

TEST REPORT

Reference No..... : WTX22X03036167W
FCC ID : SIT-KT700
Applicant : Kaissen Technology LLC
Address : 7412 SW 48 St, Suite B, Miami, FL, 33155, the United States
Manufacturer : Shenzhen Adreamer Elite Co.,Ltd.
Address : Floor4th, Fuanna industrial park, No.1qingning road, qinghu, longhua Dist, Shenzhen, China.
Product Name : 4G MPOS Device
Model No..... : KT700
Standards : FCC Part 2.1093
IEEE Std C95.1: 2019
IEEE Std C95.3: 2002 + Rev. 2008
IEEE 62209-1528: 2020
Date of Receipt sample : 2022-03-08
Date of Test..... : 2022-03-08 to 2022-03-23
Date of Issue : 2022-03-23
Test Report Form No. : WTX_IEEE62209_1528_2020W
Test Result..... : Pass

Remarks:

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

Prepared By:

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Report version

Version No.	Date of issue	Description
Rev.00	2022-03-23	Original
/	/	/

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT:	
Product Name:	4G MPOS Device
Brand Name:	Kaissen, onedine
Model No.:	KT700
Adding Model(s):	otg
Rated Voltage:	DC 3.7V
Battery capacity:	6000mAh
Software Version:	SQ806_Userdebug_20220218
Hardware Version:	Q05M001 B1-1 QT150
<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 KT700, but the circuit and the electronic construction do not change, declared by the manufacturer.</i>	

Technical Characteristics of EUT:	
2G	
Support Networks:	GPRS, EDGE
Support Band:	GSM850/PCS1900
Uplink Frequency:	GPRS/EDGE 850: 824~849MHz GPRS/EDGE 1900: 1850~1910MHz
Downlink Frequency:	GPRS/EDGE 850: 869~894MHz GPRS/EDGE 1900: 1930~1990MHz
RF Output Power:	GSM850: 32.7dBm, GSM1900: 29.65dBm EDGE850: 26.08dBm, EDGE1900: 25.99dBm
Type of Modulation:	GMSK, 8PSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM850: 0.5dBi; GSM1900: 2dBi
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: 21.59dBm, WCDMA Band 5: 23.20dBm
Type of Modulation:	BPSK
Antenna Type:	Integral Antenna
Antenna Gain:	WCDMA Band 2: 2dBi, WCDMA Band 5: 0.5dBi
4G	
Support Networks:	FDD-LTE, TDD-LTE
Support Band:	FDD-LTE Band 2, 4, 5, 7, 12, 17, TDD-LTE Band 41
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 7: Tx: 2500-2570MHz, FDD-LTE Band 12: Tx: 699-716MHz, FDD-LTE Band 17: Tx: 704-716MHz TDD-LTE Band 41: Tx: 2496-2690MHz
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz, FDD-LTE Band 4: Rx: 2110-2155MHz, FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 7: Rx: 2620-2690MHz, FDD-LTE Band 12: Rx: 729-746MHz, FDD-LTE Band 17: Rx: 734-746MHz

	TDD-LTE Band 41: Rx: 2496-2690MHz
RF Output Power:	FDD-LTE Band 2: 22.30dBm, FDD-LTE Band 4: 23.27dBm, FDD-LTE Band 5: 24.14dBm, FDD-LTE Band 7: 22.28dBm, FDD-LTE Band 12: 23.53dBm, FDD-LTE Band 17: 23.60dBm TDD-LTE Band 41: 22.32dBm
Type of Modulation:	QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	FDD-LTE Band 2: 2dBi, FDD-LTE Band 4: 2dBi, FDD-LTE Band 5: 0.5dBi, FDD-LTE Band 7: 2dBi, FDD-LTE Band 12: -0.5dBi, FDD-LTE Band 17: -0.5dBi, TDD-LTE Band 41: 2dBi
Wi-Fi(5GHz)	
Support Standards:	802.11a, 802.11n-HT20/40, 802.11ac-VHT20/40/80
Frequency Range:	5150-5250MHz, 5725-5850MHz
RF Output Power:	13.86dBm (Conducted)
Type of Modulation:	BPSK, QPSK, 16QAM, 64QAM, 256-QAM
Type of Antenna:	Integral Antenna
Antenna Gain:	1.5dBi
WIFI(2.4G)	
Support Standards:	802.11b, 802.11g, 802.11n-HT20/HT40
Frequency Range:	2412-2462MHz for 802.11b/g/n(HT20), 2422-2452MHz for 802.11n(HT40)
RF Output Power:	14.19dBm (Conducted)
Type of Modulation:	DBPSK, BPSK, DQPSK, QPSK, 16QAM, 64QAM
Quantity of Channels:	11 for 802.11b/g/n-HT20, 7 for 802.11b/g/n-HT40
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	2dBi
Bluetooth	
Bluetooth Version:	V4.2
Frequency Range:	2402-2480MHz
RF Output Power:	11.03dBm (Conducted)
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Quantity of Channels:	79/40
Channel Separation:	1MHz/2MHz
Antenna Type:	Integral Antenna
Antenna Gain:	2dBi
<i>Note: The Antenna Gain is provided by the customer and can affect the validity of results.</i>	

1.2 Test Standards

The following report is accordance with FCC 47 CFR Part 2.1093, IEEE Std C95.1: 2019, IEEE Std C95.3: 2002 + Rev. 2008, 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:

Frequency Band	Body SAR (0mm Gap)	SAR _{1g} Limit (W/kg)
	Maximum SAR _{1g} (W/kg)	
GSM	0.952	1.6
WCDMA	0.823	1.6
LTE	0.870	1.6
WLAN(5G)	0.609	1.6
WLAN(2.4G)	0.353	1.6
Bluetooth	0.433	1.6
Simultaneous Transmission	1.506	1.6

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

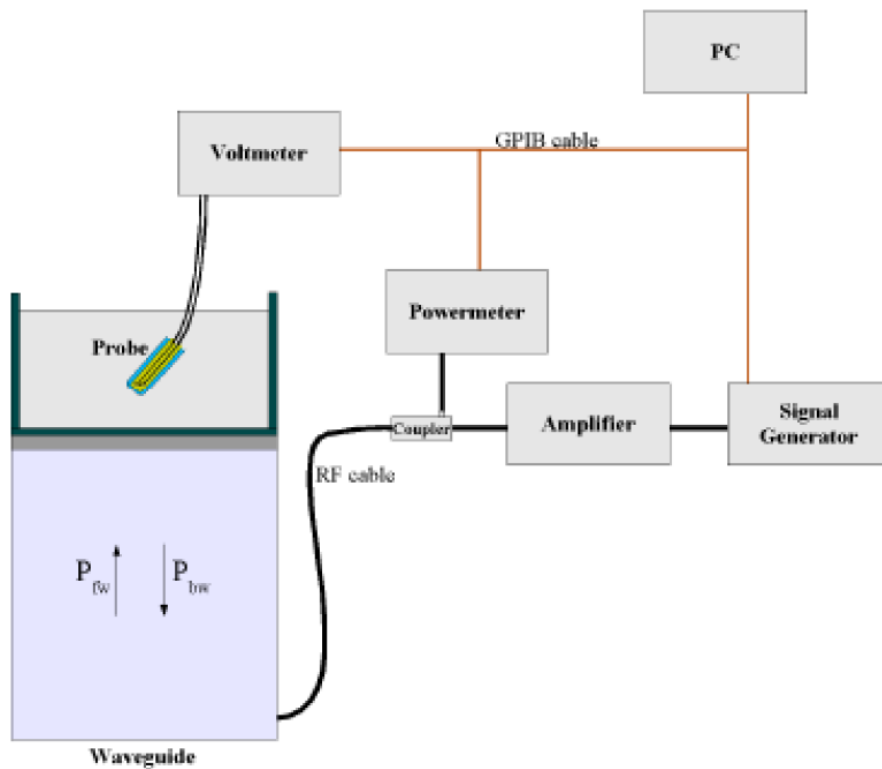
- Dynamic range: 0.01-100 W/kg
- Probe Length: 330 mm
- Length of Individual Dipoles: 4.5 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter : 5 mm

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- 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.

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The calibration factors, CF(N), for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are:

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

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

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

where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

Dosimetric Assessment Procedure

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

Free Space Assessment Procedure

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

Temperature Assessment Procedure

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

Where:

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

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

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

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

Where:

σ = simulated tissue conductivity,

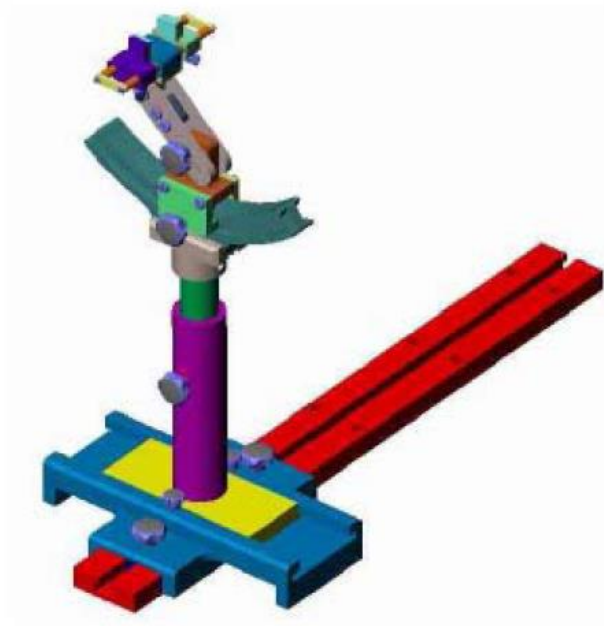
ρ = Tissue density (1.25 g/cm³ for brain tissue)

4.4 Phantom

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

4.5 Device Holder

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



System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

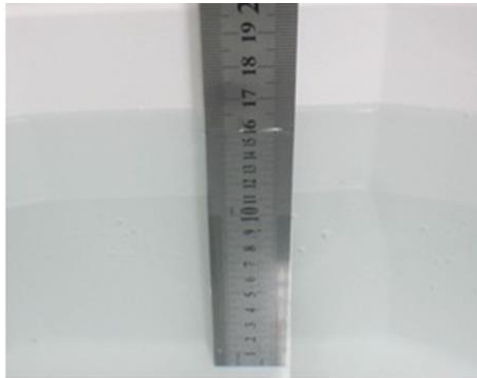
4.6 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
E-Field Probe	MVG	SSE2	SN 18/21 EPG0356	2021-07-16	2022-07-15
750MHz Dipole	MVG	SID750	SN 47/12 DIP 0G750-203	2020-03-11	2023-03-10
835MHz Dipole	MVG	SID835	SN 47/12 DIP 0G835-204	2020-03-11	2023-03-10
900MHz Dipole	MVG	SID900	SN 47/12 DIP 0G900-205	2020-03-11	2023-03-10
1800MHz Dipole	MVG	SID1800	SN 47/12 DIP 1G800-206	2020-03-11	2023-03-10
1900MHz Dipole	MVG	SID1900	SN 47/12 DIP 1G900-207	2020-03-11	2023-03-10
2000MHz Dipole	MVG	SID2000	SN 47/12 DIP 2G000-208	2020-03-11	2023-03-10
2300 MHz Dipole	MVG	SID2300	SN 50/20 DIP 2G300-513	2021-01-14	2024-01-13
2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2020-03-11	2023-03-10
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	2023-07-02
Dielectric Probe	SATIMO	SCLMP	SN 47/12 OCPG49	2021-03-27	2022-03-26
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/Body SAR

The Composition of Tissue Simulating Liquid

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

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

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		Body	
	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity (σ)	Permittivity (ϵ_r)
150	0.76	52.3	0.80	61.9
300	0.87	45.3	0.92	58.2
450	0.87	43.5	0.94	56.7
750	0.89	41.9	0.96	55.5
835	0.90	41.5	0.97	55.2
900	0.97	41.5	1.05	55.0
915	0.98	41.5	1.06	55.0
1450	1.20	40.5	1.30	54.0
1610	1.29	40.3	1.40	53.8
1750	1.37	40.1	1.49	53.4
1800-2000	1.40	40.0	1.52	53.3
2450	1.80	39.2	1.95	52.7
2600	1.96	39.0	2.16	52.5
3000	2.40	38.5	2.73	52.0
5200	4.66	36.0	5.30	49.0
5400	35.9	4.76	5.53	48.7
5600	5.07	35.5	5.77	48.5
5800	5.27	35.3	6.00	48.2

5.3 Tissue Calibration Result

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

Calibration Result for Dielectric Parameters of Tissue Simulating Liquid

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	22.2	0.94	0.96	-2.08	55.38	55.5	-0.22	± 5	2022-03-07
835	22.2	0.95	0.97	-2.06	55.16	55.2	-0.07	± 5	2022-03-07
1750	22.2	1.46	1.49	-2.01	53.42	53.4	0.04	± 5	2022-03-08
1800	22.2	1.53	1.52	0.66	53.39	53.3	0.17	± 5	2022-03-08
1900	22.2	1.54	1.52	1.32	53.36	53.3	0.11	± 5	2022-03-09
2450	22.2	1.92	1.95	-1.54	52.64	52.7	-0.11	± 5	2022-03-11
2600	22.2	2.15	2.16	-0.46	52.43	52.5	-0.13	± 5	2022-03-10
5200	22.2	5.29	5.30	-0.19	49.51	49.0	1.04	± 5	2022-03-22
5800	22.2	6.01	6.00	0.17	48.34	48.2	0.29	± 5	2022-03-22

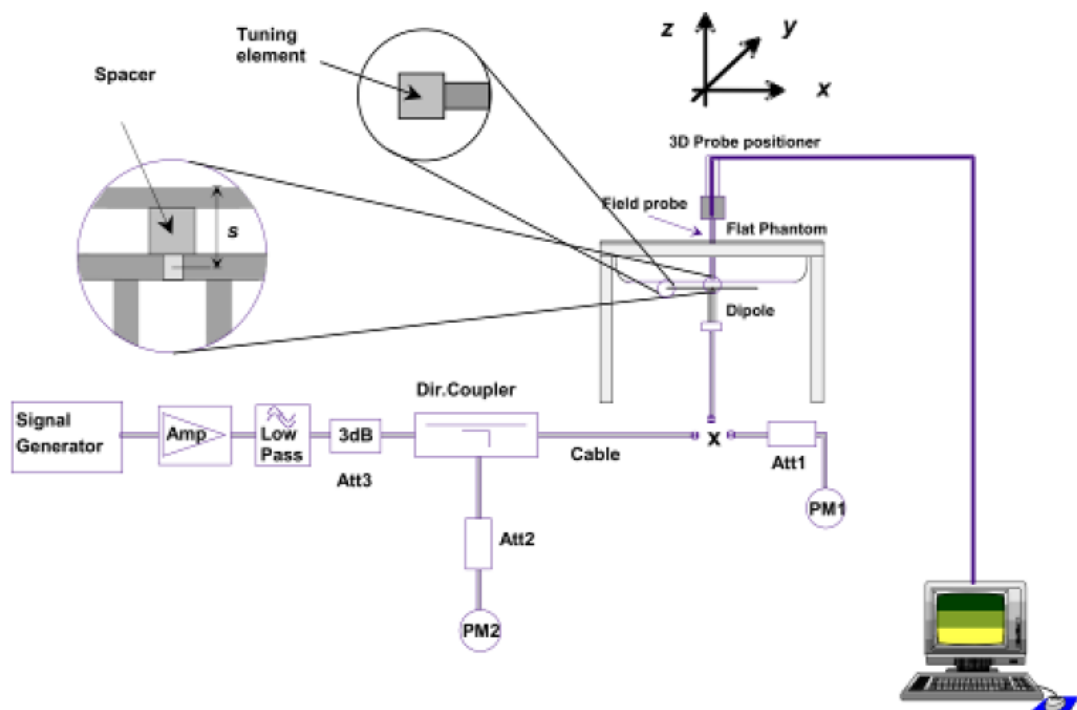
6. SAR Measurement Evaluation

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)	(%)	
Body					
750	8.40	2.18	8.72	3.81	2022-03-07
835	9.36	2.51	10.04	7.26	2022-03-07
1800	38.29	9.46	37.84	-1.18	2022-03-08
1900	39.01	9.91	39.64	1.61	2022-03-09
2450	50.33	13.03	52.12	3.56	2022-03-11
2600	55.79	13.54	54.16	-2.92	2022-03-10
5200	154.45	16.746	167.46	8.42	2022-03-22
5800	170.71	17.961	179.61	5.21	2022-03-22

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 Body Position

- (a) To position the device parallel to the phantom surface with each side.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 0mm.

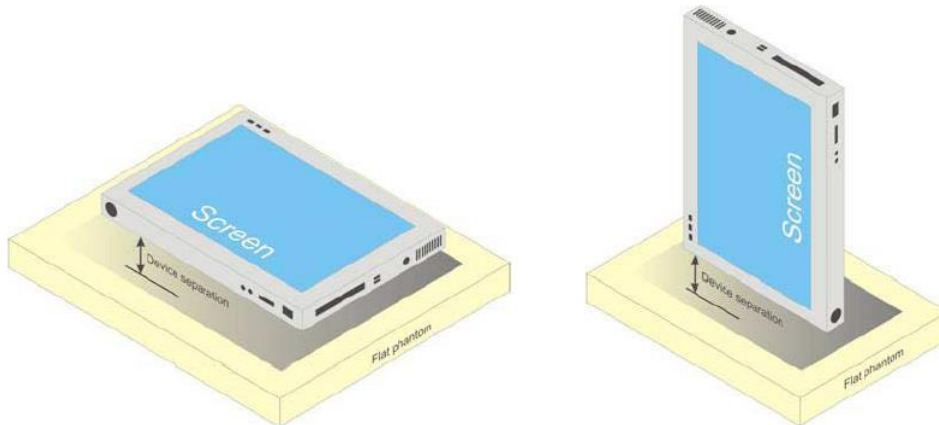
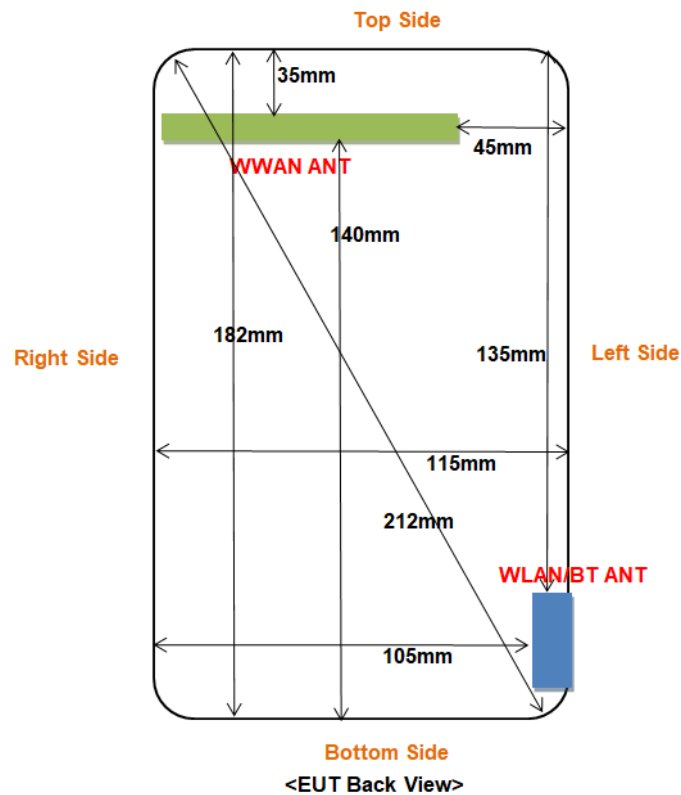


Illustration for Body Position

7.2 EUT Antenna Position



Block Diagram for EUT Antenna Position

Distance of EUT antenna-to-edge/surface(mm), Test distance:0mm						
Antennas	Back side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
WWAN	<25	<25	45	<25	35	140
WLAN	<25	<25	<25	105	135	<25
Bluetooth	<25	<25	<25	105	135	<25

7.3 EUT Testing Position

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

Body SAR tests, Test distance: 0mm						
Antennas	Front	Back	Right Side	Left Side	Top Side	Bottom Side
WWAN	Yes	Yes	Yes	Yes	No	No
WLAN	Yes	Yes	No	Yes	No	Yes
Bluetooth	Yes	Yes	No	Yes	No	Yes

Remark:

- Referring to KDB 616217 D04 v01r02, KDB 248227 D01 v02r02 and KDB 447498 D01 v06, this device is overall diagonal dimension(>20cm) tablet, tested in direct contact (no gap) with flat phantom. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
- Referring to KDB 648474 D04 Handset SAR v01r03, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg

Please refer to Annex 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)	GSM1900			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	/	/	/	/	/	/	/	/
GPRS (1 slot)	32.70	32.55	32.66	33.0	29.65	29.25	29.10	30.0
GPRS (2 slots)	31.34	31.16	31.64	32.0	28.67	28.07	27.55	29.0
GPRS (3 slots)	29.63	29.40	29.41	30.0	26.87	26.94	26.58	27.0
GPRS (4 slots)	28.83	28.63	28.62	29.0	25.45	25.74	25.11	26.0
EDGE (1 slot)	25.96	26.08	25.39	26.5	25.99	25.64	25.79	26.0
EDGE (2 slots)	24.89	24.51	24.88	25.0	24.41	24.74	24.70	25.0
EDGE (3 slots)	23.80	23.52	23.99	24.0	23.06	23.35	23.88	24.0
EDGE (4 slots)	22.87	22.48	22.55	23.0	22.36	22.33	23.0	23.5

GSM - Source-Based Time-Average Power (dBm)								
Band	GSM850			Tune-up power (dBm)	GSM1900			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	/	/	/	/	/	/	/	/
GPRS (1 slot)	23.70	23.55	23.66	24.0	20.65	20.25	20.10	21.0
GPRS (2 slots)	25.34	25.16	25.64	26.0	22.67	22.07	21.55	22.0
GPRS (3 slots)	25.38	25.15	25.16	25.5	22.62	22.69	22.33	23.0
GPRS (4 slots)	25.83	25.63	25.62	26.0	22.45	22.74	22.11	23.0
EDGE (1 slot)	16.96	17.08	16.39	17.5	16.99	16.64	16.79	17.0
EDGE (2 slots)	18.89	18.51	18.88	19.0	18.41	18.74	18.70	19.0
EDGE (3 slots)	19.55	19.27	19.74	20.0	18.81	19.10	19.63	20.0
EDGE (4 slots)	19.87	19.48	19.55	20.0	19.36	19.33	20.00	20.5

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

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

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

Remark:

1. For Body SAR testing, GPRS should be evaluated; therefore the EUT was set in GPRS (4TX slots) for GSM850 and GPRS (4TX slots) for GSM1900 due to its highest source-based time-average power.
2. Per KDB 447498 D01 v06, the maximum output power channel is used for SAR testing and for further SAR test

reduction.

3. The DUT do not support DTM function.
4. The DUT do not support Hotspot 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	21.59	21.17	21.13	22.0	23.16	23.19	23.20	23.5
HSDPA Subtest-1	20.47	20.35	21.29	21.5	21.98	21.99	22.06	22.5
HSDPA Subtest-2	20.31	20.44	21.22	21.5	21.98	21.87	22.05	22.5
HSDPA Subtest-3	20.27	20.45	21.39	21.5	21.99	21.95	22.03	22.5
HSDPA Subtest-4	20.31	20.29	21.14	21.5	21.87	21.91	22.12	22.5
HSUPA Subtest-1	20.89	20.33	20.72	21.0	21.53	21.65	21.89	22.0
HSUPA Subtest-2	20.03	20.87	20.36	21.0	21.33	21.36	21.74	22.0
HSUPA Subtest-3	20.83	20.12	20.54	21.0	21.44	21.65	21.36	22.0
HSUPA Subtest-4	20.45	20.23	20.48	20.5	21.56	21.65	21.35	22.0
HSUPA Subtest-5	20.71	20.54	20.90	21.0	21.95	21.84	21.45	22.0

Remark:

1. Per KDB 941225 D01 v03, the 12.2kbps RMC mode was selected for SAR testing (the primary mode).
2. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	Verdict
Band12	1.4	23017	1	#0	QPSK	22.97	PASS
Band12	1.4	23017	1	#Mid	QPSK	23.03	PASS
Band12	1.4	23017	1	#Max	QPSK	22.85	PASS
Band12	1.4	23017	3	#0	QPSK	23.11	PASS
Band12	1.4	23017	3	#Max	QPSK	23.19	PASS
Band12	1.4	23017	6	#0	QPSK	22.11	PASS
Band12	1.4	23017	1	#0	QAM16	22.66	PASS
Band12	1.4	23017	1	#Mid	QAM16	22.85	PASS
Band12	1.4	23017	1	#Max	QAM16	22.69	PASS
Band12	1.4	23017	3	#0	QAM16	21.56	PASS
Band12	1.4	23017	3	#Max	QAM16	21.56	PASS
Band12	1.4	23017	6	#0	QAM16	20.86	PASS
Band12	1.4	23095	1	#0	QPSK	23.00	PASS
Band12	1.4	23095	1	#Mid	QPSK	23.00	PASS
Band12	1.4	23095	1	#Max	QPSK	22.76	PASS
Band12	1.4	23095	3	#0	QPSK	23.02	PASS
Band12	1.4	23095	3	#Max	QPSK	22.87	PASS
Band12	1.4	23095	6	#0	QPSK	21.98	PASS
Band12	1.4	23095	1	#0	QAM16	21.87	PASS
Band12	1.4	23095	1	#Mid	QAM16	21.87	PASS
Band12	1.4	23095	1	#Max	QAM16	21.69	PASS
Band12	1.4	23095	3	#0	QAM16	22.23	PASS
Band12	1.4	23095	3	#Max	QAM16	21.75	PASS
Band12	1.4	23095	6	#0	QAM16	21.11	PASS
Band12	1.4	23173	1	#0	QPSK	23.42	PASS
Band12	1.4	23173	1	#Mid	QPSK	23.53	PASS
Band12	1.4	23173	1	#Max	QPSK	23.48	PASS
Band12	1.4	23173	3	#0	QPSK	23.01	PASS
Band12	1.4	23173	3	#Max	QPSK	23.15	PASS
Band12	1.4	23173	6	#0	QPSK	22.13	PASS
Band12	1.4	23173	1	#0	QAM16	22.33	PASS
Band12	1.4	23173	1	#Mid	QAM16	22.49	PASS
Band12	1.4	23173	1	#Max	QAM16	22.53	PASS
Band12	1.4	23173	3	#0	QAM16	22.23	PASS
Band12	1.4	23173	3	#Max	QAM16	22.34	PASS
Band12	1.4	23173	6	#0	QAM16	21.09	PASS
Band12	3	23025	1	#0	QPSK	22.95	PASS
Band12	3	23025	1	#Mid	QPSK	22.82	PASS
Band12	3	23025	1	#Max	QPSK	22.77	PASS
Band12	3	23025	8	#0	QPSK	21.83	PASS
Band12	3	23025	8	#Max	QPSK	21.96	PASS

Band12	3	23025	15	#0	QPSK	21.96	PASS
Band12	3	23025	1	#0	QAM16	21.90	PASS
Band12	3	23025	1	#Mid	QAM16	21.87	PASS
Band12	3	23025	1	#Max	QAM16	21.90	PASS
Band12	3	23025	8	#0	QAM16	20.66	PASS
Band12	3	23025	8	#Max	QAM16	20.82	PASS
Band12	3	23025	15	#0	QAM16	20.77	PASS
Band12	3	23095	1	#0	QPSK	22.87	PASS
Band12	3	23095	1	#Mid	QPSK	22.72	PASS
Band12	3	23095	1	#Max	QPSK	22.71	PASS
Band12	3	23095	8	#0	QPSK	22.05	PASS
Band12	3	23095	8	#Max	QPSK	21.95	PASS
Band12	3	23095	15	#0	QPSK	21.94	PASS
Band12	3	23095	1	#0	QAM16	22.19	PASS
Band12	3	23095	1	#Mid	QAM16	22.09	PASS
Band12	3	23095	1	#Max	QAM16	22.04	PASS
Band12	3	23095	8	#0	QAM16	20.91	PASS
Band12	3	23095	8	#Max	QAM16	20.71	PASS
Band12	3	23095	15	#0	QAM16	20.50	PASS
Band12	3	23165	1	#0	QPSK	23.01	PASS
Band12	3	23165	1	#Mid	QPSK	23.00	PASS
Band12	3	23165	1	#Max	QPSK	23.39	PASS
Band12	3	23165	8	#0	QPSK	22.15	PASS
Band12	3	23165	8	#Max	QPSK	22.12	PASS
Band12	3	23165	15	#0	QPSK	22.16	PASS
Band12	3	23165	1	#0	QAM16	22.03	PASS
Band12	3	23165	1	#Mid	QAM16	21.92	PASS
Band12	3	23165	1	#Max	QAM16	22.13	PASS
Band12	3	23165	8	#0	QAM16	20.91	PASS
Band12	3	23165	8	#Max	QAM16	20.97	PASS
Band12	3	23165	15	#0	QAM16	21.23	PASS
Band12	5	23035	1	#0	QPSK	22.94	PASS
Band12	5	23035	1	#Mid	QPSK	22.70	PASS
Band12	5	23035	1	#Max	QPSK	22.82	PASS
Band12	5	23035	12	#0	QPSK	21.84	PASS
Band12	5	23035	12	#Max	QPSK	21.93	PASS
Band12	5	23035	25	#0	QPSK	21.80	PASS
Band12	5	23035	1	#0	QAM16	21.91	PASS
Band12	5	23035	1	#Mid	QAM16	21.83	PASS
Band12	5	23035	1	#Max	QAM16	21.64	PASS
Band12	5	23035	12	#0	QAM16	20.69	PASS
Band12	5	23035	12	#Max	QAM16	20.67	PASS
Band12	5	23035	25	#0	QAM16	20.83	PASS

Band12	5	23095	1	#0	QPSK	22.71	PASS
Band12	5	23095	1	#Mid	QPSK	22.62	PASS
Band12	5	23095	1	#Max	QPSK	22.57	PASS
Band12	5	23095	12	#0	QPSK	21.88	PASS
Band12	5	23095	12	#Max	QPSK	21.81	PASS
Band12	5	23095	25	#0	QPSK	21.78	PASS
Band12	5	23095	1	#0	QAM16	22.01	PASS
Band12	5	23095	1	#Mid	QAM16	21.86	PASS
Band12	5	23095	1	#Max	QAM16	21.82	PASS
Band12	5	23095	12	#0	QAM16	20.71	PASS
Band12	5	23095	12	#Max	QAM16	20.64	PASS
Band12	5	23095	25	#0	QAM16	20.62	PASS
Band12	5	23155	1	#0	QPSK	22.75	PASS
Band12	5	23155	1	#Mid	QPSK	22.88	PASS
Band12	5	23155	1	#Max	QPSK	22.96	PASS
Band12	5	23155	12	#0	QPSK	22.05	PASS
Band12	5	23155	12	#Max	QPSK	21.94	PASS
Band12	5	23155	25	#0	QPSK	21.95	PASS
Band12	5	23155	1	#0	QAM16	21.94	PASS
Band12	5	23155	1	#Mid	QAM16	21.89	PASS
Band12	5	23155	1	#Max	QAM16	21.96	PASS
Band12	5	23155	12	#0	QAM16	21.03	PASS
Band12	5	23155	12	#Max	QAM16	20.95	PASS
Band12	5	23155	25	#0	QAM16	20.92	PASS
Band12	10	23060	1	#0	QPSK	22.80	PASS
Band12	10	23060	1	#Mid	QPSK	22.78	PASS
Band12	10	23060	1	#Max	QPSK	22.65	PASS
Band12	10	23060	25	#0	QPSK	21.79	PASS
Band12	10	23060	25	#Max	QPSK	21.77	PASS
Band12	10	23060	50	#0	QPSK	21.87	PASS
Band12	10	23060	1	#0	QAM16	21.80	PASS
Band12	10	23060	1	#Mid	QAM16	21.79	PASS
Band12	10	23060	1	#Max	QAM16	21.77	PASS
Band12	10	23060	25	#0	QAM16	20.87	PASS
Band12	10	23060	25	#Max	QAM16	20.82	PASS
Band12	10	23060	50	#0	QAM16	20.63	PASS
Band12	10	23095	1	#0	QPSK	22.82	PASS
Band12	10	23095	1	#Mid	QPSK	22.92	PASS
Band12	10	23095	1	#Max	QPSK	23.01	PASS
Band12	10	23095	25	#0	QPSK	21.81	PASS
Band12	10	23095	25	#Max	QPSK	21.78	PASS
Band12	10	23095	50	#0	QPSK	21.75	PASS
Band12	10	23095	1	#0	QAM16	22.35	PASS

Band12	10	23095	1	#Mid	QAM16	22.33	PASS
Band12	10	23095	1	#Max	QAM16	22.40	PASS
Band12	10	23095	25	#0	QAM16	20.88	PASS
Band12	10	23095	25	#Max	QAM16	20.73	PASS
Band12	10	23095	50	#0	QAM16	20.75	PASS
Band12	10	23130	1	#0	QPSK	22.87	PASS
Band12	10	23130	1	#Mid	QPSK	23.30	PASS
Band12	10	23130	1	#Max	QPSK	23.12	PASS
Band12	10	23130	25	#0	QPSK	21.88	PASS
Band12	10	23130	25	#Max	QPSK	22.13	PASS
Band12	10	23130	50	#0	QPSK	21.94	PASS
Band12	10	23130	1	#0	QAM16	21.41	PASS
Band12	10	23130	1	#Mid	QAM16	21.68	PASS
Band12	10	23130	1	#Max	QAM16	21.44	PASS
Band12	10	23130	25	#0	QAM16	20.72	PASS
Band12	10	23130	25	#Max	QAM16	21.14	PASS
Band12	10	23130	50	#0	QAM16	20.87	PASS
Band17	5	23755	1	#0	QPSK	22.80	PASS
Band17	5	23755	1	#Mid	QPSK	22.85	PASS
Band17	5	23755	1	#Max	QPSK	22.81	PASS
Band17	5	23755	12	#0	QPSK	22.03	PASS
Band17	5	23755	12	#Max	QPSK	22.02	PASS
Band17	5	23755	25	#0	QPSK	22.04	PASS
Band17	5	23755	1	#0	QAM16	22.26	PASS
Band17	5	23755	1	#Mid	QAM16	22.16	PASS
Band17	5	23755	1	#Max	QAM16	22.12	PASS
Band17	5	23755	12	#0	QAM16	20.94	PASS
Band17	5	23755	12	#Max	QAM16	20.82	PASS
Band17	5	23755	25	#0	QAM16	20.95	PASS
Band17	5	23790	1	#0	QPSK	22.87	PASS
Band17	5	23790	1	#Mid	QPSK	23.06	PASS
Band17	5	23790	1	#Max	QPSK	23.28	PASS
Band17	5	23790	12	#0	QPSK	21.94	PASS
Band17	5	23790	12	#Max	QPSK	22.15	PASS
Band17	5	23790	25	#0	QPSK	22.02	PASS
Band17	5	23790	1	#0	QAM16	21.91	PASS
Band17	5	23790	1	#Mid	QAM16	21.95	PASS
Band17	5	23790	1	#Max	QAM16	22.22	PASS
Band17	5	23790	12	#0	QAM16	20.97	PASS
Band17	5	23790	12	#Max	QAM16	21.21	PASS
Band17	5	23790	25	#0	QAM16	21.07	PASS
Band17	5	23825	1	#0	QPSK	23.12	PASS
Band17	5	23825	1	#Mid	QPSK	23.24	PASS

Band17	5	23825	1	#Max	QPSK	23.08	PASS
Band17	5	23825	12	#0	QPSK	22.25	PASS
Band17	5	23825	12	#Max	QPSK	22.27	PASS
Band17	5	23825	25	#0	QPSK	22.18	PASS
Band17	5	23825	1	#0	QAM16	21.96	PASS
Band17	5	23825	1	#Mid	QAM16	22.10	PASS
Band17	5	23825	1	#Max	QAM16	22.10	PASS
Band17	5	23825	12	#0	QAM16	21.09	PASS
Band17	5	23825	12	#Max	QAM16	20.91	PASS
Band17	5	23825	25	#0	QAM16	21.06	PASS
Band17	10	23780	1	#0	QPSK	23.26	PASS
Band17	10	23780	1	#Mid	QPSK	23.36	PASS
Band17	10	23780	1	#Max	QPSK	23.60	PASS
Band17	10	23780	25	#0	QPSK	22.19	PASS
Band17	10	23780	25	#Max	QPSK	22.30	PASS
Band17	10	23780	50	#0	QPSK	22.13	PASS
Band17	10	23780	1	#0	QAM16	22.21	PASS
Band17	10	23780	1	#Mid	QAM16	22.13	PASS
Band17	10	23780	1	#Max	QAM16	21.80	PASS
Band17	10	23780	25	#0	QAM16	21.11	PASS
Band17	10	23780	25	#Max	QAM16	21.32	PASS
Band17	10	23780	50	#0	QAM16	21.02	PASS
Band17	10	23790	1	#0	QPSK	22.99	PASS
Band17	10	23790	1	#Mid	QPSK	23.38	PASS
Band17	10	23790	1	#Max	QPSK	23.18	PASS
Band17	10	23790	25	#0	QPSK	22.11	PASS
Band17	10	23790	25	#Max	QPSK	22.25	PASS
Band17	10	23790	50	#0	QPSK	22.09	PASS
Band17	10	23790	1	#0	QAM16	22.32	PASS
Band17	10	23790	1	#Mid	QAM16	22.46	PASS
Band17	10	23790	1	#Max	QAM16	22.57	PASS
Band17	10	23790	25	#0	QAM16	20.89	PASS
Band17	10	23790	25	#Max	QAM16	21.21	PASS
Band17	10	23790	50	#0	QAM16	21.02	PASS
Band17	10	23800	1	#0	QPSK	22.92	PASS
Band17	10	23800	1	#Mid	QPSK	23.26	PASS
Band17	10	23800	1	#Max	QPSK	23.13	PASS
Band17	10	23800	25	#0	QPSK	21.98	PASS
Band17	10	23800	25	#Max	QPSK	22.22	PASS
Band17	10	23800	50	#0	QPSK	22.13	PASS
Band17	10	23800	1	#0	QAM16	21.59	PASS
Band17	10	23800	1	#Mid	QAM16	21.83	PASS
Band17	10	23800	1	#Max	QAM16	21.37	PASS

Band17	10	23800	25	#0	QAM16	21.01	PASS
Band17	10	23800	25	#Max	QAM16	21.46	PASS
Band17	10	23800	50	#0	QAM16	20.95	PASS
Band2	1.4	18607	1	#0	QPSK	21.44	PASS
Band2	1.4	18607	1	#Mid	QPSK	21.44	PASS
Band2	1.4	18607	1	#Max	QPSK	21.41	PASS
Band2	1.4	18607	3	#0	QPSK	21.48	PASS
Band2	1.4	18607	3	#Max	QPSK	21.38	PASS
Band2	1.4	18607	6	#0	QPSK	20.37	PASS
Band2	1.4	18607	1	#0	QAM16	20.56	PASS
Band2	1.4	18607	1	#Mid	QAM16	21.34	PASS
Band2	1.4	18607	1	#Max	QAM16	21.23	PASS
Band2	1.4	18607	3	#0	QAM16	20.73	PASS
Band2	1.4	18607	3	#Max	QAM16	20.77	PASS
Band2	1.4	18607	6	#0	QAM16	19.21	PASS
Band2	1.4	18900	1	#0	QPSK	22.09	PASS
Band2	1.4	18900	1	#Mid	QPSK	22.19	PASS
Band2	1.4	18900	1	#Max	QPSK	22.07	PASS
Band2	1.4	18900	3	#0	QPSK	21.88	PASS
Band2	1.4	18900	3	#Max	QPSK	21.78	PASS
Band2	1.4	18900	6	#0	QPSK	20.97	PASS
Band2	1.4	18900	1	#0	QAM16	20.79	PASS
Band2	1.4	18900	1	#Mid	QAM16	20.85	PASS
Band2	1.4	18900	1	#Max	QAM16	20.69	PASS
Band2	1.4	18900	3	#0	QAM16	21.03	PASS
Band2	1.4	18900	3	#Max	QAM16	20.96	PASS
Band2	1.4	18900	6	#0	QAM16	19.76	PASS
Band2	1.4	19193	1	#0	QPSK	21.96	PASS
Band2	1.4	19193	1	#Mid	QPSK	21.99	PASS
Band2	1.4	19193	1	#Max	QPSK	21.83	PASS
Band2	1.4	19193	3	#0	QPSK	21.74	PASS
Band2	1.4	19193	3	#Max	QPSK	21.60	PASS
Band2	1.4	19193	6	#0	QPSK	20.69	PASS
Band2	1.4	19193	1	#0	QAM16	21.02	PASS
Band2	1.4	19193	1	#Mid	QAM16	21.25	PASS
Band2	1.4	19193	1	#Max	QAM16	20.94	PASS
Band2	1.4	19193	3	#0	QAM16	20.66	PASS
Band2	1.4	19193	3	#Max	QAM16	20.18	PASS
Band2	1.4	19193	6	#0	QAM16	19.48	PASS
Band2	3	18615	1	#0	QPSK	21.00	PASS
Band2	3	18615	1	#Mid	QPSK	21.00	PASS
Band2	3	18615	1	#Max	QPSK	21.27	PASS
Band2	3	18615	8	#0	QPSK	20.41	PASS

Band2	3	18615	8	#Max	QPSK	20.26	PASS
Band2	3	18615	15	#0	QPSK	20.32	PASS
Band2	3	18615	1	#0	QAM16	21.02	PASS
Band2	3	18615	1	#Mid	QAM16	21.03	PASS
Band2	3	18615	1	#Max	QAM16	20.91	PASS
Band2	3	18615	8	#0	QAM16	19.62	PASS
Band2	3	18615	8	#Max	QAM16	19.47	PASS
Band2	3	18615	15	#0	QAM16	19.14	PASS
Band2	3	18900	1	#0	QPSK	22.12	PASS
Band2	3	18900	1	#Mid	QPSK	22.05	PASS
Band2	3	18900	1	#Max	QPSK	21.72	PASS
Band2	3	18900	8	#0	QPSK	20.90	PASS
Band2	3	18900	8	#Max	QPSK	20.86	PASS
Band2	3	18900	15	#0	QPSK	20.92	PASS
Band2	3	18900	1	#0	QAM16	20.63	PASS
Band2	3	18900	1	#Mid	QAM16	20.58	PASS
Band2	3	18900	1	#Max	QAM16	20.61	PASS
Band2	3	18900	8	#0	QAM16	19.98	PASS
Band2	3	18900	8	#Max	QAM16	19.85	PASS
Band2	3	18900	15	#0	QAM16	19.89	PASS
Band2	3	19185	1	#0	QPSK	21.84	PASS
Band2	3	19185	1	#Mid	QPSK	21.65	PASS
Band2	3	19185	1	#Max	QPSK	21.61	PASS
Band2	3	19185	8	#0	QPSK	20.75	PASS
Band2	3	19185	8	#Max	QPSK	20.56	PASS
Band2	3	19185	15	#0	QPSK	20.75	PASS
Band2	3	19185	1	#0	QAM16	20.80	PASS
Band2	3	19185	1	#Mid	QAM16	20.56	PASS
Band2	3	19185	1	#Max	QAM16	20.49	PASS
Band2	3	19185	8	#0	QAM16	19.92	PASS
Band2	3	19185	8	#Max	QAM16	19.46	PASS
Band2	3	19185	15	#0	QAM16	19.52	PASS
Band2	5	18625	1	#0	QPSK	21.45	PASS
Band2	5	18625	1	#Mid	QPSK	21.27	PASS
Band2	5	18625	1	#Max	QPSK	21.22	PASS
Band2	5	18625	12	#0	QPSK	20.51	PASS
Band2	5	18625	12	#Max	QPSK	20.34	PASS
Band2	5	18625	25	#0	QPSK	20.48	PASS
Band2	5	18625	1	#0	QAM16	20.69	PASS
Band2	5	18625	1	#Mid	QAM16	20.54	PASS
Band2	5	18625	1	#Max	QAM16	20.34	PASS
Band2	5	18625	12	#0	QAM16	19.29	PASS
Band2	5	18625	12	#Max	QAM16	19.27	PASS

Band2	5	18625	25	#0	QAM16	19.26	PASS
Band2	5	18900	1	#0	QPSK	21.88	PASS
Band2	5	18900	1	#Mid	QPSK	21.86	PASS
Band2	5	18900	1	#Max	QPSK	21.76	PASS
Band2	5	18900	12	#0	QPSK	20.88	PASS
Band2	5	18900	12	#Max	QPSK	20.85	PASS
Band2	5	18900	25	#0	QPSK	20.83	PASS
Band2	5	18900	1	#0	QAM16	20.78	PASS
Band2	5	18900	1	#Mid	QAM16	20.80	PASS
Band2	5	18900	1	#Max	QAM16	20.65	PASS
Band2	5	18900	12	#0	QAM16	19.90	PASS
Band2	5	18900	12	#Max	QAM16	19.79	PASS
Band2	5	18900	25	#0	QAM16	19.90	PASS
Band2	5	19175	1	#0	QPSK	21.97	PASS
Band2	5	19175	1	#Mid	QPSK	22.01	PASS
Band2	5	19175	1	#Max	QPSK	21.53	PASS
Band2	5	19175	12	#0	QPSK	20.79	PASS
Band2	5	19175	12	#Max	QPSK	20.56	PASS
Band2	5	19175	25	#0	QPSK	20.77	PASS
Band2	5	19175	1	#0	QAM16	20.99	PASS
Band2	5	19175	1	#Mid	QAM16	21.07	PASS
Band2	5	19175	1	#Max	QAM16	20.90	PASS
Band2	5	19175	12	#0	QAM16	19.69	PASS
Band2	5	19175	12	#Max	QAM16	19.30	PASS
Band2	5	19175	25	#0	QAM16	19.65	PASS
Band2	10	18650	1	#0	QPSK	21.20	PASS
Band2	10	18650	1	#Mid	QPSK	21.15	PASS
Band2	10	18650	1	#Max	QPSK	21.10	PASS
Band2	10	18650	25	#0	QPSK	20.35	PASS
Band2	10	18650	25	#Max	QPSK	20.16	PASS
Band2	10	18650	50	#0	QPSK	20.30	PASS
Band2	10	18650	1	#0	QAM16	20.35	PASS
Band2	10	18650	1	#Mid	QAM16	20.46	PASS
Band2	10	18650	1	#Max	QAM16	20.01	PASS
Band2	10	18650	25	#0	QAM16	19.40	PASS
Band2	10	18650	25	#Max	QAM16	19.19	PASS
Band2	10	18650	50	#0	QAM16	19.24	PASS
Band2	10	18900	1	#0	QPSK	21.56	PASS
Band2	10	18900	1	#Mid	QPSK	21.92	PASS
Band2	10	18900	1	#Max	QPSK	21.51	PASS
Band2	10	18900	25	#0	QPSK	20.90	PASS
Band2	10	18900	25	#Max	QPSK	20.73	PASS
Band2	10	18900	50	#0	QPSK	20.80	PASS

Band2	10	18900	1	#0	QAM16	21.13	PASS
Band2	10	18900	1	#Mid	QAM16	21.26	PASS
Band2	10	18900	1	#Max	QAM16	20.93	PASS
Band2	10	18900	25	#0	QAM16	19.85	PASS
Band2	10	18900	25	#Max	QAM16	19.69	PASS
Band2	10	18900	50	#0	QAM16	19.79	PASS
Band2	10	19150	1	#0	QPSK	21.52	PASS
Band2	10	19150	1	#Mid	QPSK	21.84	PASS
Band2	10	19150	1	#Max	QPSK	21.75	PASS
Band2	10	19150	25	#0	QPSK	20.70	PASS
Band2	10	19150	25	#Max	QPSK	20.65	PASS
Band2	10	19150	50	#0	QPSK	20.60	PASS
Band2	10	19150	1	#0	QAM16	20.36	PASS
Band2	10	19150	1	#Mid	QAM16	20.65	PASS
Band2	10	19150	1	#Max	QAM16	20.21	PASS
Band2	10	19150	25	#0	QAM16	19.53	PASS
Band2	10	19150	25	#Max	QAM16	19.57	PASS
Band2	10	19150	50	#0	QAM16	19.64	PASS
Band2	15	18675	1	#0	QPSK	21.14	PASS
Band2	15	18675	1	#Mid	QPSK	20.95	PASS
Band2	15	18675	1	#Max	QPSK	21.11	PASS
Band2	15	18675	36	#0	QPSK	20.18	PASS
Band2	15	18675	36	#Max	QPSK	20.01	PASS
Band2	15	18675	75	#0	QPSK	20.18	PASS
Band2	15	18675	1	#0	QAM16	20.10	PASS
Band2	15	18675	1	#Mid	QAM16	19.93	PASS
Band2	15	18675	1	#Max	QAM16	19.99	PASS
Band2	15	18675	36	#0	QAM16	19.21	PASS
Band2	15	18675	36	#Max	QAM16	18.99	PASS
Band2	15	18675	75	#0	QAM16	19.18	PASS
Band2	15	18900	1	#0	QPSK	21.58	PASS
Band2	15	18900	1	#Mid	QPSK	21.73	PASS
Band2	15	18900	1	#Max	QPSK	21.14	PASS
Band2	15	18900	36	#0	QPSK	20.74	PASS
Band2	15	18900	36	#Max	QPSK	20.50	PASS
Band2	15	18900	75	#0	QPSK	20.64	PASS
Band2	15	18900	1	#0	QAM16	20.89	PASS
Band2	15	18900	1	#Mid	QAM16	21.07	PASS
Band2	15	18900	1	#Max	QAM16	20.78	PASS
Band2	15	18900	36	#0	QAM16	19.63	PASS
Band2	15	18900	36	#Max	QAM16	19.47	PASS
Band2	15	18900	75	#0	QAM16	19.62	PASS
Band2	15	19125	1	#0	QPSK	21.38	PASS

Band2	15	19125	1	#Mid	QPSK	21.66	PASS
Band2	15	19125	1	#Max	QPSK	21.52	PASS
Band2	15	19125	36	#0	QPSK	20.48	PASS
Band2	15	19125	36	#Max	QPSK	20.71	PASS
Band2	15	19125	75	#0	QPSK	20.62	PASS
Band2	15	19125	1	#0	QAM16	20.24	PASS
Band2	15	19125	1	#Mid	QAM16	20.43	PASS
Band2	15	19125	1	#Max	QAM16	19.74	PASS
Band2	15	19125	36	#0	QAM16	19.42	PASS
Band2	15	19125	36	#Max	QAM16	19.56	PASS
Band2	15	19125	75	#0	QAM16	19.59	PASS
Band2	20	18700	1	#0	QPSK	21.30	PASS
Band2	20	18700	1	#Mid	QPSK	21.08	PASS
Band2	20	18700	1	#Max	QPSK	21.42	PASS
Band2	20	18700	50	#0	QPSK	20.18	PASS
Band2	20	18700	50	#Max	QPSK	20.28	PASS
Band2	20	18700	100	#0	QPSK	20.26	PASS
Band2	20	18700	1	#0	QAM16	20.45	PASS
Band2	20	18700	1	#Mid	QAM16	20.52	PASS
Band2	20	18700	1	#Max	QAM16	20.61	PASS
Band2	20	18700	50	#0	QAM16	19.09	PASS
Band2	20	18700	50	#Max	QAM16	19.14	PASS
Band2	20	18700	100	#0	QAM16	19.19	PASS
Band2	20	18900	1	#0	QPSK	21.57	PASS
Band2	20	18900	1	#Mid	QPSK	22.30	PASS
Band2	20	18900	1	#Max	QPSK	21.69	PASS
Band2	20	18900	50	#0	QPSK	20.71	PASS
Band2	20	18900	50	#Max	QPSK	20.43	PASS
Band2	20	18900	100	#0	QPSK	20.56	PASS
Band2	20	18900	1	#0	QAM16	20.09	PASS
Band2	20	18900	1	#Mid	QAM16	20.46	PASS
Band2	20	18900	1	#Max	QAM16	19.98	PASS
Band2	20	18900	50	#0	QAM16	19.55	PASS
Band2	20	18900	50	#Max	QAM16	19.45	PASS
Band2	20	18900	100	#0	QAM16	19.64	PASS
Band2	20	19100	1	#0	QPSK	21.77	PASS
Band2	20	19100	1	#Mid	QPSK	21.78	PASS
Band2	20	19100	1	#Max	QPSK	21.51	PASS
Band2	20	19100	50	#0	QPSK	20.36	PASS
Band2	20	19100	50	#Max	QPSK	20.60	PASS
Band2	20	19100	100	#0	QPSK	20.40	PASS
Band2	20	19100	1	#0	QAM16	20.12	PASS
Band2	20	19100	1	#Mid	QAM16	20.70	PASS

Band2	20	19100	1	#Max	QAM16	20.04	PASS
Band2	20	19100	50	#0	QAM16	19.36	PASS
Band2	20	19100	50	#Max	QAM16	19.60	PASS
Band2	20	19100	100	#0	QAM16	19.45	PASS
Band4	1.4	19957	1	#0	QPSK	22.76	PASS
Band4	1.4	19957	1	#Mid	QPSK	22.79	PASS
Band4	1.4	19957	1	#Max	QPSK	22.57	PASS
Band4	1.4	19957	3	#0	QPSK	22.59	PASS
Band4	1.4	19957	3	#Max	QPSK	22.50	PASS
Band4	1.4	19957	6	#0	QPSK	21.82	PASS
Band4	1.4	19957	1	#0	QAM16	22.43	PASS
Band4	1.4	19957	1	#Mid	QAM16	22.10	PASS
Band4	1.4	19957	1	#Max	QAM16	22.06	PASS
Band4	1.4	19957	3	#0	QAM16	21.81	PASS
Band4	1.4	19957	3	#Max	QAM16	21.76	PASS
Band4	1.4	19957	6	#0	QAM16	20.69	PASS
Band4	1.4	20175	1	#0	QPSK	22.62	PASS
Band4	1.4	20175	1	#Mid	QPSK	22.63	PASS
Band4	1.4	20175	1	#Max	QPSK	22.71	PASS
Band4	1.4	20175	3	#0	QPSK	22.67	PASS
Band4	1.4	20175	3	#Max	QPSK	22.60	PASS
Band4	1.4	20175	6	#0	QPSK	21.61	PASS
Band4	1.4	20175	1	#0	QAM16	21.47	PASS
Band4	1.4	20175	1	#Mid	QAM16	21.58	PASS
Band4	1.4	20175	1	#Max	QAM16	21.52	PASS
Band4	1.4	20175	3	#0	QAM16	21.79	PASS
Band4	1.4	20175	3	#Max	QAM16	21.81	PASS
Band4	1.4	20175	6	#0	QAM16	20.83	PASS
Band4	1.4	20393	1	#0	QPSK	22.83	PASS
Band4	1.4	20393	1	#Mid	QPSK	23.00	PASS
Band4	1.4	20393	1	#Max	QPSK	22.91	PASS
Band4	1.4	20393	3	#0	QPSK	22.67	PASS
Band4	1.4	20393	3	#Max	QPSK	22.61	PASS
Band4	1.4	20393	6	#0	QPSK	21.80	PASS
Band4	1.4	20393	1	#0	QAM16	21.73	PASS
Band4	1.4	20393	1	#Mid	QAM16	22.08	PASS
Band4	1.4	20393	1	#Max	QAM16	22.00	PASS
Band4	1.4	20393	3	#0	QAM16	21.73	PASS
Band4	1.4	20393	3	#Max	QAM16	21.75	PASS
Band4	1.4	20393	6	#0	QAM16	20.81	PASS
Band4	3	19965	1	#0	QPSK	22.65	PASS
Band4	3	19965	1	#Mid	QPSK	22.70	PASS
Band4	3	19965	1	#Max	QPSK	22.54	PASS

Band4	3	19965	8	#0	QPSK	21.74	PASS
Band4	3	19965	8	#Max	QPSK	21.80	PASS
Band4	3	19965	15	#0	QPSK	21.81	PASS
Band4	3	19965	1	#0	QAM16	21.78	PASS
Band4	3	19965	1	#Mid	QAM16	21.83	PASS
Band4	3	19965	1	#Max	QAM16	21.79	PASS
Band4	3	19965	8	#0	QAM16	20.65	PASS
Band4	3	19965	8	#Max	QAM16	20.61	PASS
Band4	3	19965	15	#0	QAM16	20.56	PASS
Band4	3	20175	1	#0	QPSK	22.51	PASS
Band4	3	20175	1	#Mid	QPSK	22.54	PASS
Band4	3	20175	1	#Max	QPSK	22.46	PASS
Band4	3	20175	8	#0	QPSK	21.71	PASS
Band4	3	20175	8	#Max	QPSK	21.66	PASS
Band4	3	20175	15	#0	QPSK	21.59	PASS
Band4	3	20175	1	#0	QAM16	21.85	PASS
Band4	3	20175	1	#Mid	QAM16	21.88	PASS
Band4	3	20175	1	#Max	QAM16	21.79	PASS
Band4	3	20175	8	#0	QAM16	20.97	PASS
Band4	3	20175	8	#Max	QAM16	20.91	PASS
Band4	3	20175	15	#0	QAM16	20.87	PASS
Band4	3	20385	1	#0	QPSK	22.64	PASS
Band4	3	20385	1	#Mid	QPSK	22.67	PASS
Band4	3	20385	1	#Max	QPSK	22.77	PASS
Band4	3	20385	8	#0	QPSK	21.69	PASS
Band4	3	20385	8	#Max	QPSK	21.60	PASS
Band4	3	20385	15	#0	QPSK	21.71	PASS
Band4	3	20385	1	#0	QAM16	21.44	PASS
Band4	3	20385	1	#Mid	QAM16	21.45	PASS
Band4	3	20385	1	#Max	QAM16	21.68	PASS
Band4	3	20385	8	#0	QAM16	20.85	PASS
Band4	3	20385	8	#Max	QAM16	20.78	PASS
Band4	3	20385	15	#0	QAM16	20.66	PASS
Band4	5	19975	1	#0	QPSK	22.79	PASS
Band4	5	19975	1	#Mid	QPSK	22.64	PASS
Band4	5	19975	1	#Max	QPSK	22.53	PASS
Band4	5	19975	12	#0	QPSK	21.87	PASS
Band4	5	19975	12	#Max	QPSK	21.80	PASS
Band4	5	19975	25	#0	QPSK	21.78	PASS
Band4	5	19975	1	#0	QAM16	21.73	PASS
Band4	5	19975	1	#Mid	QAM16	21.62	PASS
Band4	5	19975	1	#Max	QAM16	21.42	PASS
Band4	5	19975	12	#0	QAM16	20.80	PASS

Band4	5	19975	12	#Max	QAM16	20.74	PASS
Band4	5	19975	25	#0	QAM16	20.86	PASS
Band4	5	20175	1	#0	QPSK	22.58	PASS
Band4	5	20175	1	#Mid	QPSK	22.48	PASS
Band4	5	20175	1	#Max	QPSK	22.52	PASS
Band4	5	20175	12	#0	QPSK	21.74	PASS
Band4	5	20175	12	#Max	QPSK	21.71	PASS
Band4	5	20175	25	#0	QPSK	21.67	PASS
Band4	5	20175	1	#0	QAM16	21.63	PASS
Band4	5	20175	1	#Mid	QAM16	21.59	PASS
Band4	5	20175	1	#Max	QAM16	21.90	PASS
Band4	5	20175	12	#0	QAM16	20.48	PASS
Band4	5	20175	12	#Max	QAM16	20.42	PASS
Band4	5	20175	25	#0	QAM16	20.58	PASS
Band4	5	20375	1	#0	QPSK	22.51	PASS
Band4	5	20375	1	#Mid	QPSK	22.68	PASS
Band4	5	20375	1	#Max	QPSK	22.52	PASS
Band4	5	20375	12	#0	QPSK	21.79	PASS
Band4	5	20375	12	#Max	QPSK	21.75	PASS
Band4	5	20375	25	#0	QPSK	21.74	PASS
Band4	5	20375	1	#0	QAM16	21.72	PASS
Band4	5	20375	1	#Mid	QAM16	21.85	PASS
Band4	5	20375	1	#Max	QAM16	21.74	PASS
Band4	5	20375	12	#0	QAM16	20.80	PASS
Band4	5	20375	12	#Max	QAM16	20.75	PASS
Band4	5	20375	25	#0	QAM16	20.79	PASS
Band4	10	20000	1	#0	QPSK	22.64	PASS
Band4	10	20000	1	#Mid	QPSK	22.45	PASS
Band4	10	20000	1	#Max	QPSK	22.49	PASS
Band4	10	20000	25	#0	QPSK	21.73	PASS
Band4	10	20000	25	#Max	QPSK	21.65	PASS
Band4	10	20000	50	#0	QPSK	21.61	PASS
Band4	10	20000	1	#0	QAM16	21.85	PASS
Band4	10	20000	1	#Mid	QAM16	21.78	PASS
Band4	10	20000	1	#Max	QAM16	21.57	PASS
Band4	10	20000	25	#0	QAM16	20.82	PASS
Band4	10	20000	25	#Max	QAM16	20.75	PASS
Band4	10	20000	50	#0	QAM16	20.65	PASS
Band4	10	20175	1	#0	QPSK	22.50	PASS
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Band4	10	20175	1	#Max	QPSK	22.43	PASS
Band4	10	20175	25	#0	QPSK	21.67	PASS
Band4	10	20175	25	#Max	QPSK	21.53	PASS

Band4	10	20175	50	#0	QPSK	21.73	PASS
Band4	10	20175	1	#0	QAM16	21.36	PASS
Band4	10	20175	1	#Mid	QAM16	21.56	PASS
Band4	10	20175	1	#Max	QAM16	21.53	PASS
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Band4	10	20175	25	#Max	QAM16	20.64	PASS
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Band4	10	20350	1	#0	QPSK	22.41	PASS
Band4	10	20350	1	#Mid	QPSK	22.76	PASS
Band4	10	20350	1	#Max	QPSK	22.88	PASS
Band4	10	20350	25	#0	QPSK	21.73	PASS
Band4	10	20350	25	#Max	QPSK	21.78	PASS
Band4	10	20350	50	#0	QPSK	21.70	PASS
Band4	10	20350	1	#0	QAM16	21.39	PASS
Band4	10	20350	1	#Mid	QAM16	21.48	PASS
Band4	10	20350	1	#Max	QAM16	21.70	PASS
Band4	10	20350	25	#0	QAM16	20.71	PASS
Band4	10	20350	25	#Max	QAM16	20.71	PASS
Band4	10	20350	50	#0	QAM16	20.70	PASS
Band4	15	20025	1	#0	QPSK	22.62	PASS
Band4	15	20025	1	#Mid	QPSK	22.63	PASS
Band4	15	20025	1	#Max	QPSK	22.60	PASS
Band4	15	20025	36	#0	QPSK	21.73	PASS
Band4	15	20025	36	#Max	QPSK	21.75	PASS
Band4	15	20025	75	#0	QPSK	21.69	PASS
Band4	15	20025	1	#0	QAM16	21.80	PASS
Band4	15	20025	1	#Mid	QAM16	21.65	PASS
Band4	15	20025	1	#Max	QAM16	21.80	PASS
Band4	15	20025	36	#0	QAM16	20.76	PASS
Band4	15	20025	36	#Max	QAM16	20.53	PASS
Band4	15	20025	75	#0	QAM16	20.57	PASS
Band4	15	20175	1	#0	QPSK	22.41	PASS
Band4	15	20175	1	#Mid	QPSK	22.65	PASS
Band4	15	20175	1	#Max	QPSK	22.66	PASS
Band4	15	20175	36	#0	QPSK	21.70	PASS
Band4	15	20175	36	#Max	QPSK	21.55	PASS
Band4	15	20175	75	#0	QPSK	21.67	PASS
Band4	15	20175	1	#0	QAM16	22.21	PASS
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Band4	15	20175	1	#Max	QAM16	21.82	PASS
Band4	15	20175	36	#0	QAM16	20.55	PASS
Band4	15	20175	36	#Max	QAM16	20.47	PASS
Band4	15	20175	75	#0	QAM16	20.62	PASS

Band4	15	20325	1	#0	QPSK	22.47	PASS
Band4	15	20325	1	#Mid	QPSK	22.44	PASS
Band4	15	20325	1	#Max	QPSK	22.41	PASS
Band4	15	20325	36	#0	QPSK	21.56	PASS
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Band4	15	20325	36	#Max	QAM16	20.39	PASS
Band4	15	20325	75	#0	QAM16	20.42	PASS
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Band4	20	20050	1	#Max	QPSK	22.40	PASS
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Band4	20	20050	50	#Max	QPSK	21.74	PASS
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Band4	20	20050	1	#Max	QAM16	21.51	PASS
Band4	20	20050	50	#0	QAM16	20.64	PASS
Band4	20	20050	50	#Max	QAM16	20.72	PASS
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Band4	20	20175	1	#0	QPSK	22.96	PASS
Band4	20	20175	1	#Mid	QPSK	23.27	PASS
Band4	20	20175	1	#Max	QPSK	22.83	PASS
Band4	20	20175	50	#0	QPSK	21.75	PASS
Band4	20	20175	50	#Max	QPSK	21.56	PASS
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Band4	20	20175	1	#Max	QAM16	21.30	PASS
Band4	20	20175	50	#0	QAM16	20.71	PASS
Band4	20	20175	50	#Max	QAM16	20.40	PASS
Band4	20	20175	100	#0	QAM16	20.64	PASS
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Band4	20	20300	1	#Max	QPSK	22.53	PASS
Band4	20	20300	50	#0	QPSK	21.61	PASS
Band4	20	20300	50	#Max	QPSK	21.61	PASS
Band4	20	20300	100	#0	QPSK	21.55	PASS
Band4	20	20300	1	#0	QAM16	21.51	PASS

Band4	20	20300	1	#Mid	QAM16	21.48	PASS
Band4	20	20300	1	#Max	QAM16	21.29	PASS
Band4	20	20300	50	#0	QAM16	20.37	PASS
Band4	20	20300	50	#Max	QAM16	20.27	PASS
Band4	20	20300	100	#0	QAM16	20.38	PASS
Band41	5	39675	1	#0	QPSK	22.18	PASS
Band41	5	39675	1	#Mid	QPSK	22.23	PASS
Band41	5	39675	1	#Max	QPSK	22.14	PASS
Band41	5	39675	12	#0	QPSK	21.11	PASS
Band41	5	39675	12	#Max	QPSK	21.16	PASS
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Band41	5	39675	1	#Max	QAM16	21.13	PASS
Band41	5	39675	12	#0	QAM16	20.10	PASS
Band41	5	39675	12	#Max	QAM16	20.24	PASS
Band41	5	39675	25	#0	QAM16	20.23	PASS
Band41	5	40620	1	#0	QPSK	21.43	PASS
Band41	5	40620	1	#Mid	QPSK	21.47	PASS
Band41	5	40620	1	#Max	QPSK	21.13	PASS
Band41	5	40620	12	#0	QPSK	20.52	PASS
Band41	5	40620	12	#Max	QPSK	20.43	PASS
Band41	5	40620	25	#0	QPSK	20.55	PASS
Band41	5	40620	1	#0	QAM16	20.88	PASS
Band41	5	40620	1	#Mid	QAM16	20.76	PASS
Band41	5	40620	1	#Max	QAM16	20.61	PASS
Band41	5	40620	12	#0	QAM16	19.53	PASS
Band41	5	40620	12	#Max	QAM16	19.45	PASS
Band41	5	40620	25	#0	QAM16	19.47	PASS
Band41	5	41565	1	#0	QPSK	21.33	PASS
Band41	5	41565	1	#Mid	QPSK	21.41	PASS
Band41	5	41565	1	#Max	QPSK	21.25	PASS
Band41	5	41565	12	#0	QPSK	20.38	PASS
Band41	5	41565	12	#Max	QPSK	20.38	PASS
Band41	5	41565	25	#0	QPSK	20.35	PASS
Band41	5	41565	1	#0	QAM16	20.38	PASS
Band41	5	41565	1	#Mid	QAM16	20.27	PASS
Band41	5	41565	1	#Max	QAM16	20.21	PASS
Band41	5	41565	12	#0	QAM16	19.36	PASS
Band41	5	41565	12	#Max	QAM16	19.28	PASS
Band41	5	41565	25	#0	QAM16	19.40	PASS
Band41	10	39700	1	#0	QPSK	22.04	PASS
Band41	10	39700	1	#Mid	QPSK	22.25	PASS

Band41	10	39700	1	#Max	QPSK	22.26	PASS
Band41	10	39700	25	#0	QPSK	21.27	PASS
Band41	10	39700	25	#Max	QPSK	21.37	PASS
Band41	10	39700	50	#0	QPSK	21.27	PASS
Band41	10	39700	1	#0	QAM16	21.30	PASS
Band41	10	39700	1	#Mid	QAM16	21.60	PASS
Band41	10	39700	1	#Max	QAM16	21.26	PASS
Band41	10	39700	25	#0	QAM16	20.35	PASS
Band41	10	39700	25	#Max	QAM16	20.41	PASS
Band41	10	39700	50	#0	QAM16	20.25	PASS
Band41	10	40620	1	#0	QPSK	21.60	PASS
Band41	10	40620	1	#Mid	QPSK	21.73	PASS
Band41	10	40620	1	#Max	QPSK	21.34	PASS
Band41	10	40620	25	#0	QPSK	20.48	PASS
Band41	10	40620	25	#Max	QPSK	20.51	PASS
Band41	10	40620	50	#0	QPSK	20.49	PASS
Band41	10	40620	1	#0	QAM16	20.67	PASS
Band41	10	40620	1	#Mid	QAM16	21.17	PASS
Band41	10	40620	1	#Max	QAM16	20.45	PASS
Band41	10	40620	25	#0	QAM16	19.66	PASS
Band41	10	40620	25	#Max	QAM16	19.58	PASS
Band41	10	40620	50	#0	QAM16	19.52	PASS
Band41	10	41540	1	#0	QPSK	21.34	PASS
Band41	10	41540	1	#Mid	QPSK	21.36	PASS
Band41	10	41540	1	#Max	QPSK	21.29	PASS
Band41	10	41540	25	#0	QPSK	20.41	PASS
Band41	10	41540	25	#Max	QPSK	20.31	PASS
Band41	10	41540	50	#0	QPSK	20.40	PASS
Band41	10	41540	1	#0	QAM16	20.26	PASS
Band41	10	41540	1	#Mid	QAM16	20.62	PASS
Band41	10	41540	1	#Max	QAM16	19.93	PASS
Band41	10	41540	25	#0	QAM16	19.66	PASS
Band41	10	41540	25	#Max	QAM16	19.56	PASS
Band41	10	41540	50	#0	QAM16	19.52	PASS
Band41	15	39725	1	#0	QPSK	21.92	PASS
Band41	15	39725	1	#Mid	QPSK	22.29	PASS
Band41	15	39725	1	#Max	QPSK	22.20	PASS
Band41	15	39725	36	#0	QPSK	20.99	PASS
Band41	15	39725	36	#Max	QPSK	21.09	PASS
Band41	15	39725	75	#0	QPSK	21.00	PASS
Band41	15	39725	1	#0	QAM16	21.07	PASS
Band41	15	39725	1	#Mid	QAM16	21.28	PASS
Band41	15	39725	1	#Max	QAM16	21.14	PASS

Band41	15	39725	36	#0	QAM16	20.14	PASS
Band41	15	39725	36	#Max	QAM16	20.30	PASS
Band41	15	39725	75	#0	QAM16	20.20	PASS
Band41	15	40620	1	#0	QPSK	21.60	PASS
Band41	15	40620	1	#Mid	QPSK	21.52	PASS
Band41	15	40620	1	#Max	QPSK	21.43	PASS
Band41	15	40620	36	#0	QPSK	20.46	PASS
Band41	15	40620	36	#Max	QPSK	20.40	PASS
Band41	15	40620	75	#0	QPSK	20.42	PASS
Band41	15	40620	1	#0	QAM16	20.75	PASS
Band41	15	40620	1	#Mid	QAM16	21.02	PASS
Band41	15	40620	1	#Max	QAM16	20.65	PASS
Band41	15	40620	36	#0	QAM16	19.64	PASS
Band41	15	40620	36	#Max	QAM16	19.49	PASS
Band41	15	40620	75	#0	QAM16	19.49	PASS
Band41	15	41515	1	#0	QPSK	21.39	PASS
Band41	15	41515	1	#Mid	QPSK	21.32	PASS
Band41	15	41515	1	#Max	QPSK	21.30	PASS
Band41	15	41515	36	#0	QPSK	20.34	PASS
Band41	15	41515	36	#Max	QPSK	20.30	PASS
Band41	15	41515	75	#0	QPSK	20.38	PASS
Band41	15	41515	1	#0	QAM16	20.08	PASS
Band41	15	41515	1	#Mid	QAM16	20.11	PASS
Band41	15	41515	1	#Max	QAM16	20.02	PASS
Band41	15	41515	36	#0	QAM16	19.48	PASS
Band41	15	41515	36	#Max	QAM16	19.45	PASS
Band41	15	41515	75	#0	QAM16	19.54	PASS
Band41	20	39750	1	#0	QPSK	21.57	PASS
Band41	20	39750	1	#Mid	QPSK	22.32	PASS
Band41	20	39750	1	#Max	QPSK	22.00	PASS
Band41	20	39750	50	#0	QPSK	21.08	PASS
Band41	20	39750	50	#Max	QPSK	21.23	PASS
Band41	20	39750	100	#0	QPSK	21.15	PASS
Band41	20	39750	1	#0	QAM16	21.35	PASS
Band41	20	39750	1	#Mid	QAM16	21.77	PASS
Band41	20	39750	1	#Max	QAM16	21.59	PASS
Band41	20	39750	50	#0	QAM16	20.32	PASS
Band41	20	39750	50	#Max	QAM16	20.47	PASS
Band41	20	39750	100	#0	QAM16	20.30	PASS
Band41	20	40620	1	#0	QPSK	21.76	PASS
Band41	20	40620	1	#Mid	QPSK	21.96	PASS
Band41	20	40620	1	#Max	QPSK	21.49	PASS
Band41	20	40620	50	#0	QPSK	20.54	PASS

Band41	20	40620	50	#Max	QPSK	20.43	PASS
Band41	20	40620	100	#0	QPSK	20.47	PASS
Band41	20	40620	1	#0	QAM16	20.13	PASS
Band41	20	40620	1	#Mid	QAM16	20.29	PASS
Band41	20	40620	1	#Max	QAM16	20.00	PASS
Band41	20	40620	50	#0	QAM16	19.48	PASS
Band41	20	40620	50	#Max	QAM16	19.47	PASS
Band41	20	40620	100	#0	QAM16	19.50	PASS
Band41	20	41490	1	#0	QPSK	21.35	PASS
Band41	20	41490	1	#Mid	QPSK	21.61	PASS
Band41	20	41490	1	#Max	QPSK	21.41	PASS
Band41	20	41490	50	#0	QPSK	20.36	PASS
Band41	20	41490	50	#Max	QPSK	20.41	PASS
Band41	20	41490	100	#0	QPSK	20.39	PASS
Band41	20	41490	1	#0	QAM16	19.82	PASS
Band41	20	41490	1	#Mid	QAM16	20.63	PASS
Band41	20	41490	1	#Max	QAM16	20.06	PASS
Band41	20	41490	50	#0	QAM16	19.56	PASS
Band41	20	41490	50	#Max	QAM16	19.48	PASS
Band41	20	41490	100	#0	QAM16	19.54	PASS
Band5	1.4	20407	1	#0	QPSK	23.69	PASS
Band5	1.4	20407	1	#Mid	QPSK	23.68	PASS
Band5	1.4	20407	1	#Max	QPSK	23.72	PASS
Band5	1.4	20407	3	#0	QPSK	23.82	PASS
Band5	1.4	20407	3	#Max	QPSK	23.90	PASS
Band5	1.4	20407	6	#0	QPSK	22.79	PASS
Band5	1.4	20407	1	#0	QAM16	23.27	PASS
Band5	1.4	20407	1	#Mid	QAM16	23.40	PASS
Band5	1.4	20407	1	#Max	QAM16	23.38	PASS
Band5	1.4	20407	3	#0	QAM16	23.10	PASS
Band5	1.4	20407	3	#Max	QAM16	23.15	PASS
Band5	1.4	20407	6	#0	QAM16	21.90	PASS
Band5	1.4	20525	1	#0	QPSK	23.86	PASS
Band5	1.4	20525	1	#Mid	QPSK	24.14	PASS
Band5	1.4	20525	1	#Max	QPSK	24.10	PASS
Band5	1.4	20525	3	#0	QPSK	23.89	PASS
Band5	1.4	20525	3	#Max	QPSK	23.78	PASS
Band5	1.4	20525	6	#0	QPSK	22.88	PASS
Band5	1.4	20525	1	#0	QAM16	22.65	PASS
Band5	1.4	20525	1	#Mid	QAM16	22.62	PASS
Band5	1.4	20525	1	#Max	QAM16	22.53	PASS
Band5	1.4	20525	3	#0	QAM16	22.90	PASS
Band5	1.4	20525	3	#Max	QAM16	22.51	PASS

Band5	1.4	20525	6	#0	QAM16	21.51	PASS
Band5	1.4	20643	1	#0	QPSK	23.80	PASS
Band5	1.4	20643	1	#Mid	QPSK	23.74	PASS
Band5	1.4	20643	1	#Max	QPSK	23.59	PASS
Band5	1.4	20643	3	#0	QPSK	23.57	PASS
Band5	1.4	20643	3	#Max	QPSK	23.61	PASS
Band5	1.4	20643	6	#0	QPSK	22.53	PASS
Band5	1.4	20643	1	#0	QAM16	22.77	PASS
Band5	1.4	20643	1	#Mid	QAM16	22.78	PASS
Band5	1.4	20643	1	#Max	QAM16	22.69	PASS
Band5	1.4	20643	3	#0	QAM16	23.05	PASS
Band5	1.4	20643	3	#Max	QAM16	23.01	PASS
Band5	1.4	20643	6	#0	QAM16	21.70	PASS
Band5	3	20415	1	#0	QPSK	23.68	PASS
Band5	3	20415	1	#Mid	QPSK	23.73	PASS
Band5	3	20415	1	#Max	QPSK	23.62	PASS
Band5	3	20415	8	#0	QPSK	22.71	PASS
Band5	3	20415	8	#Max	QPSK	22.60	PASS
Band5	3	20415	15	#0	QPSK	22.65	PASS
Band5	3	20415	1	#0	QAM16	22.65	PASS
Band5	3	20415	1	#Mid	QAM16	22.63	PASS
Band5	3	20415	1	#Max	QAM16	22.55	PASS
Band5	3	20415	8	#0	QAM16	22.00	PASS
Band5	3	20415	8	#Max	QAM16	22.06	PASS
Band5	3	20415	15	#0	QAM16	21.66	PASS
Band5	3	20525	1	#0	QPSK	23.58	PASS
Band5	3	20525	1	#Mid	QPSK	23.56	PASS
Band5	3	20525	1	#Max	QPSK	23.43	PASS
Band5	3	20525	8	#0	QPSK	22.70	PASS
Band5	3	20525	8	#Max	QPSK	22.65	PASS
Band5	3	20525	15	#0	QPSK	22.70	PASS
Band5	3	20525	1	#0	QAM16	22.99	PASS
Band5	3	20525	1	#Mid	QAM16	23.10	PASS
Band5	3	20525	1	#Max	QAM16	23.11	PASS
Band5	3	20525	8	#0	QAM16	21.93	PASS
Band5	3	20525	8	#Max	QAM16	21.89	PASS
Band5	3	20525	15	#0	QAM16	21.65	PASS
Band5	3	20635	1	#0	QPSK	23.47	PASS
Band5	3	20635	1	#Mid	QPSK	23.53	PASS
Band5	3	20635	1	#Max	QPSK	23.60	PASS
Band5	3	20635	8	#0	QPSK	22.62	PASS
Band5	3	20635	8	#Max	QPSK	22.56	PASS
Band5	3	20635	15	#0	QPSK	22.56	PASS

Band5	3	20635	1	#0	QAM16	22.38	PASS
Band5	3	20635	1	#Mid	QAM16	22.41	PASS
Band5	3	20635	1	#Max	QAM16	22.31	PASS
Band5	3	20635	8	#0	QAM16	21.57	PASS
Band5	3	20635	8	#Max	QAM16	21.71	PASS
Band5	3	20635	15	#0	QAM16	21.52	PASS
Band5	5	20425	1	#0	QPSK	23.47	PASS
Band5	5	20425	1	#Mid	QPSK	23.58	PASS
Band5	5	20425	1	#Max	QPSK	23.45	PASS
Band5	5	20425	12	#0	QPSK	22.60	PASS
Band5	5	20425	12	#Max	QPSK	22.60	PASS
Band5	5	20425	25	#0	QPSK	22.54	PASS
Band5	5	20425	1	#0	QAM16	22.63	PASS
Band5	5	20425	1	#Mid	QAM16	22.58	PASS
Band5	5	20425	1	#Max	QAM16	22.63	PASS
Band5	5	20425	12	#0	QAM16	21.52	PASS
Band5	5	20425	12	#Max	QAM16	21.54	PASS
Band5	5	20425	25	#0	QAM16	21.50	PASS
Band5	5	20525	1	#0	QPSK	23.44	PASS
Band5	5	20525	1	#Mid	QPSK	23.58	PASS
Band5	5	20525	1	#Max	QPSK	23.20	PASS
Band5	5	20525	12	#0	QPSK	22.67	PASS
Band5	5	20525	12	#Max	QPSK	22.53	PASS
Band5	5	20525	25	#0	QPSK	22.63	PASS
Band5	5	20525	1	#0	QAM16	22.76	PASS
Band5	5	20525	1	#Mid	QAM16	22.81	PASS
Band5	5	20525	1	#Max	QAM16	22.63	PASS
Band5	5	20525	12	#0	QAM16	21.29	PASS
Band5	5	20525	12	#Max	QAM16	21.26	PASS
Band5	5	20525	25	#0	QAM16	21.46	PASS
Band5	5	20625	1	#0	QPSK	23.37	PASS
Band5	5	20625	1	#Mid	QPSK	23.47	PASS
Band5	5	20625	1	#Max	QPSK	23.36	PASS
Band5	5	20625	12	#0	QPSK	22.49	PASS
Band5	5	20625	12	#Max	QPSK	22.46	PASS
Band5	5	20625	25	#0	QPSK	22.47	PASS
Band5	5	20625	1	#0	QAM16	22.64	PASS
Band5	5	20625	1	#Mid	QAM16	22.75	PASS
Band5	5	20625	1	#Max	QAM16	22.75	PASS
Band5	5	20625	12	#0	QAM16	21.58	PASS
Band5	5	20625	12	#Max	QAM16	21.57	PASS
Band5	5	20625	25	#0	QAM16	21.49	PASS
Band5	10	20450	1	#0	QPSK	23.62	PASS

Band5	10	20450	1	#Mid	QPSK	23.79	PASS
Band5	10	20450	1	#Max	QPSK	23.32	PASS
Band5	10	20450	25	#0	QPSK	22.49	PASS
Band5	10	20450	25	#Max	QPSK	22.59	PASS
Band5	10	20450	50	#0	QPSK	22.47	PASS
Band5	10	20450	1	#0	QAM16	22.62	PASS
Band5	10	20450	1	#Mid	QAM16	22.72	PASS
Band5	10	20450	1	#Max	QAM16	22.37	PASS
Band5	10	20450	25	#0	QAM16	21.49	PASS
Band5	10	20450	25	#Max	QAM16	21.62	PASS
Band5	10	20450	50	#0	QAM16	21.43	PASS
Band5	10	20525	1	#0	QPSK	23.52	PASS
Band5	10	20525	1	#Mid	QPSK	23.79	PASS
Band5	10	20525	1	#Max	QPSK	23.45	PASS
Band5	10	20525	25	#0	QPSK	22.56	PASS
Band5	10	20525	25	#Max	QPSK	22.37	PASS
Band5	10	20525	50	#0	QPSK	22.46	PASS
Band5	10	20525	1	#0	QAM16	23.20	PASS
Band5	10	20525	1	#Mid	QAM16	22.91	PASS
Band5	10	20525	1	#Max	QAM16	23.11	PASS
Band5	10	20525	25	#0	QAM16	21.54	PASS
Band5	10	20525	25	#Max	QAM16	21.52	PASS
Band5	10	20525	50	#0	QAM16	21.40	PASS
Band5	10	20600	1	#0	QPSK	23.37	PASS
Band5	10	20600	1	#Mid	QPSK	23.55	PASS
Band5	10	20600	1	#Max	QPSK	23.39	PASS
Band5	10	20600	25	#0	QPSK	22.60	PASS
Band5	10	20600	25	#Max	QPSK	22.58	PASS
Band5	10	20600	50	#0	QPSK	22.48	PASS
Band5	10	20600	1	#0	QAM16	22.25	PASS
Band5	10	20600	1	#Mid	QAM16	22.44	PASS
Band5	10	20600	1	#Max	QAM16	21.81	PASS
Band5	10	20600	25	#0	QAM16	21.45	PASS
Band5	10	20600	25	#Max	QAM16	21.37	PASS
Band5	10	20600	50	#0	QAM16	21.46	PASS
Band7	5	20775	1	#0	QPSK	22.22	PASS
Band7	5	20775	1	#Mid	QPSK	22.07	PASS
Band7	5	20775	1	#Max	QPSK	22.10	PASS
Band7	5	20775	12	#0	QPSK	21.24	PASS
Band7	5	20775	12	#Max	QPSK	21.27	PASS
Band7	5	20775	25	#0	QPSK	21.19	PASS
Band7	5	20775	1	#0	QAM16	21.14	PASS
Band7	5	20775	1	#Mid	QAM16	21.21	PASS

Band7	5	20775	1	#Max	QAM16	20.97	PASS
Band7	5	20775	12	#0	QAM16	19.99	PASS
Band7	5	20775	12	#Max	QAM16	20.04	PASS
Band7	5	20775	25	#0	QAM16	20.20	PASS
Band7	5	21100	1	#0	QPSK	21.96	PASS
Band7	5	21100	1	#Mid	QPSK	22.07	PASS
Band7	5	21100	1	#Max	QPSK	21.92	PASS
Band7	5	21100	12	#0	QPSK	21.26	PASS
Band7	5	21100	12	#Max	QPSK	21.31	PASS
Band7	5	21100	25	#0	QPSK	21.27	PASS
Band7	5	21100	1	#0	QAM16	21.24	PASS
Band7	5	21100	1	#Mid	QAM16	21.66	PASS
Band7	5	21100	1	#Max	QAM16	21.30	PASS
Band7	5	21100	12	#0	QAM16	20.21	PASS
Band7	5	21100	12	#Max	QAM16	20.28	PASS
Band7	5	21100	25	#0	QAM16	20.23	PASS
Band7	5	21425	1	#0	QPSK	21.46	PASS
Band7	5	21425	1	#Mid	QPSK	21.30	PASS
Band7	5	21425	1	#Max	QPSK	21.30	PASS
Band7	5	21425	12	#0	QPSK	20.58	PASS
Band7	5	21425	12	#Max	QPSK	20.44	PASS
Band7	5	21425	25	#0	QPSK	20.50	PASS
Band7	5	21425	1	#0	QAM16	20.42	PASS
Band7	5	21425	1	#Mid	QAM16	20.42	PASS
Band7	5	21425	1	#Max	QAM16	20.41	PASS
Band7	5	21425	12	#0	QAM16	19.66	PASS
Band7	5	21425	12	#Max	QAM16	19.52	PASS
Band7	5	21425	25	#0	QAM16	19.54	PASS
Band7	10	20800	1	#0	QPSK	22.05	PASS
Band7	10	20800	1	#Mid	QPSK	21.87	PASS
Band7	10	20800	1	#Max	QPSK	21.91	PASS
Band7	10	20800	25	#0	QPSK	21.11	PASS
Band7	10	20800	25	#Max	QPSK	21.18	PASS
Band7	10	20800	50	#0	QPSK	21.18	PASS
Band7	10	20800	1	#0	QAM16	21.17	PASS
Band7	10	20800	1	#Mid	QAM16	21.37	PASS
Band7	10	20800	1	#Max	QAM16	20.91	PASS
Band7	10	20800	25	#0	QAM16	20.24	PASS
Band7	10	20800	25	#Max	QAM16	20.27	PASS
Band7	10	20800	50	#0	QAM16	20.09	PASS
Band7	10	21100	1	#0	QPSK	22.02	PASS
Band7	10	21100	1	#Mid	QPSK	22.11	PASS
Band7	10	21100	1	#Max	QPSK	22.04	PASS

Band7	10	21100	25	#0	QPSK	21.17	PASS
Band7	10	21100	25	#Max	QPSK	21.21	PASS
Band7	10	21100	50	#0	QPSK	21.19	PASS
Band7	10	21100	1	#0	QAM16	21.80	PASS
Band7	10	21100	1	#Mid	QAM16	21.89	PASS
Band7	10	21100	1	#Max	QAM16	21.80	PASS
Band7	10	21100	25	#0	QAM16	20.30	PASS
Band7	10	21100	25	#Max	QAM16	20.32	PASS
Band7	10	21100	50	#0	QAM16	20.01	PASS
Band7	10	21400	1	#0	QPSK	21.73	PASS
Band7	10	21400	1	#Mid	QPSK	21.46	PASS
Band7	10	21400	1	#Max	QPSK	21.57	PASS
Band7	10	21400	25	#0	QPSK	20.55	PASS
Band7	10	21400	25	#Max	QPSK	20.44	PASS
Band7	10	21400	50	#0	QPSK	20.56	PASS
Band7	10	21400	1	#0	QAM16	20.55	PASS
Band7	10	21400	1	#Mid	QAM16	20.53	PASS
Band7	10	21400	1	#Max	QAM16	20.06	PASS
Band7	10	21400	25	#0	QAM16	19.88	PASS
Band7	10	21400	25	#Max	QAM16	19.78	PASS
Band7	10	21400	50	#0	QAM16	19.56	PASS
Band7	15	20825	1	#0	QPSK	21.82	PASS
Band7	15	20825	1	#Mid	QPSK	21.76	PASS
Band7	15	20825	1	#Max	QPSK	21.84	PASS
Band7	15	20825	36	#0	QPSK	21.05	PASS
Band7	15	20825	36	#Max	QPSK	21.01	PASS
Band7	15	20825	75	#0	QPSK	21.05	PASS
Band7	15	20825	1	#0	QAM16	21.08	PASS
Band7	15	20825	1	#Mid	QAM16	20.89	PASS
Band7	15	20825	1	#Max	QAM16	20.97	PASS
Band7	15	20825	36	#0	QAM16	20.08	PASS
Band7	15	20825	36	#Max	QAM16	20.00	PASS
Band7	15	20825	75	#0	QAM16	20.08	PASS
Band7	15	21100	1	#0	QPSK	22.01	PASS
Band7	15	21100	1	#Mid	QPSK	21.82	PASS
Band7	15	21100	1	#Max	QPSK	21.75	PASS
Band7	15	21100	36	#0	QPSK	21.07	PASS
Band7	15	21100	36	#Max	QPSK	21.11	PASS
Band7	15	21100	75	#0	QPSK	20.97	PASS
Band7	15	21100	1	#0	QAM16	21.89	PASS
Band7	15	21100	1	#Mid	QAM16	21.79	PASS
Band7	15	21100	1	#Max	QAM16	21.90	PASS
Band7	15	21100	36	#0	QAM16	20.07	PASS

Band7	15	21100	36	#Max	QAM16	20.04	PASS
Band7	15	21100	75	#0	QAM16	19.99	PASS
Band7	15	21375	1	#0	QPSK	21.92	PASS
Band7	15	21375	1	#Mid	QPSK	21.74	PASS
Band7	15	21375	1	#Max	QPSK	21.56	PASS
Band7	15	21375	36	#0	QPSK	21.05	PASS
Band7	15	21375	36	#Max	QPSK	20.80	PASS
Band7	15	21375	75	#0	QPSK	20.81	PASS
Band7	15	21375	1	#0	QAM16	21.12	PASS
Band7	15	21375	1	#Mid	QAM16	20.86	PASS
Band7	15	21375	1	#Max	QAM16	20.38	PASS
Band7	15	21375	36	#0	QAM16	19.98	PASS
Band7	15	21375	36	#Max	QAM16	19.79	PASS
Band7	15	21375	75	#0	QAM16	19.89	PASS
Band7	20	20850	1	#0	QPSK	22.03	PASS
Band7	20	20850	1	#Mid	QPSK	22.28	PASS
Band7	20	20850	1	#Max	QPSK	21.69	PASS
Band7	20	20850	50	#0	QPSK	21.24	PASS
Band7	20	20850	50	#Max	QPSK	21.17	PASS
Band7	20	20850	100	#0	QPSK	21.25	PASS
Band7	20	20850	1	#0	QAM16	21.08	PASS
Band7	20	20850	1	#Mid	QAM16	21.83	PASS
Band7	20	20850	1	#Max	QAM16	20.88	PASS
Band7	20	20850	50	#0	QAM16	20.32	PASS
Band7	20	20850	50	#Max	QAM16	20.27	PASS
Band7	20	20850	100	#0	QAM16	20.32	PASS
Band7	20	21100	1	#0	QPSK	22.14	PASS
Band7	20	21100	1	#Mid	QPSK	22.12	PASS
Band7	20	21100	1	#Max	QPSK	22.11	PASS
Band7	20	21100	50	#0	QPSK	21.07	PASS
Band7	20	21100	50	#Max	QPSK	21.21	PASS
Band7	20	21100	100	#0	QPSK	21.17	PASS
Band7	20	21100	1	#0	QAM16	20.79	PASS
Band7	20	21100	1	#Mid	QAM16	20.62	PASS
Band7	20	21100	1	#Max	QAM16	20.24	PASS
Band7	20	21100	50	#0	QAM16	20.04	PASS
Band7	20	21100	50	#Max	QAM16	20.07	PASS
Band7	20	21100	100	#0	QAM16	20.07	PASS
Band7	20	21350	1	#0	QPSK	21.85	PASS
Band7	20	21350	1	#Mid	QPSK	21.57	PASS
Band7	20	21350	1	#Max	QPSK	21.24	PASS
Band7	20	21350	50	#0	QPSK	20.93	PASS
Band7	20	21350	50	#Max	QPSK	20.47	PASS

Band7	20	21350	100	#0	QPSK	20.73	PASS
Band7	20	21350	1	#0	QAM16	20.80	PASS
Band7	20	21350	1	#Mid	QAM16	20.77	PASS
Band7	20	21350	1	#Max	QAM16	20.37	PASS
Band7	20	21350	50	#0	QAM16	19.86	PASS
Band7	20	21350	50	#Max	QAM16	19.54	PASS
Band7	20	21350	100	#0	QAM16	19.73	PASS

Remark:

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

WLAN(2.4G)- Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11b	1Mbps	CH 01	2412	13.56	14.0
		CH 06	2437	14.19	14.5
		CH 11	2462	12.08	12.5
802.11g	54Mbps	CH 01	2412	13.01	13.5
		CH 06	2437	13.68	14.0
		CH 11	2462	11.78	12.0
802.11n (20MHz)	MCS7	CH 01	2412	12.69	13.0
		CH 06	2437	13.66	14.0
		CH 11	2462	12.02	12.5
802.11n (40MHz)	MCS7	CH 03	2422	11.25	11.5
		CH 06	2437	12.35	12.5
		CH 09	2452	12.01	12.5

WLAN(5.2G) - Conducted Power				
Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11a	CH 36	5180	10.63	11.0
	CH 40	5200	10.32	10.5
	CH 48	5240	10.89	11.0
802.11n (HT20)	CH 36	5180	10.23	10.5
	CH 40	5200	10.22	10.5
	CH 48	5240	10.53	11.0
802.11n (HT40)	CH 38	5190	10.67	11.0
	CH46	5230	10.98	11.0
802.11ac (VHT20)	CH 36	5210	9.68	10.0
	CH 40	5210	9.58	10.0
	CH 48	5210	9.86	10.0
802.11ac (VHT40)	CH 40	5210	10.79	11.0
	CH 48	5210	10.88	11.0
802.11ac (VHT80)	CH 42	5210	9.11	9.5

WLAN(5.8G) - Conducted Power				
Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11a	CH 149	5745	11.28	11.5
	CH 157	5785	10.55	11.0
	CH 165	5825	13.86	14.0
802.11n (HT20)	CH 149	5745	8.69	9.0
	CH 157	5785	9.02	9.5
	CH 165	5825	11.46	11.5
802.11n (HT40)	CH 151	5755	8.87	9.0
	CH 159	5795	8.62	9.0
802.11ac (VHT20)	CH 149	5745	7.91	8.0
	CH 157	5785	7.26	7.5
	CH 165	5825	10.59	11.0
802.11ac (VHT40)	CH 151	5755	8.72	9.0
	CH 159	5795	8.65	9.0
802.11ac (VHT80)	CH 155	5775	8.01	8.5

Remark:

1. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.
2. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements ,when the reported SAR of the highest measured maximum output power channel (see 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.
- 3 .For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is ≤ 1.2 W/kg.

Bluetooth - Maximum Average Power			
Test Mode	Data Rate	Average Power(dBm)	Tune-up power (dBm)
GFSK	1Mbps	10.89	11.0
Pi/4 QDPSK	2Mbps	10.96	11.0
8DPSK	3Mbps	11.03	11.5

Bluetooth - Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
BLE	1Mbps	CH 00	2402	0.21	0.5
		CH 19	2440	1.98	2.0
		CH 39	2480	-1.12	-1.0

9.2 Test Results for Standalone SAR Test

Body SAR

GSM850 – Body SAR Test (Gap: 0mm)									
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.	GPRS_4TX	Back Face	128	824.2	28.83	29.0	1.040	0.915	0.952
	GPRS_4TX	Front Face	128	824.2	28.83	29.0	1.040	0.019	0.020
	GPRS_4TX	Right Side	128	824.2	28.83	29.0	1.040	0.135	0.140
	GPRS_4TX	Back Face	190	836.6	28.63	29.0	1.089	0.682	0.743
	GPRS_4TX	Back Face	251	848.8	28.62	29.0	1.091	0.678	0.740

GSM1900 – Body SAR Test (Gap: 0mm)									
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.	GPRS_4TX	Back Face	661	1880	25.74	26.0	1.062	0.304	0.323
	GPRS_4TX	Front Face	661	1880	25.74	26.0	1.062	0.015	0.016
	GPRS_4TX	Right Side	661	1880	25.74	26.0	1.062	0.009	0.010

WCDMA Band II – Body SAR Test (Gap: 0mm)									
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	Back Face	9262	1852.4	21.59	22.0	1.099	0.507	0.557
	RMC 12.2k	Front Face	9262	1852.4	21.59	22.0	1.099	0.029	0.032
	RMC 12.2k	Right Side	9262	1852.4	21.59	22.0	1.099	0.025	0.027

WCDMA Band V – Body SAR Test (Gap: 0mm)									
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	Back Face	4233	846.6	23.20	23.5	1.072	0.768	0.823
	RMC 12.2k	Front Face	4233	846.6	23.20	23.5	1.072	0.021	0.023
	RMC 12.2k	Right Side	4233	846.6	23.20	23.5	1.072	0.091	0.098
	RMC 12.2k	Back Face	4132	826.4	23.16	23.5	1.081	0.749	0.810
	RMC 12.2k	Back Face	4183	836.4	23.19	23.5	1.074	0.756	0.812

LTE Band 2–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
5.	QPSK 20MHz 1RB	Back Face	1880	22.30	22.5	1.047	0.497	0.520
	QPSK 20MHz 1RB	Front Face	1880	22.30	22.5	1.047	0.022	0.023
	QPSK 20MHz 1RB	Right Side	1880	22.30	22.5	1.047	0.017	0.018
	QPSK 20MHz 50%RB	Back Face	1880	22.30	22.5	1.047	0.391	0.409
	QPSK 20MHz 50%RB	Front Face	1880	22.30	22.5	1.047	0.020	0.021
	QPSK 20MHz 50%RB	Right Side	1880	22.30	22.5	1.047	0.014	0.015

LTE Band 4–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
6.	QPSK 20MHz 1RB	Back Face	1732.5	23.27	23.5	1.054	0.281	0.296
	QPSK 20MHz 1RB	Front Face	1732.5	23.27	23.5	1.054	0.013	0.014
	QPSK 20MHz 1RB	Right Side	1732.5	23.27	23.5	1.054	0.005	0.005
	QPSK 20MHz 50%RB	Back Face	1732.5	23.27	23.5	1.054	0.253	0.267
	QPSK 20MHz 50%RB	Front Face	1732.5	23.27	23.5	1.054	0.012	0.013
	QPSK 20MHz 50%RB	Right Side	1732.5	23.27	23.5	1.054	0.004	0.004

LTE Band 5–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
7.	QPSK 1.4MHz 1RB	Back Face	836.5	24.14	24.5	1.086	0.788	0.856
	QPSK 1.4MHz 1RB	Front Face	836.5	24.14	24.5	1.086	0.022	0.024
	QPSK 1.4MHz 1RB	Right Side	836.5	24.14	24.5	1.086	0.088	0.096
	QPSK 1.4MHz 1RB	Back Face	824.7	23.90	24.0	1.023	0.776	0.794
	QPSK 1.4MHz 1RB	Back Face	848.3	23.80	24.0	1.047	0.768	0.804
	QPSK 1.4MHz 50%RB	Back Face	836.5	24.14	24.5	1.086	0.613	0.666
	QPSK 1.4MHz 50%RB	Front Face	836.5	24.14	24.5	1.086	0.013	0.014
	QPSK 1.4MHz 50%RB	Right Side	836.5	24.14	24.5	1.086	0.064	0.070

LTE Band 5–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
8.	QPSK 10MHz 1RB	Back Face	829.0	23.79	24.0	1.050	0.645	0.677
	QPSK 10MHz 1RB	Front Face	829.0	23.79	24.0	1.050	0.056	0.059
	QPSK 10MHz 1RB	Right Side	829.0	23.79	24.0	1.050	0.097	0.102
	QPSK 10MHz 50%RB	Back Face	829.0	23.79	24.0	1.050	0.614	0.644
	QPSK 10MHz 50%RB	Front Face	829.0	23.79	24.0	1.050	0.019	0.020
	QPSK 10MHz 50%RB	Right Side	829.0	23.79	24.0	1.050	0.070	0.073

LTE Band 7–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
9.	QPSK 20MHz 1RB	Back Face	2510.0	22.28	22.5	1.052	0.556	0.585
	QPSK 20MHz 1RB	Front Face	2510.0	22.28	22.5	1.052	0.247	0.260
	QPSK 20MHz 1RB	Right Side	2510.0	22.28	22.5	1.052	0.317	0.333
	QPSK 20MHz 50%RB	Back Face	2510.0	22.28	22.5	1.052	0.481	0.506
	QPSK 20MHz 50%RB	Front Face	2510.0	22.28	22.5	1.052	0.222	0.234
	QPSK 20MHz 50%RB	Right Side	2510.0	22.28	22.5	1.052	0.287	0.302

LTE Band 12–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
10.	QPSK 1.4MHz 1RB	Back Face	715.3	23.53	24.0	1.114	0.771	0.859
	QPSK 1.4MHz 1RB	Front Face	715.3	23.53	24.0	1.114	0.032	0.036
	QPSK 1.4MHz 1RB	Right Side	715.3	23.53	24.0	1.114	0.022	0.025
	QPSK 1.4MHz 1RB	Back Face	699.7	23.19	23.5	1.074	0.761	0.817
	QPSK 1.4MHz 1RB	Back Face	707.5	23.02	23.5	1.117	0.763	0.852
	QPSK 1.4MHz 50%RB	Back Face	715.3	23.53	24.0	1.114	0.626	0.698
	QPSK 1.4MHz 50%RB	Front Face	715.3	23.53	24.0	1.114	0.030	0.033
	QPSK 1.4MHz 50%RB	Right Side	715.3	23.53	24.0	1.114	0.019	0.021

LTE Band 12–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
11.	QPSK 10MHz 1RB	Back Face	711.0	23.30	23.5	1.047	0.678	0.710
	QPSK 10MHz 1RB	Front Face	711.0	23.30	23.5	1.047	0.046	0.048
	QPSK 10MHz 1RB	Right Side	711.0	23.30	23.5	1.047	0.057	0.060
	QPSK 10MHz 50%RB	Back Face	711.0	23.30	23.5	1.047	0.597	0.625
	QPSK 10MHz 50%RB	Front Face	711.0	23.30	23.5	1.047	0.029	0.030
	QPSK 10MHz 50%RB	Right Side	711.0	23.30	23.5	1.047	0.019	0.020

LTE Band 17–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
12.	QPSK 10MHz 1RB	Back Face	709.0	23.60	24.0	1.096	0.793	0.870
	QPSK 10MHz 1RB	Front Face	709.0	23.60	24.0	1.096	0.031	0.034
	QPSK 10MHz 1RB	Right Side	709.0	23.60	24.0	1.096	0.024	0.026
	QPSK 10MHz 1RB	Back Face	710.0	23.38	23.5	1.028	0.786	0.808
	QPSK 10MHz 1RB	Back Face	713.5	23.26	23.5	1.057	0.790	0.835
	QPSK 10MHz 50%RB	Back Face	709.0	23.60	24.0	1.096	0.639	0.701
	QPSK 10MHz 50%RB	Front Face	709.0	23.60	24.0	1.096	0.026	0.029
	QPSK 10MHz 50%RB	Right Side	709.0	23.60	24.0	1.096	0.017	0.019

LTE Band 41–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
13.	QPSK 20MHz 1RB	Back Face	2506.0	22.32	22.5	1.042	0.790	0.823
	QPSK 20MHz 1RB	Front Face	2506.0	22.32	22.5	1.042	0.091	0.095
	QPSK 20MHz 1RB	Right Side	2506.0	22.32	22.5	1.042	0.181	0.189
	QPSK 20MHz 1RB	Back Face	2593.0	21.96	22.0	1.009	0.792	0.799
	QPSK 20MHz 1RB	Back Face	2680.0	21.61	22.0	1.094	0.751	0.822
	QPSK 20MHz 50%RB	Back Face	2506.0	22.32	22.5	1.042	0.627	0.654
	QPSK 20MHz 50%RB	Front Face	2506.0	22.32	22.5	1.042	0.071	0.074
	QPSK 20MHz 50%RB	Right Side	2506.0	22.32	22.5	1.042	0.146	0.152

WLAN 5.2GHz –Body SAR Test(Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11n (HT40)	Back Face	CH46	5230	10.98	11.0	1.005	0.467	0.469
	802.11n (HT40)	Front Face	CH46	5230	10.98	11.0	1.005	0.217	0.218
14.	802.11n (HT40)	Left Side	CH46	5230	10.98	11.0	1.005	0.538	0.540
	802.11n (HT40)	Bottom Side	CH46	5230	10.98	11.0	1.005	0.212	0.213

WLAN 5.8GHz –Body SAR Test(Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11a	Back Face	CH 165	5825	13.86	14.0	1.033	0.536	0.554
	802.11a	Front Face	CH 165	5825	13.86	14.0	1.033	0.239	0.247
15.	802.11a	Left Side	CH 165	5825	13.86	14.0	1.033	0.590	0.609
	802.11a	Bottom Side	CH 165	5825	13.86	14.0	1.033	0.247	0.255

WLAN 2.4GHz –Body SAR Test(Gap: 0mm)									
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	Back Face	CH 06	2437	14.19	14.5	1.074	0.329	0.353
	802.11b	Front Face	CH 06	2437	14.19	14.5	1.074	0.159	0.171
	802.11b	Left Side	CH 06	2437	14.19	14.5	1.074	0.153	0.164
	802.11b	Bottom Side	CH 06	2437	14.19	14.5	1.074	0.090	0.097

Bluetooth –Body SAR Test(Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
17.	Bluetooth	Back Face	CH 78	2480	11.03	11.5	1.114	0.389	0.433
	Bluetooth	Front Face	CH 78	2480	11.03	11.5	1.114	0.159	0.177
	Bluetooth	Left Side	CH 78	2480	11.03	11.5	1.114	0.144	0.160
	Bluetooth	Bottom Side	CH 78	2480	11.03	11.5	1.114	0.098	0.109

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.

9.3 Simultaneous Multi-band Transmission SAR Analysis

List of Mode for Simultaneous Multi-band Transmission

No.	Configurations	Body SAR
1	GSM(Voice/Data) + WLAN(2.4G)(Data)	Yes
2	WCDMA (Voice/Data)+ WLAN (2.4G)(Data)	Yes
3	LTE(Data) + WLAN (2.4G)(Data)	Yes
4	GSM(Voice/Data) + WLAN(5G)(Data)	Yes
5	WCDMA (Voice/Data)+ WLAN(5G)(Data)	Yes
6	LTE(Data) + WLAN(5G)(Data)	Yes
7	GSM(Voice/Data) + Bluetooth(Data)	Yes
8	WCDMA (Voice/Data) + Bluetooth(Data)	Yes
9	LTE(Data) + Bluetooth(Data)	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. The maximum SAR summation is calculated based on the same configuration and test position.

Body SAR**WWAN and WLAN**

	WWAN		WLAN(5G)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.952	0.554	1.506
Front	GSM	0.020	0.247	0.267
Right side	GSM	0.140	--	0.140
Left side	GSM	--	0.609	0.609
Bottom side	GSM	--	0.255	0.255
Top side	GSM	--	--	--
Back	WCDMA	0.823	0.554	1.377
Front	WCDMA	0.032	0.247	0.279
Right side	WCDMA	0.098	--	0.098
Left side	WCDMA	--	0.609	0.609
Bottom side	WCDMA	--	0.255	0.255
Top side	WCDMA	--	--	--
Back	LTE	0.870	0.554	1.424
Front	LTE	0.260	0.247	0.507
Right side	LTE	0.333	--	0.333
Left side	LTE	--	0.609	0.609
Bottom side	LTE	--	0.255	0.255
Top side	LTE	--	--	--

WWAN and WLAN

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.952	0.353	1.305
Front	GSM	0.020	0.171	0.191
Right side	GSM	0.140	--	0.140
Left side	GSM	--	0.164	0.164
Bottom side	GSM	--	0.097	0.097
Top side	GSM	--	--	--
Back	WCDMA	0.823	0.353	1.176
Front	WCDMA	0.032	0.171	0.203
Right side	WCDMA	0.098	--	0.098
Left side	WCDMA	--	0.164	0.164
Bottom side	WCDMA	--	0.097	0.097
Top side	WCDMA	--	--	--
Back	LTE	0.870	0.353	1.223
Front	LTE	0.260	0.171	0.431
Right side	LTE	0.333	--	0.333
Left side	LTE	--	0.164	0.164
Bottom side	LTE	--	0.097	0.097
Top side	LTE	--	--	--

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM	0.952	0.433	1.385
Front	GSM	0.020	0.177	0.197
Right side	GSM	0.140	--	0.140
Left side	GSM	--	0.160	0.160
Bottom side	GSM	--	0.109	0.109
Top side	GSM	--	--	--
Back	WCDMA	0.823	0.433	1.256
Front	WCDMA	0.032	0.177	0.209
Right side	WCDMA	0.098	--	0.098
Left side	WCDMA	--	0.160	0.160
Bottom side	WCDMA	--	0.109	0.109
Top side	WCDMA	--	--	--
Back	LTE	0.870	0.433	1.303
Front	LTE	0.260	0.177	0.437
Right side	LTE	0.333	--	0.333
Left side	LTE	--	0.160	0.160
Bottom side	LTE	--	0.109	0.109
Top side	LTE	--	--	--

10. Measurement Uncertainty

10.1 Uncertainty for SAR Test

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

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

Annex A. Plots of System Performance Check

MEASUREMENT 1

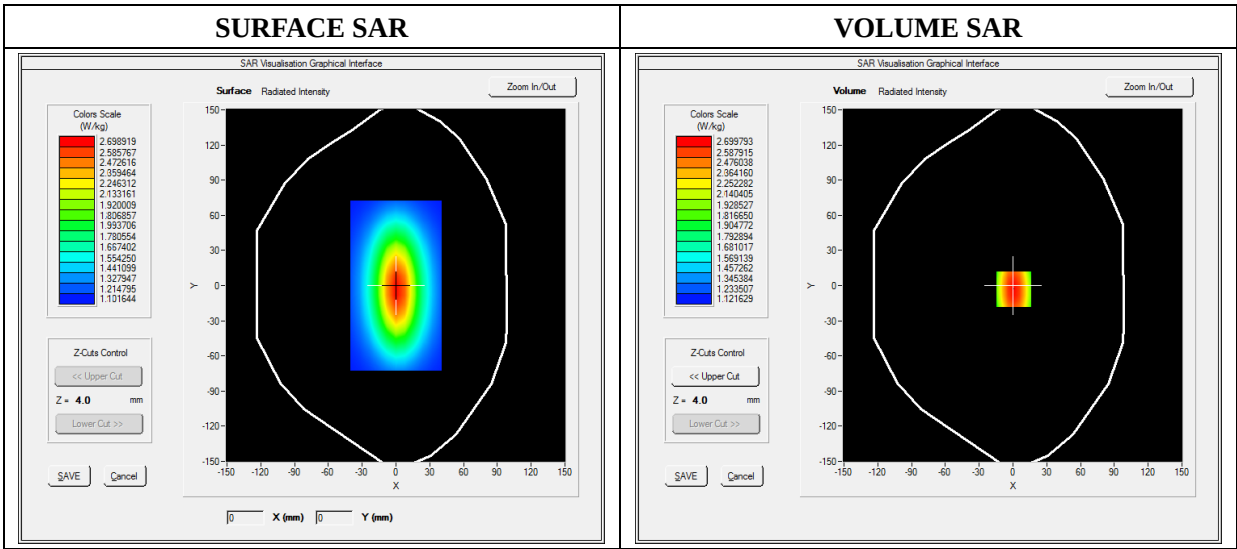
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 7 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 1.76; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
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)	55.380574
Conductivity (S/m)	0.940583
Power Variation (%)	0.038363
Ambient Temperature	22.0
Liquid Temperature	22.2

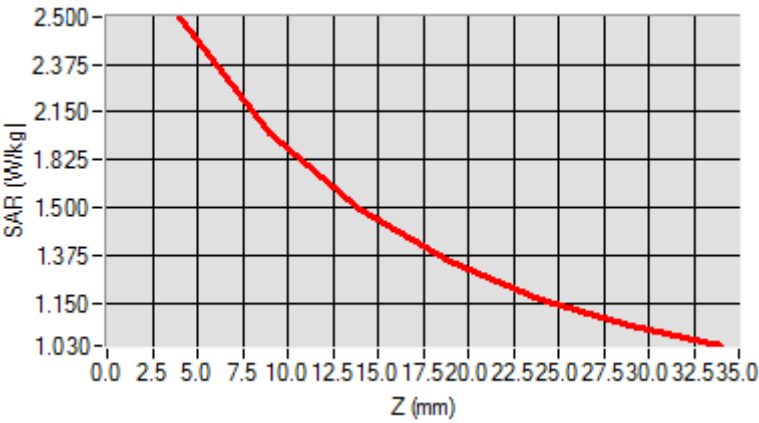


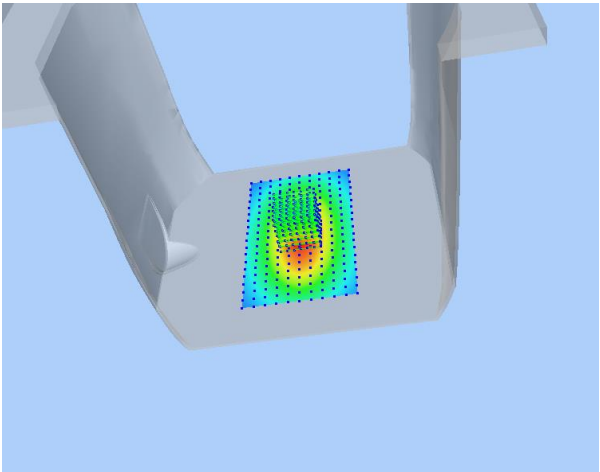
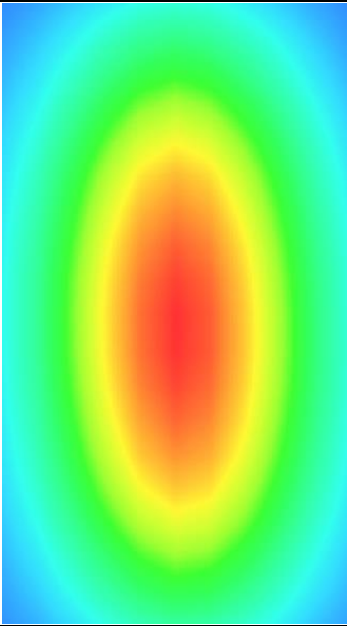
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.042744
SAR 1g (W/Kg)	2.180534

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 2

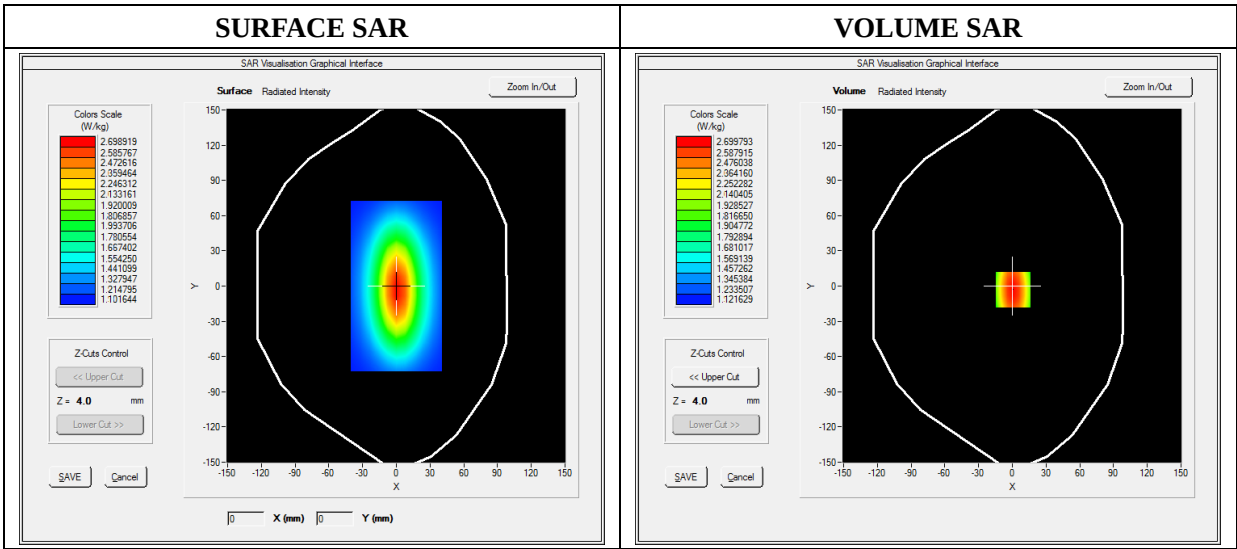
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 7 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 1.79; Calibrated: 2021-07-16

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)	55.160245
Conductivity (S/m)	0.951245
Power Variation (%)	0.428437
Ambient Temperature	22.0
Liquid Temperature	22.2

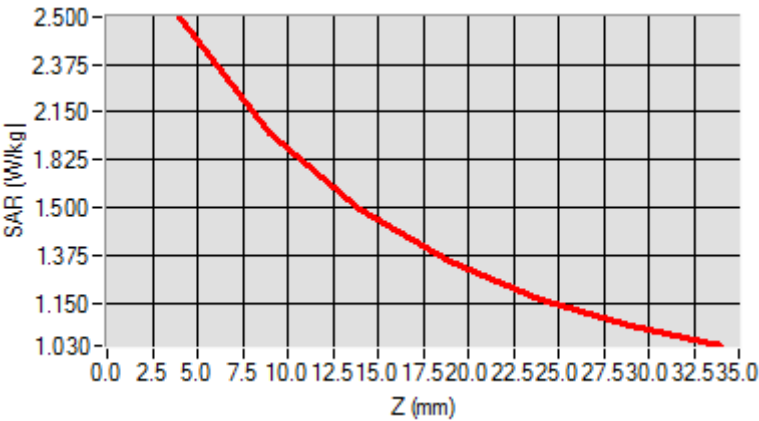


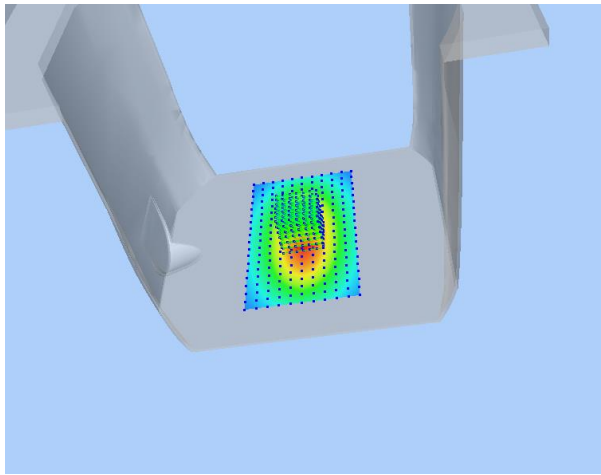
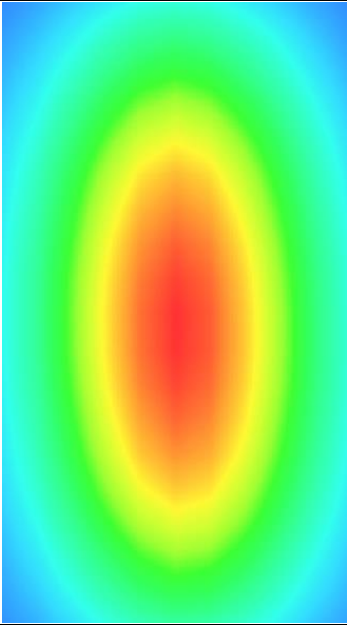
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.519489
SAR 1g (W/Kg)	2.511253

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 3

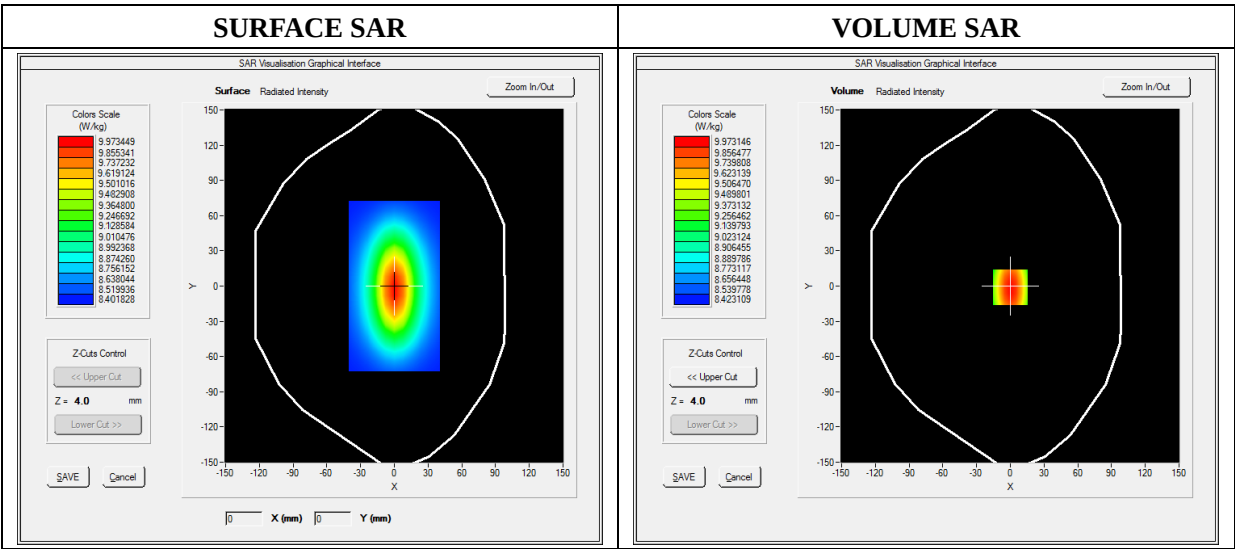
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.15; Calibrated: 2021-07-16

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)	53.394090
Conductivity (S/m)	1.532510
Power Variation (%)	1.041232
Ambient Temperature	22.0
Liquid Temperature	22.2

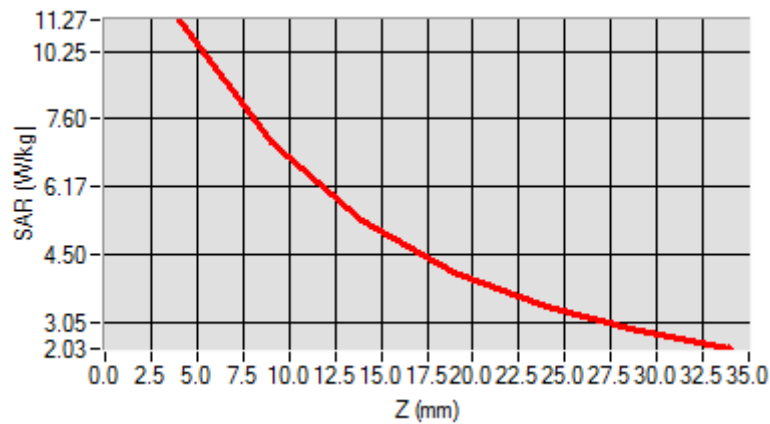


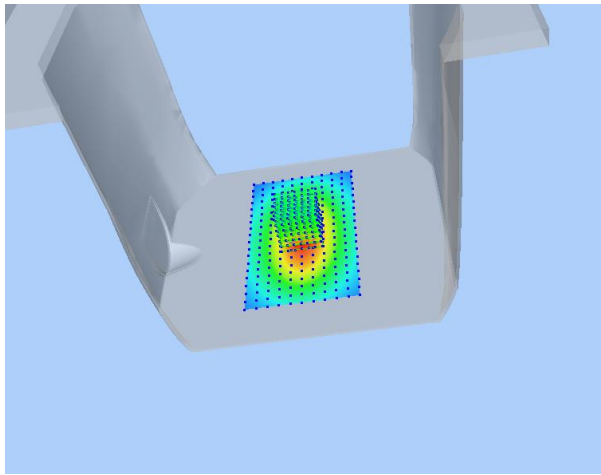
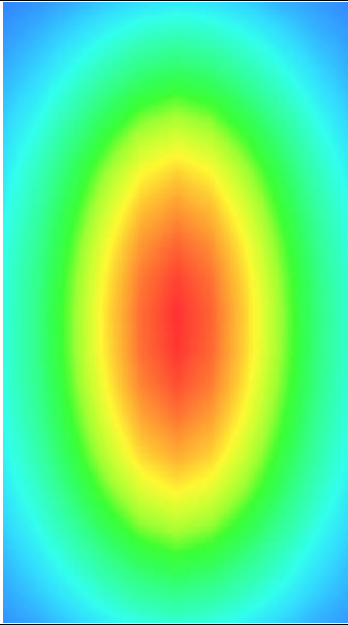
Maximum location: X=0.00, Y=0.00

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

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 4

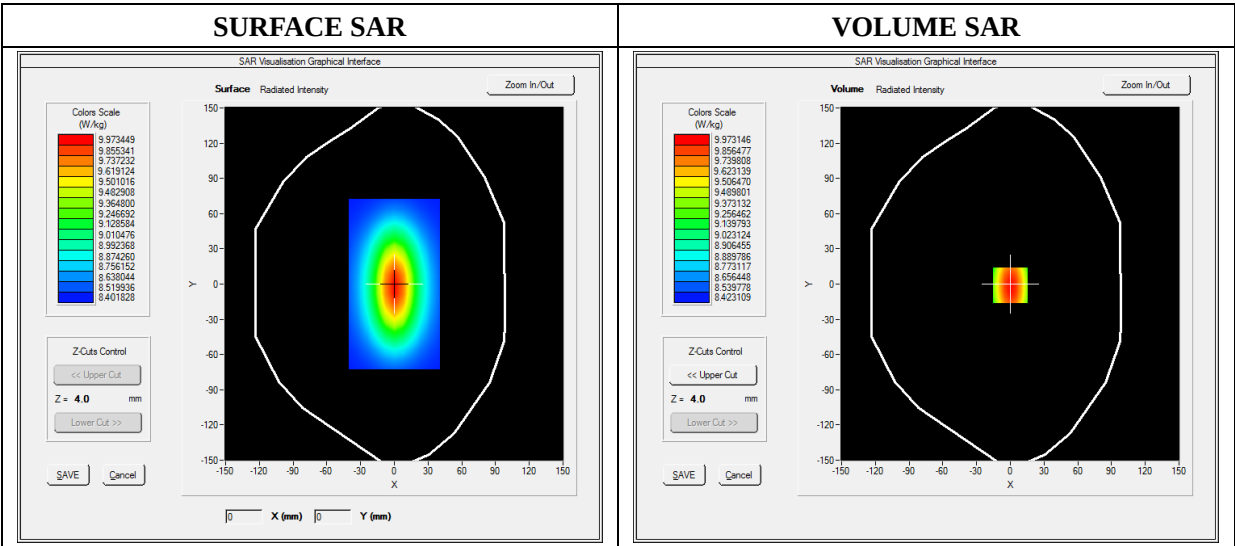
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.31; Calibrated: 2021-07-16

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)	53.360124
Conductivity (S/m)	1.543607
Power Variation (%)	1.022540
Ambient Temperature	22.0
Liquid Temperature	22.2

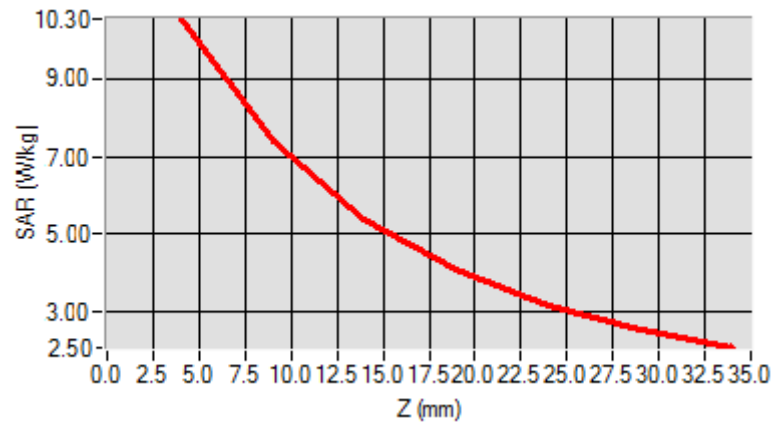


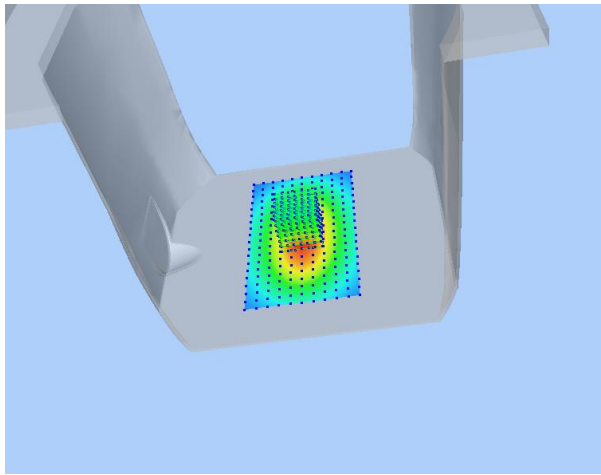
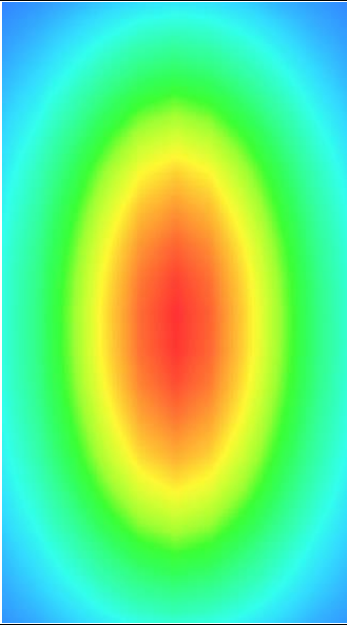
Maximum location: X=0.00, Y=0.00

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

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 5

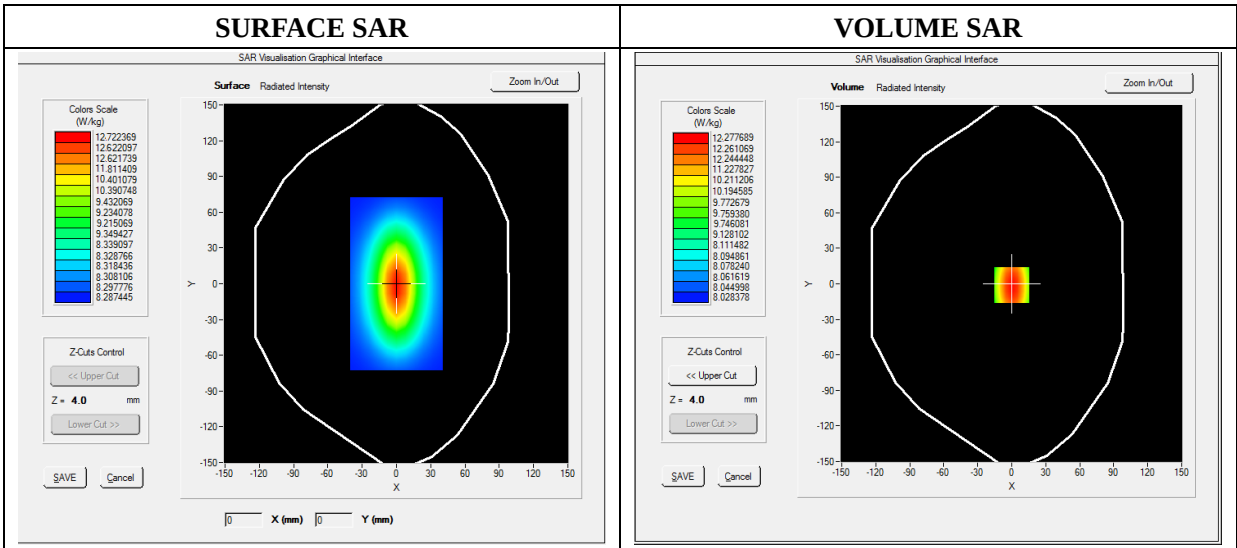
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.62; Calibrated: 2021-07-16

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	52.643275
Conductivity (S/m)	1.920214
Power Variation (%)	-1.050000
Ambient Temperature	21.2
Liquid Temperature	21.2

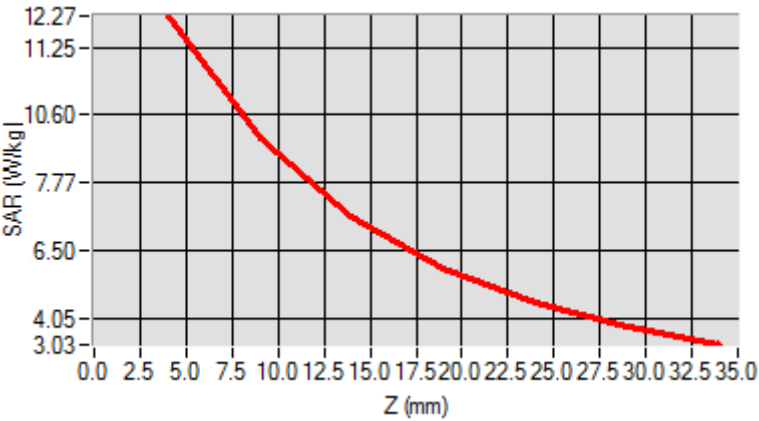


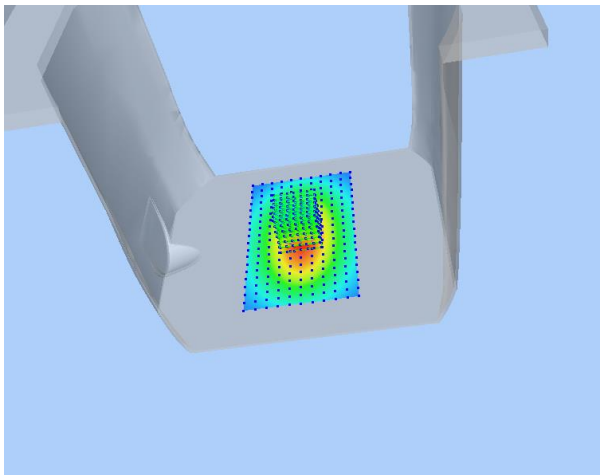
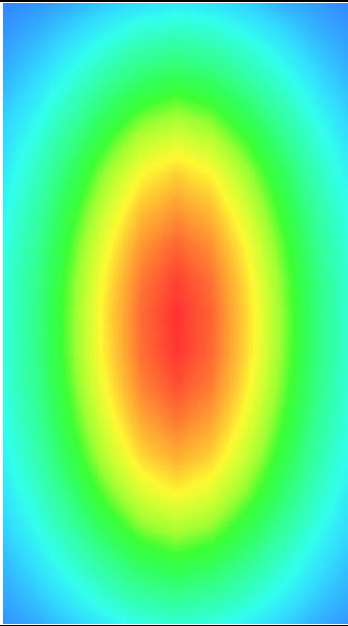
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.821735
SAR 1g (W/Kg)	13.031201

Z Axis Scan

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



3D screen shot	Hot spot position
	

MEASUREMENT 6

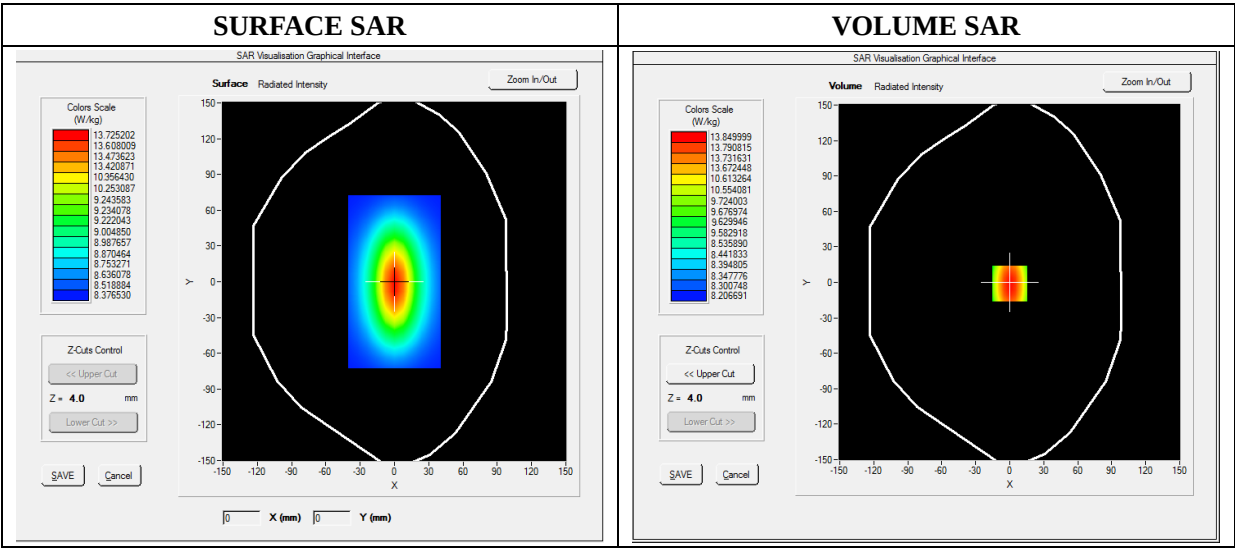
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.41; Calibrated: 2021-07-16

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)	52.434092
Conductivity (S/m)	2.153182
Power Variation (%)	0.886021
Ambient Temperature	22.0
Liquid Temperature	22.2



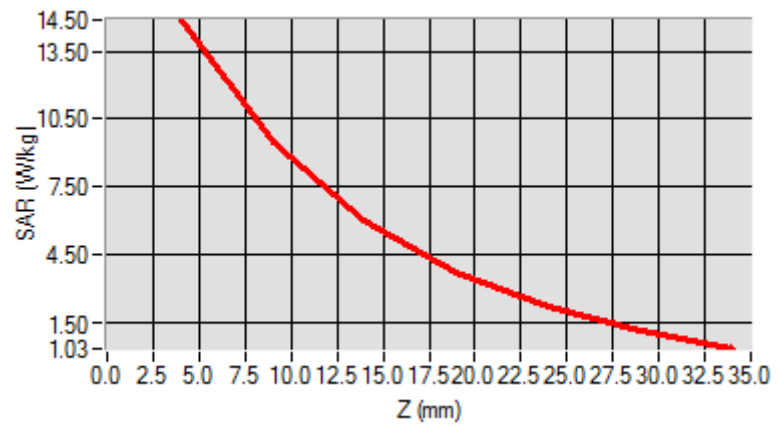
Maximum location: X=0.00, Y=0.00

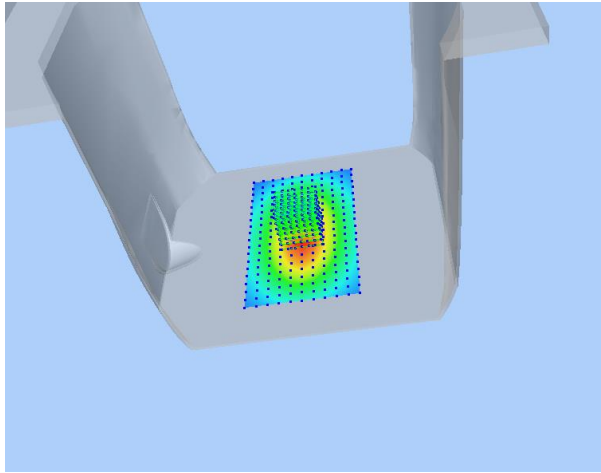
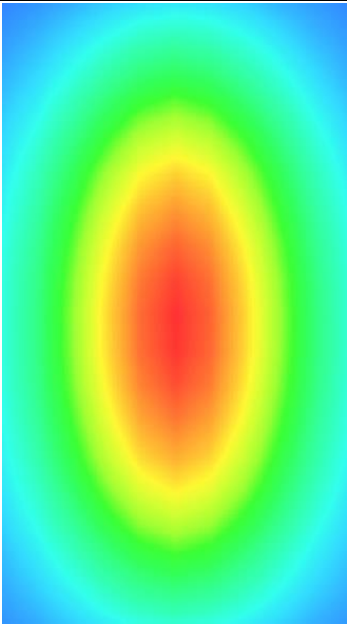
SAR 10g (W/Kg)	8.230801
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SAR 1g (W/Kg)	13.539282
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Z Axis Scan

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 7

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

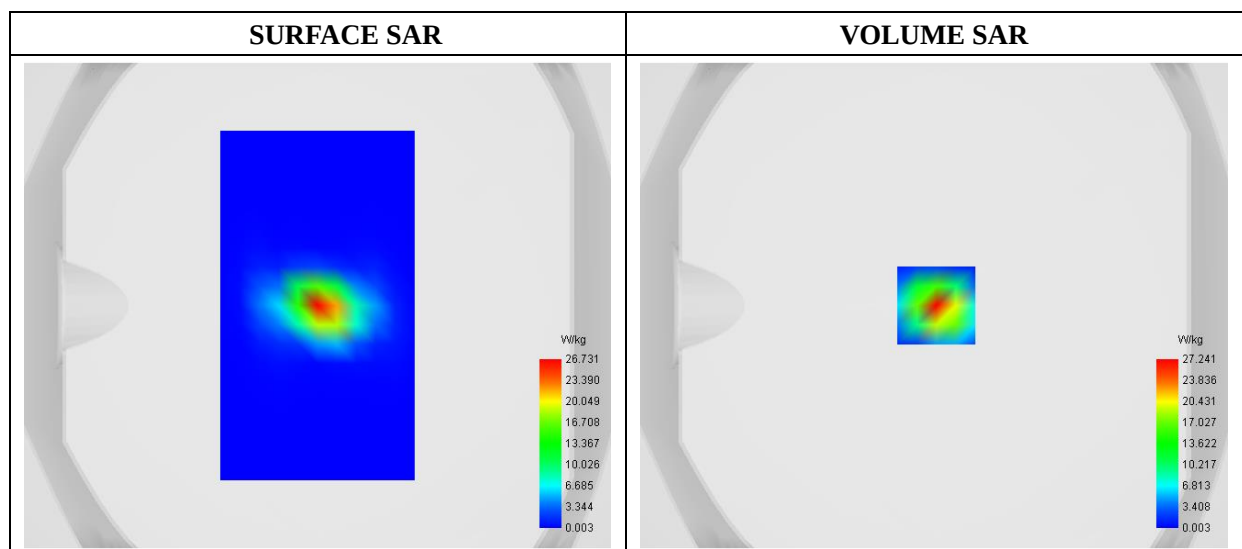
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 1.82; Calibrated: 2021-07-16

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

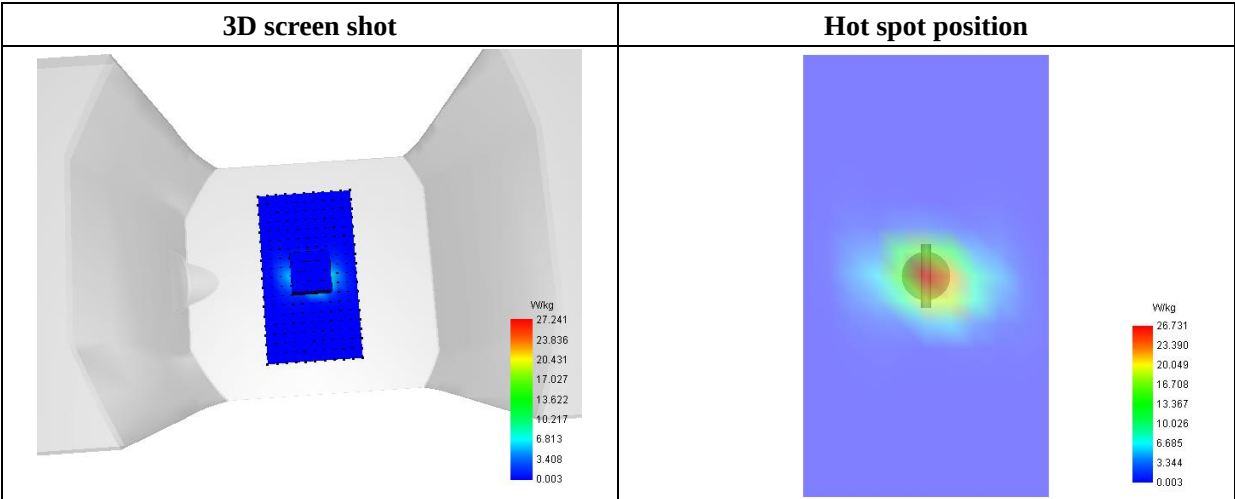
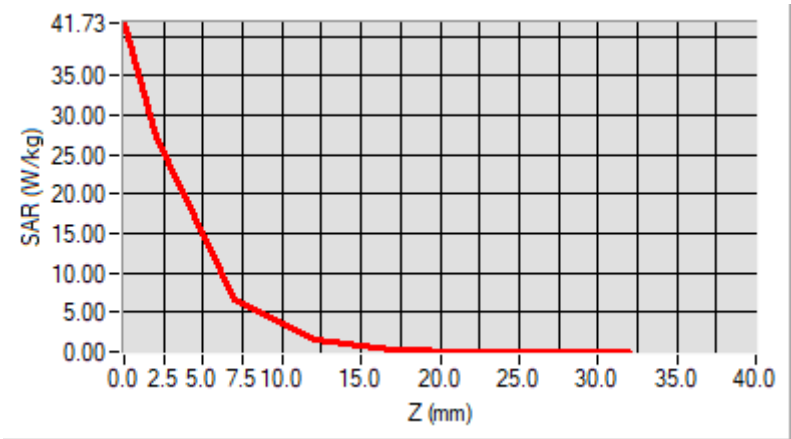
Frequency (MHz)	5200.000000
Relative Permittivity (real part)	49.512911
Conductivity (S/m)	5.293426
Power Variation (%)	-0.940000
Ambient Temperature	21.0
Liquid Temperature	21.0



Maximum location: X=1.00, Y=0.00

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

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



MEASUREMENT 8

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

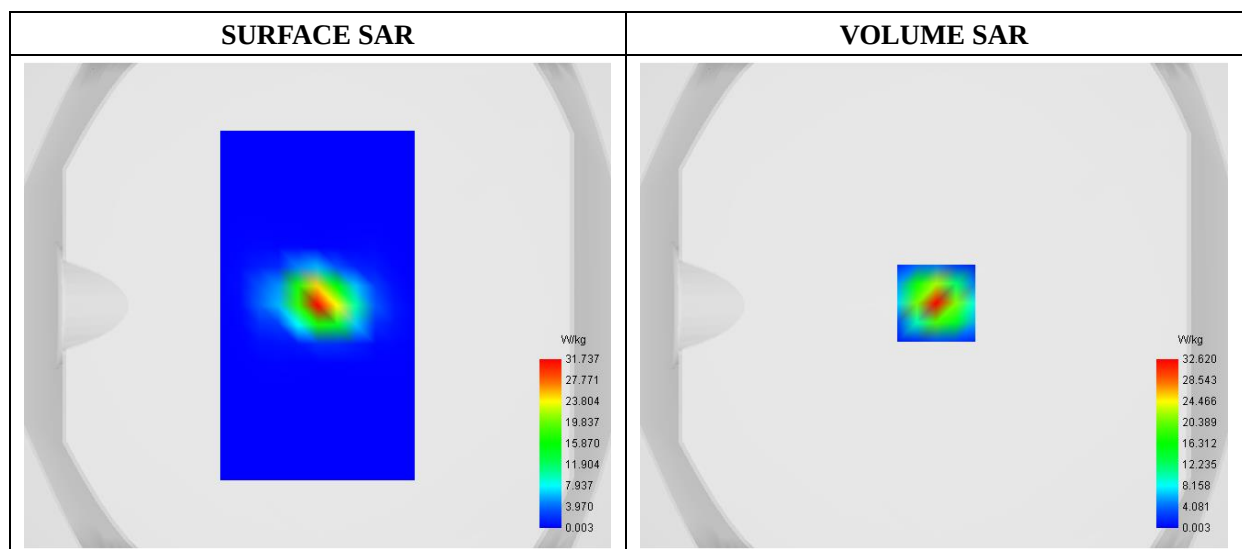
E-field Probe: SSE2 - SN 18/21 EPGO356; ConvF: 2.11; Calibrated: 2021-07-16

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

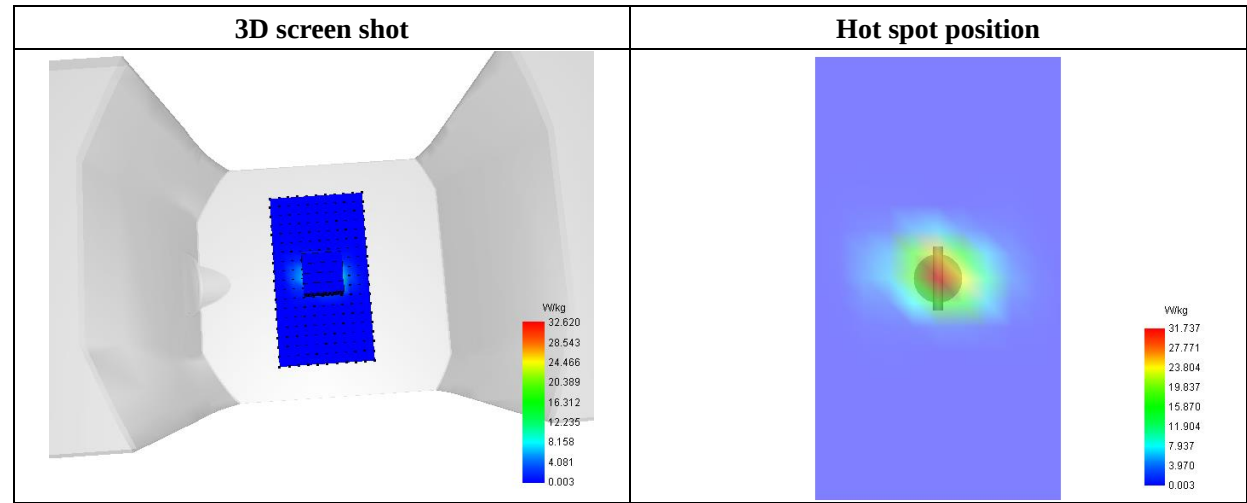
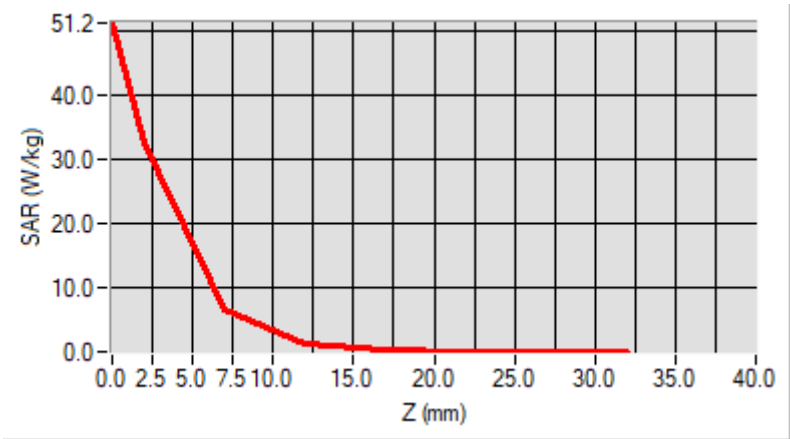
Frequency (MHz)	5800.000000
Relative Permittivity (real part)	48.343814
Conductivity (S/m)	6.012705
Power Variation (%)	-1.640000
Ambient Temperature	21.0
Liquid Temperature	21.0



Maximum location: X=1.00, Y=1.00

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

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



Annex B. Plots of SAR Measurement

MEASUREMENT 1

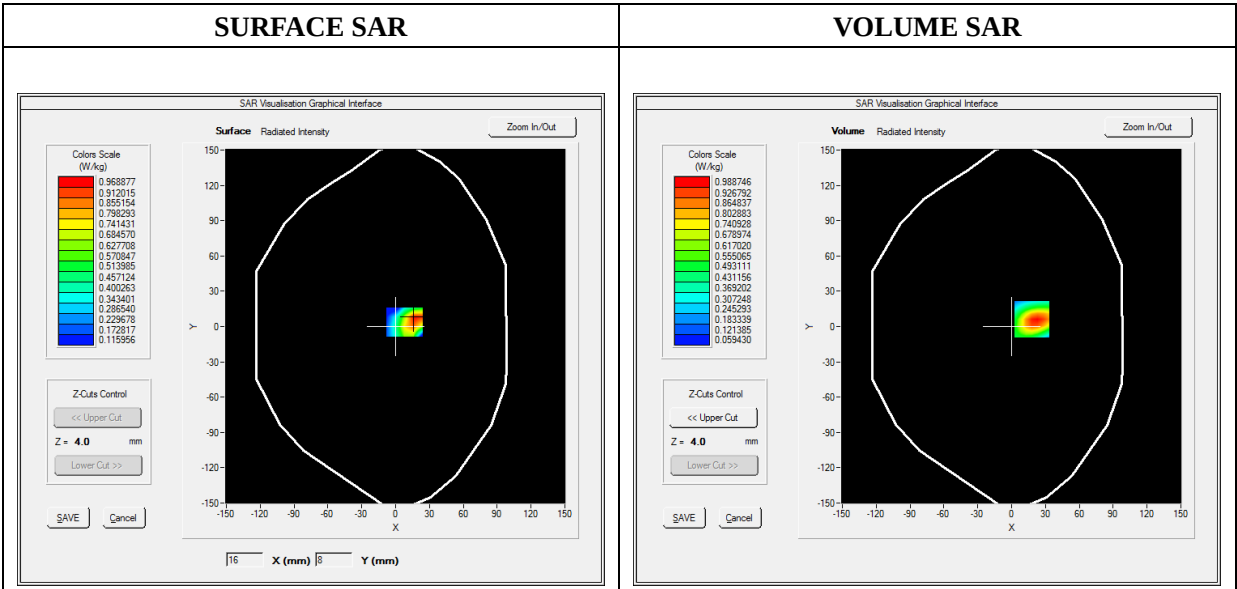
Type: Phone measurement (Complete)
Date of measurement: 2022-03-07
Measurement duration: 11 minutes 48 seconds

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	GPRS900_4TX
Channels	Low
Signal	Duty Cycle: 1:2

B. SAR Measurement Results

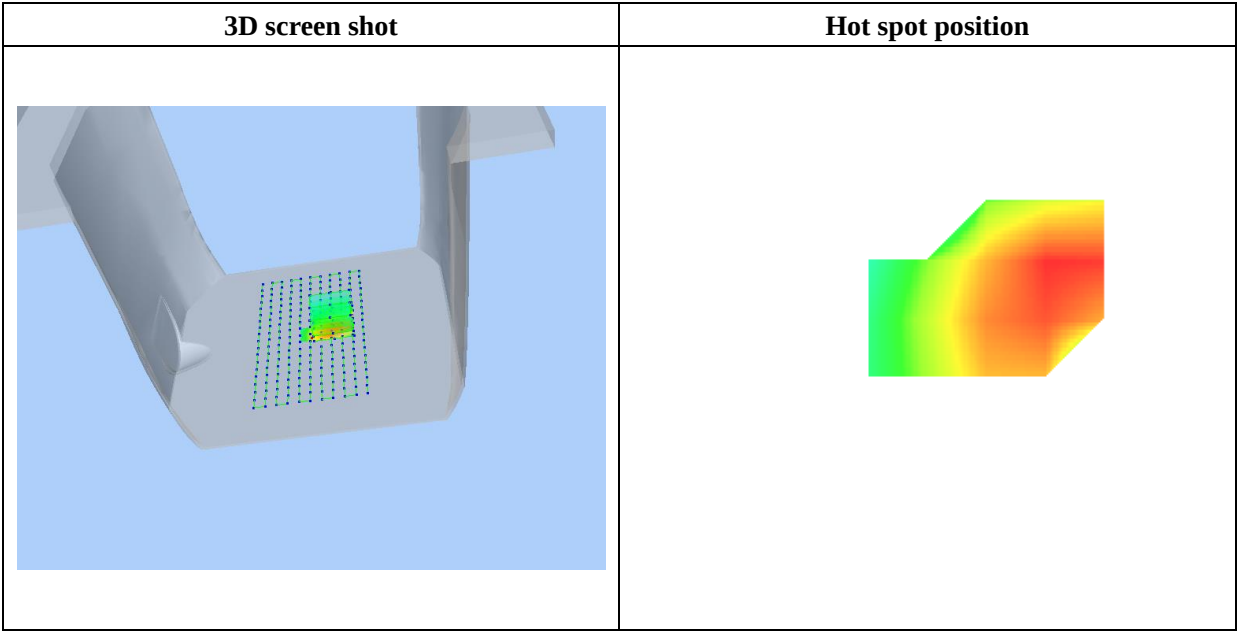
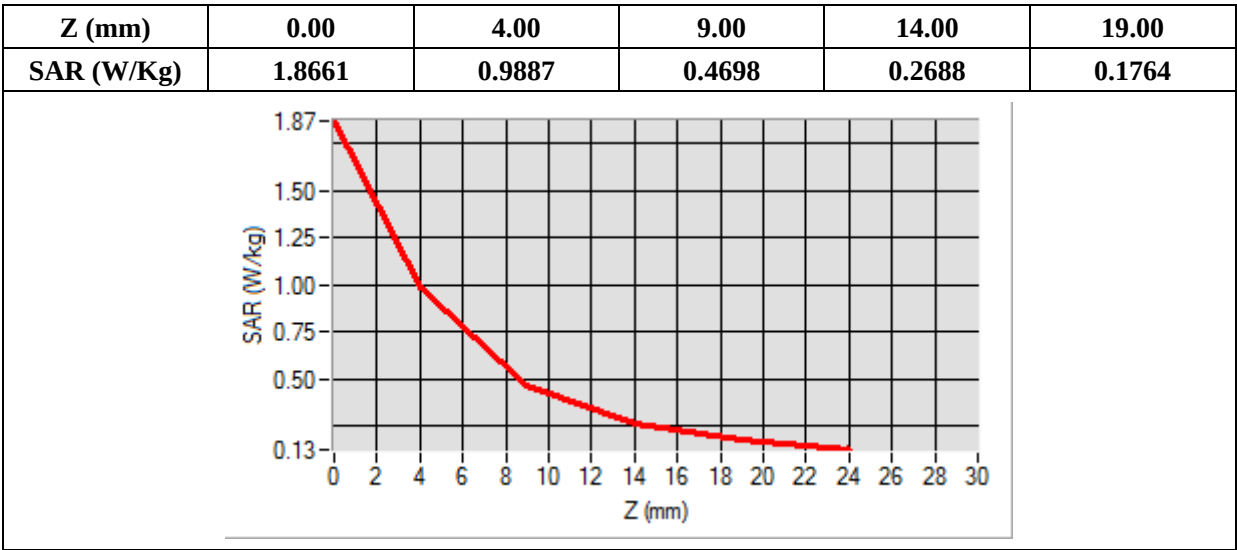
Frequency (MHz)	824.200000
Relative Permittivity (real part)	55.160245
Conductivity (S/m)	0.951245
Power Variation (%)	1.074536
Ambient Temperature	22.2
Liquid Temperature	22.2



Maximum location: X=18.00, Y=6.00

SAR Peak: 1.67 W/kg

SAR 10g (W/Kg)	0.482303
SAR 1g (W/Kg)	0.914853



MEASUREMENT 2

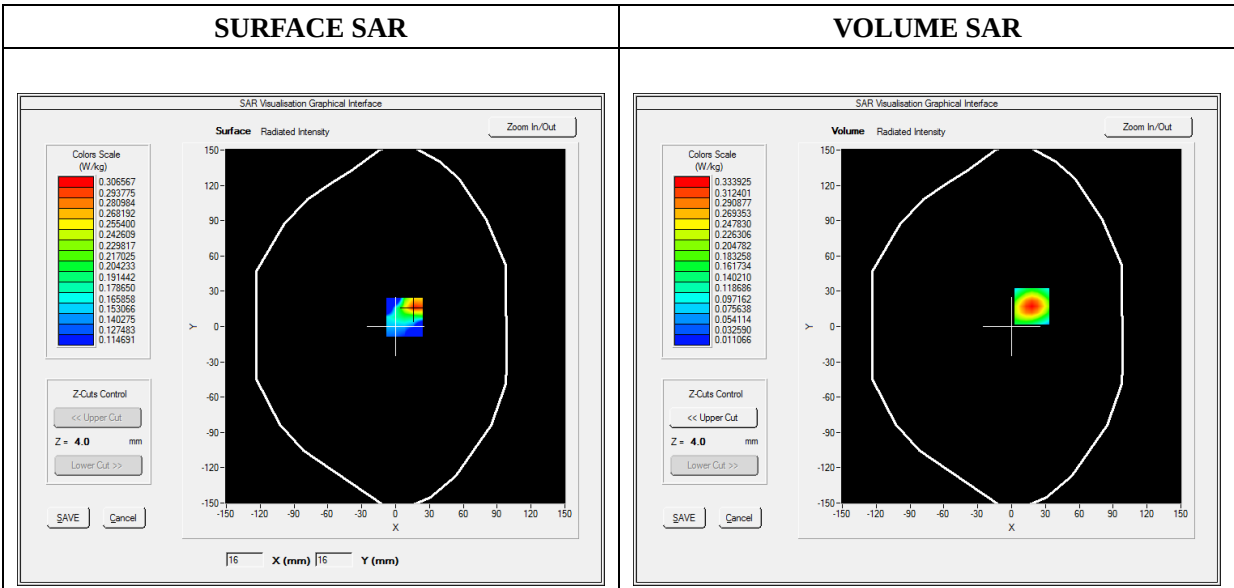
Type: Phone measurement (Complete)
Date of measurement: 2022-03-08
Measurement duration: 11 minutes 48 seconds

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	GPRS1800_4TX
Channels	Middle
Signal	Duty Cycle: 1:2

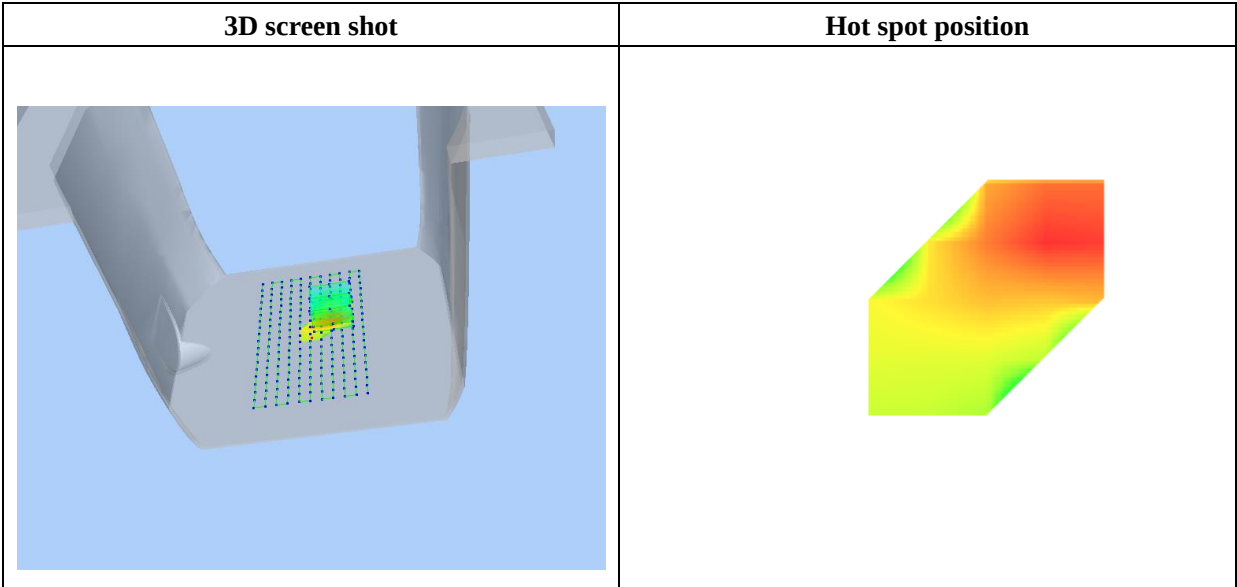
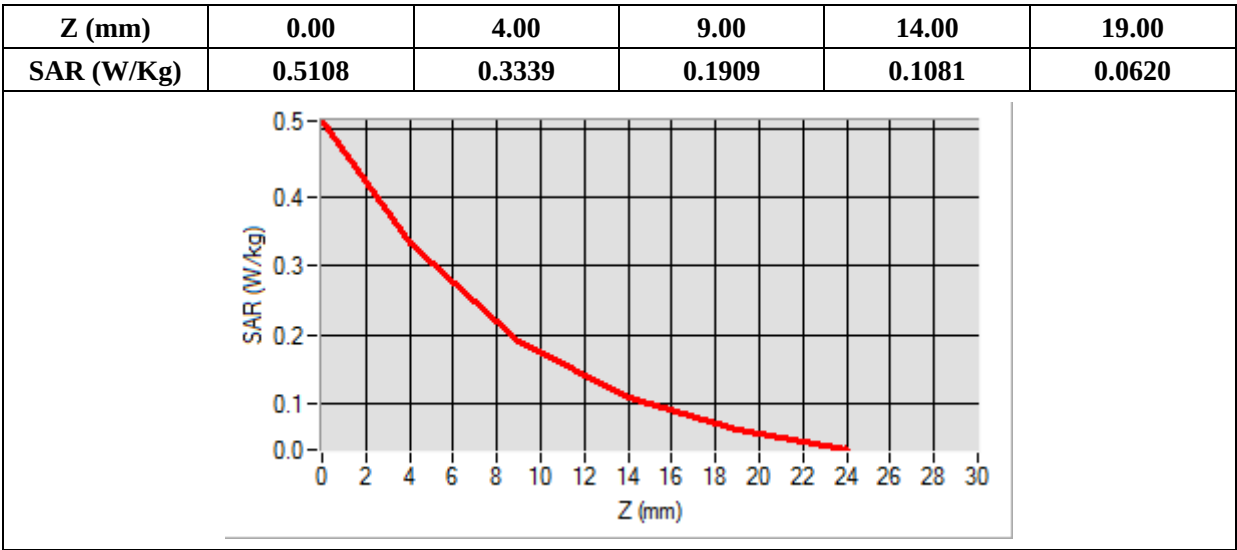
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative Permittivity (real part)	53.391248
Conductivity (S/m)	1.533697
Power Variation (%)	-0.150000
Ambient Temperature	22.0
Liquid Temperature	22.2



SAR Peak: 0.51 W/kg

SAR 10g (W/Kg)	0.161316
SAR 1g (W/Kg)	0.304073



MEASUREMENT 3

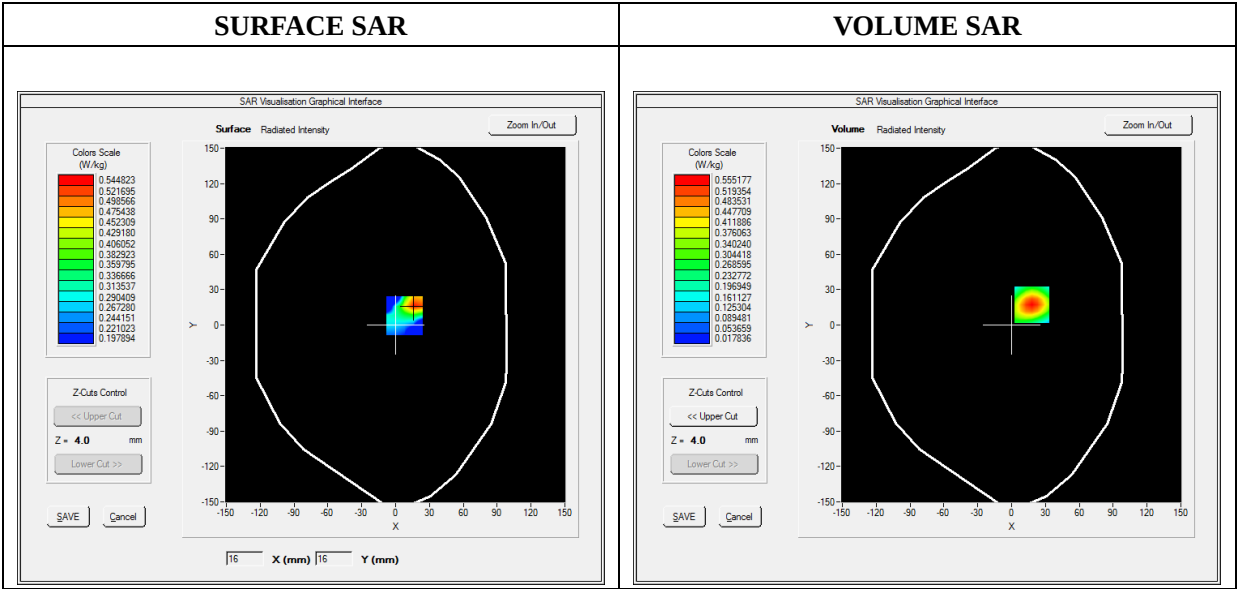
Type: Phone measurement (Complete)
Date of measurement: 2022-03-08
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

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

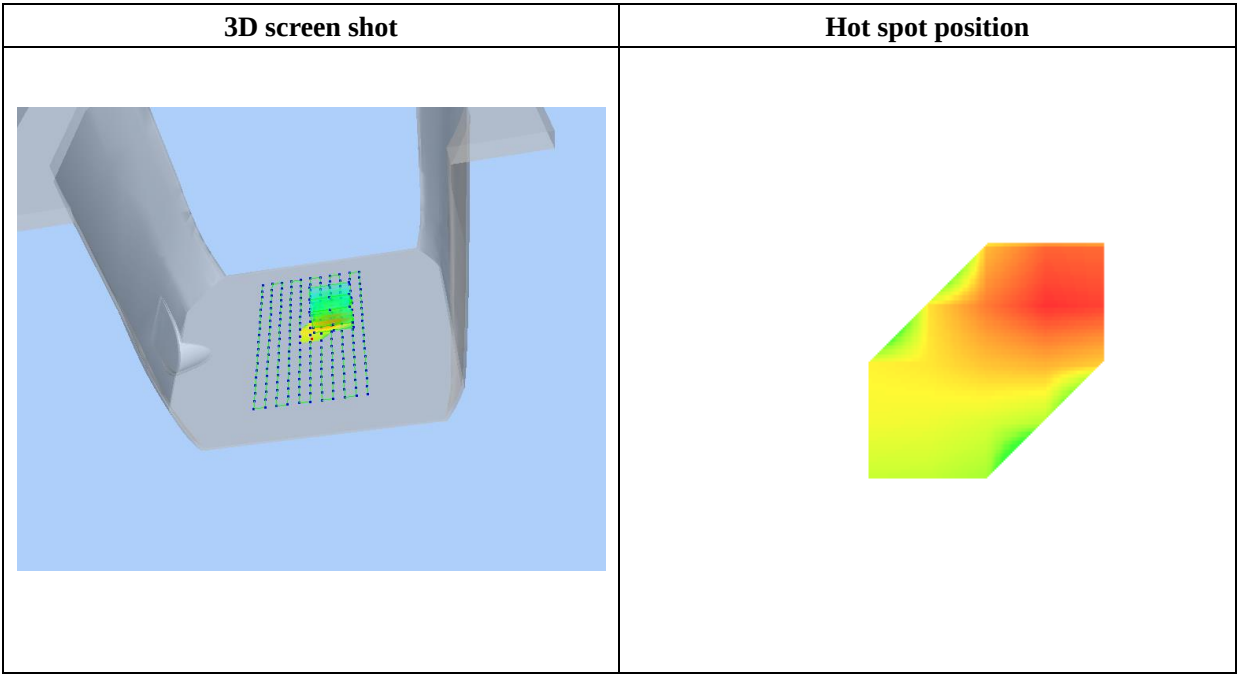
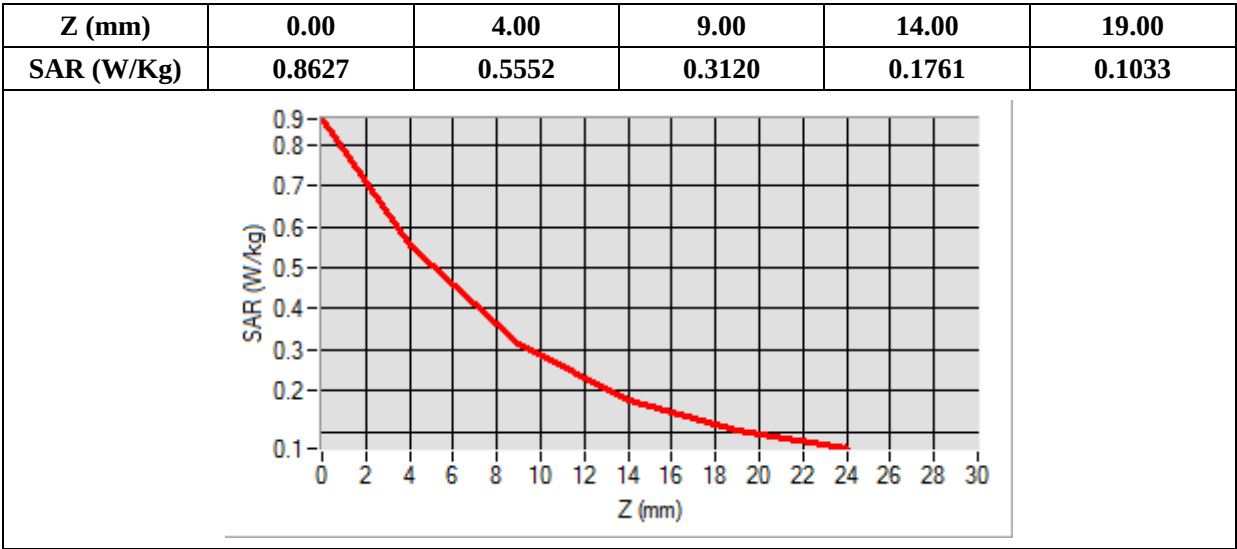
B. SAR Measurement Results

Frequency (MHz)	1852.400000
Relative Permittivity (real part)	53.390124
Conductivity (S/m)	1.533607
Power Variation (%)	0.820000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=18.00, Y=17.00
SAR Peak: 0.86 W/kg

SAR 10g (W/Kg)	0.270620
SAR 1g (W/Kg)	0.507403



MEASUREMENT 4

Type: Phone measurement (Complete)

Date of measurement: 2022-03-07

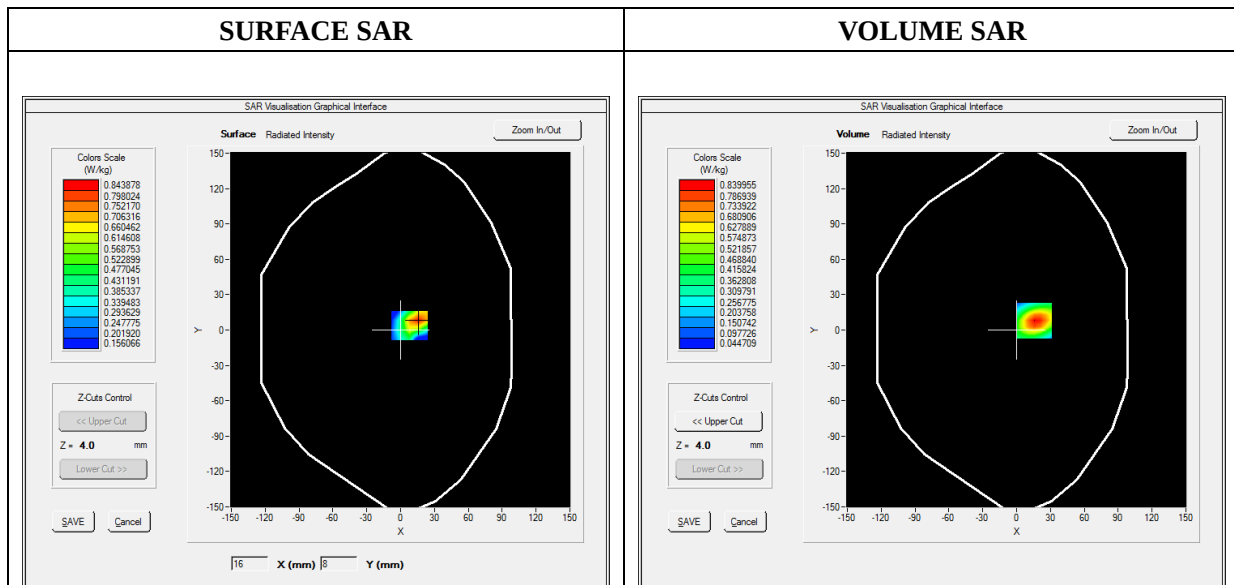
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

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

B. SAR Measurement Results

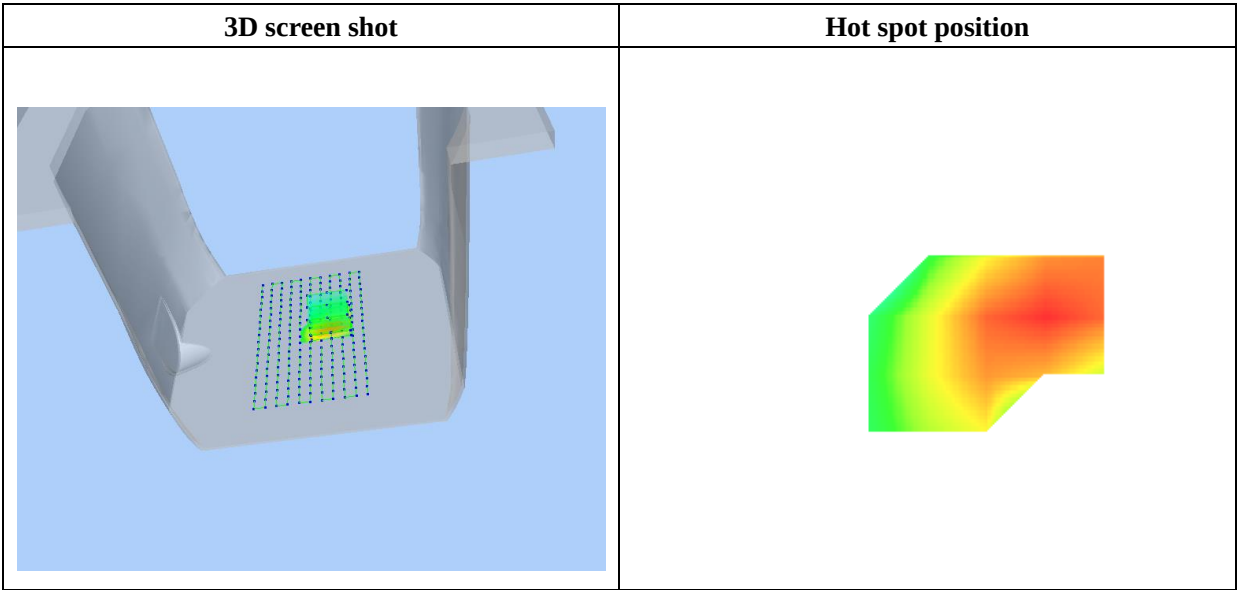
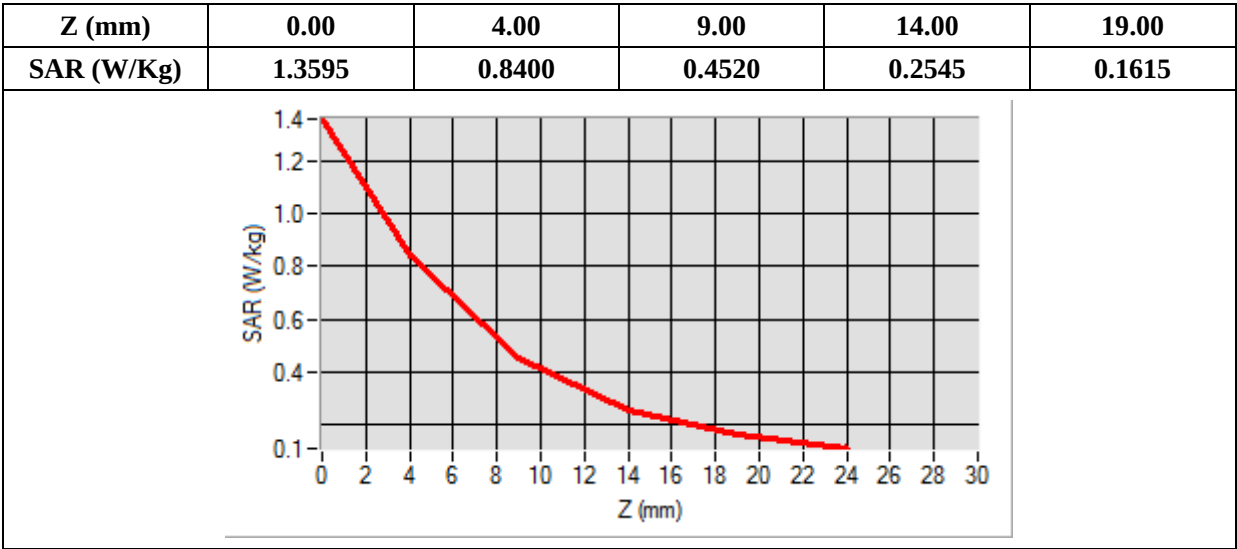
Frequency (MHz)	846.600000
Relative Permittivity (real part)	55.162275
Conductivity (S/m)	0.950987
Power Variation (%)	-1.200000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=16.00, Y=8.00

SAR Peak: 1.36 W/kg

SAR 10g (W/Kg)	0.408767
SAR 1g (W/Kg)	0.768474



MEASUREMENT 5

Type: Phone measurement (Complete)

Date of measurement: 2022-03-09

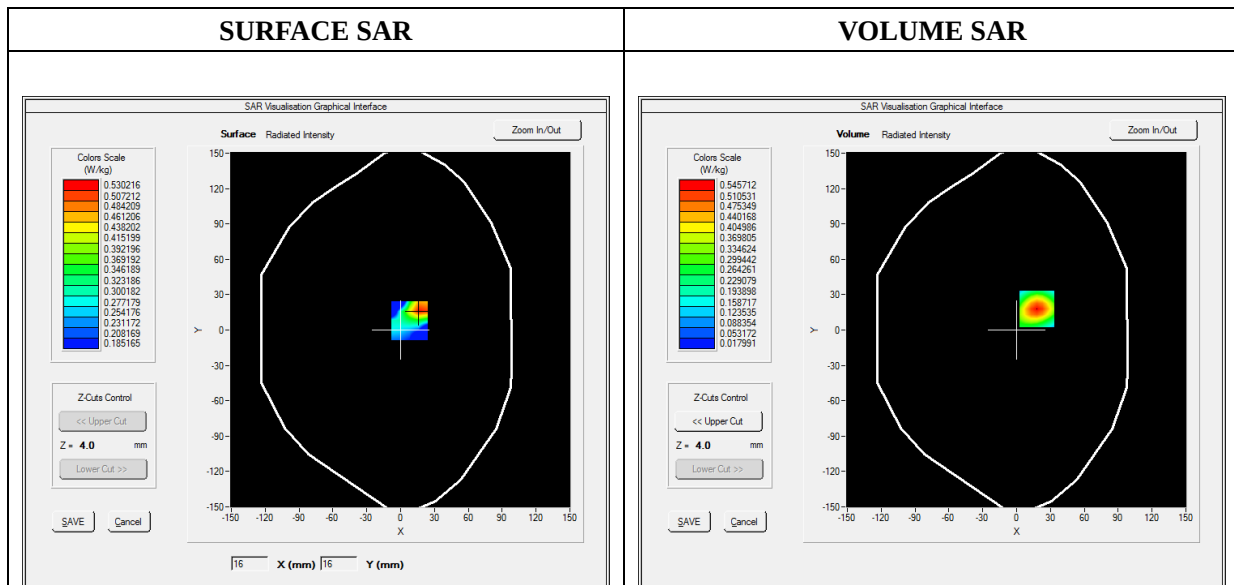
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

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

B. SAR Measurement Results

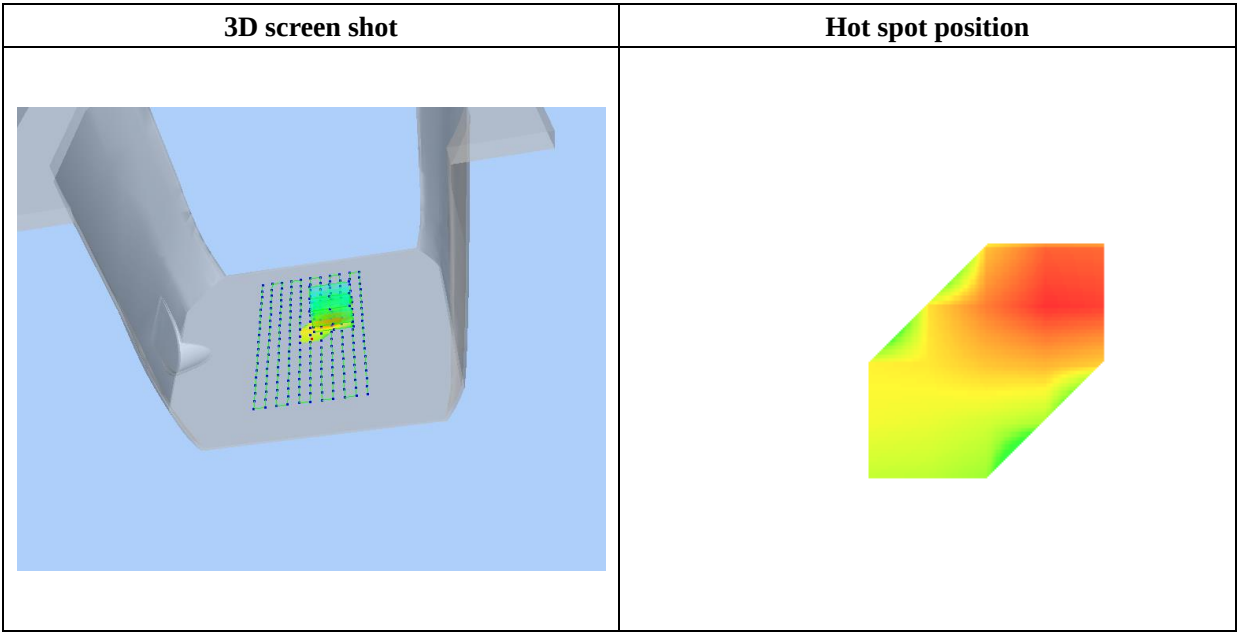
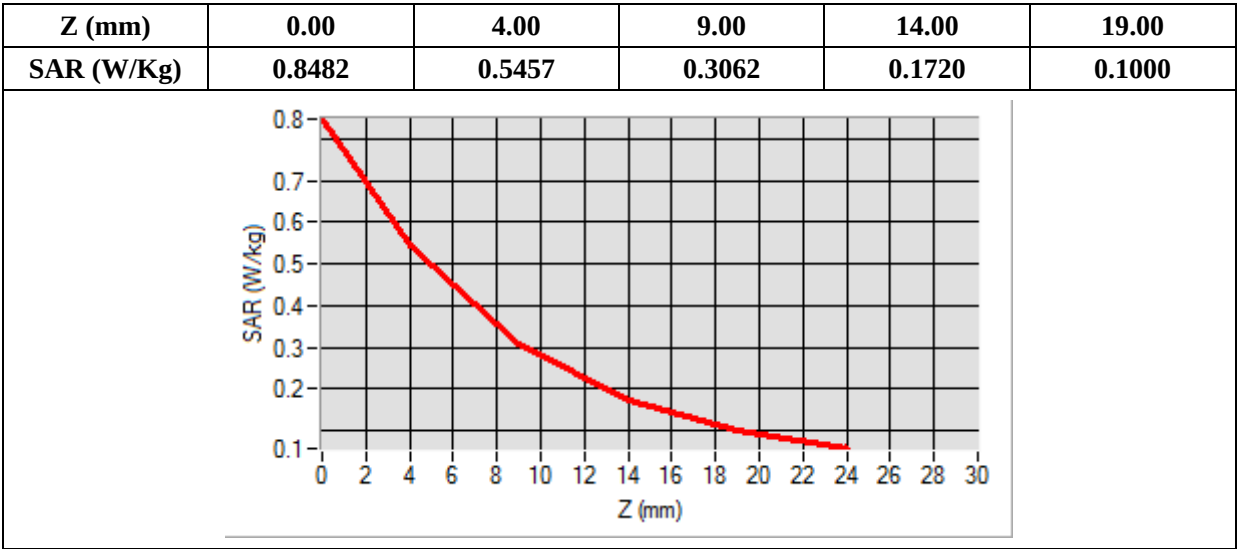
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	53.360124
Conductivity (S/m)	1.543697
Power Variation (%)	-1.340000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=18.00, Y=18.00

SAR Peak: 0.85 W/kg

SAR 10g (W/Kg)	0.262709
SAR 1g (W/Kg)	0.496739



MEASUREMENT 6

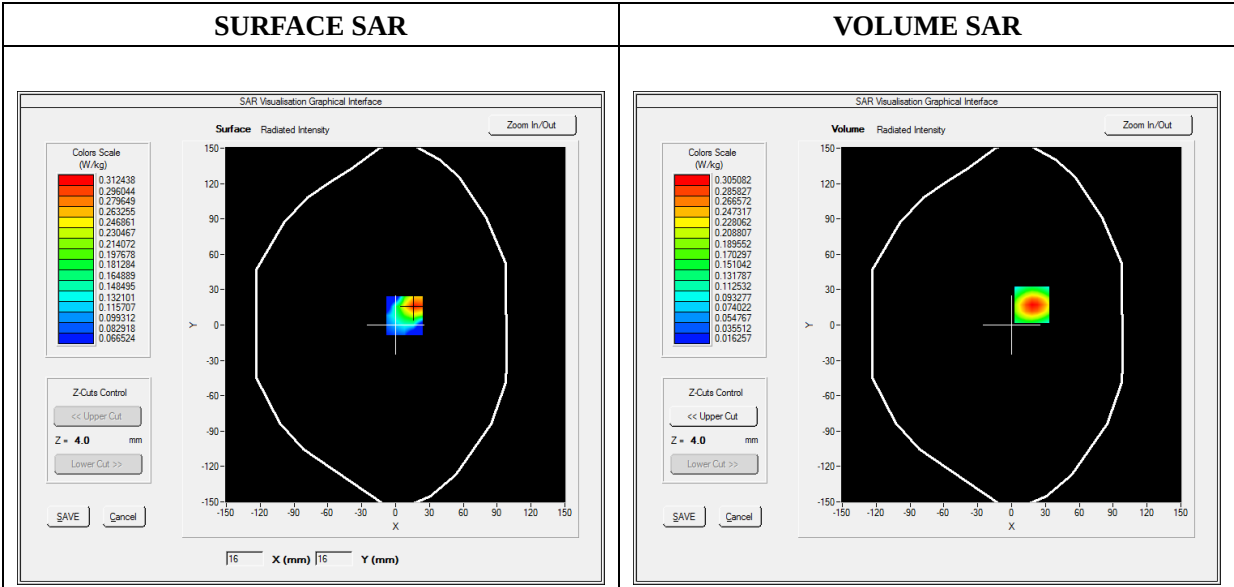
Type: Phone measurement (Complete)
Date of measurement: 2022-03-08
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 4
Channels	QPSK 20MHz 1RB, Middle
Signal	Duty Cycle 1:1

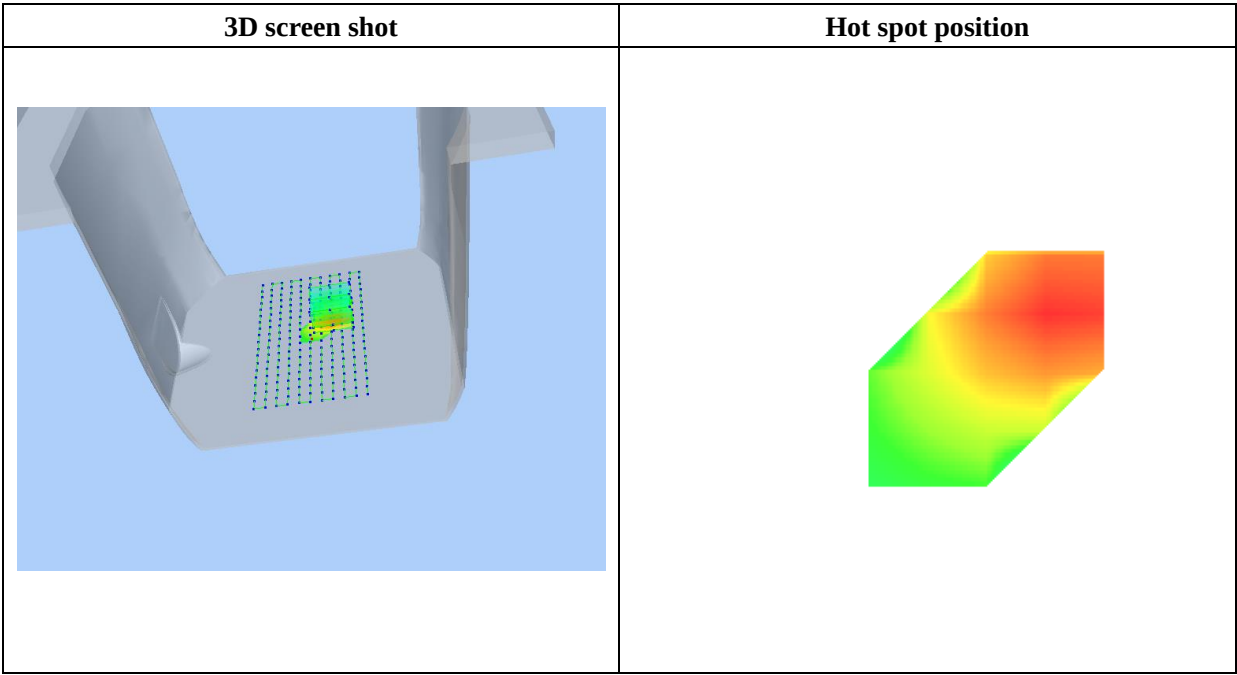
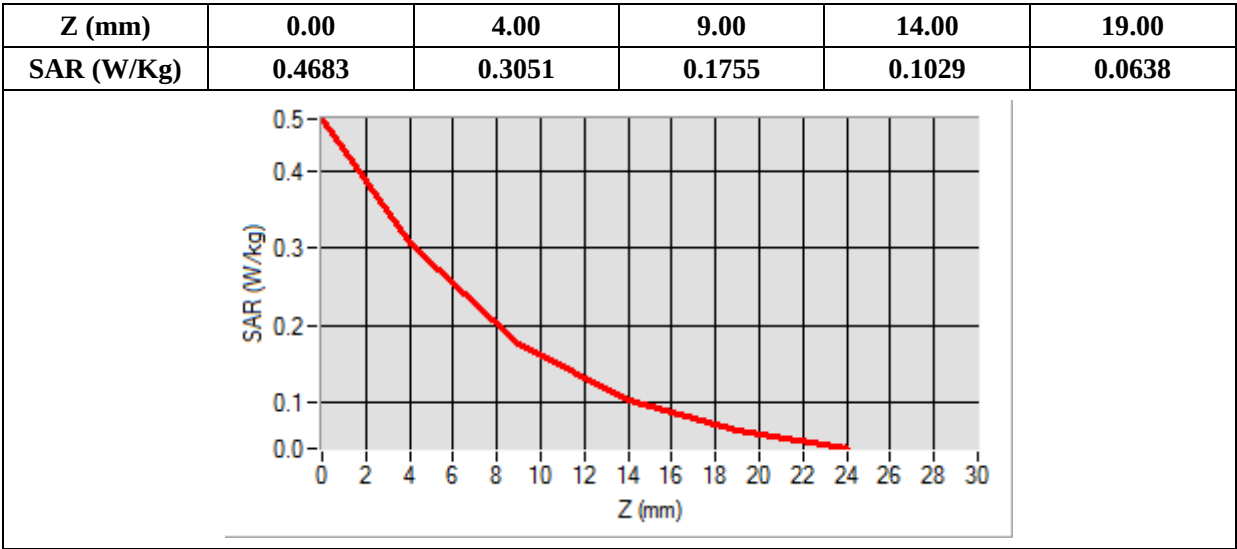
B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative Permittivity (real part)	53.422275
Conductivity (S/m)	1.460987
Power Variation (%)	0.080000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=18.00, Y=17.00
SAR Peak: 0.47 W/kg

SAR 10g (W/Kg)	0.153843
SAR 1g (W/Kg)	0.280522



MEASUREMENT 7

Type: Phone measurement (Complete)

Date of measurement: 2022-03-07

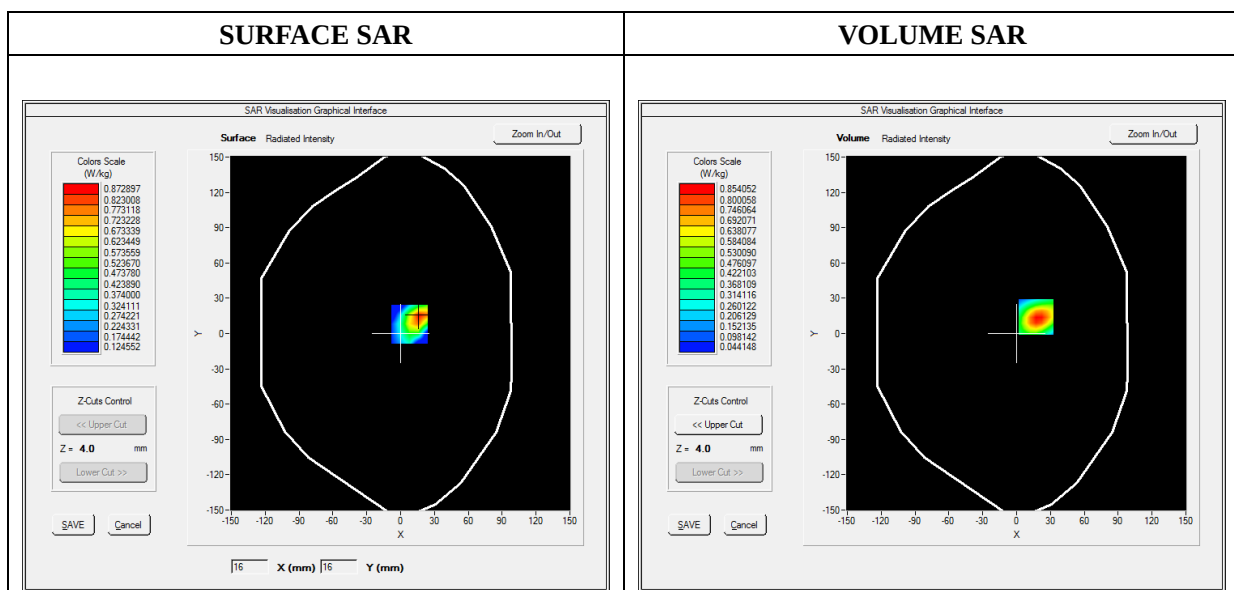
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

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

B. SAR Measurement Results

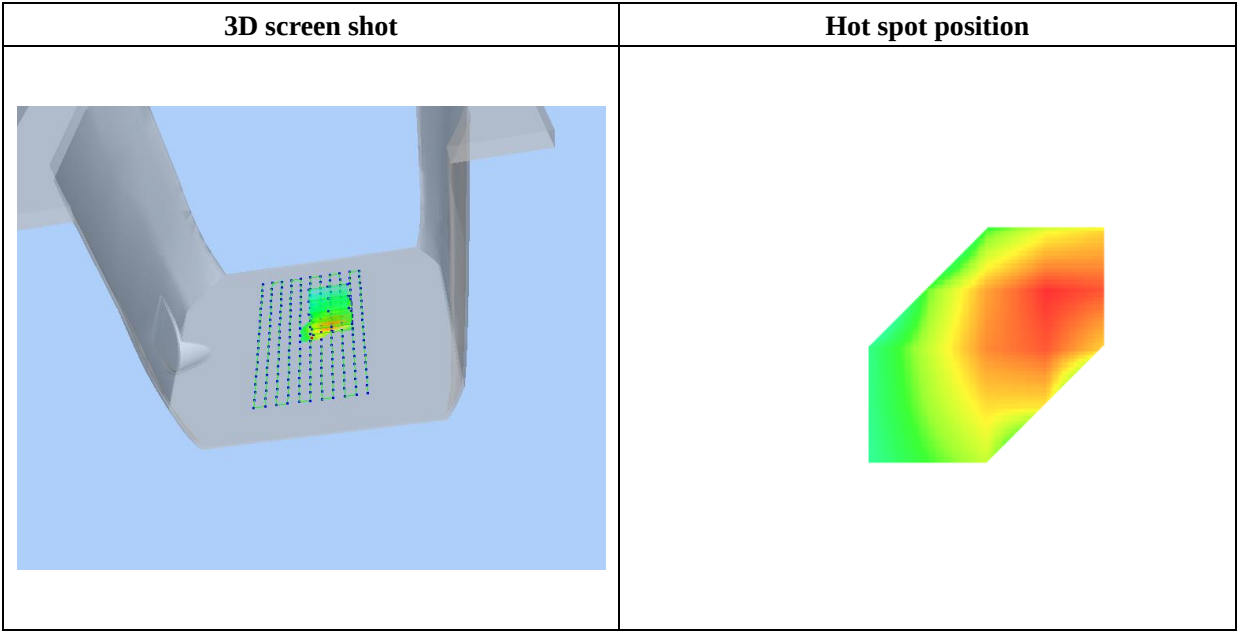
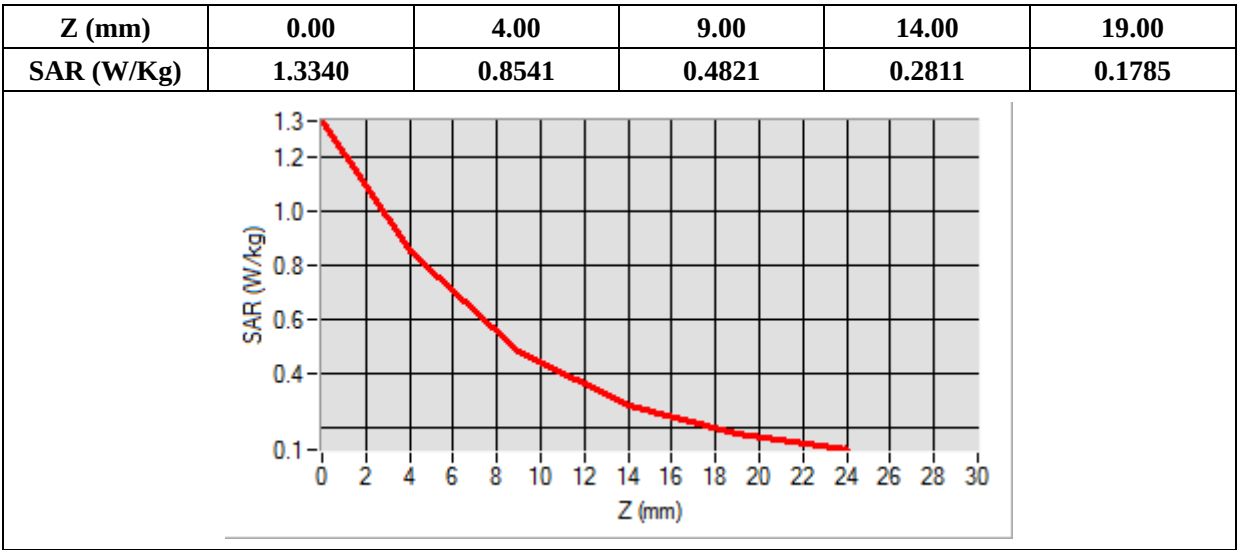
Frequency (MHz)	836.5000000
Relative Permittivity (real part)	55.162457
Conductivity (S/m)	0.951245
Power Variation (%)	-0.870000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=17.00, Y=14.00

SAR Peak: 1.35 W/kg

SAR 10g (W/Kg)	0.425521
SAR 1g (W/Kg)	0.788102



MEASUREMENT 8

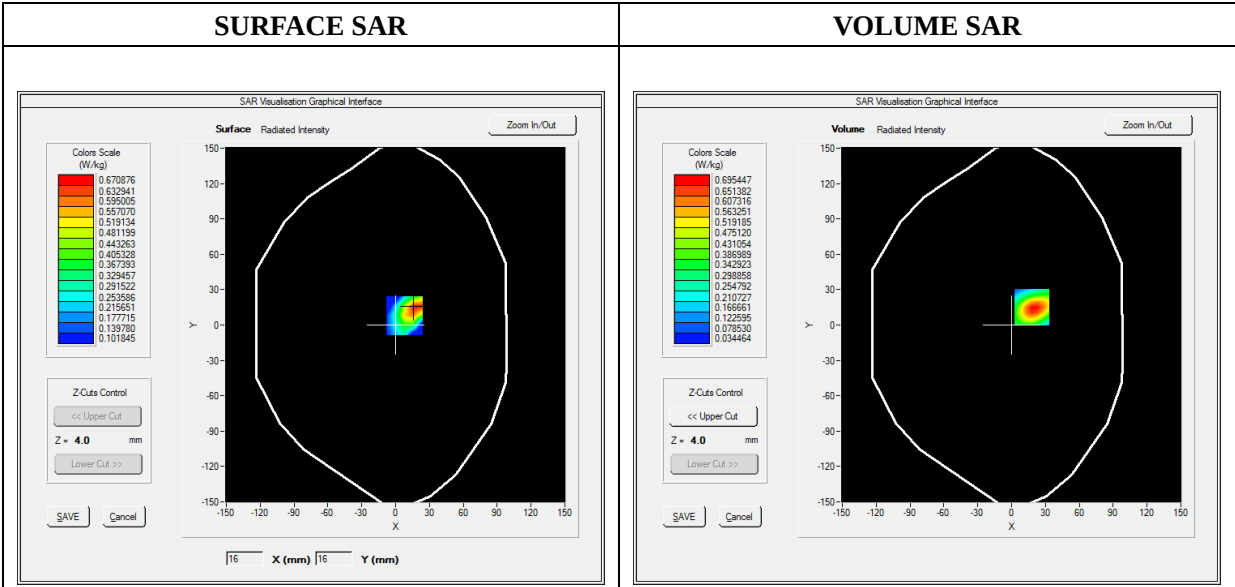
Type: Phone measurement (Complete)
Date of measurement: 2022-03-07
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

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

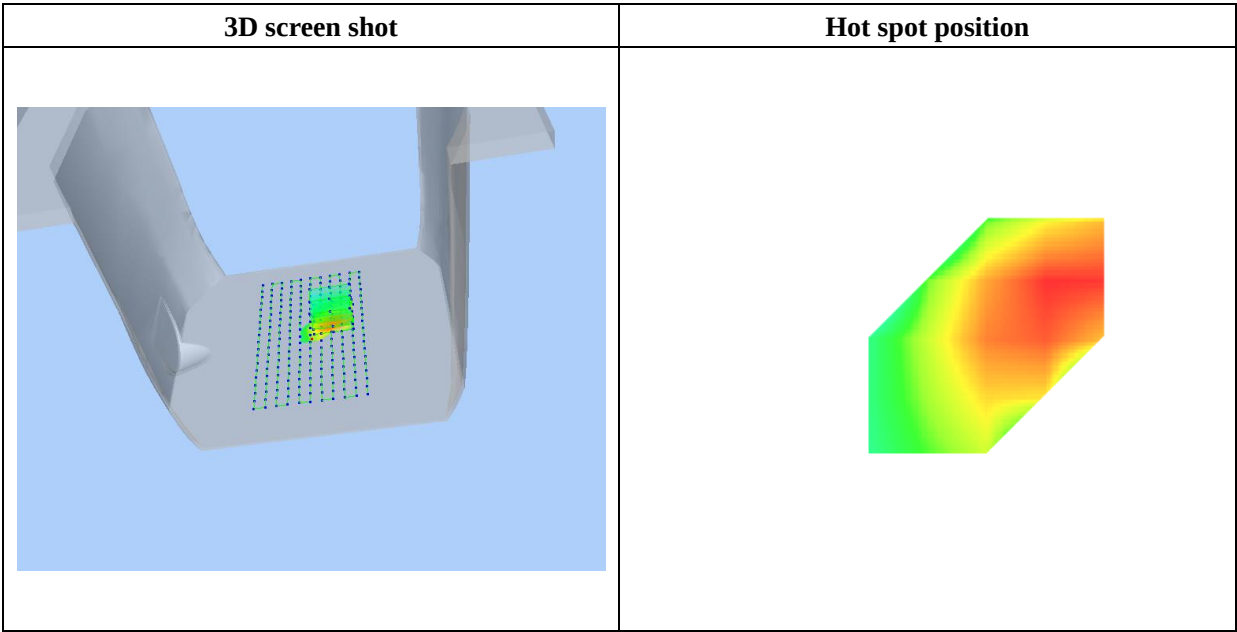
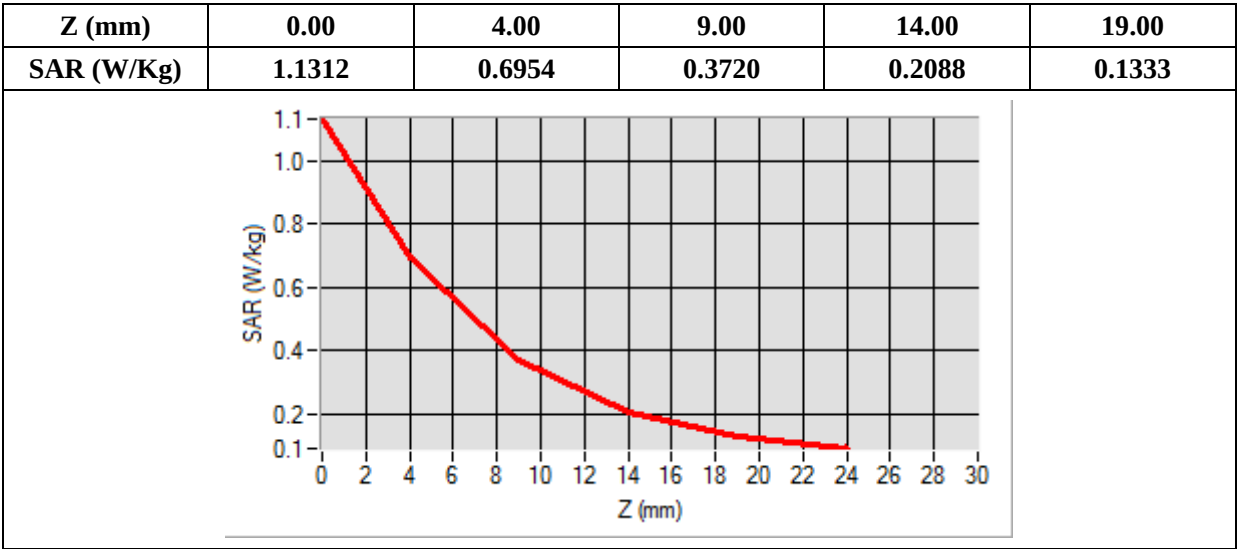
B. SAR Measurement Results

Frequency (MHz)	829.000000
Relative Permittivity (real part)	55.162457
Conductivity (S/m)	0.951245
Power Variation (%)	0.720000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=18.00, Y=15.00
SAR Peak: 1.15 W/kg

SAR 10g (W/Kg)	0.340160
SAR 1g (W/Kg)	0.645110



MEASUREMENT 9

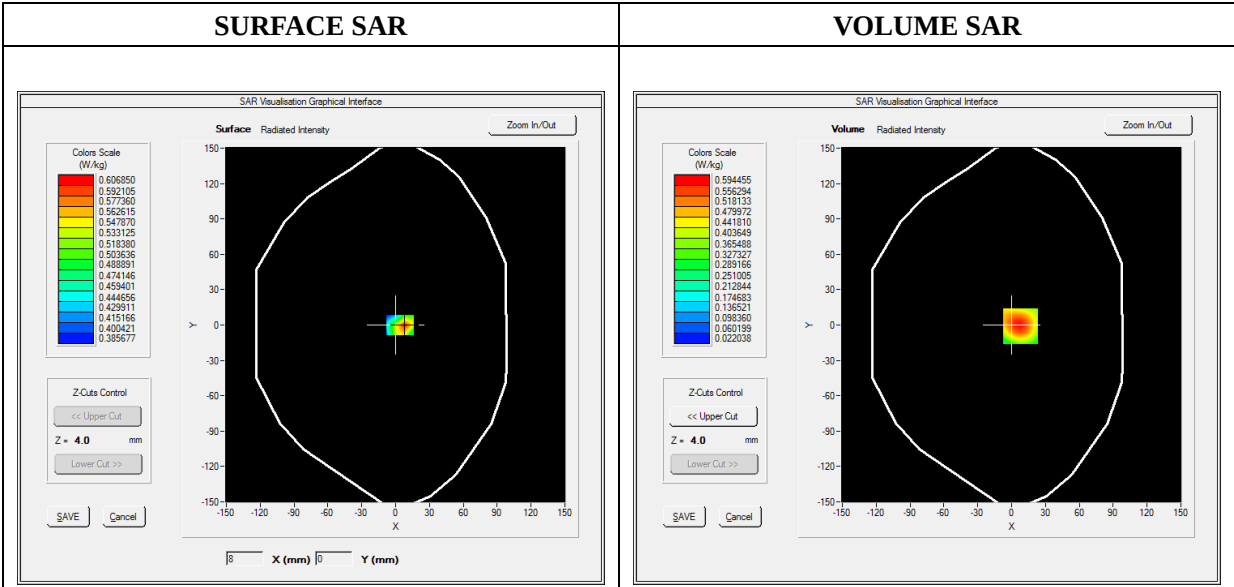
Type: Phone measurement (Complete)
Date of measurement: 2022-03-10
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

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

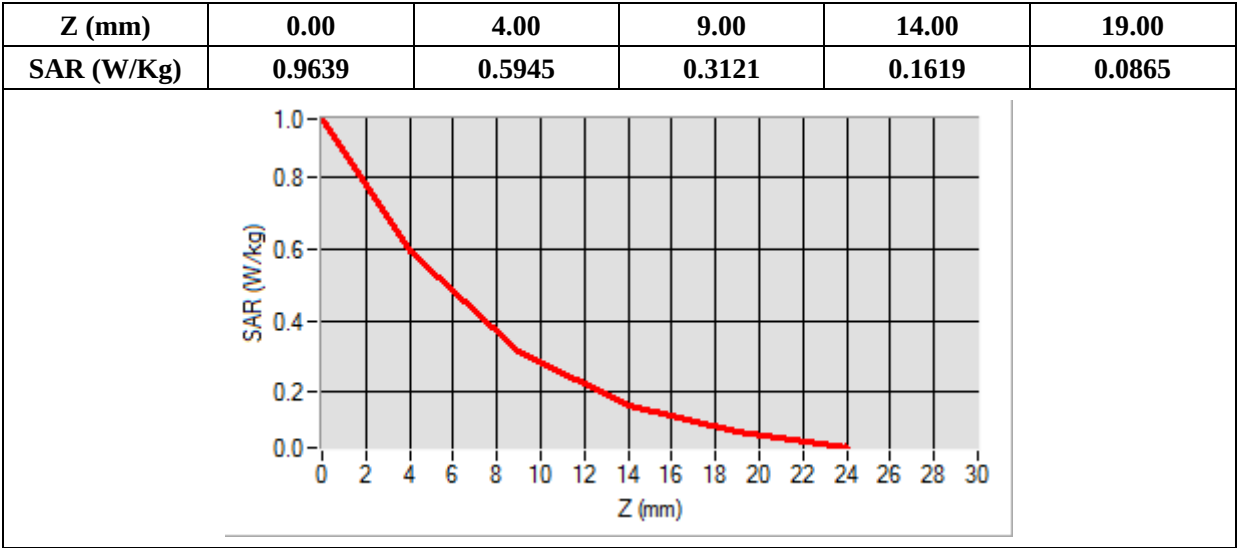
B. SAR Measurement Results

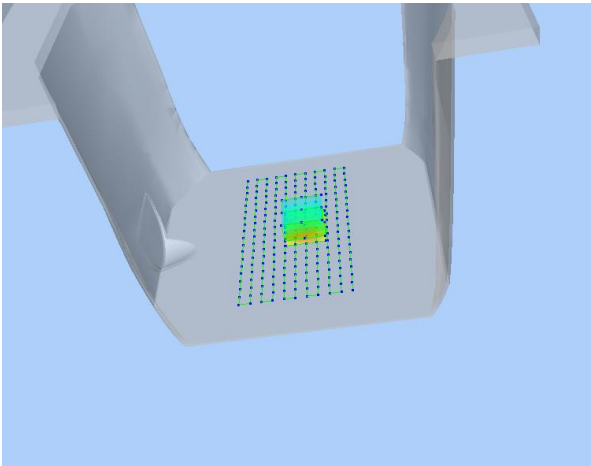
Frequency (MHz)	2510.000000
Relative Permittivity (real part)	52.430666
Conductivity (S/m)	2.150182
Power Variation (%)	-0.700000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=8.00, Y=-1.00
SAR Peak: 0.97 W/kg

SAR 10g (W/Kg)	0.298286
SAR 1g (W/Kg)	0.556494



3D screen shot	Hot spot position
	

MEASUREMENT 10

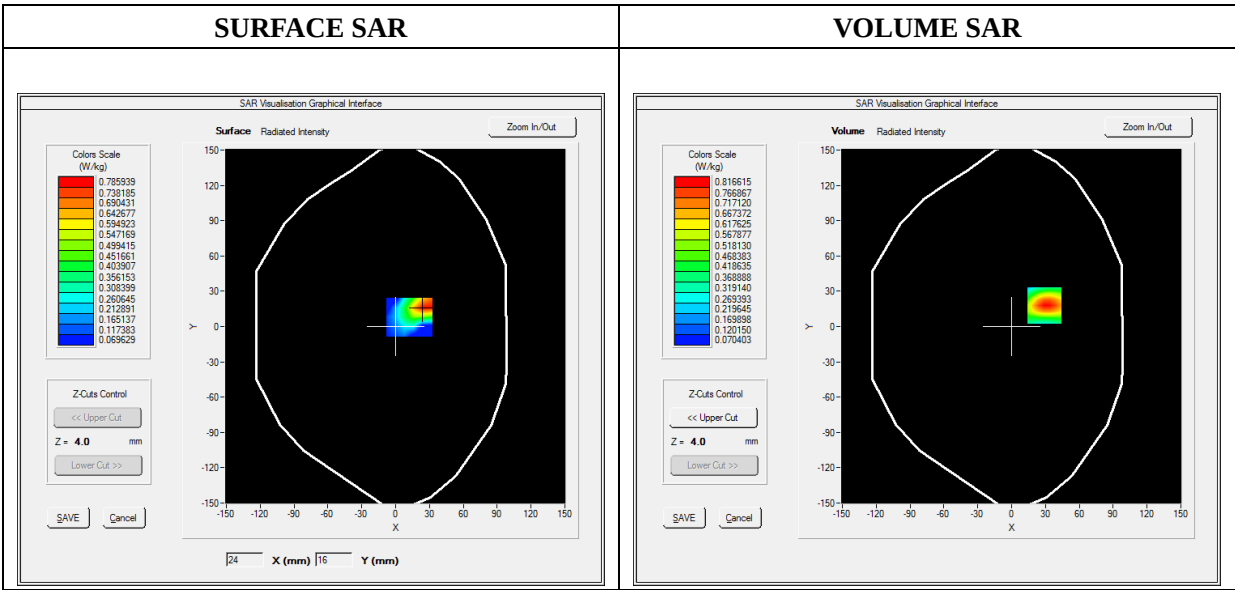
Type: Phone measurement (Complete)
Date of measurement: 2022-03-07
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 12
Channels	QPSK, 1.4MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

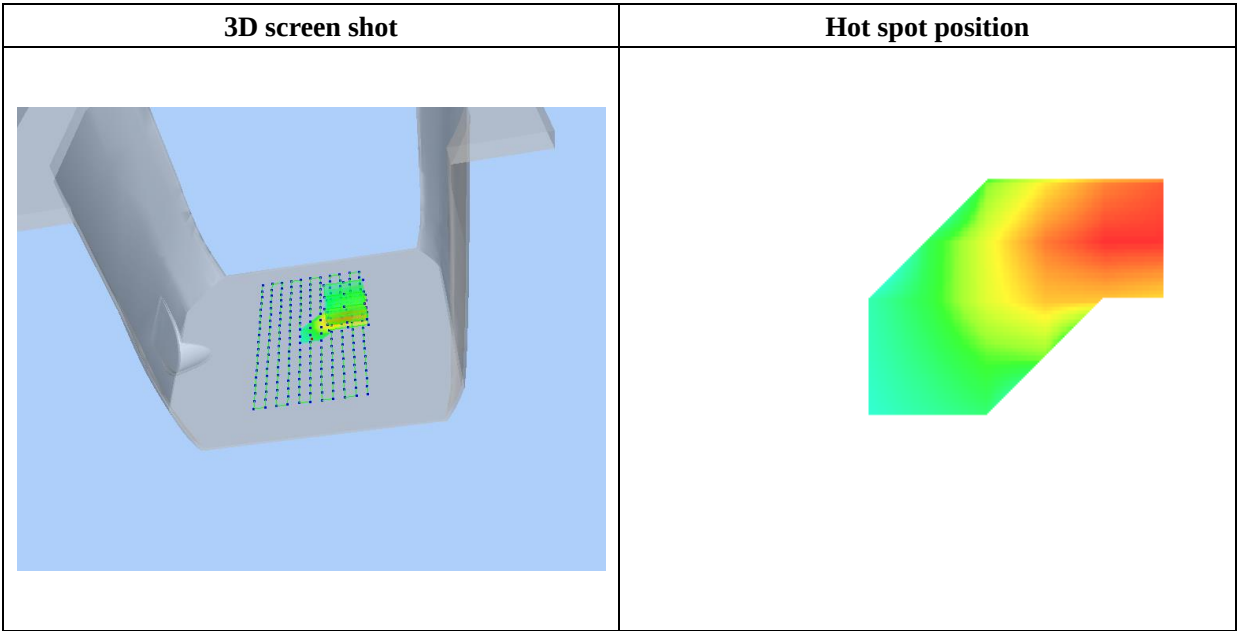
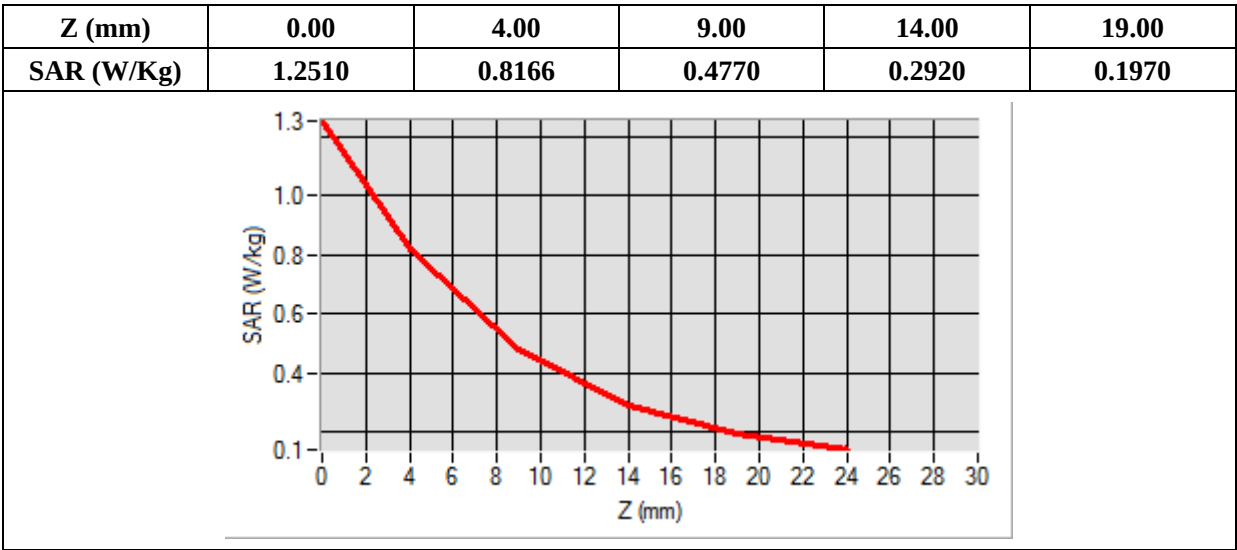
Frequency (MHz)	715.300000
Relative Permittivity (real part)	55.384668
Conductivity (S/m)	0.943696
Power Variation (%)	1.750000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=29.00, Y=18.00

SAR Peak: 1.25 W/kg

SAR 10g (W/Kg)	0.442341
SAR 1g (W/Kg)	0.770760



MEASUREMENT 11

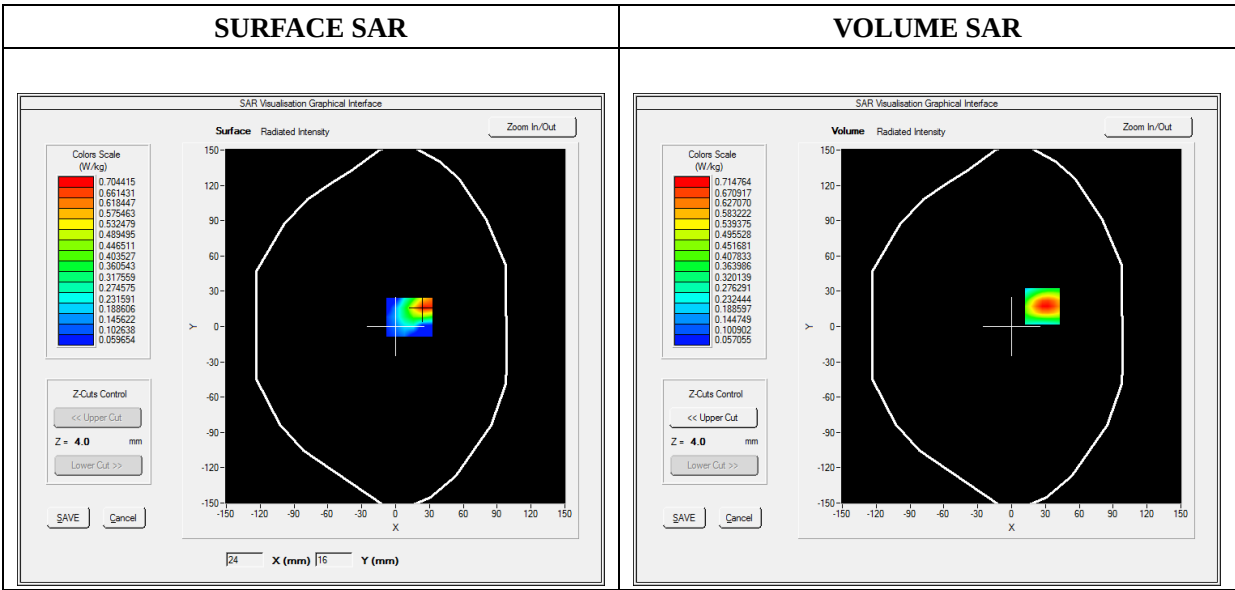
Type: Phone measurement (Complete)
Date of measurement: 2022-03-07
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

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

B. SAR Measurement Results

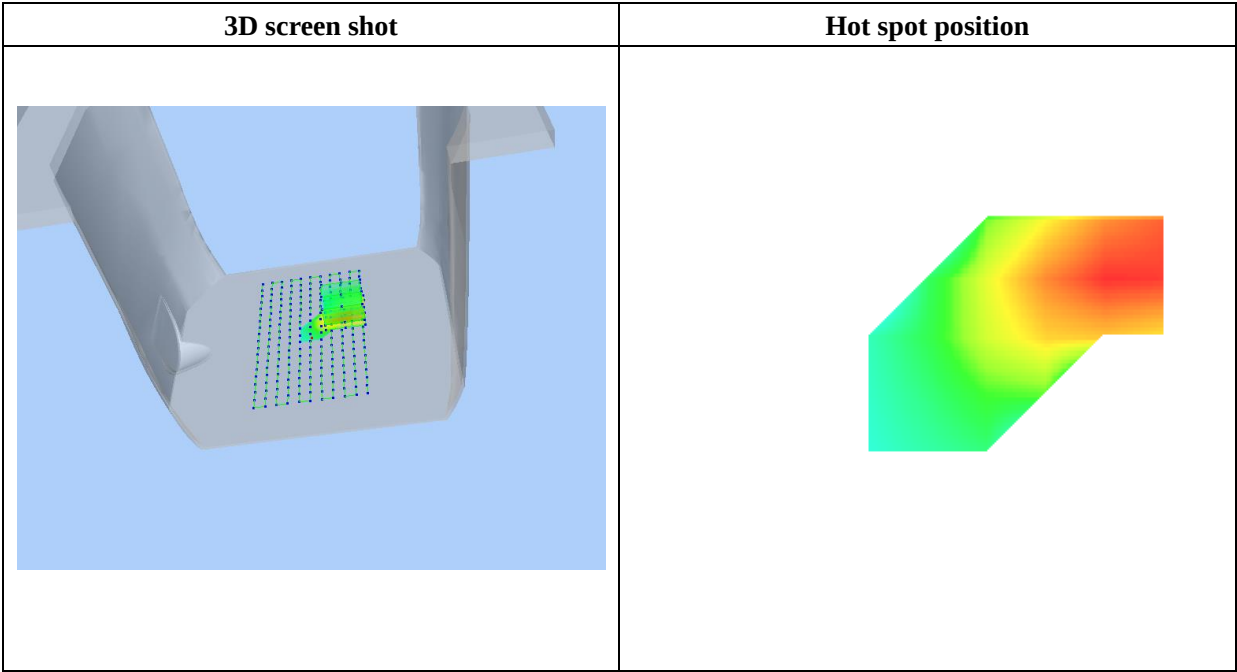
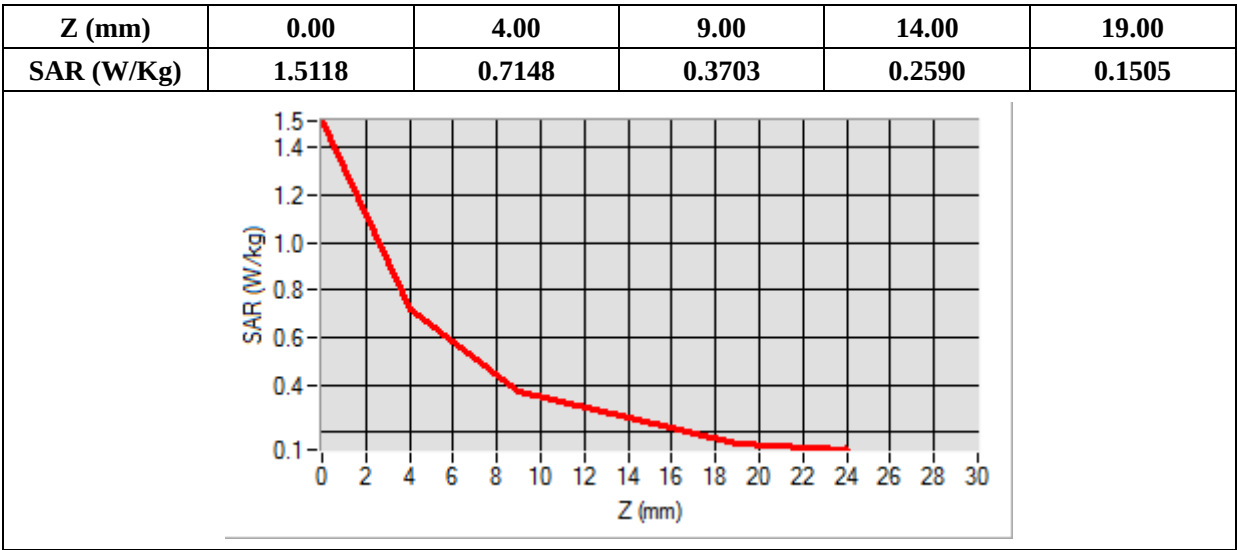
Frequency (MHz)	711.000000
Relative Permittivity (real part)	55.383668
Conductivity (S/m)	0.943696
Power Variation (%)	-1.050000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=27.00, Y=17.00

SAR Peak: 1.11 W/kg

SAR 10g (W/Kg)	0.386947
SAR 1g (W/Kg)	0.677799



MEASUREMENT 12

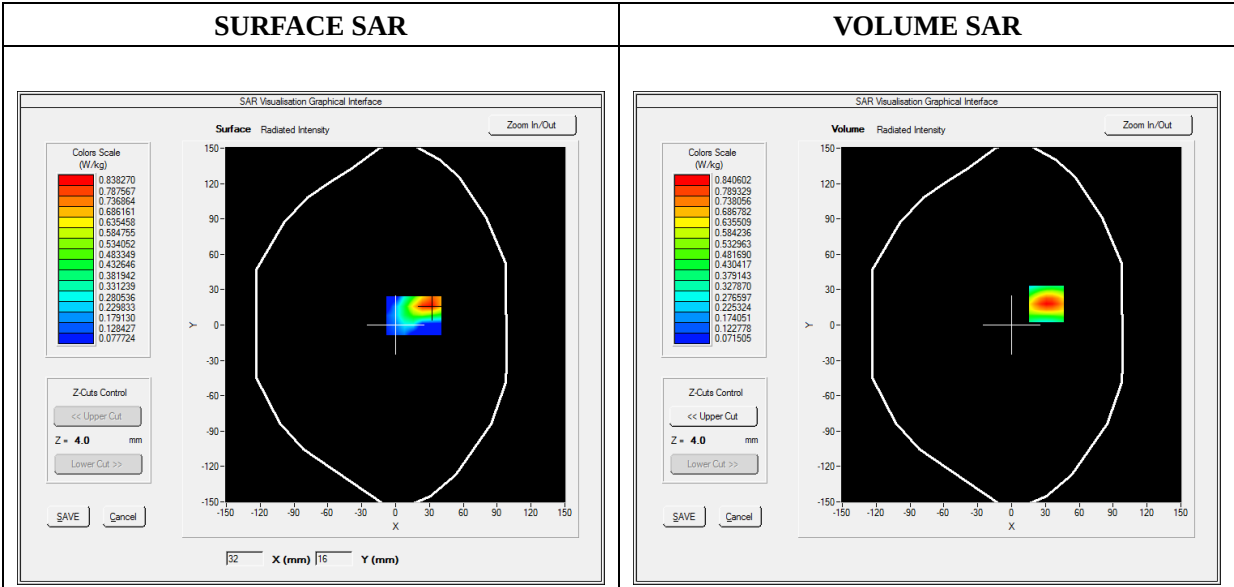
Type: Phone measurement (Complete)
Date of measurement: 2022-03-07
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 17
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

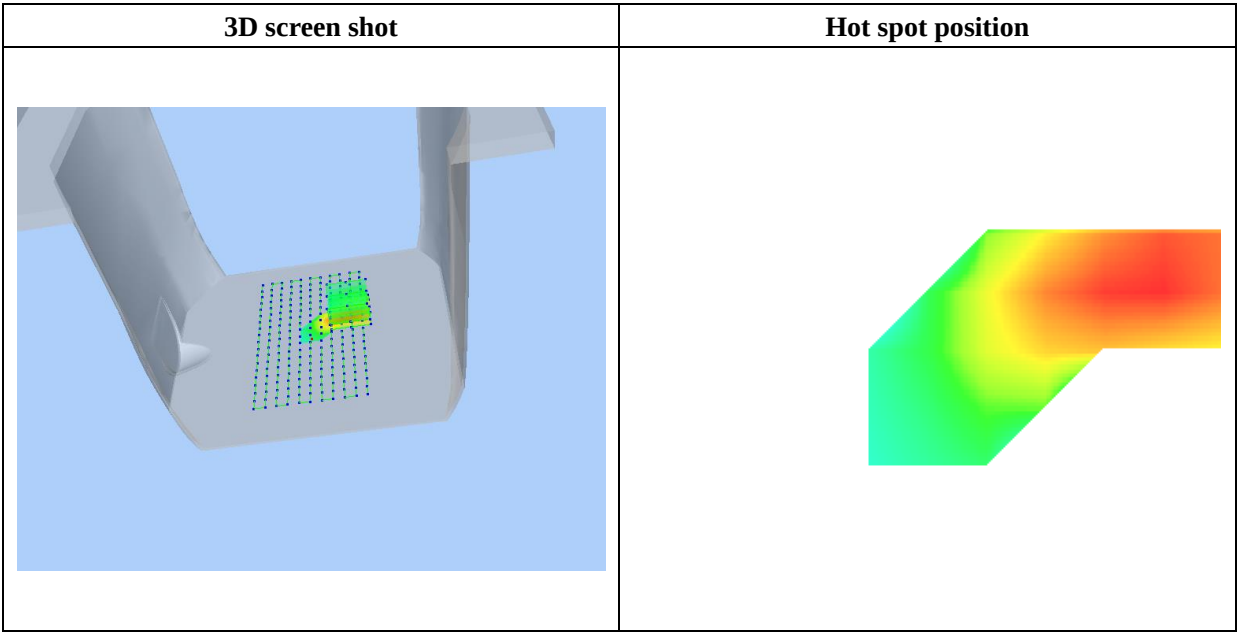
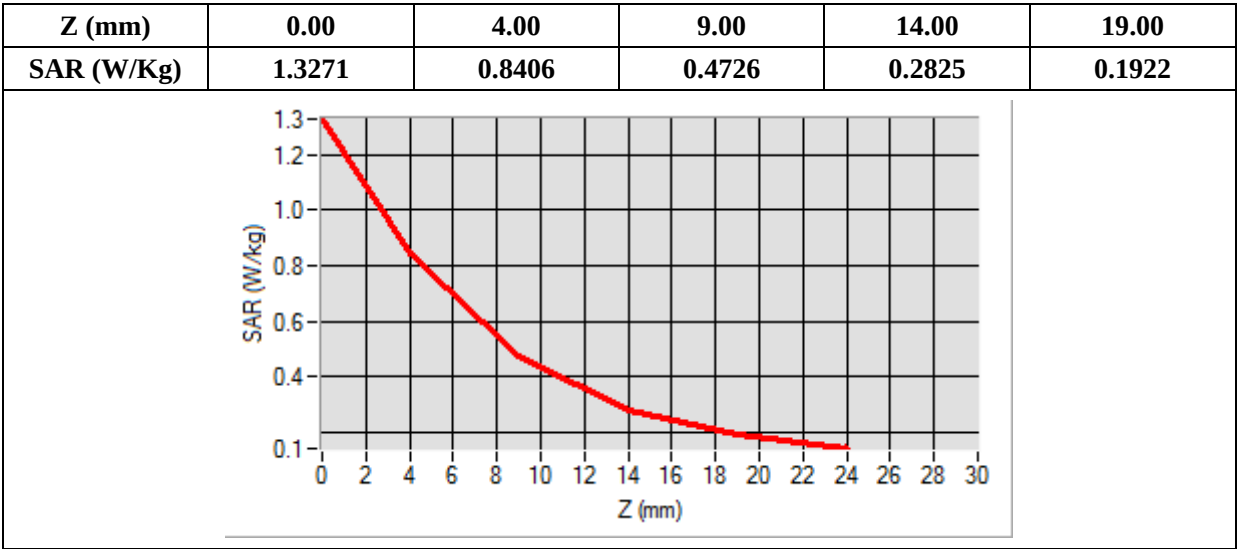
B. SAR Measurement Results

Frequency (MHz)	709.000000
Relative Permittivity (real part)	55.383668
Conductivity (S/m)	0.943696
Power Variation (%)	-1.050000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=31.00, Y=18.00
SAR Peak: 1.33 W/kg

SAR 10g (W/Kg)	0.450192
SAR 1g (W/Kg)	0.792686



MEASUREMENT 12

Type: Phone measurement (Complete)

Date of measurement: 2022-03-10

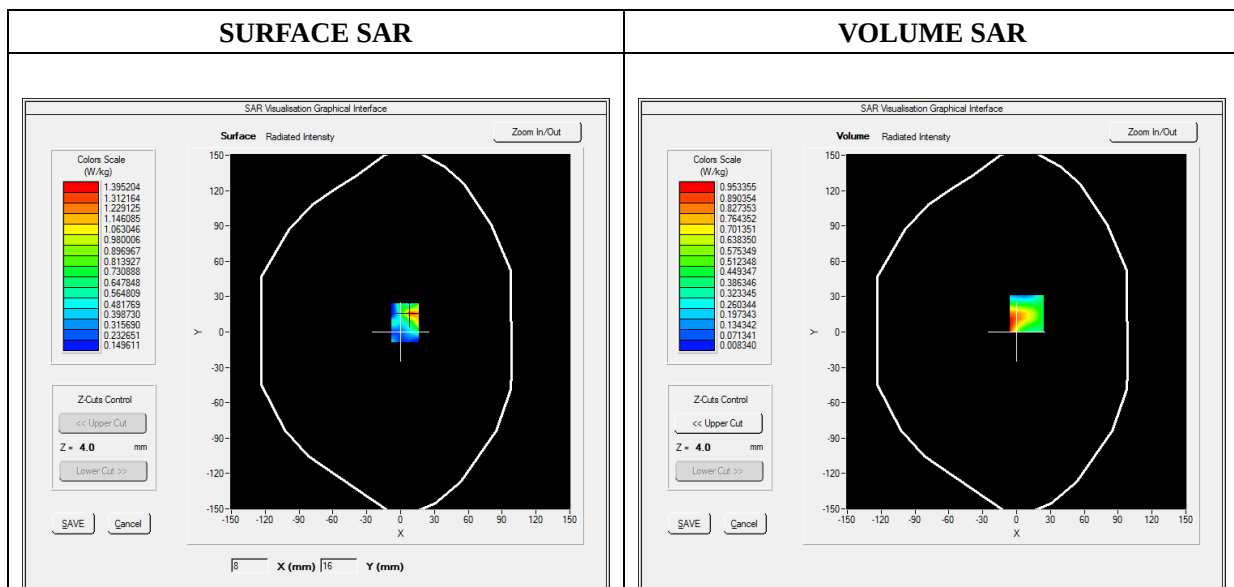
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 41
Channels	QPSK, 10MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

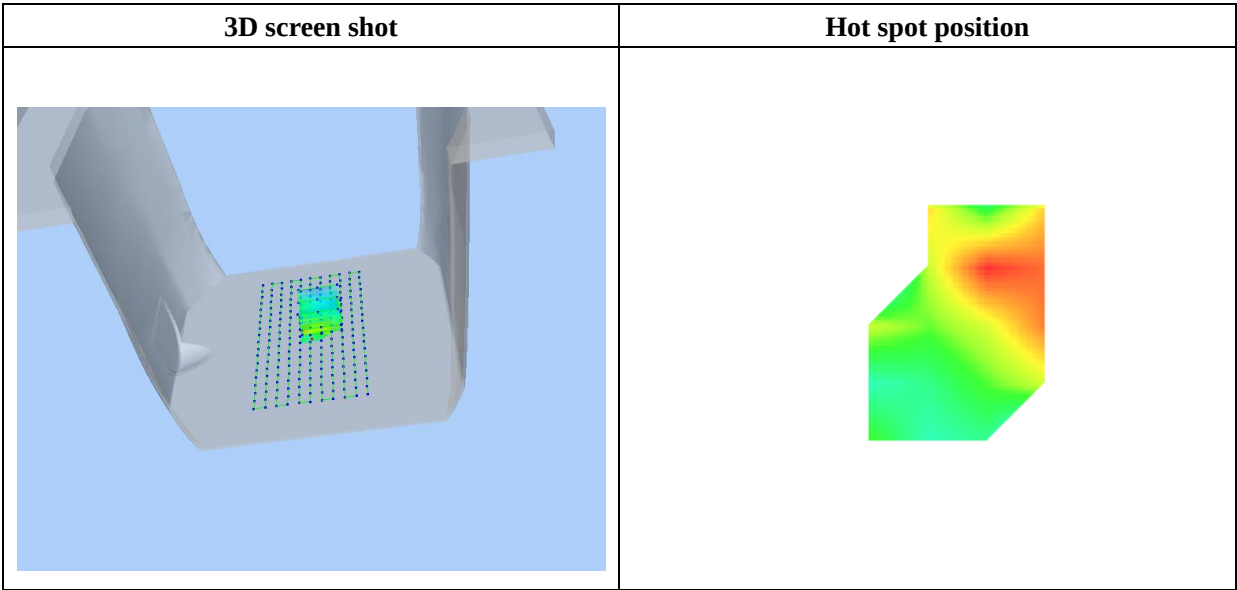
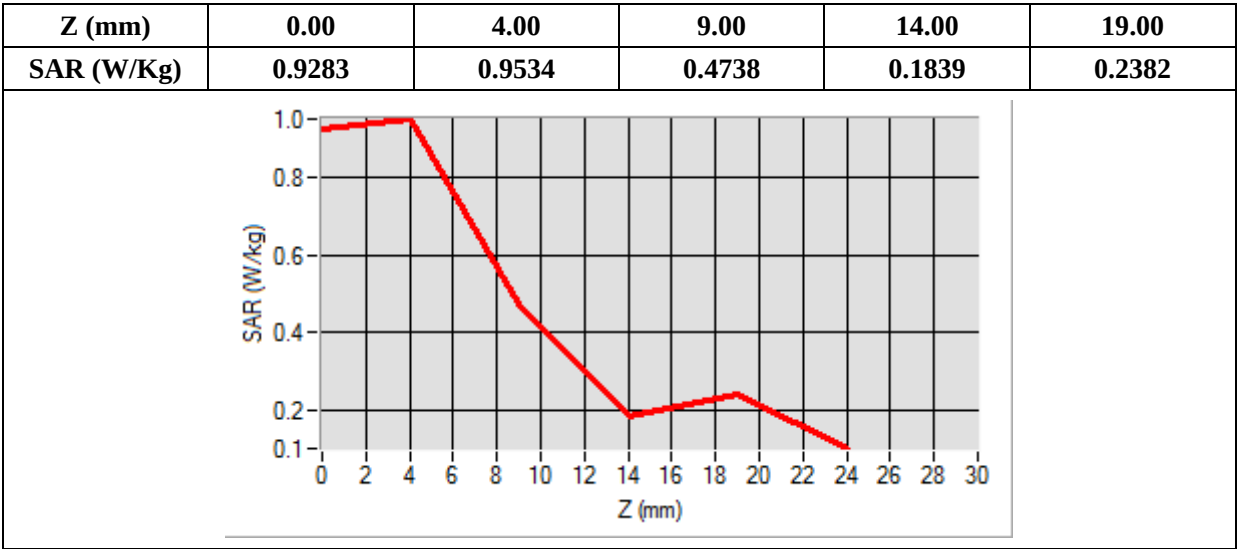
Frequency (MHz)	2506.000000
Relative Permittivity (real part)	52.431866
Conductivity (S/m)	2.153696
Power Variation (%)	-1.050000
Ambient Temperature	22.0
Liquid Temperature	22.2



Maximum location: X=9.00, Y=16.00

SAR Peak: 2.14 W/kg

SAR 10g (W/Kg)	0.381758
SAR 1g (W/Kg)	0.789681



MEASUREMENT 14

Type: Phone measurement (Complete)
Date of measurement: 2022-03-22
Measurement duration: 12 minutes 3 seconds

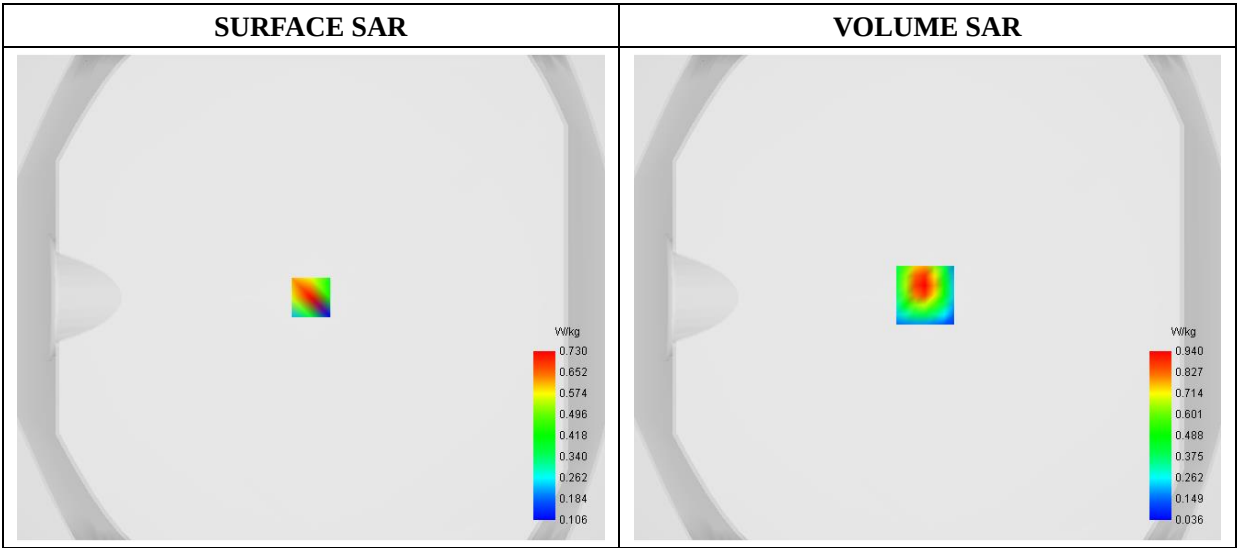
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Left
Band	WiFi(5.2GHz)_802.11n (HT40)
Channels	High
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5230.000000
Relative Permittivity (real part)	49.513299
Conductivity (S/m)	5.294147
Power Variation (%)	-1.620000
Ambient Temperature	21.0
Liquid Temperature	21.0

C. SAR Surface and Volume



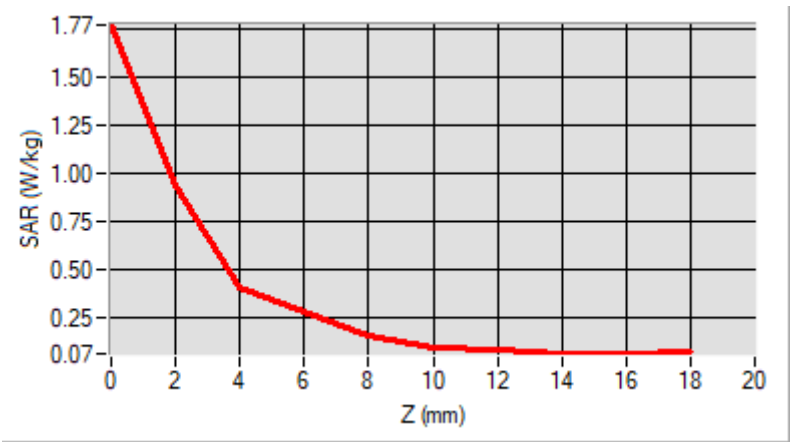
Maximum location: X=-1.00, Y=1.00

D. SAR 1g & 10g

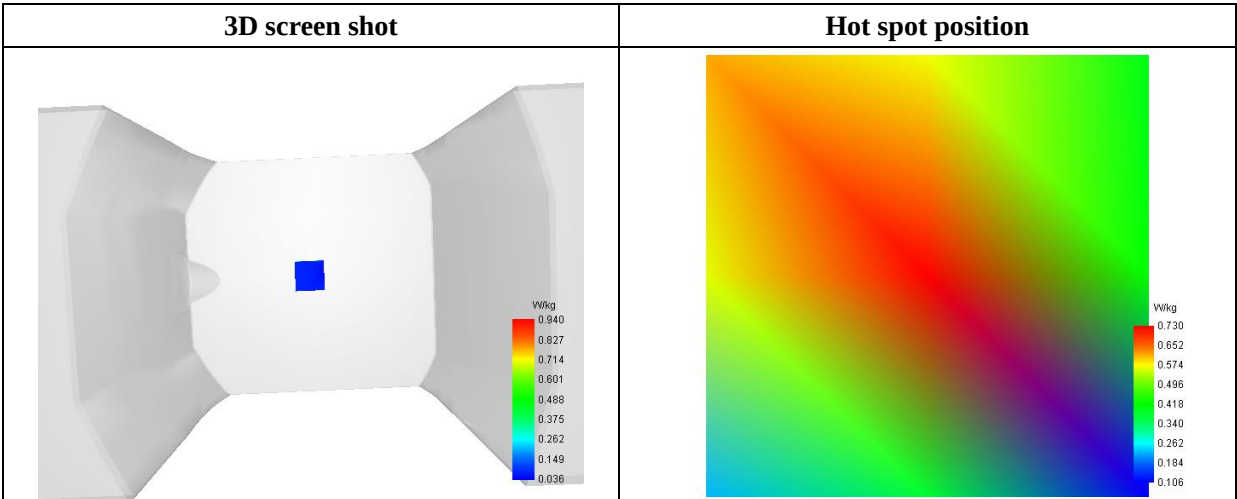
SAR 10g (W/Kg)	0.207019
SAR 1g (W/Kg)	0.537931

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	1.7744	0.9405	0.4068	0.2813	0.1555	0.0986	0.0845	0.0650	0.0675



F. 3D Image



MEASUREMENT 15

Type: Phone measurement (Complete)
Date of measurement: 2022-03-22
Measurement duration: 12 minutes 3 seconds

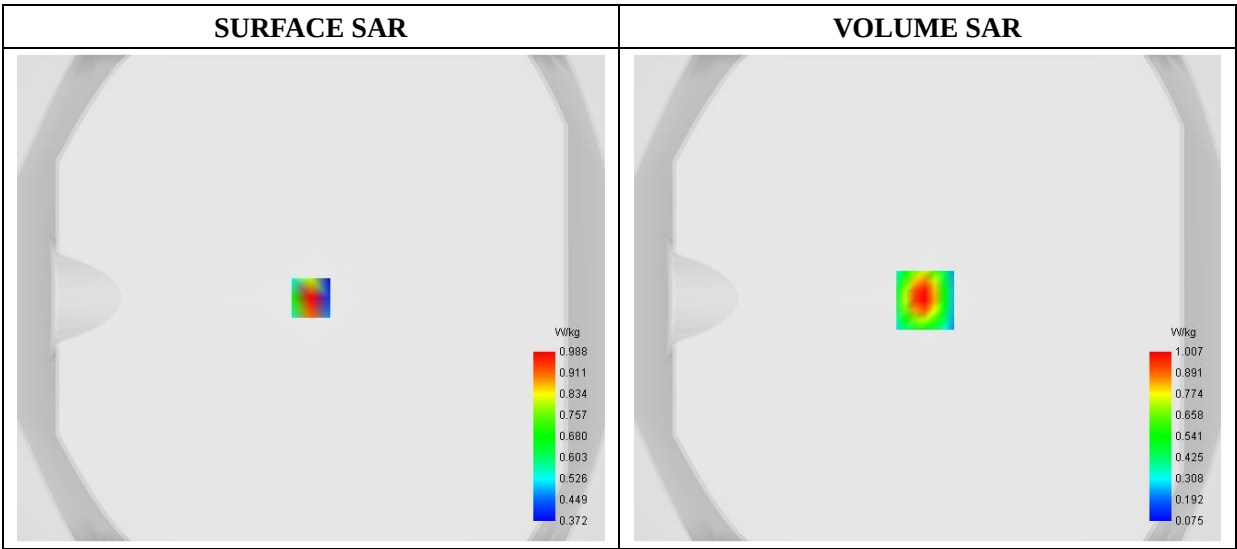
A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	5825.000000
Relative Permittivity (real part)	48.340216
Conductivity (S/m)	6.013421
Power Variation (%)	-1.830000
Ambient Temperature	21.0
Liquid Temperature	21.0

C. SAR Surface and Volume



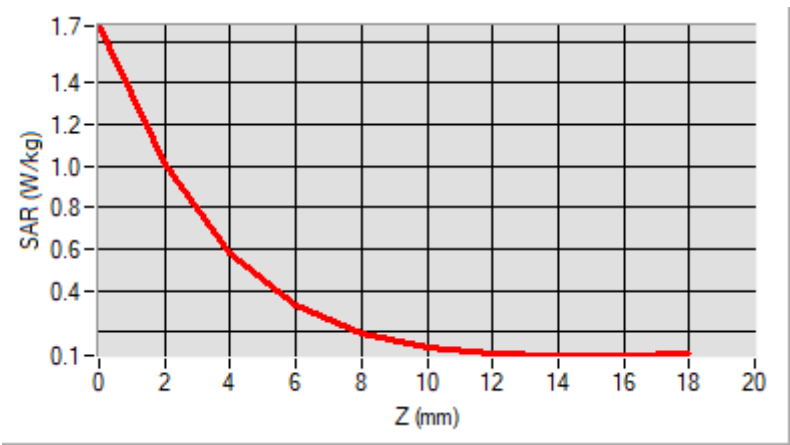
Maximum location: X=-1.00, Y=-1.00

D. SAR 1g & 10g

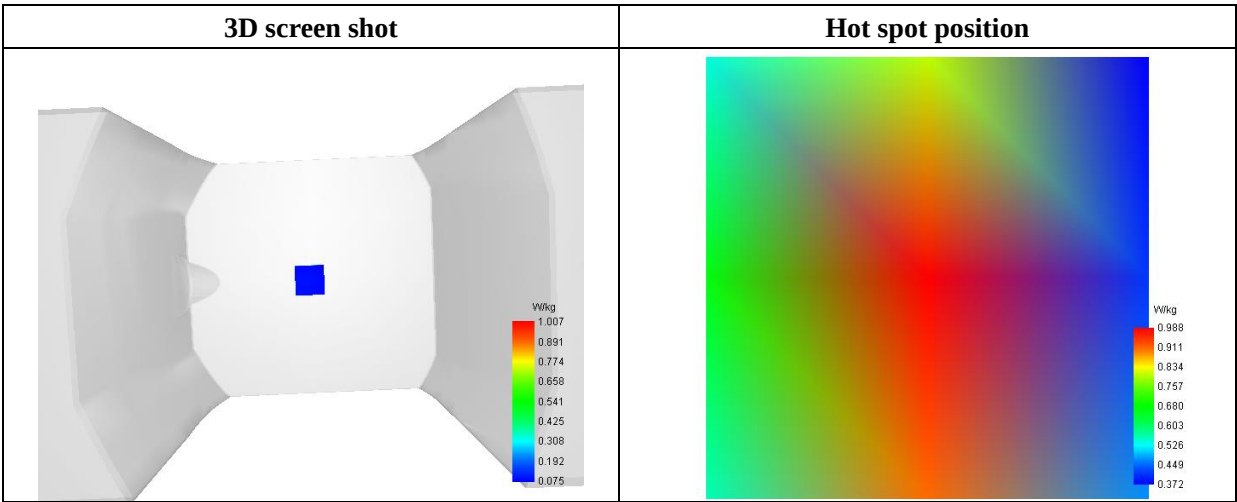
SAR 10g (W/Kg)	0.243063
SAR 1g (W/Kg)	0.590285

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	1.6757	1.0075	0.5804	0.3290	0.1954	0.1280	0.0970	0.0861	0.0866



F. 3D Image



MEASUREMENT 16

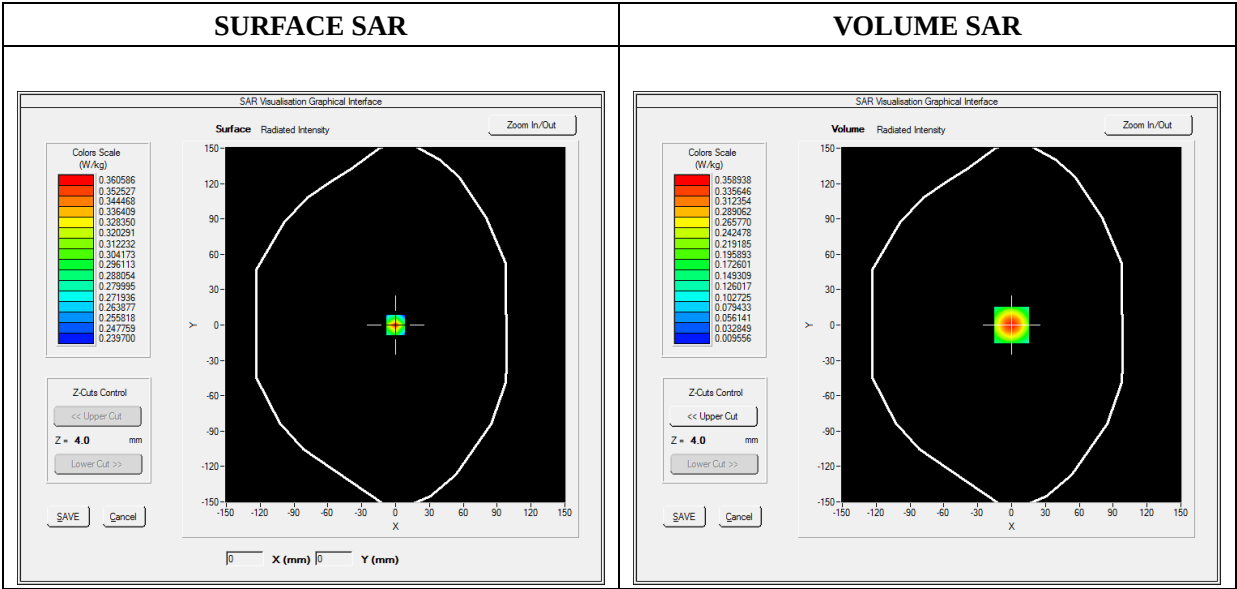
Type: Phone measurement (Complete)
Date of measurement: 2022-03-11
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

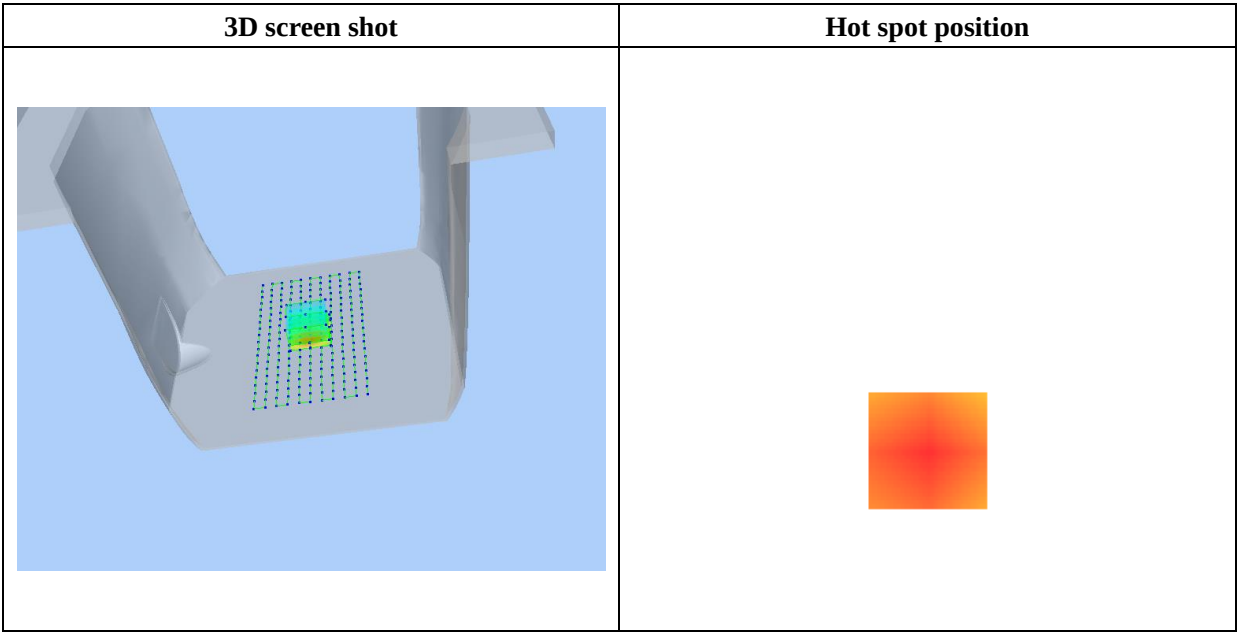
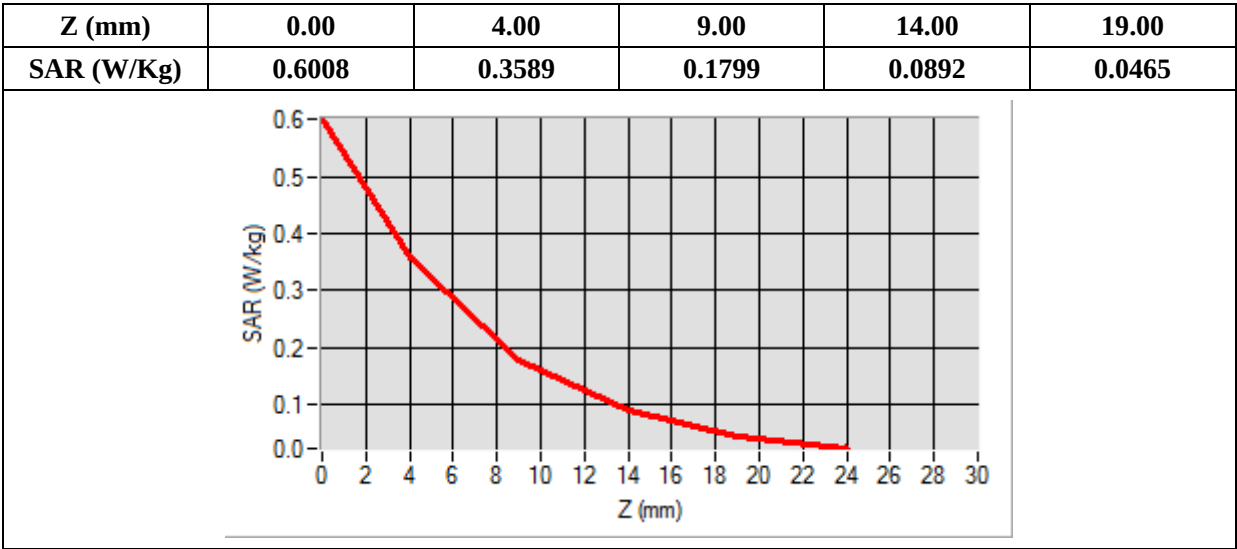
Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WiFi_802.11b
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative Permittivity (real part)	52.642687
Conductivity (S/m)	1.921572
Power Variation (%)	-0.450000
Ambient Temperature	21.2
Liquid Temperature	21.2



SAR 10g (W/Kg)	0.166040
SAR 1g (W/Kg)	0.328656



MEASUREMENT 17

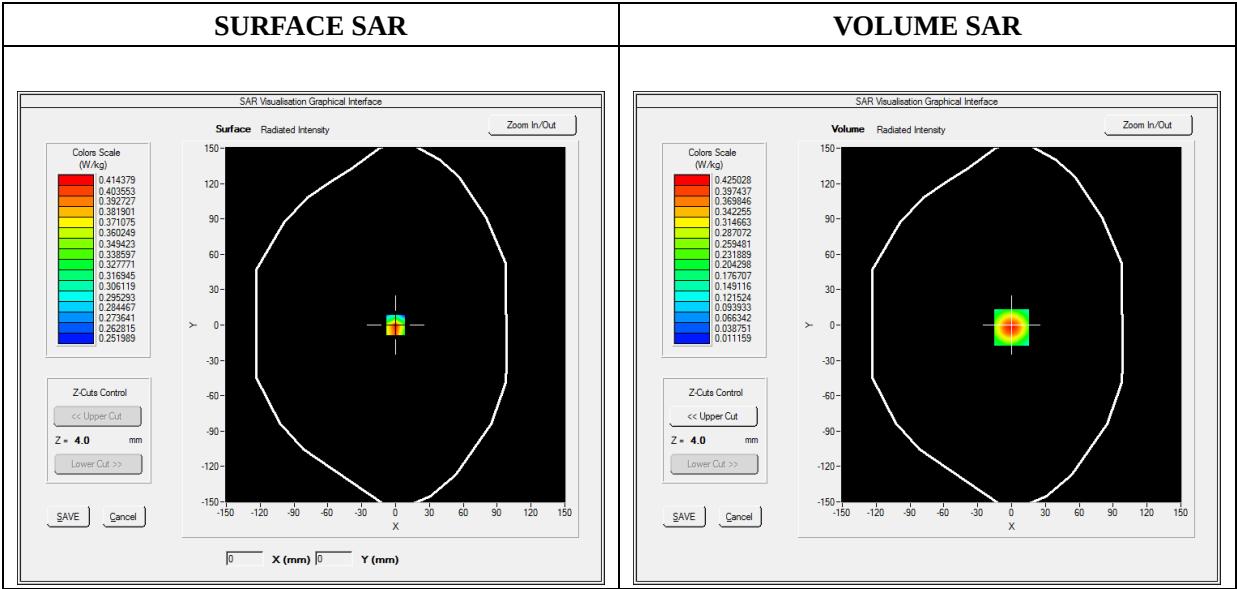
Type: Phone measurement (Complete)
Date of measurement: 2022-03-11
Measurement duration: 12 minutes 3 seconds

A. Experimental conditions

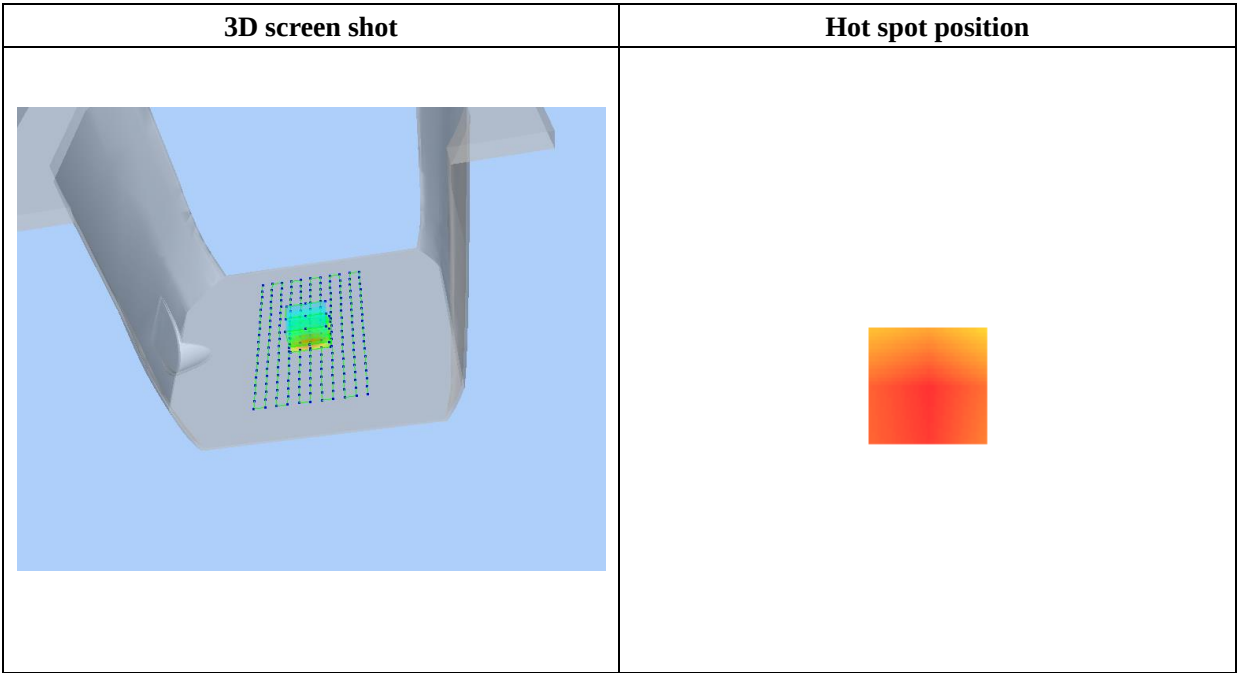
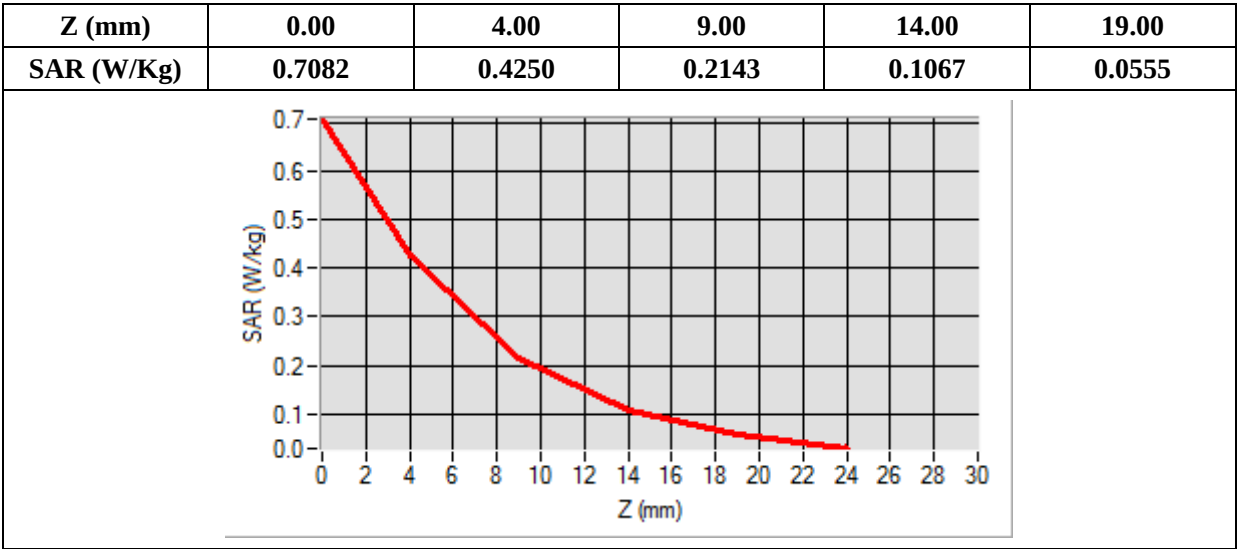
Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	Bluetooth
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2480.000000
Relative Permittivity (real part)	52.642675
Conductivity (S/m)	1.921727
Power Variation (%)	-0.450000
Ambient Temperature	21.2
Liquid Temperature	21.2



SAR 10g (W/Kg)	0.196813
SAR 1g (W/Kg)	0.388709



Annex C. EUT Photos

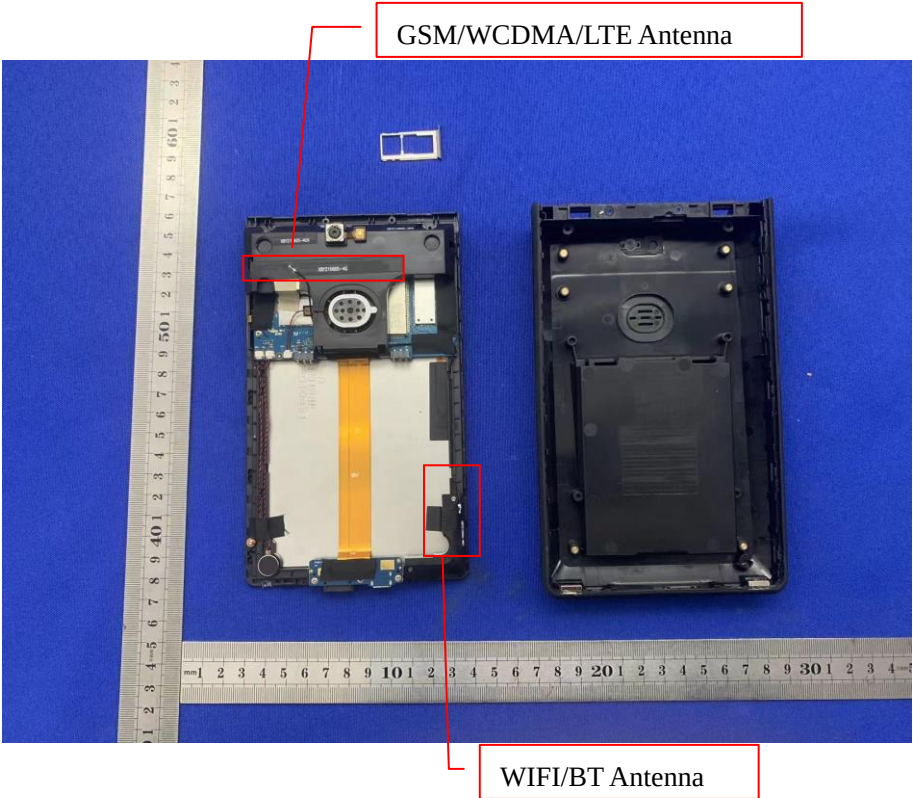
EUT View 1



EUT View 2



Antenna View



Annex D. Calibration Certificate

Please refer to the exhibit for the calibration certificate

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