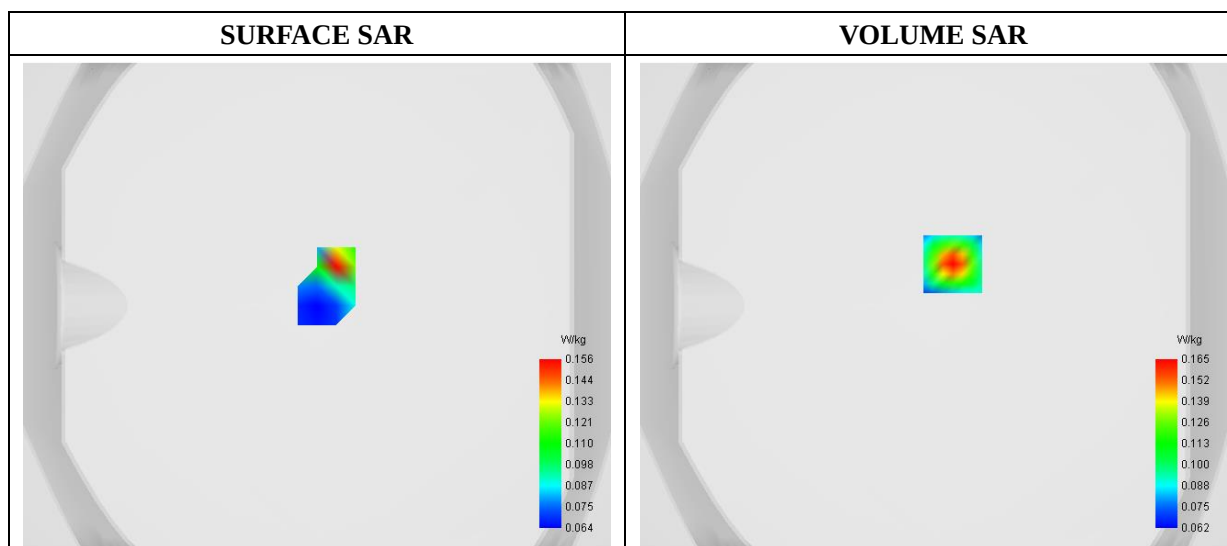
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WiFi(5.2GHz)_ 802.11n (HT20)
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative Permittivity (real part)	48.502911
Conductivity (S/m)	5.161483
Power Variation (%)	0.542660
Ambient Temperature	22.0
Liquid Temperature	22.3



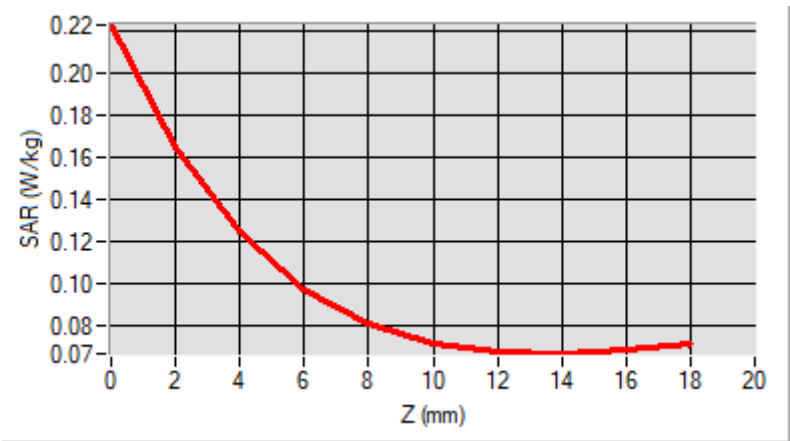
Maximum location: X=8.00, Y=17.00

D. SAR 1g & 10g

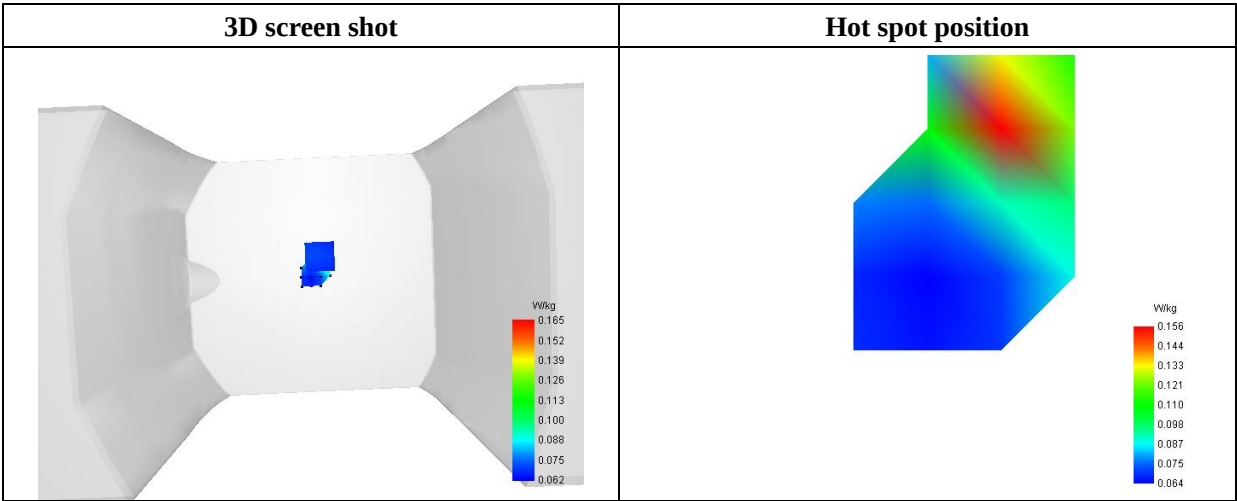
SAR 10g (W/Kg)	0.083582
SAR 1g (W/Kg)	0.118908

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)	0.2226	0.1649	0.1246	0.0975	0.0810	0.0718	0.0676	0.0669	0.0685



F. 3D Image



MEASUREMENT 31

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

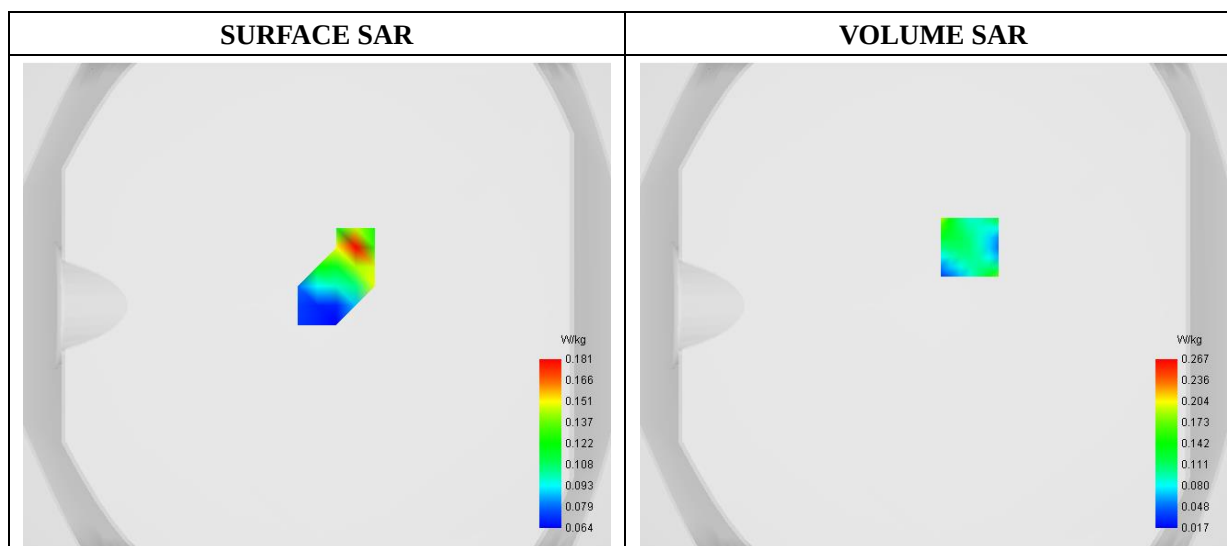
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
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)	48.500839
Conductivity (S/m)	5.7601254
Power Variation (%)	5.210512
Ambient Temperature	22.0
Liquid Temperature	22.3



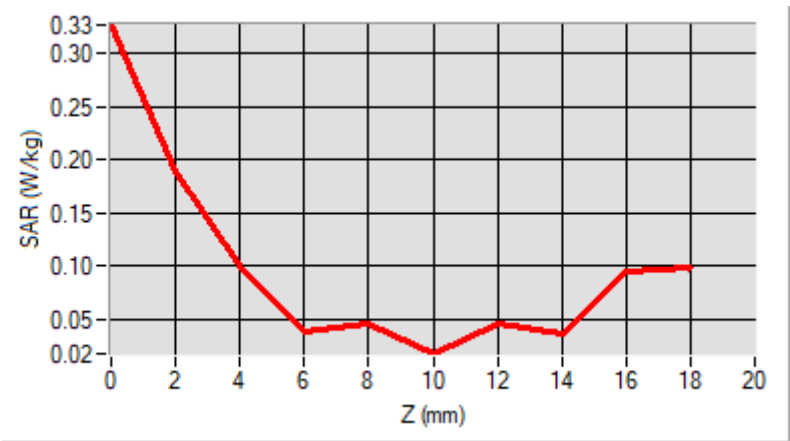
Maximum location: X=15.00, Y=24.00

D. SAR 1g & 10g

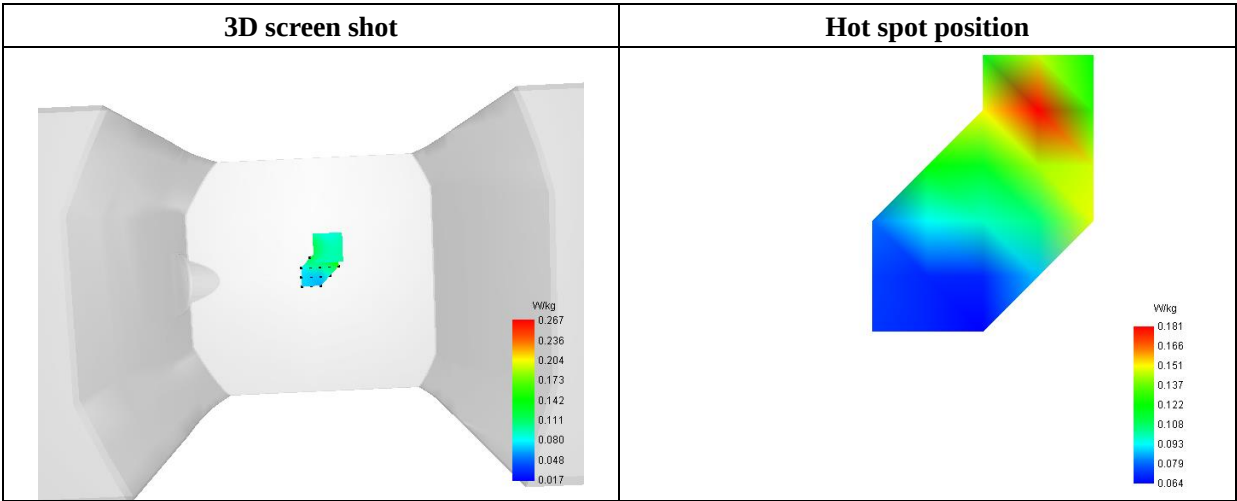
SAR 10g (W/Kg)	0.103299
SAR 1g (W/Kg)	0.116117

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)	0.3274	0.1885	0.0998	0.0379	0.0456	0.0172	0.0453	0.0368	0.0942



F. 3D Image



MEASUREMENT 32

Type: Phone measurement (Complete)

Date of measurement: 2021-11-09

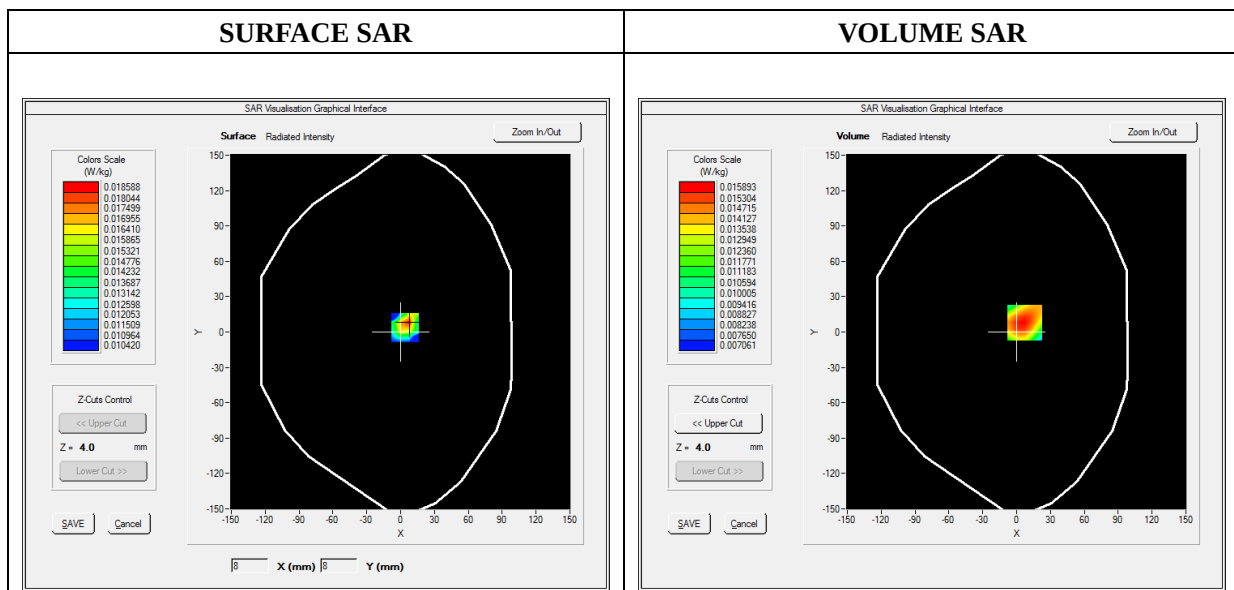
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WiFi(2.4GHz)_802.11b
Channels	Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

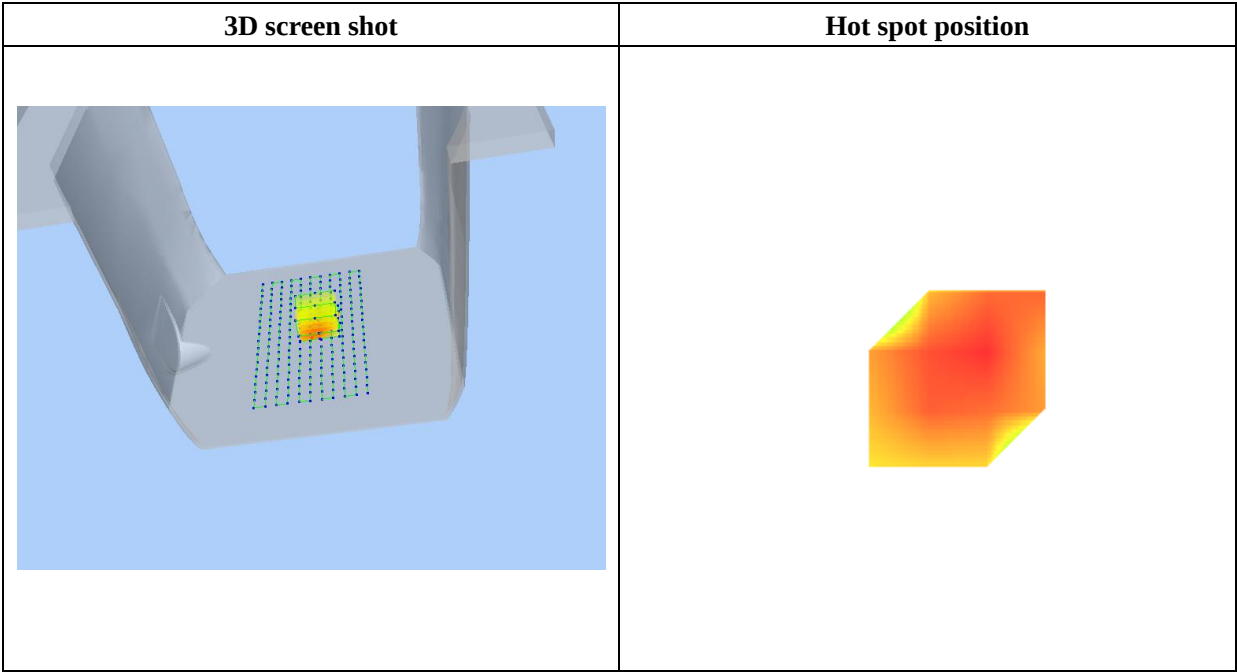
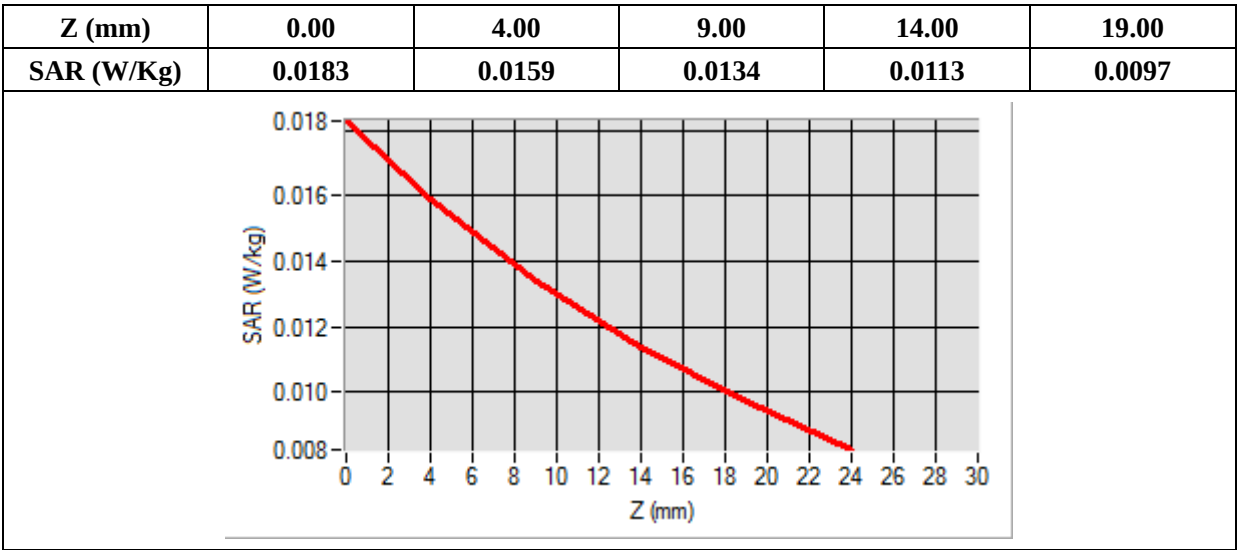
Frequency (MHz)	2412.000000
Relative Permittivity (real part)	52.010839
Conductivity (S/m)	1.911254
Power Variation (%)	5.210512
Ambient Temperature	22.0
Liquid Temperature	22.3



Maximum location: X=7.00, Y=8.00

SAR Peak: 0.02 W/kg

SAR 10g (W/Kg)	0.012338
SAR 1g (W/Kg)	0.015348



Annex C. EUT Photos

EUT View 1



EUT View 2



EUT View 3



EUT Housing and Board View



Antenna View



Annex E. Calibration Certificate

Please refer to the exhibit for the calibration certificate

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