TEST REPORT

Reference No......	:	WTX20X11082085W
FCC ID.....	:	2APBP-CS20
Applicant	:	Ciontek Technology Corp.
Address	:	B501,Chanxueyan Building Wuhan University,No.6 Of Yuexing 2nd Road ,Yuehai Street ,Nanshan District ,Shenzhen,China
Product Name	:	Mobile Smart POS
Test Model.	:	CS20
Standards	:	FCC Part 2.1093 ANSI / IEEE C95.1 : 2005+A1:2010 ANSI / IEEE C95.3 : 2002(R2008) IEEE 1528 :2013
Date of Receipt sample	:	Nov.06, 2020
Date of Test.....	:	Nov.10, 2020 to Dec.01, 2020
Date of Issue	:	Dec.04, 2020
Test Result.....	:	**Pass**

Remarks:

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

Prepared By:

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TABLE OF CONTENTS

1. General Information 3
1.1 Product Description for Equipment Under Test (EUT) 3
1.2 Test Standards 6
1.3 Test Methodology 6
1.4 Test Facility 6
2. Summary of Test Results 7
3. Specific Absorption Rate (SAR) 8
3.1 Introduction 8
3.2 SAR Definition 8
4. SAR Measurement System 9
4.1 The Measurement System 9
4.2 Probe 9
4.3 Probe Calibration Process 11
4.4 Phantom 12
4.5 Device Holder 12
4.6 Test Equipment List 13
5. Tissue Simulating Liquids 14
5.1 Composition of Tissue Simulating Liquid 14
5.2 Tissue Dielectric Parameters for Head and Body Phantoms 15
5.3 Tissue Calibration Result 16
6. SAR Measurement Evaluation 17
6.1 Purpose of System Performance Check 17
6.2 System Setup 17
6.3 Validation Results 18
7. EUT Testing Position 20
7.1 Define Two Imaginary Lines on The Handset 20
7.2 Cheek Position 21
7.3 Tilted Position 21
7.4 Body Position 22
7.5 EUT Antenna Position 23
7.6 EUT Testing Position 24
8. SAR Measurement Procedures 25
8.1 Measurement Procedures 25
8.2 Spatial Peak SAR Evaluation 25
8.3 Area & Zoom Scan Procedures 26
8.4 Volume Scan Procedures 26
8.5 SAR Averaged Methods 26
8.6 Power Drift Monitoring 26
9. SAR Test Result 27
9.1 Conducted RF Output Power 27
9.2 Test Results for Standalone SAR Test 44
9.3 Simultaneous Multi-band Transmission SAR Analysis 57
10. Measurement Uncertainty 63
10.1 Uncertainty for EUT SAR Test 63
10.2 Uncertainty for System Performance Check 64
Annex A. Plots of System Performance Check 66
Annex B. Plots of SAR Measurement 80
Annex C. EUT Photos 146
Annex D. Test Setup Photos 148
Annex E. Calibration Certificate 153

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Ciontek Technology Corp.
Address of applicant:	B501,Chanxueyan Building Wuhan University,No.6 Of Yuexing 2nd Road, Yuehai Street, Nanshan District, Shenzhen, China
Manufacturer:	Ciontek Technology Corp.
Address of manufacturer:	B501,Chanxueyan Building Wuhan University,No.6 Of Yuexing 2nd Road, Yuehai Street, Nanshan District, Shenzhen, China

General Description of EUT:	
Product Name:	Mobile Smart POS
Brand Name:	Ciontek
Model No.:	CS20
Adding Model(s):	CS20PRO, CS20LITE, CS20S, CS20V, CS20MINI, CS20A, CS20B, CS20C, CS21
Rated Voltage:	DC3.8V by Battery
Battery:	3500mAh
Device Category:	Portable Device
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 CS20, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT:	
2G	
Support Networks:	GSM, GPRS, EDGE
Support Band:	GSM850/PCS1900
Uplink Frequency:	GSM/GPRS/EDGE 850: 824~849MHz GSM/GPRS/EDGE 1900: 1850~1910MHz
Downlink Frequency:	GSM/GPRS/EDGE 850: 869~894MHz GSM/GPRS/EDGE 1900: 1930~1990MHz
RF Output Power:	GSM850: 33.69Bm, GSM1900: 31.13dBm EDGE850: 26.85dBm, EDGE1900: 26.47dBm
Type of Modulation:	GMSK, 8PSK
Type of Antenna:	PIFA Antenna
Antenna Gain:	GSM850: 0.6dBi; GSM1900: 0.6dBi
GPRS/EDGE Class:	Class 12

3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Band:	WCDMA Band 2, WCDMA Band 4, WCDMA Band 5
Uplink Frequency:	WCDMA Band 2: 1850~1910MHz WCDMA Band 4: 1710~1755MHz WCDMA Band 5: 824~849MHz
Downlink Frequency:	WCDMA Band 2: 1930~1990MHz WCDMA Band 4: 2110~2155MHz WCDMA Band 5: 869~894MHz
RF Output Power:	WCDMA Band 2: 22.83dBm, WCDMA Band 4: 22.88dBm WCDMA Band 5: 22.78dBm
Type of Modulation:	BPSK
Antenna Type:	PIFA Antenna
Antenna Gain:	WCDMA Band 2: 0.8dBi, WCDMA Band 4: 0.8dBi WCDMA Band 5: 0.8dBi
4G	
Support Networks:	FDD-LTE
Support Band:	FDD-LTE Band 2, 4, 5, 12, 17
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 12: Tx: 699-716MHz, FDD-LTE Band 17: Tx: 704-716MHz
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz, FDD-LTE Band 4: Rx: 2110-2155MHz, FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 12: Rx: 729-746MHz, FDD-LTE Band 17: Rx: 734-746MHz
RF Output Power:	FDD-LTE Band 2: 24.59dBm FDD-LTE Band 4: 24.82dBm FDD-LTE Band 5: 24.69dBm FDD-LTE Band 12: 24.84dBm FDD-LTE Band 17: 24.58dBm
Type of Modulation:	QPSK, 16QAM
Antenna Type:	PIFA Antenna
Antenna Gain:	FDD-LTE Band 2: 0.75dBi, FDD-LTE Band 4: 0.75dBi, FDD-LTE Band 5: 0.75dBi, FDD-LTE Band 12: 0.75dBi, FDD-LTE Band 17: 0.75dBi
WIFI(2.4G)	

Support Standards:	802.11b, 802.11g, 802.11n-HT20/40
Frequency Range:	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
RF Output Power:	14.31dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11 for 802.11b/g/n(HT20) 7 for 802.11n(HT40)
Channel Separation:	5MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	0.7dBi
Bluetooth	
Bluetooth Version:	V4.2
Frequency Range:	2402-2480MHz
RF Output Power:	6.80dBm (Conducted)
Data Rate:	1Mbps, 2Mbps, 3Mbps
Modulation:	GFSK, Pi/4 QDPSK, 8DPSK
Quantity of Channels:	79/40
Channel Separation:	1MHz/2MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	0.8dBi
WIFI(5G)	
Support Standards:	802.11a, 802.11n-HT20/40
Frequency Range:	Band 1: 5180-5240MHz, Band 4: 5745-5825MHz
RF Output Power:	14.33dBm (Conducted)
Type of Modulation:	BPSK, QPSK,16QAM,64QAM
Type of Antenna:	PIFA Antenna
Antenna Gain:	0.7dBi

1.2 Test Standards

The following report is prepared on behalf of the Ciontek Technology Corp in accordance with FCC 47 CFR Part 2.1093, ANSI/IEEE C95.1-2005, ANSI / IEEE C95.3 :2002, IEEE 1528-2013, KDB 447498 D01 v06, KDB 648474 D04 v01r03, KDB 248227 D01 v02r02, KDB 941225 D01 v03r01, KDB 941225 D05 v02r05 , and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02.

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

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

1.3 Test Methodology

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

1.4 Test Facility

Address of the test laboratory
Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990
Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010.Test Firm Registration Number is 125990.

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

2. Summary of Test Results

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

Frequency Band	Head SAR	Body-worn (10mm Gap)	Hotspot (10mm Gap)	SAR_{1g} Limit (W/kg)
	Maximum SAR_{1g} (W/kg)	Maximum SAR_{1g} (W/kg)	Maximum SAR_{1g} (W/kg)	
GSM	0.229	0.362	1.272	1.6
WCDMA	0.428	1.176	1.176	1.6
LTE	**0.514**	**1.153**	**1.356**	1.6
WLAN 2.4G	0.259	0.114	0.129	1.6
WLAN 5G	0.433	0.321	0.357	1.6
Simultaneous Transmission	0.947	1.497	**1.593**	1.6

Remark:

*The highest reported SAR values for head, body-worn, router(hotspot), and simultaneous transmission conditions are **0.514W/kg, 1.153W/kg, 1.356W/kg, and 1.593W/kg** respectively.*

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2.1093 and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedure specified in IEEE 1528-2013 and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02

3. Specific Absorption Rate (SAR)

3.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techiques 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:

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

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

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

Where: C is the specific heat capacity, δ T is the temperature rise and δ t is the exposure duration, or related to the
electrical field in the tissue by

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

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.

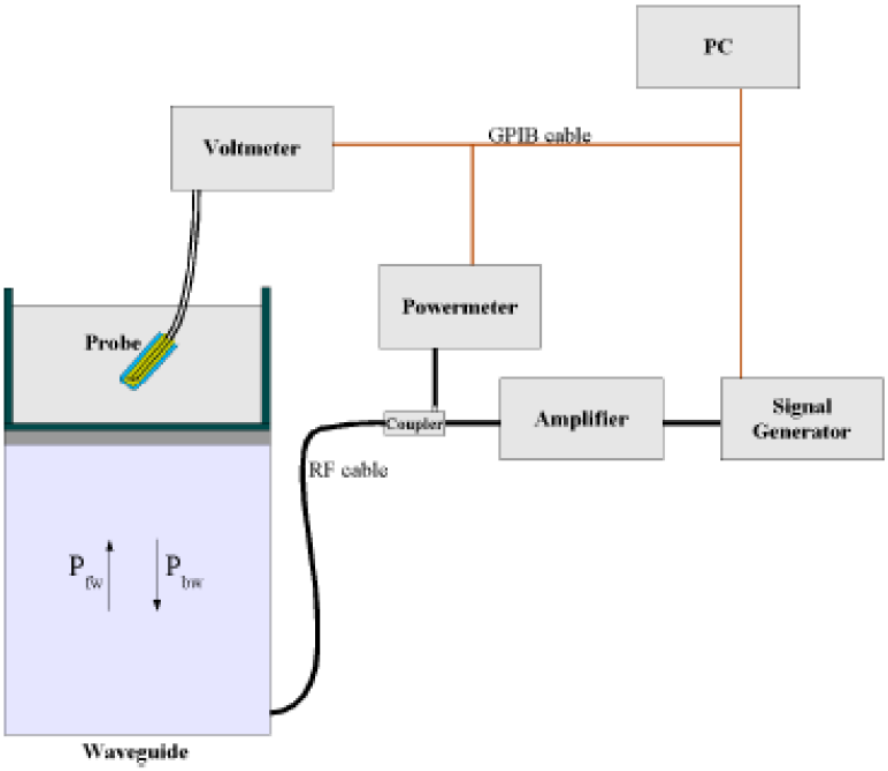
4.2 Probe

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

- 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 suface normal line:1ess 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.



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

Where :

Pfw = Forward Power

Pbw = Backward Power

a and b =Waveguide dimensions

I = Skin depth

Keithley configuration:

Rate = Medium; Filter = ON; RDGS = 10; Filter type = Moving Average; Range auto after each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

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

$$CF(N)=SAR(N)/Vlin(N)\ (N=1,2,3)$$

The linearised output voltage Vlin(N) is obtained from the displayed output voltage V(N) using

$$Vlin(N)=V(N)*(1+V(N)/DCP(N))\ (N=1,2,3)$$

where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

Dosimetric Assessment Procedure

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

Free Space Assessment Procedure

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

Temperature Assessment Procedure

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

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

Where:

Δt = exposure time (30 seconds),

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

ΔT = temperature increase due to RF exposure.

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

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

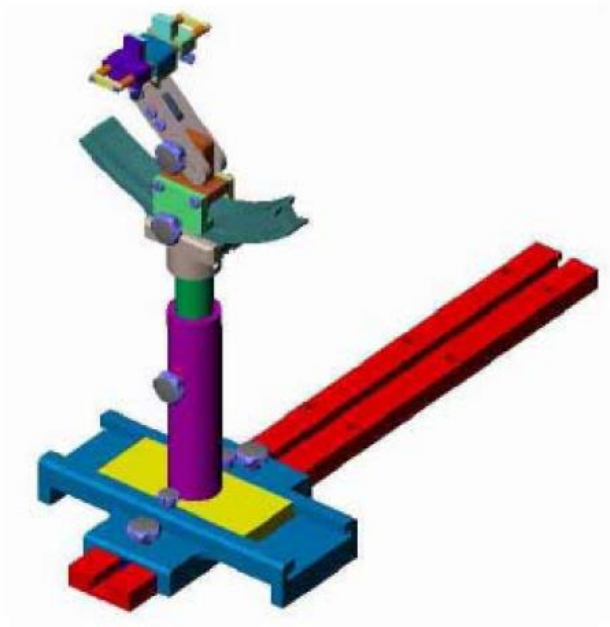
Where:
σ = simulated tissue conductivity,
ρ = Tissue density (1.25 g/cm3 for brain tissue)

4.4 Phantom

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

4.5 Device Holder

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



System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

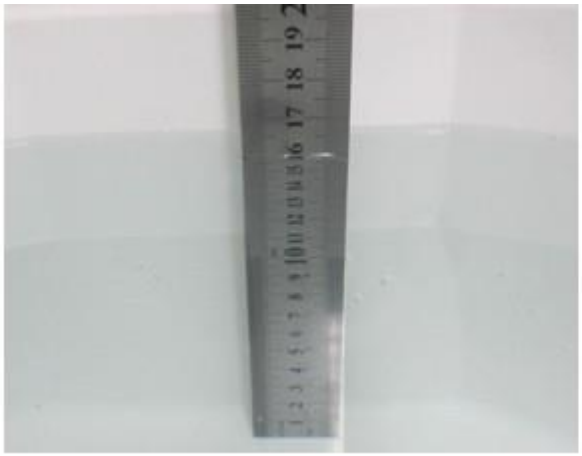
4.6 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
E-Field Probe	MVG	SSE5	SN 09/13 EP168	2020-05-22	2021-05-21
E-Field Probe	MVG	SSE2	SN 45/15 EPGO280	2020-07-03	2021-07-02
750MHz Dipole	MVG	SID750	SN 47/12 DIP 0G750-203	2020-03-11	2021-03-10
835MHz Dipole	MVG	SID835	SN 47/12 DIP 0G835-204	2020-03-11	2021-03-10
1800MHz Dipole	MVG	SID1800	SN 47/12 DIP 1G800-206	2020-03-11	2021-03-10
1900MHz Dipole	MVG	SID1900	SN 47/12 DIP 1G900-207	2020-03-11	2021-03-10
2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2020-03-11	2021-03-10
5 GHz Waveguide	MVG	SWG5500	SN 49/16 WGA45	2020-07-03	2021-07-02
Dielectric Probe Kit	MVG	SCLMP	SN 47/12 OCPG49	2020-03-11	2021-03-10
SAM Phantom	MVG	SAM	SN/ 47/12 SAM95	N/A	N/A
MULTIMETER	KEITHLEY	Keithley 2000	4006367	2020-04-28	2021-04-27
Signal Generator	Rohde & Schwarz	SMR20	100047	2020-04-28	2021-04-27
Universal Tester	Rohde & Schwarz	CMU200	112012	2020-04-28	2021-04-27
Communications Tester	Rohde & Schwarz	CMW500	148650	2020-04-28	2021-04-27
Network Analyzer	HP	8753C	2901A00831	2020-04-28	2021-04-27
Directional Couplers	Agilent	778D	20160	2020-04-28	2021-04-27

5. Tissue Simulating Liquids

5.1 Composition of Tissue Simulating Liquid

For the measurement of the field distribution inside the SAM phantom with SMTIMO, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. Please see the following photos for the liquid height.



Liquid Height for Head SAR

Liquid Height for Body SAR

The Composition of Tissue Simulating Liquid

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

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

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

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

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

5.3 Tissue Calibration Result

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

Calibration Result for Dielectric Parameters of Tissue Simulating Liquid

Head Tissue Simulating Liquid									
Freq. MHz.	Temp. (℃)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ε r)	Target (ε r)	Delta (%)		
750	21.3	0.87	0.89	-2.25	42.62	41.90	1.72	±5	2020-11-20
835	21.5	0.91	0.90	1.11	41.94	41.50	1.06	±5	2020-12-01
1800	21.3	1.38	1.40	-1.43	39.64	40.00	-0.90	±5	2020-11-23
1900	21.5	1.40	1.40	0.00	39.18	40.00	-2.05	±5	2020-11-30
2450	21.2	1.77	1.80	-1.67	39.76	39.20	1.43	±5	2020-11-18
5200	21.0	4.57	4.66	-1.93	37.06	36.0	2.94	±5	2020-11-27
5800	21.0	5.08	5.27	-3.61	34.61	35.3	-1.95	±5	2020-11-27

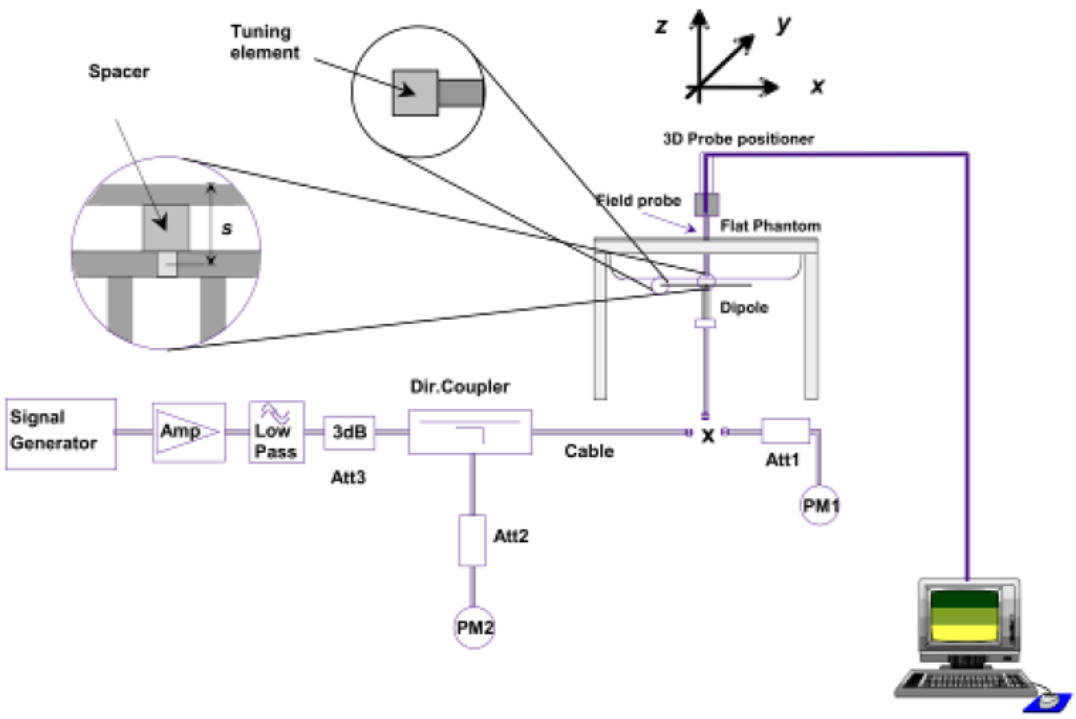
6. SAR Measurement Evaluation

6.1 Purpose of System Performance Check

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

6.2 System Setup

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



System Verification Setup Block Diagram

Setup Photo of Dipole Antenna

The output power on dipole port must be calibrated to 24 dBm(250 mW) before dipole is connected.
The output power on 5 GHz Waveguide must be calibrated to 20 dBm (100mW) before 5 GHz Waveguide is connected.

6.3 Validation Results

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

Frequency	Targeted SAR_{1g}	Measured SAR_{1g}	Normalized SAR_{1g}	Tolerance	Date
MHz	(W/kg)	(W/kg)	(W/kg)	(%)	
Head					
750	8.40	2.06	8.24	-1.90	2020-11-20
835	9.65	2.48	9.92	2.80	2020-12-01
1800	38.49	9.46	37.84	-1.69	2020-11-23
1900	39.59	10.01	40.4	1.14	2020-11-30
2450	53.76	13.67	54.68	1.71	2020-11-18
5200	161.23	16.85	168.5	4.51	2020-11-27
5800	179.32	17.31	173.1	-3.47	2020-11-27

Remark: Referring to IEEE 1528-2013, Section 8.2, The system check shall be performed at a test frequency that is within ±10% or ±100 MHz of the compliance test mid-band frequency, so the 1750 MHz system verification is made of 1800MHz Dipole.

Targeted and Measurement SAR

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

7. EUT Testing Position

7.1 Define Two Imaginary Lines on The Handset

(a) The vertical centerline passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.

(b) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.

(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

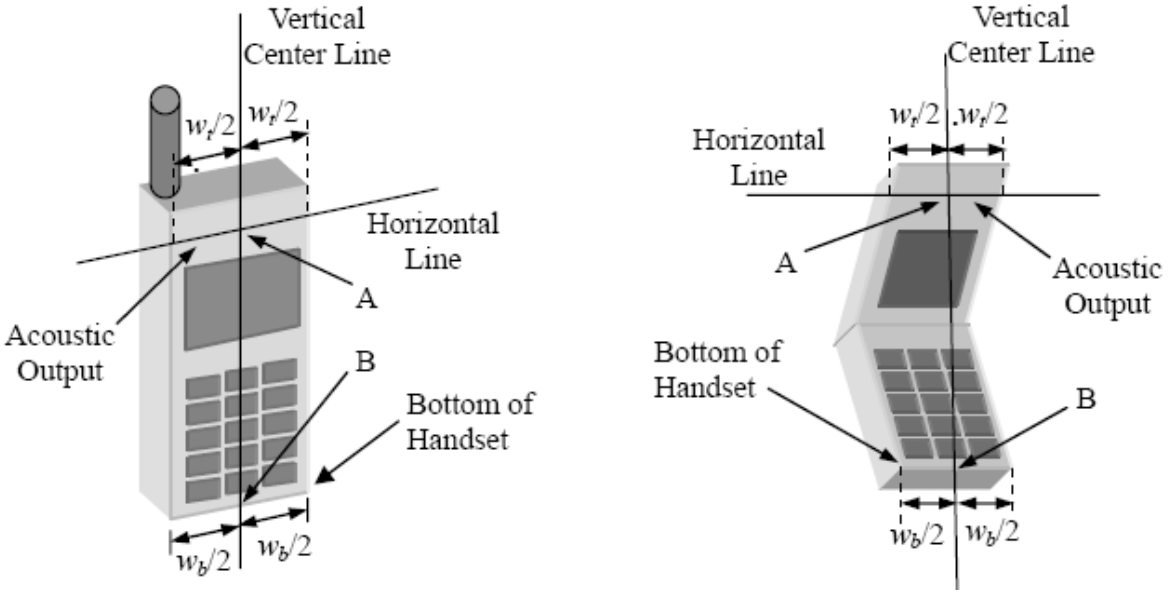


Illustration for Handset Vertical and Horizontal Reference Lines

7.2 Cheek Position

(a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
(b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig. 7.2).

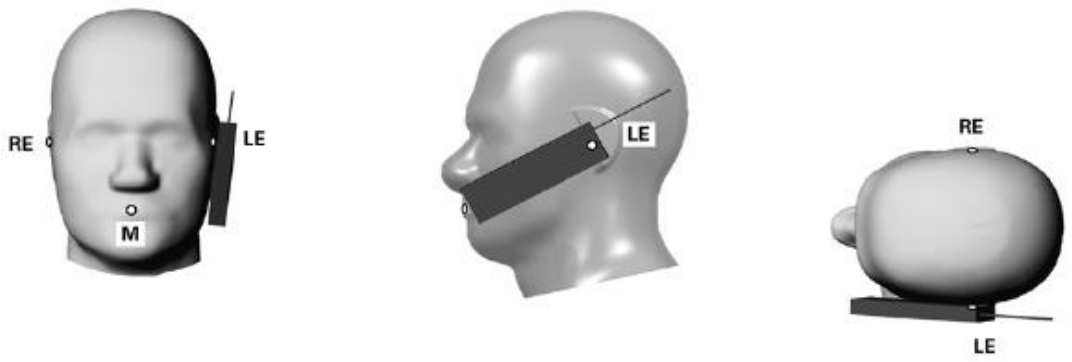


Illustration for Cheek Position

7.3 Tilted Position

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

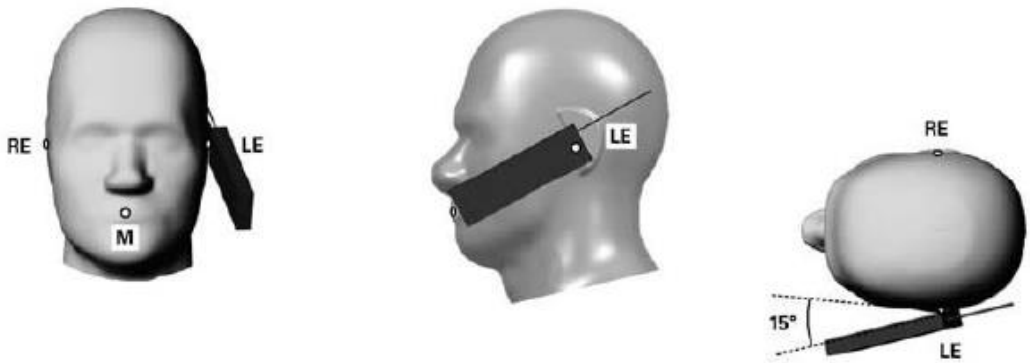


Illustration for Tilted Position

7.4 Body Position

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

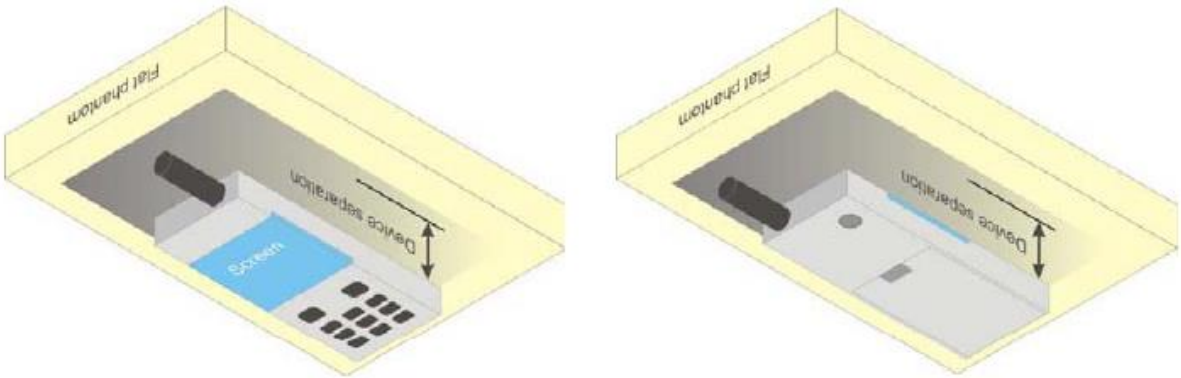
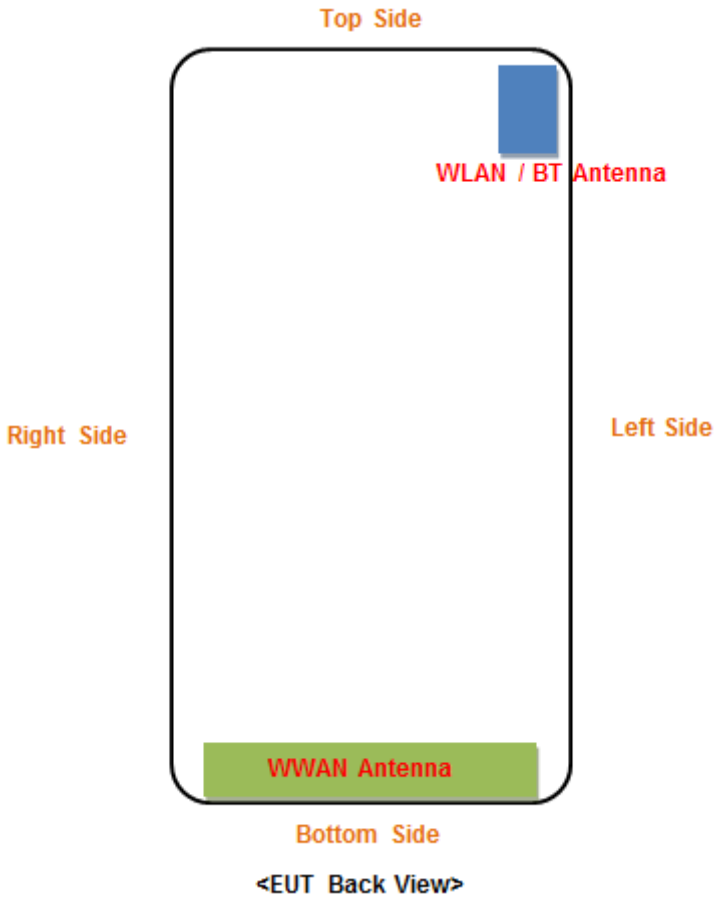


Illustration for Body Position

7.5 EUT Antenna Position



Block Diagram for EUT Antenna Position

Distance of EUT antenna-to-edge/surface(mm), Test distance:10mm						
Antennas	**Front**	**Back**	**Right Side**	**Left Side**	**Top Side**	**Bottom Side**
WWAN	<25	*<25*	*<25*	*<25*	142	*<25*
WLAN	<25	*<25*	60	<25	<25	141

7.6 EUT Testing Position

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

Head SAR tests				
Antennas	**Right Cheek**	**Left Cheek**	**Right Tilted**	**Left Tilted**
WWAN	Yes	Yes	Yes	Yes
WLAN	Yes	Yes	Yes	Yes

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

Remark:

1. Referring to KDB 941225 D06, when the overall device length and width are >= 9cm*5cm, the test separation distances is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

2. 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 D for the EUT test setup photos.

8. SAR Measurement Procedures

8.1 Measurement Procedures

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

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:
(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

8.2 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The SATIMO software includes all numerical procedures necessary to evaluate the spatial peak SAR value.
The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.
The entire evaluation of the spatial peak values is performed within the post-processing engine. The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:
(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

8.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 5x5x7 points with step size 8, 8 and 5 mm for 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

8.4 Volume Scan Procedures

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

8.5 SAR Averaged Methods

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

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

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

8.6 Power Drift Monitoring

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

9. SAR Test Result

9.1 Conducted RF Output Power

GSM - Burst Average Power (dBm)								
Band	**GSM850**			**Tune-up power (dBm)**	**PCS1900**			**Tune-up power (dBm)**
Channel	**128**	**190**	**251**		**512**	**661**	**810**	
Frequency (MHz)	**824.2**	**836.6**	**848.8**		**1850.2**	**1880**	**1909.8**	
GSM	33.68	33.54	33.62	34.0	31.13	30.98	30.99	31.5
GPRS (1 slot)	33.69	33.54	33.62	34.0	31.11	31.00	30.91	31.5
GPRS (2 slots)	32.54	32.16	32.28	33.0	29.56	29.36	29.46	30.0
GPRS (3 slots)	31.45	31.36	31.26	31.5	28.63	28.46	28.59	29.0
GPRS (4 slots)	30.58	30.87	30.54	31.0	27.58	27.46	27.69	28.0
EDGE (1 slot)	26.85	26.52	26.23	27.0	26.47	26.21	25.94	26.5
EDGE (2 slots)	25.36	25.86	25.75	26.0	25.69	25.78	25.14	26.0
EDGE (3 slots)	25.13	25.14	25.23	25.5	24.65	24.53	24.36	25.0
EDGE (4 slots)	24.86	24.78	24.46	25.0	23.86	23.58	23.45	24.0

GSM - Source-Based Time-Average Power (dBm)								
Band	**GSM850**			**Tune-up power (dBm)**	**PCS1900**			**Tune-up power (dBm)**
Channel	**128**	**190**	**251**		**512**	**661**	**810**	
Frequency (MHz)	**824.2**	**836.6**	**848.8**		**1850.2**	**1880**	**1909.8**	
GSM	24.68	24.54	24.62	25.0	22.13	21.98	21.99	22.5
GPRS (1 slot)	24.69	24.54	24.62	25.0	22.11	22.00	21.91	22.5
GPRS (2 slots)	26.54	26.16	26.28	27.0	23.56	23.36	23.46	24.0
GPRS (3 slots)	27.20	27.11	27.01	27.5	24.38	24.21	24.34	24.5
GPRS (4 slots)	27.58	27.87	27.54	28.0	24.58	24.46	24.69	25.0
EDGE (1 slot)	17.85	17.52	17.23	18.0	17.47	17.21	16.94	17.5
EDGE (2 slots)	19.36	19.86	19.75	20.0	19.69	19.78	19.14	20.0
EDGE (3 slots)	20.88	20.89	20.98	21.0	20.40	20.28	20.11	20.5
EDGE (4 slots)	21.86	21.78	21.46	22.0	20.86	20.58	20.45	21.0
Note: The source-based time-averaged power is linearly scaled the maximum burst averaged power based on time slots. The calculated method are shown as below: Source based time-average power = Burst averaged power - Duty cycle factor in dB Duty cycle factor = 9 dB for 1 Tx slot, 6 dB for 2 Tx slots, 4.25 dB for 3 Tx slots, 3 dB for 4 Tx slots								

Remark:

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

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

4. The DUT do not support DTM function.

5. 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	22.83	22.65	22.64	23.0	21.63	21.77	21.75	22.0
HSDPA Subtest-1	21.87	21.75	21.60	22.0	22.58	22.78	22.78	23.0
HSDPA Subtest-2	21.25	21.16	21.23	21.5	22.12	22.23	22.42	22.5
HSDPA Subtest-3	20.96	20.85	20.78	21.0	21.86	21.96	21.75	22.0
HSDPA Subtest-4	20.41	20.16	20.23	20.5	20.36	20.45	20.16	20.5
HSUPA Subtest-1	21.51	21.10	21.05	22.0	22.02	22.20	22.05	22.5
HSUPA Subtest-2	21.12	20.96	20.86	21.5	21.68	21.38	21.56	22.0
HSUPA Subtest-3	20.24	20.33	20.25	20.5	21.23	21.13	21.63	22.0
HSUPA Subtest-4	20.05	20.03	20.12	20.5	20.86	20.76	20.63	21.0
HSUPA Subtest-5	20.13	20.70	20.11	21.0	20.35	20.42	20.19	20.5

WCDMA - Average Power (dBm)				
Band	**WCDMA Band IV**			
Channel	**1312**	**1413**	**1513**	**Tune-up power (dBm)**
Frequency (MHz)	**1712.4**	**1732.6**	**1752.6**	
RMC 12.2k	22.88	21.47	22.76	23.0
HSDPA Subtest-1	22.61	22.20	21.71	23.0
HSDPA Subtest-2	22.03	22.12	21.46	22.5
HSDPA Subtest-3	21.96	21.56	21.36	22.0
HSDPA Subtest-4	20.85	20.54	20.36	21.0
HSUPA Subtest-1	22.19	20.61	21.88	22.5
HSUPA Subtest-2	21.86	20.45	21.06	22.0
HSUPA Subtest-3	20.36	20.68	20.15	21.0
HSUPA Subtest-4	20.16	20.06	20.14	20.5
HSUPA Subtest-5	20.27	20.60	20.08	21.0

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 ≤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

FDD-LTE Band 2:

FDD-LTE Band 2						
Channel Bandwidth: 1.4 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.38	23.72	23.83	PASS
	1	3	24.51	23.76	24.15	PASS
	1	5	24.23	23.90	23.94	PASS
	3	0	24.13	23.88	23.96	PASS
	3	1	24.06	23.93	24.03	PASS
	3	3	24.01	23.98	23.88	PASS
	6	0	23.13	22.68	23.10	PASS
16QAM	1	0	22.61	22.99	23.04	PASS
	1	3	22.58	23.08	23.04	PASS
	1	5	22.60	22.94	23.02	PASS
	3	0	22.87	22.50	22.82	PASS
	3	1	22.81	22.44	22.98	PASS
	3	3	22.88	22.34	22.84	PASS
	6	0	21.70	21.70	21.86	PASS
Channel Bandwidth: 3 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	23.95	23.84	23.83	PASS
	1	7	23.94	23.85	23.70	PASS
	1	14	23.82	23.81	23.72	PASS
	8	0	23.03	23.07	22.87	PASS
	8	4	23.10	22.92	22.85	PASS
	8	7	23.11	22.96	22.85	PASS
	15	0	22.97	22.84	22.87	PASS
16QAM	1	0	22.60	22.43	22.83	PASS
	1	7	22.70	22.76	22.78	PASS
	1	14	22.70	22.25	22.40	PASS
	8	0	21.67	21.70	21.73	PASS
	8	4	21.63	21.94	21.82	PASS
	8	7	21.66	22.03	21.84	PASS
	15	0	21.97	21.72	21.87	PASS

FDD-LTE Band 2						
Channel Bandwidth: 5 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	23.83	23.62	23.95	PASS
	1	12	24.59	24.08	24.10	PASS
	1	24	23.77	23.57	23.79	PASS
	12	0	22.86	22.73	22.91	PASS
	12	6	22.96	22.83	22.91	PASS
	12	11	22.86	22.77	22.79	PASS
	25	0	22.86	22.74	22.87	PASS
16QAM	1	0	22.05	22.10	22.43	PASS
	1	12	22.63	22.25	22.73	PASS
	1	24	21.91	22.03	22.07	PASS
	12	0	21.80	21.48	21.66	PASS
	12	6	21.83	21.58	21.67	PASS
	12	11	21.80	21.49	21.32	PASS
	25	0	21.69	21.64	21.78	PASS
Channel Bandwidth: 10 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	24.21	23.67	23.75	PASS
	1	24	24.12	24.19	24.16	PASS
	1	49	24.03	23.81	23.67	PASS
	25	0	22.94	22.75	22.79	PASS
	25	12	22.90	22.87	22.90	PASS
	25	24	22.90	22.88	22.85	PASS
	50	0	22.94	22.92	22.90	PASS
16QAM	1	0	22.65	22.87	22.97	PASS
	1	24	22.68	22.23	22.98	PASS
	1	49	22.43	21.68	22.83	PASS
	25	0	21.82	21.68	22.01	PASS
	25	12	21.86	21.63	22.22	PASS
	25	24	21.96	21.74	21.72	PASS
	50	0	21.68	22.23	21.85	PASS

FDD-LTE Band 2						
Channel Bandwidth: 15 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	24.11	23.71	23.69	PASS
	1	37	24.19	24.02	24.09	PASS
	1	74	24.00	23.76	23.79	PASS
	36	0	22.98	22.84	22.93	PASS
	36	16	22.92	22.82	22.83	PASS
	36	35	22.94	22.79	22.80	PASS
	75	0	22.90	22.82	22.79	PASS
16QAM	1	0	22.81	22.90	22.79	PASS
	1	37	22.89	22.65	23.11	PASS
	1	74	22.26	22.07	22.37	PASS
	36	0	21.82	21.73	21.95	PASS
	36	16	22.02	21.80	21.83	PASS
	36	35	21.81	21.73	21.73	PASS
	75	0	21.86	21.64	21.65	PASS
Channel Bandwidth: 20 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	23.87	24.21	23.59	PASS
	1	49	24.20	24.41	24.08	PASS
	1	99	23.63	23.72	23.94	PASS
	50	0	22.89	22.79	22.86	PASS
	50	24	22.97	22.86	22.94	PASS
	50	49	22.84	22.91	22.86	PASS
	100	0	22.96	22.84	22.79	PASS
16QAM	1	0	22.33	22.89	22.73	PASS
	1	49	22.45	23.52	22.98	PASS
	1	99	22.24	22.83	22.56	PASS
	50	0	21.91	21.76	21.72	PASS
	50	24	21.85	21.83	21.89	PASS
	50	49	21.74	21.87	21.73	PASS
	100	0	21.93	21.86	21.79	PASS

FDD-LTE Band 4:

FDD-LTE Band 4						
Channel Bandwidth: 1.4 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.25	24.11	24.01	PASS
	1	2	24.28	24.37	24.12	PASS
	1	5	24.31	24.18	24.07	PASS
	3	0	24.23	24.11	24.15	PASS
	3	1	24.32	24.17	24.12	PASS
	3	2	24.36	24.22	24.20	PASS
	6	0	23.32	23.32	23.10	PASS
16QAM	1	0	22.80	22.98	23.05	PASS
	1	2	23.00	23.21	22.95	PASS
	1	5	22.85	23.06	23.00	PASS
	3	0	23.07	22.49	23.13	PASS
	3	1	23.02	22.50	23.18	PASS
	3	2	23.09	22.42	23.12	PASS
	6	0	22.23	22.08	22.15	PASS
Channel Bandwidth: 3 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.19	24.26	24.01	PASS
	1	7	24.40	24.31	24.02	PASS
	1	14	24.24	24.28	24.00	PASS
	8	0	23.28	23.33	23.22	PASS
	8	4	23.43	23.31	23.17	PASS
	8	7	23.47	23.25	23.16	PASS
	15	0	23.31	23.27	23.17	PASS
16QAM	1	0	22.89	23.12	23.00	PASS
	1	7	22.75	23.14	23.17	PASS
	1	14	22.54	23.19	23.22	PASS
	8	0	22.10	22.29	22.14	PASS
	8	4	22.06	22.18	22.20	PASS
	8	7	22.13	22.23	22.20	PASS
	15	0	22.18	21.93	22.14	PASS

FDD-LTE Band 4						
Channel Bandwidth: 5 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	24.15	24.07	24.23	PASS
	1	12	24.82	24.40	24.70	PASS
	1	24	24.32	24.13	24.24	PASS
	12	0	23.27	23.22	23.34	PASS
	12	6	23.31	23.25	23.25	PASS
	12	11	23.30	23.30	23.23	PASS
	25	0	23.30	23.24	23.26	PASS
16QAM	1	0	22.65	22.63	22.73	PASS
	1	12	23.07	23.38	23.21	PASS
	1	24	22.37	22.61	22.78	PASS
	12	0	22.12	21.94	21.94	PASS
	12	6	22.17	22.07	22.02	PASS
	12	11	22.18	22.01	21.95	PASS
	25	0	22.16	21.95	22.22	PASS
Channel Bandwidth: 10 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	24.26	24.19	24.10	PASS
	1	24	24.41	24.62	24.68	PASS
	1	49	24.36	24.23	24.23	PASS
	25	0	23.38	23.24	23.37	PASS
	25	12	23.43	23.23	23.32	PASS
	25	24	23.34	23.26	23.32	PASS
	50	0	23.38	23.29	23.35	PASS
16QAM	1	0	23.01	23.07	23.44	PASS
	1	24	23.26	23.23	23.50	PASS
	1	49	22.85	22.79	23.30	PASS
	25	0	22.23	22.16	22.52	PASS
	25	12	22.30	22.31	22.59	PASS
	25	24	22.24	22.32	22.39	PASS
	50	0	22.16	22.05	22.20	PASS

FDD-LTE Band 4						
Channel Bandwidth: 15 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.30	24.26	24.24	PASS
	1	37	24.68	24.55	24.40	PASS
	1	74	24.30	24.27	24.21	PASS
	36	0	23.34	23.26	23.48	PASS
	36	16	23.40	23.31	23.39	PASS
	36	35	23.29	23.33	23.28	PASS
	75	0	23.34	23.29	23.31	PASS
16QAM	1	0	23.23	23.14	23.39	PASS
	1	37	23.31	23.19	23.51	PASS
	1	74	22.75	22.50	22.81	PASS
	36	0	22.44	22.04	22.33	PASS
	36	16	22.45	22.23	22.27	PASS
	36	35	22.29	22.17	22.01	PASS
	75	0	22.16	22.25	22.00	PASS
Channel Bandwidth: 20 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.05	24.14	24.28	PASS
	1	49	24.58	24.61	24.60	PASS
	1	99	24.05	24.50	24.17	PASS
	50	0	23.41	23.26	23.44	PASS
	50	24	23.29	23.32	23.46	PASS
	50	49	23.30	23.33	23.33	PASS
	100	0	23.34	23.30	23.49	PASS
16QAM	1	0	22.69	23.63	23.19	PASS
	1	49	22.78	24.07	23.26	PASS
	1	99	22.73	23.56	23.04	PASS
	50	0	22.23	22.18	22.11	PASS
	50	24	22.20	22.21	22.25	PASS
	50	49	22.04	22.17	22.13	PASS
	100	0	22.16	22.19	22.26	PASS

FDD-LTE Band 5:

FDD-LTE Band 5						
Channel Bandwidth: 1.4 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.12	23.93	23.77	PASS
	1	2	24.09	23.96	23.89	PASS
	1	5	24.12	23.97	23.74	PASS
	3	0	24.03	24.00	24.00	PASS
	3	1	24.22	24.19	24.10	PASS
	3	2	24.11	24.12	24.01	PASS
	6	0	23.10	23.11	22.91	PASS
16QAM	1	0	22.55	22.80	22.77	PASS
	1	2	22.79	23.13	22.71	PASS
	1	5	22.57	22.86	22.61	PASS
	3	0	22.82	22.86	22.95	PASS
	3	1	22.90	22.81	23.10	PASS
	3	2	22.85	22.72	23.00	PASS
	6	0	22.09	21.89	22.10	PASS
Channel Bandwidth: 3 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	23.94	24.16	23.83	PASS
	1	7	24.04	24.12	23.84	PASS
	1	14	24.00	24.02	23.73	PASS
	8	0	23.23	23.13	23.06	PASS
	8	4	23.19	23.15	23.04	PASS
	8	7	23.12	23.19	22.99	PASS
	15	0	23.14	23.13	23.09	PASS
16QAM	1	0	22.54	22.88	23.05	PASS
	1	7	22.80	22.89	23.02	PASS
	1	14	22.66	22.95	22.82	PASS
	8	0	22.04	22.25	21.93	PASS
	8	4	22.00	22.36	21.90	PASS
	8	7	22.04	22.41	21.64	PASS
	15	0	22.15	21.94	21.80	PASS

FDD-LTE Band 5						
Channel Bandwidth: 5 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	23.89	23.87	24.01	PASS
	1	12	24.69	24.24	24.33	PASS
	1	24	23.85	23.95	23.85	PASS
	12	0	23.08	23.15	23.05	PASS
	12	6	23.09	23.12	23.05	PASS
	12	11	23.07	23.08	22.95	PASS
	25	0	23.10	23.06	23.04	PASS
16QAM	1	0	22.49	22.46	22.51	PASS
	1	12	22.90	23.28	22.58	PASS
	1	24	22.07	22.91	22.42	PASS
	12	0	21.97	21.95	21.71	PASS
	12	6	22.02	22.09	21.69	PASS
	12	11	21.98	21.89	21.43	PASS
	25	0	21.91	21.94	21.83	PASS
Channel Bandwidth: 10 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	24.00	24.06	23.90	PASS
	1	24	24.17	24.56	24.23	PASS
	1	49	24.02	24.29	23.73	PASS
	25	0	23.21	23.10	23.07	PASS
	25	12	23.11	23.14	23.14	PASS
	25	24	23.13	23.14	23.04	PASS
	50	0	23.10	23.17	23.06	PASS
16QAM	1	0	22.81	22.92	23.27	PASS
	1	24	22.89	23.11	23.25	PASS
	1	49	22.53	22.99	22.95	PASS
	25	0	22.18	22.15	22.15	PASS
	25	12	22.04	22.28	22.04	PASS
	25	24	22.08	22.26	22.12	PASS
	50	0	22.05	22.06	22.15	PASS

FDD-LTE Band 12:

FDD-LTE Band 12						
Channel Bandwidth: 1.4 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.15	24.20	24.07	PASS
	1	2	24.22	24.31	24.13	PASS
	1	5	24.28	24.24	24.06	PASS
	3	0	24.20	24.15	24.30	PASS
	3	1	24.22	24.12	24.31	PASS
	3	2	24.21	24.19	24.29	PASS
	6	0	23.15	23.22	23.21	PASS
16QAM	1	0	23.03	22.67	23.47	PASS
	1	2	23.13	22.89	23.49	PASS
	1	5	23.06	22.77	23.41	PASS
	3	0	22.94	23.00	23.20	PASS
	3	1	22.98	22.95	23.23	PASS
	3	2	22.98	22.89	23.17	PASS
	6	0	22.22	22.39	22.21	PASS
Channel Bandwidth: 3 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.02	24.31	24.18	PASS
	1	7	24.19	24.34	24.12	PASS
	1	14	24.10	24.31	24.03	PASS
	8	0	23.21	23.40	23.25	PASS
	8	4	23.24	23.35	23.28	PASS
	8	7	23.25	23.31	23.21	PASS
	15	0	23.17	23.23	23.22	PASS
16QAM	1	0	22.84	23.02	23.26	PASS
	1	7	22.90	23.12	23.29	PASS
	1	14	22.88	22.87	23.02	PASS
	8	0	22.00	22.31	22.31	PASS
	8	4	21.95	22.34	22.36	PASS
	8	7	21.98	22.30	21.83	PASS
	15	0	22.15	22.22	21.99	PASS

FDD-LTE Band 12						
Channel Bandwidth: 5 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	23.92	24.06	24.10	PASS
	1	12	24.72	24.31	24.84	PASS
	1	24	24.10	24.10	23.92	PASS
	12	0	23.21	23.24	23.31	PASS
	12	6	23.20	23.26	23.24	PASS
	12	11	23.12	23.23	23.10	PASS
	25	0	23.11	23.22	23.21	PASS
16QAM	1	0	22.63	22.84	22.80	PASS
	1	12	22.89	23.45	23.12	PASS
	1	24	22.23	22.69	22.53	PASS
	12	0	22.13	22.12	22.07	PASS
	12	6	21.95	22.13	22.01	PASS
	12	11	21.82	22.08	21.54	PASS
	25	0	22.05	21.99	22.10	PASS
Channel Bandwidth: 10 MHz						
Modulation	RB Size	RB Offset	Conducted Power (dBm)			Result
			Low CH	Middle CH	High CH	
QPSK	1	0	23.97	23.95	24.12	PASS
	1	24	24.24	24.40	24.59	PASS
	1	49	24.19	24.32	23.90	PASS
	25	0	23.12	23.18	23.26	PASS
	25	12	23.19	23.24	23.38	PASS
	25	24	23.24	23.21	23.30	PASS
	50	0	23.27	23.28	23.30	PASS
16QAM	1	0	22.82	22.76	23.35	PASS
	1	24	22.99	23.19	23.52	PASS
	1	49	22.64	23.07	22.90	PASS
	25	0	22.11	22.13	22.45	PASS
	25	12	22.13	22.14	22.59	PASS
	25	24	22.06	22.21	22.52	PASS
	50	0	22.09	22.03	22.16	PASS

FDD-LTE Band 17:

FDD-LTE Band 17						
Channel Bandwidth: 5 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	23.89	23.87	23.96	PASS
	1	12	24.66	24.23	24.58	PASS
	1	24	23.84	23.87	23.83	PASS
	12	0	23.08	23.02	23.01	PASS
	12	6	23.07	23.09	23.04	PASS
	12	11	22.91	23.03	22.97	PASS
	25	0	22.98	22.94	22.96	PASS
16QAM	1	0	22.47	22.45	22.64	PASS
	1	12	22.68	23.18	22.88	PASS
	1	24	22.02	22.80	22.28	PASS
	12	0	22.04	21.85	21.81	PASS
	12	6	22.12	21.89	21.84	PASS
	12	11	22.03	21.87	21.39	PASS
	25	0	22.01	21.81	21.84	PASS
Channel Bandwidth: 10 MHz						
Modulation	**RB Size**	**RB Offset**	**Conducted Power (dBm)**			**Result**
			Low CH	**Middle CH**	**High CH**	
QPSK	1	0	24.14	24.02	23.76	PASS
	1	24	24.27	24.51	24.31	PASS
	1	49	23.99	23.75	23.69	PASS
	25	0	23.09	22.96	23.09	PASS
	25	12	23.20	23.13	23.11	PASS
	25	24	23.21	23.13	22.95	PASS
	50	0	23.08	23.10	23.08	PASS
16QAM	1	0	22.90	22.93	23.14	PASS
	1	24	22.88	23.02	23.26	PASS
	1	49	22.49	22.19	22.91	PASS
	25	0	22.04	22.04	21.96	PASS
	25	12	22.23	22.27	22.26	PASS
	25	24	22.24	22.26	22.12	PASS
	50	0	21.97	22.01	21.96	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 > ½ 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	14.31	14.5
		CH 06	2437	13.21	13.5
		CH 11	2462	12.33	12.5
802.11g	6Mbps	CH 01	2412	11.64	12.0
		CH 06	2437	10.81	11.0
		CH 11	2462	10.34	10.5
802.11n (20MHz)	MCS0	CH 01	2412	11.85	12.0
		CH 06	2437	10.82	11.0
		CH 11	2462	10.01	10.5
802.11n (40MHz)	MCS0	CH 03	2422	10.61	11.0
		CH 06	2437	10.92	11.0
		CH 09	2452	9.59	10.0

WLAN(5.2G) - Maximum Average Power				
Test Mode	**Channel**	**Frequency (MHz)**	**Average Power (dBm)**	**Tune-up power (dBm)**
802.11a	36	5180	14.01	14.5
	40	5200	14.08	14.5
	48	5240	14.33	14.5
802.11n (HT20)	36	5180	14.02	14.5
	40	5200	14.03	14.5
	48	5240	14.06	14.5
802.11n (HT40)	38	5190	13.45	13.5
	46	5230	13.56	14.0

WLAN(5.8G) - Maximum Average Power				
Test Mode	**Channel**	**Frequency (MHz)**	**Average Power (dBm)**	**Tune-up power (dBm)**
802.11a	149	5745	12.47	12.5
	157	5785	11.93	12.0
	165	5825	11.41	11.5
802.11n (HT20)	149	5745	12.62	13.0
	157	5785	12.12	12.5
	165	5825	11.25	11.5
802.11n (HT40)	151	5755	12.16	12.5

	159	5795	11.89	12.0

Remark:

1. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.

2. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements ,when the reported SAR of the highest measured maximum output power channel (see 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

3 .For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is <= 1.2W/kg.

4. Per KDB 248227 D01 v02r02, When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same specified maximum output power.

2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.

3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.

4) When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n.

Bluetooth - Maximum Average Power			
Test Mode	**Data Rate**	**Average Power(dBm)**	**Tune-up power (dBm)**
GFSK	1Mbps	3.99	4.0
Pi/4 QDPSK	2Mbps	3.93	4.0
8DPSK	3Mbps	4.26	4.5

Bluetooth - Maximum Average Power					
Test Mode	**Data Rate**	**Channel**	**Frequency (MHz)**	**Average Power (dBm)**	**Tune-up power (dBm)**
BLE	1Mbps	CH 00	2402	6.80	7.0
		CH 19	2440	6.50	7.0
		CH 39	2480	4.86	5.0

Remark:

Bluetooth maximum output power is 3.820dBm and Maximum Tune-Up output power is 4.0dBm,. Per KDB 447498 D01 V06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,16 where

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

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	Result	Limit
7.0	5.01	5	2.402	1.55	3

The exclusion thresholds is 1.55< 3, therefore, the RF exposure evaluation is not required.

9.2 Test Results for Standalone SAR Test

Head SAR

GSM850 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
1.	GSM	Right Cheek	128	824.2	33.68	34.0	1.076	0.077	0.083
2.	GSM	Right Tilted	128	824.2	33.68	34.0	1.076	0.043	0.046
3.	GSM	Left Cheek	128	824.2	33.68	34.0	1.076	0.065	0.070
4.	GSM	Left Tilted	128	824.2	33.68	34.0	1.076	0.035	0.038

GSM1900 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	M Hz					
5.	GSM	Right Cheek	512	1850.2	31.13	31.5	1.089	0.210	0.229
6.	GSM	Right Tilted	512	1850.2	31.13	31.5	1.089	0.096	0.105
7.	GSM	Left Cheek	512	1850.2	31.13	31.5	1.089	0.163	0.177
8.	GSM	Left Tilted	512	1850.2	31.13	31.5	1.089	0.080	0.087

WCDMA Band 2 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
9.	RMC	Right Cheek	9262	1852.4	22.83	23.0	1.040	0.317	0.330
10.	RMC	Right Tilted	9262	1852.4	22.83	23.0	1.040	0.146	0.152
11.	RMC	Left Cheek	9262	1852.4	22.83	23.0	1.040	0.412	0.428
12.	RMC	Left Tilted	9262	1852.4	22.83	23.0	1.040	0.195	0.203

WCDMA Band 4 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
13.	RMC	Right Cheek	1312	1712.4	22.88	23.0	1.028	0.395	0.406
14.	RMC	Right Tilted	1312	1712.4	22.88	23.0	1.028	0.183	0.188
15.	RMC	Left Cheek	1312	1712.4	22.88	23.0	1.028	0.193	0.198
16.	RMC	Left Tilted	1312	1712.4	22.88	23.0	1.028	0.102	0.105

WCDMA Band 5 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
17.	RMC	Right Cheek	4183	836.4	21.77	22.0	1.054	0.117	0.123
18.	RMC	Right Tilted	4183	836.4	21.77	22.0	1.054	0.050	0.053
19.	RMC	Left Cheek	4183	836.4	21.77	22.0	1.054	0.129	0.136
20.	RMC	Left Tilted	4183	836.4	21.77	22.0	1.054	0.056	0.059

LTE Band 2– Head SAR Test								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
21.	QPSK 20MHz 1RB	Right Cheek	1880	24.41	24.5	1.021	0.371	0.379
22.	QPSK 20MHz 1RB	Right Tilted	1880	24.41	24.5	1.021	0.154	0.157
23.	QPSK 20MHz 1RB	Left Cheek	1880	24.41	24.5	1.021	0.198	0.202
24.	QPSK 20MHz 1RB	Left Tilted	1880	24.41	24.5	1.021	0.102	0.104
25.	QPSK 20MHz 50%RB	Right Cheek	1860	22.97	23.0	1.007	0.278	0.280
26.	QPSK 20MHz 50%RB	Right Tilted	1860	22.97	23.0	1.007	0.117	0.118
27.	QPSK 20MHz 50%RB	Left Cheek	1860	22.97	23.0	1.007	0.140	0.141
28.	QPSK 20MHz 50%RB	Left Tilted	1860	22.97	23.0	1.007	0.080	0.081

LTE Band 4– Head SAR Test								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
29.	QPSK 20MHz 1RB	Right Cheek	1732.5	24.61	25.0	1.094	0.470	0.514
30.	QPSK 20MHz 1RB	Right Tilted	1732.5	24.61	25.0	1.094	0.225	0.246
31.	QPSK 20MHz 1RB	Left Cheek	1732.5	24.61	25.0	1.094	0.217	0.237
32.	QPSK 20MHz 1RB	Left Tilted	1732.5	24.61	25.0	1.094	0.102	0.112
33.	QPSK 20MHz 50%RB	Right Cheek	1745.0	23.46	23.5	1.009	0.430	0.434
34.	QPSK 20MHz 50%RB	Right Tilted	1745.0	23.46	23.5	1.009	0.218	0.220
35.	QPSK 20MHz 50%RB	Left Cheek	1745.0	23.46	23.5	1.009	0.179	0.181
36.	QPSK 20MHz 50%RB	Left Tilted	1745.0	23.46	23.5	1.009	0.086	0.087

LTE Band 5– Head SAR Test								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
37.	QPSK 10MHz 1RB	Right Cheek	836.5	24.56	25.0	1.107	0.108	0.120
38.	QPSK 10MHz 1RB	Right Tilted	836.5	24.56	25.0	1.107	0.050	0.055
39.	QPSK 10MHz 1RB	Left Cheek	836.5	24.56	25.0	1.107	0.109	0.121

40.	QPSK 10MHz 1RB	Left Tilted	836.5	24.56	25.0	1.107	0.052	0.058
41.	QPSK 10MHz 50%RB	Right Cheek	829.0	23.21	23.5	1.069	0.085	0.091
42.	QPSK 10MHz 50%RB	Right Tilted	829.0	23.21	23.5	1.069	0.041	0.044
43.	QPSK 10MHz 50%RB	Left Cheek	829.0	23.21	23.5	1.069	0.088	0.094
44.	QPSK 10MHz 50%RB	Left Tilted	829.0	23.21	23.5	1.069	0.046	0.049

LTE Band 12– Head SAR Test								
Plot No.	**Mode**	**Test Position Head**	**Frequency**	**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth		**MHz**					
45.	QPSK 10MHz 1RB	Right Cheek	711	24.59	25.0	1.099	0.235	0.258
46.	QPSK 10MHz 1RB	Right Tilted	711	24.59	25.0	1.099	0.152	0.167
47.	QPSK 10MHz 1RB	Left Cheek	711	24.59	25.0	1.099	0.206	0.226
48.	QPSK 10MHz 1RB	Left Tilted	711	24.59	25.0	1.099	0.095	0.104
49.	QPSK 10MHz 50%RB	Right Cheek	711	23.38	23.5	1.028	0.189	0.194
50.	QPSK 10MHz 50%RB	Right Tilted	711	23.38	23.5	1.028	0.091	0.094
51.	QPSK 10MHz 50%RB	Left Cheek	711	23.38	23.5	1.028	0.168	0.173
52.	QPSK 10MHz 50%RB	Left Tilted	711	23.38	23.5	1.028	0.078	0.080

LTE Band 17– Head SAR Test								
Plot No.	**Mode**	**Test Position Head**	**Frequency**	**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth		**MHz**					
53.	QPSK 10MHz 1RB	Right Cheek	710	24.51	25.0	1.119	0.257	0.288
54.	QPSK 10MHz 1RB	Right Tilted	710	24.51	25.0	1.119	0.118	0.132
55.	QPSK 10MHz 1RB	Left Cheek	710	24.51	25.0	1.119	0.233	0.261
56.	QPSK 10MHz 1RB	Left Tilted	710	24.51	25.0	1.119	0.106	0.119
57.	QPSK 10MHz 50%RB	Right Cheek	709	23.21	23.5	1.069	0.197	0.211
58.	QPSK 10MHz 50%RB	Right Tilted	709	23.21	23.5	1.069	0.094	0.100
59.	QPSK 10MHz 50%RB	Left Cheek	709	23.21	23.5	1.069	0.175	0.187
60.	QPSK 10MHz 50%RB	Left Tilted	709	23.21	23.5	1.069	0.087	0.093

WLAN 2.4GHz – Head SAR Test									
Plot No.	**Mode**	**Test Position Head**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
61.	802.11b	Right Cheek	01	2412	14.31	14.5	1.045	0.248	0.259
62.	802.11b	Right Tilted	01	2412	14.31	14.5	1.045	0.205	0.214
63.	802.11b	Left Cheek	01	2412	14.31	14.5	1.045	0.071	0.074
64.	802.11b	Left Tilted	01	2412	14.31	14.5	1.045	0.082	0.086

WLAN 5.2GHz – Head SAR Test									
Plot No.	**Mode**	**Test Position Head**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
65.	802.11a	Right Cheek	48	5240	14.33	14.5	1.040	0.416	0.433
66.	802.11a	Right Tilted	48	5240	14.33	14.5	1.040	0.378	0.393
67.	802.11a	Left Cheek	48	5240	14.33	14.5	1.040	0.405	0.421
68.	802.11a	Left Tilted	48	5240	14.33	14.5	1.040	0.359	0.373

WLAN 5.8GHz – Head SAR Test									
Plot No.	**Mode**	**Test Position Head**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
69.	802.11n (HT20)	Right Cheek	149	5745	12.62	13.0	1.091	0.317	0.346
70.	802.11n (HT20)	Right Tilted	149	5745	12.62	13.0	1.091	0.298	0.325
71.	802.11n (HT20)	Left Cheek	149	5745	12.62	13.0	1.091	0.332	0.362
72.	802.11n (HT20)	Left Tilted	149	5745	12.62	13.0	1.091	0.305	0.333

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

Body-worn SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
73.	GSM	Back	128	824.2	33.68	34.0	1.076	0.336	0.362
74.	GSM	Front	128	824.2	33.68	34.0	1.076	0.027	0.029

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
75.	GSM	Back	512	1850.2	31.13	31.5	1.089	0.266	0.290
76.	GSM	Front	512	1850.2	31.13	31.5	1.089	0.124	0.135

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
77.	RMC 12.2k	Back Side	9262	1852.4	22.83	23.0	1.040	0.806	0.838
78.	RMC 12.2k	Back Side	9400	1880.0	22.64	23.0	1.086	0.977	1.061
79.	RMC 12.2k	Back Side	9537	1907.6	22.65	23.0	1.084	1.085	1.176
80.	**RMC 12.2k**	**Back Side**	**9537**	**1907.6**	**22.65**	**23.0**	**1.084**	**1.038**	**1.125**
81.	RMC 12.2k	Front Face	9262	1852.4	22.83	23.0	1.040	0.481	0.500

WCDMA Band 4 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
82.	RMC 12.2k	Back Side	1312	1712.4	22.88	23.0	1.028	1.021	1.050
83.	**RMC 12.2k**	**Back Side**	**1312**	**1712.4**	**22.88**	**23.0**	**1.028**	**0.984**	**1.012**
84.	RMC 12.2k	Back Side	1413	1732.6	21.47	22.0	1.130	0.911	1.029
85.	RMC 12.2k	Back Side	1513	1752.6	22.76	23.0	1.057	0.941	0.994
86.	RMC 12.2k	Front Face	1312	1712.4	22.88	23.0	1.028	0.386	0.397

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
87.	RMC 12.2k	Back Side	4183	836.4	21.77	22.0	1.054	0.415	0.438
88.	RMC 12.2k	Front Side	4183	836.4	21.77	22.0	1.054	0.055	0.058

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	**Mode**	**Test Position**	**Frequency**	**Output Power**	**Rated Limit**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth, RB	**Body**	**MHz**	**(dBm)**	**(dBm)**			
89.	QPSK 20MHz 1RB	Back Side	1880	24.41	24.5	1.021	0.904	0.923
90.	QPSK 20MHz 1RB	Back Side	1860	24.20	24.5	1.072	0.946	1.014
91.	QPSK 20MHz 1RB	Back Side	1900	24.08	24.5	1.102	1.047	1.153
92.	**QPSK 20MHz 1RB**	**Back Side**	**1900**	**24.08**	**24.5**	**1.102**	**0.996**	**1.097**
93.	QPSK 20MHz 1RB	Front Side	1880	24.41	24.5	1.021	0.441	0.450
94.	QPSK 20MHz 50%RB	Back Side	1860	22.97	23.0	1.007	0.767	0.772
95.	QPSK 20MHz 50%RB	Front Side	1860	22.97	23.0	1.007	0.334	0.336

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	**Mode**	**Test Position**	**Frequency**	**Output Power**	**Rated Limit**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth, RB	**Body**	**MHz**	**(dBm)**	**(dBm)**			
96.	QPSK 20MHz 1RB	Back Side	1732.5	24.61	25.0	1.094	0.929	1.016
97.	QPSK 20MHz 1RB	Back Side	1720.0	24.58	25.0	1.102	1.024	1.128
98.	**QPSK 20MHz 1RB**	**Back Side**	**1720.0**	**24.58**	**25.0**	**1.102**	**0.989**	**1.089**
99.	QPSK 20MHz 1RB	Back Side	1745.0	24.60	25.0	1.096	0.888	0.974
100.	QPSK 20MHz 1RB	Front Side	1732.5	24.61	25.0	1.094	0.352	0.385
101.	QPSK 20MHz 50%RB	Back Side	1745.0	23.46	23.5	1.009	0.858	0.866
102.	**QPSK 20MHz 50%RB**	**Back Side**	**1745.0**	**23.46**	**23.5**	**1.009**	**0.842**	**0.850**
103.	QPSK 20MHz 50%RB	Back Side	1720.0	23.29	23.5	1.050	0.826	0.867
104.	QPSK 20MHz 50%RB	Back Side	1732.5	23.32	23.5	1.042	0.748	0.780
105.	QPSK 20MHz 50%RB	Front Side	1745.0	23.46	23.5	1.009	0.294	0.297

LTE Band 5–Body SAR Test (Gap: 10mm)								
Plot No.	**Mode**	**Test Position**	**Frequency**	**Output Power**	**Rated Limit**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth, RB	**Body**	**MHz**	**(dBm)**	**(dBm)**			
106.	QPSK 10MHz 1RB	Back Side	836.5	24.56	25.0	1.107	0.313	0.346
107.	QPSK 10MHz 1RB	Front Side	836.5	24.56	25.0	1.107	0.043	0.048
108.	QPSK 10MHz 50%RB	Back Side	829.0	23.21	23.5	1.069	0.259	0.277
109.	QPSK 10MHz 50%RB	Front Side	829.0	23.21	23.5	1.069	0.034	0.036

LTE Band 12–Body SAR Test (Gap: 10mm)								
Plot No.	**Mode**	**Test Position**	**Frequency**	**Output Power**	**Rated Limit**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth, RB	**Body**	**MHz**	**(dBm)**	**(dBm)**			
110.	QPSK 10MHz 1RB	Back Side	711	24.59	25.0	1.099	0.328	0.360
111.	QPSK 10MHz 1RB	Front Side	711	24.59	25.0	1.099	0.098	0.108

112.	QPSK 10MHz 50%RB	Back Side	711	23.38	23.5	1.028	0.268	0.276
113.	QPSK 10MHz 50%RB	Front Side	711	23.38	23.5	1.028	0.141	0.145

LTE Band 17–Body SAR Test (Gap: 10mm)								
Plot No.	**Mode**	**Test Position Body**	**Frequency**	**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth, RB		**MHz**					
114.	QPSK 10MHz 1RB	Back Side	710	24.51	25.0	1.119	0.349	0.391
115.	QPSK 10MHz 1RB	Front Side	710	24.51	25.0	1.119	0.209	0.234
116.	QPSK 10MHz 50%RB	Back Side	709	23.21	23.5	1.069	0.289	0.309
117.	QPSK 10MHz 50%RB	Front Side	709	23.21	23.5	1.069	0.152	0.162

WLAN 2.4GHz –Body SAR Test									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
118.	802.11b	Back Side	01	2412	14.31	14.5	1.045	0.097	0.101
119.	802.11b	Front Side	01	2412	14.31	14.5	1.045	0.109	0.114

WLAN 5.2GHz –Body SAR Test									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
120.	802.11a	Back Side	48	5240	14.33	14.5	1.040	0.309	0.321
121.	802.11a	Front Side	48	5240	14.33	14.5	1.040	0.171	0.178

WLAN 5.8GHz –Body SAR Test									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
122.	802.11n (HT20)	Back Side	149	5745	12.62	13.0	1.091	0.285	0.311
123.	802.11n (HT20)	Front Side	149	5745	12.62	13.0	1.091	0.193	0.211

Hotspot SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
124.	GPRS_4TX	Back Side	190	836.6	30.87	31.0	1.030	0.925	0.953
125.	GPRS_4TX	Back Side	128	824.2	30.58	31.0	1.102	1.155	1.272
126.	**GPRS_4TX**	**Back Side**	**128**	**824.2**	**30.58**	**31.0**	**1.102**	**1.092**	**1.203**
127.	GPRS_4TX	Back Side	251	848.8	30.54	31.0	1.112	0.657	0.730
128.	GPRS_4TX	Front Side	190	836.6	30.87	31.0	1.030	0.040	0.041
129.	GPRS_4TX	Right side	190	836.6	30.87	31.0	1.030	0.346	0.357
130.	GPRS_4TX	Left side	190	836.6	30.87	31.0	1.030	0.266	0.274
131.	GPRS_4TX	Bottom side	190	836.6	30.87	31.0	1.030	0.307	0.316

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
132.	GPRS_4TX	Back Side	810	1909.8	27.69	28.0	1.074	1.159	1.245
133.	**GPRS_4TX**	**Back Side**	**810**	**1909.8**	**27.69**	**28.0**	**1.074**	**1.110**	**1.192**
134.	GPRS_4TX	Back Side	512	1850.2	27.58	28.0	1.102	1.000	1.102
135.	GPRS_4TX	Back Side	661	1880.0	27.46	28.0	1.132	0.990	1.121
136.	GPRS_4TX	Front Side	810	1909.8	27.69	28.0	1.074	0.347	0.373
137.	GPRS_4TX	Right side	810	1909.8	27.69	28.0	1.074	0.446	0.479
138.	GPRS_4TX	Left side	810	1909.8	27.69	28.0	1.074	0.266	0.286
139.	GPRS_4TX	Bottom side	810	1909.8	27.69	28.0	1.074	1.046	1.123
140.	**GPRS_4TX**	**Bottom side**	**810**	**1909.8**	**27.69**	**28.0**	**1.074**	**0.985**	**1.058**
141.	GPRS_4TX	Bottom side	512	1850.2	27.58	28.0	1.102	0.814	0.897
142.	GPRS_4TX	Bottom side	661	1880.0	27.46	28.0	1.132	0.920	1.042

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
143.	RMC 12.2k	Back Side	9262	1852.4	22.83	23.0	1.040	0.806	0.838
144.	RMC 12.2k	Back Side	9400	1880.0	22.64	23.0	1.086	0.977	1.061
145.	RMC 12.2k	Back Side	9537	1907.6	22.65	23.0	1.084	1.085	1.176
146.	**RMC 12.2k**	**Back Side**	**9537**	**1907.6**	**22.65**	**23.0**	**1.084**	**1.038**	**1.125**
147.	RMC 12.2k	Front Face	9262	1852.4	22.83	23.0	1.040	0.481	0.500
148.	RMC 12.2k	Right side	9262	1852.4	22.83	23.0	1.040	0.586	0.609
149.	RMC 12.2k	Left side	9262	1852.4	22.83	23.0	1.040	0.061	0.063

150.	RMC 12.2k	Bottom Side	9262	1852.4	22.83	23.0	1.040	0.854	0.888
151.	RMC 12.2k	Bottom Side	9400	1880.0	22.64	23.0	1.086	0.990	1.076
152.	RMC 12.2k	Bottom Side	9537	1907.6	22.65	23.0	1.084	1.050	1.138
153.	**RMC 12.2k**	**Bottom Side**	**9537**	**1907.6**	**22.65**	**23.0**	**1.084**	**1.020**	**1.106**

WCDMA Band 4 – Body SAR Test (Gap: 10mm)									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
154.	RMC 12.2k	Back Side	1312	1712.4	22.88	23.0	1.028	1.021	1.050
155.	**RMC 12.2k**	**Back Side**	**1312**	**1712.4**	**22.88**	**23.0**	**1.028**	**0.984**	**1.012**
156.	RMC 12.2k	Back Side	1413	1732.6	21.47	22.0	1.130	0.911	1.029
157.	RMC 12.2k	Back Side	1513	1752.6	22.76	23.0	1.057	0.941	0.994
158.	RMC 12.2k	Front Face	1312	1712.4	22.88	23.0	1.028	0.386	0.397
159.	RMC 12.2k	Right side	1312	1712.4	22.88	23.0	1.028	0.680	0.699
160.	RMC 12.2k	Left side	1312	1712.4	22.88	23.0	1.028	0.214	0.220
161.	RMC 12.2k	Bottom Side	1312	1712.4	22.88	23.0	1.028	0.899	0.924
162.	RMC 12.2k	Bottom Side	1413	1732.6	21.47	22.0	1.130	0.905	1.022
163.	RMC 12.2k	Bottom Side	1513	1752.6	22.76	23.0	1.057	0.930	0.983
164.	**RMC 12.2k**	**Bottom Side**	**1513**	**1752.6**	**22.76**	**23.0**	**1.057**	**0.902**	**0.953**

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
165.	RMC 12.2k	Back Side	4183	836.4	21.77	22.0	1.054	0.415	0.438
166.	RMC 12.2k	Front Side	4183	836.4	21.77	22.0	1.054	0.055	0.058
167.	RMC 12.2k	Right side	4183	836.4	21.77	22.0	1.054	0.164	0.173
168.	RMC 12.2k	Left side	4183	836.4	21.77	22.0	1.054	0.136	0.143
169.	RMC 12.2k	Bottom side	4183	836.4	21.77	22.0	1.054	0.097	0.102

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	**Mode**	**Test Position Body**	**Frequency**	**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth, RB		**MHz**					
170.	QPSK 20MHz 1RB	Back Side	1880	24.41	24.5	1.021	0.904	0.923
171.	QPSK 20MHz 1RB	Back Side	1860	24.20	24.5	1.072	0.946	1.014
172.	QPSK 20MHz 1RB	Back Side	1900	24.08	24.5	1.102	1.047	1.153
173.	**QPSK 20MHz 1RB**	**Back Side**	**1900**	**24.08**	**24.5**	**1.102**	**0.996**	**1.097**
174.	QPSK 20MHz 1RB	Front Side	1880	24.41	24.5	1.021	0.441	0.450
175.	QPSK 20MHz 1RB	Right side	1880	24.41	24.5	1.021	0.541	0.552

176.	QPSK 20MHz 1RB	Left side	1880	24.41	24.5	1.021	0.322	0.329
177.	QPSK 20MHz 1RB	Bottom side	1880	24.41	24.5	1.021	1.098	1.121
178.	QPSK 20MHz 1RB	Bottom side	1860	24.20	24.5	1.072	1.058	1.134
179.	QPSK 20MHz 1RB	Bottom side	1900	24.08	24.5	1.102	1.231	1.356
180.	**QPSK 20MHz 1RB**	**Bottom side**	**1900**	**24.08**	**24.5**	**1.102**	**1.178**	**1.298**
181.	QPSK 20MHz 50%RB	Back Side	1860	22.97	23.0	1.007	0.767	0.772
182.	QPSK 20MHz 50%RB	Front Side	1860	22.97	23.0	1.007	0.334	0.336
183.	QPSK 20MHz 50%RB	Right side	1860	22.97	23.0	1.007	0.504	0.507
184.	QPSK 20MHz 50%RB	Left side	1860	22.97	23.0	1.007	0.301	0.303
185.	QPSK 20MHz 50%RB	Bottom side	1860	22.97	23.0	1.007	0.914	0.920
186.	QPSK 20MHz 50%RB	Bottom side	1880	22.86	23.0	1.033	0.943	0.974
187.	QPSK 20MHz 50%RB	Bottom side	1900	22.94	23.0	1.014	0.964	0.977
188.	**QPSK 20MHz 50%RB**	**Bottom side**	**1900**	**22.94**	**23.0**	**1.014**	**0.952**	**0.965**
189.	QPSK 20MHz 100%RB	Back Side	1860	22.96	23.0	1.009	0.653	0.659
190.	QPSK 20MHz 100%RB	Bottom side	1860	22.96	23.0	1.009	0.788	0.795

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	**Mode**	**Test Position Body**	**Frequency**	**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
	Modulation, Bandwidth, RB		**MHz**					
191.	QPSK 20MHz 1RB	Back Side	1732.5	24.61	25.0	1.094	0.929	1.016
192.	QPSK 20MHz 1RB	Back Side	1720.0	24.58	25.0	1.102	1.024	1.128
193.	**QPSK 20MHz 1RB**	**Back Side**	**1720.0**	**24.58**	**25.0**	**1.102**	**0.989**	**1.089**
194.	QPSK 20MHz 1RB	Back Side	1745.0	24.60	25.0	1.096	0.888	0.974
195.	QPSK 20MHz 1RB	Front Side	1732.5	24.61	25.0	1.094	0.352	0.385
196.	QPSK 20MHz 1RB	Right side	1732.5	24.61	25.0	1.094	0.646	0.707
197.	QPSK 20MHz 1RB	Left side	1732.5	24.61	25.0	1.094	0.252	0.276
198.	QPSK 20MHz 1RB	Bottom side	1732.5	24.61	25.0	1.094	1.048	1.146
199.	**QPSK 20MHz 1RB**	**Bottom side**	**1732.5**	**24.61**	**25.0**	**1.094**	**1.020**	**1.116**
200.	QPSK 20MHz 1RB	Bottom side	1720.0	24.58	25.0	1.102	0.896	0.987
201.	QPSK 20MHz 1RB	Bottom side	1745.0	24.60	25.0	1.096	0.970	1.064
202.	QPSK 20MHz 50%RB	Back Side	1732.5	23.46	23.5	1.009	0.858	0.866
203.	**QPSK 20MHz 50%RB**	**Back Side**	**1745.0**	**23.46**	**23.5**	**1.009**	**0.842**	**0.850**
204.	QPSK 20MHz 50%RB	Back Side	1720.0	23.29	23.5	1.050	0.826	0.867
205.	QPSK 20MHz 50%RB	Back Side	1732.5	23.32	23.5	1.042	0.748	0.780
206.	QPSK 20MHz 50%RB	Front Side	1745.0	23.46	23.5	1.009	0.294	0.297
207.	QPSK 20MHz 50%RB	Right side	1745.0	23.46	23.5	1.009	0.632	0.638
208.	QPSK 20MHz 50%RB	Left side	1745.0	23.46	23.5	1.009	0.213	0.215
209.	QPSK 20MHz 50%RB	Bottom side	1745.0	23.46	23.5	1.009	0.779	0.786
210.	QPSK 20MHz 100%RB	Back side	1745.0	23.49	23.5	1.002	0.752	0.754
211.	QPSK 20MHz 100%RB	Bottom side	1745.0	23.49	23.5	1.002	0.706	0.708

LTE Band 5–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
212.	QPSK 10MHz 1RB	Back Side	836.5	24.56	25.0	1.107	0.313	0.346
213.	QPSK 10MHz 1RB	Front Side	836.5	24.56	25.0	1.107	0.043	0.048
214.	QPSK 10MHz 1RB	Right side	836.5	24.56	25.0	1.107	0.137	0.152
215.	QPSK 10MHz 1RB	Left side	836.5	24.56	25.0	1.107	0.117	0.129
216.	QPSK 10MHz 1RB	Bottom side	836.5	24.56	25.0	1.107	0.074	0.082
217.	QPSK 10MHz 50%RB	Back Side	829.0	23.21	23.5	1.069	0.259	0.277
218.	QPSK 10MHz 50%RB	Front Side	829.0	23.21	23.5	1.069	0.034	0.036
219.	QPSK 10MHz 50%RB	Right side	829.0	23.21	23.5	1.069	0.115	0.123
220.	QPSK 10MHz 50%RB	Left side	829.0	23.21	23.5	1.069	0.096	0.103
221.	QPSK 10MHz 50%RB	Bottom side	829.0	23.21	23.5	1.069	0.058	0.062

LTE Band 12–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
222.	QPSK 10MHz 1RB	Back Side	711	24.59	25.0	1.099	0.328	0.360
223.	QPSK 10MHz 1RB	Front Side	711	24.59	25.0	1.099	0.098	0.108
224.	QPSK 10MHz 1RB	Right side	711	24.59	25.0	1.099	0.187	0.206
225.	QPSK 10MHz 1RB	Left side	711	24.59	25.0	1.099	0.127	0.140
226.	QPSK 10MHz 1RB	Bottom side	711	24.59	25.0	1.099	0.067	0.074
227.	QPSK 10MHz 50%RB	Back Side	711	23.38	23.5	1.028	0.268	0.276
228.	QPSK 10MHz 50%RB	Front Side	711	23.38	23.5	1.028	0.141	0.145
229.	QPSK 10MHz 50%RB	Right side	711	23.38	23.5	1.028	0.156	0.160
230.	QPSK 10MHz 50%RB	Left side	711	23.38	23.5	1.028	0.107	0.110
231.	QPSK 10MHz 50%RB	Bottom side	711	23.38	23.5	1.028	0.051	0.052

LTE Band 17–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
232.	QPSK 10MHz 1RB	Back Side	710	24.51	25.0	1.119	0.349	0.391
233.	QPSK 10MHz 1RB	Front Side	710	24.51	25.0	1.119	0.209	0.234
234.	QPSK 10MHz 1RB	Right side	710	24.51	25.0	1.119	0.220	0.246
235.	QPSK 10MHz 1RB	Left side	710	24.51	25.0	1.119	0.141	0.158

236.	QPSK 10MHz 1RB	Bottom side	710	24.51	25.0	1.119	0.069	0.077
237.	QPSK 10MHz 50%RB	Back Side	709	23.21	23.5	1.069	0.289	0.309
238.	QPSK 10MHz 50%RB	Front Side	709	23.21	23.5	1.069	0.152	0.162
239.	QPSK 10MHz 50%RB	Right side	709	23.21	23.5	1.069	0.168	0.180
240.	QPSK 10MHz 50%RB	Left side	709	23.21	23.5	1.069	0.114	0.122
241.	QPSK 10MHz 50%RB	Bottom side	709	23.21	23.5	1.069	0.054	0.058

WLAN 2.4GHz –Body SAR Test									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
242.	802.11b	Back Side	01	2412	14.31	14.5	1.045	0.097	0.101
243.	802.11b	Front Side	01	2412	14.31	14.5	1.045	0.109	0.114
244.	802.11b	Left side	01	2412	14.31	14.5	1.045	0.123	0.129
245.	802.11b	Top side	01	2412	14.31	14.5	1.045	0.080	0.084

WLAN 5.2GHz –Body SAR Test									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
246.	802.11a	Back Side	48	5240	14.33	14.5	1.040	0.309	0.321
247.	802.11a	Front Side	48	5240	14.33	14.5	1.040	0.171	0.178
248.	802.11a	Left side	48	5240	14.33	14.5	1.040	0.288	0.299
249.	802.11a	Top side	48	5240	14.33	14.5	1.040	0.297	0.309

WLAN 5.8GHz –Body SAR Test									
Plot No.	**Mode**	**Test Position Body**	**Frequency**		**Output Power (dBm)**	**Rated Limit (dBm)**	**Scaling Factor**	**SAR1g (W/kg)**	**Scaled SAR1g (W/kg)**
			CH.	**MHz**					
250.	802.11n (HT20)	Back Side	149	5745	12.62	13.0	1.091	0.285	0.311
251.	802.11n (HT20)	Front Side	149	5745	12.62	13.0	1.091	0.193	0.211
252.	802.11n (HT20)	Left side	149	5745	12.62	13.0	1.091	0.293	0.320
253.	802.11n (HT20)	Top side	149	5745	12.62	13.0	1.091	0.327	0.357

Repeated SAR

Mode	Test Position Body	Frequency		SAR1g (W/kg)	Repeated SAR		Ratio	
		CH.	MHz		1	2	1	2
GPRS850_4TX	Back Side	128	824.2	1.155	1.092	/	1.058	/
GPRS1900_4TX	Back Side	810	1909.8	1.159	1.110	/	1.044	/
GPRS1900_4TX	Bottom Side	810	1909.8	1.046	0.985	/	1.062	/
WCDMA Band 2	Back Side	9537	1907.6	1.085	1.038	/	1.045	/
WCDMA Band 2	Bottom Side	9537	1907.6	1.050	1.020	/	1.029	/
WCDMA Band 4	Back Side	1312	1712.4	1.021	0.984	/	1.038	/
WCDMA Band 4	Bottom Side	1513	1752.6	0.930	0.902	/	1.031	/
LTE Band 2 QPSK 20MHz 1RB	Back Side	19100	1900	1.047	0.996	/	1.051	/
LTE Band 2 QPSK 20MHz 1RB	Bottom Side	19100	1900	1.231	1.178	/	1.045	/
LTE Band 2 QPSK 20MHz 50%RB	Bottom Side	19100	1900	0.964	0.952	/	1.013	/
LTE Band 4 QPSK 20MHz 1RB	Back Side	20050	1720.0	1.024	0.989	/	1.035	/
LTE Band 4 QPSK 20MHz 1RB	Bottom Side	20175	1732.5	1.048	1.020	/	1.027	/
LTE Band 4 QPSK 20MHz 50%RB	Back Side	20300	1732.5	0.858	0.842	/	1.019	/

Remark:

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

2) When the original highest measured SAR is ⩾ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ⩾ 1.45 W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

9.3 Simultaneous Multi-band Transmission SAR Analysis

List of Mode for Simultaneous Multi-band Transmission

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

Remark:

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

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;

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

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

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	X	SAR(1g) 5mm	SAR(1g) 10mm
7.0	5.01	5/10	2.402	7.5	0.207	0.104

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

Head SAR

WWAN and WLAN

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Right Cheek	GSM	0.229	0.259	0.488
Right Tilted	GSM	0.105	0.214	0.319
Left Cheek	GSM	0.177	0.074	0.251
Left Tilted	GSM	0.087	0.086	0.173
Right Cheek	WCDMA	0.406	0.259	0.665
Right Tilted	WCDMA	0.188	0.214	0.402
Left Cheek	WCDMA	0.428	0.074	0.502
Left Tilted	WCDMA	0.203	0.086	0.289
Right Cheek	LTE	0.514	0.259	0.773
Right Tilted	LTE	0.246	0.214	0.460
Left Cheek	LTE	0.261	0.074	0.335
Left Tilted	LTE	0.119	0.086	0.205

WWAN and WLAN

	WWAN		WLAN(5G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Right Cheek	GSM	0.229	0.433	0.662
Right Tilted	GSM	0.105	0.393	0.498
Left Cheek	GSM	0.177	0.421	0.598
Left Tilted	GSM	0.087	0.373	0.460
Right Cheek	WCDMA	0.406	0.433	0.839
Right Tilted	WCDMA	0.188	0.393	0.581
Left Cheek	WCDMA	0.428	0.421	0.849
Left Tilted	WCDMA	0.203	0.373	0.576
Right Cheek	LTE	0.514	0.433	0.947
Right Tilted	LTE	0.246	0.393	0.639
Left Cheek	LTE	0.261	0.421	0.682
Left Tilted	LTE	0.119	0.373	0.492

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Right Cheek	GSM	0.229	0.207	0.436
Right Tilted	GSM	0.105	0.207	0.312

Left Cheek	GSM	0.177	0.207	0.384
Left Tilted	GSM	0.087	0.207	0.294
Right Cheek	WCDMA	0.406	0.207	0.613
Right Tilted	WCDMA	0.188	0.207	0.395
Left Cheek	WCDMA	0.428	0.207	0.635
Left Tilted	WCDMA	0.203	0.207	0.410
Right Cheek	LTE	0.514	0.207	0.721
Right Tilted	LTE	0.246	0.207	0.453
Left Cheek	LTE	0.261	0.207	0.468
Left Tilted	LTE	0.119	0.207	0.326

Body-worn SAR

WWAN and WLAN

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	0.362	0.101	0.463
Front	GSM	0.135	0.114	0.249
Back	WCDMA	1.176	0.101	1.277
Front	WCDMA	0.500	0.114	0.614
Back	LTE	1.153	0.101	1.254
Front	LTE	0.450	0.114	0.564

WWAN and WLAN

	WWAN		WLAN(5G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	0.362	0.321	0.683
Front	GSM	0.135	0.211	0.346
Back	WCDMA	1.176	0.321	1.497
Front	WCDMA	0.500	0.211	0.711
Back	LTE	1.153	0.321	1.474
Front	LTE	0.450	0.211	0.661

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	0.362	0.104	0.466
Front	GSM	0.135	0.104	0.239
Back	WCDMA	1.176	0.104	1.280
Front	WCDMA	0.500	0.104	0.604
Back	LTE	1.153	0.104	1.257
Front	LTE	0.450	0.104	0.554

Hotspot SAR

WWAN and WLAN

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	1.272	0.101	1.373
Front	GSM	0.373	0.114	0.487
Right side	GSM	0.479	/	0.479
Left side	GSM	0.286	0.129	0.415
Bottom side	GSM	1.123	/	1.123
Top side	GSM	/	0.084	0.084
Back	WCDMA	1.176	0.101	1.277
Front	WCDMA	0.500	0.114	0.614
Right side	WCDMA	0.699	/	0.699
Left side	WCDMA	0.220	0.129	0.349
Bottom side	WCDMA	1.138	/	1.138
Top side	WCDMA	/	0.084	0.084
Back	LTE	1.153	0.101	1.254
Front	LTE	0.450	0.114	0.564
Right side	LTE	0.707	/	0.707
Left side	LTE	0.329	0.129	0.458
Bottom side	LTE	1.356	/	1.356
Top side	LTE	/	0.084	0.084

WWAN and WLAN

	WWAN		WLAN(5G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	1.272	0.321	1.593
Front	GSM	0.373	0.211	0.584
Right side	GSM	0.479	/	0.479
Left side	GSM	0.286	0.320	0.606
Bottom side	GSM	1.123	/	1.123
Top side	GSM	/	0.357	0.357
Back	WCDMA	1.176	0.321	1.497
Front	WCDMA	0.500	0.211	0.711
Right side	WCDMA	0.699	/	0.699
Left side	WCDMA	0.220	0.320	0.54
Bottom side	WCDMA	1.138	/	1.138
Top side	WCDMA	/	0.357	0.357
Back	LTE	1.153	0.321	1.474

Front	LTE	0.450	0.211	0.661
Right side	LTE	0.707	/	0.707
Left side	LTE	0.329	0.320	0.649
Bottom side	LTE	1.356	/	1.356
Top side	LTE	/	0.357	0.357

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	1.272	0.104	1.376
Front	GSM	0.373	0.104	0.477
Right side	GSM	0.479	/	0.479
Left side	GSM	0.286	0.104	0.39
Bottom side	GSM	1.123	/	1.123
Top side	GSM	/	0.104	0.104
Back	WCDMA	1.176	0.104	1.280
Front	WCDMA	0.500	0.104	0.604
Right side	WCDMA	0.699	/	0.699
Left side	WCDMA	0.220	0.104	0.324
Bottom side	WCDMA	1.138	/	1.138
Top side	WCDMA	/	0.104	0.104
Back	LTE	1.153	0.104	1.257
Front	LTE	0.450	0.104	0.554
Right side	LTE	0.707	/	0.707
Left side	LTE	0.329	0.104	0.433
Bottom side	LTE	1.356	/	1.356
Top side	LTE	/	0.104	0.104

10. Measurement Uncertainty

10.1 Uncertainty for EUT SAR Test

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	**Sec.**	**Tol (+- %)**	**Prob. Dist.**	**Div.**	**Ci (1g)**	**Ci (10g)**	**1g Ui (+-%)**	**10g Ui (+-%)**	**Vi**
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	∝
Axial Isotropy	E.2.2	2.5	R	√3	(1_Cp)^1/2	(1_Cp)^1/2	1.02	1.02	∝
Hemispherical Isotropy	E.2.2	4.0	R	√3	(Cp)^1/2	(Cp)^1/2	1.63	1.63	∝
Boundary effect	E.2.3	1.0	R	√3	1	1	0.58	0.58	∝
Linearity	E.2.4	5.0	R	√3	1	1	2.89	2.89	∝
System detection limits	E.2.5	1.0	R	√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	√3	1	1	1.73	1.73	∝
Integration Time	E.2.8	2.0	R	√3	1	1	1.15	1.15	∝
RF ambient Conditions – Noise	E.6.1	3.0	R	√3	1	1	1.73	1.73	∝
RF ambient Conditions - Reflections	E.6.1	3.0	R	√3	1	1	1.73	1.73	∝
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	√3	1	1	1.15	1.15	∝
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	√3	1	1	0.03	0.03	∝
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5	5.0	R	√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	√3	1	1	6.94	6.94	∝
SAR scaling	E6.5	0.0	R	√3	1	1	0.0	0.0	∝
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	√3	1	1	0.03	0.03	∝
Uncertainty in SAR correction for deviations in permittivity and conductivity	E3.2	1.9	R	√3	1	0.84	1.10	0.90	∝

Liquid conductivity - deviation from target value	E.3.2	5.00	R	√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	√3	0.6	0.49	0.13	0.10	∝
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	∝
Combined Standard Uncertainty			RSS				12.98	12.53	
Expanded Uncertainty (95% Confidence interval)			K=2				25.32	24.43	

10.2 Uncertainty for System Performance Check

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	**Sec.**	**Tol (+- %)**	**Prob. Dist.**	**Div.**	**Ci (1g)**	**Ci (10g)**	**1g Ui (+-%)**	**10g Ui (+-%)**	**Vi**
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	∝
Axial Isotropy	E.2.2	2.5	R	√3	(1_Cp)^1/2	(1_Cp)^1/2	1.02	1.02	∝
Hemispherical Isotropy	E.2.2	4.0	R	√3	(Cp)^1/2	(Cp)^1/2	1.63	1.63	∝
Boundary effect	E.2.3	1.0	R	√3	1	1	0.58	0.58	∝
Linearity	E.2.4	5.0	R	√3	1	1	2.89	2.89	∝
System detection limits	E.2.5	1.0	R	√3	1	1	0.58	0.58	∝
Modulation response	E.2.5	0	R	√3	0	0	0.0	0.0	∝
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	∝
Reponse Time	E.2.7	3.0	R	√3	1	1	1.73	1.73	∝
Integration Time	E.2.8	2.0	R	√3	1	1	1.15	1.15	∝
RF ambient Conditions – Noise	E.6.1	3.0	R	√3	1	1	1.73	1.73	∝
RF ambient Conditions - Reflections	E.6.1	3.0	R	√3	1	1	1.73	1.73	∝
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	√3	1	1	1.15	1.15	∝
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	√3	1	1	0.03	0.03	∝
Extrapolation, interpolation and	E.5.2	5.0	R	√3	1	1	2.89	2.89	∝

integration Algoritms for Max. SAR Evaluation									
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	√3	1	1	0.58	0.58	N−1
Input power and SAR drift measurement	8,6.6.2	12.02	R	√3	1	1	6.94	6.94	∝
Deviation of experimental dipole from numerical dipole	E.6.4	5.5	R	√3	1	1	3.20	3.20	∝
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	√3	1	1	0.03	0.03	∝
Uncertainty in SAR correction for deviations in permittivity and conductivity	E3.2	2.0	R	√3	1	0.84	1.10	1.10	∝
Liquid conductivity - deviation from target value	E.3.2	5.00	R	√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	√3	0.6	0.49	0.13	0.10	
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M
Combined Standard Uncertainty			RSS				12.00	11.50	
Expanded Uncertainty (95% Confidence interval)			K=2				23.39	22.43	

Annex A. Plots of System Performance Check

MEASUREMENT 1

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

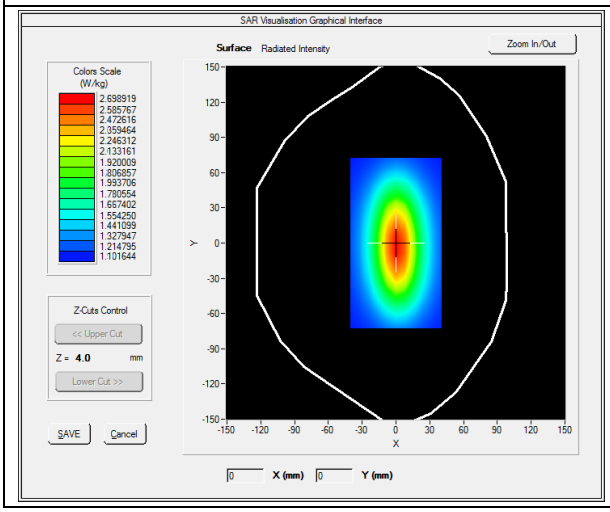
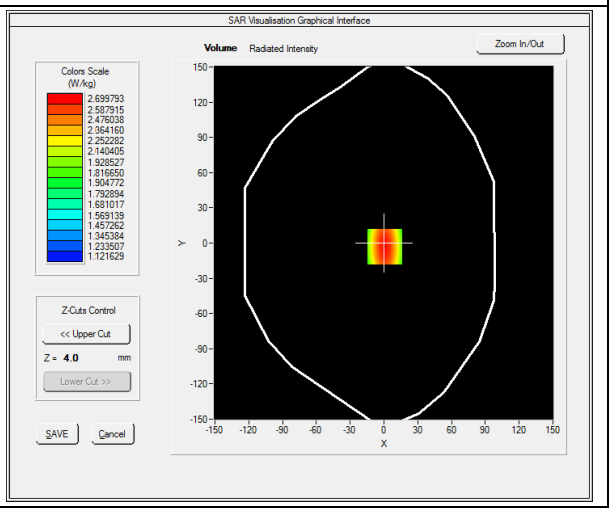
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.99; Calibrated: 2020-05-22

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)	42.620138
Conductivity (S/m)	0.874252
Power Variation (%)	0.030000
Ambient Temperature	21.3
Liquid Temperature	21.3

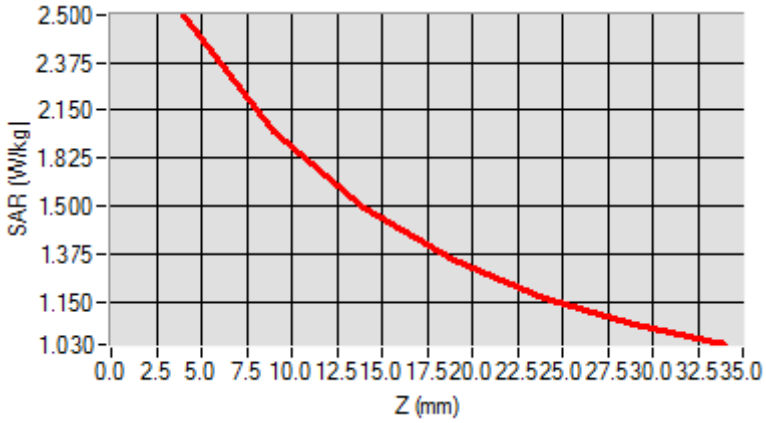
SURFACE SAR	VOLUME SAR
	

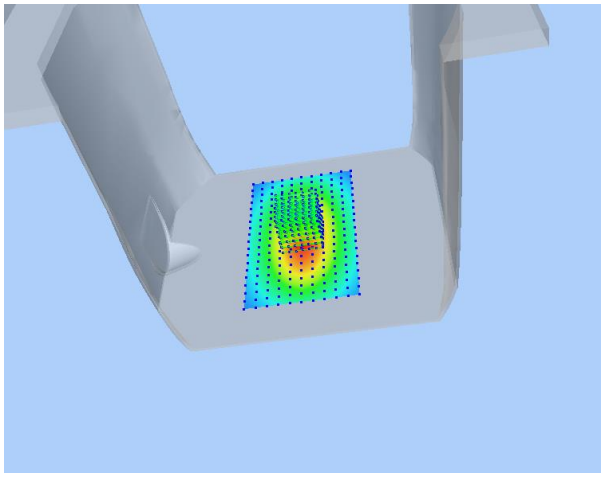
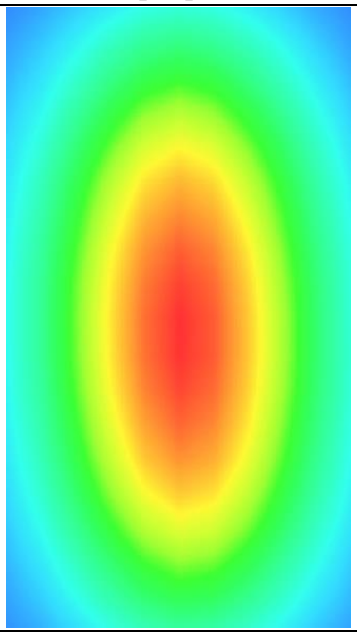
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**1.342744**
SAR 1g (W/Kg)	**2.064534**

Z Axis Scan

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



3D screen shot	**Hot spot position**
	

MEASUREMENT 2

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

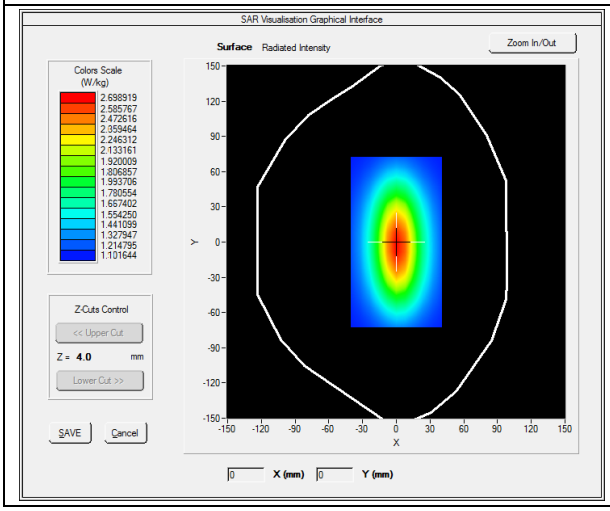
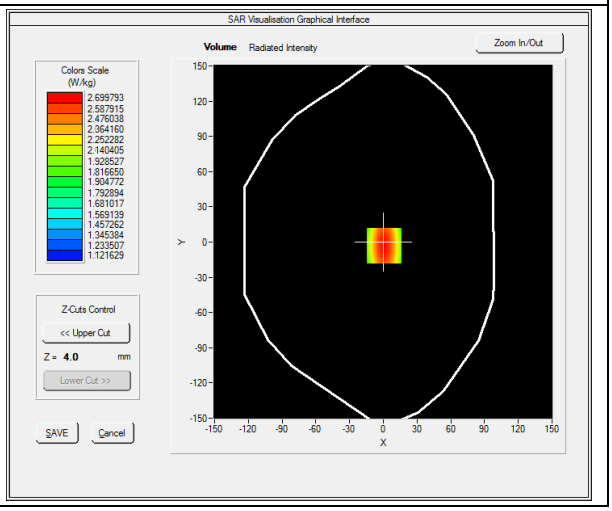
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

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)	41.940162
Conductivity (S/m)	0.907324
Power Variation (%)	0.680000
Ambient Temperature	21.5
Liquid Temperature	21.5

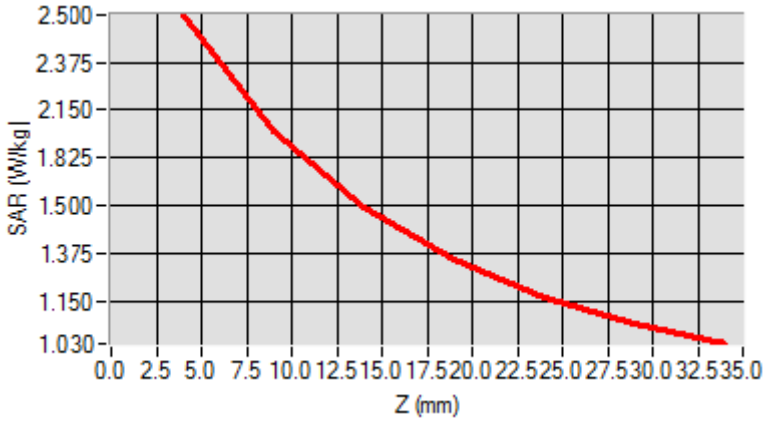
SURFACE SAR	VOLUME SAR
	

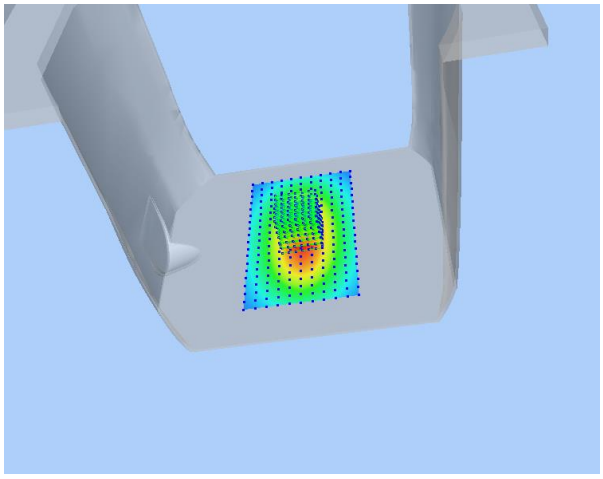
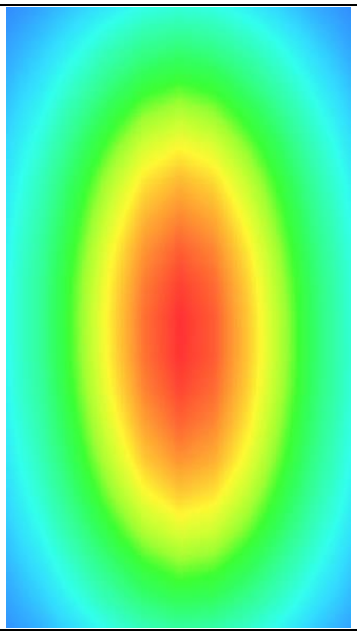
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**1.590438**
SAR 1g (W/Kg)	**2.481206**

Z Axis Scan

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



3D screen shot	**Hot spot position**
	

MEASUREMENT 3

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

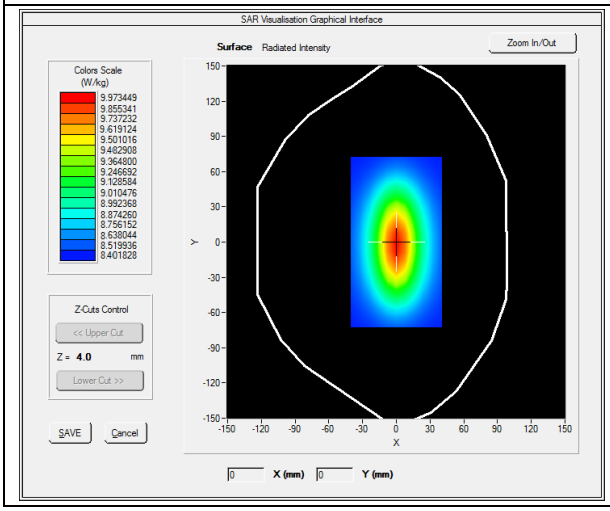
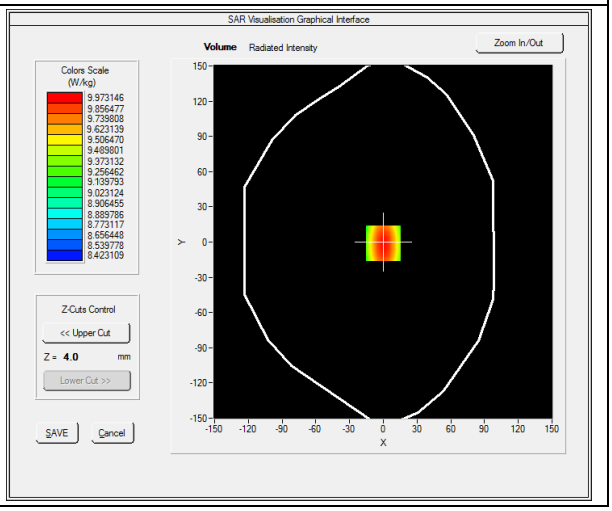
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

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)	39.640518
Conductivity (S/m)	1.382075
Power Variation (%)	1.200000
Ambient Temperature	21.3
Liquid Temperature	21.3

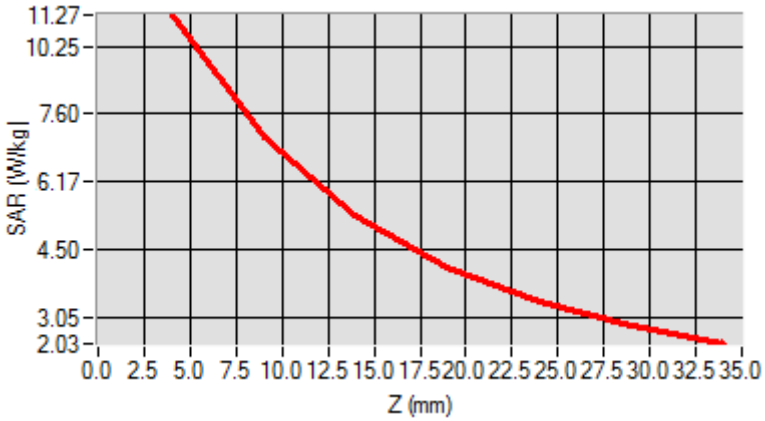
SURFACE SAR	VOLUME SAR
	

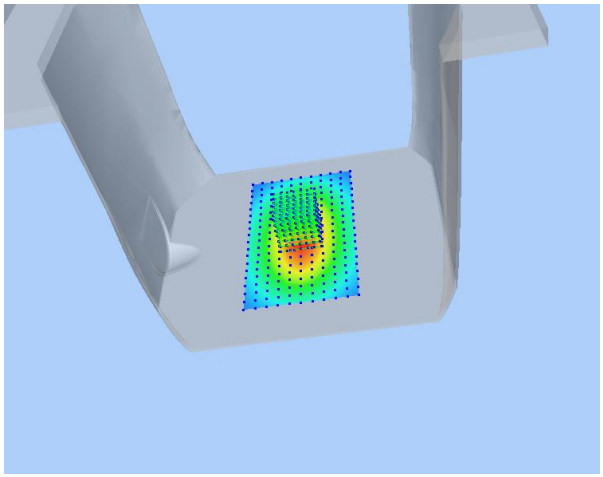
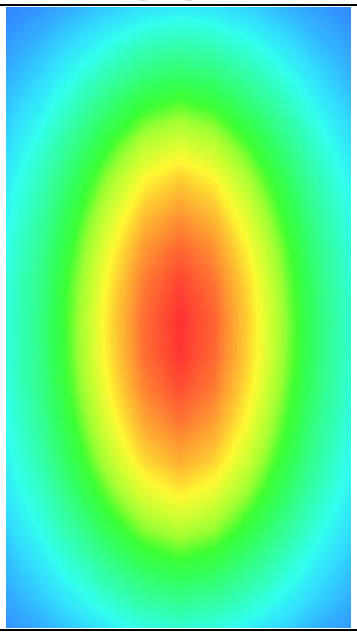
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**5.140252**
SAR 1g (W/Kg)	**9.461250**

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

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

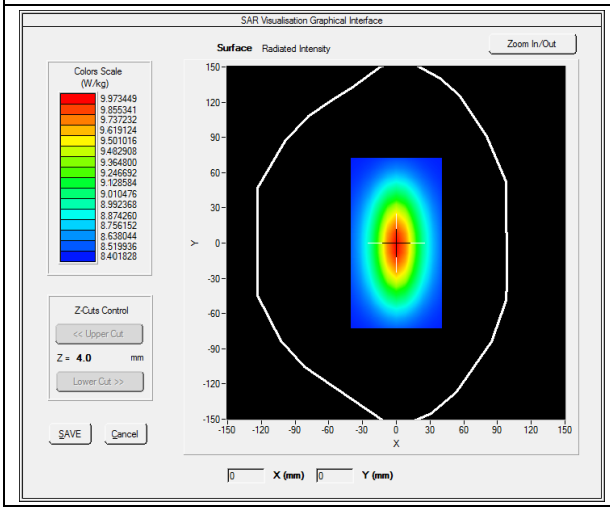
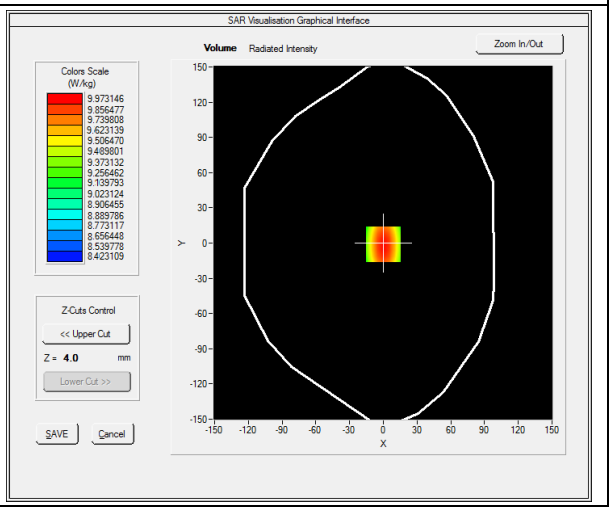
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

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)	39.180926
Conductivity (S/m)	1.397169
Power Variation (%)	1.060000
Ambient Temperature	21.5
Liquid Temperature	21.5

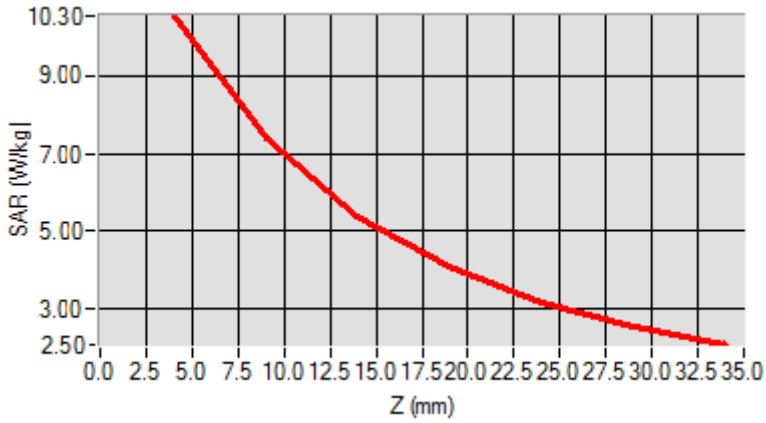
SURFACE SAR	VOLUME SAR
	

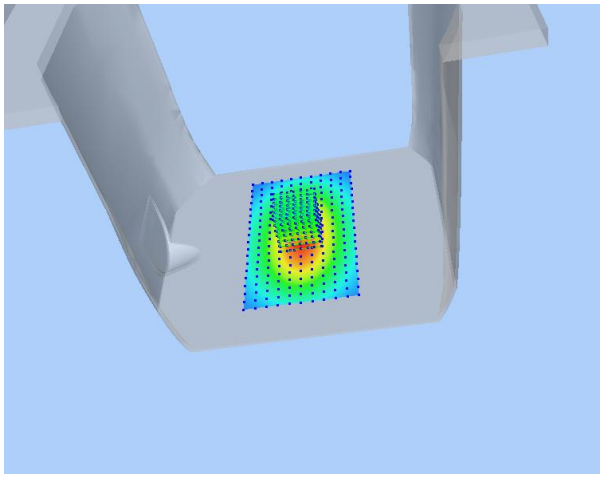
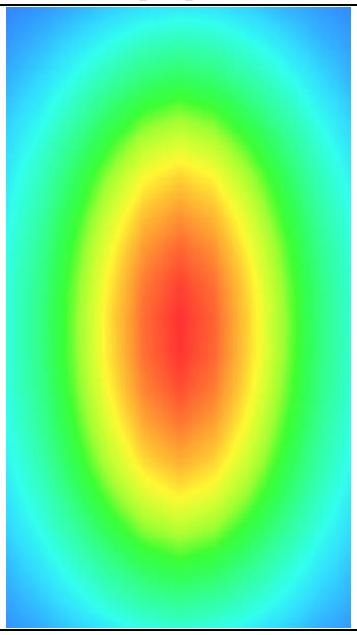
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**5.214526**
SAR 1g (W/Kg)	**10.013214**

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

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

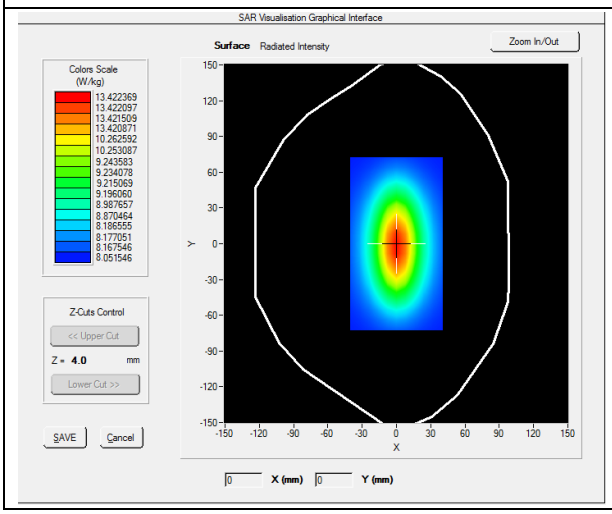
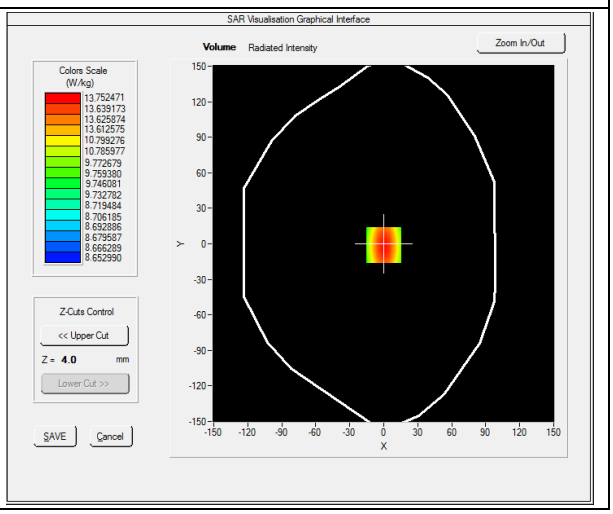
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.64; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	39.761385
Conductivity (S/m)	1.774012
Power Variation (%)	-1.400000
Ambient Temperature	21.2
Liquid Temperature	21.2

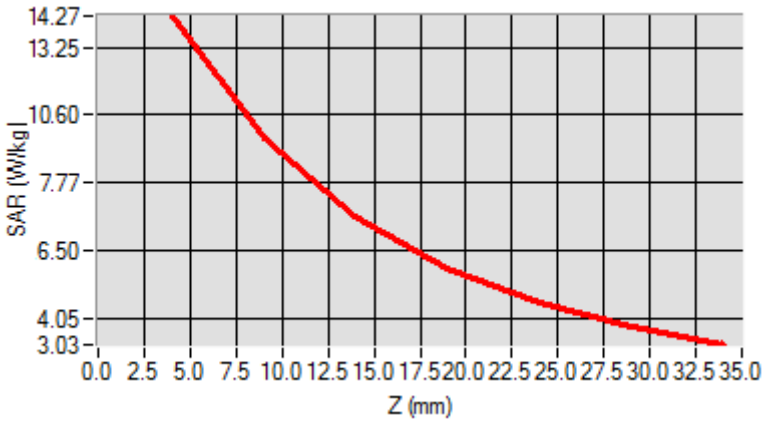
SURFACE SAR	VOLUME SAR
	

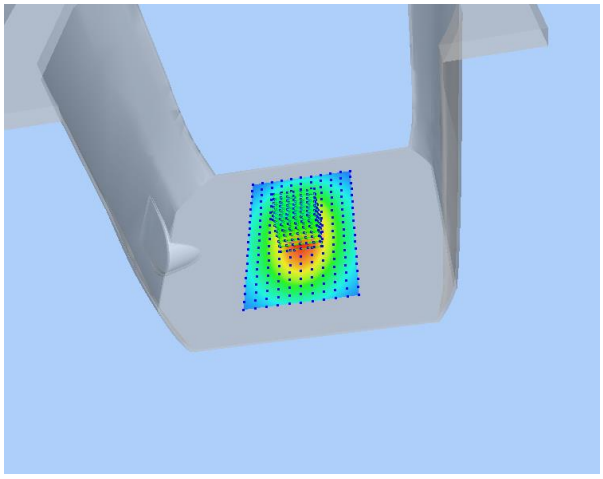
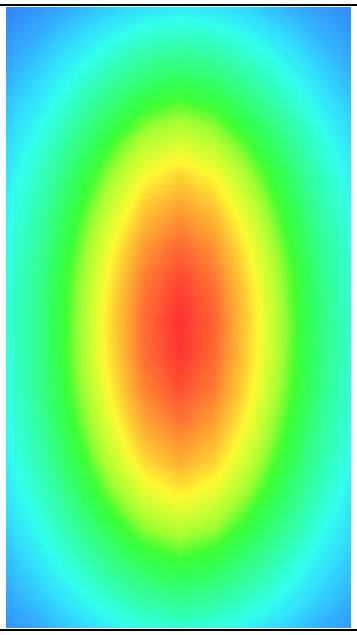
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**6.020494**
SAR 1g (W/Kg)	**13.670182**

Z Axis Scan

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



3D screen shot	**Hot spot position**
	

MEASUREMENT 6

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

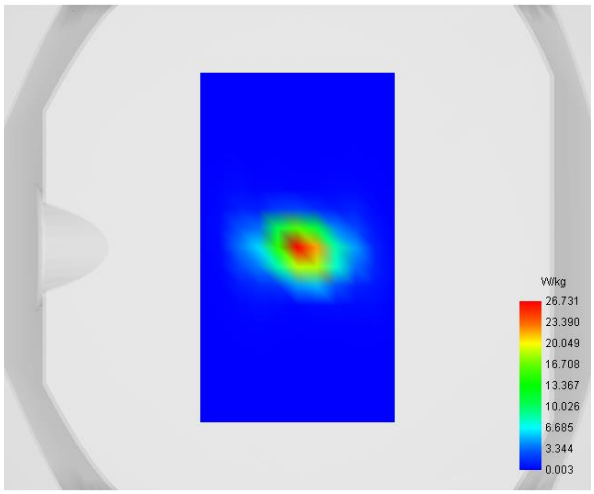
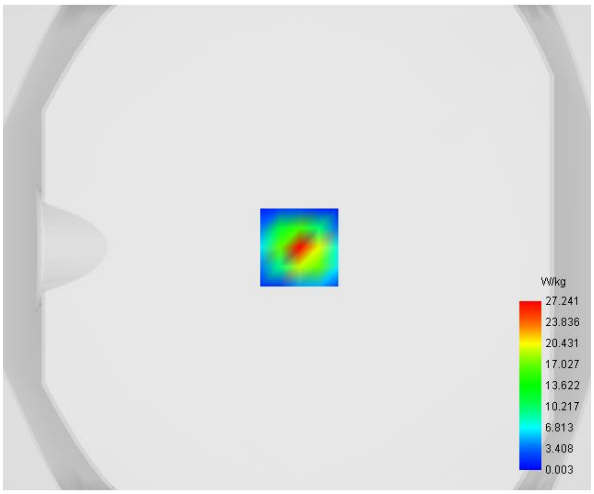
E-field Probe: SSE2- SN 45/15 EPGO280; ConvF: 2.44; Calibrated: 2020-07-03

A. Experimental conditions

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

B. SAR Measurement Results

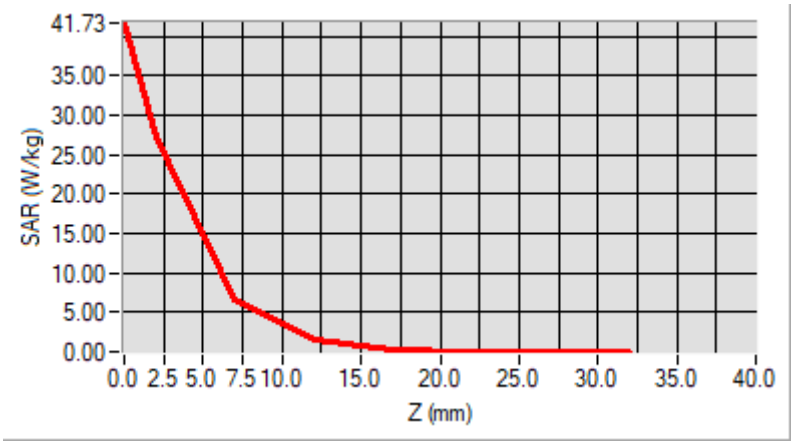
Frequency (MHz)	5200.000000
Relative Permittivity (real part)	37.062985
Conductivity (S/m)	4.570214
Power Variation (%)	0.940000
Ambient Temperature	21.0
Liquid Temperature	21.0

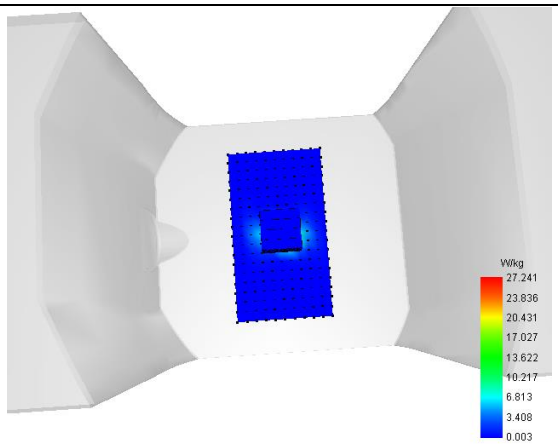
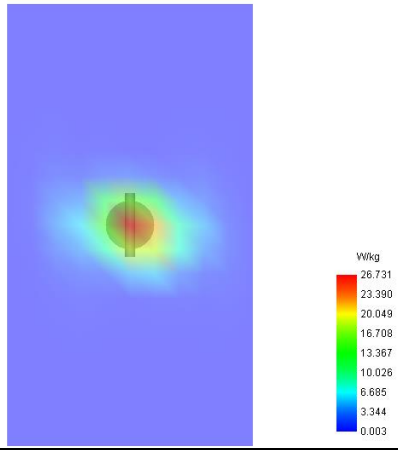
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	**5.320706**
SAR 1g (W/Kg)	**16.854352**

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**



3D screen shot	**Hot spot position**
	

MEASUREMENT 7

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

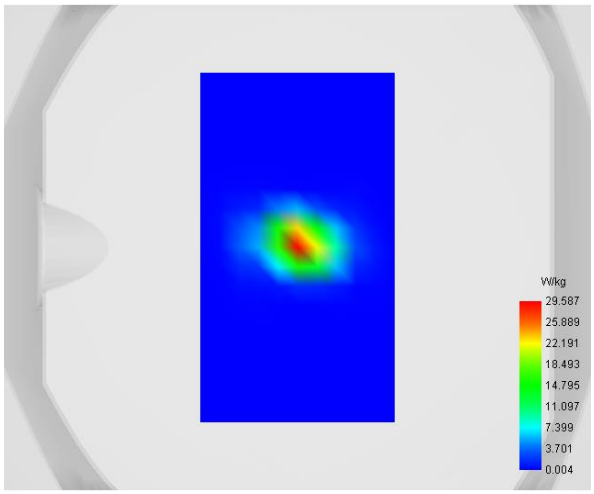
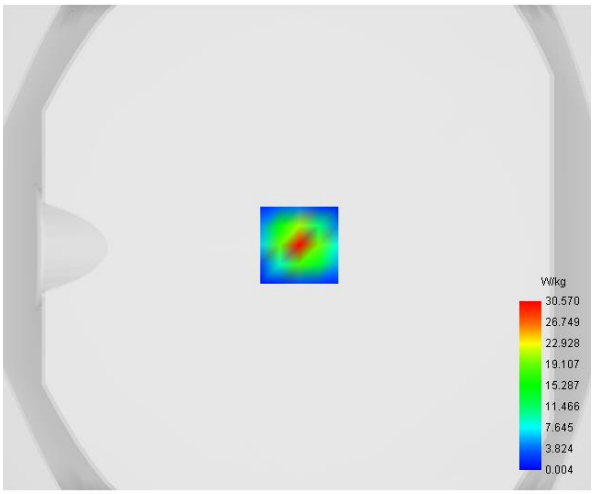
E-field Probe: SSE2- SN 45/15 EPGO280; ConvF: 2.52; Calibrated: 2020-07-03

A. Experimental conditions

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

B. SAR Measurement Results

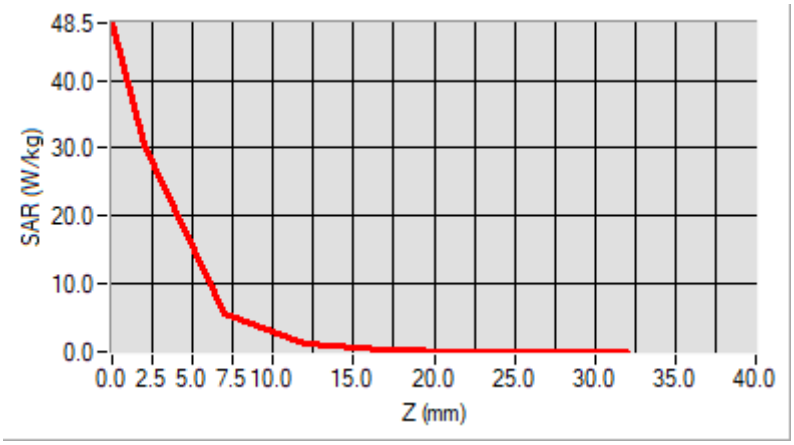
Frequency (MHz)	5800.000000
Relative Permittivity (real part)	34.607328
Conductivity (S/m)	5.083504
Power Variation (%)	-1.040000
Ambient Temperature	21.0
Liquid Temperature	21.0

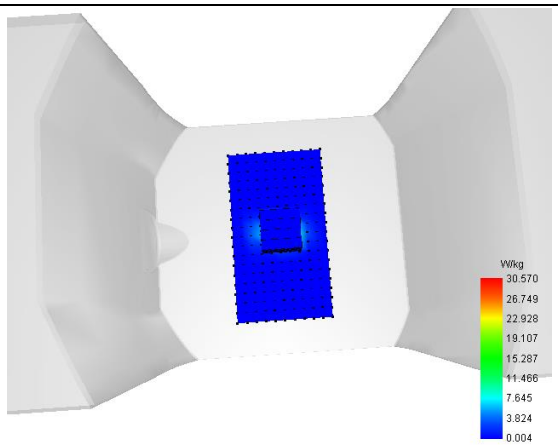
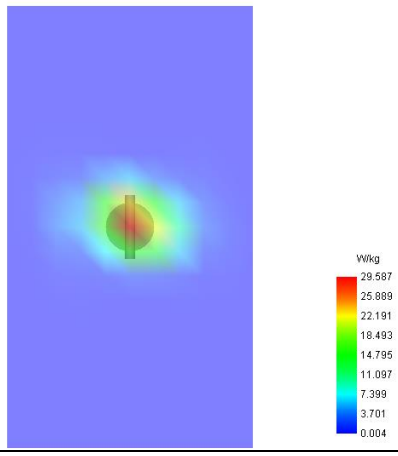
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=1.00

SAR 10g (W/Kg)	**5.879544**
SAR 1g (W/Kg)	**17.310704**

Z (mm)	**0.00**	**2.00**	**7.00**	**12.00**	**17.00**	**22.00**	**27.00**
SAR (W/Kg)	**48.4695**	**30.5699**	**5.7100**	**1.0698**	**0.1906**	**0.0364**	**0.0052**



3D screen shot	**Hot spot position**
	

Annex B. Plots of SAR Measurement

TYPE	BAND	PARAMETERS
Phone	**GSM850**	Measurement 1: Right Head with Cheek device position on Low Channel in GSM mode
Phone	**GSM1900**	Measurement 5: Right Head with Cheek device position on Low Channel in GSM mode
Phone	**WCDMA1900_RMC**	Measurement 11: Left Head with Cheek device position on Low Channel in WCDMA mode
Phone	**WCDMA1700_RMC**	Measurement 13: Right Head with Cheek device position on Low Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 19: Left Head with Cheek device position on Middle Channel in WCDMA mode
Phone	**LTE Band 2**	Measurement 21: Right Head with Cheek device position on Middle Channel in LTE mode
Phone	**LTE Band 4**	Measurement 29: Right Head with Cheek device position on Middle Channel in LTE mode
Phone	**LTE Band 5**	Measurement 39: Left Head with Cheek device position on Middle Channel in LTE mode
Phone	**LTE Band 12**	Measurement 45: Right Head with Cheek device position on High Channel in LTE mode
Phone	**LTE Band 17**	Measurement 53: Right Head with Cheek device position on Middle Channel in LTE mode
Phone	**2.4G WiFi_802.11b**	Measurement 61: Right Head with Cheek device position on Low Channel in 802.11b mode
Phone	**5.2G WiFi_802.11a**	Measurement 65: Right Head with Cheek device position on High Channel in 802.11a mode
Phone	**5.8GWiFi_802.11n20**	Measurement 71: Right Head with Cheek device position on Low Channel in 802.11n mode
Phone	**GSM850**	Measurement 73: Flat Plane with Back device position on Low Channel in GSM mode
Phone	**GSM1900**	Measurement 75: Flat Plane with Back device position on Low Channel in GSM mode
Phone	**WCDMA1900_RMC**	Measurement 79/145: Flat Plane with Back side device position on High Channel in WCDMA mode
Phone	**WCDMA1700_RMC**	Measurement 82/155: Flat Plane with Back side device position on Low Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 87/165: Flat Plane with Back side device position on Middle Channel in WCDMA mode

Phone	**LTE Band 2**	Measurement 91: Flat Plane with Back device position on High Channel in LTE mode
Phone	**LTE Band 4**	Measurement 97: Flat Plane with Back device position on Low Channel in LTE mode
Phone	**LTE Band 5**	Measurement 106/212: Flat Plane with Back device position on Middle Channel in LTE mode
Phone	**LTE Band 12**	Measurement 110/222: Flat Plane with Back device position on High Channel in LTE mode
Phone	**LTE Band 17**	Measurement 114/232: Flat Plane with Back device position on Middle Channel in LTE mode
Phone	**WiFi_802.11b**	Measurement 119: Flat Plane with Front side device position on Low Channel in 802.11b mode
Phone	**5.2G WiFi_802.11a**	Measurement 120/246: Flat Plane with Back side device position on High Channel in 802.11a mode
Phone	**5.8GWiFi_802.11n20**	Measurement 122: Flat Plane with Back side device position on Low Channel in 802.11n mode
Phone	**GPRS850_4TX**	Measurement 125: Flat Plane with Back device position on Low Channel in GPRS mode
Phone	**GPRS1900_4TX**	Measurement 132: Flat Plane with Back device position on High Channel in GPRS mode
Phone	**LTE Band 2**	Measurement 179: Flat Plane with Bottom device position on High Channel in LTE mode
Phone	**LTE Band 4**	Measurement 198: Flat Plane with Bottom device position on Low Channel in LTE mode
Phone	**WiFi_802.11b**	Measurement 244: Flat Plane with Left side device position on Low Channel in 802.11b mode
Phone	**5.8GWiFi_802.11n20**	Measurement 253: Flat Plane with Top side device position on Low Channel in 802.11n mode
Remark: SAR plot is showed the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.		

MEASUREMENT 1

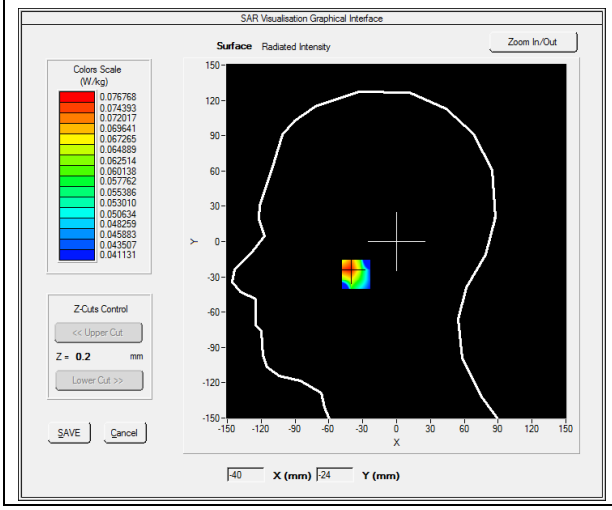
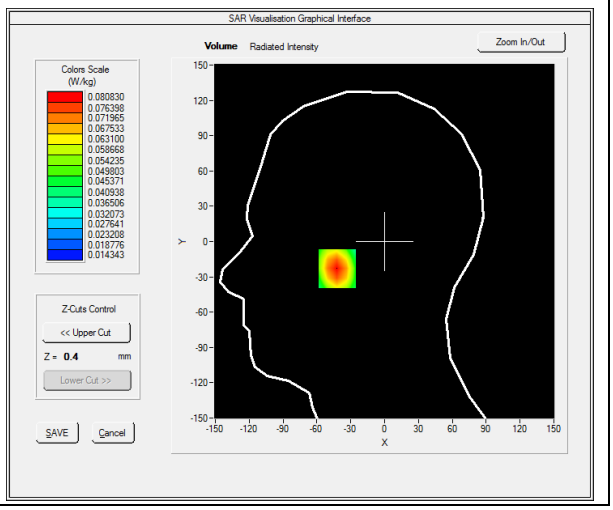
Type: Phone measurement (Complete)
Date of measurement: 2020-12-01
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

Frequency (MHz)	824.200000
Relative Permittivity (real part)	42.010187
Conductivity (S/m)	0.901883
Power Variation (%)	0.090000
Ambient Temperature	21.5
Liquid Temperature	21.5

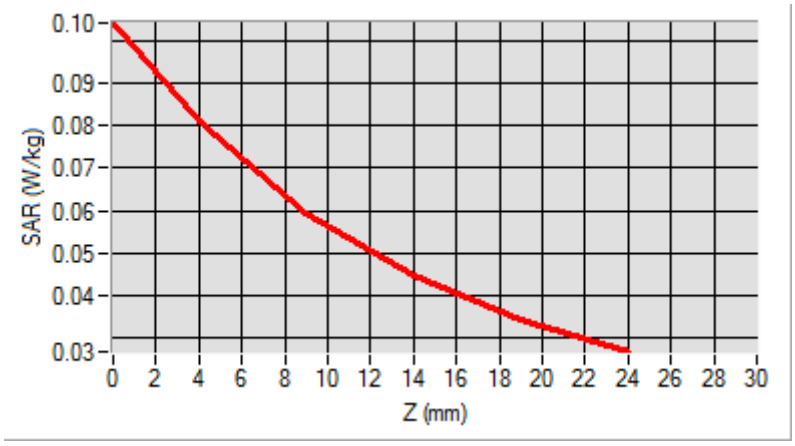
SURFACE SAR	VOLUME SAR
	

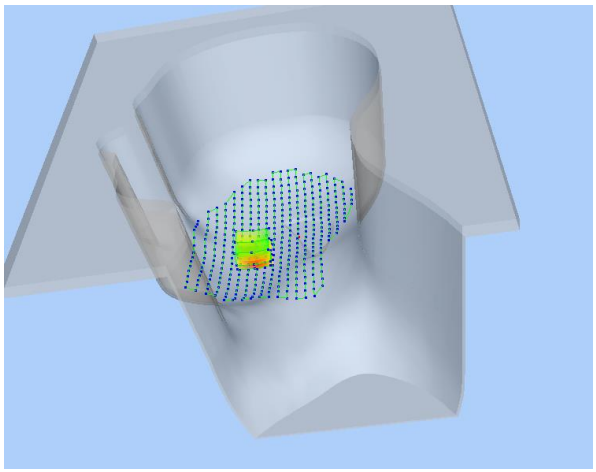
Maximum location: X=-42.00, Y=-23.00

SAR Peak: 0.10 W/kg

SAR 10g (W/Kg)	**0.055615**
SAR 1g (W/Kg)	**0.077273**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.1041**	**0.0808**	**0.0593**	**0.0445**	**0.0344**



3D screen shot	**Hot spot position**
	

MEASUREMENT 5

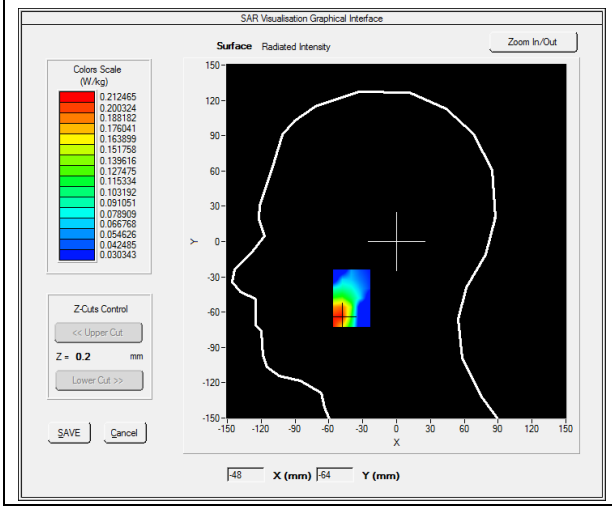
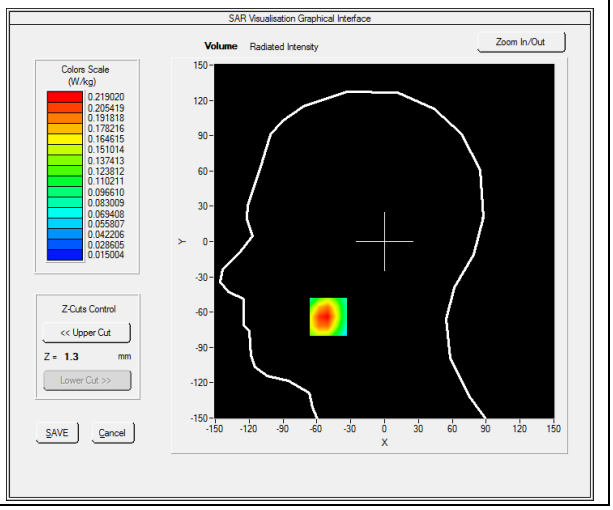
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

Frequency (MHz)	1850.200000
Relative Permittivity (real part)	39.380520
Conductivity (S/m)	1.392060
Power Variation (%)	-1.400000
Ambient Temperature	21.5
Liquid Temperature	21.5

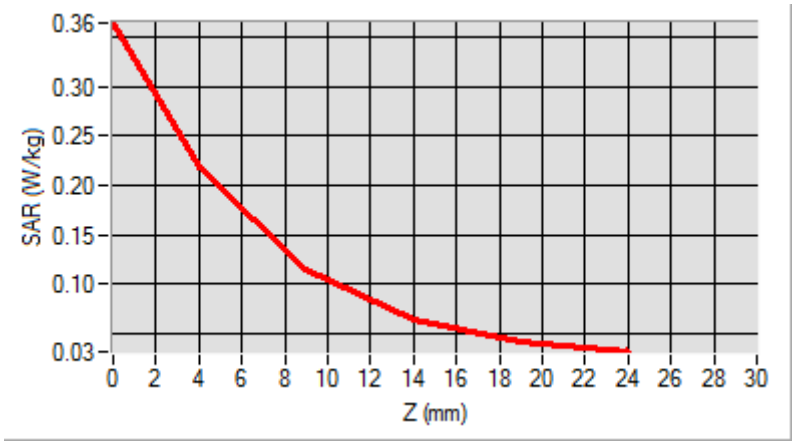
SURFACE SAR	VOLUME SAR
	

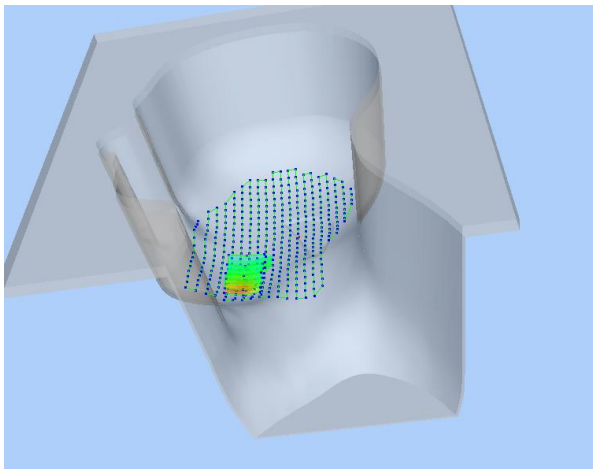
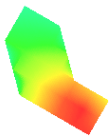
Maximum location: X=-50.00, Y=-64.00

SAR Peak: 0.37 W/kg

SAR 10g (W/Kg)	**0.115139**
SAR 1g (W/Kg)	**0.210104**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.3647**	**0.2190**	**0.1140**	**0.0636**	**0.0422**



3D screen shot	**Hot spot position**
	

MEASUREMENT 11

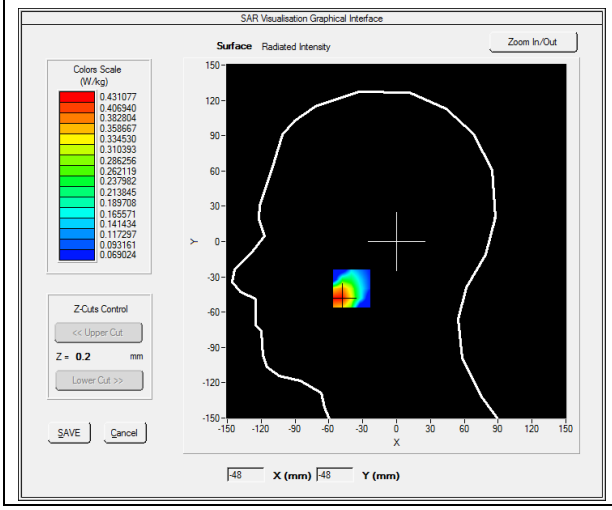
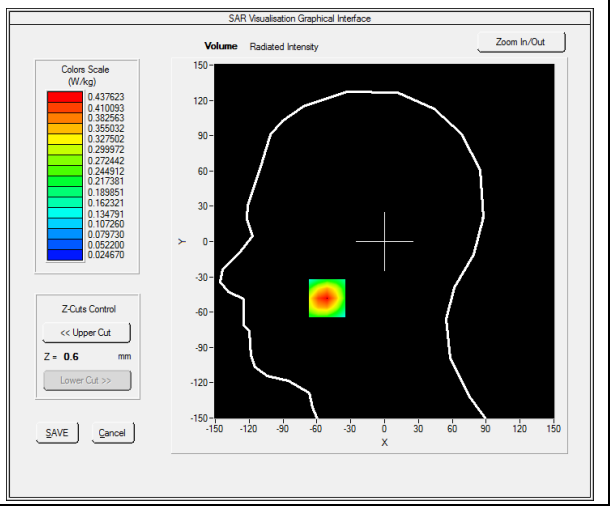
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA1900_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1850.200000
Relative Permittivity (real part)	39.380520
Conductivity (S/m)	1.392060
Power Variation (%)	-1.860000
Ambient Temperature	21.5
Liquid Temperature	21.5

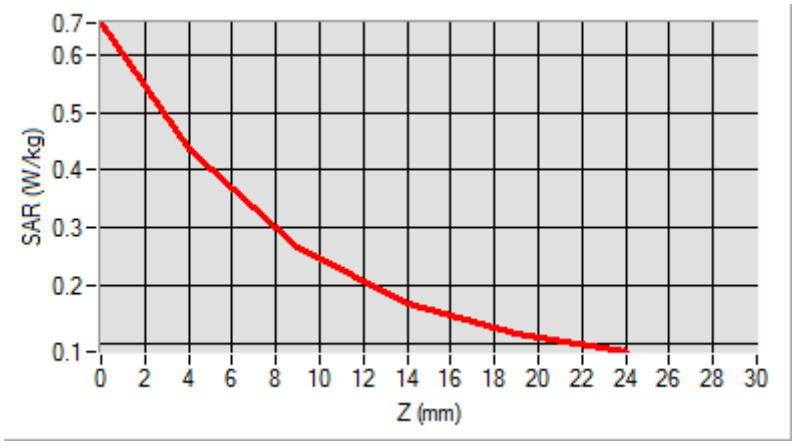
SURFACE SAR	VOLUME SAR
	

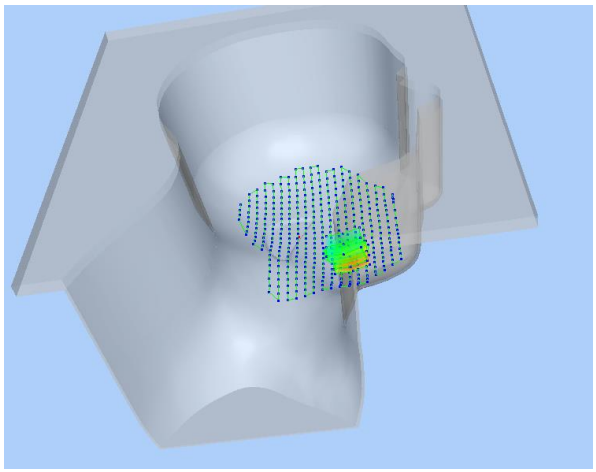
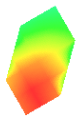
Maximum location: X=-51.00, Y=-48.00

SAR Peak: 0.65 W/kg

SAR 10g (W/Kg)	**0.239732**
SAR 1g (W/Kg)	**0.412430**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.6543**	**0.4376**	**0.2650**	**0.1685**	**0.1174**



3D screen shot	**Hot spot position**
	

MEASUREMENT 13

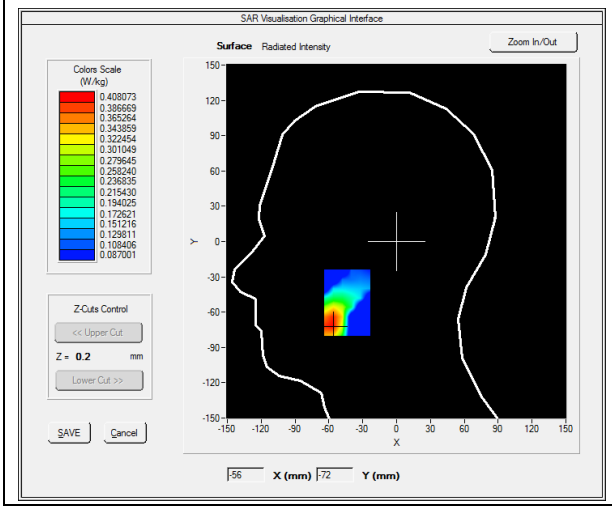
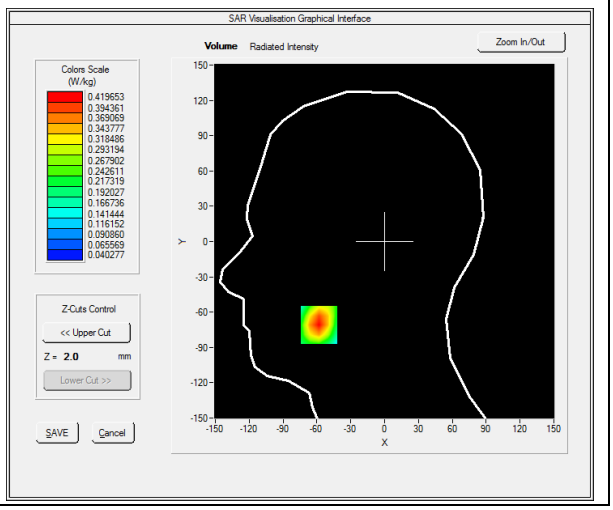
Type: Phone measurement (Complete)
Date of measurement: 2020-11-23
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA1700_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1712.400000
Relative Permittivity (real part)	40.285002
Conductivity (S/m)	1.347088
Power Variation (%)	-0.550000
Ambient Temperature	21.3
Liquid Temperature	21.3

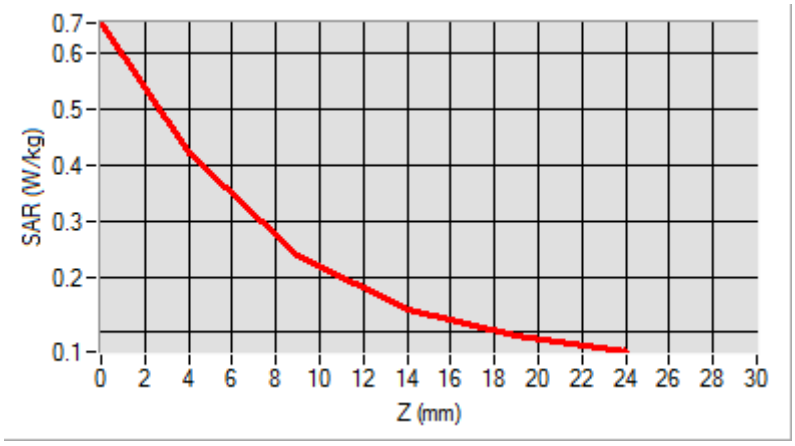
SURFACE SAR	VOLUME SAR
	

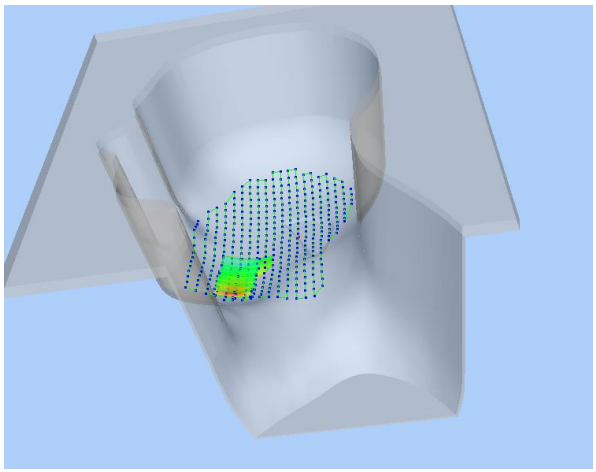
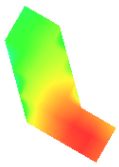
Maximum location: X=-58.00, Y=-71.00

SAR Peak: 0.66 W/kg

SAR 10g (W/Kg)	**0.222952**
SAR 1g (W/Kg)	**0.395187**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.6547**	**0.4197**	**0.2386**	**0.1421**	**0.0938**



3D screen shot	**Hot spot position**
	

MEASUREMENT 19

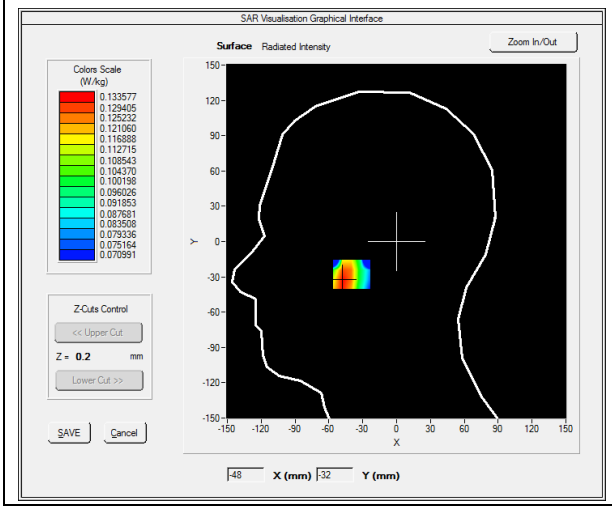
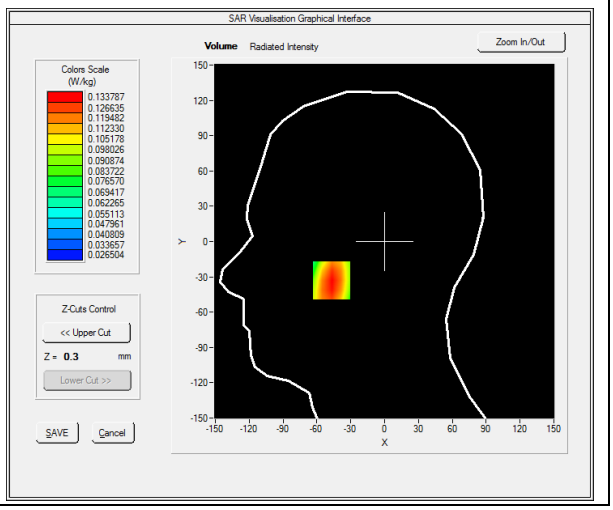
Type: Phone measurement (Complete)
Date of measurement: 2020-12-01
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA850_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative Permittivity (real part)	41.940162
Conductivity (S/m)	0.907324
Power Variation (%)	-1.650000
Ambient Temperature	21.5
Liquid Temperature	21.5

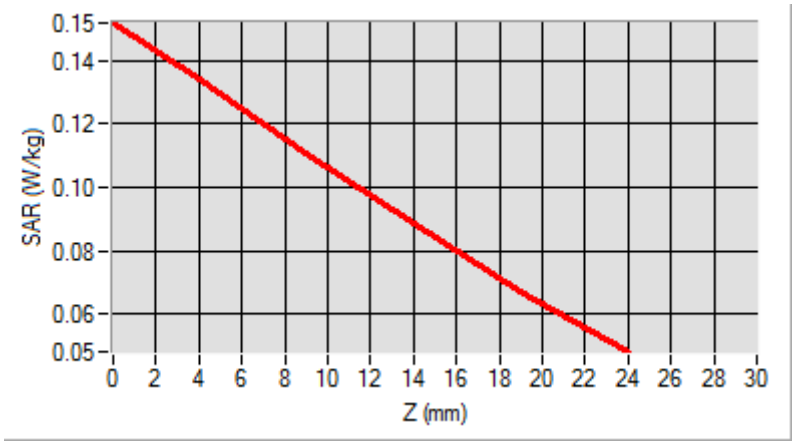
SURFACE SAR	VOLUME SAR
	

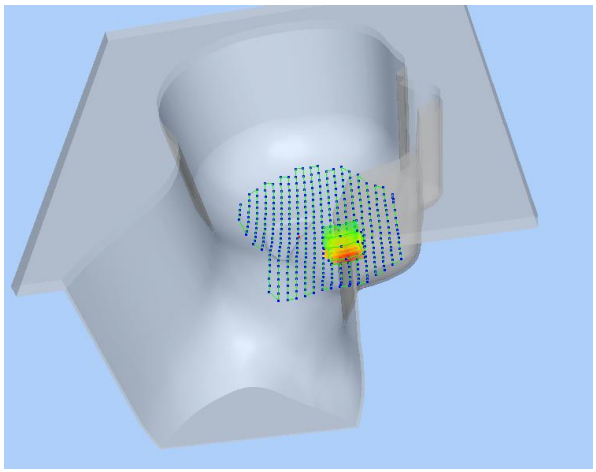
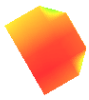
Maximum location: X=-47.00, Y=-33.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	**0.096498**
SAR 1g (W/Kg)	**0.128595**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.1518**	**0.1338**	**0.1110**	**0.0885**	**0.0671**



3D screen shot	**Hot spot position**
	

MEASUREMENT 21

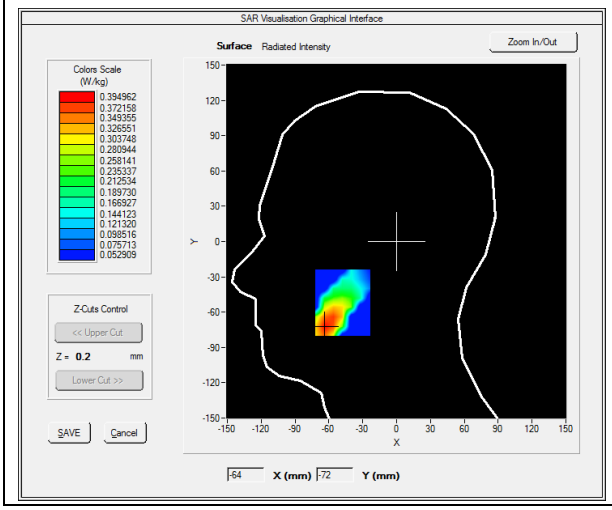
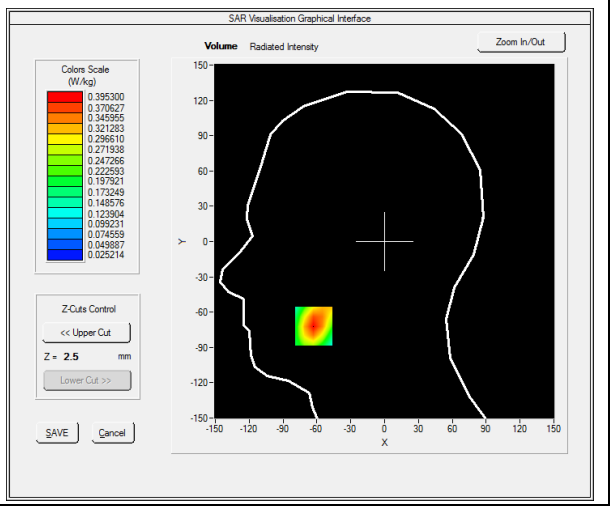
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	LTE Band 2
Channels	QPSK, 20MHz, 1RB,Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative Permittivity (real part)	39.224700
Conductivity (S/m)	1.396275
Power Variation (%)	0.820000
Ambient Temperature	21.5
Liquid Temperature	21.5

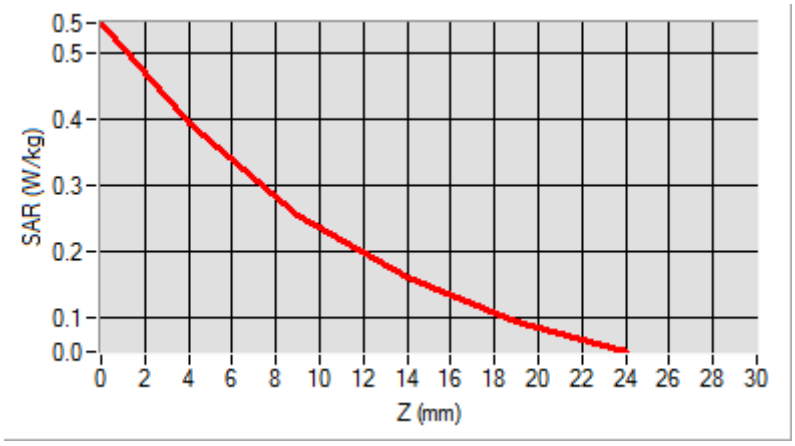
SURFACE SAR	VOLUME SAR
	

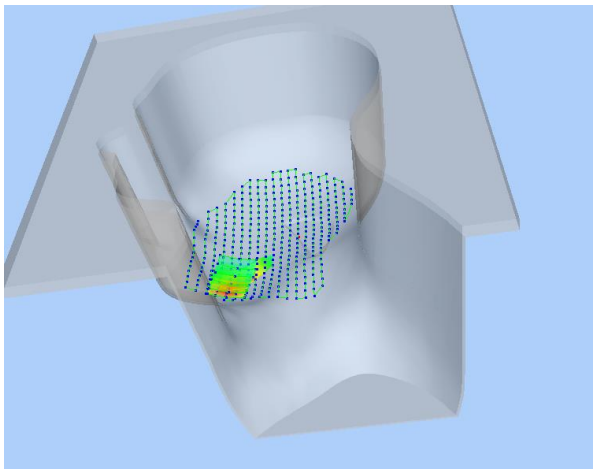
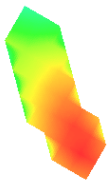
Maximum location: X=-63.00, Y=-72.00

SAR Peak: 0.55 W/kg

SAR 10g (W/Kg)	**0.221919**
SAR 1g (W/Kg)	**0.371290**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.5455**	**0.3953**	**0.2564**	**0.1602**	**0.0948**



3D screen shot	**Hot spot position**
	

MEASUREMENT 29

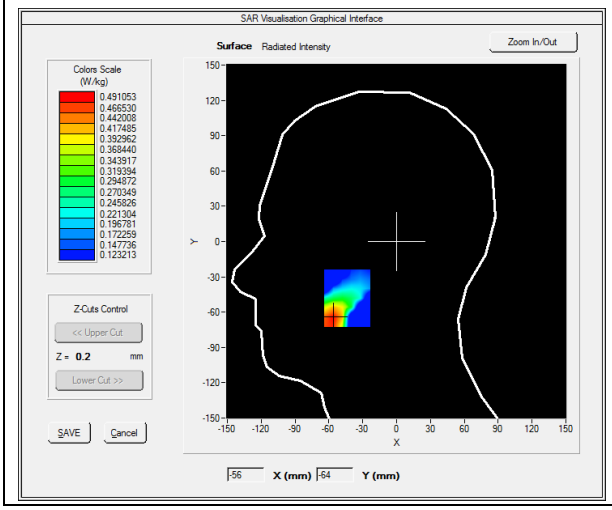
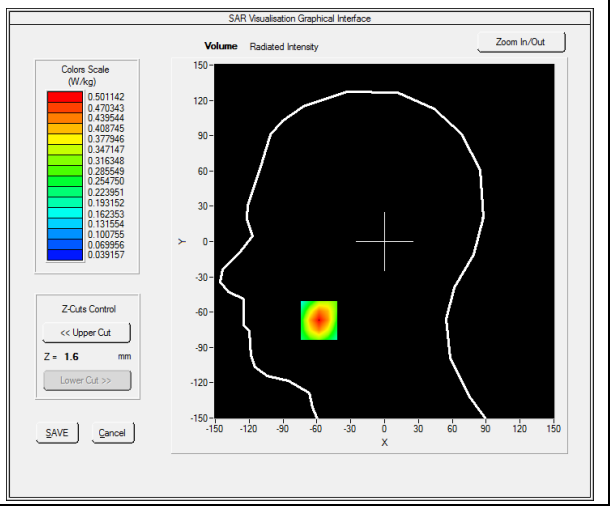
Type: Phone measurement (Complete)
Date of measurement: 2020-11-23
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
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)	40.224910
Conductivity (S/m)	1.347136
Power Variation (%)	-0.460000
Ambient Temperature	21.3
Liquid Temperature	21.3

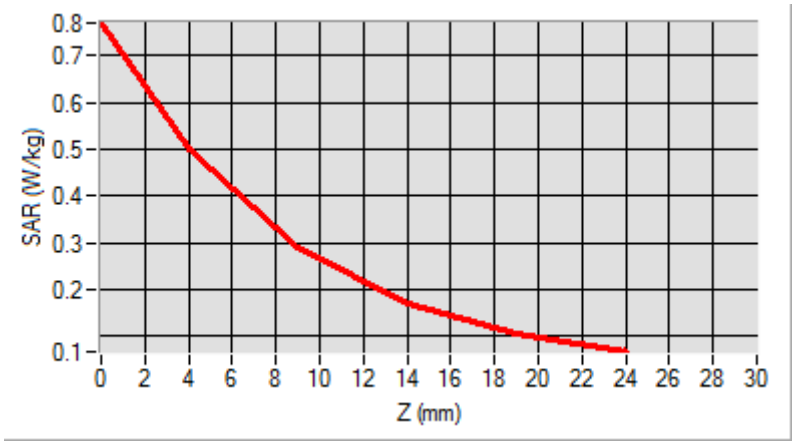
SURFACE SAR	VOLUME SAR
	

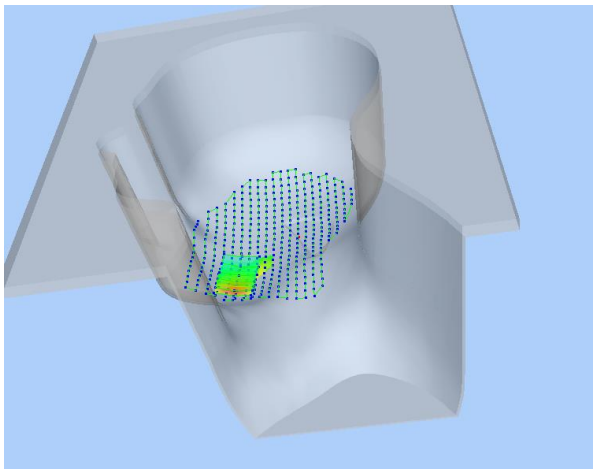
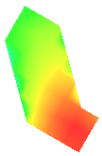
Maximum location: X=-58.00, Y=-67.00

SAR Peak: 0.77 W/kg

SAR 10g (W/Kg)	**0.264532**
SAR 1g (W/Kg)	**0.469562**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.7707**	**0.5011**	**0.2878**	**0.1687**	**0.1050**



3D screen shot	**Hot spot position**
	

MEASUREMENT 39

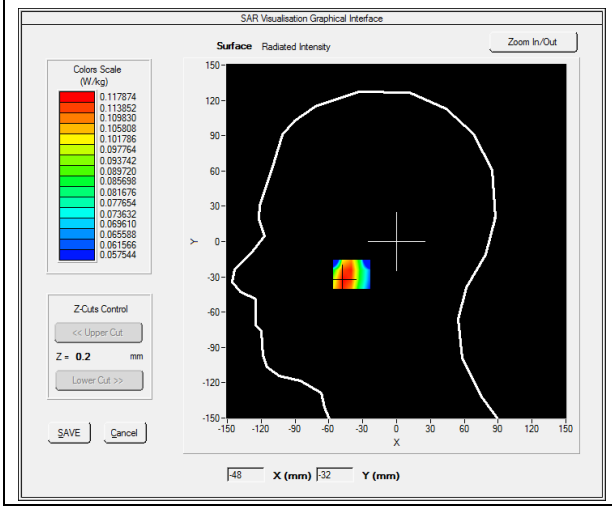
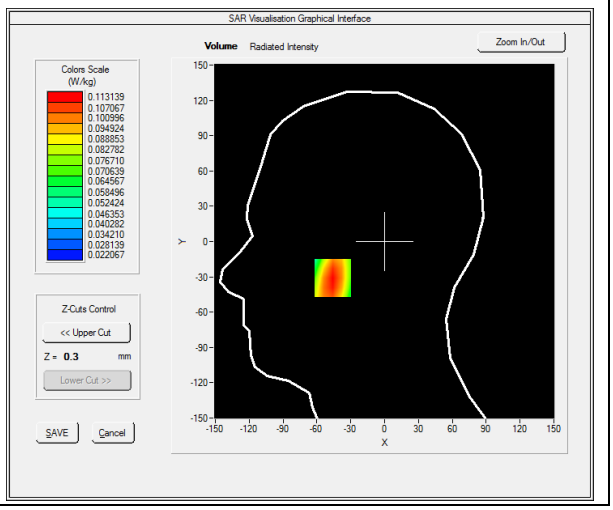
Type: Phone measurement (Complete)
Date of measurement: 2020-12-01
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	LTE Band 5
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative Permittivity (real part)	41.940162
Conductivity (S/m)	0.907324
Power Variation (%)	-1.340000
Ambient Temperature	21.5
Liquid Temperature	21.5

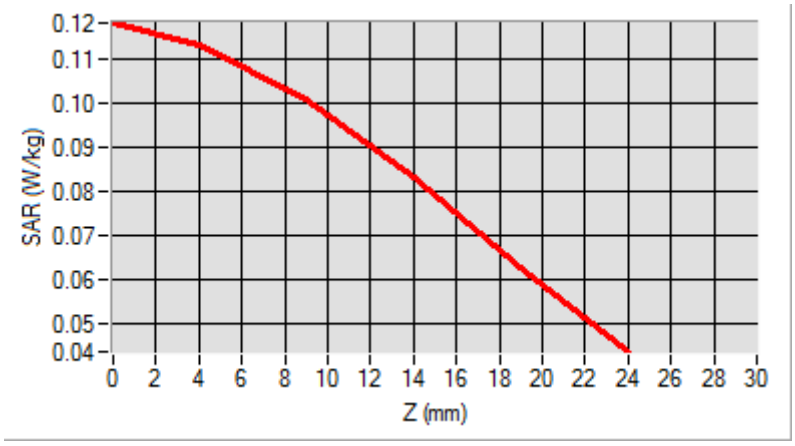
SURFACE SAR	VOLUME SAR
	

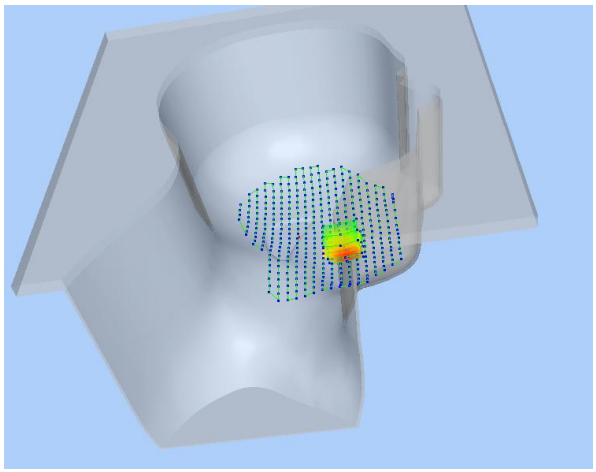
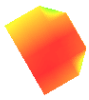
Maximum location: X=-46.00, Y=-31.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	**0.085365**
SAR 1g (W/Kg)	**0.109102**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.1183**	**0.1131**	**0.1009**	**0.0833**	**0.0631**



3D screen shot	**Hot spot position**
	

MEASUREMENT 45

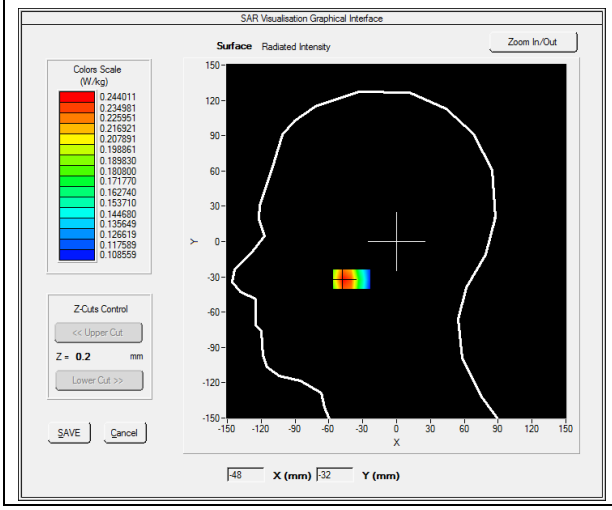
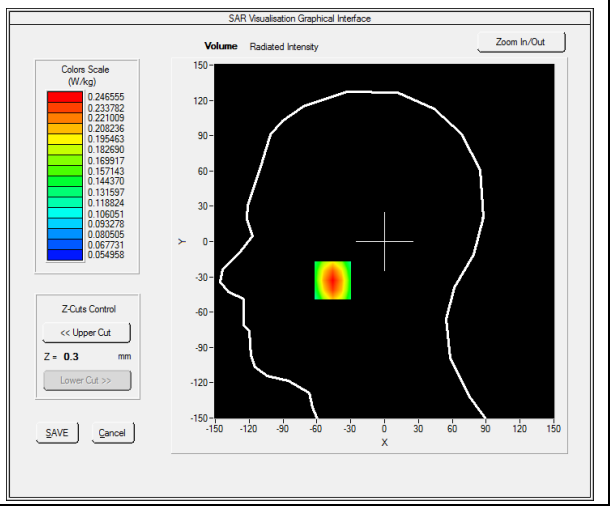
Type: Phone measurement (Complete)
Date of measurement: 2020-11-20
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.99; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
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)	42.940825
Conductivity (S/m)	0.852787
Power Variation (%)	-1.540000
Ambient Temperature	21.3
Liquid Temperature	21.3

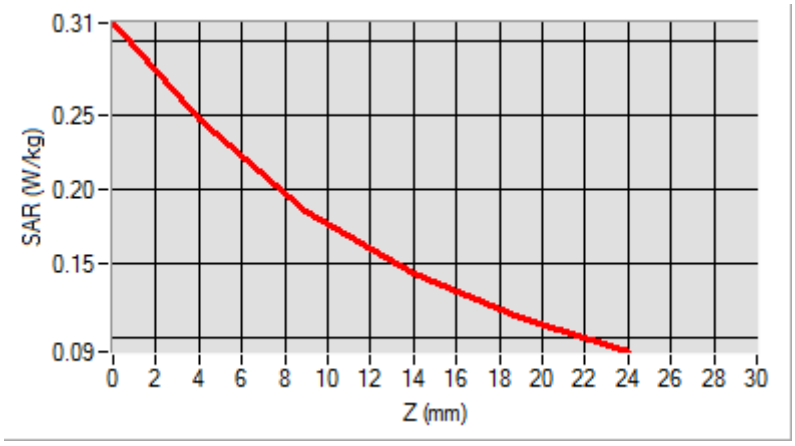
SURFACE SAR	VOLUME SAR
	

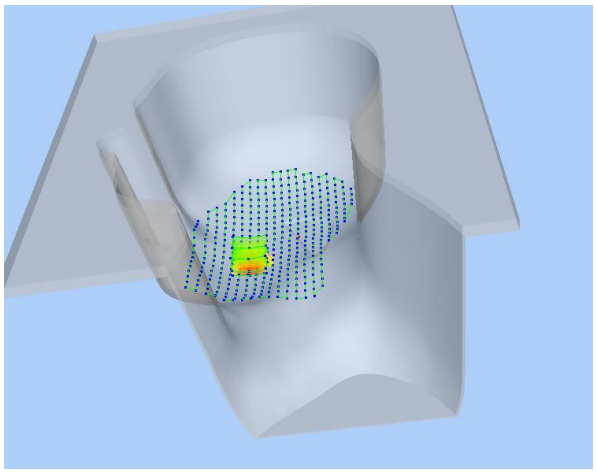
Maximum location: X=-46.00, Y=-33.00

SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	**0.165827**
SAR 1g (W/Kg)	**0.234784**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.3115**	**0.2466**	**0.1857**	**0.1432**	**0.1137**



3D screen shot	**Hot spot position**
	

MEASUREMENT 53

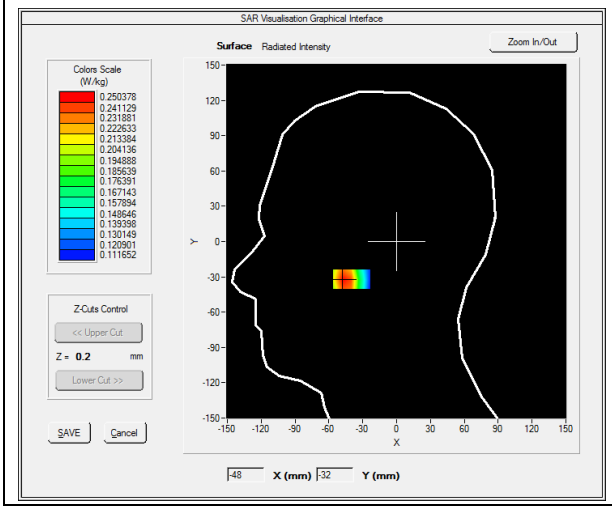
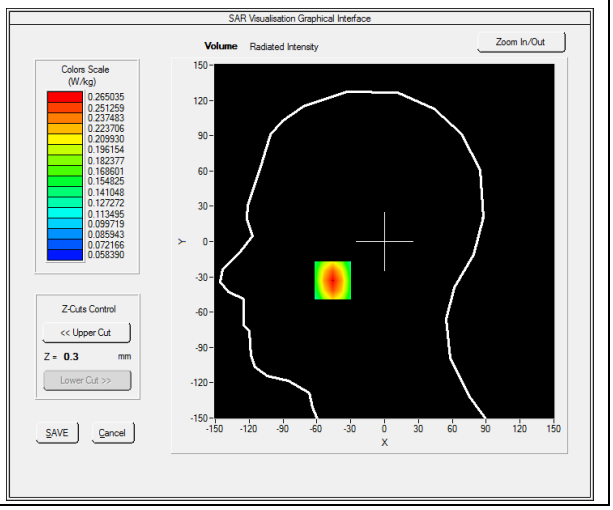
Type: Phone measurement (Complete)
Date of measurement: 2020-11-20
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.99; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right Head
Device Position	Cheek
Band	LTE Band 17
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	710.000000
Relative Permittivity (real part)	42.940825
Conductivity (S/m)	0.852787
Power Variation (%)	1.830000
Ambient Temperature	21.3
Liquid Temperature	21.3

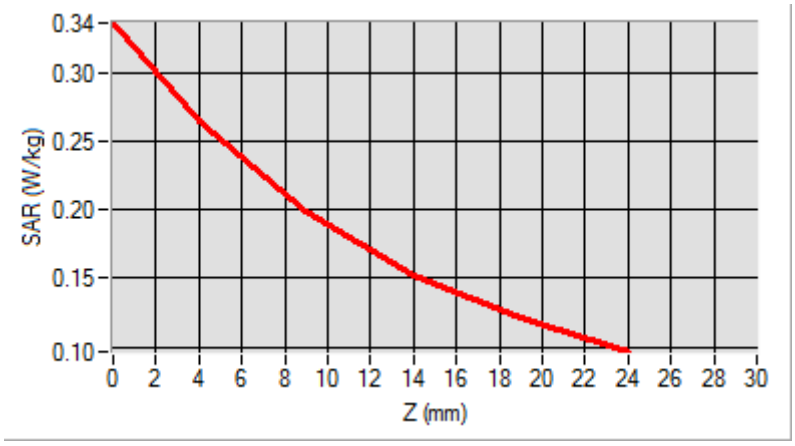
SURFACE SAR	VOLUME SAR
	

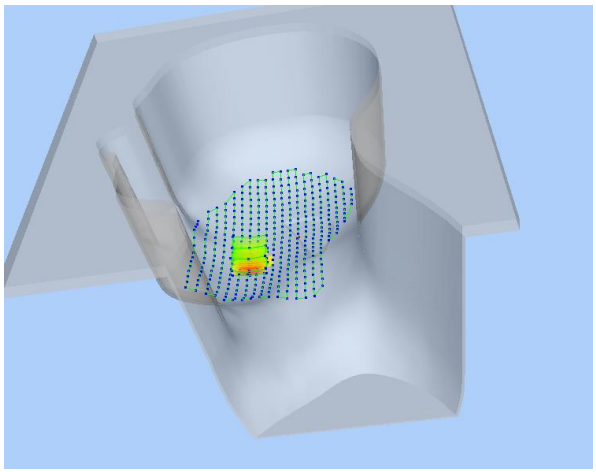
Maximum location: X=-46.00, Y=-33.00

SAR Peak: 0.34 W/kg

SAR 10g (W/Kg)	**0.179987**
SAR 1g (W/Kg)	**0.256835**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.3367**	**0.2650**	**0.1984**	**0.1523**	**0.1206**



3D screen shot	**Hot spot position**
	

MEASUREMENT 61

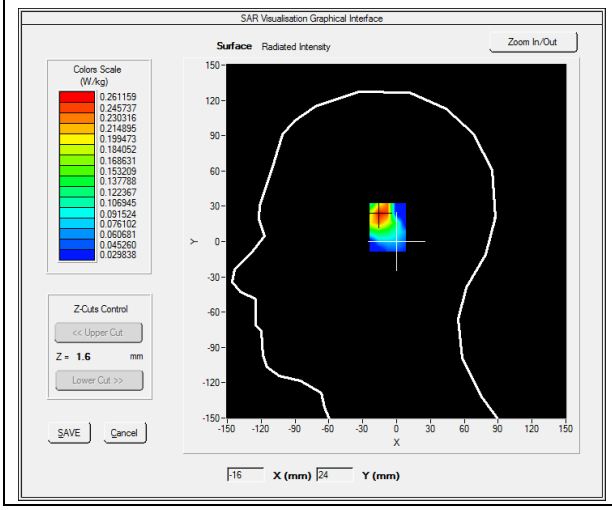
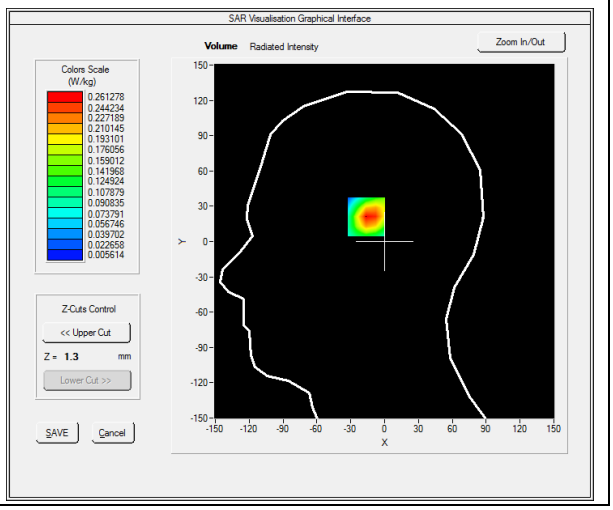
Type: Phone measurement (Complete)
Date of measurement: 2020-11-18
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.64; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WiFi_802.11b
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	39.943001
Conductivity (S/m)	1.7540038
Power Variation (%)	-0.210000
Ambient Temperature	21.2
Liquid Temperature	21.2

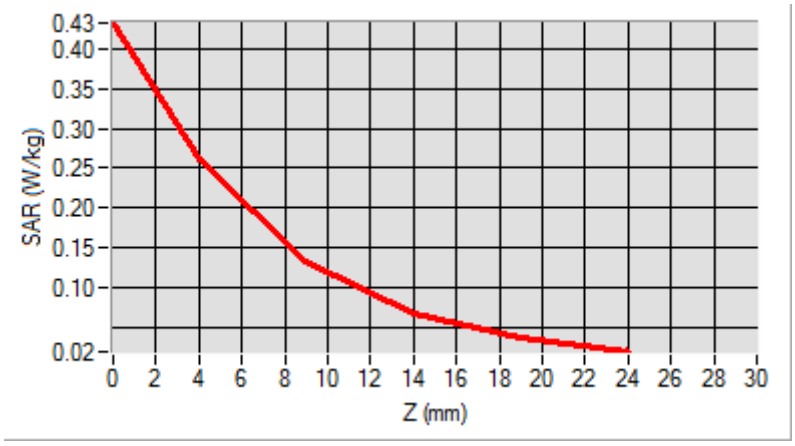
SURFACE SAR	VOLUME SAR
	

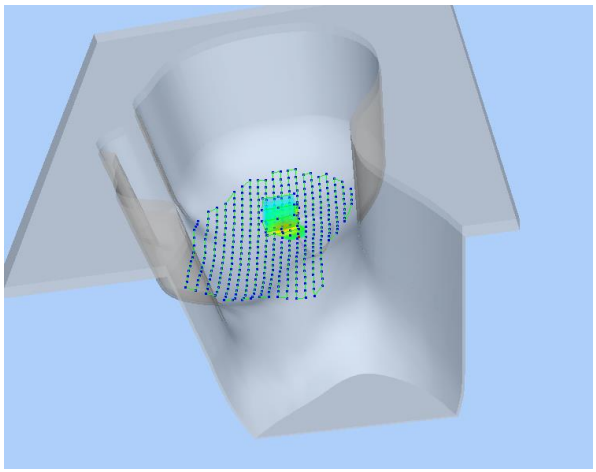
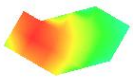
Maximum location: X=-15.00, Y=23.00

SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	**0.123970**
SAR 1g (W/Kg)	**0.248150**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.4327**	**0.2613**	**0.1333**	**0.0677**	**0.0364**



3D screen shot	**Hot spot position**
	

MEASUREMENT 65

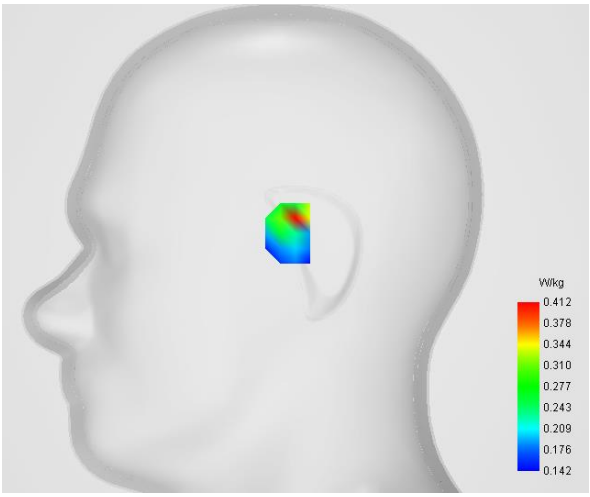
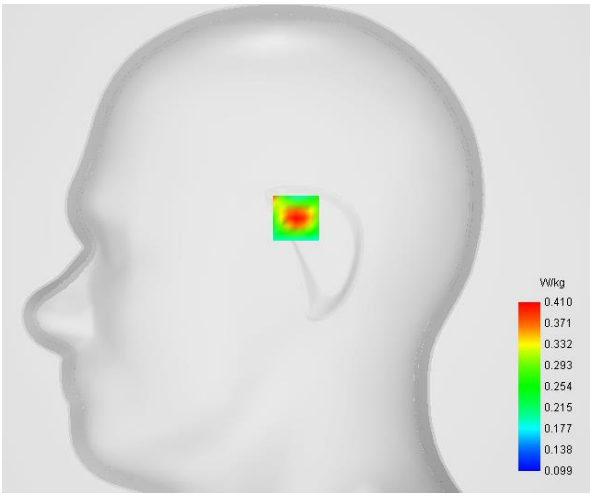
Type: Phone measurement (Complete)
Date of measurement: 2020-11-27
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2- SN 45/15 EPGO280; ConvF: 2.44; Calibrated: 2020-07-03

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WiFi_802.11a
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

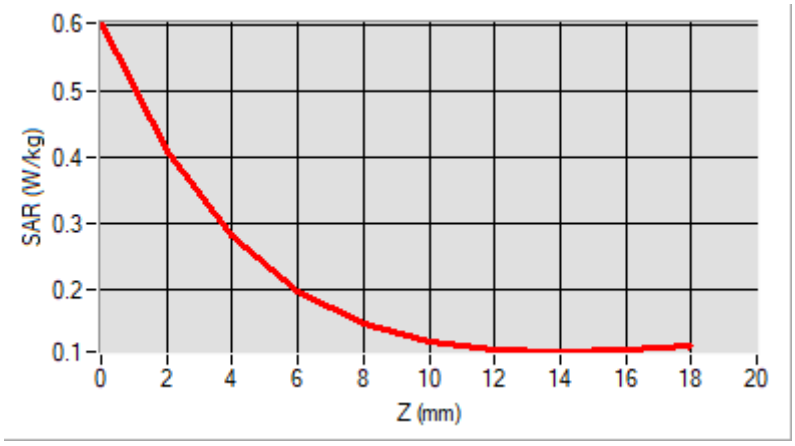
Frequency (MHz)	5240.000000
Relative Permittivity (real part)	36.943001
Conductivity (S/m)	4.599698
Power Variation (%)	-1.500000
Ambient Temperature	21.0
Liquid Temperature	21.0

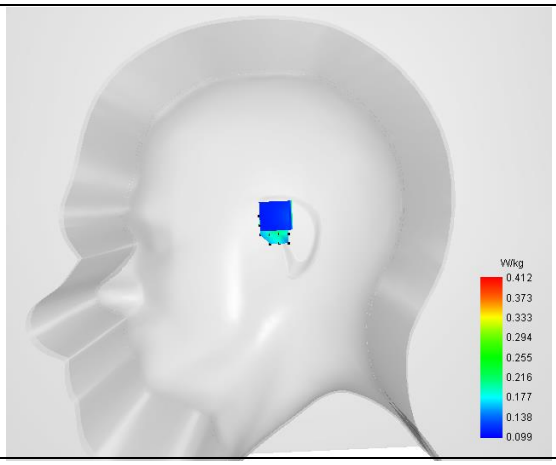
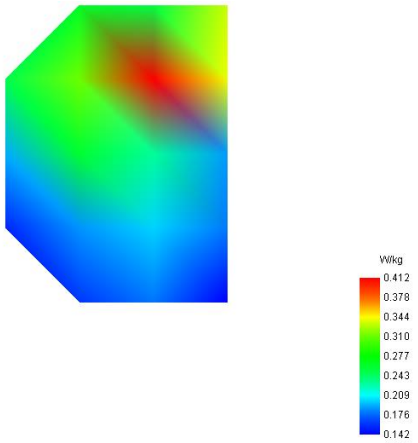
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=16.00

SAR 10g (W/Kg)	0.228882
SAR 1g (W/Kg)	0.415508

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.6026	0.4102	0.2804	0.1971	0.1484	0.1217	0.1093	0.1060	0.1086



3D screen shot	Hot spot position
	

MEASUREMENT 71

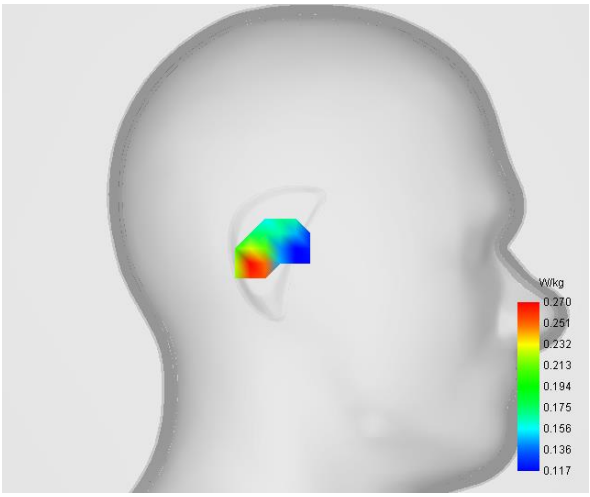
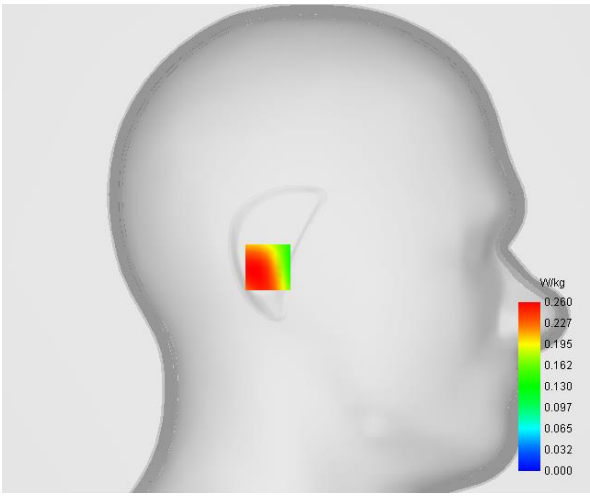
Type: Phone measurement (Complete)
Date of measurement: 2020-11-27
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2- SN 45/15 EPGO280; ConvF: 2.52; Calibrated: 2020-07-03

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WiFi_802.11 n (HT20)
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

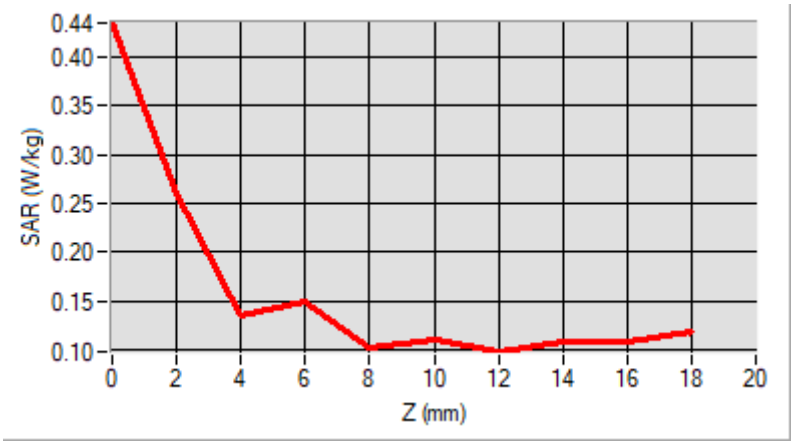
Frequency (MHz)	5745.000000
Relative Permittivity (real part)	34.985423
Conductivity (S/m)	5.032163
Power Variation (%)	1.300000
Ambient Temperature	21.0
Liquid Temperature	21.0

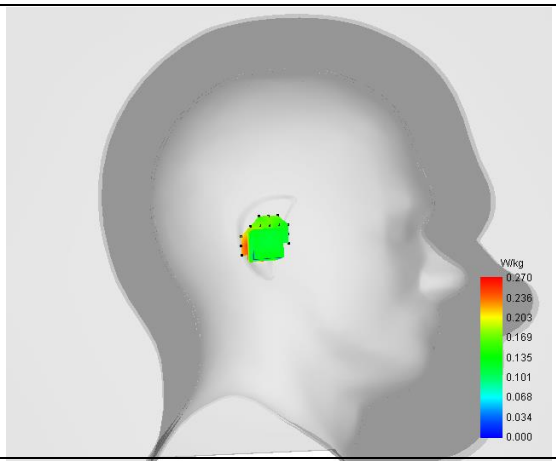
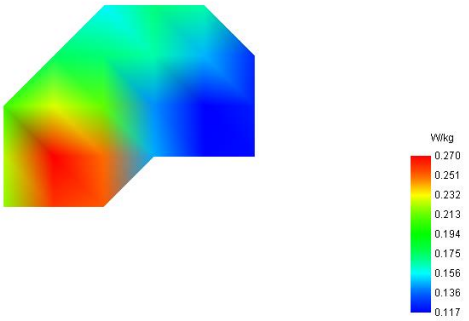
SURFACE SAR	VOLUME SAR
	

Maximum location: X=15.00, Y=-10.00

SAR 10g (W/Kg)	0.194281
SAR 1g (W/Kg)	0.332288

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.4352	0.2599	0.1347	0.1491	0.1010	0.1108	0.0976	0.1083	0.1083



3D screen shot	Hot spot position
	

MEASUREMENT 73

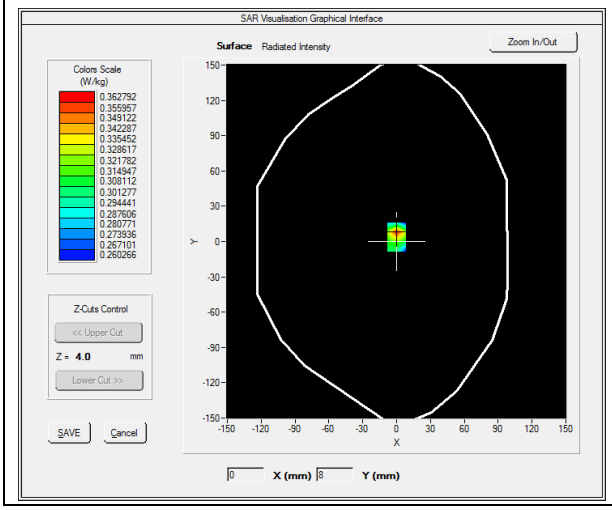
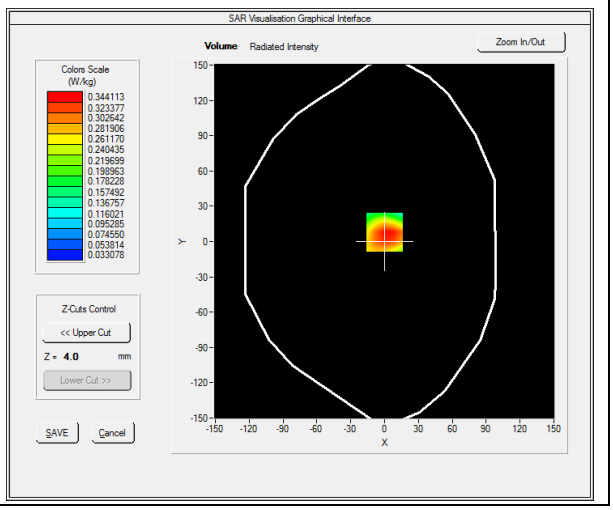
Type: Phone measurement (Complete)
Date of measurement: 2020-12-01
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	824.200000
Relative Permittivity (real part)	42.010187
Conductivity (S/m)	0.901883
Power Variation (%)	-1.120000
Ambient Temperature	21.5
Liquid Temperature	21.5

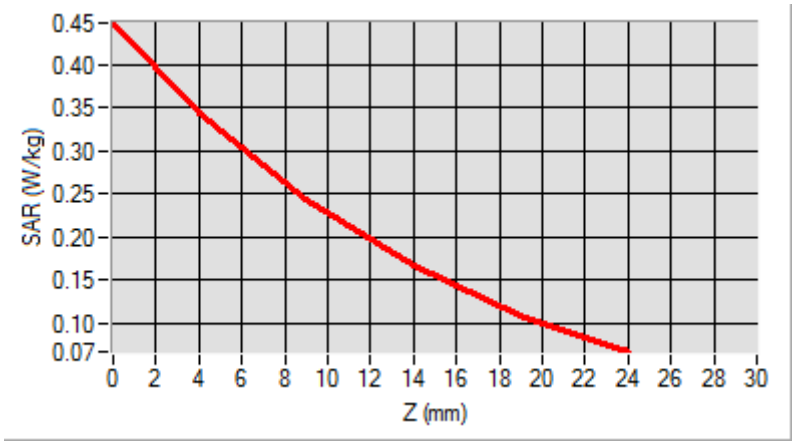
SURFACE SAR	VOLUME SAR
	

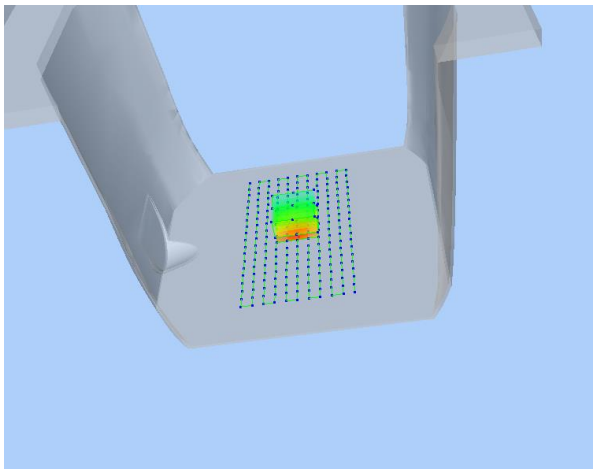
Maximum location: X=0.00, Y=8.00

SAR Peak: 0.47 W/kg

SAR 10g (W/Kg)	**0.219074**
SAR 1g (W/Kg)	**0.335743**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.4477**	**0.3441**	**0.2423**	**0.1661**	**0.1095**



3D screen shot	**Hot spot position**
	

MEASUREMENT 75

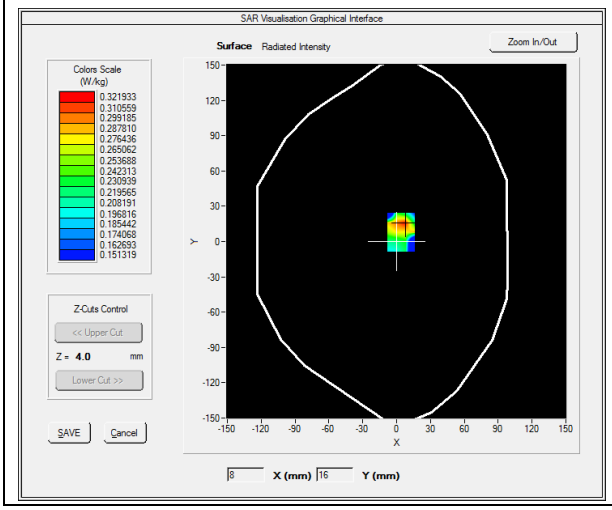
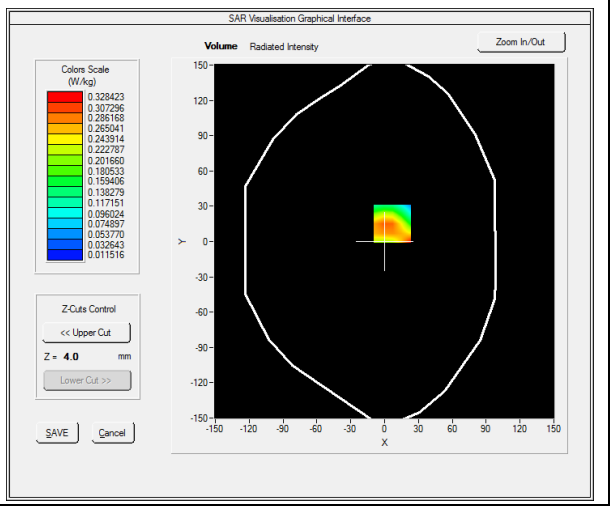
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	1850.200000
Relative Permittivity (real part)	39.380520
Conductivity (S/m)	1.392060
Power Variation (%)	-1.080000
Ambient Temperature	21.5
Liquid Temperature	21.5

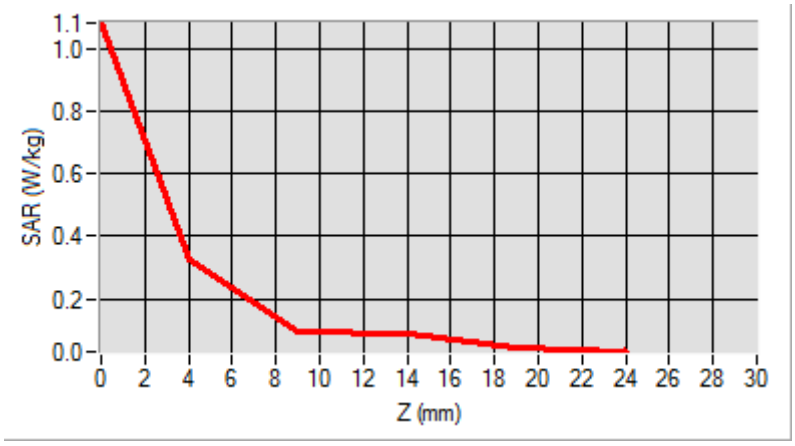
SURFACE SAR	VOLUME SAR
	

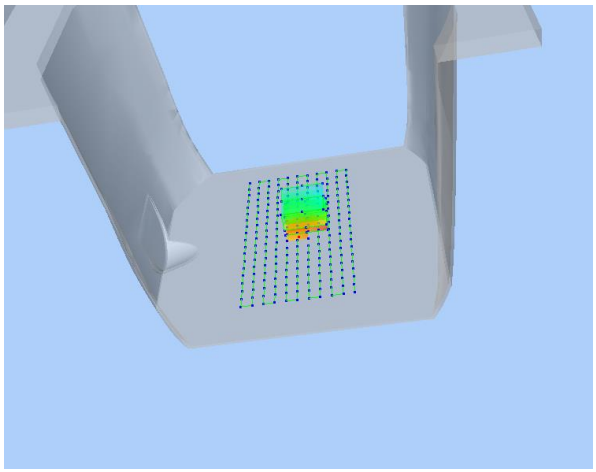
Maximum location: X=7.00, Y=15.00

SAR Peak: 0.55 W/kg

SAR 10g (W/Kg)	**0.159444**
SAR 1g (W/Kg)	**0.266015**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.0852**	**0.3284**	**0.0912**	**0.0871**	**0.0441**



3D screen shot	**Hot spot position**
	

MEASUREMENT 79/145

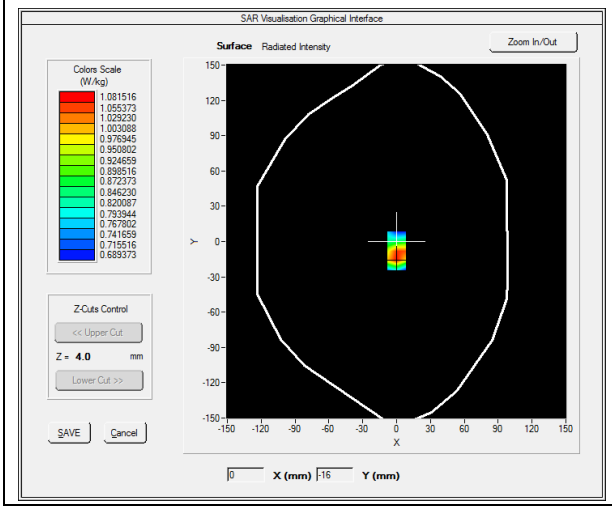
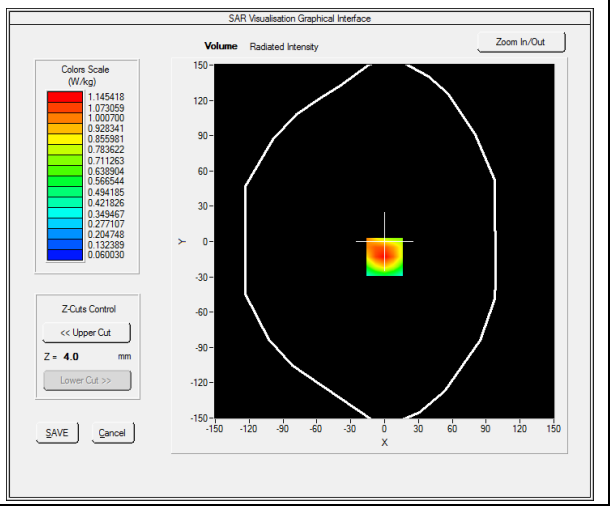
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	1907.600000
Relative Permittivity (real part)	39.180926
Conductivity (S/m)	1.397169
Power Variation (%)	-0.850000
Ambient Temperature	21.5
Liquid Temperature	21.5

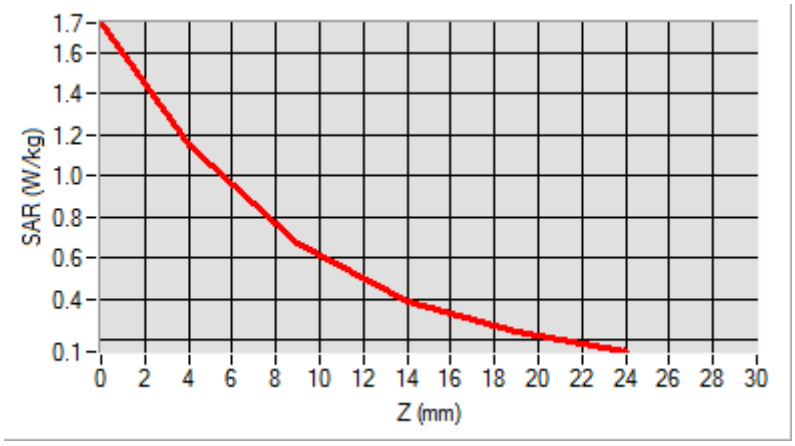
SURFACE SAR	VOLUME SAR
	

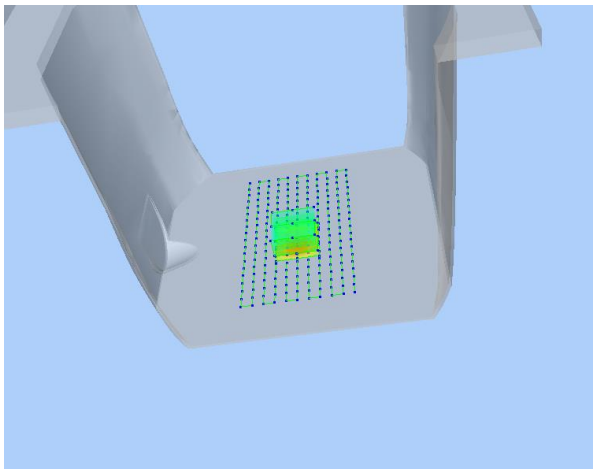
Maximum location: X=0.00, Y=-13.00

SAR Peak: 1.76 W/kg

SAR 10g (W/Kg)	**0.619737**
SAR 1g (W/Kg)	**1.084727**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.7418**	**1.1454**	**0.6656**	**0.3908**	**0.2391**



3D screen shot	**Hot spot position**
	

MEASUREMENT 82/154

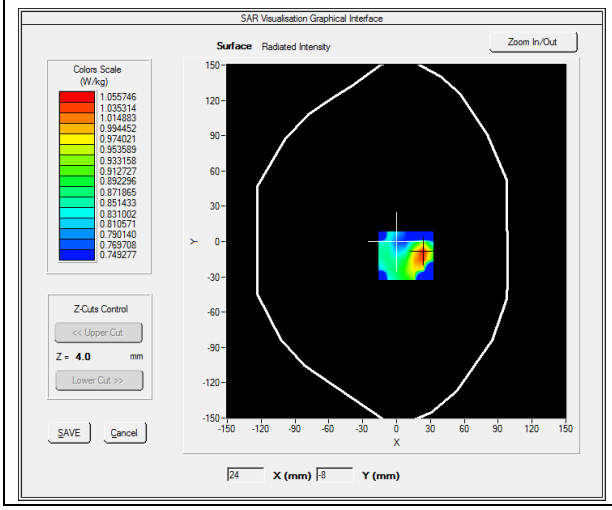
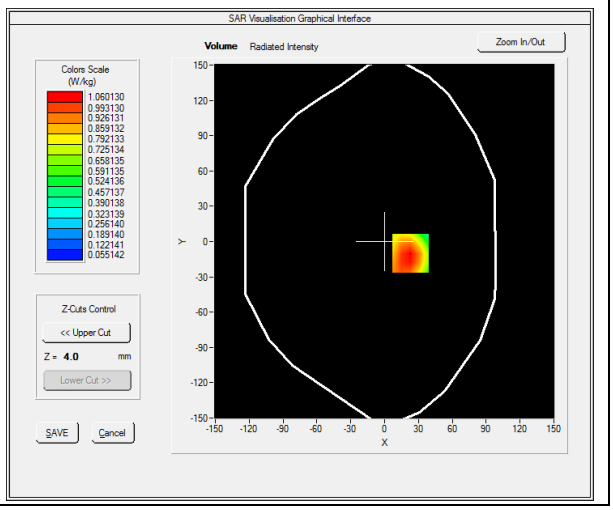
Type: Phone measurement (Complete)
Date of measurement: 2020-11-23
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WCDMA1700_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1712.400000
Relative Permittivity (real part)	40.285002
Conductivity (S/m)	1.347088
Power Variation (%)	-0.780000
Ambient Temperature	21.3
Liquid Temperature	21.3

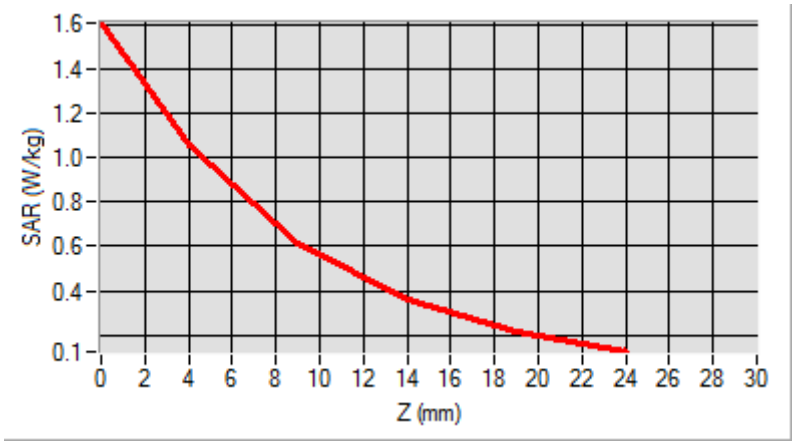
SURFACE SAR	VOLUME SAR
	

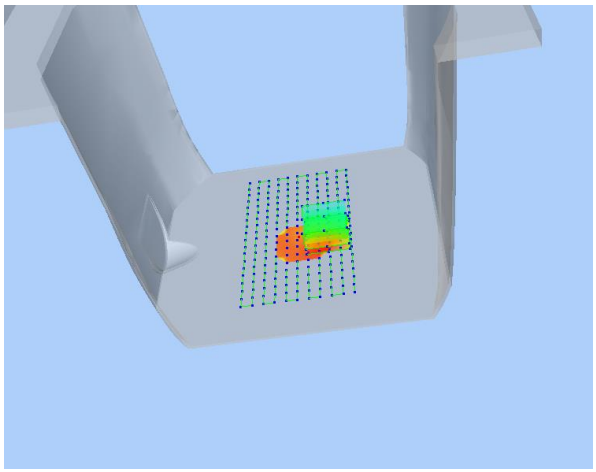
Maximum location: X=23.00, Y=-10.00

SAR Peak: 1.62 W/kg

SAR 10g (W/Kg)	**0.617562**
SAR 1g (W/Kg)	**1.021362**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.6115**	**1.0601**	**0.6143**	**0.3567**	**0.2131**



3D screen shot	**Hot spot position**
	

MEASUREMENT 87/165

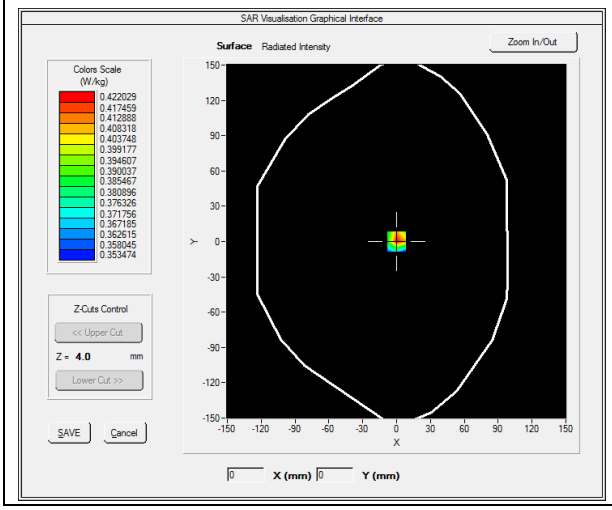
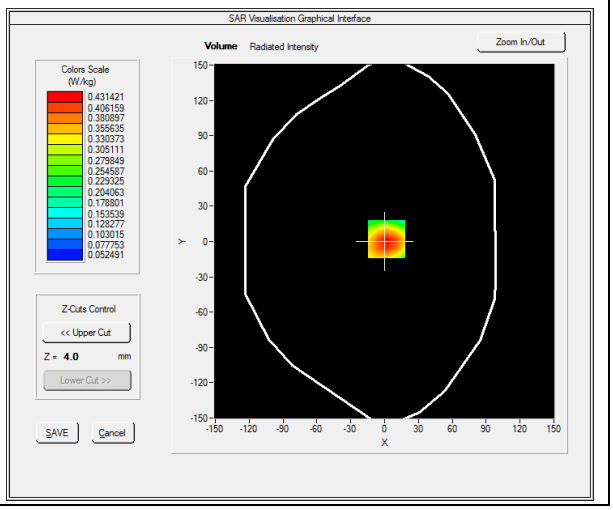
Type: Phone measurement (Complete)
Date of measurement: 2020-12-01
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative Permittivity (real part)	41.940162
Conductivity (S/m)	0.907324
Power Variation (%)	-0.920000
Ambient Temperature	21.5
Liquid Temperature	21.5

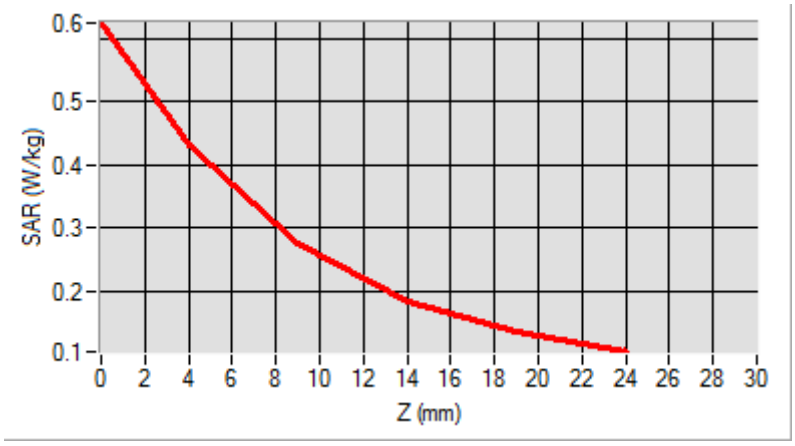
SURFACE SAR	VOLUME SAR
	

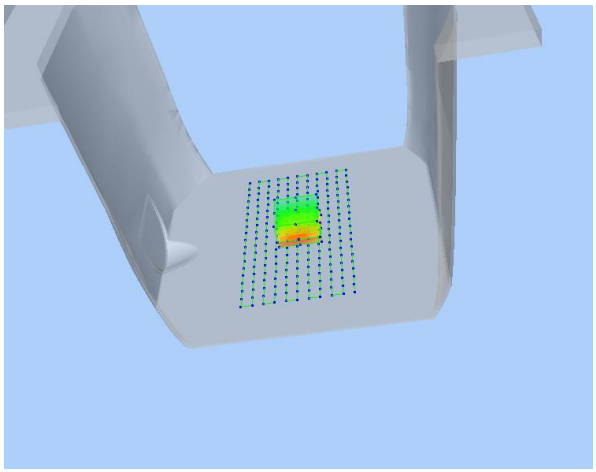
Maximum location: X=2.00, Y=2.00

SAR Peak: 0.63 W/kg

SAR 10g (W/Kg)	**0.266987**
SAR 1g (W/Kg)	**0.414604**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.6250**	**0.4314**	**0.2741**	**0.1841**	**0.1352**



3D screen shot	**Hot spot position**
	

MEASUREMENT 91

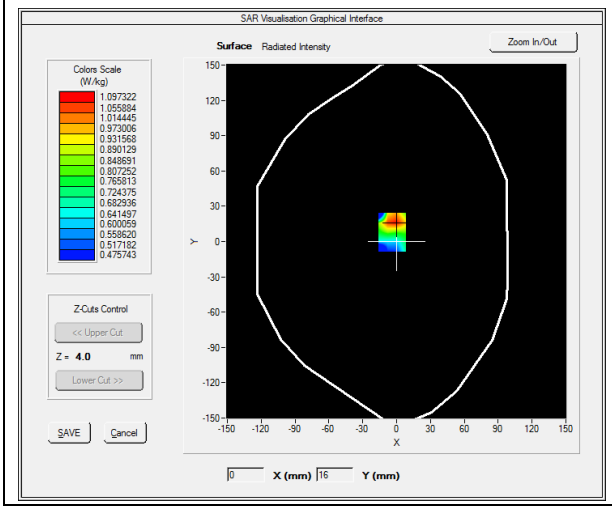
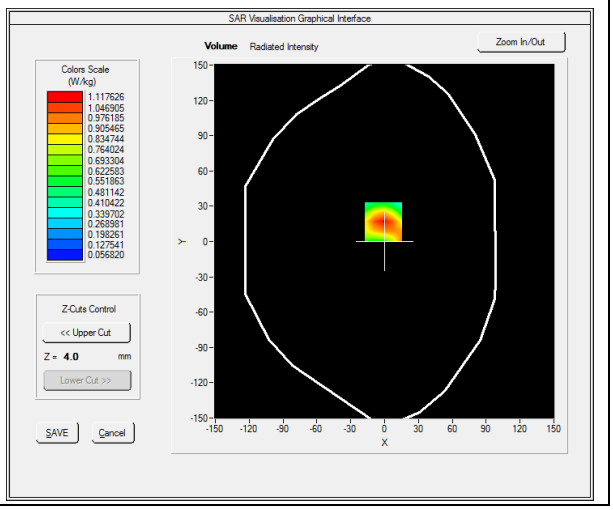
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	39.180926
Conductivity (S/m)	1.397169
Power Variation (%)	-1.410000
Ambient Temperature	21.5
Liquid Temperature	21.5

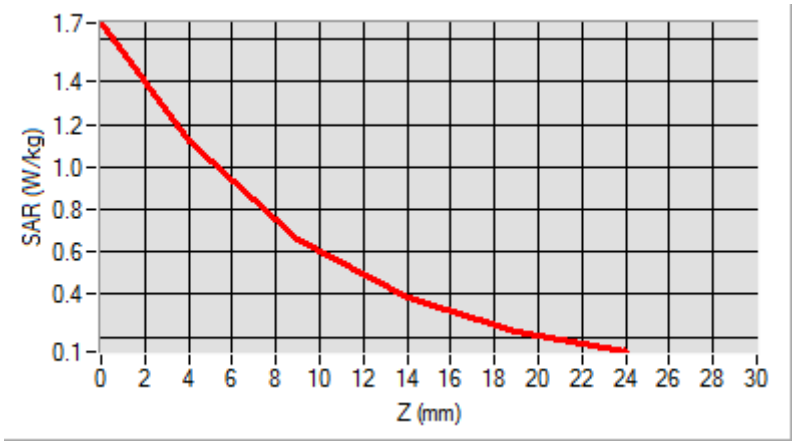
SURFACE SAR	VOLUME SAR
	

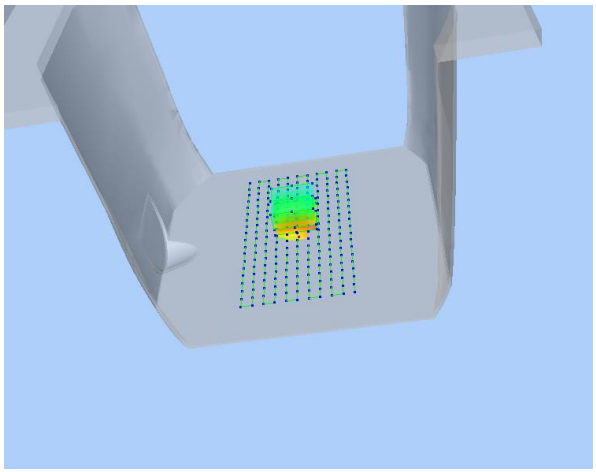
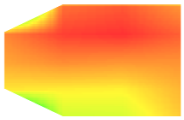
Maximum location: X=-1.00, Y=17.00

SAR Peak: 1.68 W/kg

SAR 10g (W/Kg)	**0.592553**
SAR 1g (W/Kg)	**1.046940**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.6778**	**1.1176**	**0.6575**	**0.3855**	**0.2295**



3D screen shot	**Hot spot position**
	

MEASUREMENT 97

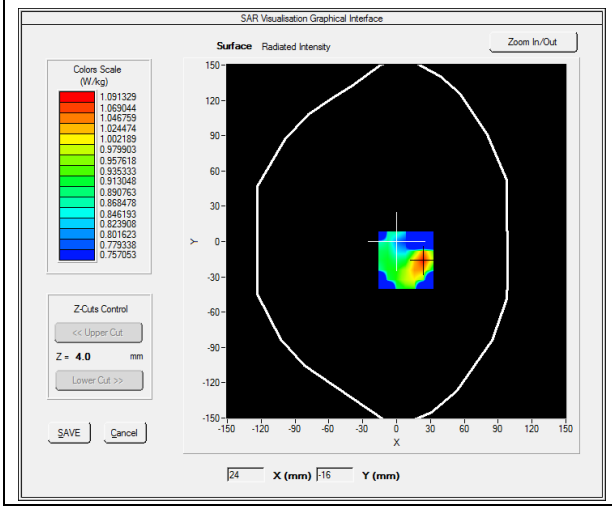
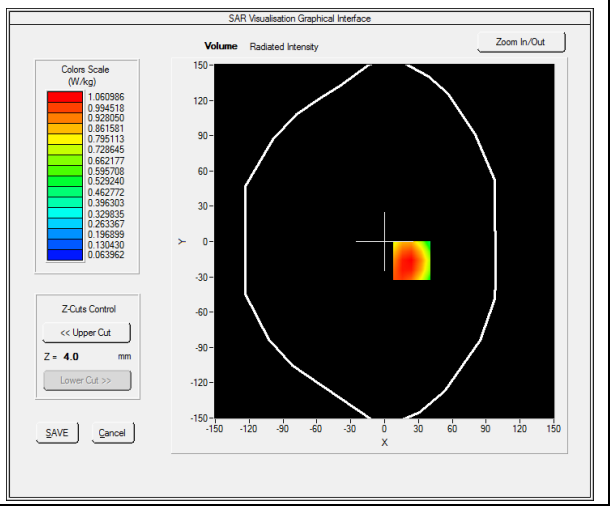
Type: Phone measurement (Complete)
Date of measurement: 2020-11-23
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 4
Channels	QPSK, 20MHz, 1RB,Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1720.000000
Relative Permittivity (real part)	40.285002
Conductivity (S/m)	1.347088
Power Variation (%)	0.620000
Ambient Temperature	21.3
Liquid Temperature	21.3

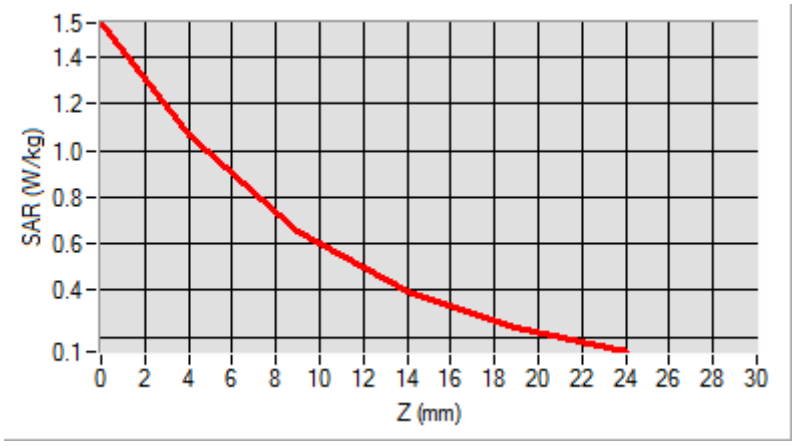
SURFACE SAR	VOLUME SAR
	

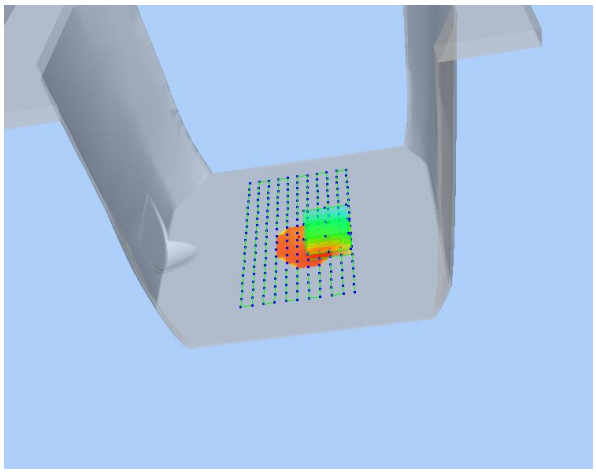
Maximum location: X=24.00, Y=-16.00

SAR Peak: 1.56 W/kg

SAR 10g (W/Kg)	**0.641131**
SAR 1g (W/Kg)	**1.024321**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.5464**	**1.0610**	**0.6487**	**0.3931**	**0.2384**



3D screen shot	**Hot spot position**
	

MEASUREMENT 106/212

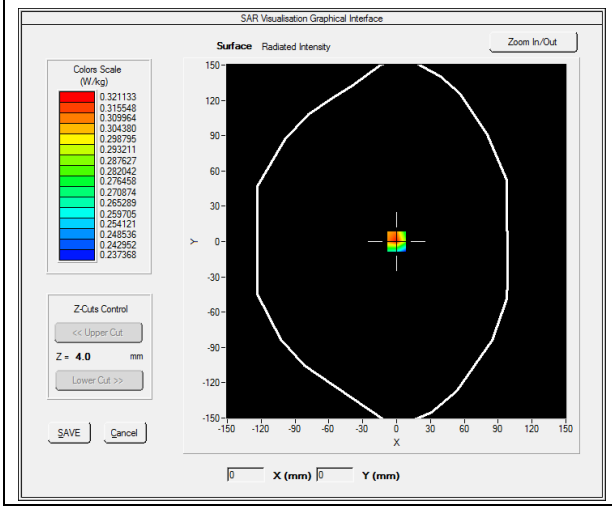
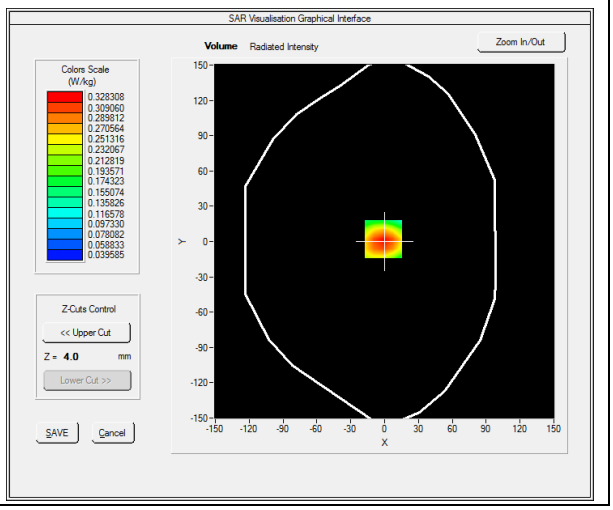
Type: Phone measurement (Complete)
Date of measurement: 2020-12-01
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative Permittivity (real part)	41.940162
Conductivity (S/m)	0.907324
Power Variation (%)	-0.560000
Ambient Temperature	21.5
Liquid Temperature	21.5

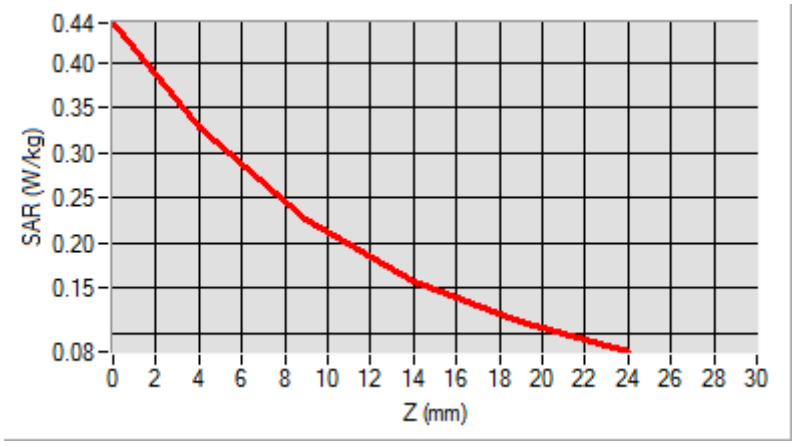
SURFACE SAR	VOLUME SAR
	

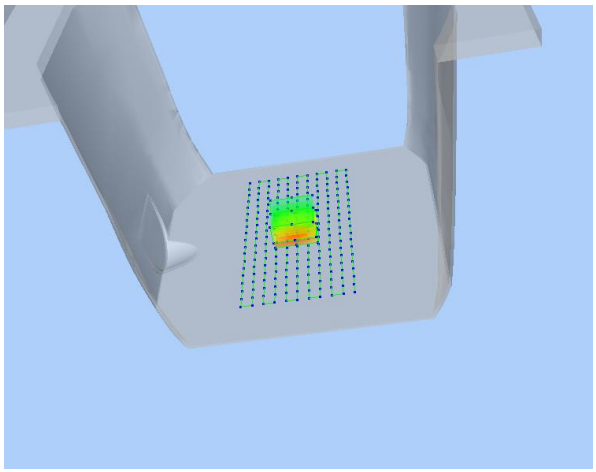
Maximum location: X=-1.00, Y=2.00

SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	**0.204463**
SAR 1g (W/Kg)	**0.313188**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.4436**	**0.3283**	**0.2251**	**0.1566**	**0.1116**



3D screen shot	**Hot spot position**
	

MEASUREMENT 110/222

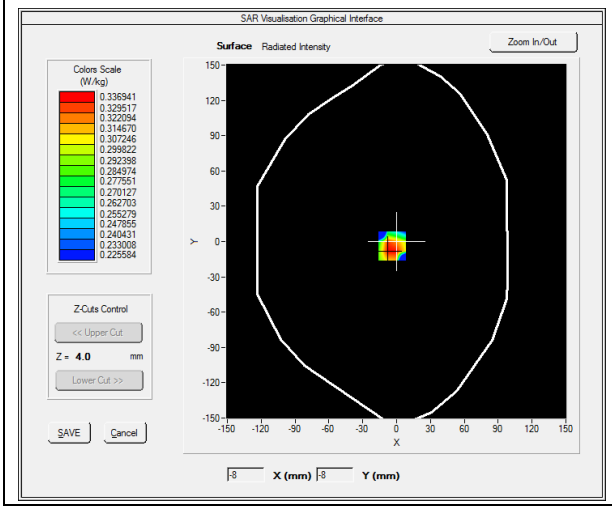
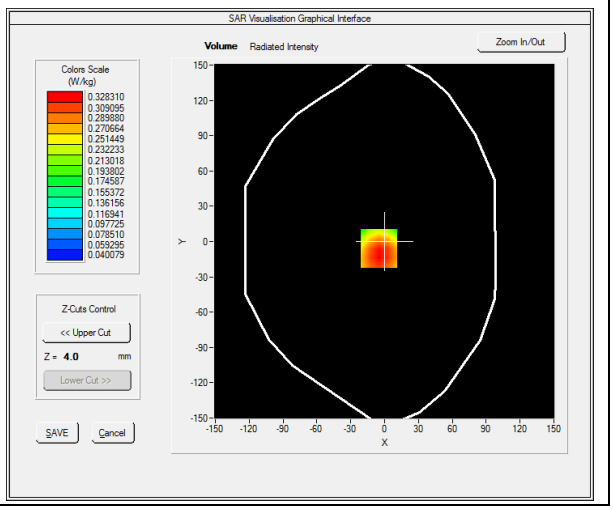
Type: Phone measurement (Complete)
Date of measurement: 2020-11-20
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.99; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	711.000000
Relative Permittivity (real part)	42.940825
Conductivity (S/m)	0.852787
Power Variation (%)	1.160000
Ambient Temperature	21.3
Liquid Temperature	21.3

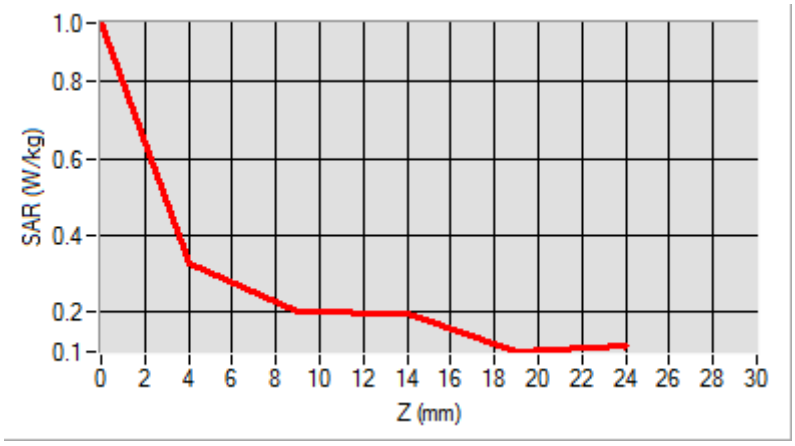
SURFACE SAR	VOLUME SAR
	

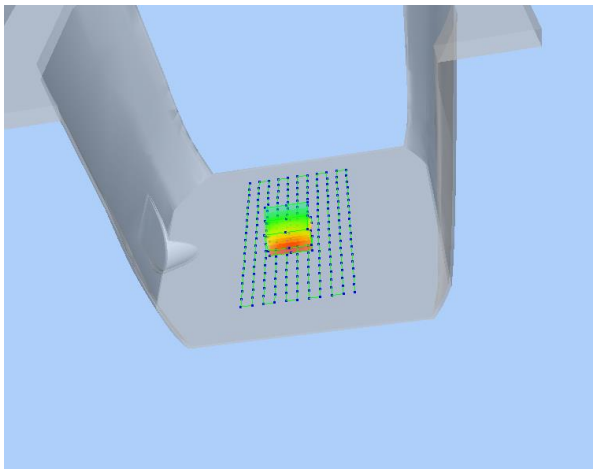
Maximum location: X=-5.00, Y=-6.00

SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	**0.236009**
SAR 1g (W/Kg)	**0.328019**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.9538**	**0.3283**	**0.1993**	**0.1973**	**0.0972**



3D screen shot	**Hot spot position**
	

MEASUREMENT 114/232

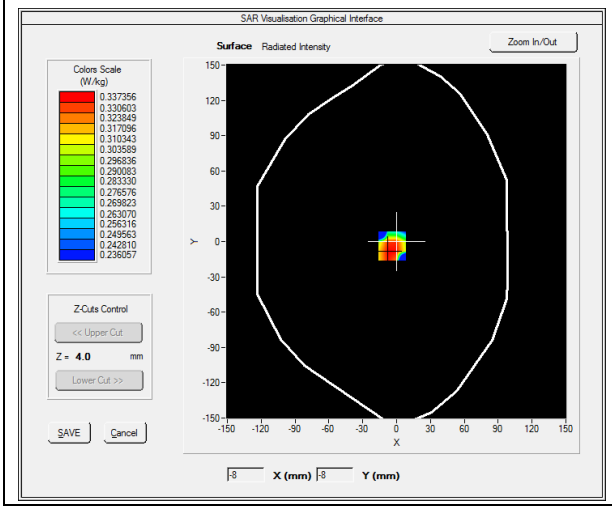
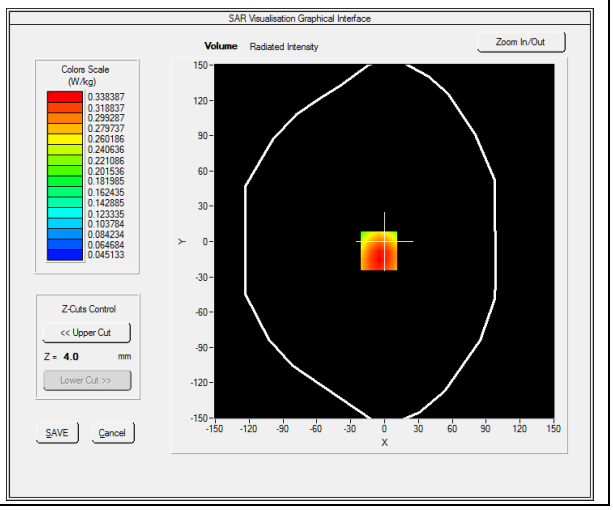
Type: Phone measurement (Complete)
Date of measurement: 2020-11-20
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.99; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 17
Channels	QPSK, 10MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	710.000000
Relative Permittivity (real part)	42.940825
Conductivity (S/m)	0.852787
Power Variation (%)	-0.660000
Ambient Temperature	21.3
Liquid Temperature	21.3

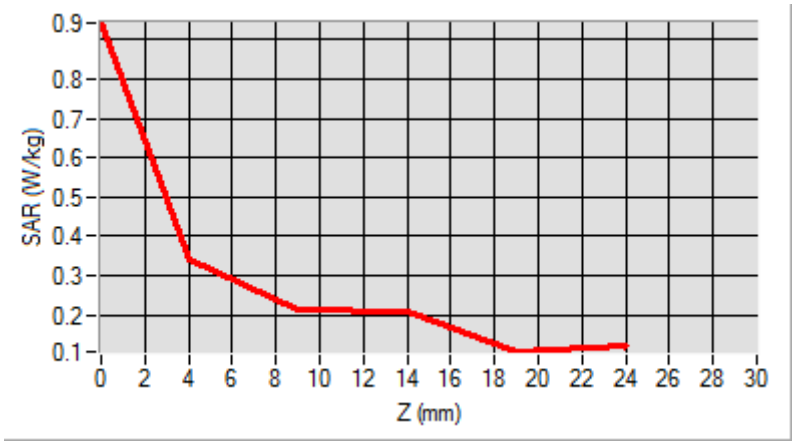
SURFACE SAR	VOLUME SAR
	

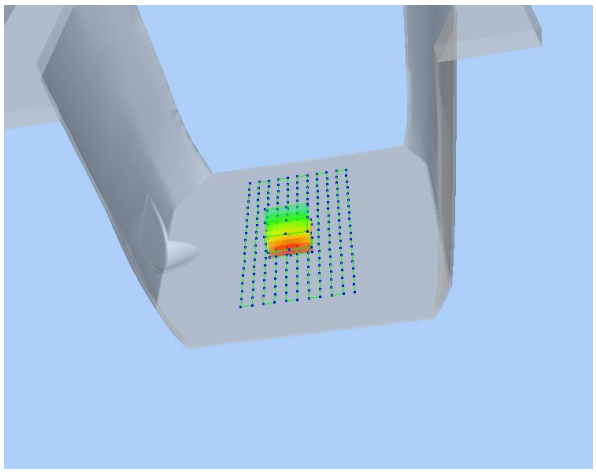
Maximum location: X=-5.00, Y=-8.00

SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	**0.253496**
SAR 1g (W/Kg)	**0.348769**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.9425**	**0.3384**	**0.2133**	**0.2077**	**0.1060**



3D screen shot	**Hot spot position**
	

MEASUREMENT 119

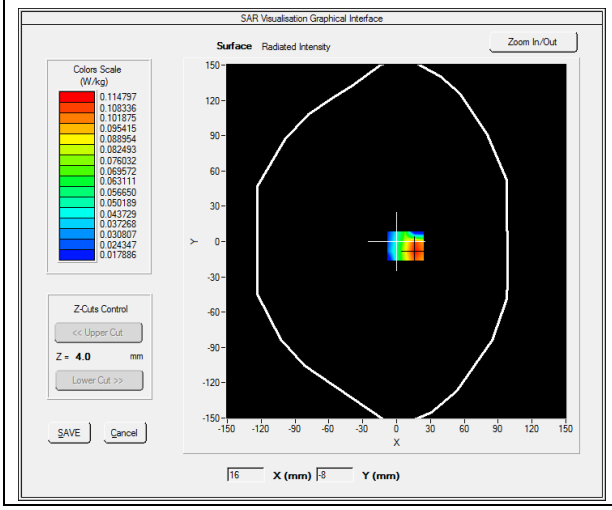
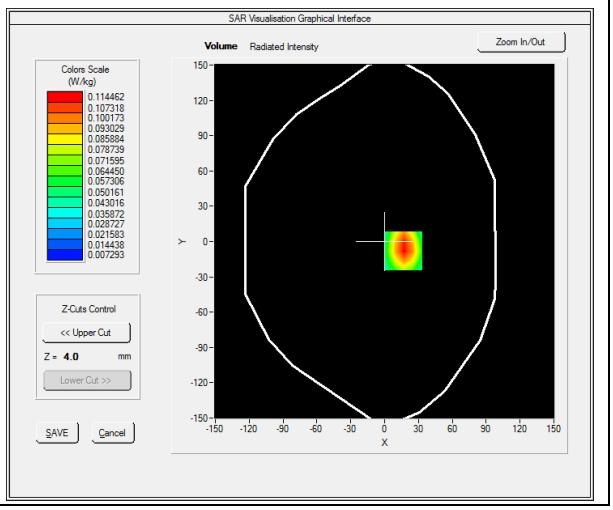
Type: Phone measurement (Complete)
Date of measurement: 2020-11-18
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.64; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front
Band	WiFi_802.11b
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	39.943001
Conductivity (S/m)	1.7540038
Power Variation (%)	-0.320000
Ambient Temperature	21.2
Liquid Temperature	21.2

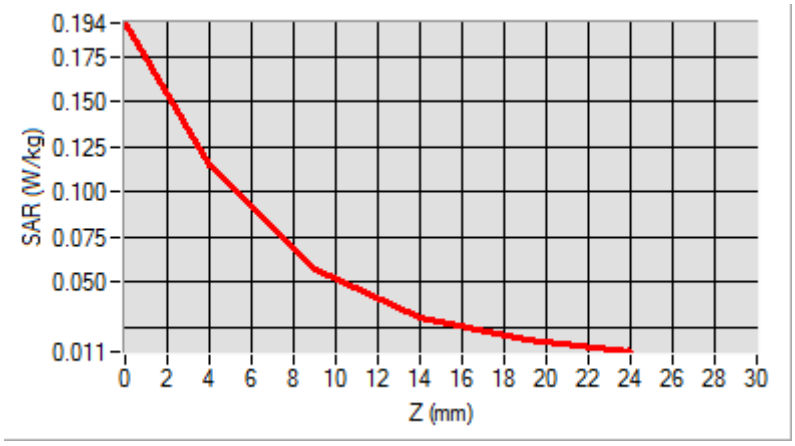
SURFACE SAR	VOLUME SAR
	

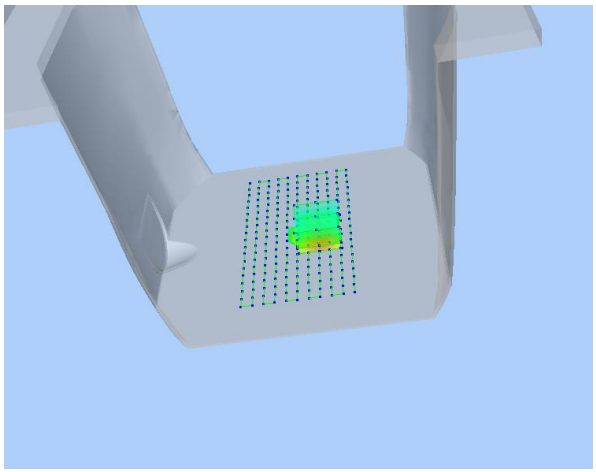
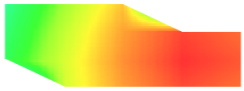
Maximum location: X=17.00, Y=-8.00

SAR Peak: 0.19 W/kg

SAR 10g (W/Kg)	**0.057990**
SAR 1g (W/Kg)	**0.108593**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.1937**	**0.1145**	**0.0573**	**0.0296**	**0.0174**



3D screen shot	**Hot spot position**
	

MEASUREMENT 120/246

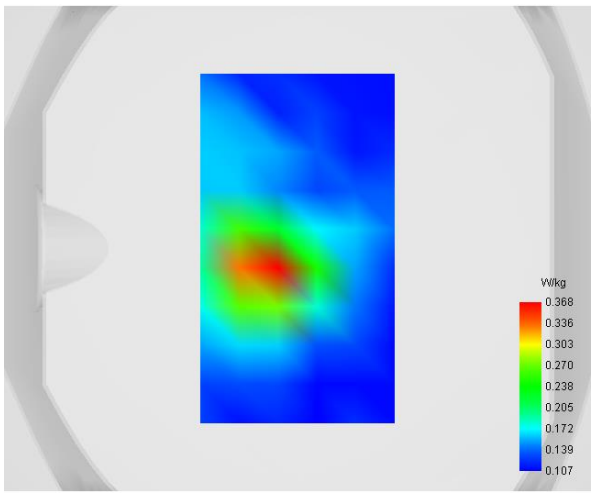
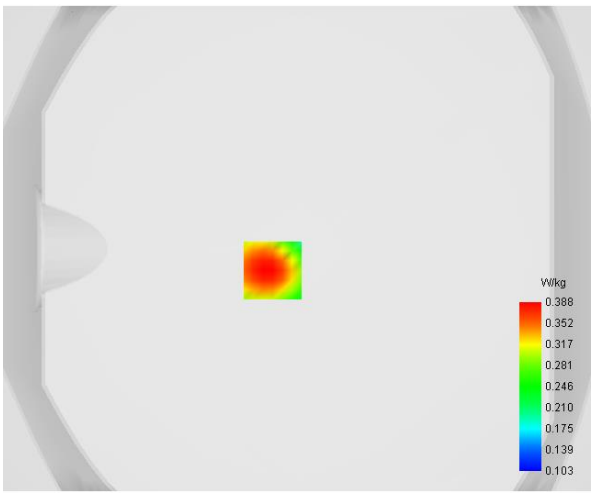
Type: Phone measurement (Complete)
Date of measurement: 2020-11-27
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2- SN 45/15 EPGO280; ConvF: 2.44; Calibrated: 2020-07-03

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WiFi_802.11a
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

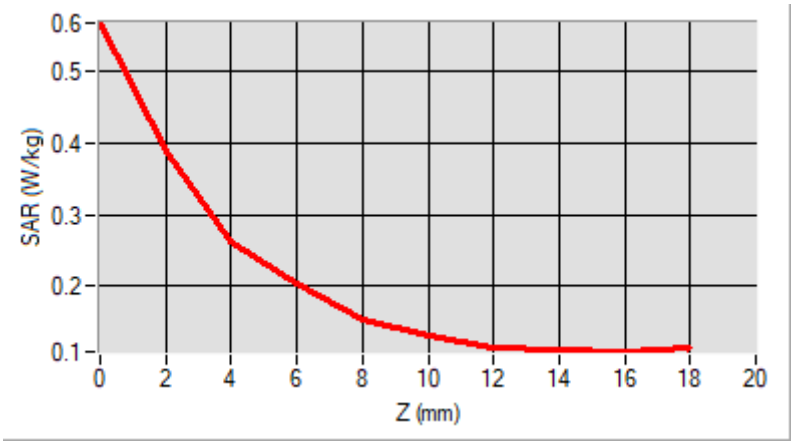
Frequency (MHz)	5240.000000
Relative Permittivity (real part)	36.943001
Conductivity (S/m)	4.599698
Power Variation (%)	-1.120000
Ambient Temperature	21.0
Liquid Temperature	21.0

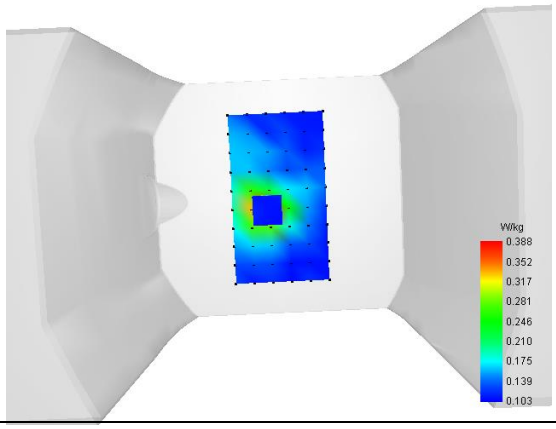
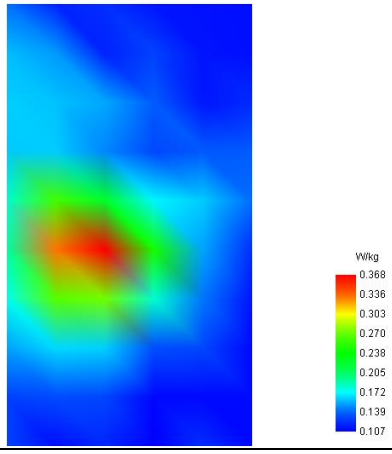
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-10.00, Y=-9.00

SAR 10g (W/Kg)	0.192661
SAR 1g (W/Kg)	0.309057

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.5688	0.3880	0.2630	0.2029	0.1519	0.1314	0.1141	0.1116	0.1079



3D screen shot	Hot spot position
	

MEASUREMENT 122

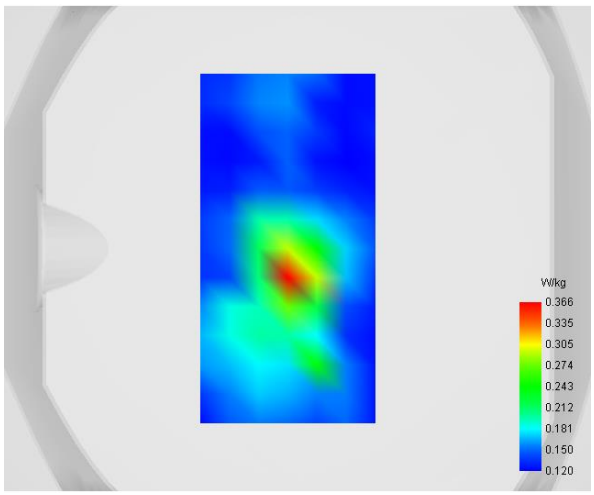
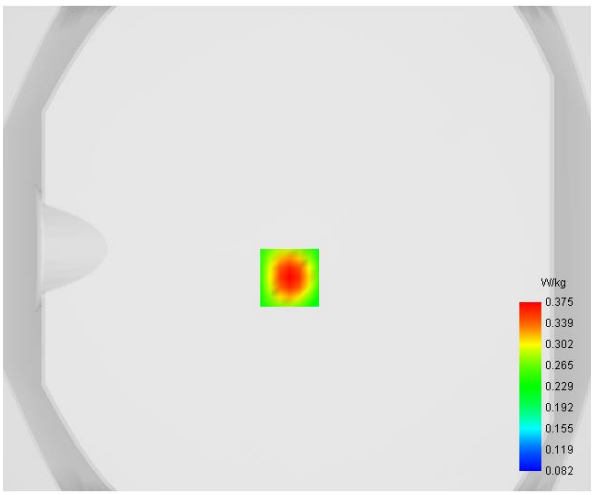
Type: Phone measurement (Complete)
Date of measurement: 2020-11-27
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2- SN 45/15 EPGO280; ConvF: 2.52; Calibrated: 2020-07-03

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WiFi_802.11 n (HT20)
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

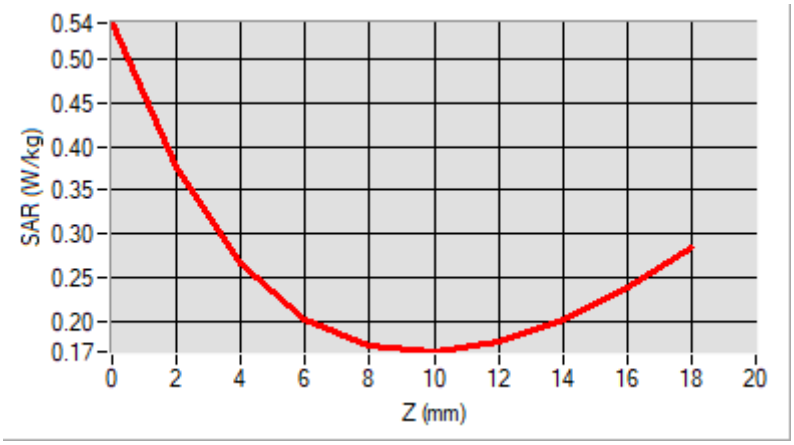
Frequency (MHz)	5745.000000
Relative Permittivity (real part)	34.985423
Conductivity (S/m)	5.032163
Power Variation (%)	-0.960000
Ambient Temperature	21.0
Liquid Temperature	21.0

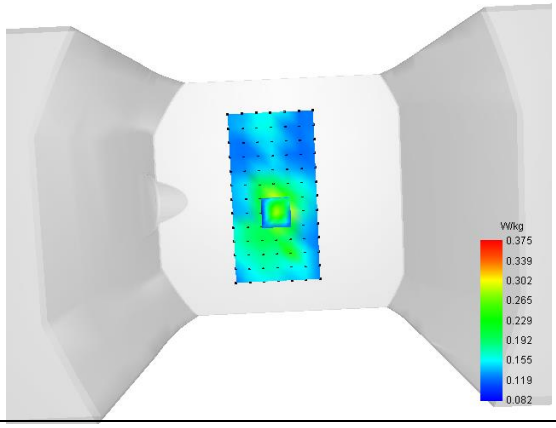
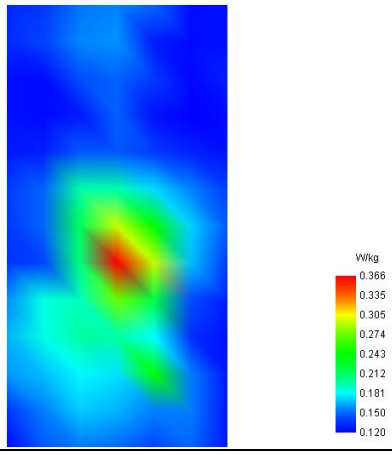
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-3.00, Y=-12.00

SAR 10g (W/Kg)	0.224896
SAR 1g (W/Kg)	0.293213

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.5403	0.3752	0.2668	0.2029	0.1731	0.1665	0.1774	0.2027	0.2400



3D screen shot	Hot spot position
	

MEASUREMENT 125

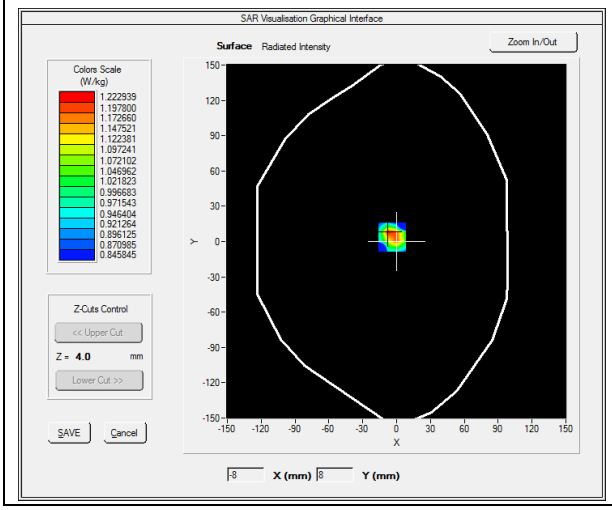
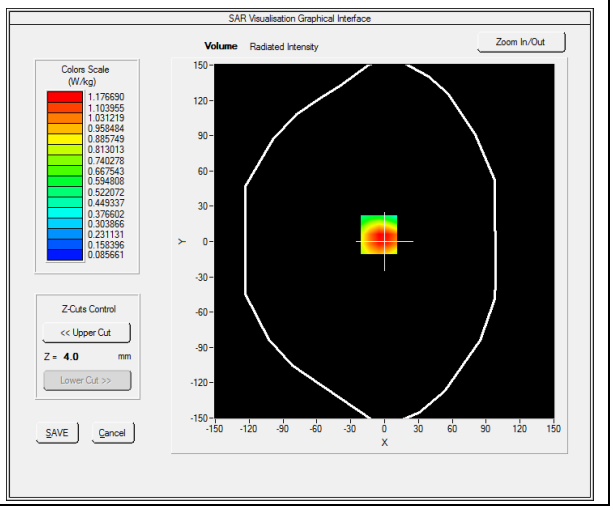
Type: Phone measurement (Complete)
Date of measurement: 2020-12-01
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	GPRS850_4TX
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

Frequency (MHz)	824.200000
Relative Permittivity (real part)	42.010187
Conductivity (S/m)	0.901883
Power Variation (%)	-0.690000
Ambient Temperature	21.5
Liquid Temperature	21.5

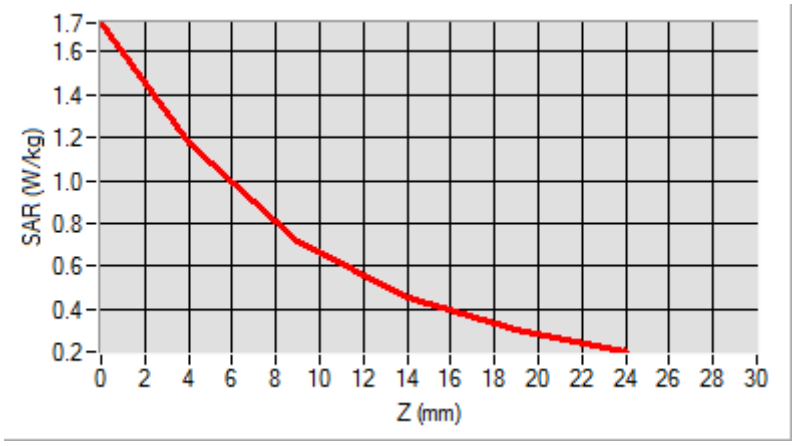
SURFACE SAR	VOLUME SAR
	

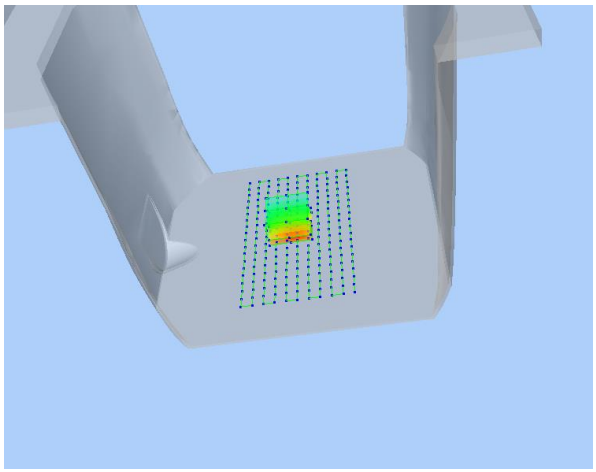
Maximum location: X=-5.00, Y=6.00

SAR Peak: 1.77 W/kg

SAR 10g (W/Kg)	**0.721344**
SAR 1g (W/Kg)	**1.155194**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.7354**	**1.1767**	**0.7189**	**0.4504**	**0.2981**



3D screen shot	**Hot spot position**
	

MEASUREMENT 132

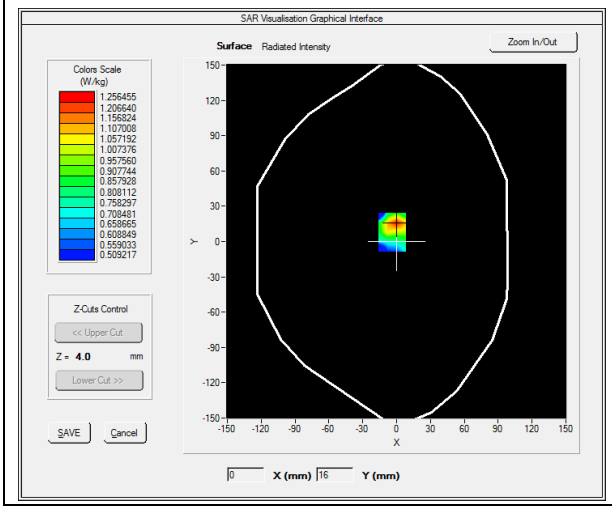
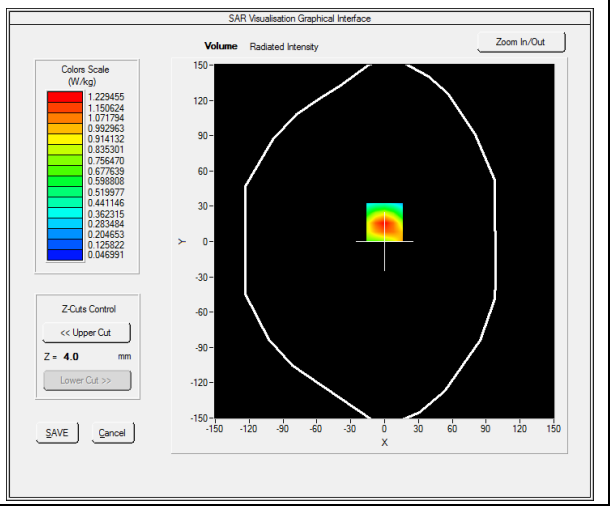
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	GPRS1900_4TX
Channels	High
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

Frequency (MHz)	1909.800000
Relative Permittivity (real part)	39.180926
Conductivity (S/m)	1.397169
Power Variation (%)	1.230000
Ambient Temperature	21.5
Liquid Temperature	21.5

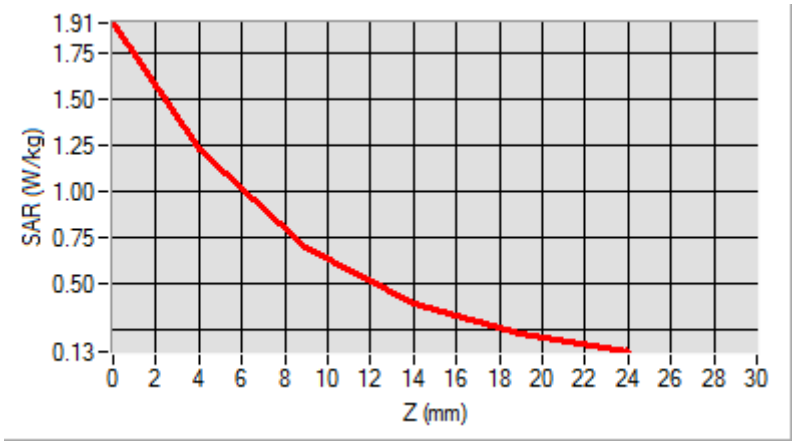
SURFACE SAR	VOLUME SAR
	

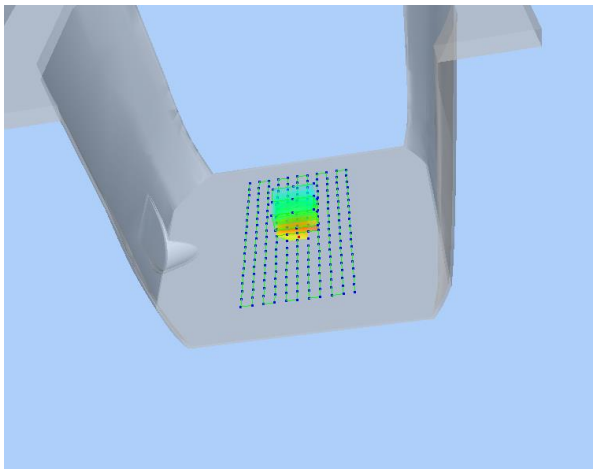
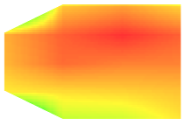
Maximum location: X=0.00, Y=16.00

SAR Peak: 1.94 W/kg

SAR 10g (W/Kg)	**0.631238**
SAR 1g (W/Kg)	**1.159266**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.9078**	**1.2295**	**0.6924**	**0.3916**	**0.2301**



3D screen shot	**Hot spot position**
	

MEASUREMENT 179

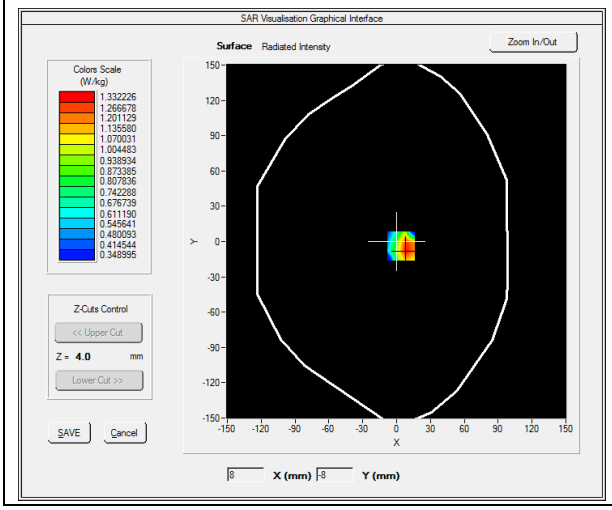
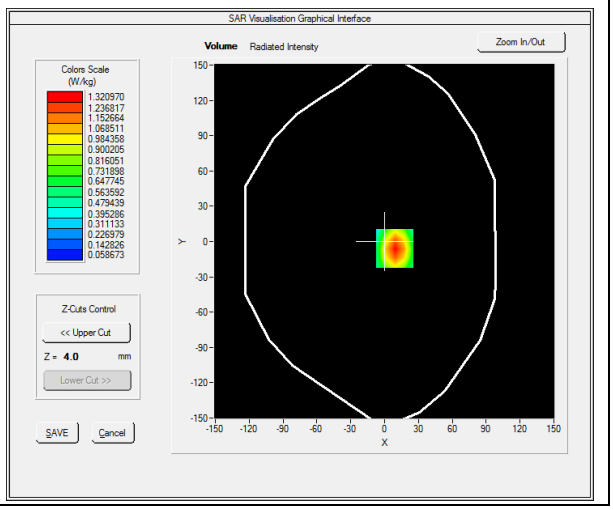
Type: Phone measurement (Complete)
Date of measurement: 2020-11-30
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	39.180926
Conductivity (S/m)	1.397169
Power Variation (%)	-1.030000
Ambient Temperature	21.5
Liquid Temperature	21.5

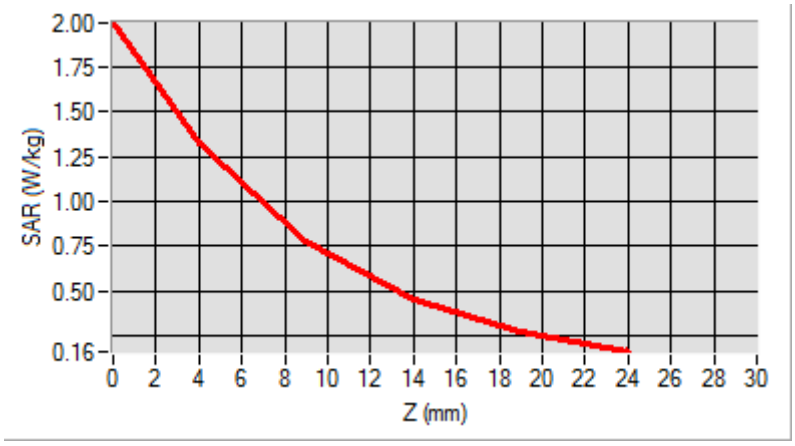
SURFACE SAR	VOLUME SAR
	

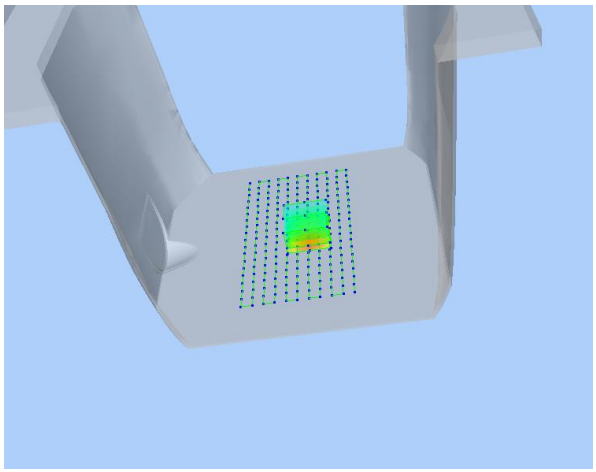
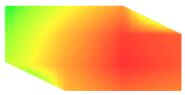
Maximum location: X=9.00, Y=-6.00

SAR Peak: 2.00 W/kg

SAR 10g (W/Kg)	**0.684743**
SAR 1g (W/Kg)	**1.231364**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.9972**	**1.3210**	**0.7720**	**0.4532**	**0.2743**



3D screen shot	**Hot spot position**
	

MEASUREMENT 198

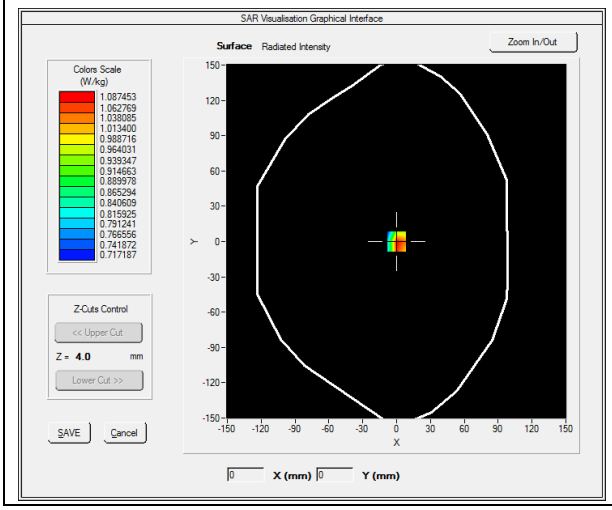
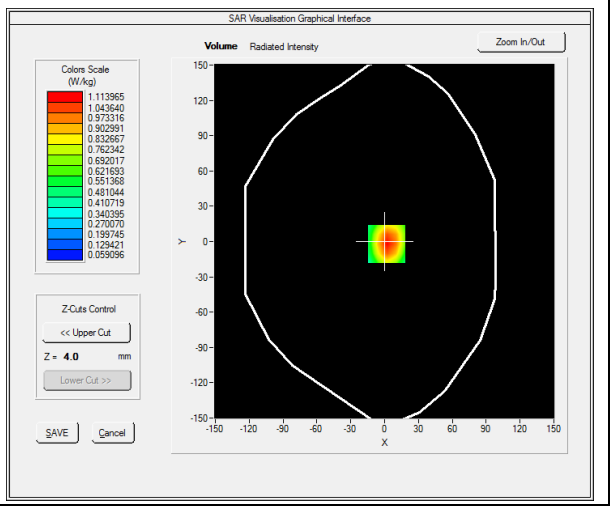
Type: Phone measurement (Complete)
Date of measurement: 2020-11-23
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Bottom
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)	40.224910
Conductivity (S/m)	1.347136
Power Variation (%)	-0.550000
Ambient Temperature	21.3
Liquid Temperature	21.3

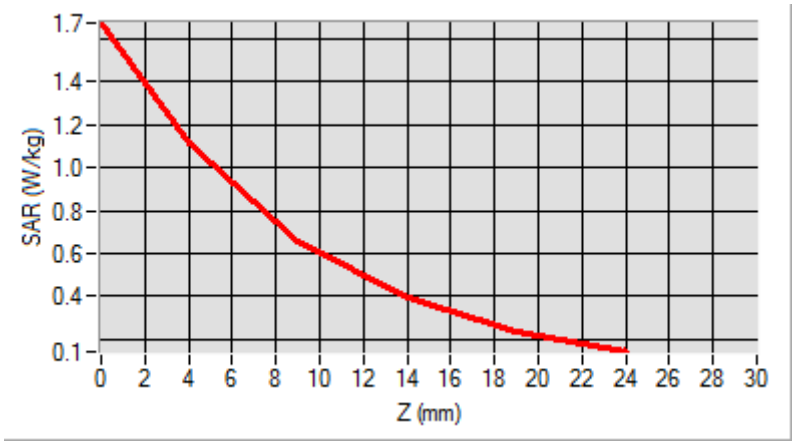
SURFACE SAR	VOLUME SAR
	

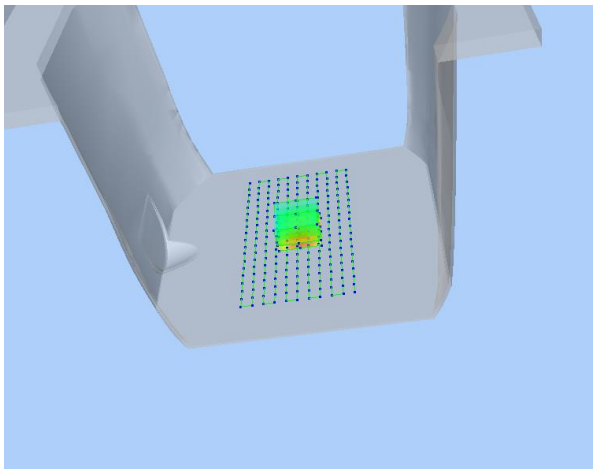
Maximum location: X=2.00, Y=-2.00

SAR Peak: 1.68 W/kg

SAR 10g (W/Kg)	**0.600067**
SAR 1g (W/Kg)	**1.047957**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.6733**	**1.1140**	**0.6573**	**0.3899**	**0.2382**



3D screen shot	**Hot spot position**
	

MEASUREMENT 244

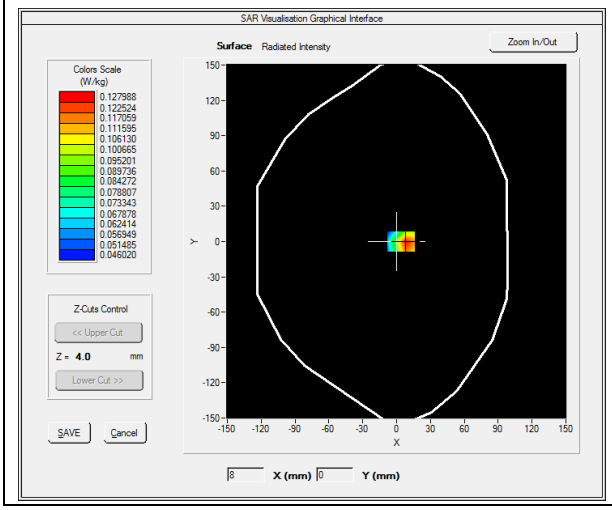
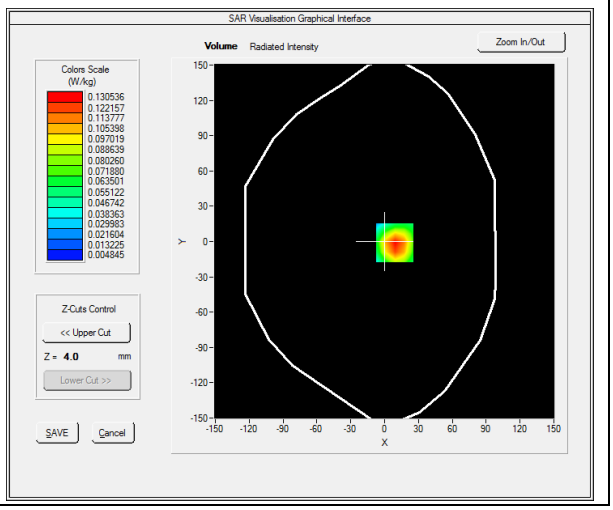
Type: Phone measurement (Complete)
Date of measurement: 2020-11-18
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.64; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Left
Band	WiFi_802.11b
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	39.943001
Conductivity (S/m)	1.7540038
Power Variation (%)	-0.560000
Ambient Temperature	21.2
Liquid Temperature	21.2

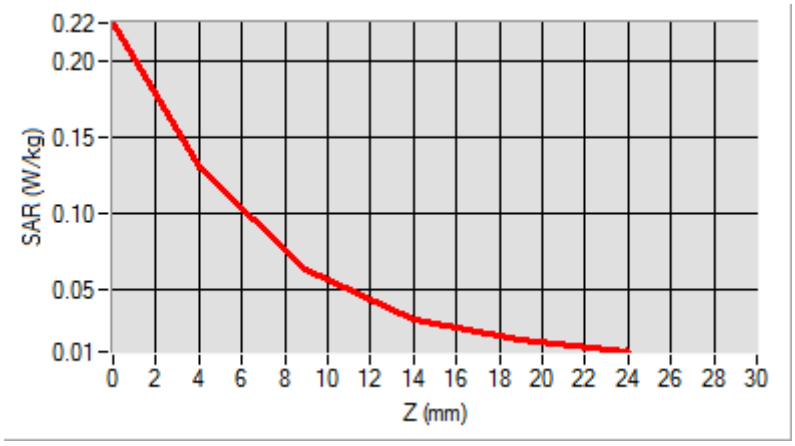
SURFACE SAR	VOLUME SAR
	

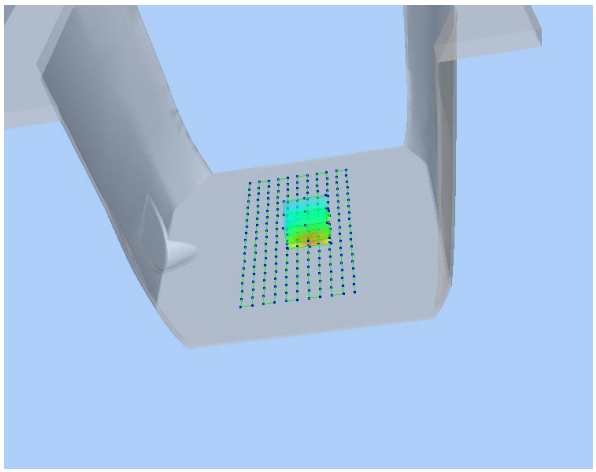
Maximum location: X=9.00, Y=-1.00

SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	**0.062271**
SAR 1g (W/Kg)	**0.123455**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.2243**	**0.1305**	**0.0632**	**0.0308**	**0.0165**



3D screen shot	**Hot spot position**
	

MEASUREMENT 253

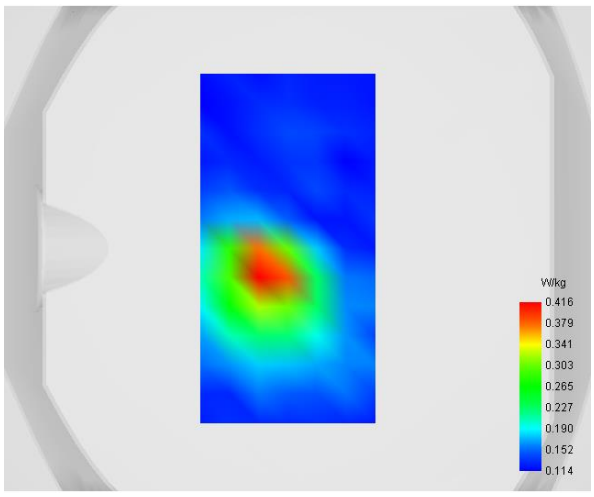
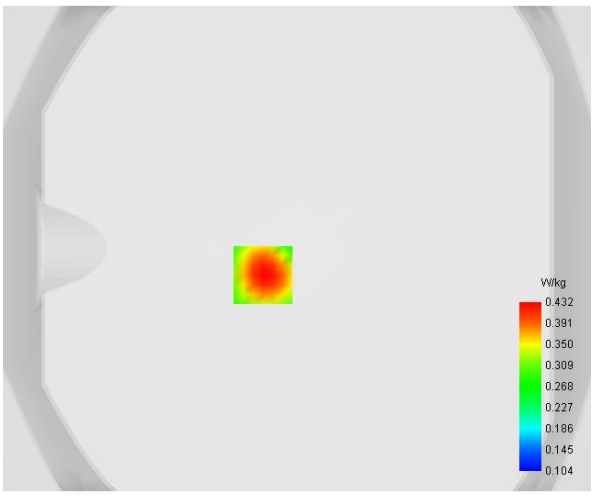
Type: Phone measurement (Complete)
Date of measurement: 2020-11-27
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2- SN 45/15 EPGO280; ConvF: 2.52; Calibrated: 2020-07-03

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Top
Band	WiFi_802.11 n (HT20)
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

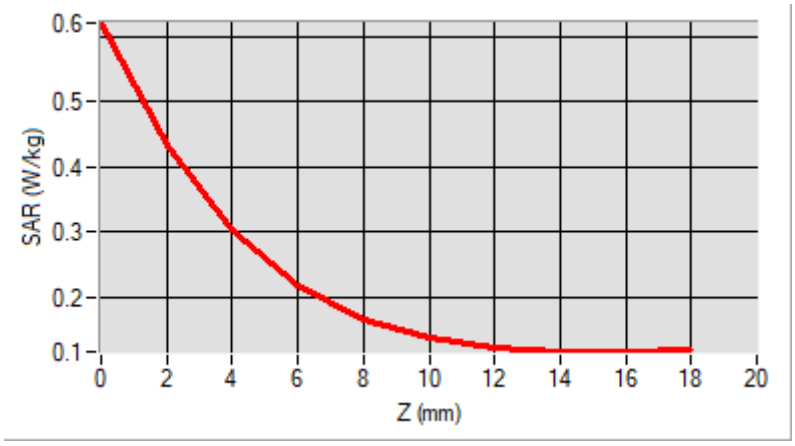
Frequency (MHz)	5745.000000
Relative Permittivity (real part)	34.985423
Conductivity (S/m)	5.032163
Power Variation (%)	1.650000
Ambient Temperature	21.0
Liquid Temperature	21.0

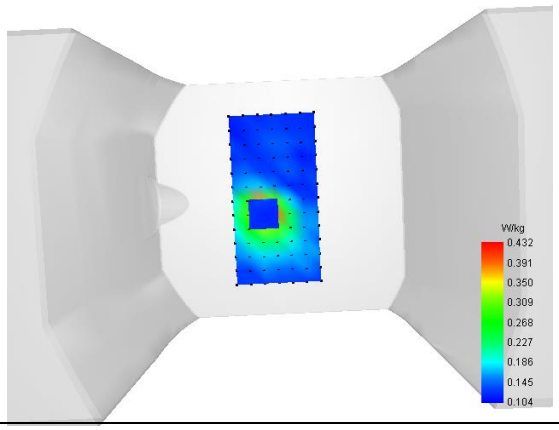
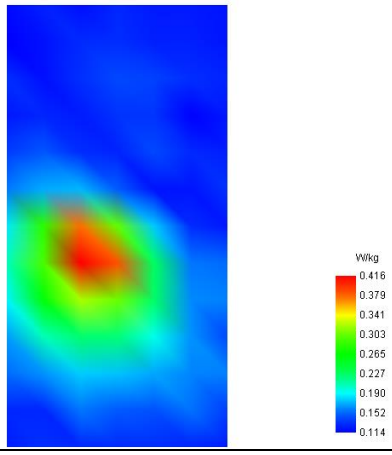
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-14.00, Y=-11.00

SAR 10g (W/Kg)	0.208122
SAR 1g (W/Kg)	0.327072

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.6208	0.4324	0.3033	0.2186	0.1674	0.1381	0.1230	0.1171	0.1170



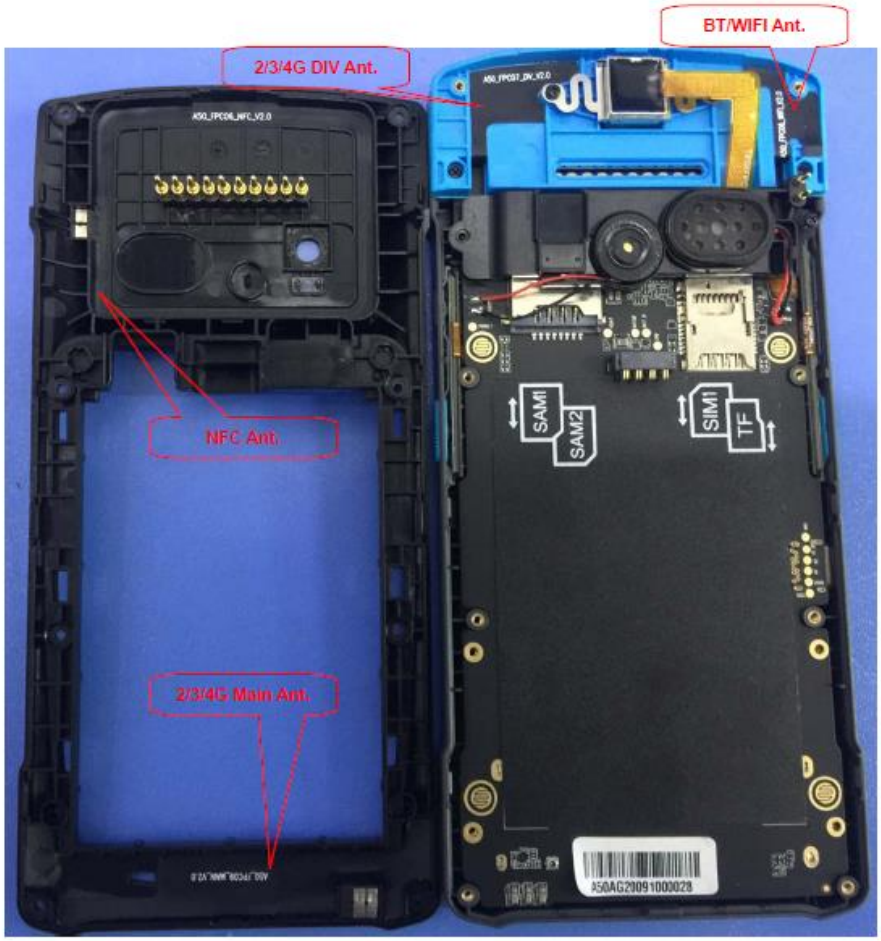
3D screen shot	Hot spot position
	

Annex C. EUT Photos

EUT View Front

EUT View Back

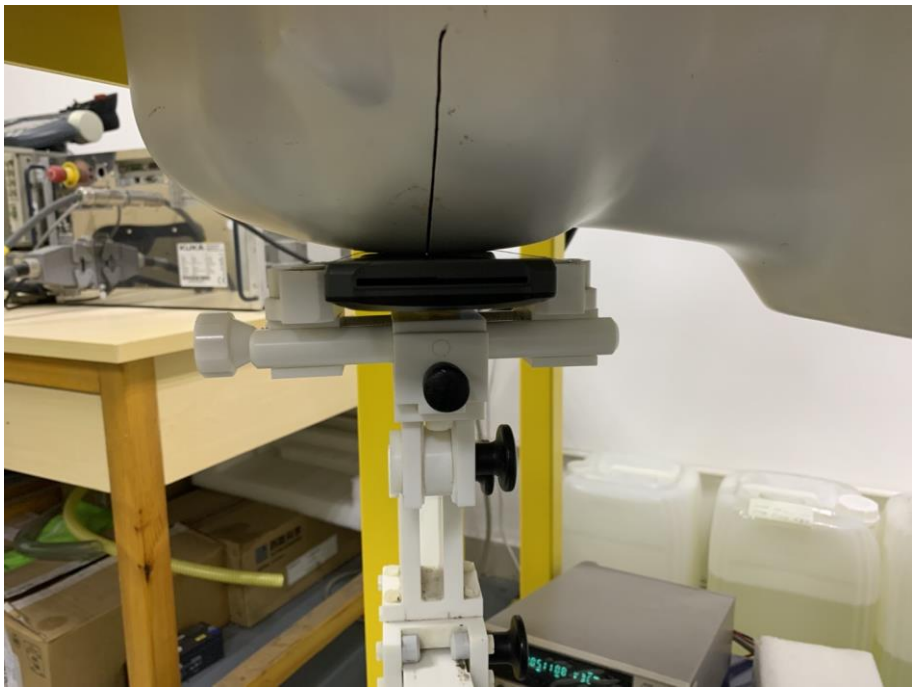
Antenna View



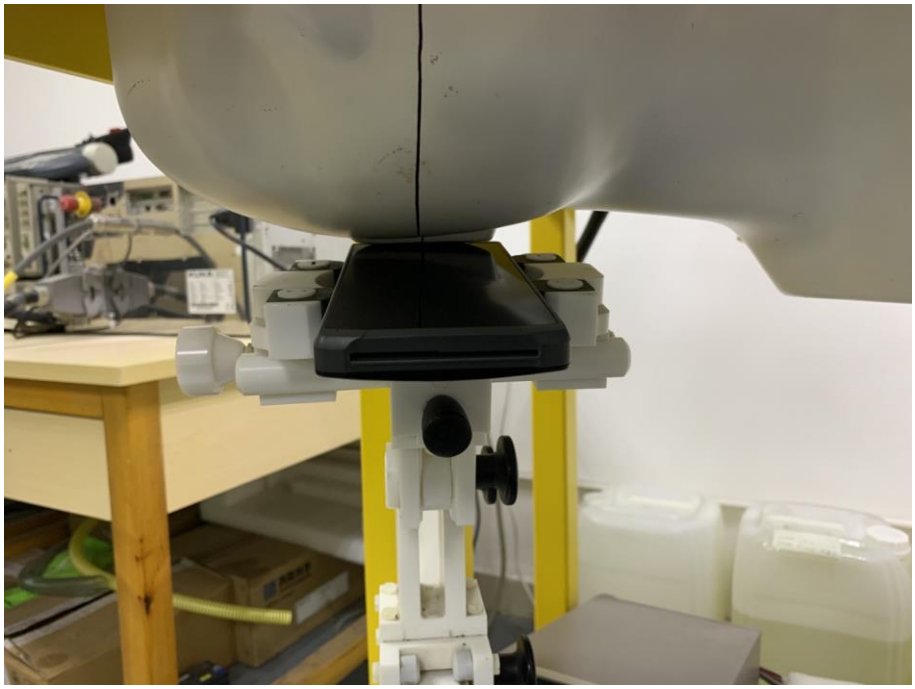
Annex D. Test Setup Photos

Head Exposure Conditions

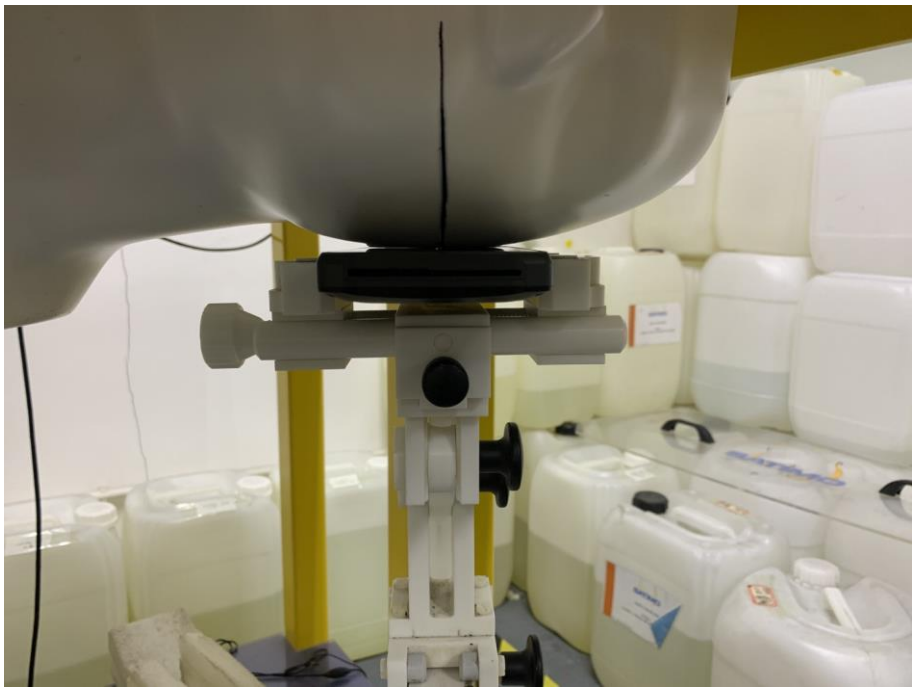
Right Cheek



Tilt



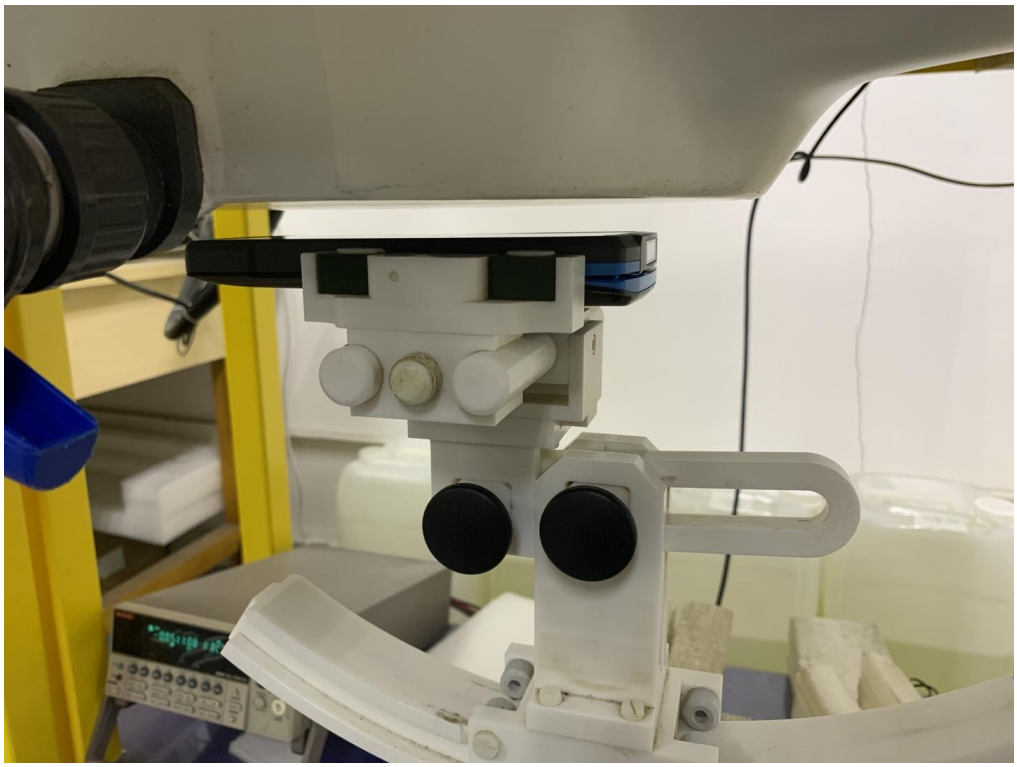
Left Cheek



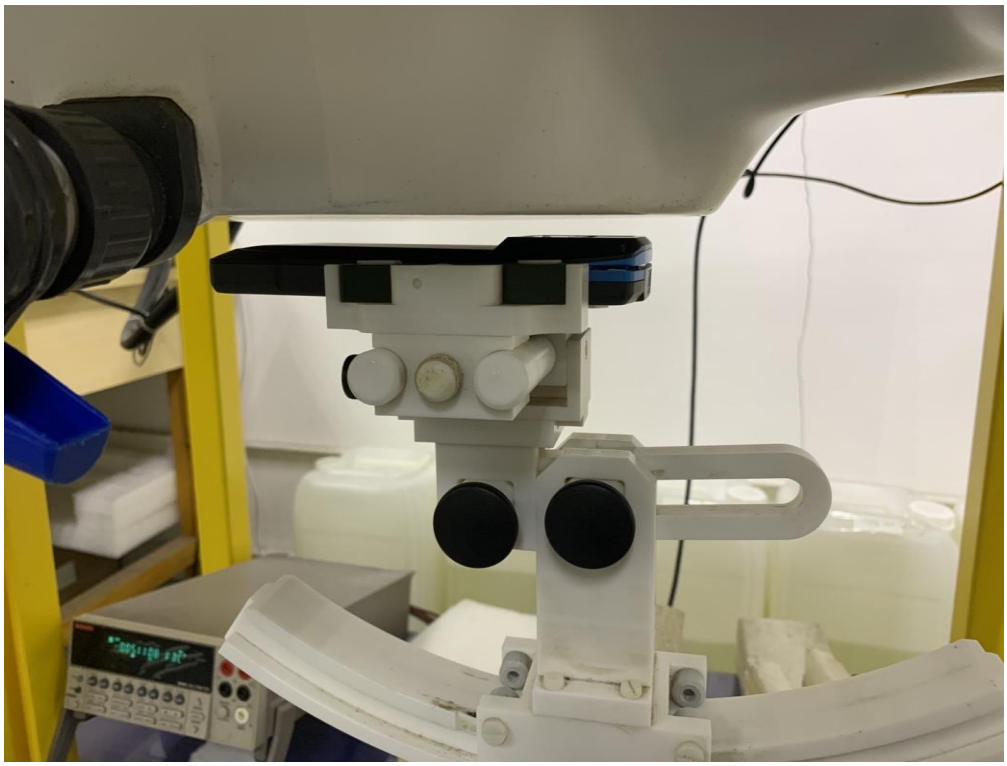
Tilt

Body mode Exposure Conditions
Test distance: 10mm

Body Front

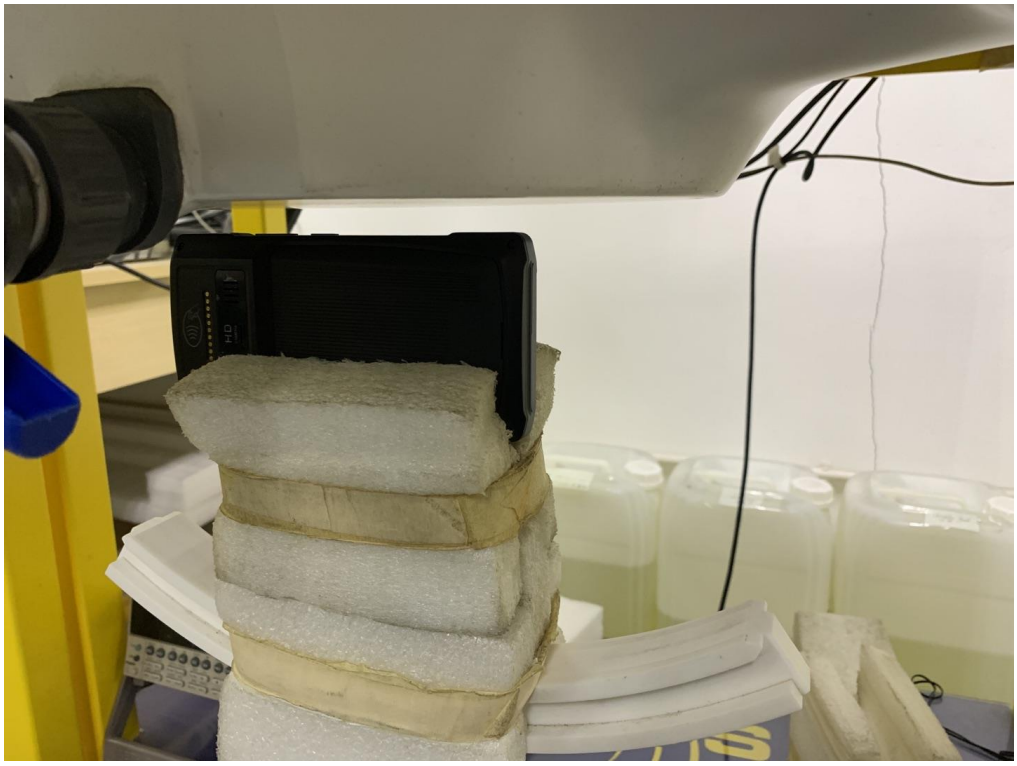


Body Back

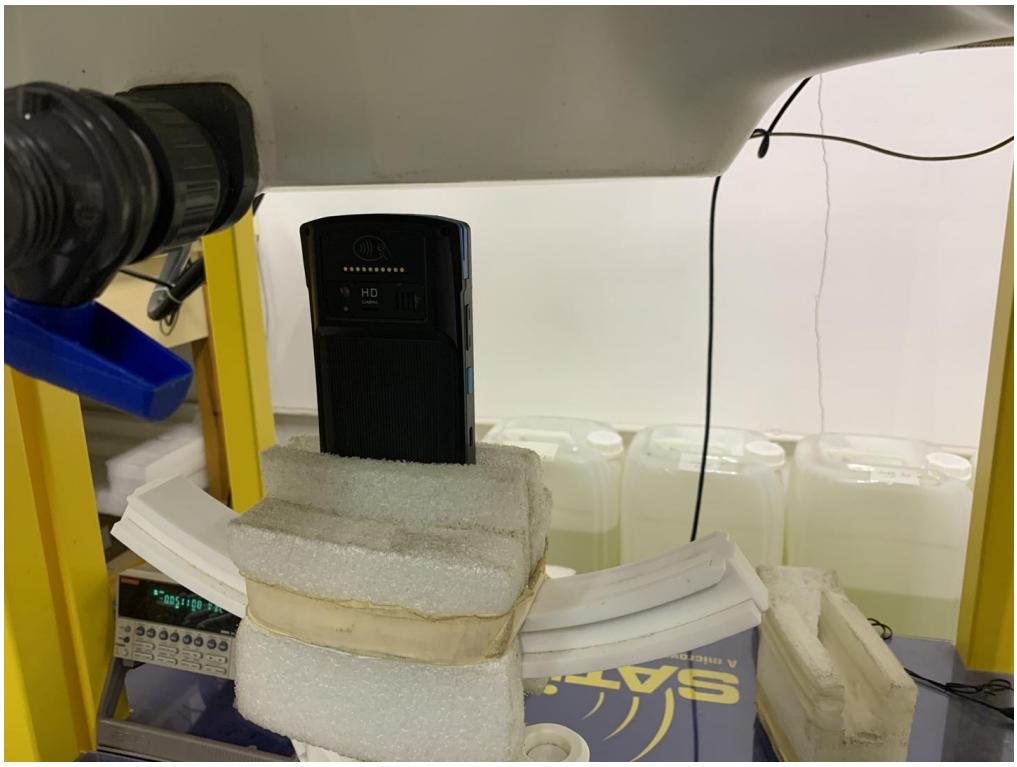


Body Right

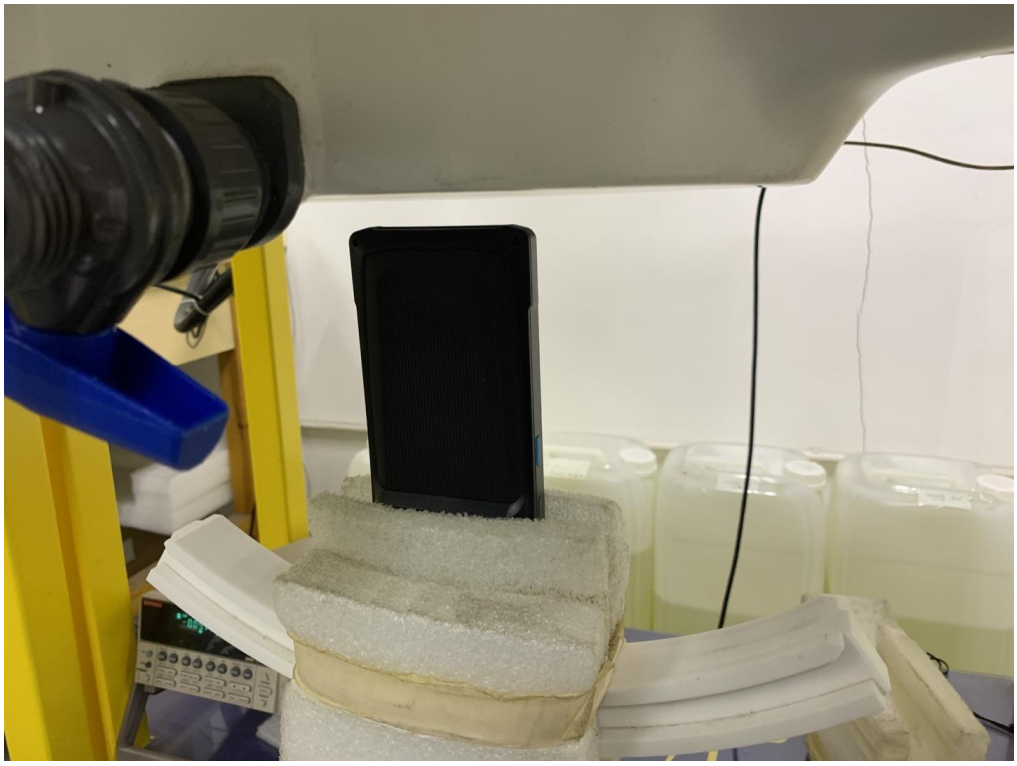
Body Left



Body Top



Body Bottom



Annex E. Calibration Certificate

Please refer to the exhibit for the calibration certificate

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