

FCC SAR EVALUATION REPORT

**In accordance with the requirements of
FCC 47 CFR Part 2(2.1093), ANSI/IEEE C95.1-1992 and
IEEE Std 1528-2013**

Product Name : SMART PHONE

Trademark : N/A

Model Name : MIST

Family Model : N/A

Report No. : STR200609001007E

FCC ID : 2ATH4-MIST

Prepared for

Alliance International group, Inc
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TEST RESULT CERTIFICATION**Applicant's name**.....: Alliance International group, Inc

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Manufacturer's Name.....: Alliance International group, Inc

Address.....: 43337 Isle Royal Street Fremont CA 94538 USA

Product description

Product name.....: SMART PHONE

Trademark: N/A

Model Name: MIST

Family Model.....: N/A

FCC 47 CFR Part 2(2.1093)

ANSI/IEEE C95.1-1992

Standards.....: IEEE Std 1528-2013

Published RF exposure KDB procedures

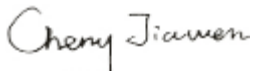
This device described above has been tested by Shenzhen NTEK. In accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 and KDB 865664 D01. Testing has shown that this device is capable of compliance with localized specific absorption rate (SAR) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992. The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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Date of Test

Date (s) of performance of tests.....: Jun. 10, 2020 ~ Jun. 22, 2020

Date of Issue: Jul. 03, 2020

Test Result: **Pass**Prepared By
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※ ※ Revision History ※ ※

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TABLE OF CONTENTS

1. General Information	6
1.1. RF exposure limits.....	6
1.2. Statement of Compliance	7
1.3. EUT Description	7
1.4. Test specification(s)	10
1.5. Ambient Condition.....	10
2. SAR Measurement System	11
2.1. SATIMO SAR Measurement Set-up Diagram	11
2.2. Robot	12
2.3. E-Field Probe.....	13
2.3.1. E-Field Probe Calibration	13
2.4. SAM phantoms	14
2.4.1. Technical Data	15
2.5. Device Holder	16
2.6. Test Equipment List	17
3. SAR Measurement Procedures	19
3.1. Power Reference	19
3.2. Area scan & Zoom scan.....	19
3.3. Description of interpolation/extrapolation scheme	22
3.4. Volumetric Scan	22
3.5. Power Drift	22
4. System Verification Procedure	23
4.1. Tissue Verification	23
4.1.1. Tissue Dielectric Parameter Check Results	24
4.2. System Verification Procedure	25
4.2.1. System Verification Results	26
5. SAR Measurement variability and uncertainty	27
5.1. SAR measurement variability.....	27
5.2. SAR measurement uncertainty	27
6. RF Exposure Positions	28
6.1. Ear and handset reference point	28
6.2. Definition of the cheek position	28
6.3. Definition of the tilt position	30
6.4. Body Worn Accessory	30
6.5. Wireless Router Devices	31
7. RF Output Power	32
7.1. GSM Conducted Power	32
7.2. WCDMA Conducted Power	32
7.3. LTE Conducted Power	33

7.4. WLAN & Bluetooth Output Power	48
7.4.1. Output Power Results Of WLAN	48
7.4.2. Output Power Results Of Bluetooth.....	49
8. Antenna Location.....	50
9. Stand-alone SAR test exclusion.....	51
10. SAR Results	52
10.1. SAR measurement results	52
10.1.1. SAR measurement Result of GSM850.....	52
10.1.2. SAR measurement Result of GSM1900.....	53
10.1.3. SAR measurement Result of WCDMA Band 2.....	55
10.1.4. SAR measurement Result of WCDMA Band 4.....	56
10.1.5. SAR measurement Result of WCDMA Band 5.....	57
10.1.6. SAR measurement Result of LTE Band 2	58
10.1.7. SAR measurement Result of LTE Band 4	60
10.1.8. SAR measurement Result of LTE Band 5	63
10.1.9. SAR measurement Result of LTE Band 7	66
10.1.10. SAR measurement Result of LTE Band 12	68
10.1.11. SAR measurement Result of LTE Band 17	70
10.1.12. SAR measurement Result of LTE Band 66	73
10.1.13. SAR measurement Result of WLAN 2.4G	75
10.2. SAR Summation Scenario.....	76
11. Appendix A. Photo documentation	87
12. Appendix B. System Check Plots.....	88
13. Appendix C. Plots of High SAR Measurement.....	113
14. Appendix D. Calibration Certificate	193

1. General Information

1.1. RF exposure limits

(A).Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

(B).Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

NOTE: **Whole-Body SAR** is averaged over the entire body, **partial-body SAR** is averaged over any 1 gram of tissue defined as a tissue volume in the shape of a cube. **SAR for hands, wrists, feet and ankles** is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

Occupational/Controlled Environments:

Are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

General Population/Uncontrolled Environments:

Are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

NOTE
 HEAD AND TRUNK LIMIT
 1.6 W/kg
 APPLIED TO THIS EUT

1.2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for MIST are as follows.

RF Exposure Conditions		Equipment Class - Highest Reported SAR (W/kg)			
		PCE	DTS	NII	DSS
1-g Head		0.997	0.067	N/A	N/A
1-g Body-Worn (Separation distance of 10mm)		1.319	0.089	N/A	N/A
1-g Hotspot (Separation distance of 10mm)		1.319	0.089	N/A	N/A
Max Simultaneous Tx	Head	1.064	1.064	N/A	1.039
	Body-Worn	1.408	1.408	N/A	1.340
	Hotspot	1.408	1.408	N/A	1.340

Note: The Max Simultaneous Tx is calculated based on the same configuration and test position. This 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(2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 & KDB 865664 D01.

1.3. EUT Description

Device Information			
Product Name	SMART PHONE		
Trade Name	N/A		
Model Name	MIST		
Family Model	N/A		
FCC ID	2ATH4-MIST		
Device Phase	Identical Prototype		
Exposure Category	General population / Uncontrolled environment		
Antenna	PIFA Antenna		
Battery Information	DC 3.7V, 1400mAh		
Device Operating Configurations			
Supporting Mode(s)	GSM 850/1900, WCDMA Band 2/4/5, LTE Band 2/4/5/7/12/17/66, WLAN 2.4G, Bluetooth		
Test Modulation	GSM(GMSK), WCDMA(QPSK), LTE(QPSK/16QAM), WLAN(DSSS/OFDM), Bluetooth(GFSK, $\pi/4$ -DQPSK, 8DPSK)		
Device Class	B		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM 850	824-849	869-894
	GSM 1900	1850-1910	1930-1990

	WCDMA Band 2	1850-1910	1930-1990
	WCDMA Band 4	1710-1755	2110-2155
	WCDMA Band 5	824-849	869-894
	LTE Band 2	1850-1910	1930-1990
	LTE Band 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620-2690
	LTE Band 12	699-716	729-746
	LTE Band 17	704-716	734-746
	LTE Band 66	1710-1780	2110-2200
	WLAN 2.4G	2412-2462	
	Bluetooth	2402-2480	
	GPRS Multislot Class(12)	Max Number of Timeslots in Uplink	4
Max Number of Timeslots in Downlink		4	
Max Total Timeslot		5	
Power Class	4, tested with power level 5(GSM 850)		
	1, tested with power level 0(GSM 1900)		
	3, tested with power control “all 1”(WCDMA Band 2)		
	3, tested with power control “all 1”(WCDMA Band 4)		
	3, tested with power control “all 1”(WCDMA Band 5)		
	3, tested with power control all Max.(LTE Band 2)		
	3, tested with power control all Max.(LTE Band 4)		
	3, tested with power control all Max.(LTE Band 5)		
	3, tested with power control all Max.(LTE Band 7)		
	3, tested with power control all Max.(LTE Band 12)		
	3, tested with power control all Max.(LTE Band 17)		
	3, tested with power control all Max.(LTE Band 66)		
	Test Channels (low-mid-high)	128-189-251(GSM 850)	
512-661-810(GSM 1900)			
9262-9400-9538(WCDMA Band 2)			
1312-1413-1513(WCDMA Band 4)			
4132-4182-4233(WCDMA Band 5)			
18607-18900-19193(LTE Band 2 BW=1.4MHz)			
18615-18900-19185(LTE Band 2 BW=3MHz)			
18625-18900-19175(LTE Band 2 BW=5MHz)			
18650-18900-19150(LTE Band 2 BW=10MHz)			
18675-18900-19125(LTE Band 2 BW=15MHz)			
18700-18900-19100(LTE Band 2 BW=20MHz)			
19957-20175-20393(LTE Band 4 BW=1.4MHz)			
19965-20175-20385(LTE Band 4 BW=3MHz)			

19975-20175-20375(LTE Band 4 BW=5MHz)
20000-20175-20350(LTE Band 4 BW=10MHz)
20025-20175-20325(LTE Band 4 BW=15MHz)
20050-20175-20300(LTE Band 4 BW=20MHz)
20407-20525-20643(LTE Band 5 BW=1.4MHz)
20415-20525-20635(LTE Band 5 BW=3MHz)
20425-20525-20625(LTE Band 5 BW=5MHz)
20450-20525-20600(LTE Band 5 BW=10MHz)
20775-21100-21425(LTE Band 7 BW=5MHz)
20800-21100-21400(LTE Band 7 BW=10MHz)
20825-21100-21375(LTE Band 7 BW=15MHz)
20850-21100-21350(LTE Band 7 BW=20MHz)
23017-23095-23173 (LTE Band 12 BW=1.4MHz)
23025-23095-23165 (LTE Band 12 BW=3MHz)
23035-23095-23155 (LTE Band 12 BW=5MHz)
23060-23095-23130 (LTE Band 12 BW=10MHz)
23755-23790-23825(LTE Band 17 BW=5MHz)
23780-23790-23800(LTE Band 17 BW=10MHz)
131979-132322-132665 (LTE Band 66 BW=1.4MHz)
131987-132322-132657 (LTE Band 66 BW=3MHz)
131997-132322-132647 (LTE Band 66 BW=5MHz)
132022-132322-132622 (LTE Band 66 BW=10MHz)
132047-132322-132597 (LTE Band 66 BW=15MHz)
132072-132322-132572 (LTE Band 66 BW=20MHz)
1-3-6-9-11(WLAN 2.4G)

1.4. Test specification(s)

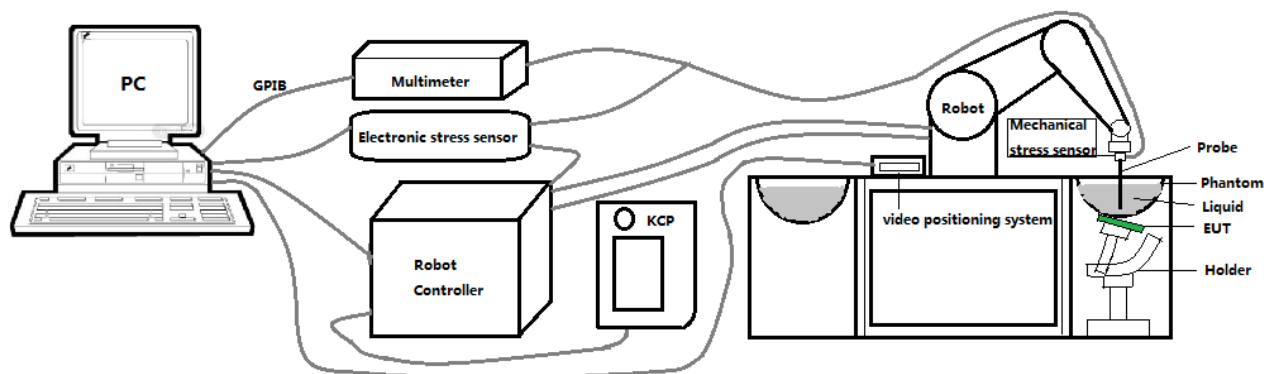
FCC 47 CFR Part 2(2.1093)
ANSI/IEEE C95.1-1992
IEEE Std 1528-2013
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz
KDB 865664 D02 RF Exposure Reporting
KDB 447498 D01 General RF Exposure Guidance
KDB 248227 D01 802.11 Wi-Fi SAR
KDB 941225 D01 3G SAR Procedures
KDB 941225 D05 SAR for LTE Devices
KDB 941225 D06 Hotspot SAR
KDB 648474 D04 Handset SAR

1.5. Ambient Condition

Ambient temperature	20°C – 24°C
Relative Humidity	30% – 70%

2. SAR Measurement System

2.1. SATIMO SAR Measurement Set-up Diagram



These measurements were performed with the automated near-field scanning system OPENSAR from SATIMO. The system is based on a high precision robot (working range: 901 mm), which positions the probes with a positional repeatability of better than ± 0.03 mm. The SAR measurements were conducted with dosimetric probe (manufactured by SATIMO), designed in the classical triangular configuration and optimized for dosimetric evaluation.

The first step of the field measurement is the evaluation of the voltages induced on the probe by the device under test. Probe diode detectors are nonlinear. Below the diode compression point, the output voltage is proportional to the square of the applied E-field; above the diode compression point, it is linear to the applied E-field. The compression point depends on the diode, and a calibration procedure is necessary for each sensor of the probe.

The Keithley multimeter reads the voltage of each sensor and send these three values to the PC. The corresponding E field value is calculated using the probe calibration factors, which are stored in the working directory. This evaluation includes linearization of the diode characteristics. The field calculation is done separately for each sensor. Each component of the E field is displayed on the "Dipole Area Scan Interface" and the total E field is displayed on the "3D Interface"

2.2. Robot

The SATIMO SAR system uses the high precision robots from KUKA. For the 6-axis controller system, the robot controller version (KUKA) from KUKA is used. The KUKA robot series have many features that are important for our application:



- High precision (repeatability ± 0.03 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

2.3. E-Field Probe

This E-field detection probe is composed of three orthogonal dipoles linked to special Schottky diodes with low detection thresholds. The probe allows the measurement of electric fields in liquids such as the one defined in the IEEE and CENELEC standards.

For the measurements the Specific Dosimetric E-Field Probe SN 08/16 EPGO287 with following specifications is used



- Dynamic range: 0.01-100 W/kg
 - Tip Diameter: 2.5 mm
 - Distance between probe tip and sensor center: 1 mm
 - Distance between sensor center and the inner phantom surface: 2 mm (repeatability better than ± 1 mm).
 - Probe linearity: ± 0.08 dB
 - Axial isotropy: 0.06 dB
 - Hemispherical Isotropy: 0.08 dB
 - Calibration range: 650MHz to 5900MHz for head & body simulating liquid.
 - Lower detection limit: 7mW/kg
- Angle between probe axis (evaluation axis) and surface normal line: less than 30° .

2.3.1. E-Field Probe Calibration

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy shall be evaluated and within ± 0.25 dB. The sensitivity parameters (Norm X, Norm Y, and Norm Z), the diode compression parameter (DCP) and the conversion factor (Conv F) of the probe are tested. The calibration data can be referred to appendix D of this report.

2.4. SAM phantoms

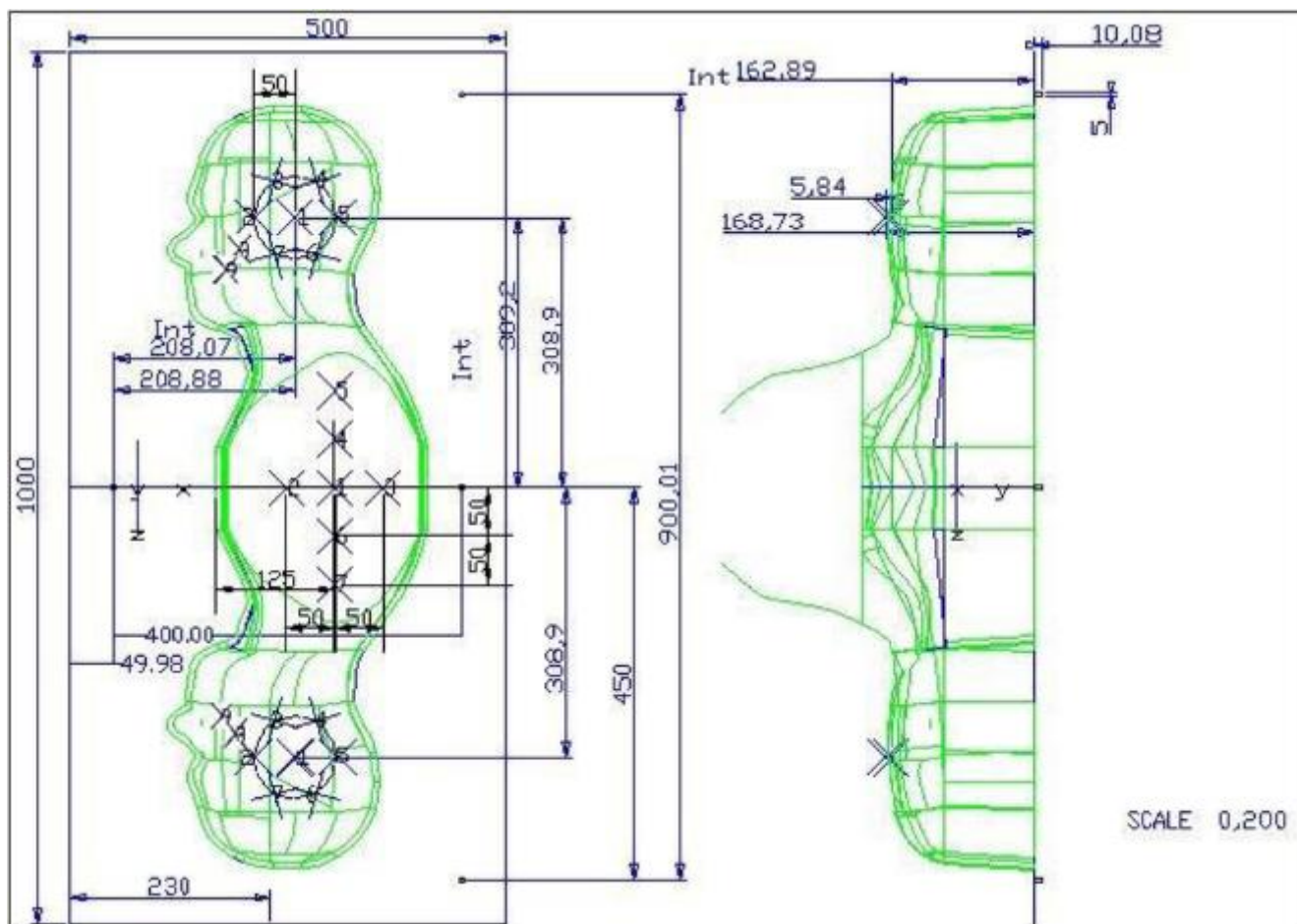
Photo of SAM phantom SN 16/15 SAM119



The SAM phantom is used to measure the SAR relative to people exposed to electro-magnetic field radiated by mobile phones.

2.4.1. Technical Data

Serial Number	Shell thickness	Filling volume	Dimensions	Positionner Material	Permittivity	Loss Tangent
SN 16/15 SAM119	2 mm ±0.2 mm	27 liters	Length:1000 mm Width:500 mm Height:200 mm	Gelcoat with fiberglass	3.4	0.02

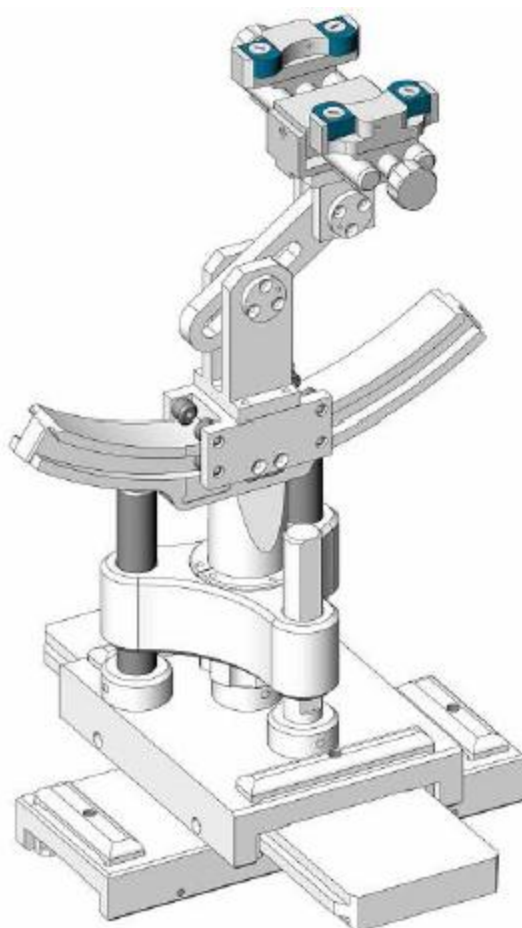


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

The test, based on ultrasonic system, allows measuring the thickness with an accuracy of 10 μm .

2.5. 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 degree.



Serial Number	Holder Material	Permittivity	Loss Tangent
SN 16/15 MSH100	Delrin	3.7	0.005

2.6. Test Equipment List

This table gives a complete overview of the SAR measurement equipment.

Devices used during the test described are marked ☒

	Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
					Last Cal.	Due Date
☒	MVG	E FIELD PROBE	SSE2	SN 08/16 EPGO287	Dec. 27, 2019	Dec. 26, 2020
☒	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Apr. 19, 2018	Apr. 18, 2021
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DIP 0G900-348	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Apr. 19, 2018	Apr. 18, 2021
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Apr. 19, 2018	Apr. 18, 2021
☐	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	Liquid measurement Kit	SCLMP	SN 21/15 OCPG 72	NCR	NCR
☒	MVG	Power Amplifier	N.A	AMPLISAR_28/14_003	NCR	NCR
☒	KEITHLEY	Millivoltmeter	2000	4072790	NCR	NCR
☒	R&S	Universal radio communication tester	CMU200	117858	Aug. 06, 2019	Aug. 05, 2020
☒	R&S	Wideband radio communication tester	CMW500	103917	Aug. 28, 2019	Aug. 27, 2020
☒	HP	Network Analyzer	8753D	3410J01136	Aug. 06, 2019	Aug. 05, 2020
☒	Agilent	PSG Analog Signal Generator	E8257D	MY51110112	Aug. 06, 2019	Aug. 05, 2020

☒	Agilent	Power meter	E4419B	MY45102538	Aug. 06, 2019	Aug. 05, 2020
☒	Agilent	Power sensor	E9301A	MY41495644	Aug. 06, 2019	Aug. 05, 2020
☒	Agilent	Power sensor	E9301A	US39212148	Aug. 06, 2019	Aug. 05, 2020
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Aug. 06, 2019	Aug. 05, 2020

3. SAR Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/Bluetooth power measurement, use engineering software to configure EUT WLAN/Bluetooth continuously transmission, at maximum RF power in each supported wireless interface and frequency band.
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/Bluetooth output power.

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/Bluetooth continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix A demonstrates.
- (c) Set scan area, grid size and other setting on the OPENSAR software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band.
- (f) Measure SAR results for other channels in worst SAR testing position if the reported 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

3.1. Power Reference

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

3.2. Area scan & Zoom scan

The area scan is a 2D scan to find the hot spot location on the DUT. The zoom scan is a 3D scan above the hot spot to calculate the 1g and 10g SAR value.

Measurement of the SAR distribution with a grid of 8 to 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8 * 4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g., 1 W/kg for 1,6 W/kg 1 g limit, or 1,26 W/kg for 2 W/kg, 10 g limit).

Area scan & Zoom scan scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

3.3. Description of interpolation/extrapolation scheme

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 minimise 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 1 mm 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 10 grams and 1 gram requires a very fine resolution in the three dimensional scanned data array.

3.4. Volumetric Scan

The volumetric scan consists to a full 3D scan over a specific area. This 3D scan is useful form multi Tx SAR measurement. Indeed, it is possible with OpenSAR to add, point by point, several volumetric scan to calculate the SAR value of the combined measurement as it is define in the standard IEEE1528 and IEC62209.

3.5. Power Drift

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In OpenSAR 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 V/m. If the power drifts more than $\pm 5\%$, the SAR will be retested.

4. System Verification Procedure

4.1. Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Ingredients (% of weight)	Head Tissue									
Frequency Band (MHz)	750	835	900	1800	1900	2000	2450	2600	5200	5800
Water	34.40	34.40	34.40	55.36	55.36	57.87	57.87	57.87	65.53	65.53
NaCl	0.79	0.79	0.79	0.35	0.35	0.16	0.16	0.16	0.00	0.00
1,2-Propanediol	64.81	64.81	64.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	30.45	30.45	19.97	19.97	19.97	24.24	24.24
DGBE	0.00	0.00	0.00	13.84	13.84	22.00	22.00	22.00	10.23	10.23
Ingredients (% of weight)	Body Tissue									
Frequency Band (MHz)	750	835	900	1800	1900	2000	2450	2600	5200	5800
Water	50.30	50.30	50.30	69.91	69.91	71.88	71.88	71.88	79.54	79.54
NaCl	0.60	0.60	0.60	0.13	0.13	0.16	0.16	0.16	0.00	0.00
1,2-Propanediol	49.10	49.10	49.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	9.99	9.99	19.97	19.97	19.97	11.24	11.24
DGBE	0.00	0.00	0.00	19.97	19.97	7.99	7.99	7.99	9.22	9.22

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid depth from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm.

Photo of Liquid depth for Head Position	Photo of Liquid depth for Body Position
	

4.1.1. Tissue Dielectric Parameter Check Results

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within $\pm 5\%$ of the target values.

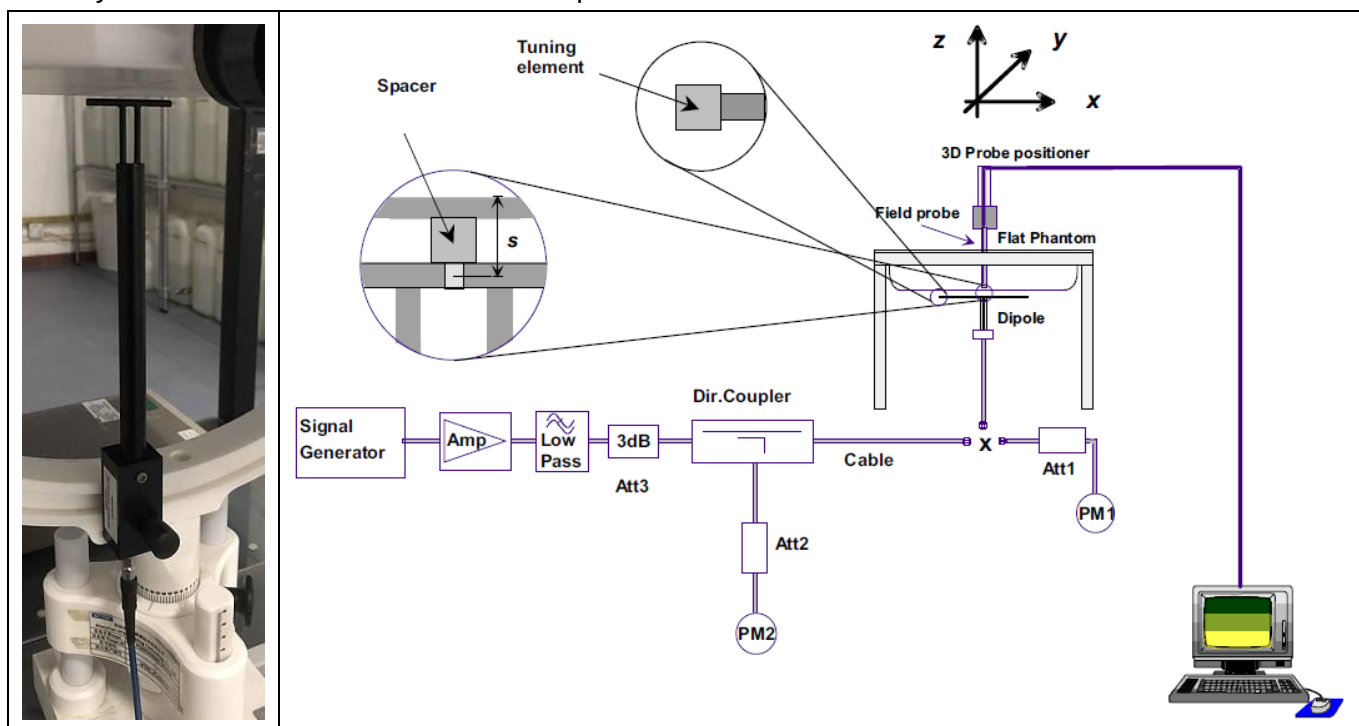
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		$\epsilon_r (\pm 5\%)$	σ (S/m) ($\pm 5\%$)	ϵ_r	σ (S/m)		
Head 750	750	41.96 (39.86~44.06)	0.89 (0.85~0.93)	41.53	0.92	21.2 °C	Jun. 10, 2020
Body 750	750	55.55 (52.77~58.33)	0.96 (0.91~1.01)	55.47	0.96	21.3 °C	Jun. 20, 2020
Head 850	835	41.50 (39.43~43.58)	0.90 (0.86~0.95)	40.74	0.93	21.5 °C	Jun. 20, 2020
Body 850	835	55.20 (52.44~57.96)	0.97 (0.92~1.02)	54.47	0.98	21.4 °C	Jun. 20, 2020
Head 1800	1800	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.52	1.39	21.7 °C	Jun. 13, 2020
Body 1800	1800	53.30 (50.64~55.97)	1.52 (1.44~1.60)	54.04	1.51	21.5 °C	Jun. 21, 2020
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.58	1.44	21.5 °C	Jun. 21, 2020
Body 1900	1900	53.30 (50.64~55.97)	1.52 (1.44~1.60)	54.21	1.53	21.4 °C	Jun. 21, 2020
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	38.45	1.85	21.5 °C	Jun. 10, 2020
Body 2450	2450	52.70 (50.07~55.34)	1.95 (1.85~2.05)	51.47	1.89	21.5 °C	Jun. 22, 2020
Head 2600	2600	39.01 (37.06~40.96)	1.96 (1.86~2.06)	38.04	2.03	21.4 °C	Jun. 11, 2020
Body 2600	2600	52.51 (49.88~55.14)	2.16 (2.05~2.27)	52.80	2.22	21.2 °C	Jun. 22, 2020

NOTE: The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.

4.2. System Verification Procedure

The system verification is performed for verifying the accuracy of the complete measurement system and performance of the software. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 100mW (below 5GHz) or 100mW (above 5GHz). To adjust this power a power meter is used. The power sensor is connected to the cable before the system verification to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system verification to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).

The system verification is shown as below picture:



4.2.1. System Verification Results

Comparing to the original SAR value provided by SATIMO, the verification data should be within its specification of $\pm 10\%$. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance verification can meet the variation criterion and the plots can be referred to Appendix B of this report.

System Verification	Target SAR (1W) ($\pm 10\%$)		Measured SAR (Normalized to 1W)		Liquid Temp.	Test Date
	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)		
750MHz Head	8.56 (7.70~9.42)	5.55 (5.00~6.11)	8.78	5.57	21.2 °C	Jun. 10, 2020
750MHz Body	8.85 (7.97~9.74)	5.91 (5.32~6.50)	8.45	6.06	21.3 °C	Jun. 20, 2020
835MHz Head	9.55 (8.60~10.51)	6.10 (5.49~6.71)	9.04	6.37	21.5 °C	Jun. 20, 2020
835MHz Body	9.83 (8.85~10.81)	6.45 (5.81~7.10)	10.28	6.28	21.4 °C	Jun. 20, 2020
1800MHz Head	38.11 (34.30~41.92)	20.05 (18.05~22.06)	37.69	19.43	21.7 °C	Jun. 13, 2020
1800MHz Body	38.13 (34.32~41.94)	20.65 (18.59~22.72)	37.41	20.19	21.5 °C	Jun. 21, 2020
1900MHz Head	38.92 (35.03~42.81)	20.09 (18.08~22.10)	39.15	19.73	21.5 °C	Jun. 21, 2020
1900MHz Body	39.02 (35.12~42.92)	20.57 (18.51~22.63)	37.12	21.69	21.4 °C	Jun. 21, 2020
2450MHz Head	53.76 (48.38~59.14)	24.12 (21.71~26.53)	50.61	23.58	21.5 °C	Jun. 10, 2020
2450MHz Body	52.90 (47.61~58.19)	24.09 (21.68~26.50)	53.14	25.14	21.5 °C	Jun. 22, 2020
2600MHz Head	55.60 (50.04~61.16)	24.60 (22.14~27.06)	55.96	24.06	21.4 °C	Jun. 11, 2020
2600MHz Body	52.49 (47.24~57.74)	23.74 (21.37~26.11)	53.09	22.56	21.2 °C	Jun. 22, 2020

5. SAR Measurement variability and uncertainty

5.1. SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

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

5.2. SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

6. RF Exposure Positions

6.1. Ear and handset reference point

Figure 6.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled “M”, the left ear reference point (ERP) is marked “LE”, and the right ERP is marked “RE”.



Fig 6.1.1 Front, back, and side views of SAM phantom

6.2. Definition of the cheek position

1. Define two imaginary lines on the handset, the vertical centerline and the horizontal line. 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 (point A in Figure 6.2.1 and Figure 6.2.2), and the midpoint of the width w_b of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 6.2.1). 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 (see Figure 6.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
2. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 6.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
3. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP
4. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
5. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.

6. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 6.2.3. The actual rotation angles should be documented in the test report.

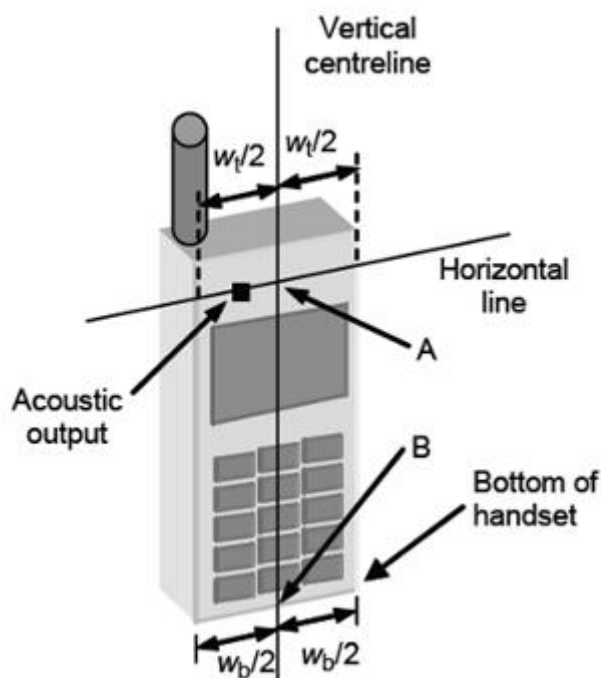


Fig 6.2.1 Handset vertical and horizontal reference lines—"fixed case"

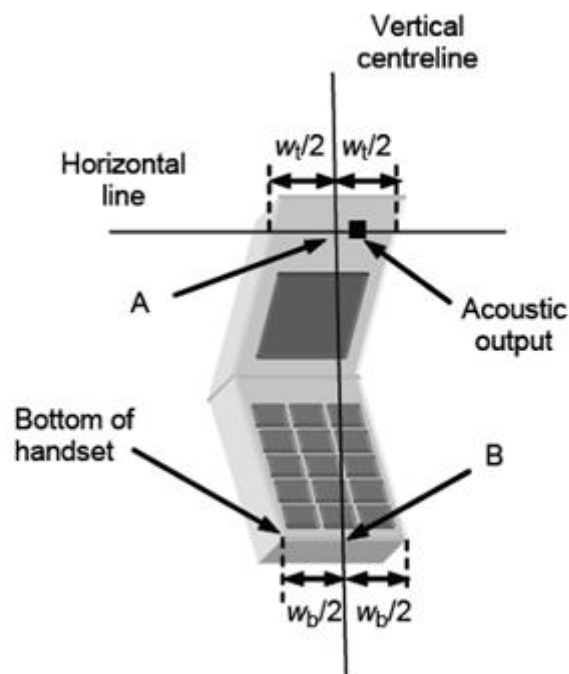


Fig 6.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

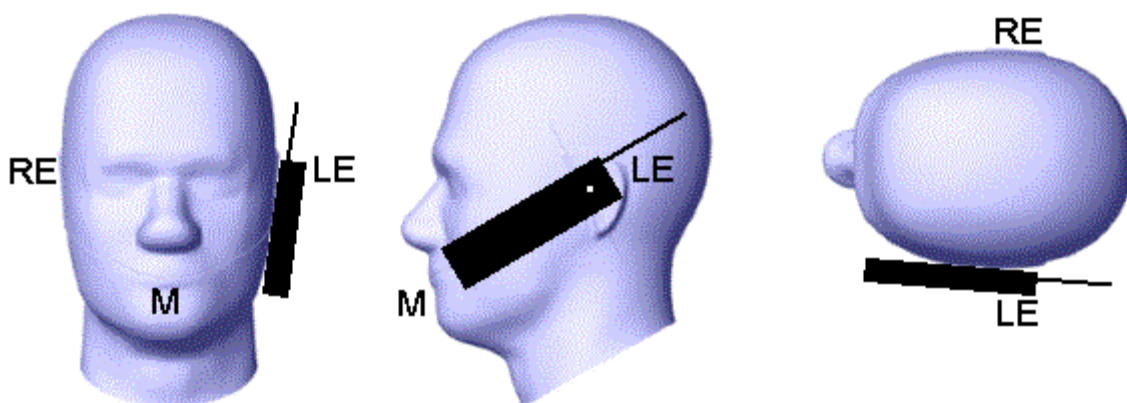


Fig 6.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

6.3. Definition of the tilt position

1. While maintaining the orientation of the handset, retract the handset parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15 degree.
2. Rotate the Handset around the horizontal line by 15 degree (see Figure 6.3.1).
3. While maintaining the orientation of the handset, move the handset towards the phantom on a line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact is on the pinna. If the contact is at any location other than the pinna, e.g., the antenna with the back of the phantom head, the angle of the handset shall be reduced. In this case, the tilt position is obtained if any part of the handset is in contact with the pinna as well as a second part of the handset is in contact with the phantom, e.g., the antenna with the back of the head.

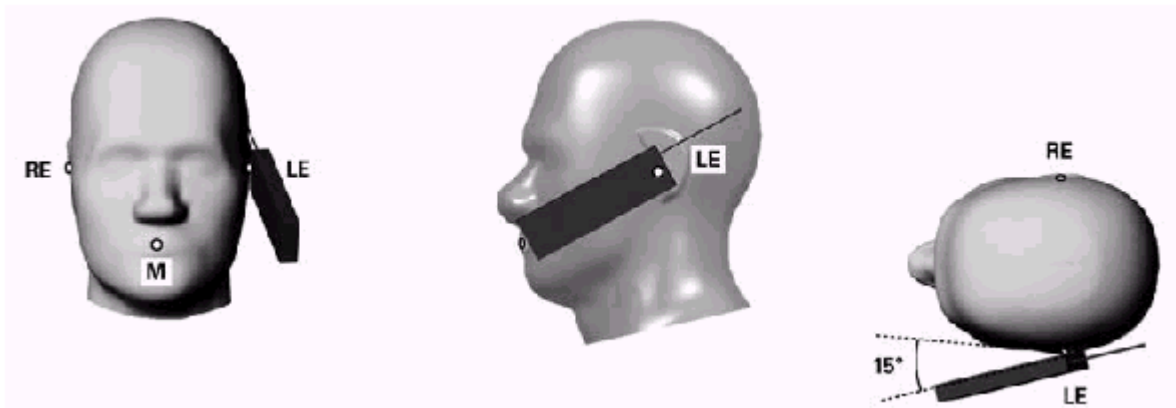


Figure 6.3.1 – Tilt position of the wireless device on the left side of SAM

6.4. Body Worn Accessory

1. Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6.4.1). Per KDB 648474 D04, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is $< 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.
2. Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest

spacing to the body. Then multiple accessories that contain metallic components are test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

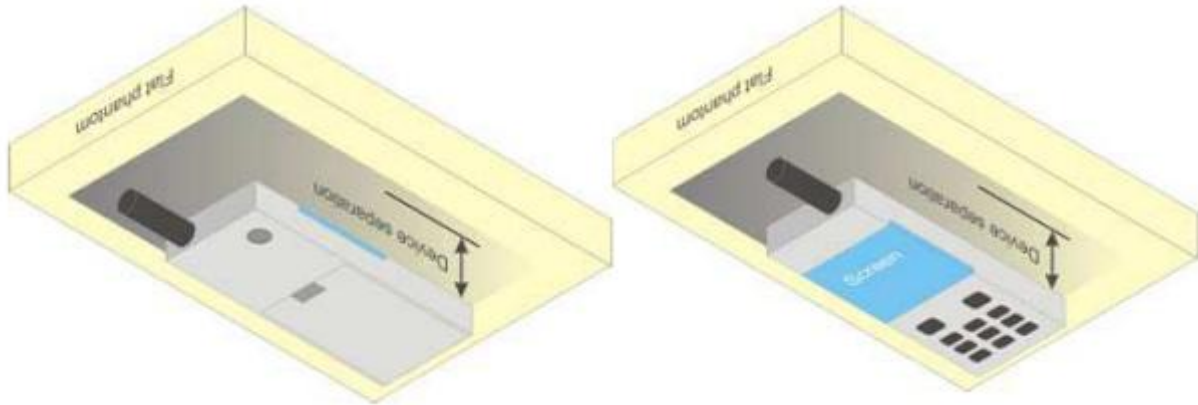


Figure 6.4.1 – Test positions for body-worn devices

6.5. Wireless Router Devices

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WLAN simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 where SAR test considerations for handsets ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WLAN transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WLAN transmitter according to FCC KDB Publication 447498 D01 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

7. RF Output Power

7.1. GSM Conducted Power

Band GSM850	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up	128	189	251	Tune-up	128	189	251
Frequency (MHz)	(dBm)	824.2	836.4	848.8	(dBm)	824.2	836.4	848.8
GSM (GMSK)	33.50	33.02	33.11	33.01	24.47	23.99	24.08	23.98
GPRS(GMSK, 1 TS)	33.50	33.02	33.10	33.02	24.47	23.99	24.07	23.99
GPRS(GMSK, 2 TS)	30.50	30.01	30.13	30.31	24.48	23.99	24.11	24.29
GPRS(GMSK, 3 TS)	29.50	28.73	28.89	29.10	25.24	24.47	24.63	24.84
GPRS(GMSK, 4 TS)	27.50	26.64	26.82	27.02	24.49	23.63	23.81	24.01
Band GSM1900	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up	512	661	810	Tune-up	512	661	810
Frequency (MHz)	(dBm)	1850.2	1880.0	1909.8	(dBm)	1850.2	1880.0	1909.8
GSM (GMSK)	31.00	30.64	30.45	30.30	21.97	21.61	21.42	21.27
GPRS(GMSK, 1 TS)	31.00	30.65	30.44	30.29	21.97	21.62	21.41	21.26
GPRS(GMSK, 2 TS)	28.50	28.08	27.61	27.33	22.48	22.06	21.59	21.31
GPRS(GMSK, 3 TS)	27.00	26.94	26.45	26.12	22.74	22.68	22.19	21.86
GPRS(GMSK, 4 TS)	25.00	24.90	24.35	23.97	21.99	21.89	21.34	20.96

Note: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots.

The calculated method are shown as below:

Frame-averaged power = Maximum burst averaged power (1 TS) - 9.03 dB

Frame-averaged power = Maximum burst averaged power (2 TS) - 6.02 dB

Frame-averaged power = Maximum burst averaged power (3 TS) - 4.26 dB

Frame-averaged power = Maximum burst averaged power (4 TS) - 3.01 dB

7.2. WCDMA Conducted Power

Band	WCDMA Band 2			
Tx Channel	Tune-up	9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
RMC 12.2Kbps	23.50	23.30	23.11	23.25
HSDPA Subtest-1	23.00	22.31	22.14	22.25
HSDPA Subtest-2	22.00	21.70	21.34	21.52
HSDPA Subtest-3	21.00	20.55	20.63	20.75
HSDPA Subtest-4	21.00	20.76	20.95	20.91
HSUPA Subtest-1	23.00	22.03	21.71	21.76
HSUPA Subtest-2	23.00	22.23	22.16	22.21
HSUPA Subtest-3	22.00	20.91	21.04	20.60

HSUPA Subtest-4	23.00	22.32	22.19	22.25
HSUPA Subtest-5	22.00	21.46	21.37	21.27
Band	WCDMA Band 4			
Tx Channel	Tune-up	1312	1413	1513
Frequency (MHz)		1712.4	1732.6	1752.6
RMC 12.2Kbps	23.50	23.40	23.41	23.42
HSDPA Subtest-1	23.00	22.42	22.41	22.43
HSDPA Subtest-2	23.00	21.80	21.60	22.08
HSDPA Subtest-3	22.00	20.69	20.94	21.03
HSDPA Subtest-4	22.00	20.92	21.14	21.01
HSUPA Subtest-1	23.00	21.99	22.23	22.04
HSUPA Subtest-2	23.00	22.39	22.34	22.38
HSUPA Subtest-3	22.00	21.15	21.11	21.09
HSUPA Subtest-4	23.00	22.44	22.41	22.42
HSUPA Subtest-5	22.00	21.78	21.43	21.63
Band	WCDMA Band 5			
Tx Channel	Tune-up	4132	4182	4233
Frequency (MHz)		826.4	836.4	846.6
RMC 12.2Kbps	23.50	23.34	23.36	23.27
HSDPA Subtest-1	23.00	22.39	22.37	22.28
HSDPA Subtest-2	22.00	21.90	21.71	21.76
HSDPA Subtest-3	21.00	20.95	20.78	20.68
HSDPA Subtest-4	21.00	20.92	20.75	20.49
HSUPA Subtest-1	23.00	21.93	22.03	21.70
HSUPA Subtest-2	23.00	22.26	22.37	22.21
HSUPA Subtest-3	22.00	21.01	21.17	21.10
HSUPA Subtest-4	23.00	22.37	22.39	22.25
HSUPA Subtest-5	22.00	21.74	21.64	21.42

7.3. LTE Conducted Power

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18607/1850.7	18900/1880	19193/1909.3
LTE Band 2	1.4MHz	QPSK	1	0	25.00	24.01	23.62	23.94
			1	2	25.00	24.12	23.77	24.11
			1	5	25.00	23.99	23.67	24.05
			3	0	24.00	23.89	23.70	23.71
			3	1	24.00	23.89	23.68	23.75

			3	2	24.00	23.89	23.69	23.67
			6	0	24.00	22.92	22.69	23.08
		16QAM	1	0	23.00	22.79	22.69	22.43
			1	2	23.00	22.89	22.79	22.62
			1	5	23.00	22.78	22.70	22.49
			3	0	23.00	22.95	22.84	22.77
			3	1	23.00	22.94	22.85	22.78
			3	2	23.00	22.90	22.86	22.72
			6	0	23.00	22.04	21.84	22.00
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18615/1851.5	18900/1880	19185/1908.5
LTE Band 2	3MHz	QPSK	1	0	25.00	23.93	23.66	23.86
			1	7	25.00	24.17	23.90	24.24
			1	14	25.00	23.74	23.68	24.05
			8	0	23.00	22.86	22.69	22.86
			8	4	23.00	22.85	22.70	22.93
			8	7	23.00	22.80	22.66	22.90
			15	0	23.00	22.74	22.62	22.73
		16QAM	1	0	24.00	23.07	22.74	22.47
			1	7	24.00	23.29	22.91	22.77
			1	14	24.00	23.00	22.67	22.50
			8	0	22.00	21.85	21.69	21.79
			8	4	22.00	21.84	21.72	21.79
			8	7	22.00	21.78	21.67	21.79
			15	0	22.00	21.81	21.59	21.78
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18625/1852.5	18900/1880	19175/1907.5
LTE Band 2	5MHz	QPSK	1	0	25.00	23.81	23.57	23.65
			1	12	25.00	24.21	24.03	24.25
			1	24	25.00	23.73	23.59	23.90
			12	0	23.00	22.73	22.65	22.69
			12	6	23.00	22.74	22.66	22.81
			12	11	23.00	22.72	22.59	22.74
			25	0	23.00	22.77	22.64	22.74
		16QAM	1	0	24.00	23.07	22.81	22.77
			1	12	24.00	23.48	23.15	23.10

			1	24	24.00	22.98	22.77	22.76
			12	0	22.00	21.81	21.64	21.77
			12	6	22.00	21.83	21.70	21.83
			12	11	22.00	21.74	21.58	21.75
			25	0	22.00	21.74	21.69	21.70
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	24.00	23.93	23.66	23.71
			1	24	24.00	23.94	23.78	23.88
			1	49	24.00	23.71	23.60	23.98
			25	0	23.00	22.77	22.66	22.72
			25	12	23.00	22.77	22.67	22.75
			25	24	23.00	22.70	22.65	22.81
			50	0	23.00	22.75	22.67	22.78
		16QAM	1	0	24.00	22.56	22.95	22.68
			1	24	24.00	22.60	23.05	22.85
			1	49	24.00	22.41	22.82	22.51
			25	0	22.00	21.78	21.71	21.71
			25	12	22.00	21.74	21.75	21.74
			25	24	22.00	21.74	21.70	21.81
			50	0	22.00	21.74	21.73	21.80
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	25.00	23.79	23.55	23.19
			1	37	25.00	24.05	23.96	23.53
			1	74	25.00	23.49	23.52	23.32
			36	0	23.00	22.90	22.80	22.35
			36	18	23.00	22.83	22.81	22.35
			36	37	23.00	22.78	22.74	22.39
			75	0	23.00	22.87	22.78	22.40
		16QAM	1	0	24.00	22.80	22.71	22.09
			1	37	24.00	22.98	23.10	22.64
			1	74	24.00	22.58	22.52	22.19
			36	0	22.00	21.83	21.66	21.33
			36	18	22.00	21.78	21.72	21.35
			36	37	22.00	21.73	21.73	21.37

			75	0	22.00	21.85	21.76	21.30
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18700/1860	18900/1880	19100/1900
LTE Band 2	20MHz	QPSK	1	0	24.00	23.61	22.90	22.88
			1	49	24.00	23.91	23.27	23.33
			1	99	24.00	23.12	22.82	23.07
			50	0	23.00	22.71	22.25	22.28
			50	24	23.00	22.59	22.25	22.24
			50	49	23.00	22.59	22.16	22.26
			100	0	23.00	22.54	22.18	22.26
		16QAM	1	0	23.00	22.30	22.26	21.95
			1	49	23.00	22.49	22.56	22.42
			1	99	23.00	22.12	22.05	22.10
			50	0	22.00	21.30	21.28	21.22
			50	24	22.00	21.29	21.27	21.20
			50	49	22.00	21.21	21.16	21.21
			100	0	22.00	21.34	21.17	21.24

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	21.00	20.34	19.68	19.59
			1	2	21.00	20.74	20.07	20.14
			1	5	21.00	20.32	19.70	19.40
			3	0	21.00	20.51	19.90	19.94
			3	1	21.00	20.63	20.01	20.03
			3	2	21.00	20.46	19.91	19.81
			6	0	21.00	20.47	19.88	19.90
		16QAM	1	0	21.00	20.38	19.83	19.68
			1	2	21.00	20.76	20.21	20.01
			1	5	21.00	20.41	19.85	19.51
			3	0	21.00	20.62	20.11	20.11
			3	1	21.00	20.75	20.23	20.20
			3	2	21.00	20.57	20.12	20.03
			6	0	21.00	20.55	20.00	20.05
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		

			RB Size	RB Offset		19965/1711.5	20175/1732.5	20385/1753.5
LTE Band 4	3MHz	QPSK	1	0	21.00	20.19	19.50	19.89
			1	7	21.00	20.50	19.93	20.11
			1	14	21.00	20.03	19.58	19.35
			8	0	21.00	20.31	19.70	19.93
			8	4	21.00	20.40	19.85	19.97
			8	7	21.00	20.25	19.76	19.73
			15	0	21.00	20.25	19.71	19.81
		16QAM	1	0	21.00	20.48	19.71	19.75
			1	7	21.00	20.80	20.08	19.94
			1	14	21.00	20.37	19.72	19.39
			8	0	21.00	20.27	19.68	19.90
			8	4	21.00	20.35	19.81	19.94
			8	7	21.00	20.18	19.73	19.73
			15	0	21.00	20.19	19.64	19.86
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	21.00	20.10	19.47	19.95
			1	12	21.00	20.01	19.51	19.68
			1	24	21.00	19.75	19.53	19.35
			12	0	21.00	20.02	19.41	19.79
			12	6	21.00	19.98	19.44	19.62
			12	11	21.00	19.85	19.42	19.45
			25	0	20.00	19.95	19.44	19.62
		16QAM	1	0	21.00	20.30	20.00	20.21
			1	12	21.00	20.26	20.01	19.99
			1	24	21.00	20.08	20.00	19.70
			12	0	21.00	20.01	19.42	19.73
			12	6	21.00	19.95	19.43	19.59
			12	11	21.00	19.87	19.42	19.41
			25	0	20.00	19.84	19.36	19.62
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band	10MHz	QPSK	1	0	20.00	19.89	19.12	19.92
			1	24	20.00	19.81	19.33	19.78

4			1	49	20.00	19.20	19.45	19.07
			25	0	20.00	19.87	19.25	19.94
			25	12	20.00	19.76	19.33	19.78
			25	24	20.00	19.50	19.38	19.48
			50	0	20.00	19.65	19.31	19.70
		16QAM	1	0	20.50	19.93	18.95	20.26
			1	24	20.50	19.92	19.16	20.18
			1	49	20.50	19.35	19.23	19.51
			25	0	20.00	19.82	19.20	19.91
			25	12	20.00	19.73	19.30	19.76
			25	24	20.00	19.48	19.34	19.44
			50	0	20.00	19.67	19.26	19.66
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20025/1717.5	20175/1732.5	20325/1747.5
LTE Band 4	15MHz	QPSK	1	0	20.00	19.94	19.14	19.84
			1	37	20.00	19.31	19.15	19.70
			1	74	20.00	19.00	19.59	19.04
			36	0	20.00	19.78	19.13	19.95
			36	18	20.00	19.49	19.23	19.81
			36	37	20.00	19.23	19.45	19.50
			75	0	20.00	19.45	19.32	19.75
		16QAM	1	0	21.00	20.26	19.34	19.92
			1	37	21.00	19.82	19.30	19.83
			1	74	21.00	19.47	19.72	19.20
			36	0	20.00	19.74	19.21	19.86
			36	18	20.00	19.47	19.28	19.76
			36	37	20.00	19.27	19.48	19.47
			75	0	20.00	19.43	19.27	19.72
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20050/1720	20175/1732.5	20300/1745
LTE Band 4	20MHz	QPSK	1	0	21.00	20.15	19.36	19.67
			1	49	21.00	19.13	19.01	19.76
			1	99	21.00	19.04	19.68	19.07
			50	0	20.00	19.74	19.22	19.82
			50	24	20.00	19.18	19.16	19.78
			50	49	20.00	19.04	19.42	19.55

			100	0	20.00	19.37	19.33	19.72
		16QAM	1	0	21.00	20.29	19.72	19.96
			1	49	21.00	19.38	19.34	19.95
			1	99	21.00	19.21	19.99	19.36
			50	0	20.00	19.69	19.25	19.77
			50	24	20.00	19.23	19.16	19.70
			50	49	20.00	19.05	19.40	19.50
			100	0	20.00	19.34	19.30	19.65

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20407/824.7	20525/836.5	20643/848.3
LTE Band 5	1.4MHz	QPSK	1	0	19.00	17.96	17.65	17.80
			1	2	19.00	18.30	18.18	18.20
			1	5	19.00	17.85	17.62	17.79
			3	0	19.00	18.11	17.97	18.00
			3	1	19.00	18.24	18.12	18.13
			3	2	19.00	18.07	17.81	17.96
			6	0	19.00	18.02	17.93	17.95
		16QAM	1	0	19.00	18.26	17.98	17.82
			1	2	19.00	18.62	18.38	18.23
			1	5	19.00	18.20	17.96	17.65
			3	0	19.00	18.44	18.26	18.32
			3	1	19.00	18.56	18.43	18.42
			3	2	19.00	18.36	18.25	18.31
			6	0	19.00	18.36	18.11	18.25
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5
LTE Band 5	3MHz	QPSK	1	0	19.00	17.97	17.71	17.61
			1	7	19.00	18.22	18.12	18.09
			1	14	19.00	17.67	17.59	17.66
			8	0	19.00	18.07	17.93	17.83
			8	4	19.00	18.12	18.03	17.95
			8	7	19.00	17.93	17.79	17.79
			15	0	18.00	17.94	17.88	17.76
		16QAM	1	0	19.00	18.49	17.94	17.59
			1	7	19.00	18.78	18.33	18.07

			1	14	19.00	18.25	17.91	17.50
			8	0	19.00	18.20	17.95	17.93
			8	4	19.00	18.28	18.03	18.03
			8	7	19.00	18.08	17.90	17.88
			15	0	19.00	18.11	17.83	17.94
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20425/826.5	20525/836.5	20625/846.5
LTE Band 5	5MHz	QPSK	1	0	18.00	17.88	17.61	17.39
			1	12	18.00	17.91	17.76	17.54
			1	24	18.00	17.75	17.83	17.64
			12	0	18.00	17.82	17.64	17.45
			12	6	18.00	17.83	17.73	17.52
			12	11	18.00	17.77	17.77	17.58
			25	0	18.00	17.81	17.68	17.52
		16QAM	1	0	19.00	18.49	17.98	17.90
			1	12	19.00	18.50	18.09	18.00
			1	24	19.00	18.35	18.16	18.22
			12	0	18.00	17.90	17.63	17.61
			12	6	18.00	17.89	17.72	17.65
			12	11	18.00	17.82	17.75	17.80
			25	0	18.00	17.78	17.69	17.59
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20450/829	20525/836.5	20600/844
LTE Band 5	10MHz	QPSK	1	0	19.00	18.12	18.34	18.13
			1	24	19.00	17.81	17.69	17.47
			1	49	19.00	17.70	17.88	18.01
			25	0	18.00	17.95	17.70	17.78
			25	12	18.00	17.82	17.73	17.51
			25	24	18.00	17.72	17.83	17.52
			50	0	18.00	17.82	17.80	17.70
		16QAM	1	0	19.00	18.51	17.96	17.98
			1	24	19.00	18.22	17.90	17.33
			1	49	19.00	18.12	18.05	17.91
			25	0	18.00	17.94	17.72	17.78
			25	12	18.00	17.82	17.76	17.52
			25	24	18.00	17.72	17.83	17.72

			50	0	18.00	17.81	17.83	17.68
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Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20775/2502.5	21100/2535	21425/2567.5
LTE Band 7	5MHz	QPSK	1	0	21.00	19.93	19.90	20.00
			1	12	21.00	19.71	19.64	20.04
			1	24	21.00	19.72	19.70	19.89
			12	0	20.00	19.71	19.73	19.93
			12	6	20.00	19.67	19.62	19.93
			12	11	20.00	19.62	19.59	19.87
			25	0	20.00	19.66	19.64	19.91
		16QAM	1	0	21.00	20.09	20.15	20.46
			1	12	21.00	20.05	20.07	20.51
			1	24	21.00	19.95	19.97	20.34
			12	0	20.00	19.68	19.80	19.93
			12	6	20.00	19.67	19.74	19.94
			12	11	20.00	19.60	19.67	19.85
			25	0	20.00	19.67	19.66	19.83

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20800/2505	21100/2535	21400/2565
LTE Band 7	10MHz	QPSK	1	0	20.00	19.31	19.38	19.40
			1	24	20.00	19.51	19.41	19.66
			1	49	20.00	19.68	19.72	19.76
			25	0	20.00	19.42	19.41	19.61
			25	12	20.00	19.43	19.46	19.71
			25	24	20.00	19.60	19.66	19.80
			50	0	20.00	19.46	19.51	19.71
		16QAM	1	0	21.00	19.03	19.58	19.54
			1	24	21.00	19.41	19.94	19.81
			1	49	21.00	19.45	20.14	19.88
			25	0	20.00	19.34	19.42	19.57
			25	12	20.00	19.49	19.57	19.67
			25	24	20.00	19.55	19.67	19.76
			50	0	20.00	19.39	19.53	19.71

Band	Band Width	Modulation	RB Configuration	Tune-up	Channel/Frequency(MHz)
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			RB Size	RB Offset		20825/2507.5	21100/2535	21375/2562.5
LTE Band 7	15MHz	QPSK	1	0	20.00	19.18	19.10	19.46
			1	37	20.00	19.16	19.17	19.48
			1	74	20.00	19.67	19.73	19.72
			36	0	20.00	19.26	19.18	19.53
			36	18	20.00	19.20	19.27	19.55
			36	37	20.00	19.46	19.56	19.71
			75	0	20.00	19.30	19.30	19.63
		16QAM	1	0	21.00	19.52	19.29	19.58
			1	37	21.00	19.68	19.48	19.60
			1	74	21.00	20.06	19.91	19.82
			36	0	20.00	19.27	19.33	19.49
			36	18	20.00	19.36	19.47	19.52
			36	37	20.00	19.58	19.65	19.68
			75	0	20.00	19.33	19.36	19.64
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20850/2510	21100/2535	21350/2560
LTE Band 7	20MHz	QPSK	1	0	21.00	19.32	19.15	19.58
			1	49	21.00	19.28	19.12	19.55
			1	99	21.00	19.89	20.01	19.91
			50	0	20.00	19.37	19.23	19.69
			50	24	20.00	19.35	19.30	19.67
			50	49	20.00	19.65	19.68	19.80
			100	0	20.00	19.51	19.42	19.72
		16QAM	1	0	21.00	19.43	19.42	20.02
			1	49	21.00	19.62	19.51	19.85
			1	99	21.00	20.12	20.28	20.31
			50	0	20.00	19.30	19.33	19.71
			50	24	20.00	19.41	19.45	19.70
			50	49	20.00	19.64	19.72	19.83
			100	0	20.00	19.48	19.47	19.71

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23017/699.7	23095/707.5	23173/715.3
LTE	1.4MHz	QPSK	1	0	19.50	18.57	17.56	18.44

Band 12			1	2	19.50	19.07	17.83	18.88
			1	5	19.50	18.51	17.55	18.32
			3	0	19.50	18.78	17.65	18.64
			3	1	19.50	19.07	17.77	18.76
			3	2	19.50	18.77	17.58	18.43
			6	0	19.00	18.75	17.64	18.65
		16QAM	1	0	19.50	18.90	17.87	18.39
			1	2	19.50	19.37	18.21	18.84
			1	5	19.50	18.92	17.77	18.35
			3	0	19.50	19.07	18.11	18.91
			3	1	19.50	19.26	18.23	19.01
			3	2	19.50	19.09	18.05	18.84
			6	0	19.50	19.09	17.96	18.92
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23025/700.5	23095/707.5	23165/714.5
LTE Band 12	3MHz	QPSK	1	0	19.50	18.74	17.56	18.71
			1	7	19.50	19.18	17.82	18.99
			1	14	19.50	18.70	17.51	18.18
			8	0	19.00	18.85	17.71	18.77
			8	4	19.00	18.97	17.82	18.77
			8	7	19.00	18.86	17.69	18.50
			15	0	19.00	18.81	17.68	18.62
		16QAM	1	0	19.50	19.21	18.02	18.68
			1	7	19.50	19.48	18.21	18.93
			1	14	19.50	19.26	18.01	18.23
			8	0	19.50	18.95	17.88	18.85
			8	4	19.50	19.08	17.93	18.84
			8	7	19.50	18.95	17.77	18.58
			15	0	19.00	18.92	17.76	18.77
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23035/701.5	23095/707.5	23155/713.5
LTE Band 12	5MHz	QPSK	1	0	19.00	18.88	18.15	18.29
			1	12	19.00	18.94	17.55	18.82
			1	24	19.00	18.63	17.67	18.38
			12	0	19.00	18.79	17.67	18.46
			12	6	19.00	18.80	17.53	18.60

			12	11	19.00	18.68	17.54	18.42
			25	0	19.00	18.77	17.67	18.44
		16QAM	1	0	19.50	19.27	18.98	18.79
			1	12	19.50	19.38	18.37	19.29
			1	24	19.50	19.14	18.57	18.85
			12	0	19.00	18.93	17.99	18.52
			12	6	19.00	18.95	17.72	18.69
			12	11	19.00	18.81	17.72	18.47
			25	0	19.00	18.82	17.74	18.59
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23060/704	23095/707.5	23130/711
LTE Band 12	10MHz	QPSK	1	0	19.50	19.19	19.14	18.08
			1	24	19.50	18.75	17.75	17.74
			1	49	19.50	17.64	18.30	18.44
			25	0	19.00	18.93	18.39	17.73
			25	12	19.00	18.54	17.59	17.92
			25	24	19.00	17.91	17.68	18.35
			50	0	19.00	18.55	17.96	18.11
			1	0	19.50	19.04	19.50	18.56
		16QAM	1	24	19.50	18.68	18.02	18.20
			1	49	19.50	18.01	18.90	18.79
			25	0	19.00	19.00	18.51	17.84
			25	12	19.00	18.61	17.71	18.10
			25	24	19.00	18.08	17.90	18.44
			50	0	19.00	18.58	18.19	18.35

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23755/706.5	23790/710	23825/713.5
LTE Band 17	5MHz	QPSK	1	0	19.00	18.60	17.49	18.20
			1	12	19.00	17.79	17.73	18.65
			1	24	19.00	17.50	18.38	18.26
			12	0	19.00	18.22	17.45	18.38
			12	6	19.00	17.70	17.63	18.52
			12	11	19.00	17.40	17.93	18.42
			25	0	19.00	17.79	17.73	18.39
			1	0	19.50	19.36	18.01	18.65
		16QAM	1	0	19.50	19.36	18.01	18.65

			1	12	19.50	18.67	18.24	19.13
			1	24	19.50	18.20	18.86	18.76
			12	0	19.00	18.35	17.47	18.50
			12	6	19.00	17.97	17.66	18.67
			12	11	19.00	17.51	18.08	18.57
			25	0	19.00	17.90	17.95	18.45
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23780/709	23790/710	23800/711
LTE Band 17	10MHz	QPSK	1	0	19.50	19.11	18.50	17.99
			1	24	19.50	17.55	17.54	17.93
			1	49	19.50	18.78	18.78	18.43
			25	0	19.00	18.07	17.71	17.68
			25	12	19.00	17.52	17.71	18.01
			25	24	19.00	17.88	18.33	18.45
			50	0	19.00	17.97	18.03	18.09
		16QAM	1	0	19.50	19.44	18.84	18.09
			1	24	19.50	17.94	17.85	18.00
			1	49	19.50	19.48	19.25	18.39
			25	0	19.00	18.27	17.78	17.78
			25	12	19.00	17.59	17.91	18.22
			25	24	19.00	18.08	18.44	18.54
			50	0	19.00	18.17	18.29	18.31

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131979/1710.7	132322/1745	132665/1779.3
LTE Band 66	1.4MHz	QPSK	1	0	24.00	23.29	23.22	23.18
			1	2	24.00	23.41	23.27	23.27
			1	5	24.00	23.24	23.18	23.21
			3	0	24.00	23.18	23.10	23.12
			3	1	24.00	23.22	23.12	23.16
			3	2	24.00	23.18	23.10	23.12
			6	0	23.00	22.23	22.30	22.26
		16QAM	1	0	23.00	22.17	22.17	21.90
			1	2	23.00	22.24	22.25	22.02
			1	5	23.00	22.16	22.21	21.90
			3	0	23.00	22.32	22.23	22.27

			3	1	23.00	22.30	22.21	22.29
			3	2	23.00	22.28	22.25	22.28
			6	0	22.00	21.30	21.26	21.34
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131987/1711.5	132322/1745	132657/1778.5
LTE Band 66	3MHz	QPSK	1	0	24.00	23.27	23.28	23.21
			1	7	24.00	23.47	23.53	23.61
			1	14	24.00	23.15	23.26	23.26
			8	0	23.00	22.27	22.32	22.27
			8	4	23.00	22.29	22.35	22.29
			8	7	23.00	22.28	22.28	22.28
			15	0	23.00	22.20	22.21	22.22
		16QAM	1	0	23.00	22.51	22.20	21.94
			1	7	23.00	22.76	22.51	22.32
			1	14	23.00	22.49	22.20	21.97
			8	0	22.00	21.22	21.17	21.16
			8	4	22.00	21.25	21.19	21.18
			8	7	22.00	21.17	21.15	21.18
			15	0	22.00	21.15	21.08	21.22
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1712.5	132322/1745	132647/1777.5
LTE Band 66	5MHz	QPSK	1	0	24.00	23.17	23.21	23.15
			1	12	24.00	23.52	23.69	23.46
			1	24	24.00	23.06	23.15	23.14
			12	0	23.00	22.17	22.20	22.13
			12	6	23.00	22.25	22.25	22.20
			12	11	23.00	22.18	22.17	22.14
			25	0	23.00	22.23	22.20	22.17
		16QAM	1	0	23.00	22.36	22.21	22.39
			1	12	23.00	22.73	22.67	22.88
			1	24	23.00	22.37	22.26	22.53
			12	0	22.00	21.12	21.14	21.10
			12	6	22.00	21.19	21.22	21.21
			12	11	22.00	21.14	21.14	21.16
			25	0	22.00	21.22	21.08	21.12
Band	Band	Modulation	RB		Tune-up	Channel/Frequency(MHz)		

	Width		Configuration					
			RB Size	RB Offset		132022/1715.0	132322/1745	132622/1775.0
LTE Band 66	10MHz	QPSK	1	0	24.00	23.23	23.33	23.13
			1	24	24.00	23.29	23.48	23.34
			1	49	24.00	23.11	23.20	23.17
			25	0	23.00	22.22	22.20	22.15
			25	12	23.00	22.24	22.28	22.22
			25	24	23.00	22.22	22.24	22.22
			50	0	23.00	22.20	22.20	22.18
		16QAM	1	0	23.00	22.30	21.92	22.34
			1	24	23.00	22.44	22.07	22.50
			1	49	23.00	22.27	21.90	22.49
			25	0	22.00	21.21	21.15	21.12
			25	12	22.00	21.22	21.16	21.16
			25	24	22.00	21.19	21.15	21.16
			50	0	22.00	21.22	21.14	21.13
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		132047/1717.5	132322/1745	132597/1772.5
LTE Band 66	15MHz	QPSK	1	0	24.00	23.25	23.25	22.86
			1	37	24.00	23.48	23.57	23.43
			1	74	24.00	23.03	23.10	23.14
			36	0	23.00	22.33	22.45	22.31
			36	18	23.00	22.29	22.44	22.34
			36	37	23.00	22.22	22.37	22.35
			75	0	23.00	22.34	22.46	22.30
		16QAM	1	0	23.00	22.25	22.17	22.39
			1	37	23.00	22.58	22.60	22.59
			1	74	23.00	22.27	22.16	22.45
			36	0	22.00	21.36	21.26	21.19
			36	18	22.00	21.32	21.28	21.24
			36	37	22.00	21.29	21.24	21.23
			75	0	22.00	21.25	21.30	21.19
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		132072/1720.0	132322/1745	132572/1770.0
LTE	20MHz	QPSK	1	0	24.00	23.04	22.99	22.77

Band 66			1	49	24.00	23.25	23.46	23.37
			1	99	24.00	22.87	22.88	23.05
			50	0	23.00	22.24	22.22	22.20
			50	24	23.00	22.22	22.24	22.13
			50	49	23.00	22.15	22.27	22.14
			100	0	23.00	22.19	22.23	22.13
		16QAM	1	0	23.00	22.21	21.98	22.15
			1	49	23.00	22.59	22.33	22.34
			1	99	23.00	22.19	22.15	22.15
			50	0	22.00	21.29	21.12	21.26
			50	24	22.00	21.27	21.16	21.13
			50	49	22.00	21.21	21.20	21.13
			100	0	22.00	21.20	21.16	21.09

7.4. WLAN & Bluetooth Output Power

7.4.1. Output Power Results Of WLAN

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11b	1	2412	12.00	11.72
	6	2437	12.00	11.04
	11	2462	12.00	11.16
802.11g	1	2412	12.00	11.00
	6	2437	12.00	11.09
	11	2462	12.00	10.94
802.11n HT20	1	2412	12.00	11.28
	6	2437	12.00	10.82
	11	2462	12.00	10.93
802.11n HT40	3	2422	12.00	11.22
	6	2437	12.00	11.03
	9	2452	12.00	11.27

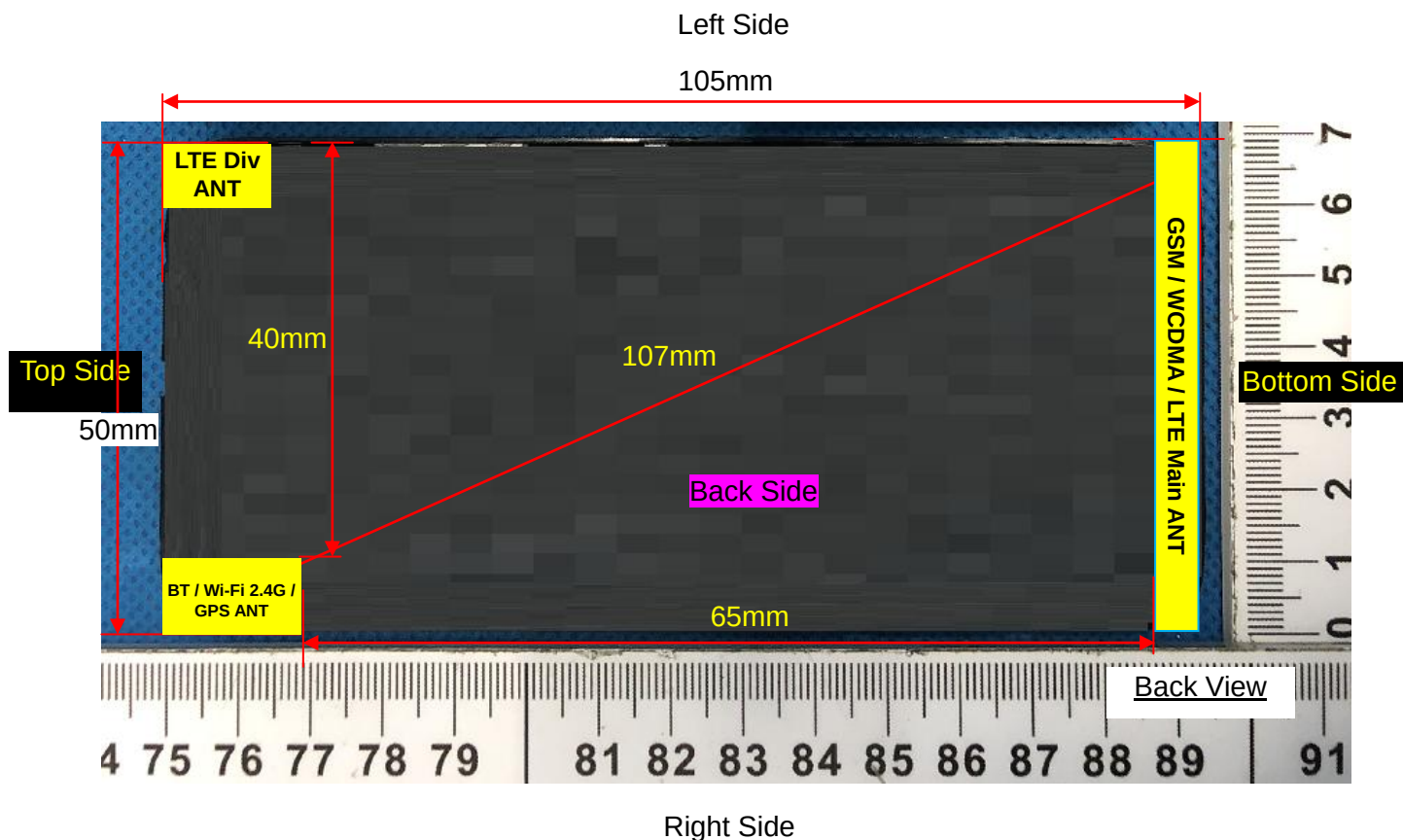
NOTE: Power measurement results of WLAN 2.4G.

7.4.2. Output Power Results Of Bluetooth

BR+EDR	Output Power (dBm)				
	Channel	Tune-up	Data Rates		
			1M	2M	3M
	0CH	-1.500	-1.563	-2.241	-2.156
	39CH	0.000	-0.940	-1.151	-1.375
78CH	-0.500	-0.701	-2.050	-1.899	

BLE	Channel	Data Rates	Tune-up	Output Power (dBm)
	0CH	1M	-1.000	-2.000
	19CH		-1.000	-1.526
	39CH		-1.000	-1.226

8. Antenna Location



Note: Since the confidentiality request of EUT, the antenna location example diagram see as above.

Distance of the Antenna to the EUT surface/edge						
Antennas	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
WWAN Main	≤ 25mm	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm
WLAN & Bluetooth	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	>25mm
Positions for SAR tests						
Antennas	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
WWAN Main	Yes	Yes	Yes	Yes	NO	Yes
WLAN & Bluetooth	Yes	Yes	NO	Yes	Yes	NO

9. Stand-alone SAR test exclusion

Refer to FCC KDB 447498D01, the 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

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

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Mode	P_{max} (dBm)	P_{max} (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR Exclusion threshold	SAR test exclusion
Bluetooth	0	1	5	2.480	0.31	3.0	Yes

NOTE: Standalone SAR test exclusion for Bluetooth

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}/x] \text{ W/kg}$ for test separation distances $\leq 50\text{mm}$, where $x = 7.5$ for 1-g SAR and $x = 18.75$ for 10-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Mode	Position	P_{max} (dBm)	P_{max} (mW)	Distance (mm)	f (GHz)	x	Estimated SAR (W/Kg)
Bluetooth	Head	0	1	5	2.480	7.5	0.042
Bluetooth	Body	0	1	10	2.480	7.5	0.021
Bluetooth	Hotspot	0	1	10	2.480	7.5	0.021

NOTE: Estimated SAR calculation for Bluetooth

10. SAR Results

10.1. SAR measurement results

10.1.1. SAR measurement Result of GSM850

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
Left Cheek	189/836.4	GPRS(GMSK 3TS)	0.866	0.605	1.79	28.89	29.50	0.997
Left Cheek Repeated	189/836.4	GPRS(GMSK 3TS)	0.860	0.601	1.53	28.89	29.50	0.990
Left Tilt 15 Degree	189/836.4	GPRS(GMSK 3TS)	0.488	0.342	2.51	28.89	29.50	0.562
Right Cheek	189/836.4	GPRS(GMSK 3TS)	0.819	0.568	-1.90	28.89	29.50	0.943
Right Tilt 15 Degree	189/836.4	GPRS(GMSK 3TS)	0.406	0.288	1.02	28.89	29.50	0.467
Left Cheek	128/824.2	GPRS(GMSK 3TS)	0.795	0.587	0.78	28.73	29.50	0.949
Left Cheek	251/848.8	GPRS(GMSK 3TS)	0.801	0.596	2.13	29.10	29.50	0.878
Open								
Left Cheek	189/836.4	GPRS(GMSK 3TS)	0.198	0.139	0.27	28.89	29.50	0.228
Left Tilt 15 Degree	189/836.4	GPRS(GMSK 3TS)	0.113	0.079	-4.60	28.89	29.50	0.130
Right Cheek	189/836.4	GPRS(GMSK 3TS)	0.181	0.124	-4.87	28.89	29.50	0.208
Right Tilt 15 Degree	189/836.4	GPRS(GMSK 3TS)	0.093	0.063	-1.92	28.89	29.50	0.107

NOTE: Head SAR test results of GSM850.

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	189/836.4	GPRS(GMSK 3TS)	0.599	0.404	-3.16	28.89	29.50	0.689
Back Side	189/836.4	GPRS(GMSK 3TS)	1.146	0.853	1.86	28.89	29.50	1.319

Back Side Repeated	189/836.4	GPRS(GMSK 3TS)	1.102	0.850	0.31	28.89	29.50	1.268
Back Side	128/824.2	GPRS(GMSK 3TS)	0.986	0.678	0.89	28.73	29.50	1.177
Back Side	251/848.8	GPRS(GMSK 3TS)	0.904	0.646	1.11	29.10	29.50	0.991

NOTE: Body-Worn SAR test results of GSM850

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	189/836.4	GPRS(GMSK 3TS)	0.599	0.404	-3.16	28.89	29.50	0.689
Back Side	189/836.4	GPRS(GMSK 3TS)	1.146	0.853	1.86	28.89	29.50	1.319
Back Side Repeated	189/836.4	GPRS(GMSK 3TS)	1.102	0.850	0.31	28.89	29.50	1.268
Left Side	189/836.4	GPRS(GMSK 3TS)	0.561	0.387	-4.36	28.89	29.50	0.646
Right Side	189/836.4	GPRS(GMSK 3TS)	0.537	0.369	4.01	28.89	29.50	0.618
Bottom Side	189/836.4	GPRS(GMSK 3TS)	0.451	0.310	-4.38	28.89	29.50	0.519
Back Side	128/824.2	GPRS(GMSK 3TS)	0.986	0.678	0.89	28.73	29.50	1.177
Back Side	251/848.8	GPRS(GMSK 3TS)	0.904	0.646	1.11	29.10	29.50	0.991

NOTE: Hotspot SAR test results of GSM850

10.1.2. SAR measurement Result of GSM1900

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
Left Cheek	661/1880	GPRS(GMSK 3TS)	0.673	0.334	3.65	26.45	27.00	0.764
Left Tilt 15 Degree	661/1880	GPRS(GMSK 3TS)	0.346	0.167	0.00	26.45	27.00	0.393
Right Cheek	661/1880	GPRS(GMSK 3TS)	0.575	0.283	-3.16	26.45	27.00	0.653

Right Tilt 15 Degree	661/1880	GPRS(GMSK 3TS)	0.315	0.160	1.13	26.45	27.00	0.358
Open								
Left Cheek	661/1880	GPRS(GMSK 3TS)	0.091	0.056	0.14	26.45	27.00	0.103
Left Tilt 15 Degree	661/1880	GPRS(GMSK 3TS)	0.046	0.033	3.17	26.45	27.00	0.052
Right Cheek	661/1880	GPRS(GMSK 3TS)	0.085	0.050	-0.86	26.45	27.00	0.096
Right Tilt 15 Degree	661/1880	GPRS(GMSK 3TS)	0.045	0.031	-3.30	26.45	27.00	0.051

NOTE: Head SAR test results of GSM1900

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	661/1880	GPRS(GMSK 3TS)	0.598	0.309	-3.46	26.45	27.00	0.679
Back Side	661/1880	GPRS(GMSK 3TS)	0.750	0.389	3.48	26.45	27.00	0.851
Back Side	512/1850.2	GPRS(GMSK 3TS)	0.740	0.380	2.01	26.94	27.00	0.750
Back Side	810/1909.8	GPRS(GMSK 3TS)	0.689	0.351	1.47	26.12	27.00	0.844

NOTE: Body-Worn SAR test results of GSM1900

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	661/1880	GPRS(GMSK 3TS)	0.598	0.309	-3.46	26.45	27.00	0.679
Back Side	661/1880	GPRS(GMSK 3TS)	0.750	0.389	3.48	26.45	27.00	0.851
Left Side	661/1880	GPRS(GMSK 3TS)	0.560	0.290	4.28	26.45	27.00	0.636
Right Side	661/1880	GPRS(GMSK 3TS)	0.349	0.177	-2.54	26.45	27.00	0.396
Bottom Side	661/1880	GPRS(GMSK 3TS)	0.270	0.136	1.08	26.45	27.00	0.306
Back Side	512/1850.2	GPRS(GMSK 3TS)	0.740	0.380	2.01	26.94	27.00	0.750

Back Side	810/1909.8	GPRS(GMSK 3TS)	0.689	0.351	1.47	26.12	27.00	0.844
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NOTE: Hotspot SAR test results of GSM1900

10.1.3. SAR measurement Result of WCDMA Band 2

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
Left Cheek	9400/1880	RMC12.2K	0.438	0.223	-1.43	23.11	23.50	0.479
Left Tilt 15 Degree	9400/1880	RMC12.2K	0.245	0.128	-1.79	23.11	23.50	0.268
Right Cheek	9400/1880	RMC12.2K	0.381	0.190	1.46	23.11	23.50	0.417
Right Tilt 15 Degree	9400/1880	RMC12.2K	0.208	0.108	3.89	23.11	23.50	0.228
Open								
Left Cheek	9400/1880	RMC12.2K	0.074	0.047	-4.00	23.11	23.50	0.081
Left Tilt 15 Degree	9400/1880	RMC12.2K	0.044	0.027	2.37	23.11	23.50	0.048
Right Cheek	9400/1880	RMC12.2K	0.063	0.044	3.31	23.11	23.50	0.069
Right Tilt 15 Degree	9400/1880	RMC12.2K	0.032	0.017	-4.36	23.11	23.50	0.035

NOTE: Head SAR test results of WCDMA Band 2

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	9400/1880	RMC12.2K	0.591	0.310	3.53	23.11	23.50	0.647
Back Side	9400/1880	RMC12.2K	1.015	0.521	-0.89	23.11	23.50	1.110
Back Side Repeated	9400/1880	RMC12.2K	1.001	0.519	0.45	23.11	23.50	1.095
Back Side	9262/1852.4	RMC12.2K	0.891	0.451	2.31	23.30	23.50	0.933
Back Side	9538/1907.6	RMC12.2K	0.903	0.461	1.45	23.25	23.50	0.957

NOTE: Body-Worn SAR test results of WCDMA Band 2

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	9400/1880	RMC12.2K	0.591	0.310	3.53	23.11	23.50	0.647

Back Side	9400/1880	RMC12.2K	1.015	0.521	-0.89	23.11	23.50	1.110
Back Side Repeated	9400/1880	RMC12.2K	1.001	0.519	0.45	23.11	23.50	1.095
Left Side	9400/1880	RMC12.2K	0.601	0.285	-3.59	23.11	23.50	0.657
Right Side	9400/1880	RMC12.2K	0.454	0.230	-4.76	23.11	23.50	0.497
Bottom Side	9400/1880	RMC12.2K	0.374	0.195	4.27	23.11	23.50	0.409
Back Side	9262/1852.4	RMC12.2K	0.891	0.451	2.31	23.30	23.50	0.933
Back Side	9538/1907.6	RMC12.2K	0.903	0.461	1.45	23.25	23.50	0.957

NOTE: Hotspot SAR test results of WCDMA Band 2

10.1.4. SAR measurement Result of WCDMA Band 4

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
Left Cheek	1413/1732.6	RMC12.2K	0.671	0.349	-4.11	23.41	23.50	0.685
Left Tilt 15 Degree	1413/1732.6	RMC12.2K	0.374	0.192	2.50	23.41	23.50	0.382
Right Cheek	1413/1732.6	RMC12.2K	0.629	0.328	-4.74	23.41	23.50	0.642
Right Tilt 15 Degree	1413/1732.6	RMC12.2K	0.310	0.165	1.56	23.41	23.50	0.316
Open								
Left Cheek	1413/1732.6	RMC12.2K	0.284	0.161	-1.73	23.41	23.50	0.290
Left Tilt 15 Degree	1413/1732.6	RMC12.2K	0.151	0.083	-3.57	23.41	23.50	0.154
Right Cheek	1413/1732.6	RMC12.2K	0.243	0.136	-3.00	23.41	23.50	0.248
Right Tilt 15 Degree	1413/1732.6	RMC12.2K	0.113	0.060	-4.74	23.41	23.50	0.115

NOTE: Head SAR test results of WCDMA Band 4

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	1413/1732.6	RMC12.2K	0.611	0.301	4.48	23.41	23.50	0.624
Back Side	1413/1732.6	RMC12.2K	0.882	0.480	-4.41	23.41	23.50	0.900
Back Side Repeated	1413/1732.6	RMC12.2K	0.879	0.478	0.89	23.41	23.50	0.897
Back Side	1312/1712.4	RMC12.2K	0.675	0.362	1.83	23.40	23.50	0.691
Back Side	1513/1752.6	RMC12.2K	0.714	0.391	-0.37	23.42	23.50	0.727

NOTE: Body-Worn SAR test results of WCDMA Band 4

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	1413/1732.6	RMC12.2K	0.611	0.301	4.48	23.41	23.50	0.624
Back Side	1413/1732.6	RMC12.2K	0.882	0.480	-4.41	23.41	23.50	0.900
Back Side Repeated	1413/1732.6	RMC12.2K	0.879	0.478	0.89	23.41	23.50	0.897
Left Side	1413/1732.6	RMC12.2K	0.599	0.307	-3.58	23.41	23.50	0.612
Right Side	1413/1732.6	RMC12.2K	0.417	0.229	-4.76	23.41	23.50	0.426
Bottom Side	1413/1732.6	RMC12.2K	0.348	0.191	-0.59	23.41	23.50	0.355
Back Side	1312/1712.4	RMC12.2K	0.675	0.362	1.83	23.40	23.50	0.691
Back Side	1513/1752.6	RMC12.2K	0.714	0.391	-0.37	23.42	23.50	0.727

NOTE: Hotspot SAR test results of WCDMA Band 4

10.1.5. SAR measurement Result of WCDMA Band 5

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
Left Cheek	4182/836.4	RMC12.2K	0.672	0.488	-1.42	23.36	23.50	0.694
Left Tilt 15 Degree	4182/836.4	RMC12.2K	0.341	0.246	2.13	23.36	23.50	0.352
Right Cheek	4182/836.4	RMC12.2K	0.599	0.430	2.99	23.36	23.50	0.619
Right Tilt 15 Degree	4182/836.4	RMC12.2K	0.316	0.226	2.64	23.36	23.50	0.326
Open								
Left Cheek	4182/836.4	RMC12.2K	0.185	0.129	2.54	23.36	23.50	0.191
Left Tilt 15 Degree	4182/836.4	RMC12.2K	0.095	0.069	-3.23	23.36	23.50	0.098
Right Cheek	4182/836.4	RMC12.2K	0.173	0.117	3.67	23.36	23.50	0.179
Right Tilt 15 Degree	4182/836.4	RMC12.2K	0.080	0.059	3.91	23.36	23.50	0.083

NOTE: Head SAR test results of WCDMA Band 5

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	4182/836.4	RMC12.2K	0.675	0.477	2.11	23.36	23.50	0.697
Back Side	4182/836.4	RMC12.2K	0.836	0.586	-1.40	23.36	23.50	0.863

Back Side Repeated	4182/836.4	RMC12.2K	0.830	0.580	0.77	23.36	23.50	0.857
Back Side	4132/826.4	RMC12.2K	0.709	0.496	-2.57	23.34	23.50	0.736
Back Side	4233/846.6	RMC12.2K	0.701	0.489	2.51	23.27	23.50	0.739

NOTE: Body-Worn SAR test results of WCDMA Band 5

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	4182/836.4	RMC12.2K	0.675	0.477	2.11	23.36	23.50	0.697
Back Side	4182/836.4	RMC12.2K	0.836	0.586	-1.40	23.36	23.50	0.863
Back Side Repeated	4182/836.4	RMC12.2K	0.830	0.580	0.77	23.36	23.50	0.857
Left Side	4182/836.4	RMC12.2K	0.611	0.431	-2.60	23.36	23.50	0.631
Right Side	4182/836.4	RMC12.2K	0.393	0.280	-2.53	23.36	23.50	0.406
Bottom Side	4182/836.4	RMC12.2K	0.308	0.215	-4.83	23.36	23.50	0.318
Back Side	4132/826.4	RMC12.2K	0.709	0.496	-2.57	23.34	23.50	0.736
Back Side	4233/846.6	RMC12.2K	0.701	0.489	2.51	23.27	23.50	0.739

NOTE: Hotspot SAR test results of WCDMA Band 5

10.1.6. SAR measurement Result of LTE Band 2

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
1RB								
Left Cheek	18900/1880	15M QPSK(1,37)	0.203	0.121	-0.59	23.96	25.00	0.258
Left Tilt 15 Degree	18900/1880	15M QPSK(1,37)	0.103	0.061	0.71	23.96	25.00	0.131
Right Cheek	18900/1880	15M QPSK(1,37)	0.201	0.120	-0.98	23.96	25.00	0.255
Right Tilt 15 Degree	18900/1880	15M QPSK(1,37)	0.102	0.060	4.13	23.96	25.00	0.130
50%RB								
Left Cheek	18900/1880	1.4M QPSK(3,0)	0.187	0.091	-0.33	23.70	24.00	0.200
Left Tilt 15 Degree	18900/1880	1.4M QPSK(3,0)	0.094	0.048	2.50	23.70	24.00	0.101
Right Cheek	18900/1880	1.4M QPSK(3,0)	0.183	0.087	2.59	23.70	24.00	0.196

Right Tilt 15 Degree	18900/1880	1.4M QPSK(3,0)	0.092	0.046	4.42	23.70	24.00	0.099
Open								
1RB								
Left Cheek	18900/1880	15M QPSK(1,37)	0.083	0.056	-0.19	23.96	25.00	0.105
Left Tilt 15 Degree	18900/1880	15M QPSK(1,37)	0.041	0.018	1.03	23.96	25.00	0.052
Right Cheek	18900/1880	15M QPSK(1,37)	0.074	0.053	1.22	23.96	25.00	0.094
Right Tilt 15 Degree	18900/1880	15M QPSK(1,37)	0.038	0.016	0.34	23.96	25.00	0.048
50%RB								
Left Cheek	18900/1880	1.4M QPSK(3,0)	0.067	0.031	-0.33	23.70	24.00	0.072
Left Tilt 15 Degree	18900/1880	1.4M QPSK(3,0)	0.035	0.015	2.50	23.70	24.00	0.038
Right Cheek	18900/1880	1.4M QPSK(3,0)	0.063	0.030	2.59	23.70	24.00	0.068
Right Tilt 15 Degree	18900/1880	1.4M QPSK(3,0)	0.032	0.015	4.42	23.70	24.00	0.034

NOTE: Head SAR test results of LTE Band 2

Test Position of Body-Wor n with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conduc ted power (dBm)	Tune-u p power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	18900/1880	15M QPSK(1,37)	0.152	0.088	-2.82	23.96	25.00	0.193
Back Side	18900/1880	15M QPSK(1,37)	0.201	0.110	-0.98	23.96	25.00	0.255
50%RB								
Front Side	18900/1880	1.4M QPSK(3,0)	0.130	0.081	3.51	23.70	24.00	0.139
Back Side	18900/1880	1.4M QPSK(3,0)	0.187	0.104	-4.57	23.70	24.00	0.200

NOTE: Body-Worn SAR test results of LTE Band 2

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	18900/1880	15M QPSK(1,37)	0.152	0.088	-2.82	23.96	25.00	0.193

Back Side	18900/1880	15M QPSK(1,37)	0.201	0.110	-0.98	23.96	25.00	0.255
Left Side	18900/1880	15M QPSK(1,37)	0.159	0.088	-1.12	23.96	25.00	0.202
Right Side	18900/1880	15M QPSK(1,37)	0.093	0.053	-1.30	23.96	25.00	0.118
Bottom Side	18900/1880	15M QPSK(1,37)	0.073	0.041	-0.32	23.96	25.00	0.093
50%RB								
Front Side	18900/1880	1.4M QPSK(3,0)	0.130	0.081	3.51	23.70	24.00	0.139
Back Side	18900/1880	1.4M QPSK(3,0)	0.187	0.104	-4.57	23.70	24.00	0.200
Left Side	18900/1880	1.4M QPSK(3,0)	0.141	0.082	-4.17	23.70	24.00	0.151
Right Side	18900/1880	1.4M QPSK(3,0)	0.081	0.048	-2.18	23.70	24.00	0.087
Bottom Side	18900/1880	1.4M QPSK(3,0)	0.063	0.036	3.99	23.70	24.00	0.068

NOTE: Hotspot SAR test results of LTE Band 2

10.1.7. SAR measurement Result of LTE Band 4

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
1RB								
Left Cheek	20175/1732.5	20M QPSK(1,0)	0.201	0.130	-2.22	19.36	21.00	0.293
Left Tilt 15 Degree	20175/1732.5	20M QPSK(1,0)	0.118	0.076	-0.74	19.36	21.00	0.172
Right Cheek	20175/1732.5	20M QPSK(1,0)	0.181	0.117	4.95	19.36	21.00	0.264
Right Tilt 15 Degree	20175/1732.5	20M QPSK(1,0)	0.085	0.057	-3.26	19.36	21.00	0.124
50%RB								
Left Cheek	20175/1732.5	5M QPSK(12,0)	0.186	0.123	-4.20	19.41	21.00	0.268
Left Tilt 15 Degree	20175/1732.5	5M QPSK(12,0)	0.111	0.065	-0.02	19.41	21.00	0.160

Right Cheek	20175/1732.5	5M QPSK(12,0)	0.158	0.100	-4.94	19.41	21.00	0.228
Right Tilt 15 Degree	20175/1732.5	5M QPSK(12,0)	0.080	0.051	1.87	19.41	21.00	0.115
Open								
1RB								
Left Cheek	20175/1732.5	20M QPSK(1,0)	0.191	0.119	2.15	19.36	21.00	0.279
Left Tilt 15 Degree	20175/1732.5	20M QPSK(1,0)	0.107	0.071	3.64	19.36	21.00	0.156
Right Cheek	20175/1732.5	20M QPSK(1,0)	0.166	0.102	3.53	19.36	21.00	0.242
Right Tilt 15 Degree	20175/1732.5	20M QPSK(1,0)	0.089	0.057	-1.11	19.36	21.00	0.130
50%RB								
Left Cheek	20175/1732.5	5M QPSK(12,0)	0.172	0.111	-4.33	19.41	21.00	0.248
Left Tilt 15 Degree	20175/1732.5	5M QPSK(12,0)	0.095	0.061	3.13	19.41	21.00	0.137
Right Cheek	20175/1732.5	5M QPSK(12,0)	0.149	0.090	2.09	19.41	21.00	0.215
Right Tilt 15 Degree	20175/1732.5	5M QPSK(12,0)	0.078	0.049	-4.03	19.41	21.00	0.112

NOTE: Head SAR test results of LTE Band 4

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	20175/1732.5	20M QPSK(1,0)	0.515	0.197	-3.47	19.36	21.00	0.751
Back Side	20175/1732.5	20M QPSK(1,0)	0.879	0.488	-1.92	19.36	21.00	1.282
Back Side Repeated	20175/1732.5	20M QPSK(1,0)	0.870	0.480	0.23	19.36	21.00	1.269

Back Side	20050/1720	20M QPSK(1,0)	0.834	0.465	0.45	20.15	21.00	1.014
Back Side	20300/1745	20M QPSK(1,0)	0.828	0.458	2.12	19.67	21.00	1.125
50%RB								
Front Side	20175/1732. 5	5M QPSK(12,0)	0.452	0.188	-4.42	19.41	21.00	0.652
Back Side	20175/1732. 5	5M QPSK(12,0)	0.783	0.457	4.29	19.41	21.00	1.129
Back Side	19975/1712. 5	5M QPSK(12,0)	0.762	0.421	3.33	20.02	21.00	0.955
Back Side	20375/1752. 5	5M QPSK(12,0)	0.725	0.401	2.12	19.79	21.00	0.958
100%RB								
Back Side	20175/1732. 5	3M QPSK(15,0)	0.687	0.366	1.23	19.71	21.00	0.925

NOTE: Body-Worn SAR test results of LTE Band 4

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conduc ted power (dBm)	Tune-u p power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	20175/1732. 5	20M QPSK(1,49)	0.515	0.197	-3.47	19.36	21.00	0.751
Back Side	20175/1732. 5	20M QPSK(1,49)	0.879	0.488	-1.92	19.36	21.00	1.282
Back Side Repeated	20175/1732. 5	20M QPSK(1,0)	0.870	0.480	0.23	19.36	21.00	1.269
Left Side	20175/1732. 5	20M QPSK(1,0)	0.508	0.190	-0.23	19.36	21.00	0.741
Right Side	20175/1732. 5	20M QPSK(1,0)	0.416	0.232	2.33	19.36	21.00	0.607
Bottom Side	20175/1732. 5	20M QPSK(1,0)	0.303	0.168	-4.68	19.36	21.00	0.442
Back Side	20050/1720	20M QPSK(1,0)	0.834	0.465	0.45	20.15	21.00	1.014
Back Side	20300/1745	20M QPSK(1,0)	0.828	0.458	2.12	19.67	21.00	1.125
50%RB								
Front Side	20175/1732. 5	5M QPSK(12,0)	0.452	0.188	-4.42	19.41	21.00	0.652
Back Side	20175/1732. 5	5M QPSK(12,0)	0.783	0.457	4.29	19.41	21.00	1.129
Left Side	20175/1732.	5M QPSK(12,0)	0.488	0.176	-0.50	19.41	21.00	0.704

	5							
Right Side	20175/1732. 5	5M QPSK(12,0)	0.389	0.219	-4.26	19.41	21.00	0.561
Bottom Side	20175/1732. 5	5M QPSK(12,0)	0.268	0.151	-2.06	19.41	21.00	0.386
Back Side	19975/1712. 5	5M QPSK(12,0)	0.762	0.421	3.33	20.02	21.00	0.955
Back Side	20375/1752. 5	5M QPSK(12,0)	0.725	0.401	2.12	19.79	21.00	0.958
100%RB								
Back Side	20175/1732. 5	3M QPSK(15,0)	0.687	0.366	1.23	19.71	21.00	0.925

NOTE: Hotspot SAR test results of LTE Band 4

10.1.8. SAR measurement Result of LTE Band 5

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
1RB								
Left Cheek	20525/836.5	10M QPSK(1,0)	0.659	0.481	-0.42	18.34	19.00	0.767
Left Tilt 15 Degree	20525/836.5	10M QPSK(1,0)	0.371	0.270	-4.99	18.34	19.00	0.432
Right Cheek	20525/836.5	10M QPSK(1,0)	0.623	0.456	4.99	18.34	19.00	0.725
Right Tilt 15 Degree	20525/836.5	10M QPSK(1,0)	0.295	0.218	-0.53	18.34	19.00	0.343
50%RB								
Left Cheek	20525/836.5	3M QPSK(8,4)	0.570	0.443	-2.81	18.03	19.00	0.713
Left Tilt 15 Degree	20525/836.5	3M QPSK(8,4)	0.320	0.236	2.53	18.03	19.00	0.400
Right Cheek	20525/836.5	3M QPSK(8,4)	0.537	0.400	0.35	18.03	19.00	0.671
Right Tilt	20525/836.5	3M QPSK(8,4)	0.274	0.200	4.25	18.03	19.00	0.343

15 Degree								
Open								
1RB								
Left Cheek	20525/836.5	10M QPSK(1,0)	0.211	0.149	4.84	18.34	19.00	0.246
Left Tilt 15 Degree	20525/836.5	10M QPSK(1,0)	0.118	0.086	0.58	18.34	19.00	0.137
Right Cheek	20525/836.5	10M QPSK(1,0)	0.182	0.129	3.26	18.34	19.00	0.212
Right Tilt 15 Degree	20525/836.5	10M QPSK(1,0)	0.097	0.064	3.75	18.34	19.00	0.113
50%RB								
Left Cheek	20525/836.5	3M QPSK(8,4)	0.181	0.128	1.45	18.03	19.00	0.226
Left Tilt 15 Degree	20525/836.5	3M QPSK(8,4)	0.104	0.076	3.24	18.03	19.00	0.130
Right Cheek	20525/836.5	3M QPSK(8,4)	0.170	0.110	-3.39	18.03	19.00	0.213
Right Tilt 15 Degree	20525/836.5	3M QPSK(8,4)	0.089	0.057	-4.70	18.03	19.00	0.111

NOTE: Head SAR test results of LTE Band 5

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	20525/836.5	10M QPSK(1,0)	0.642	0.416	-4.49	18.34	19.00	0.747
Back Side	20525/836.5	10M QPSK(1,0)	0.879	0.616	-4.16	18.34	19.00	1.023
Back Side Repeated	20525/836.5	10M QPSK(1,0)	0.873	0.613	-1.16	18.34	19.00	1.016
Back Side	20450/829	10M QPSK(1,0)	0.787	0.598	0.55	18.12	19.00	0.964
Back Side	20600/844	10M QPSK(1,0)	0.792	0.601	0.13	18.13	19.00	0.968
50%RB								
Front Side	20525/836.5	3M QPSK(8,4)	0.446	0.298	3.77	18.03	19.00	0.558
Back Side	20525/836.5	3M QPSK(8,4)	0.601	0.402	-0.37	18.03	19.00	0.751

100%RB								
Back Side	20525/836.5	1.4M QPSK(6,0)	0.509	0.301	0.44	17.93	19.00	0.651

NOTE: Body-Worn SAR test results of LTE Band 5

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	20525/836.5	10M QPSK(1,0)	0.642	0.416	-4.49	18.34	19.00	0.747
Back Side	20525/836.5	10M QPSK(1,0)	0.879	0.616	-4.16	18.34	19.00	1.023
Back Side Repeated	20525/836.5	10M QPSK(1,0)	0.873	0.613	-1.16	18.34	19.00	1.016
Left Side	20525/836.5	10M QPSK(1,0)	0.570	0.401	-0.46	18.34	19.00	0.664
Right Side	20525/836.5	10M QPSK(1,0)	0.401	0.284	-0.35	18.34	19.00	0.467
Bottom Side	20525/836.5	10M QPSK(1,0)	0.349	0.243	2.71	18.34	19.00	0.406
Back Side	20450/829	10M QPSK(1,0)	0.787	0.598	0.55	18.12	19.00	0.964
Back Side	20600/844	10M QPSK(1,0)	0.792	0.601	0.13	18.13	19.00	0.968
50%RB								
Front Side	20525/836.5	3M QPSK(8,4)	0.446	0.298	3.77	18.03	19.00	0.558
Back Side	20525/836.5	3M QPSK(8,4)	0.601	0.402	-0.37	18.03	19.00	0.751
Left Side	20525/836.5	3M QPSK(8,4)	0.432	0.290	-1.67	18.03	19.00	0.540
Right Side	20525/836.5	3M QPSK(8,4)	0.425	0.287	-0.59	18.03	19.00	0.531
Bottom Side	20525/836.5	3M QPSK(8,4)	0.389	0.284	2.95	18.03	19.00	0.486
100%RB								
Back Side	20525/836.5	1.4M QPSK(6,0)	0.509	0.301	0.44	17.93	19.00	0.651

NOTE: Hotspot SAR test results of LTE Band 5

10.1.9. SAR measurement Result of LTE Band 7

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
1RB								
Left Cheek	21100/2535	20M QPSK(1,99)	0.429	0.226	-4.79	20.01	21.00	0.539
Left Tilt 15 Degree	21100/2535	20M QPSK(1,99)	0.218	0.113	2.05	20.01	21.00	0.274
Right Cheek	21100/2535	20M QPSK(1,99)	0.390	0.209	-2.86	20.01	21.00	0.490
Right Tilt 15 Degree	21100/2535	20M QPSK(1,99)	0.185	0.102	4.40	20.01	21.00	0.232
50%RB								
Left Cheek	21100/2535	20M QPSK(50,49)	0.222	0.120	-2.85	19.68	20.00	0.239
Left Tilt 15 Degree	21100/2535	20M QPSK(50,49)	0.128	0.059	-2.95	19.68	20.00	0.138
Right Cheek	21100/2535	20M QPSK(50,49)	0.212	0.110	2.94	19.68	20.00	0.228
Right Tilt 15 Degree	21100/2535	20M QPSK(50,49)	0.107	0.055	1.37	19.68	20.00	0.115
Open								
1RB								
Left Cheek	21100/2535	20M QPSK(1,99)	0.140	0.085	-4.43	20.01	21.00	0.176
Left Tilt 15 Degree	21100/2535	20M QPSK(1,99)	0.078	0.050	-3.00	20.01	21.00	0.098
Right Cheek	21100/2535	20M QPSK(1,99)	0.123	0.079	3.56	20.01	21.00	0.154
Right Tilt 15	21100/2535	20M QPSK(1,99)	0.066	0.040	0.80	20.01	21.00	0.083

Degree								
50%RB								
Left Cheek	21100/2535	20M QPSK(50,49)	0.126	0.078	3.35	19.68	20.00	0.136
Left Tilt 15 Degree	21100/2535	20M QPSK(50,49)	0.068	0.044	4.22	19.68	20.00	0.073
Right Cheek	21100/2535	20M QPSK(50,49)	0.111	0.070	-0.37	19.68	20.00	0.119
Right Tilt 15 Degree	21100/2535	20M QPSK(50,49)	0.061	0.036	1.60	19.68	20.00	0.066

NOTE: Head SAR test results of LTE Band 7

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	21100/2535	20M QPSK(1,99)	0.425	0.226	2.99	20.01	21.00	0.534
Back Side	21100/2535	20M QPSK(1,99)	0.547	0.294	0.11	20.01	21.00	0.687
50%RB								
Front Side	21100/2535	20M QPSK(50,49)	0.225	0.128	-0.57	19.68	20.00	0.242
Back Side	21100/2535	20M QPSK(50,49)	0.294	0.168	4.42	19.68	20.00	0.316

NOTE: Body-Worn SAR test results of LTE Band 7

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conduc ted power (dBm)	Tune-u p power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	21100/2535	20M QPSK(1,99)	0.425	0.226	2.99	20.01	21.00	0.534
Back Side	21100/2535	20M QPSK(1,99)	0.547	0.294	0.11	20.01	21.00	0.687
Left Side	21100/2535	20M QPSK(1,99)	0.428	0.234	-4.46	20.01	21.00	0.538
Right Side	21100/2535	20M	0.247	0.133	-3.99	20.01	21.00	0.310

		QPSK(1,99)						
Bottom Side	21100/2535	20M QPSK(1,99)	0.209	0.109	-0.28	20.01	21.00	0.263
50%RB								
Front Side	21100/2535	20M QPSK(50,49)	0.225	0.128	-0.57	19.68	20.00	0.242
Back Side	21100/2535	20M QPSK(50,49)	0.294	0.168	4.42	19.68	20.00	0.316
Left Side	21100/2535	20M QPSK(50,49)	0.225	0.138	-4.98	19.68	20.00	0.242
Right Side	21100/2535	20M QPSK(50,49)	0.127	0.071	1.73	19.68	20.00	0.137
Bottom Side	21100/2535	20M QPSK(50,49)	0.112	0.061	-1.47	19.68	20.00	0.121

NOTE: Hotspot SAR test results of LTE Band 7

10.1.10. SAR measurement Result of LTE Band 12

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
1RB								
Left Cheek	23095/707.5	10M QPSK(1,0)	0.167	0.130	-1.53	19.14	19.50	0.181
Left Tilt 15 Degree	23095/707.5	10M QPSK(1,0)	0.096	0.077	-0.69	19.14	19.50	0.104
Right Cheek	23095/707.5	10M QPSK(1,0)	0.151	0.113	-1.66	19.14	19.50	0.164
Right Tilt 15 Degree	23095/707.5	10M QPSK(1,0)	0.081	0.067	2.54	19.14	19.50	0.088
50%RB								
Left Cheek	23095/707.5	1.4M QPSK(3,1)	0.154	0.120	4.22	17.77	19.50	0.229
Left Tilt 15 Degree	23095/707.5	1.4M QPSK(3,1)	0.091	0.068	1.57	17.77	19.50	0.136
Right	23095/707.5	1.4M QPSK(3,1)	0.139	0.098	4.75	17.77	19.50	0.207

Cheek								
Right Tilt 15 Degree	23095/707.5	1.4M QPSK(3,1)	0.071	0.057	4.65	17.77	19.50	0.106
Open								
1RB								
Left Cheek	23095/707.5	10M QPSK(1,0)	0.103	0.077	2.54	19.14	19.50	0.112
Left Tilt 15 Degree	23095/707.5	10M QPSK(1,0)	0.059	0.048	3.40	19.14	19.50	0.064
Right Cheek	23095/707.5	10M QPSK(1,0)	0.093	0.067	0.77	19.14	19.50	0.101
Right Tilt 15 Degree	23095/707.5	10M QPSK(1,0)	0.046	0.033	2.97	19.14	19.50	0.050
50%RB								
Left Cheek	23095/707.5	1.4M QPSK(3,1)	0.092	0.071	-0.57	17.77	19.50	0.137
Left Tilt 15 Degree	23095/707.5	1.4M QPSK(3,1)	0.054	0.042	-3.72	17.77	19.50	0.080
Right Cheek	23095/707.5	1.4M QPSK(3,1)	0.080	0.062	2.86	17.77	19.50	0.119
Right Tilt 15 Degree	23095/707.5	1.4M QPSK(3,1)	0.039	0.029	1.76	17.77	19.50	0.058

NOTE: Head SAR test results of LTE Band 12

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	23095/707.5	10M QPSK(1,0)	0.183	0.129	-1.81	19.14	19.50	0.199
Back Side	23095/707.5	10M QPSK(1,0)	0.242	0.174	-4.64	19.14	19.50	0.263
50%RB								
Front Side	23095/707.5	1.4M QPSK(3,1)	0.156	0.114	-0.46	17.77	19.50	0.232
Back Side	23095/707.5	1.4M QPSK(3,1)	0.222	0.148	0.66	17.77	19.50	0.331

NOTE: Body-Worn SAR test results of LTE Band 12

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	23095/707.5	10M QPSK(1,0)	0.183	0.129	-1.81	19.14	19.50	0.199
Back Side	23095/707.5	10M QPSK(1,0)	0.242	0.174	-4.64	19.14	19.50	0.263
Left Side	23095/707.5	10M QPSK(1,0)	0.187	0.136	4.46	19.14	19.50	0.203
Right Side	23095/707.5	10M QPSK(1,0)	0.111	0.083	-1.46	19.14	19.50	0.121
Bottom Side	23095/707.5	10M QPSK(1,0)	0.086	0.063	-2.98	19.14	19.50	0.093
50%RB								
Front Side	23095/707.5	1.4M QPSK(3,1)	0.156	0.114	-0.46	17.77	19.50	0.232
Back Side	23095/707.5	1.4M QPSK(3,1)	0.222	0.148	0.66	17.77	19.50	0.331
Left Side	23095/707.5	1.4M QPSK(3,1)	0.175	0.128	-3.31	17.77	19.50	0.261
Right Side	23095/707.5	1.4M QPSK(3,1)	0.101	0.077	-2.91	17.77	19.50	0.150
Bottom Side	23095/707.5	1.4M QPSK(3,1)	0.075	0.058	-2.32	17.77	19.50	0.112

NOTE: Hotspot SAR test results of LTE Band 12

10.1.11. SAR measurement Result of LTE Band 17

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
1RB								
Left Cheek	23790/710	10M QPSK(1,0)	0.163	0.124	1.43	18.50	19.50	0.205
Left Tilt 15 Degree	23790/710	10M QPSK(1,0)	0.083	0.063	-1.06	18.50	19.50	0.104

Right Cheek	23790/710	10M QPSK(1,0)	0.143	0.113	3.58	18.50	19.50	0.180
Right Tilt 15 Degree	23790/710	10M QPSK(1,0)	0.076	0.053	-3.98	18.50	19.50	0.096
50%RB								
Left Cheek	23790/710	10M QPSK(25,24)	0.142	0.117	-0.92	18.33	19.00	0.166
Left Tilt 15 Degree	23790/710	10M QPSK(25,24)	0.072	0.058	-0.59	18.33	19.00	0.084
Right Cheek	23790/710	10M QPSK(25,24)	0.124	0.101	0.53	18.33	19.00	0.145
Right Tilt 15 Degree	23790/710	10M QPSK(25,24)	0.065	0.049	-0.96	18.33	19.00	0.076
Open								
1RB								
Left Cheek	23790/710	10M QPSK(1,0)	0.100	0.080	3.19	18.50	19.50	0.126
Left Tilt 15 Degree	23790/710	10M QPSK(1,0)	0.053	0.039	0.17	18.50	19.50	0.067
Right Cheek	23790/710	10M QPSK(1,0)	0.091	0.077	2.91	18.50	19.50	0.115
Right Tilt 15 Degree	23790/710	10M QPSK(1,0)	0.050	0.039	-3.39	18.50	19.50	0.063
50%RB								
Left Cheek	23790/710	10M QPSK(25,24)	0.088	0.068	1.36	18.33	19.00	0.103
Left Tilt 15 Degree	23790/710	10M QPSK(25,24)	0.049	0.036	1.32	18.33	19.00	0.057
Right Cheek	23790/710	10M QPSK(25,24)	0.083	0.068	1.22	18.33	19.00	0.097
Right Tilt 15 Degree	23790/710	10M QPSK(25,24)	0.045	0.036	1.22	18.33	19.00	0.053

NOTE: Head SAR test results of LTE Band 17

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	23790/710	10M QPSK(1,0)	0.208	0.141	-1.19	18.50	19.50	0.262
Back Side	23790/710	10M QPSK(1,0)	0.267	0.187	-0.52	18.50	19.50	0.336
50%RB								
Front Side	23790/710	10M QPSK(25,24)	0.180	0.123	3.96	18.33	19.00	0.210
Back Side	23790/710	10M QPSK(25,24)	0.250	0.177	-1.50	18.33	19.00	0.292

NOTE: Body-Worn SAR test results of LTE Band 17

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	23790/710	10M QPSK(1,0)	0.208	0.141	-1.19	18.50	19.50	0.262
Back Side	23790/710	10M QPSK(1,0)	0.267	0.187	-0.52	18.50	19.50	0.336
Left Side	23790/710	10M QPSK(1,0)	0.205	0.140	0.77	18.50	19.50	0.258
Right Side	23790/710	10M QPSK(1,0)	0.126	0.087	1.52	18.50	19.50	0.159
Bottom Side	23790/710	10M QPSK(1,0)	0.101	0.070	-0.25	18.50	19.50	0.127
50%RB								
Front Side	23790/710	10M QPSK(25,24)	0.180	0.123	3.96	18.33	19.00	0.210
Back Side	23790/710	10M QPSK(25,24)	0.250	0.177	-1.50	18.33	19.00	0.292
Left Side	23790/710	10M QPSK(25,24)	0.188	0.129	3.51	18.33	19.00	0.219
Right Side	23790/710	10M QPSK(25,24)	0.110	0.075	1.97	18.33	19.00	0.128
Bottom Side	23790/710	10M QPSK(25,24)	0.091	0.062	4.49	18.33	19.00	0.106

NOTE: Hotspot SAR test results of LTE Band 17

10.1.12. SAR measurement Result of LTE Band 66

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
1RB								
Left Cheek	132322/1745	20M QPSK(1,49)	0.617	0.327	-1.29	23.46	24.00	0.699
Left Tilt 15 Degree	132322/1745	20M QPSK(1,49)	0.321	0.174	-1.61	23.46	24.00	0.364
Right Cheek	132322/1745	20M QPSK(1,49)	0.564	0.297	-1.16	23.46	24.00	0.639
Right Tilt 15 Degree	132322/1745	20M QPSK(1,49)	0.286	0.151	-3.74	23.46	24.00	0.324
50%RB								
Left Cheek	132322/1745	1.4M QPSK(3,1)	0.543	0.310	-2.23	23.12	24.00	0.665
Left Tilt 15 Degree	132322/1745	1.4M QPSK(3,1)	0.293	0.155	-3.06	23.12	24.00	0.359
Right Cheek	132322/1745	1.4M QPSK(3,1)	0.494	0.261	-0.65	23.12	24.00	0.605
Right Tilt 15 Degree	132322/1745	1.4M QPSK(3,1)	0.266	0.143	-1.50	23.12	24.00	0.326
Open								
1RB								
Left Cheek	132322/1745	20M QPSK(1,49)	0.161	0.102	-0.28	23.46	24.00	0.182
Left Tilt 15 Degree	132322/1745	20M QPSK(1,49)	0.081	0.052	-4.86	23.46	24.00	0.092
Right Cheek	132322/1745	20M QPSK(1,49)	0.158	0.100	-4.56	23.46	24.00	0.179
Right Tilt	132322/1745	20M QPSK(1,49)	0.078	0.048	2.02	23.46	24.00	0.088

15 Degree								
50%RB								
Left Cheek	132322/1745	1.4M QPSK(3,1)	0.155	0.087	4.84	23.12	24.00	0.190
Left Tilt 15 Degree	132322/1745	1.4M QPSK(3,1)	0.079	0.048	-4.35	23.12	24.00	0.097
Right Cheek	132322/1745	1.4M QPSK(3,1)	0.150	0.083	-0.05	23.12	24.00	0.184
Right Tilt 15 Degree	132322/1745	1.4M QPSK(3,1)	0.076	0.046	1.66	23.12	24.00	0.093

NOTE: Head SAR test results of LTE Band 66

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	132322/1745	20M QPSK(1,49)	0.521	0.279	1.95	23.46	24.00	0.590
Back Side	132322/1745	20M QPSK(1,49)	1.068	0.580	-4.79	23.46	24.00	1.209
Back Side Repeated	132322/1745	20M QPSK(1,49)	1.060	0.576	1.00	23.46	24.00	1.200
Back Side	132072/1720.0	20M QPSK(1,49)	0.837	0.457	-2.25	23.25	24.00	0.995
Back Side	132572/1770.0	20M QPSK(1,49)	0.827	0.448	1.42	23.37	24.00	0.956
50%RB								
Front Side	132322/1745	1.4M QPSK(3,1)	0.477	0.260	0.90	23.12	24.00	0.584
Back Side	132322/1745	1.4M QPSK(3,1)	0.634	0.405	-0.50	23.12	24.00	0.776
100%RB								
Back Side	132322/1745	20M QPSK(100,0)	0.466	0.242	0.90	22.23	23.00	0.556

NOTE: Body-Worn SAR test results of LTE Band 66

Test	Test channel	Test Mode	SAR Value	Power	Conducted	Tune-up	Scaled
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Position of Hotspot with 10mm	/Freq.		(W/kg)		Drift (±5%)	power (dBm)	power (dBm)	SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	132322/1745	20M QPSK(1,49)	0.521	0.279	1.95	23.46	24.00	0.590
Back Side	132322/1745	20M QPSK(1,49)	1.068	0.580	-4.79	23.46	24.00	1.209
Back Side Repeated	132322/1745	20M QPSK(1,49)	1.060	0.576	1.00	23.46	24.00	1.200
Left Side	132322/1745	20M QPSK(1,49)	0.465	0.249	-1.06	23.46	24.00	0.527
Right Side	132322/1745	20M QPSK(1,49)	0.494	0.267	4.90	23.46	24.00	0.559
Bottom Side	132322/1745	20M QPSK(1,49)	0.518	0.278	4.09	23.46	24.00	0.587
Back Side	132072/1720.0	20M QPSK(1,49)	0.837	0.457	-2.25	23.25	24.00	0.995
Back Side	132572/1770.0	20M QPSK(1,49)	0.827	0.448	1.42	23.37	24.00	0.956
50%RB								
Front Side	132322/1745	1.4M QPSK(3,1)	0.477	0.260	0.90	23.12	24.00	0.584
Back Side	132322/1745	1.4M QPSK(3,1)	0.634	0.405	-0.50	23.12	24.00	0.776
Left Side	132322/1745	1.4M QPSK(3,1)	0.399	0.225	-2.04	23.12	24.00	0.489
Right Side	132322/1745	1.4M QPSK(3,1)	0.447	0.243	1.62	23.12	24.00	0.547
Bottom Side	132322/1745	1.4M QPSK(3,1)	0.422	0.283	-4.30	23.12	24.00	0.517
100%RB								
Back Side	132322/1745	20M QPSK(100,0)	0.466	0.242	0.90	22.23	23.00	0.556

NOTE: Hotspot SAR test results of LTE Band 66

10.1.13. SAR measurement Result of WLAN 2.4G

Test Position of Head	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Closed								
Left Cheek	6/2437	802.11 b	0.054	0.037	0.16	11.04	12.00	0.067
Left Tilt 15 Degree	6/2437	802.11 b	0.031	0.018	-3.21	11.04	12.00	0.039
Right Cheek	6/2437	802.11 b	0.048	0.035	3.63	11.04	12.00	0.060
Right Tilt 15 Degree	6/2437	802.11 b	0.023	0.012	1.53	11.04	12.00	0.029
Open								
Left Cheek	6/2437	802.11 b	0.041	0.032	3.09	11.04	12.00	0.051
Left Tilt 15 Degree	6/2437	802.11 b	0.024	0.019	-0.67	11.04	12.00	0.030
Right Cheek	6/2437	802.11 b	0.038	0.034	-3.50	11.04	12.00	0.047
Right Tilt 15 Degree	6/2437	802.11 b	0.020	0.016	2.41	11.04	12.00	0.025

NOTE: Head SAR test results of WLAN 2.4G

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	6/2437	802.11 b	0.045	0.027	4.69	11.04	12.00	0.056
Back Side	6/2437	802.11 b	0.071	0.044	-1.71	11.04	12.00	0.089

NOTE: Body-Worn SAR test results of WLAN 2.4G

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
Front Side	6/2437	802.11 b	0.045	0.027	4.69	11.04	12.00	0.056
Back Side	6/2437	802.11 b	0.071	0.044	-1.71	11.04	12.00	0.089
Right Side	6/2437	802.11 b	0.017	0.011	-2.37	11.04	12.00	0.021
Top Side	6/2437	802.11 b	0.025	0.015	3.09	11.04	12.00	0.031

NOTE: Hotspot SAR test results of WLAN 2.4G

10.2. SAR Summation Scenario

Per KDB 447498 D01, simultaneous transmission SAR is compliant if,

- 1) Scalar SAR summation < 1.6W/kg.

2) $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 850	WLAN 2.4G			
Head	Left Cheek	0.997	0.067	1.064	N/A	N/A
	Left Tilt 15 Degree	0.562	0.039	0.601	N/A	N/A
	Right Cheek	0.943	0.060	1.003	N/A	N/A
	Right Tilt 15 Degree	0.467	0.029	0.496	N/A	N/A
Body-Worn	Front Side	0.689	0.056	0.745	N/A	N/A
	Back Side	1.319	0.089	1.408	N/A	N/A
Hotspot	Front Side	0.689	0.056	0.745	N/A	N/A
	Back Side	1.319	0.089	1.408	N/A	N/A
	Left Side	0.646	N/A	0.646	N/A	N/A
	Right Side	0.618	0.021	0.639	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.519	N/A	0.519	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM850 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 1900	WLAN 2.4G			
Head	Left Cheek	0.764	0.067	0.831	N/A	N/A
	Left Tilt 15 Degree	0.393	0.039	0.432	N/A	N/A
	Right Cheek	0.653	0.060	0.713	N/A	N/A
	Right Tilt 15 Degree	0.358	0.029	0.387	N/A	N/A
Body-Worn	Front Side	0.679	0.056	0.735	N/A	N/A
	Back Side	0.851	0.089	0.940	N/A	N/A
Hotspot	Front Side	0.679	0.056	0.735	N/A	N/A
	Back Side	0.851	0.089	0.940	N/A	N/A
	Left Side	0.636	N/A	0.636	N/A	N/A
	Right Side	0.396	0.021	0.417	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.306	N/A	0.306	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM1900 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 2	WLAN 2.4G			

Head	Left Cheek	0.479	0.067	0.546	N/A	N/A
	Left Tilt 15 Degree	0.268	0.039	0.307	N/A	N/A
	Right Cheek	0.417	0.060	0.477	N/A	N/A
	Right Tilt 15 Degree	0.228	0.029	0.257	N/A	N/A
Body-Worn	Front Side	0.647	0.056	0.703	N/A	N/A
	Back Side	1.110	0.089	1.199	N/A	N/A
Hotspot	Front Side	0.647	0.056	0.703	N/A	N/A
	Back Side	1.110	0.089	1.199	N/A	N/A
	Left Side	0.657	N/A	0.657	N/A	N/A
	Right Side	0.497	0.021	0.518	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.409	N/A	0.409	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 2 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 4	WLAN 2.4G			
Head	Left Cheek	0.685	0.067	0.752	N/A	N/A
	Left Tilt 15 Degree	0.382	0.039	0.421	N/A	N/A
	Right Cheek	0.642	0.060	0.702	N/A	N/A
	Right Tilt 15 Degree	0.316	0.029	0.345	N/A	N/A
Body-Worn	Front Side	0.624	0.056	0.680	N/A	N/A
	Back Side	0.900	0.089	0.989	N/A	N/A
Hotspot	Front Side	0.624	0.056	0.680	N/A	N/A
	Back Side	0.900	0.089	0.989	N/A	N/A
	Left Side	0.612	N/A	0.612	N/A	N/A
	Right Side	0.426	0.021	0.447	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.355	N/A	0.355	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 4 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 5	WLAN 2.4G			
Head	Left Cheek	0.694	0.067	0.761	N/A	N/A
	Left Tilt 15 Degree	0.352	0.039	0.391	N/A	N/A
	Right Cheek	0.619	0.060	0.679	N/A	N/A
	Right Tilt 15 Degree	0.326	0.029	0.355	N/A	N/A
Body-Worn	Front Side	0.697	0.056	0.753	N/A	N/A

	Back Side	0.863	0.089	0.952	N/A	N/A
Hotspot	Front Side	0.697	0.056	0.753	N/A	N/A
	Back Side	0.863	0.089	0.952	N/A	N/A
	Left Side	0.631	N/A	0.631	N/A	N/A
	Right Side	0.406	0.021	0.427	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.318	N/A	0.318	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 5 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 2	WLAN 2.4G			
Head	Left Cheek	0.258	0.067	0.325	N/A	N/A
	Left Tilt 15 Degree	0.131	0.039	0.170	N/A	N/A
	Right Cheek	0.255	0.060	0.315	N/A	N/A
	Right Tilt 15 Degree	0.130	0.029	0.159	N/A	N/A
Body-Worn	Front Side	0.193	0.056	0.249	N/A	N/A
	Back Side	0.255	0.089	0.344	N/A	N/A
Hotspot	Front Side	0.193	0.056	0.249	N/A	N/A
	Back Side	0.255	0.089	0.344	N/A	N/A
	Left Side	0.202	N/A	0.202	N/A	N/A
	Right Side	0.118	0.021	0.139	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.093	N/A	0.093	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 2 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 4	WLAN 2.4G			
Head	Left Cheek	0.293	0.067	0.360	N/A	N/A
	Left Tilt 15 Degree	0.172	0.039	0.211	N/A	N/A
	Right Cheek	0.264	0.060	0.324	N/A	N/A
	Right Tilt 15 Degree	0.124	0.029	0.153	N/A	N/A
Body-Worn	Front Side	0.751	0.056	0.807	N/A	N/A
	Back Side	1.282	0.089	1.371	N/A	N/A
Hotspot	Front Side	0.751	0.056	0.807	N/A	N/A
	Back Side	1.282	0.089	1.371	N/A	N/A
	Left Side	0.741	N/A	0.741	N/A	N/A
	Right Side	0.607	0.021	0.628	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.442	N/A	0.442	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 4 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 5	WLAN 2.4G			
Head	Left Cheek	0.767	0.067	0.834	N/A	N/A
	Left Tilt 15 Degree	0.432	0.039	0.471	N/A	N/A
	Right Cheek	0.725	0.060	0.785	N/A	N/A
	Right Tilt 15 Degree	0.343	0.029	0.372	N/A	N/A
Body-Worn	Front Side	0.747	0.056	0.803	N/A	N/A
	Back Side	1.023	0.089	1.112	N/A	N/A
Hotspot	Front Side	0.747	0.056	0.803	N/A	N/A
	Back Side	1.023	0.089	1.112	N/A	N/A
	Left Side	0.664	N/A	0.664	N/A	N/A
	Right Side	0.531	0.021	0.552	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.486	N/A	0.486	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 5 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 7	WLAN 2.4G			
Head	Left Cheek	0.539	0.067	0.606	N/A	N/A
	Left Tilt 15 Degree	0.274	0.039	0.313	N/A	N/A
	Right Cheek	0.490	0.060	0.550	N/A	N/A
	Right Tilt 15 Degree	0.232	0.029	0.261	N/A	N/A
Body-Worn	Front Side	0.534	0.056	0.590	N/A	N/A
	Back Side	0.687	0.089	0.776	N/A	N/A
Hotspot	Front Side	0.534	0.056	0.590	N/A	N/A
	Back Side	0.687	0.089	0.776	N/A	N/A
	Left Side	0.538	N/A	0.538	N/A	N/A
	Right Side	0.310	0.021	0.331	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.263	N/A	0.263	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 7 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 12	WLAN 2.4G			
Head	Left Cheek	0.229	0.067	0.296	N/A	N/A
	Left Tilt 15 Degree	0.136	0.039	0.175	N/A	N/A

	Right Cheek	0.207	0.060	0.267	N/A	N/A
	Right Tilt 15 Degree	0.106	0.029	0.135	N/A	N/A
Body-Worn	Front Side	0.232	0.056	0.288	N/A	N/A
	Back Side	0.331	0.089	0.420	N/A	N/A
Hotspot	Front Side	0.232	0.056	0.288	N/A	N/A
	Back Side	0.331	0.089	0.420	N/A	N/A
	Left Side	0.261	N/A	0.261	N/A	N/A
	Right Side	0.150	0.021	0.171	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.112	N/A	0.112	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 12 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 17	WLAN 2.4G			
Head	Left Cheek	0.205	0.067	0.272	N/A	N/A
	Left Tilt 15 Degree	0.104	0.039	0.143	N/A	N/A
	Right Cheek	0.180	0.060	0.240	N/A	N/A
	Right Tilt 15 Degree	0.096	0.029	0.125	N/A	N/A
Body-Worn	Front Side	0.262	0.056	0.318	N/A	N/A
	Back Side	0.336	0.089	0.425	N/A	N/A
Hotspot	Front Side	0.262	0.056	0.318	N/A	N/A
	Back Side	0.336	0.089	0.425	N/A	N/A
	Left Side	0.258	N/A	0.258	N/A	N/A
	Right Side	0.159	0.021	0.180	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.127	N/A	0.127	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 17 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 66	WLAN 2.4G			
Head	Left Cheek	0.699	0.067	0.766	N/A	N/A
	Left Tilt 15 Degree	0.364	0.039	0.403	N/A	N/A
	Right Cheek	0.639	0.060	0.699	N/A	N/A
	Right Tilt 15 Degree	0.326	0.029	0.355	N/A	N/A
Body-Worn	Front Side	0.590	0.056	0.646	N/A	N/A
	Back Side	1.209	0.089	1.298	N/A	N/A
Hotspot	Front Side	0.590	0.056	0.646	N/A	N/A

	Back Side	1.209	0.089	1.298	N/A	N/A
	Left Side	0.527	N/A	0.527	N/A	N/A
	Right Side	0.559	0.021	0.580	N/A	N/A
	Top Side	N/A	0.031	0.031	N/A	N/A
	Bottom Side	0.587	N/A	0.587	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 66 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 850	Bluetooth			
Head	Left Cheek	0.997	0.042	1.039	N/A	N/A
	Left Tilt 15 Degree	0.562	0.042	0.604	N/A	N/A
	Right Cheek	0.943	0.042	0.985	N/A	N/A
	Right Tilt 15 Degree	0.467	0.042	0.509	N/A	N/A
Body-Worn	Front Side	0.689	0.021	0.710	N/A	N/A
	Back Side	1.319	0.021	1.340	N/A	N/A
Hotspot	Front Side	0.689	0.021	0.710	N/A	N/A
	Back Side	1.319	0.021	1.340	N/A	N/A
	Left Side	0.646	N/A	0.646	N/A	N/A
	Right Side	0.618	0.021	0.639	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.519	N/A	0.519	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM850 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 1900	Bluetooth			
Head	Left Cheek	0.764	0.042	0.806	N/A	N/A
	Left Tilt 15 Degree	0.393	0.042	0.435	N/A	N/A
	Right Cheek	0.653	0.042	0.695	N/A	N/A
	Right Tilt 15 Degree	0.358	0.042	0.400	N/A	N/A
Body-Worn	Front Side	0.679	0.021	0.700	N/A	N/A
	Back Side	0.851	0.021	0.872	N/A	N/A
Hotspot	Front Side	0.679	0.021	0.700	N/A	N/A
	Back Side	0.851	0.021	0.872	N/A	N/A
	Left Side	0.636	N/A	0.636	N/A	N/A
	Right Side	0.396	0.021	0.417	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.306	N/A	0.306	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM1900 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 2	Bluetooth			
Head	Left Cheek	0.479	0.042	0.521	N/A	N/A
	Left Tilt 15 Degree	0.268	0.042	0.310	N/A	N/A
	Right Cheek	0.417	0.042	0.459	N/A	N/A
	Right Tilt 15 Degree	0.228	0.042	0.270	N/A	N/A
Body-Worn	Front Side	0.647	0.021	0.668	N/A	N/A
	Back Side	1.110	0.021	1.131	N/A	N/A
Hotspot	Front Side	0.647	0.021	0.668	N/A	N/A
	Back Side	1.110	0.021	1.131	N/A	N/A
	Left Side	0.657	N/A	0.657	N/A	N/A
	Right Side	0.497	0.021	0.518	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.409	N/A	0.409	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 2 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 4	Bluetooth			
Head	Left Cheek	0.685	0.042	0.727	N/A	N/A
	Left Tilt 15 Degree	0.382	0.042	0.424	N/A	N/A
	Right Cheek	0.642	0.042	0.684	N/A	N/A
	Right Tilt 15 Degree	0.316	0.042	0.358	N/A	N/A
Body-Worn	Front Side	0.624	0.021	0.645	N/A	N/A
	Back Side	0.900	0.021	0.921	N/A	N/A
Hotspot	Front Side	0.624	0.021	0.645	N/A	N/A
	Back Side	0.900	0.021	0.921	N/A	N/A
	Left Side	0.612	N/A	0.612	N/A	N/A
	Right Side	0.426	0.021	0.447	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.355	N/A	0.355	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 4 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 5	Bluetooth			
Head	Left Cheek	0.694	0.042	0.736	N/A	N/A
	Left Tilt 15 Degree	0.352	0.042	0.394	N/A	N/A

	Right Cheek	0.619	0.042	0.661	N/A	N/A
	Right Tilt 15 Degree	0.326	0.042	0.368	N/A	N/A
Body-Worn	Front Side	0.697	0.021	0.718	N/A	N/A
	Back Side	0.863	0.021	0.884	N/A	N/A
Hotspot	Front Side	0.697	0.021	0.718	N/A	N/A
	Back Side	0.863	0.021	0.884	N/A	N/A
	Left Side	0.631	N/A	0.631	N/A	N/A
	Right Side	0.406	0.021	0.427	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.318	N/A	0.318	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 5 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 2	Bluetooth			
Head	Left Cheek	0.258	0.042	0.300	N/A	N/A
	Left Tilt 15 Degree	0.131	0.042	0.173	N/A	N/A
	Right Cheek	0.255	0.042	0.297	N/A	N/A
	Right Tilt 15 Degree	0.130	0.042	0.172	N/A	N/A
Body-Worn	Front Side	0.193	0.021	0.214	N/A	N/A
	Back Side	0.255	0.021	0.276	N/A	N/A
Hotspot	Front Side	0.193	0.021	0.214	N/A	N/A
	Back Side	0.255	0.021	0.276	N/A	N/A
	Left Side	0.202	N/A	0.202	N/A	N/A
	Right Side	0.118	0.021	0.139	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.093	N/A	0.093	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 2 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 4	Bluetooth			
Head	Left Cheek	0.293	0.042	0.335	N/A	N/A
	Left Tilt 15 Degree	0.172	0.042	0.214	N/A	N/A
	Right Cheek	0.264	0.042	0.306	N/A	N/A
	Right Tilt 15 Degree	0.124	0.042	0.166	N/A	N/A
Body-Worn	Front Side	0.751	0.021	0.772	N/A	N/A
	Back Side	1.282	0.021	1.303	N/A	N/A
Hotspot	Front Side	0.751	0.021	0.772	N/A	N/A
	Back Side	1.282	0.021	1.303	N/A	N/A

	Left Side	0.741	N/A	0.741	N/A	N/A
	Right Side	0.607	0.021	0.628	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.442	N/A	0.442	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 4 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 5	Bluetooth			
Head	Left Cheek	0.767	0.042	0.809	N/A	N/A
	Left Tilt 15 Degree	0.432	0.042	0.474	N/A	N/A
	Right Cheek	0.725	0.042	0.767	N/A	N/A
	Right Tilt 15 Degree	0.343	0.042	0.385	N/A	N/A
Body-Worn	Front Side	0.747	0.021	0.768	N/A	N/A
	Back Side	1.023	0.021	1.044	N/A	N/A
Hotspot	Front Side	0.747	0.021	0.768	N/A	N/A
	Back Side	1.023	0.021	1.044	N/A	N/A
	Left Side	0.664	N/A	0.664	N/A	N/A
	Right Side	0.531	0.021	0.552	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.486	N/A	0.486	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 5 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 7	Bluetooth			
Head	Left Cheek	0.539	0.042	0.581	N/A	N/A
	Left Tilt 15 Degree	0.274	0.042	0.316	N/A	N/A
	Right Cheek	0.490	0.042	0.532	N/A	N/A
	Right Tilt 15 Degree	0.232	0.042	0.274	N/A	N/A
Body-Worn	Front Side	0.534	0.021	0.555	N/A	N/A
	Back Side	0.687	0.021	0.708	N/A	N/A
Hotspot	Front Side	0.534	0.021	0.555	N/A	N/A
	Back Side	0.687	0.021	0.708	N/A	N/A
	Left Side	0.538	N/A	0.538	N/A	N/A
	Right Side	0.310	0.021	0.331	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.263	N/A	0.263	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 7 and Bluetooth.

Test Position	Scaled SAR _{MAX}		Σ 1-g SAR	SPLSR	Remark
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		LTE Band 12	Bluetooth	(W/Kg)		
Head	Left Cheek	0.229	0.042	0.271	N/A	N/A
	Left Tilt 15 Degree	0.136	0.042	0.178	N/A	N/A
	Right Cheek	0.207	0.042	0.249	N/A	N/A
	Right Tilt 15 Degree	0.106	0.042	0.148	N/A	N/A
Body-Worn	Front Side	0.232	0.021	0.253	N/A	N/A
	Back Side	0.331	0.021	0.352	N/A	N/A
Hotspot	Front Side	0.232	0.021	0.253	N/A	N/A
	Back Side	0.331	0.021	0.352	N/A	N/A
	Left Side	0.261	N/A	0.261	N/A	N/A
	Right Side	0.150	0.021	0.171	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.112	N/A	0.112	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 12 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 17	Bluetooth			
Head	Left Cheek	0.205	0.042	0.247	N/A	N/A
	Left Tilt 15 Degree	0.104	0.042	0.146	N/A	N/A
	Right Cheek	0.180	0.042	0.222	N/A	N/A
	Right Tilt 15 Degree	0.096	0.042	0.138	N/A	N/A
Body-Worn	Front Side	0.262	0.021	0.283	N/A	N/A
	Back Side	0.336	0.021	0.357	N/A	N/A
Hotspot	Front Side	0.262	0.021	0.283	N/A	N/A
	Back Side	0.336	0.021	0.357	N/A	N/A
	Left Side	0.258	N/A	0.258	N/A	N/A
	Right Side	0.159	0.021	0.180	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.127	N/A	0.127	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 17 and Bluetooth.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 66	Bluetooth			
Head	Left Cheek	0.699	0.042	0.741	N/A	N/A
	Left Tilt 15 Degree	0.364	0.042	0.406	N/A	N/A
	Right Cheek	0.639	0.042	0.681	N/A	N/A

	Right Tilt 15 Degree	0.326	0.042	0.368	N/A	N/A
Body-Worn	Front Side	0.590	0.021	0.611	N/A	N/A
	Back Side	1.209	0.021	1.230	N/A	N/A
Hotspot	Front Side	0.590	0.021	0.611	N/A	N/A
	Back Side	1.209	0.021	1.230	N/A	N/A
	Left Side	0.527	N/A	0.527	N/A	N/A
	Right Side	0.559	0.021	0.580	N/A	N/A
	Top Side	N/A	0.021	0.021	N/A	N/A
	Bottom Side	0.587	N/A	0.587	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 66 and Bluetooth.

11. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

12. Appendix B. System Check Plots

Table of contents
MEASUREMENT 1 System Performance Check - SID750 - Head
MEASUREMENT 2 System Performance Check - SID750 - Body
MEASUREMENT 3 System Performance Check - SID835 - Head
MEASUREMENT 4 System Performance Check - SID835 - Body
MEASUREMENT 5 System Performance Check - SID1800 - Head
MEASUREMENT 6 System Performance Check - SID1800 - Body
MEASUREMENT 7 System Performance Check - SID1900 - Head
MEASUREMENT 8 System Performance Check - SID1900 - Body
MEASUREMENT 9 System Performance Check - SID2450 - Head
MEASUREMENT 10 System Performance Check - SID2450 - Body
MEASUREMENT 11 System Performance Check - SID2600 - Head
MEASUREMENT 12 System Performance Check - SID2600 - Body

MEASUREMENT 1

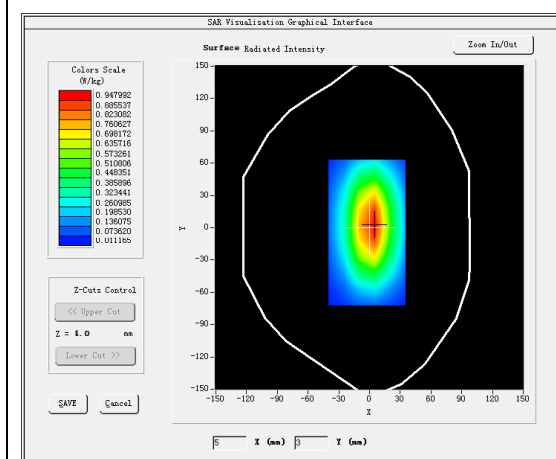
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW750</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

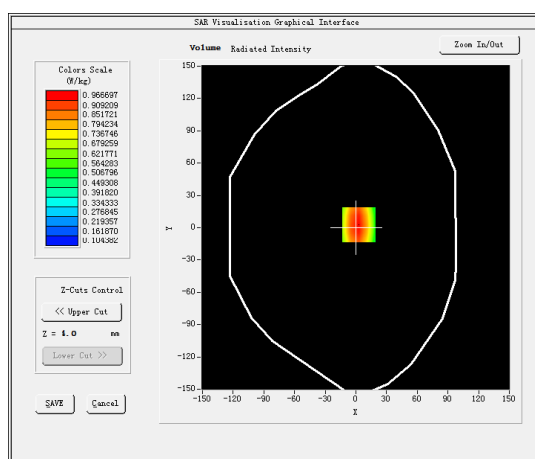
B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative permittivity (real part)	41.533162
Relative permittivity (imaginary part)	22.311263
Conductivity (S/m)	0.922262
Variation (%)	-1.810000

SURFACE SAR



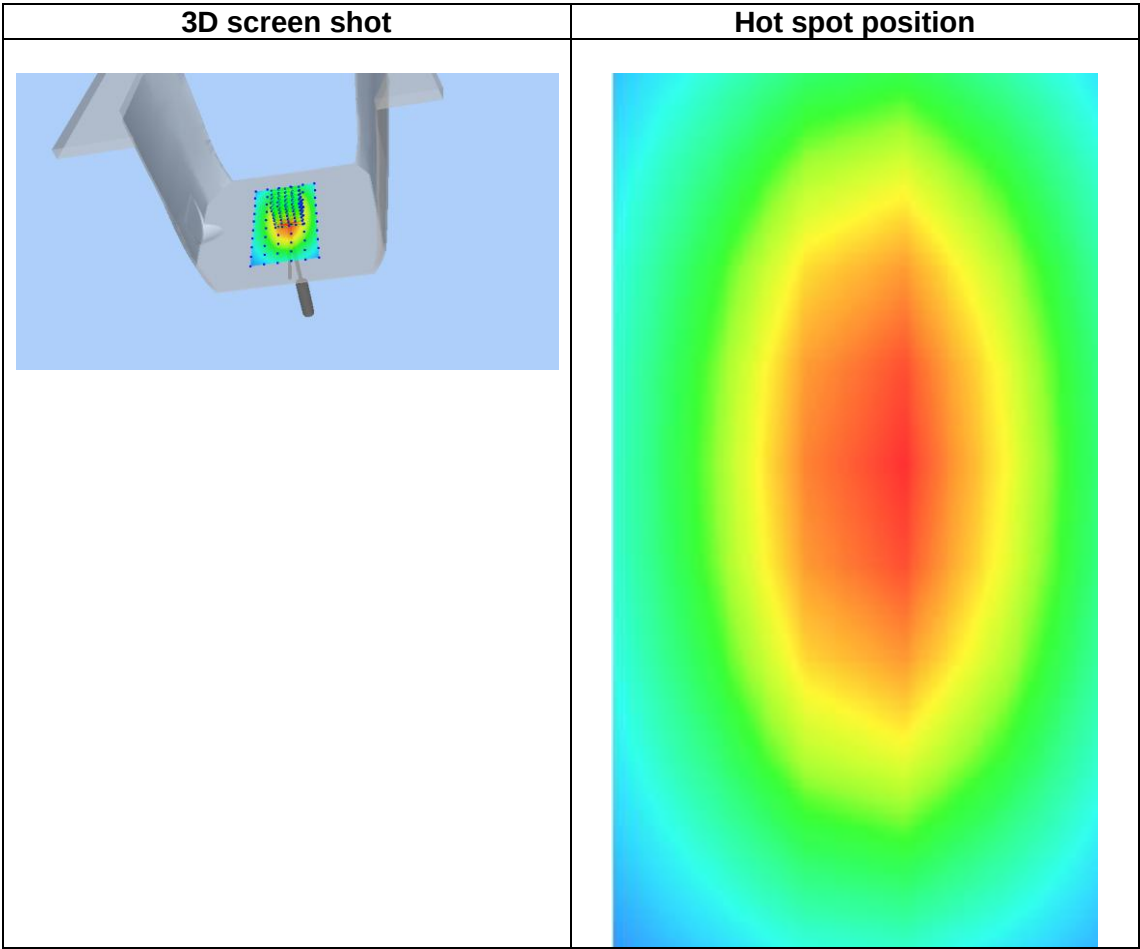
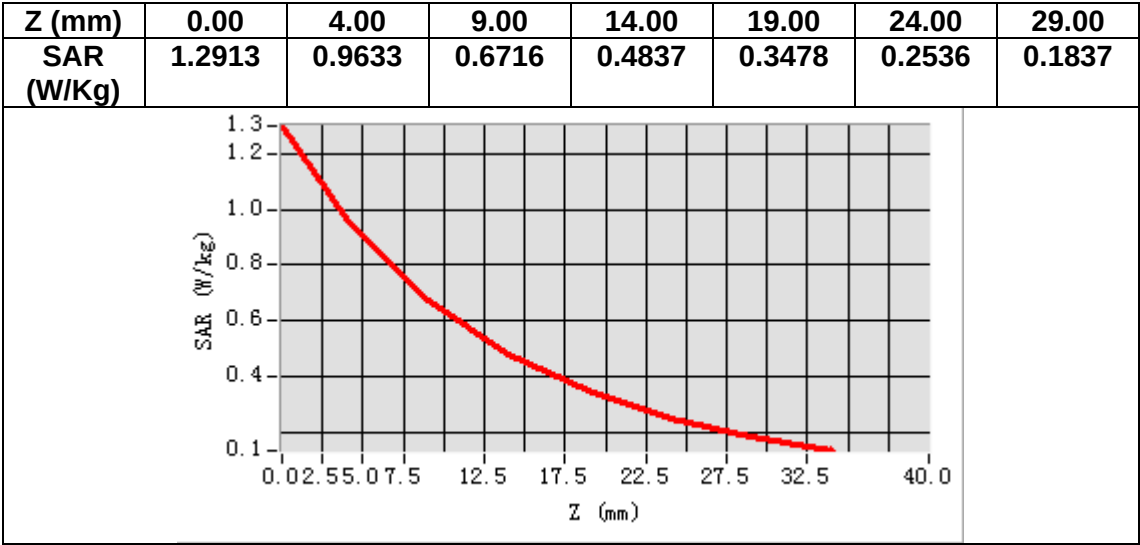
VOLUME SAR



Maximum location: X=3.00, Y=3.00

SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.557218
SAR 1g (W/Kg)	0.878362



MEASUREMENT 2

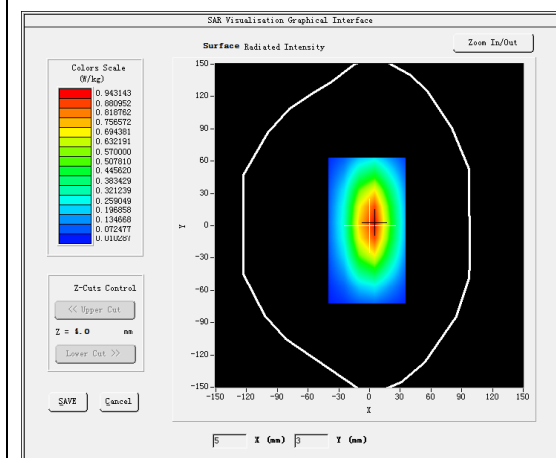
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW750</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

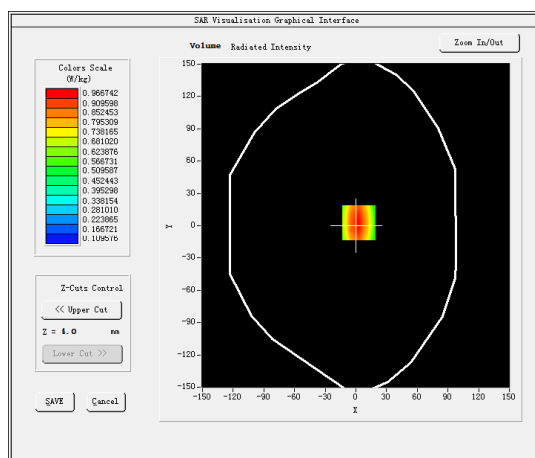
B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative permittivity (real part)	55.470248
Relative permittivity (imaginary part)	23.163842
Conductivity (S/m)	0.960318
Variation (%)	-0.490000

SURFACE SAR



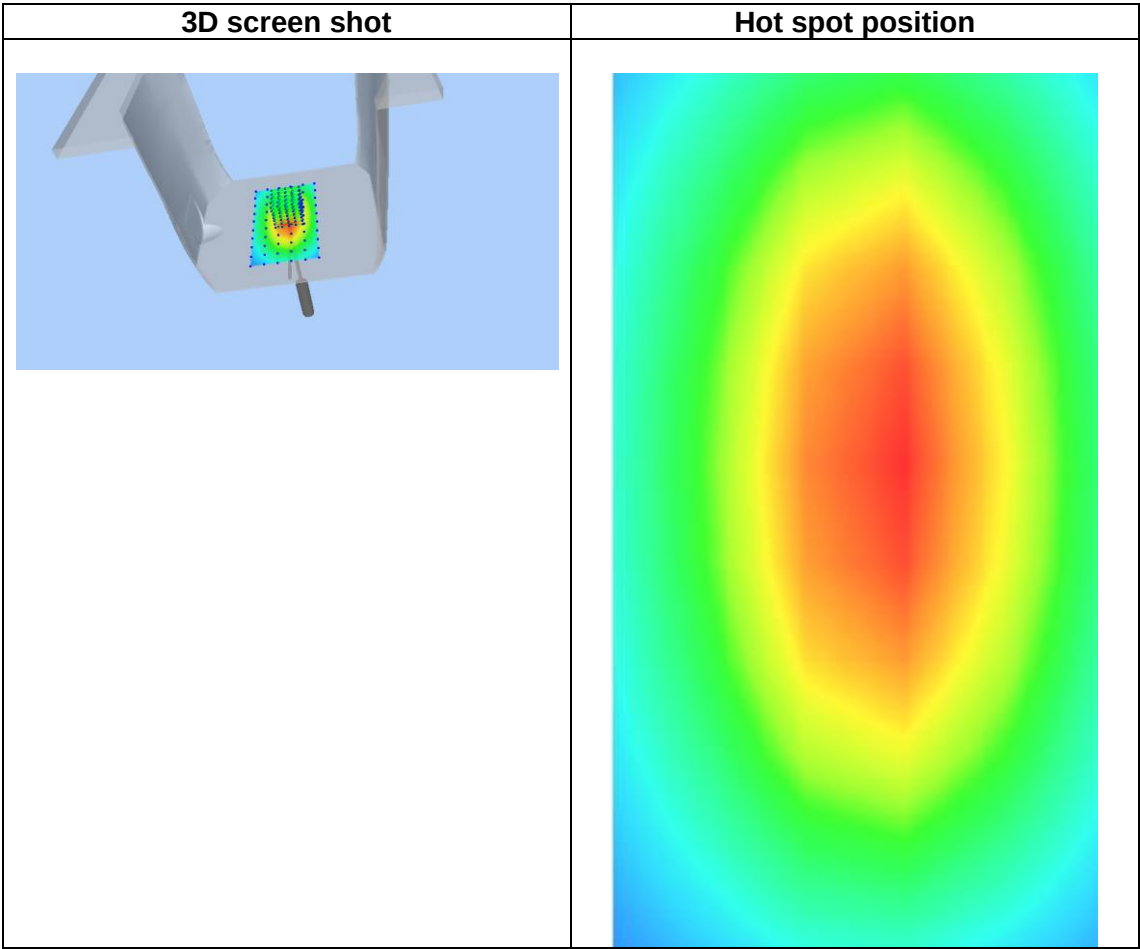
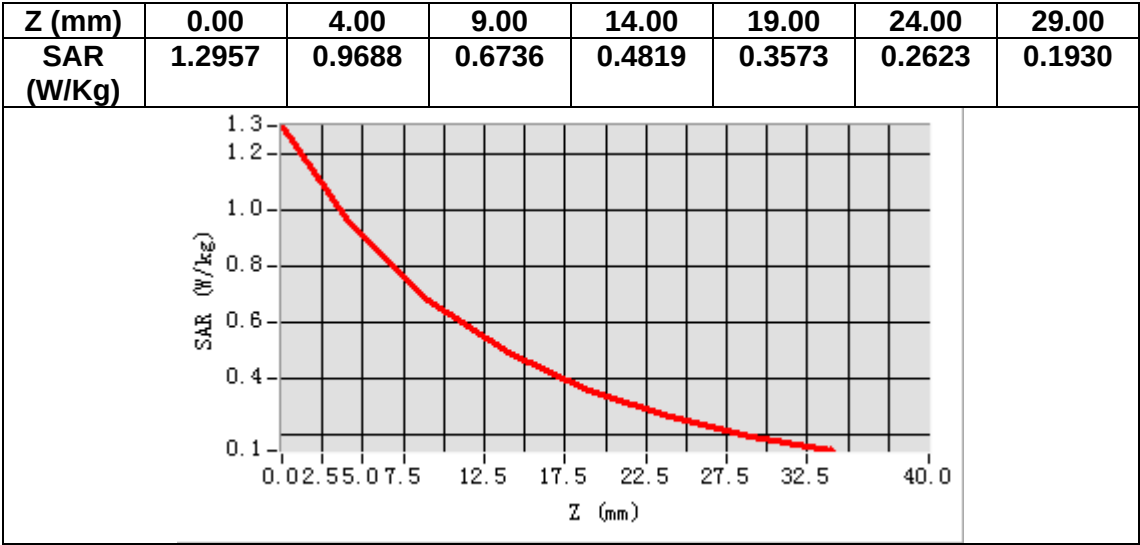
VOLUME SAR



Maximum location: X=3.00, Y=3.00

SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.606281
SAR 1g (W/Kg)	0.845263



MEASUREMENT 3

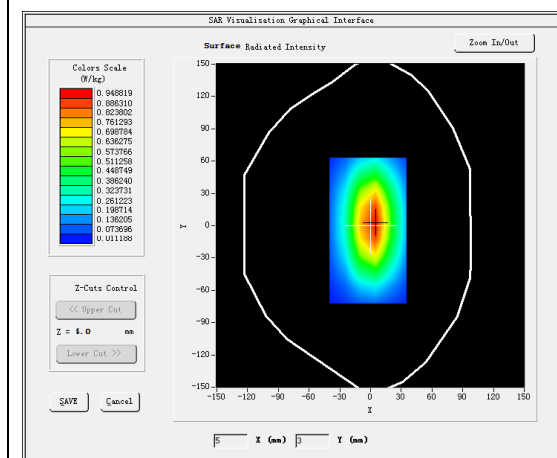
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

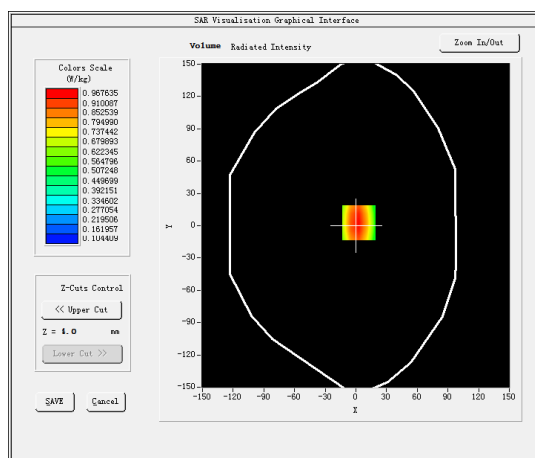
B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.743541
Relative permittivity (imaginary part)	19.971613
Conductivity (S/m)	0.930542
Variation (%)	1.870000

SURFACE SAR



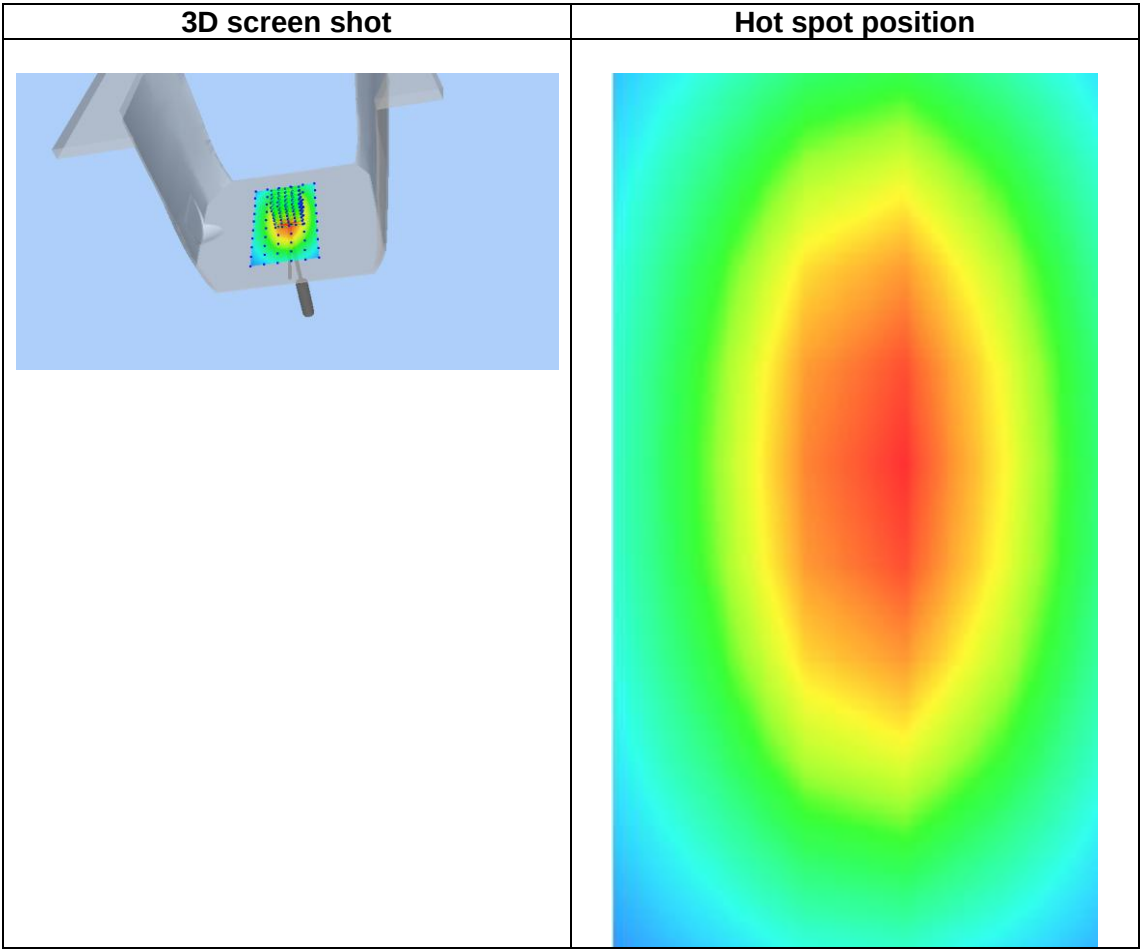
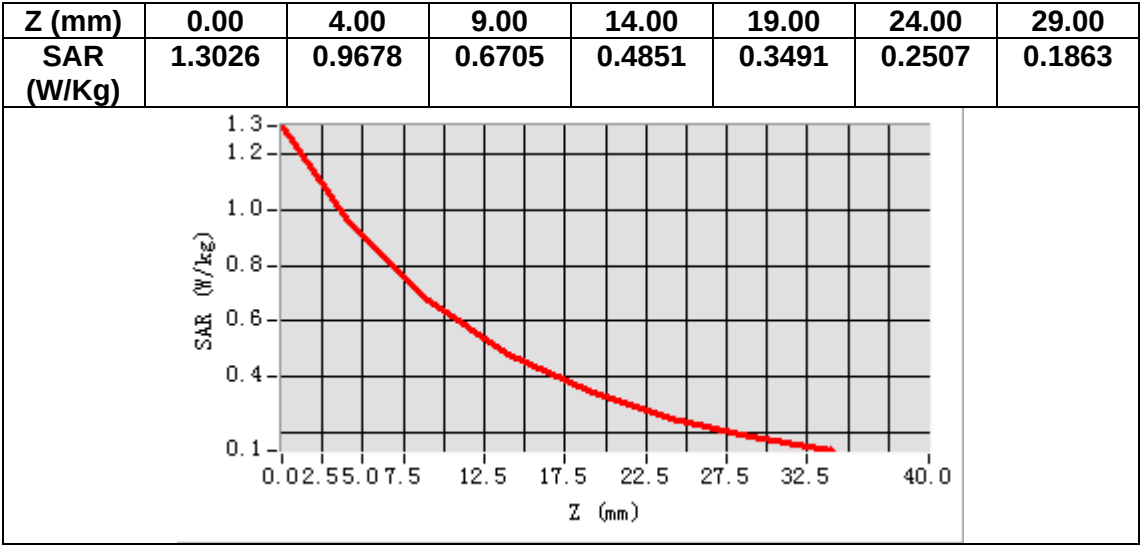
VOLUME SAR



Maximum location: X=3.00, Y=3.00

SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.637466
SAR 1g (W/Kg)	0.904035



MEASUREMENT 4

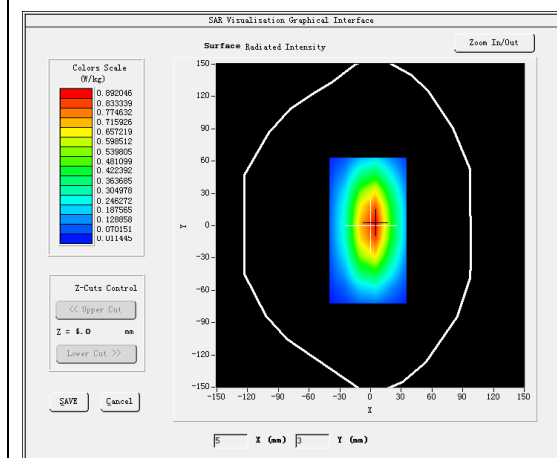
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

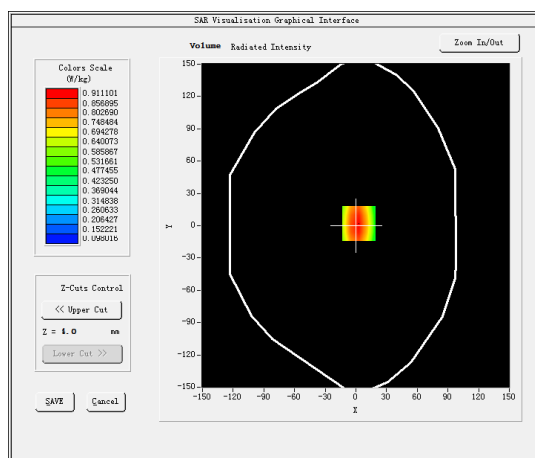
B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative permittivity (real part)	54.471101
Relative permittivity (imaginary part)	21.213359
Conductivity (S/m)	0.981236
Variation (%)	-1.210000

SURFACE SAR



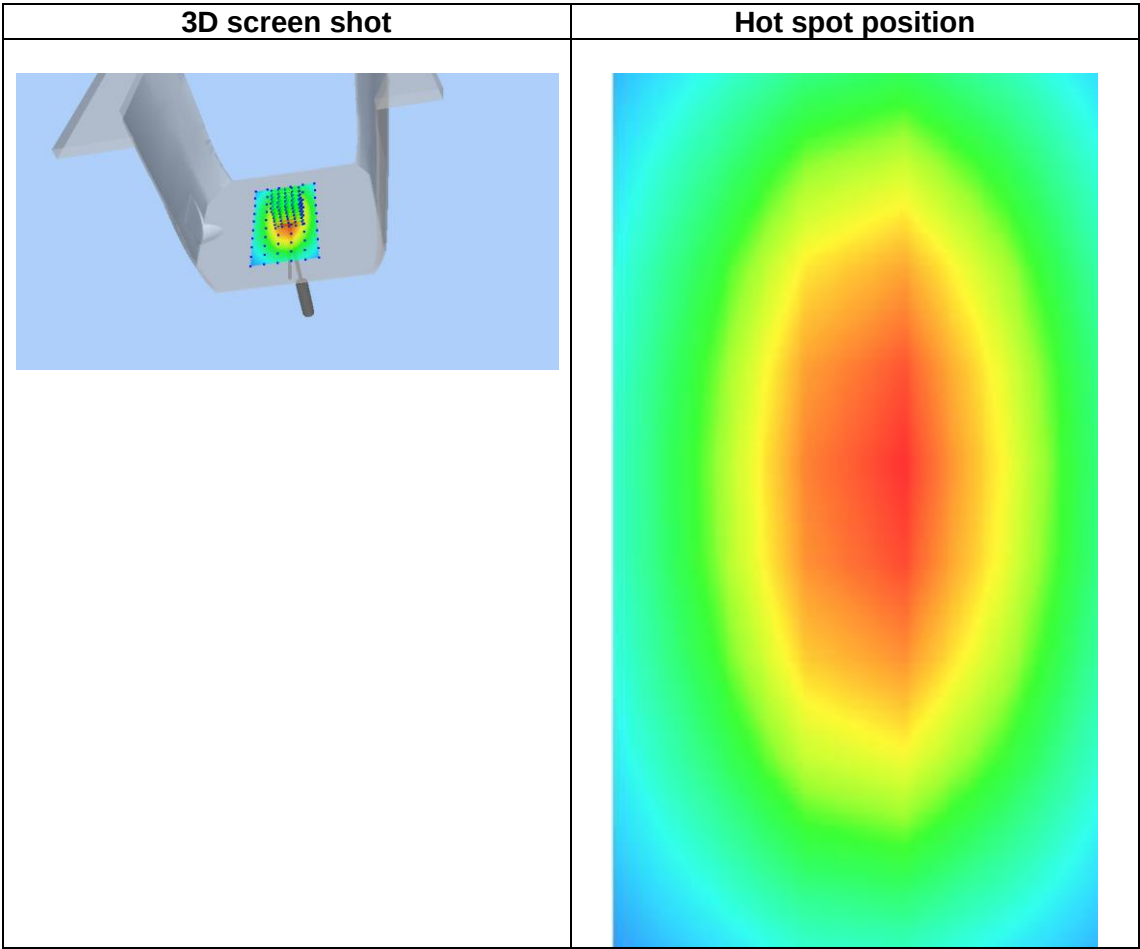
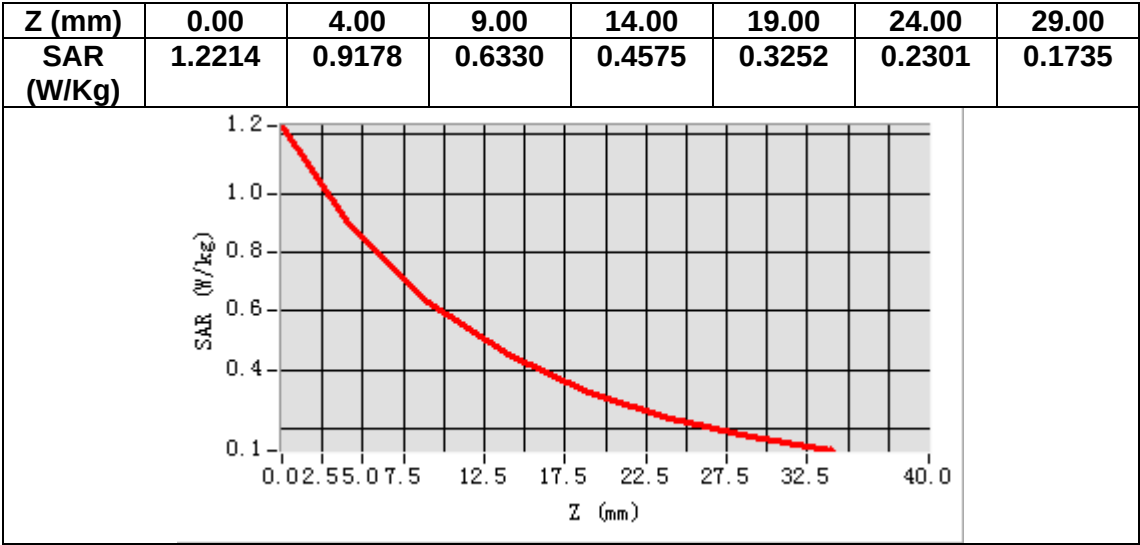
VOLUME SAR



Maximum location: X=3.00, Y=2.00

SAR Peak: 1.23 W/kg

SAR 10g (W/Kg)	0.628123
SAR 1g (W/Kg)	1.028356



MEASUREMENT 5

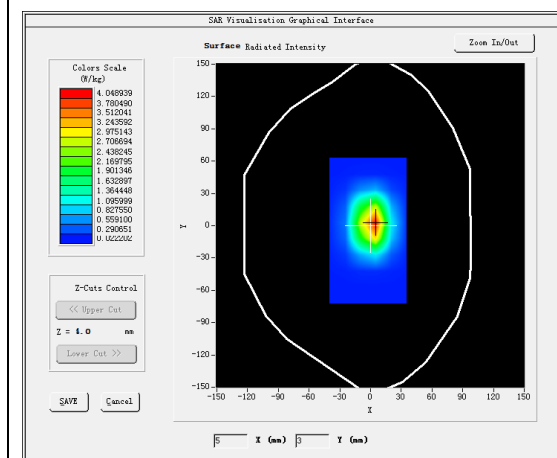
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

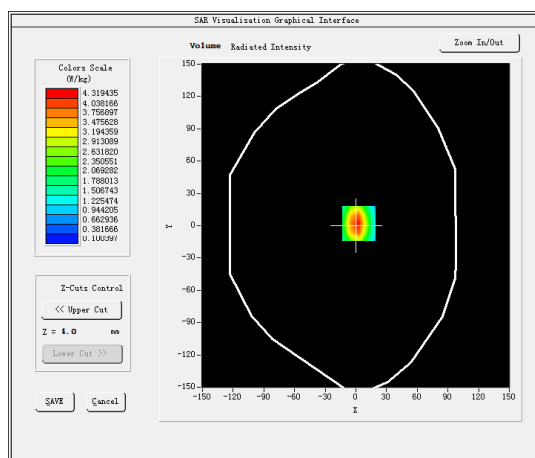
B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative permittivity (real part)	38.521237
Relative permittivity (imaginary part)	13.863229
Conductivity (S/m)	1.391367
Variation (%)	-2.113000

SURFACE SAR



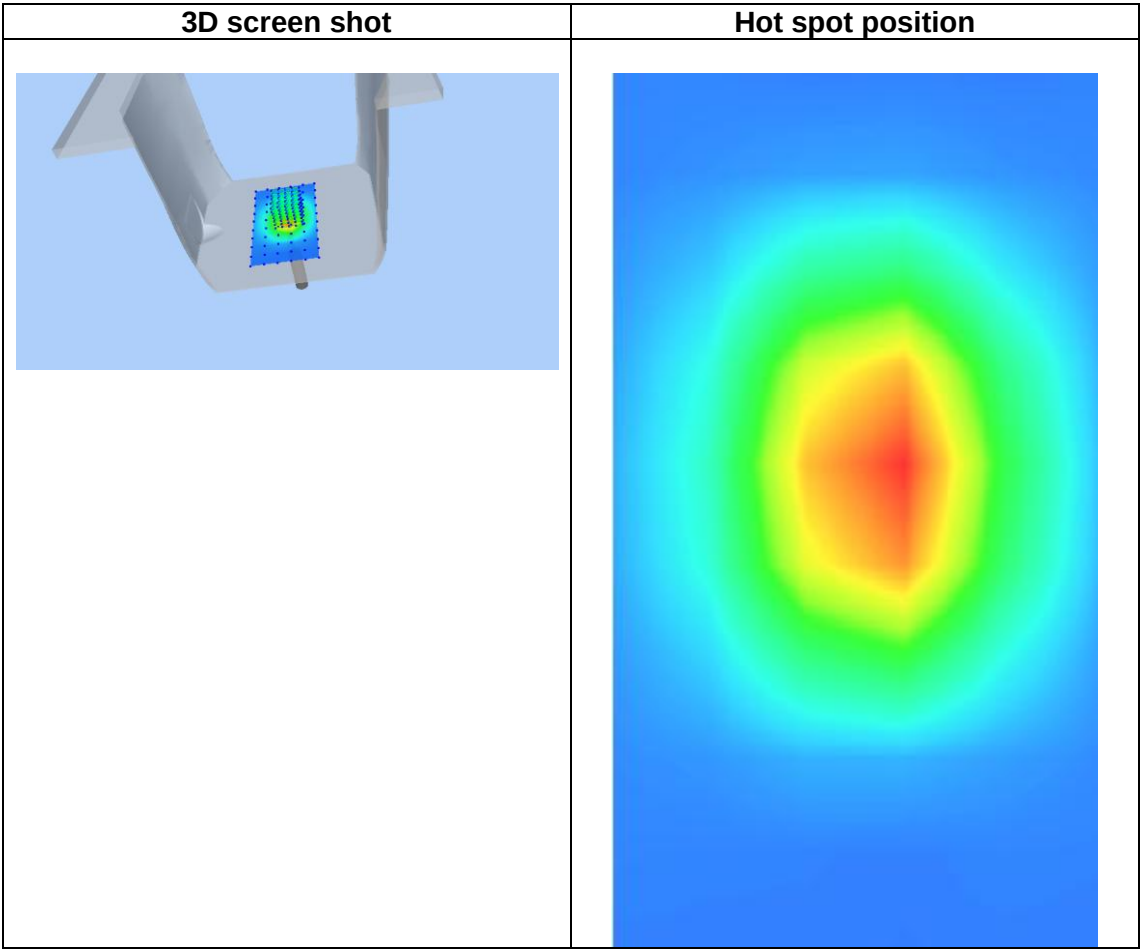
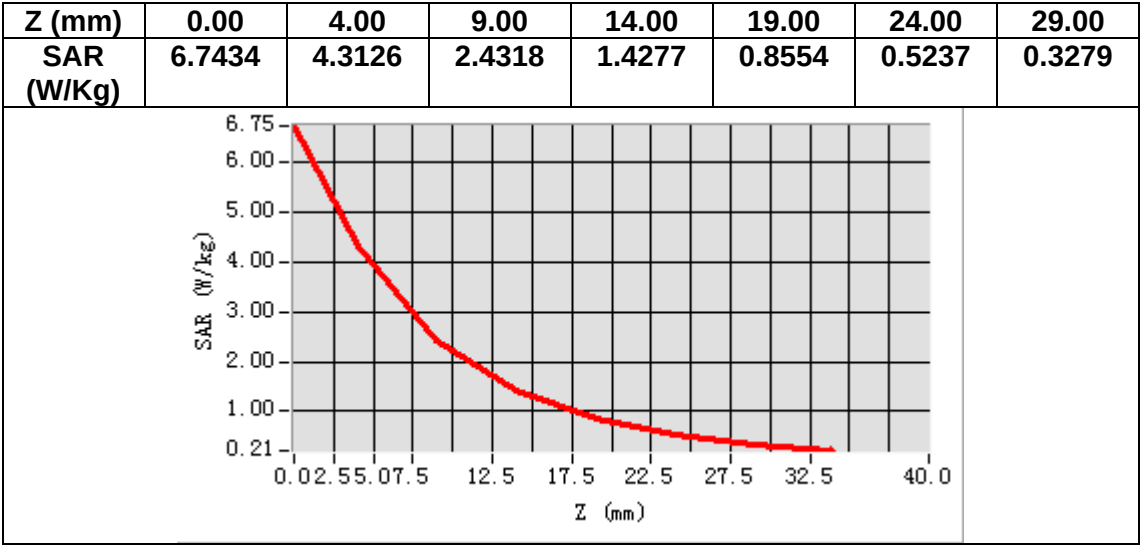
VOLUME SAR



Maximum location: X=3.00, Y=2.00

SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	1.943397
SAR 1g (W/Kg)	3.769451



MEASUREMENT 6

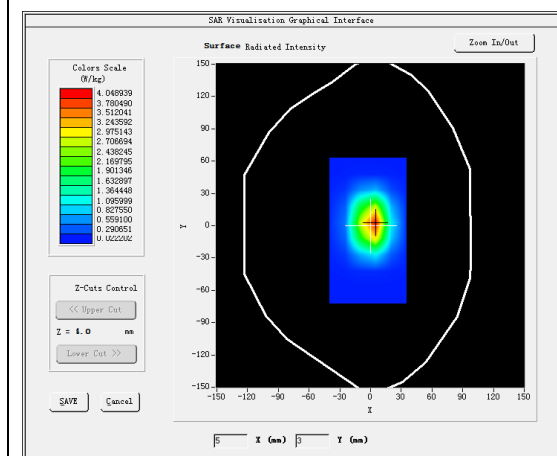
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

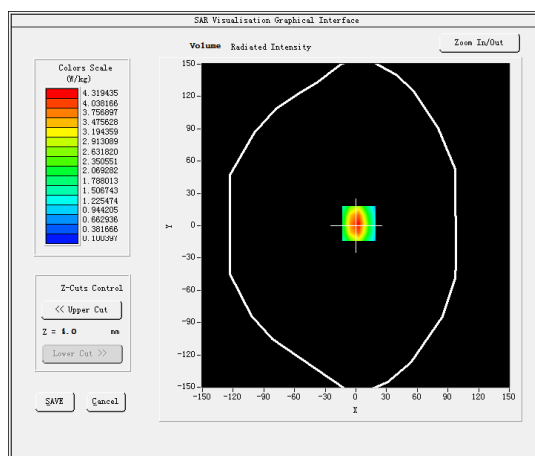
B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative permittivity (real part)	54.043510
Relative permittivity (imaginary part)	15.144016
Conductivity (S/m)	1.513096
Variation (%)	2.020000

SURFACE SAR



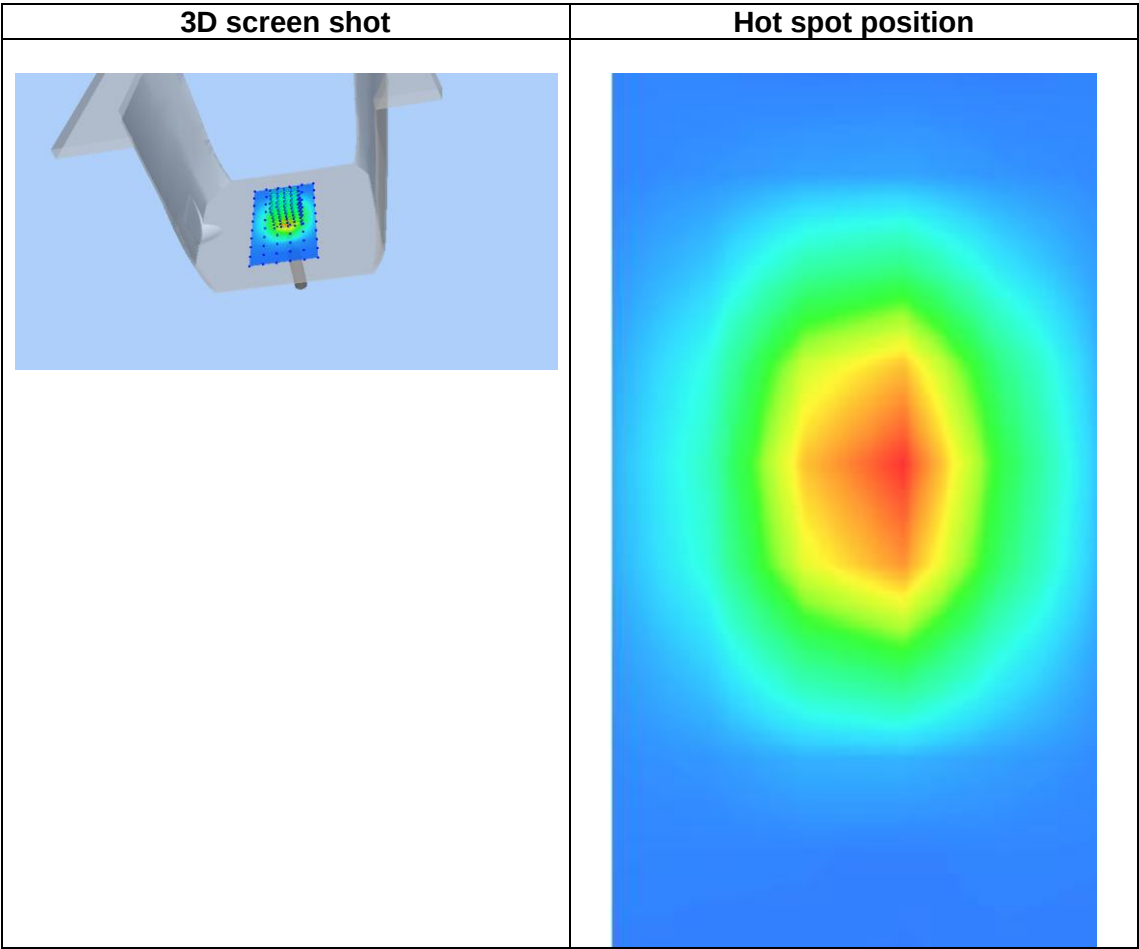
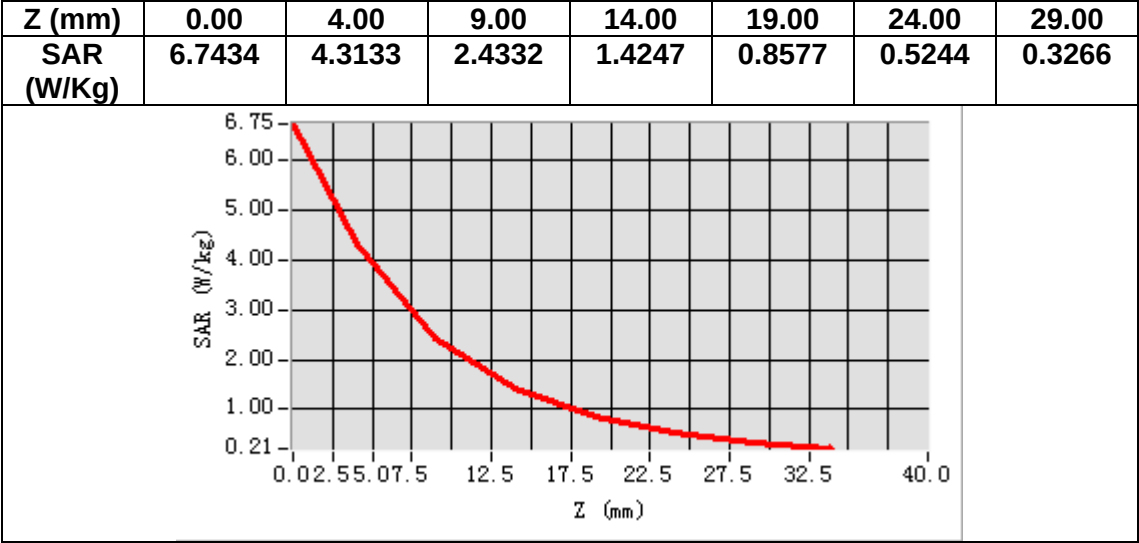
VOLUME SAR



Maximum location: X=3.00, Y=2.00

SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	2.019379
SAR 1g (W/Kg)	3.741268



MEASUREMENT 7

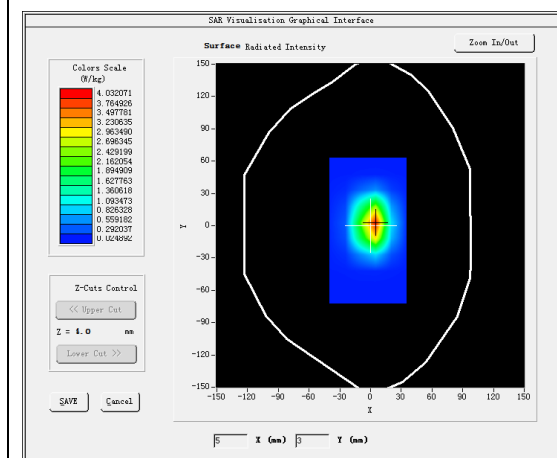
A. Experimental conditions.

Area Scan	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
ZoomScan	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Dipole</u>
Band	<u>CW1900</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>

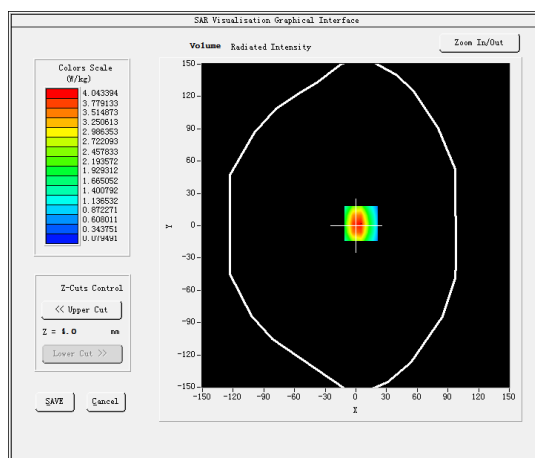
B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	38.581287
Relative permittivity (imaginary part)	13.633008
Conductivity (S/m)	1.440336
Variation (%)	-1.430000

SURFACE SAR



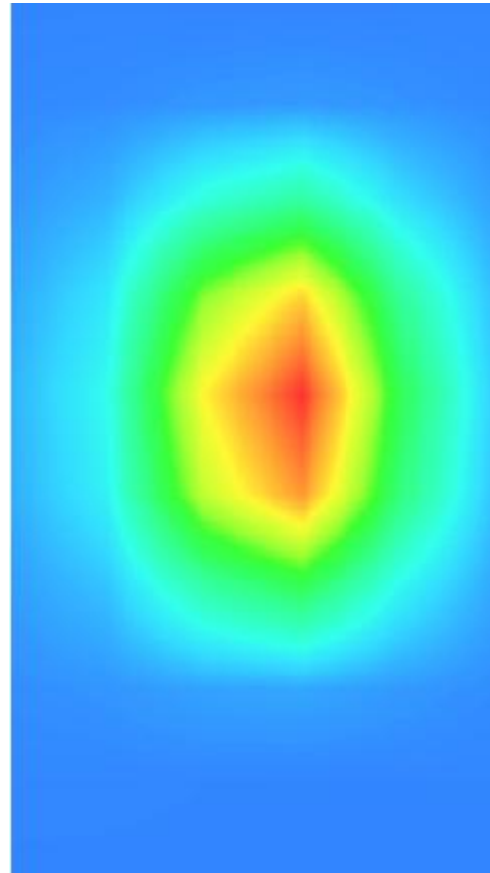
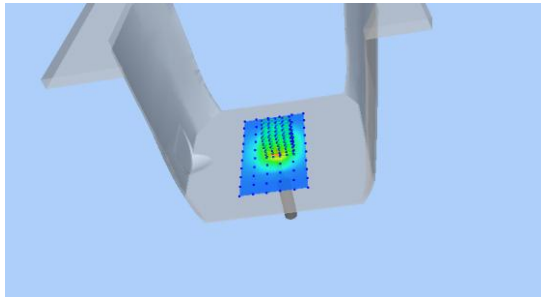
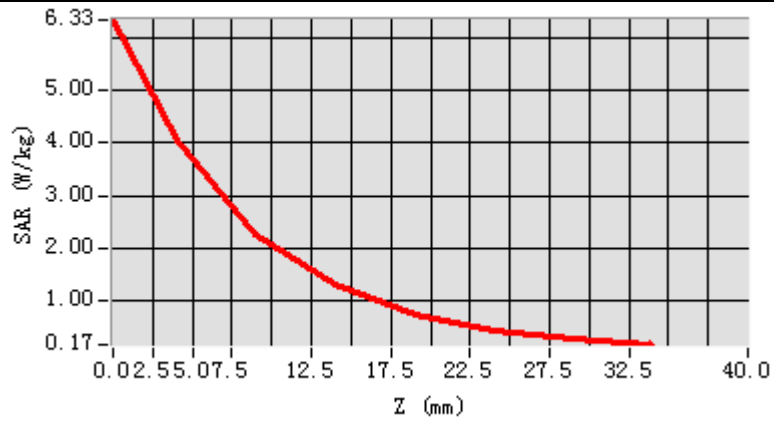
VOLUME SAR



Maximum location: X=5.00, Y=2.00

SAR Peak: 6.70 W/kg

SAR 10g (W/Kg)	1.973456
SAR 1g (W/Kg)	3.915365



MEASUREMENT 8

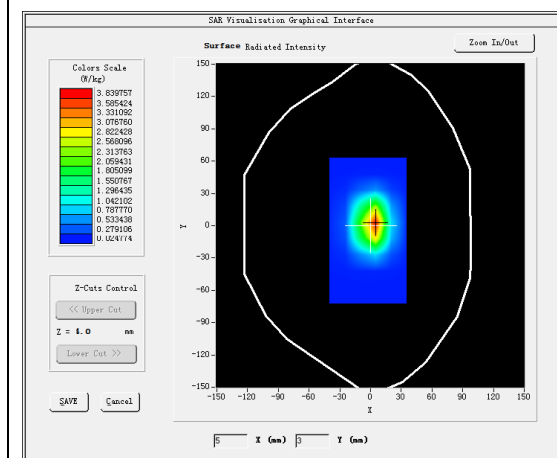
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

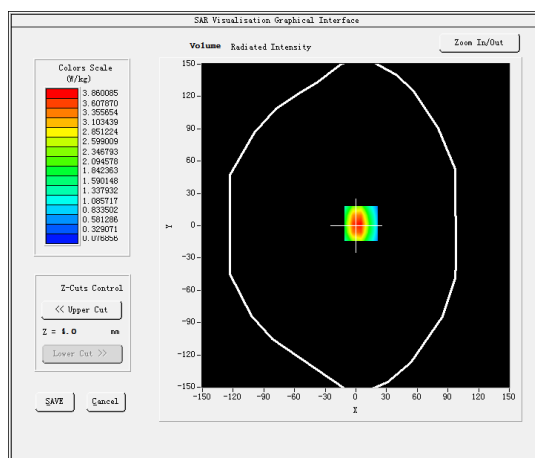
B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	54.213335
Relative permittivity (imaginary part)	14.513503
Conductivity (S/m)	1.533566
Variation (%)	0.120000

SURFACE SAR



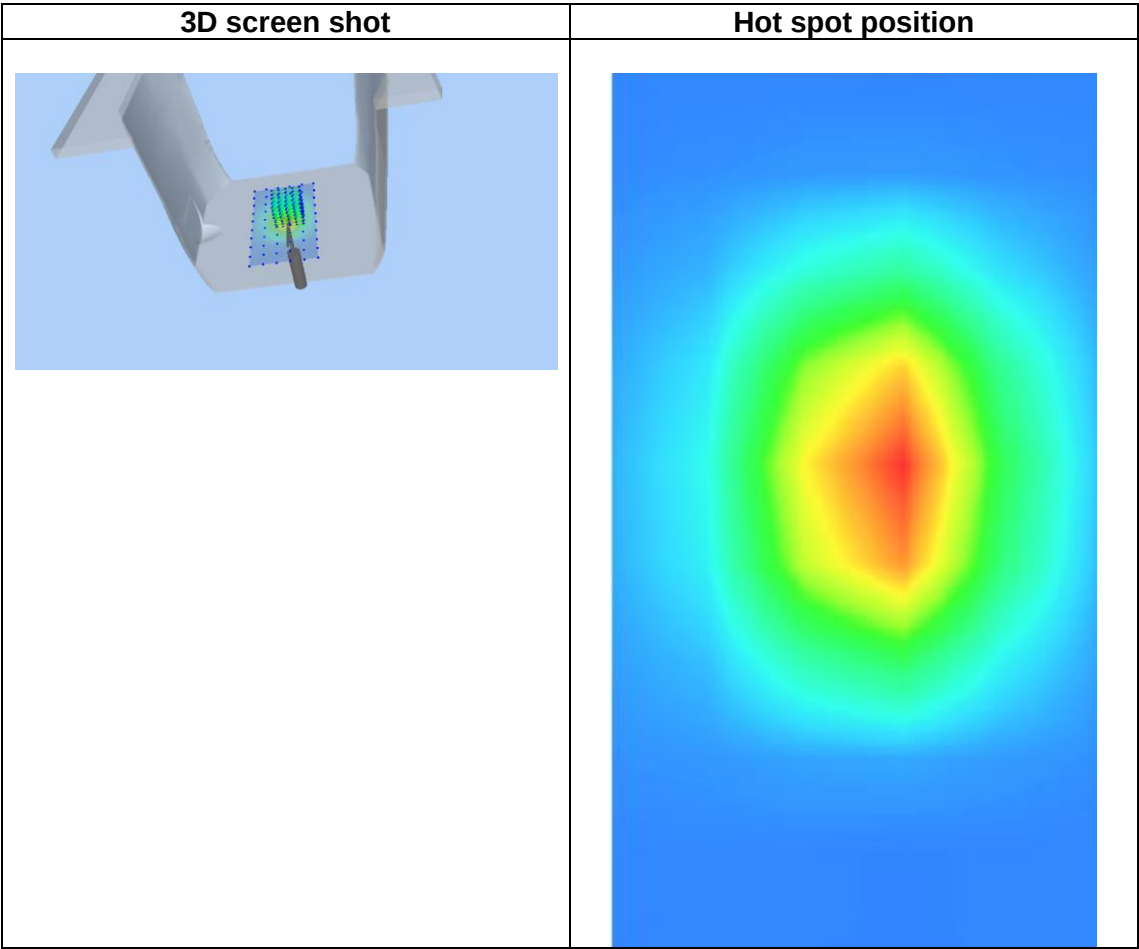
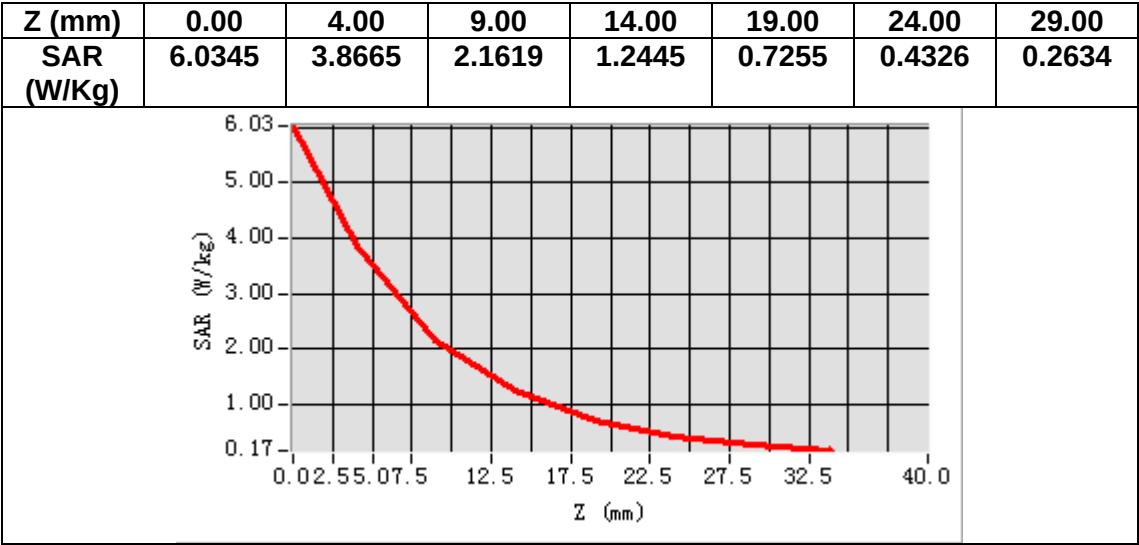
VOLUME SAR



Maximum location: X=5.00, Y=2.00

SAR Peak: 6.39 W/kg

SAR 10g (W/Kg)	2.169329
SAR 1g (W/Kg)	3.712402



MEASUREMENT 9

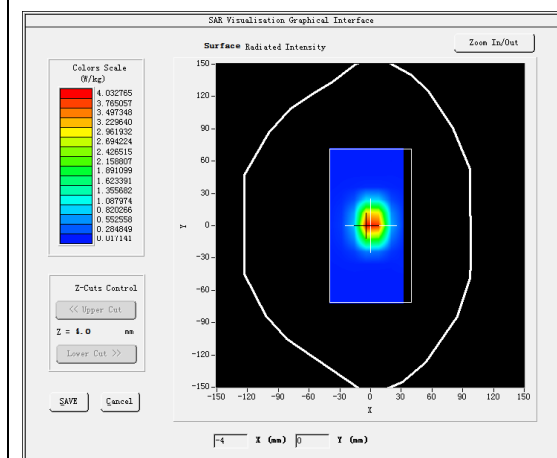
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

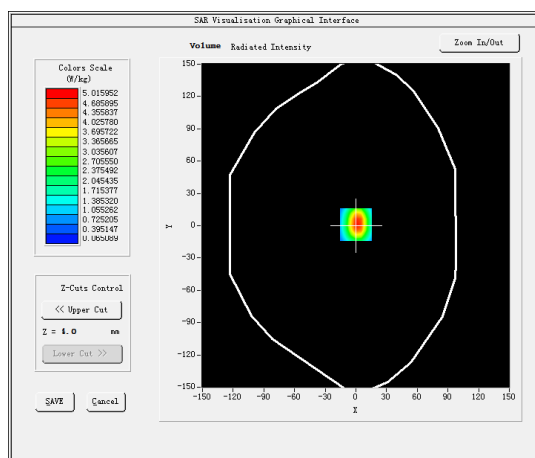
B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative permittivity (real part)	38.451421
Relative permittivity (imaginary part)	13.602631
Conductivity (S/m)	1.850663
Variation (%)	-3.350000

SURFACE SAR



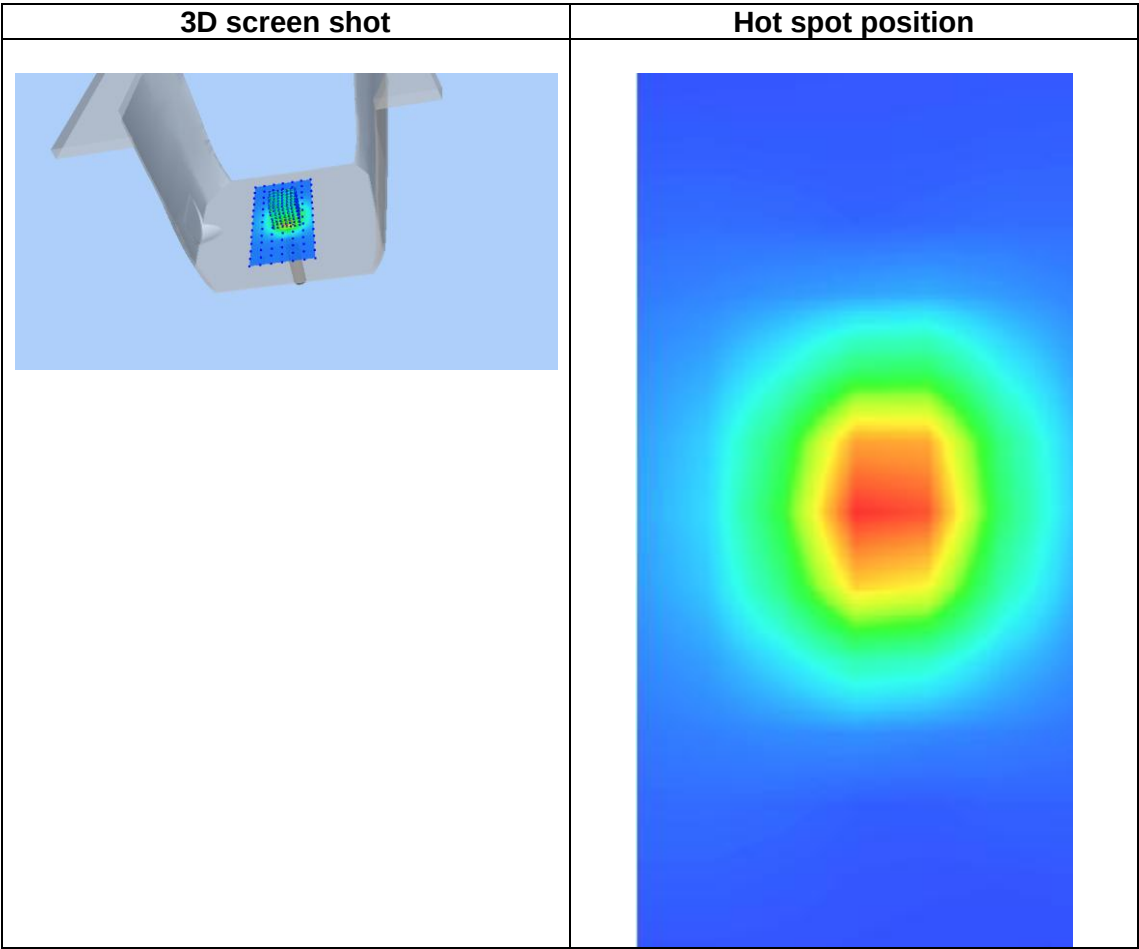
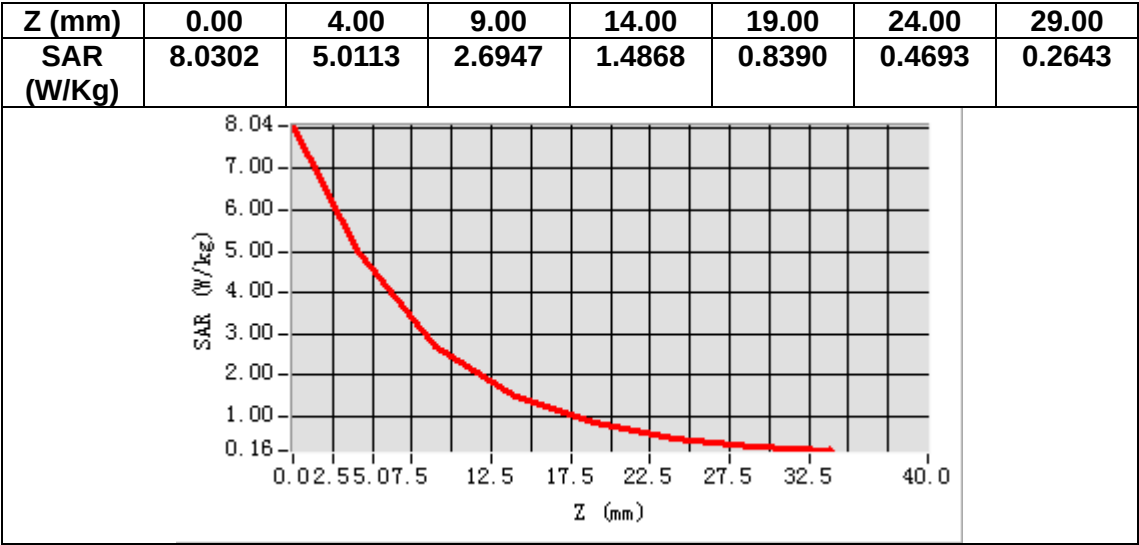
VOLUME SAR



Maximum location: X=0.00, Y=1.00

SAR Peak: 8.14 W/kg

SAR 10g (W/Kg)	2.358375
SAR 1g (W/Kg)	5.061435



MEASUREMENT 10

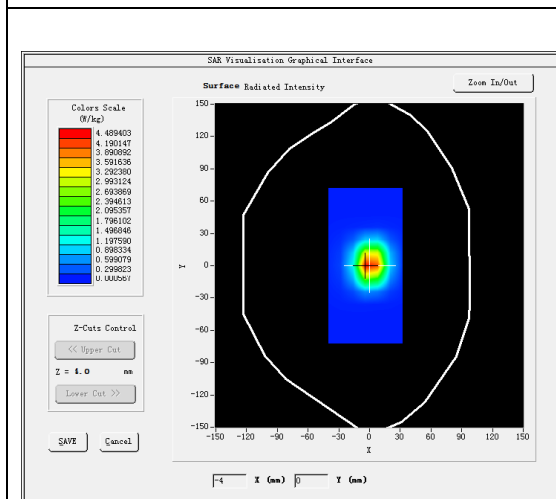
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

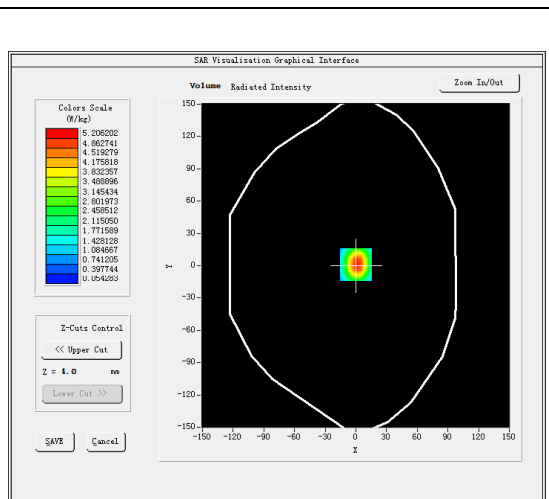
B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative permittivity (real part)	51.471497
Relative permittivity (imaginary part)	13.863566
Conductivity (S/m)	1.892816
Variation (%)	0.420000

SURFACE SAR



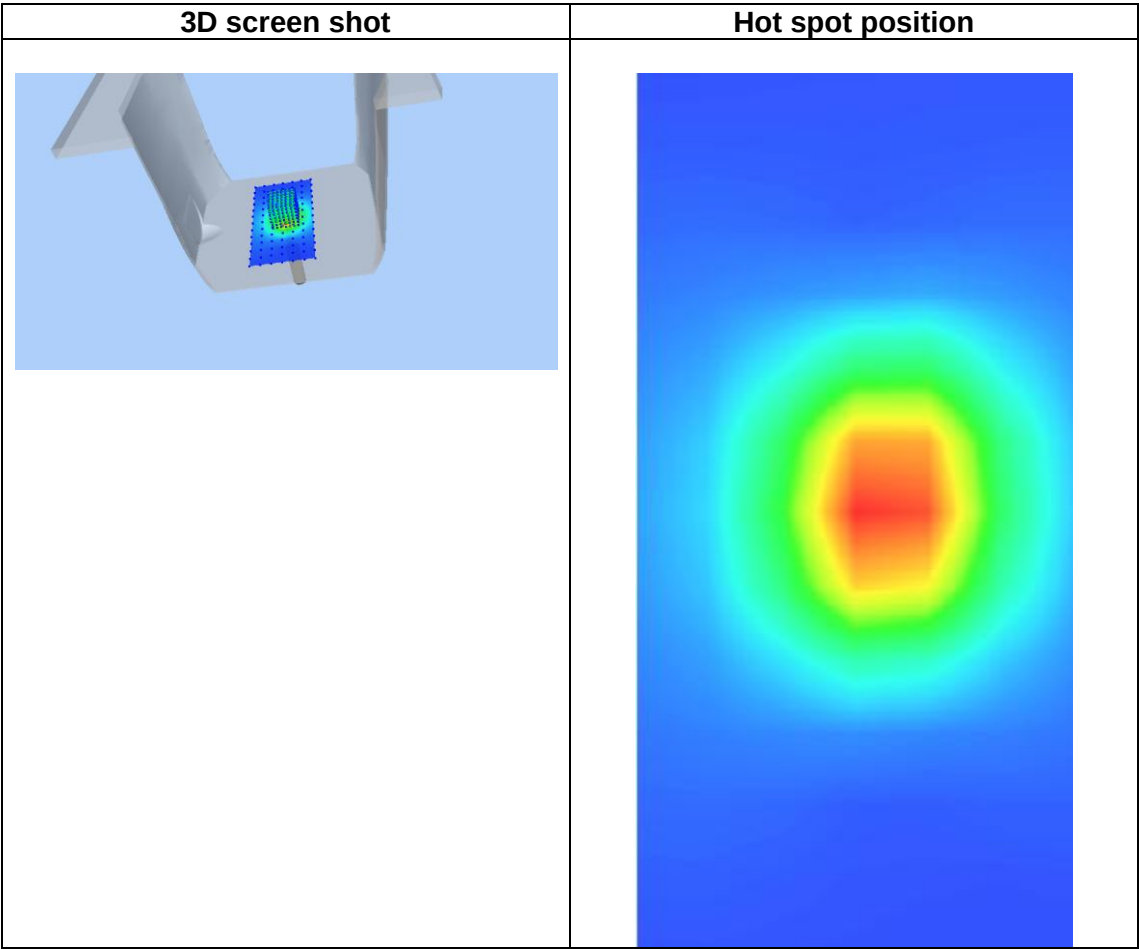
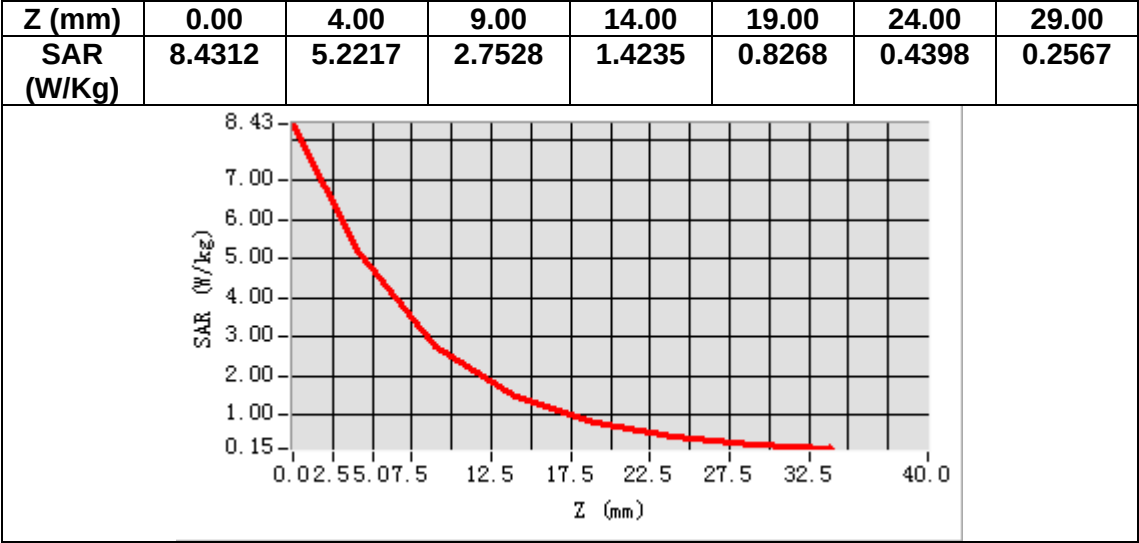
VOLUME SAR



Maximum location: X=0.00, Y=1.00

SAR Peak: 8.46 W/kg

SAR 10g (W/Kg)	2.514285
SAR 1g (W/Kg)	5.314270



MEASUREMENT 11

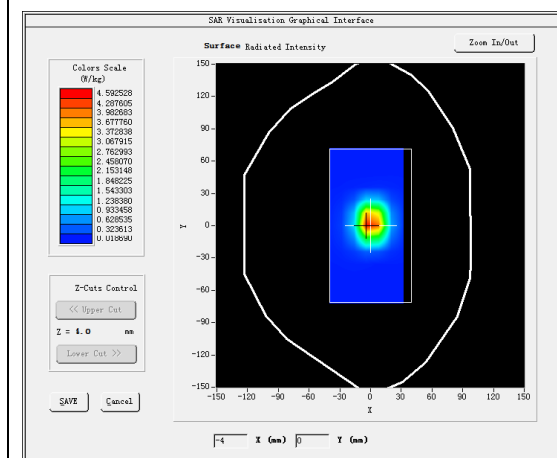
A. Experimental conditions.

Area Scan	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
ZoomScan	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Dipole</u>
Band	<u>CW2600</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>

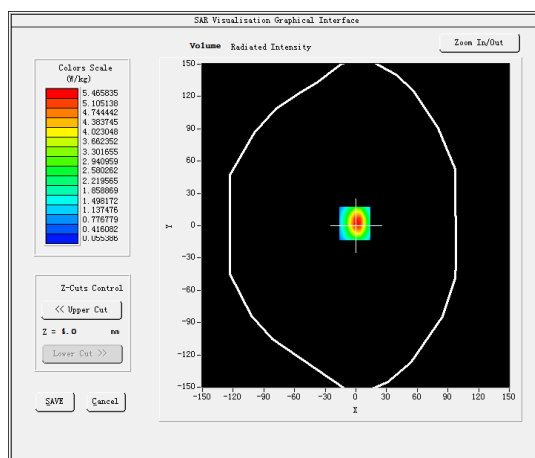
B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative permittivity (real part)	38.042638
Relative permittivity (imaginary part)	14.043997
Conductivity (S/m)	2.033631
Variation (%)	-0.040000

SURFACE SAR



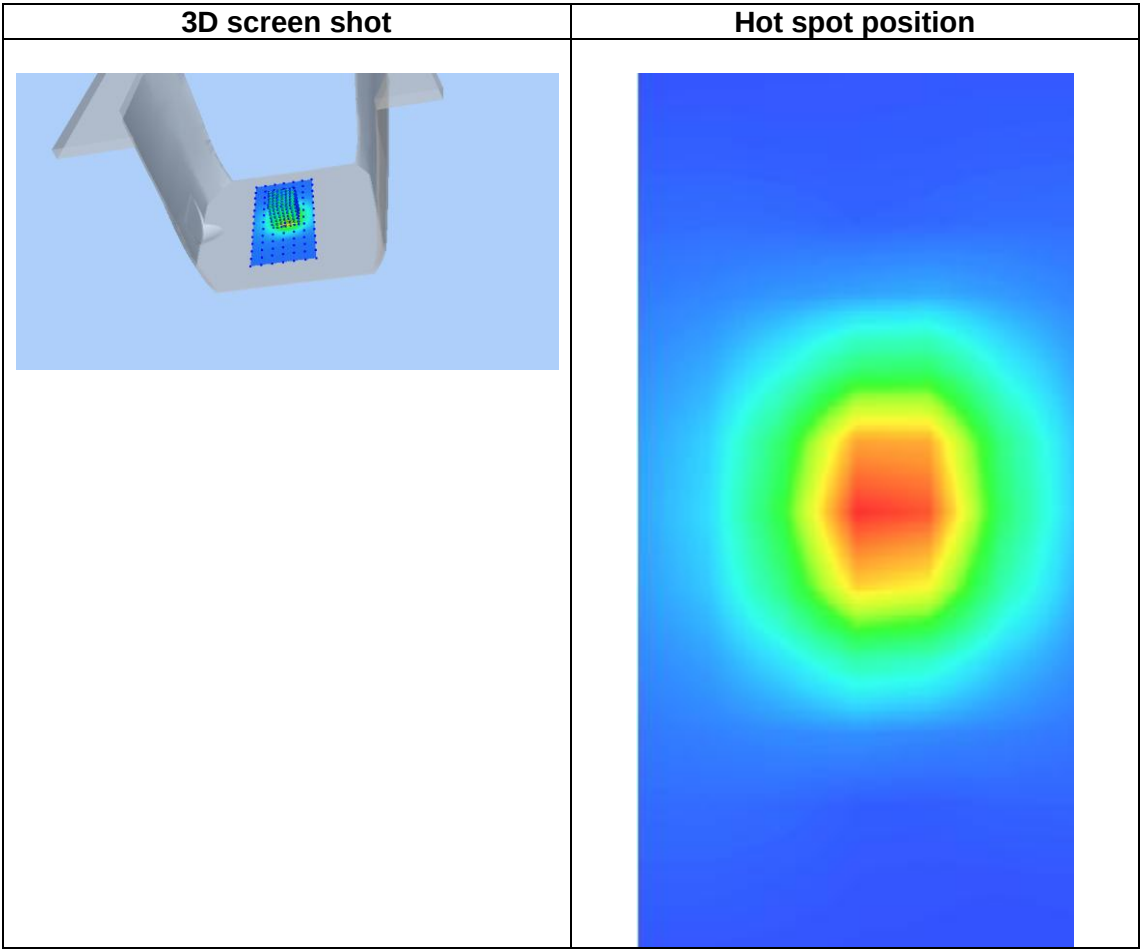
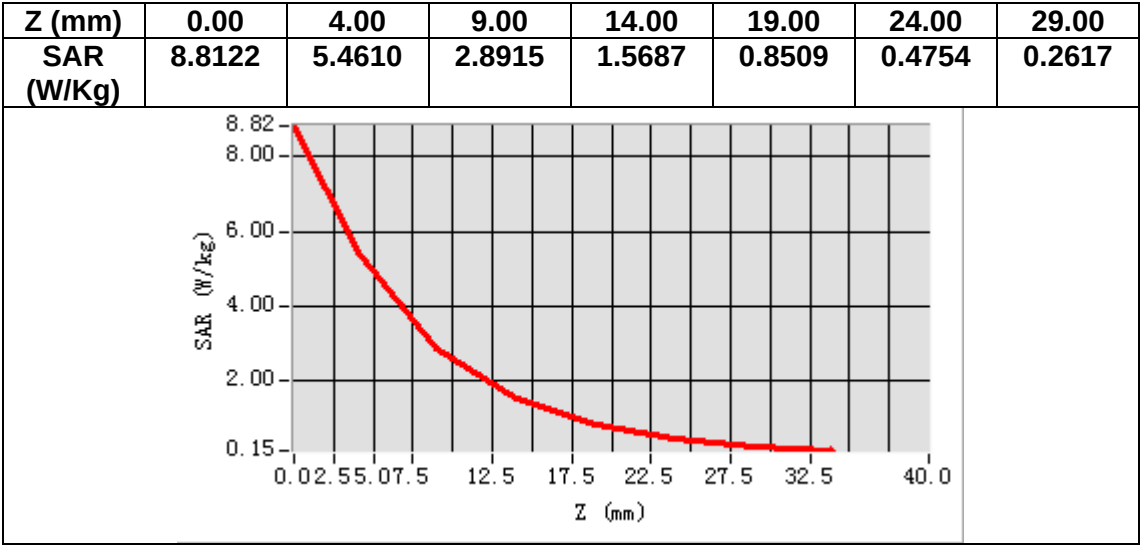
VOLUME SAR



Maximum location: X=-1.00, Y=2.00

SAR Peak: 9.07 W/kg

SAR 10g (W/Kg)	2.406205
SAR 1g (W/Kg)	5.596267



MEASUREMENT 12

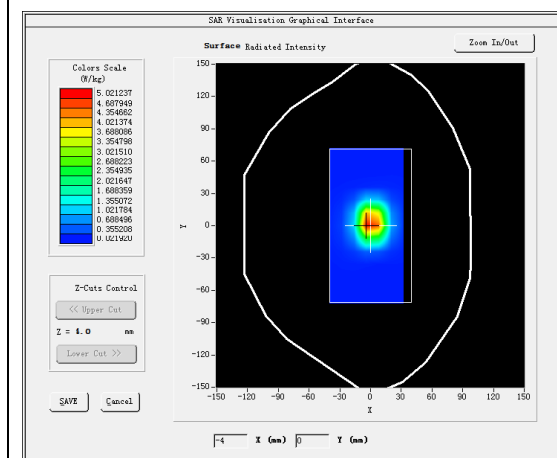
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2600</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

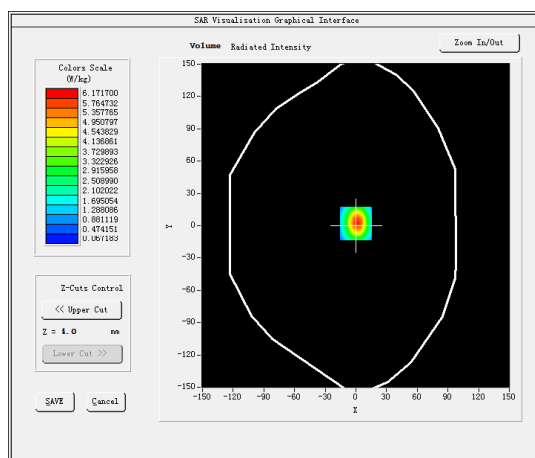
B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative permittivity (real part)	52.802866
Relative permittivity (imaginary part)	15.360101
Conductivity (S/m)	2.223465
Variation (%)	-1.220000

SURFACE SAR



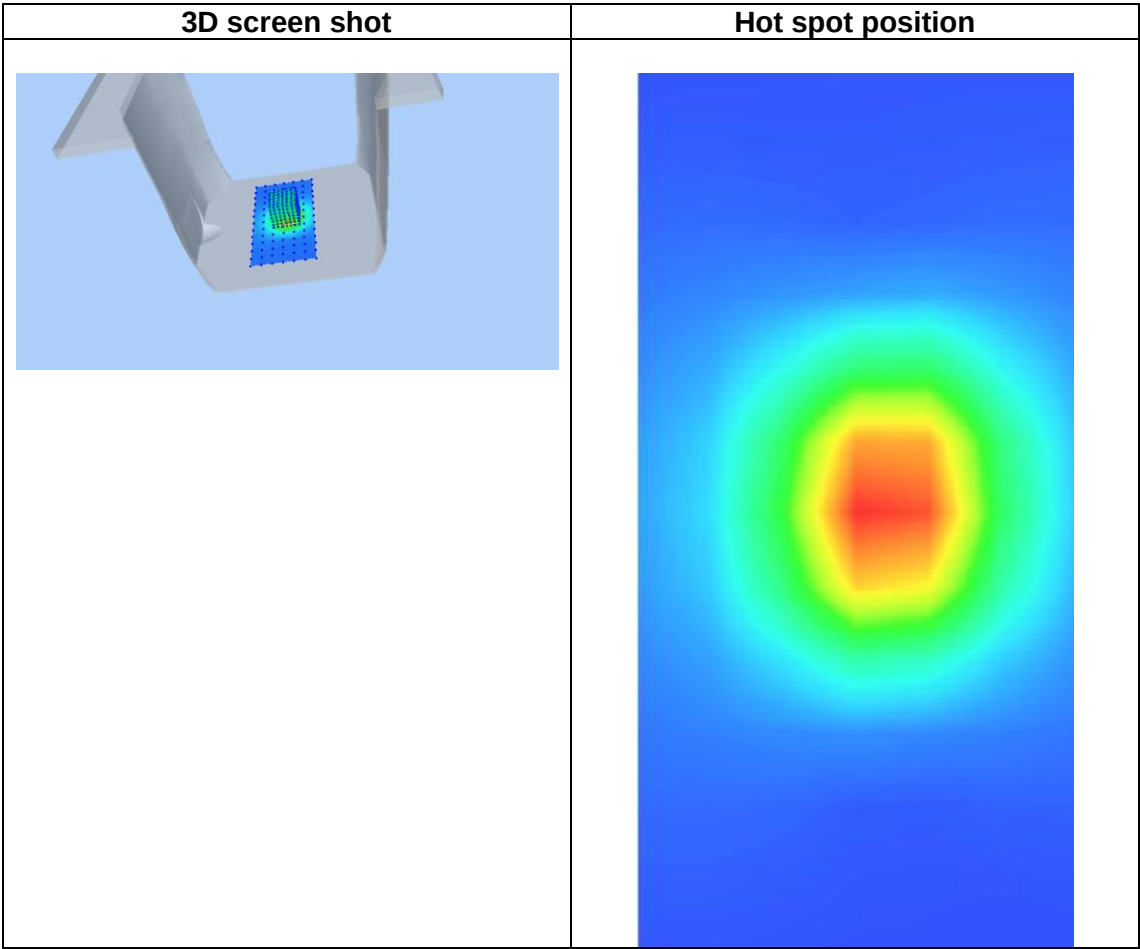
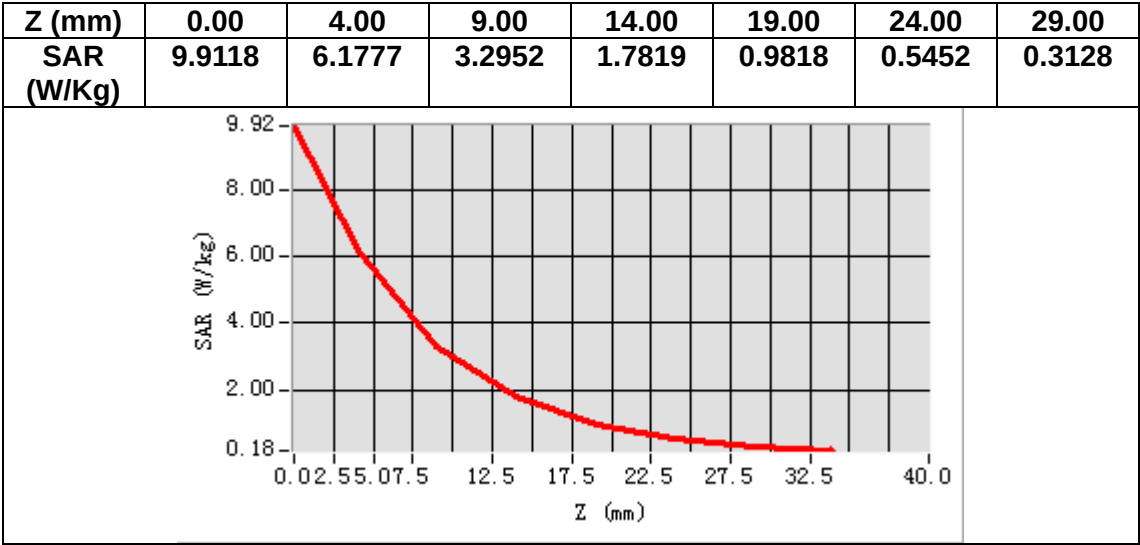
VOLUME SAR



Maximum location: X=0.00, Y=2.00

SAR Peak: 9.99 W/kg

SAR 10g (W/Kg)	2.256324
SAR 1g (W/Kg)	5.309188



13. Appendix C. Plots of High SAR Measurement

Table of contents
MEASUREMENT 1 GSM 850 Head-Closed
MEASUREMENT 2 GSM 850 Head-Open
MEASUREMENT 3 GSM 850 Body
MEASUREMENT 4 GSM 1900 Head-Closed
MEASUREMENT 5 GSM 1900 Head-Open
MEASUREMENT 6 GSM 1900 Body
MEASUREMENT 7 WCDMA Band 2 Head-Closed
MEASUREMENT 8 WCDMA Band 2 Head-Open
MEASUREMENT 9 WCDMA Band 2 Body
MEASUREMENT 10 WCDMA Band 4 Head-Open
MEASUREMENT 11 WCDMA Band 4 Head-Closed
MEASUREMENT 12 WCDMA Band 4 Body
MEASUREMENT 13 WCDMA Band 5 Head-Closed
MEASUREMENT 14 WCDMA Band 5 Head-Open
MEASUREMENT 15 WCDMA Band 5 Body
MEASUREMENT 16 WLAN 2.4G Head-Closed
MEASUREMENT 17 WLAN 2.4G Head-Open
MEASUREMENT 18 WLAN 2.4G Body
MEASUREMENT 19 LTE Band 2 Head-Closed
MEASUREMENT 20 LTE Band 2 Head-Open
MEASUREMENT 21 LTE Band 2 Body
MEASUREMENT 22 LTE Band 4 Head-Closed
MEASUREMENT 23 LTE Band 4 Head-Open
MEASUREMENT 24 LTE Band 4 Body
MEASUREMENT 25 LTE Band 5 Head-Closed
MEASUREMENT 26 LTE Band 5 Head-Open
MEASUREMENT 27 LTE Band 5 Body
MEASUREMENT 28 LTE Band 7 Head-Closed
MEASUREMENT 29 LTE Band 7 Head-Open
MEASUREMENT 30 LTE Band 7 Body
MEASUREMENT 31 LTE Band 12 Head-Closed
MEASUREMENT 32 LTE Band 12 Head-Open
MEASUREMENT 33 LTE Band 12 Body
MEASUREMENT 34 LTE Band 17 Head-Closed
MEASUREMENT 35 LTE Band 17 Head-Open
MEASUREMENT 36 LTE Band 17 Body
MEASUREMENT 37 LTE Band 66 Head-Closed

MEASUREMENT 38 LTE Band 66 Head-Open

MEASUREMENT 39 LTE Band 66 Body

MEASUREMENT 1

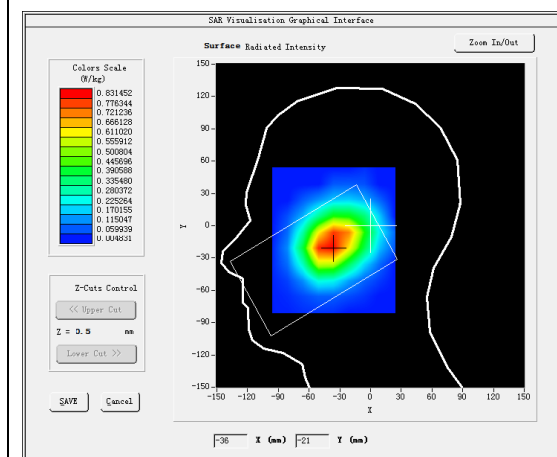
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>GSM850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 2.7)</u>

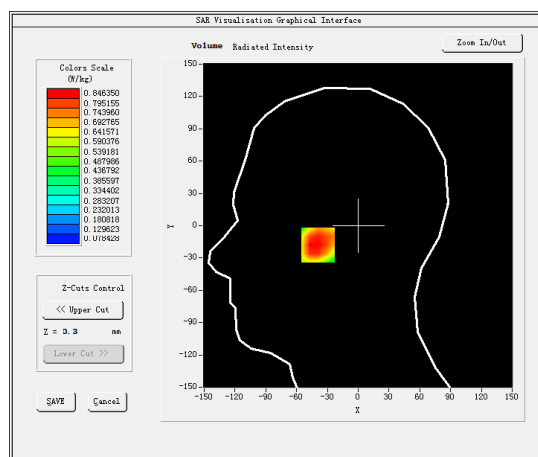
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	40.650959
Relative permittivity (imaginary part)	19.991541
Conductivity (S/m)	0.928940
Variation (%)	1.790000

SURFACE SAR



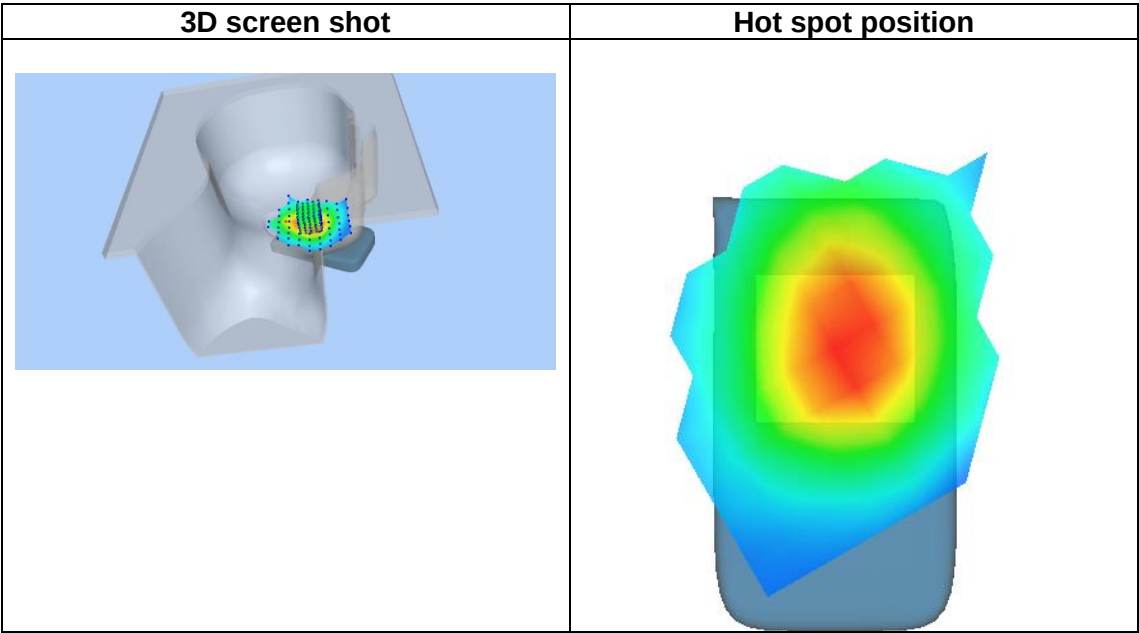
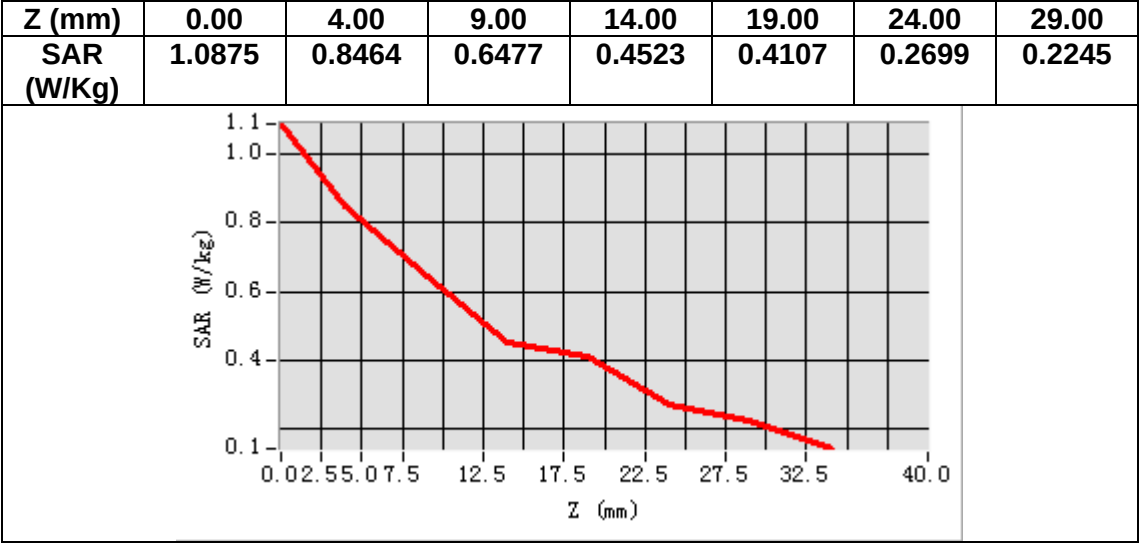
VOLUME SAR



Maximum location: X=-39.00, Y=-18.00

SAR Peak: 1.16 W/kg

SAR 10g (W/Kg)	0.605030
SAR 1g (W/Kg)	0.866202



MEASUREMENT 2

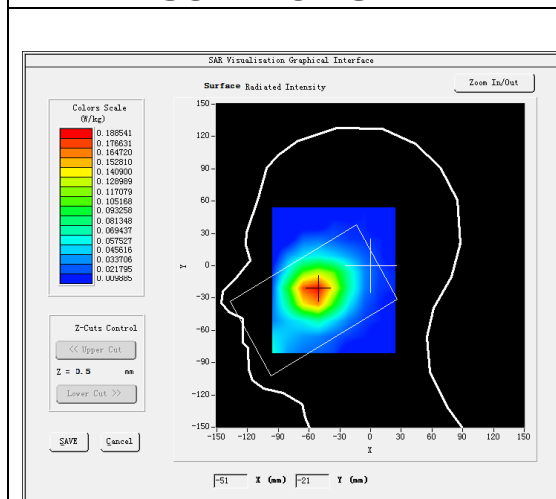
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>GSM850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 2.7)</u>

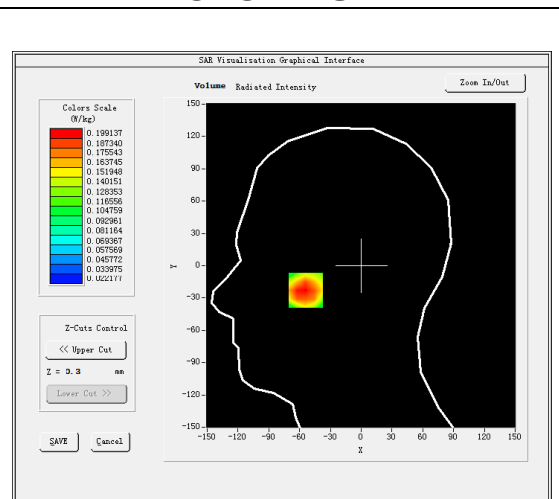
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	40.650959
Relative permittivity (imaginary part)	19.991541
Conductivity (S/m)	0.928940
Variation (%)	0.270000

SURFACE SAR



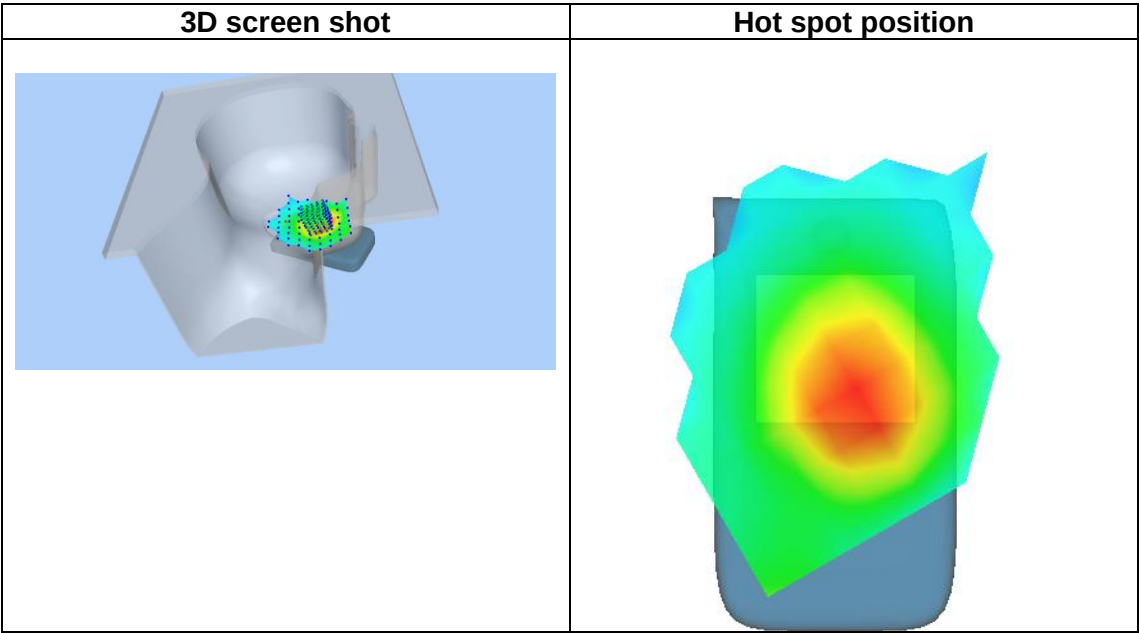
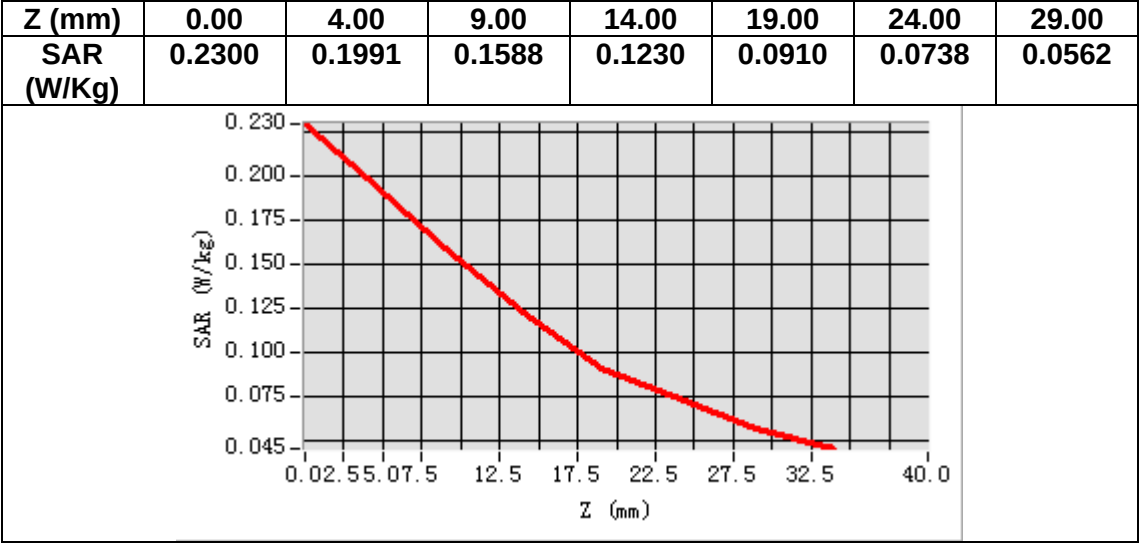
VOLUME SAR



Maximum location: X=-54.00, Y=-23.00

SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.139131
SAR 1g (W/Kg)	0.197846



MEASUREMENT 3

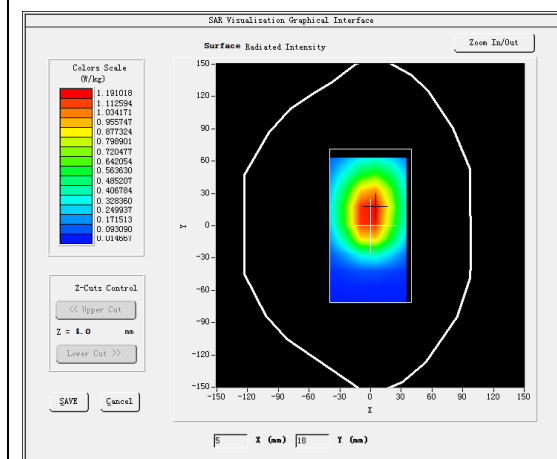
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>GSM850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 2.7)</u>

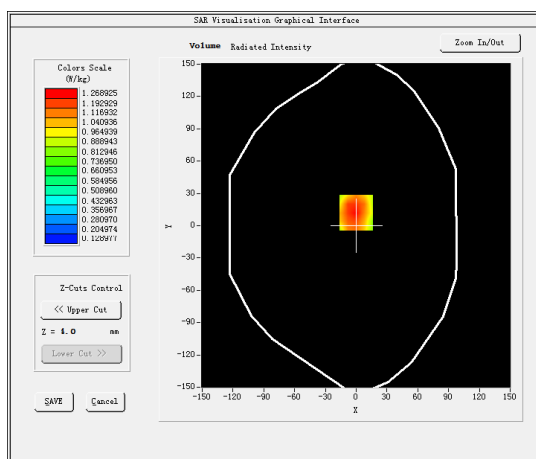
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	54.479580
Relative permittivity (imaginary part)	21.192739
Conductivity (S/m)	0.984756
Variation (%)	1.860000

SURFACE SAR



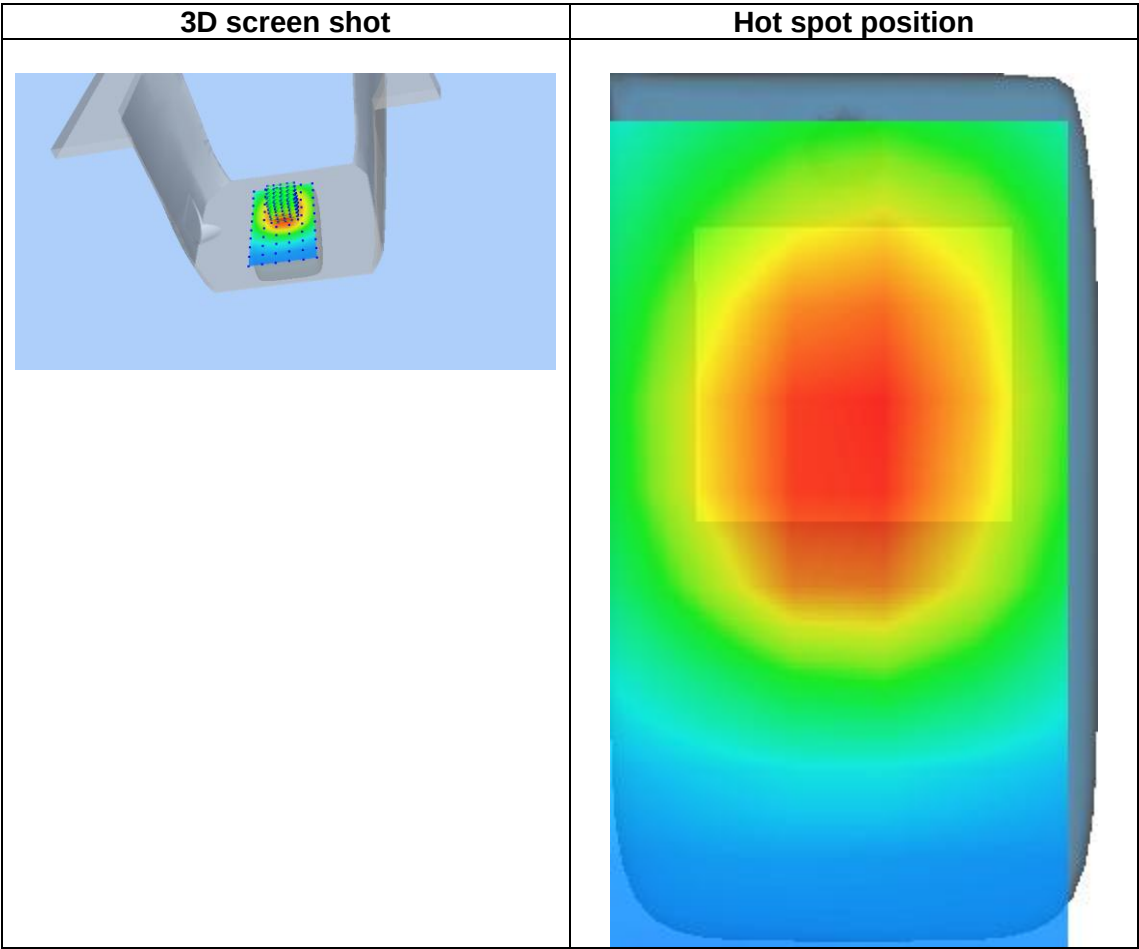
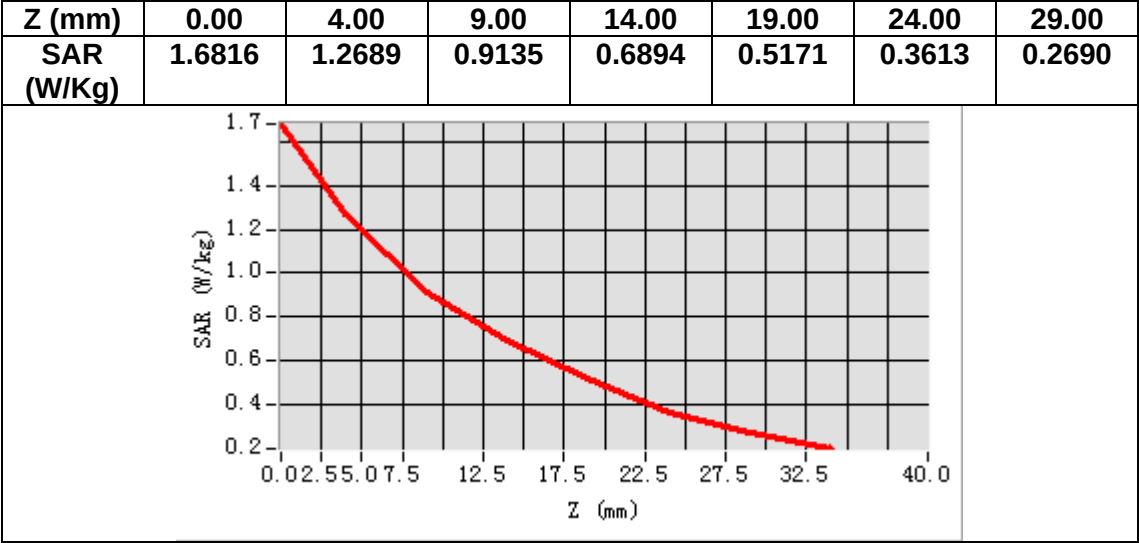
VOLUME SAR



Maximum location: X=0.00, Y=12.00

SAR Peak: 1.71 W/kg

SAR 10g (W/Kg)	0.852986
SAR 1g (W/Kg)	1.146040



MEASUREMENT 4

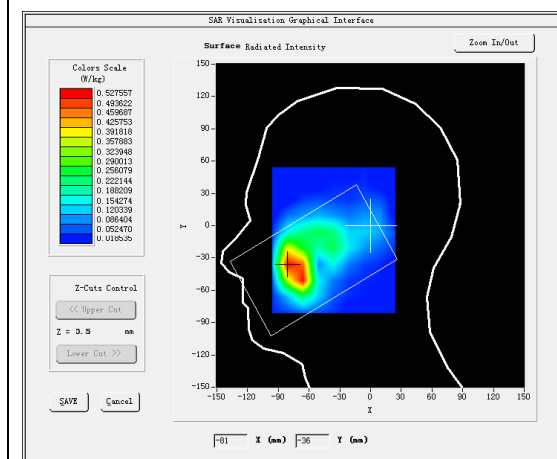
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>GSM1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 2.7)</u>

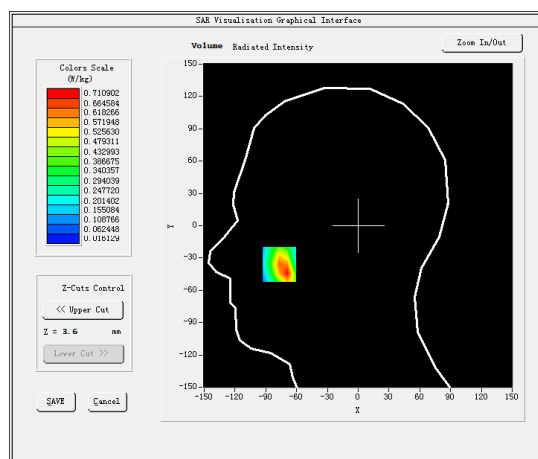
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.957001
Relative permittivity (imaginary part)	13.290200
Conductivity (S/m)	1.388088
Variation (%)	3.650000

SURFACE SAR



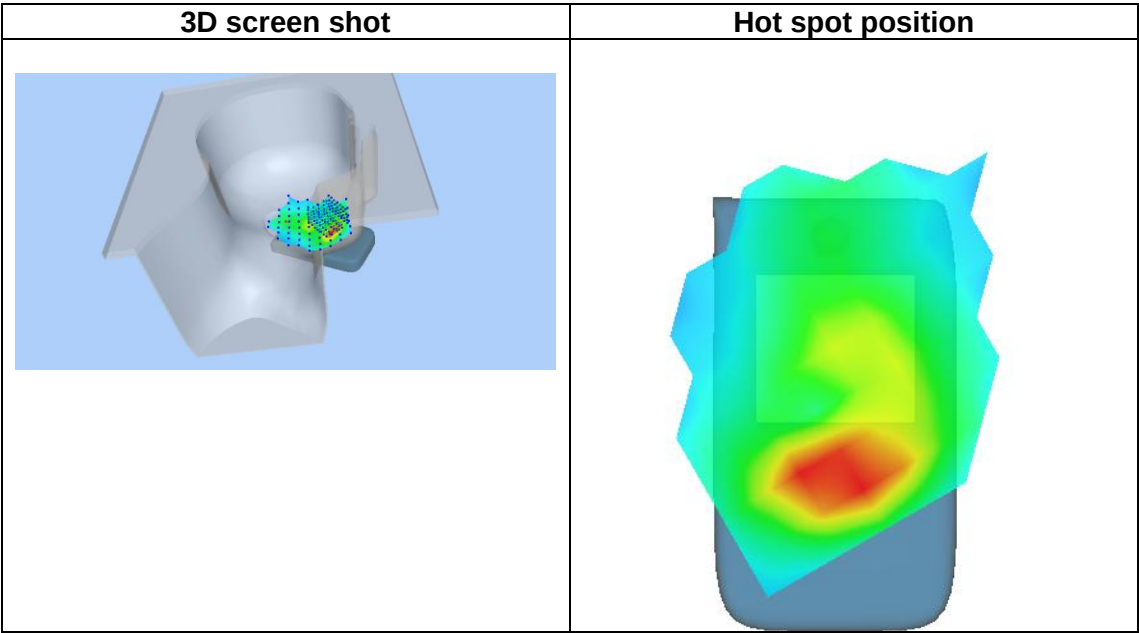
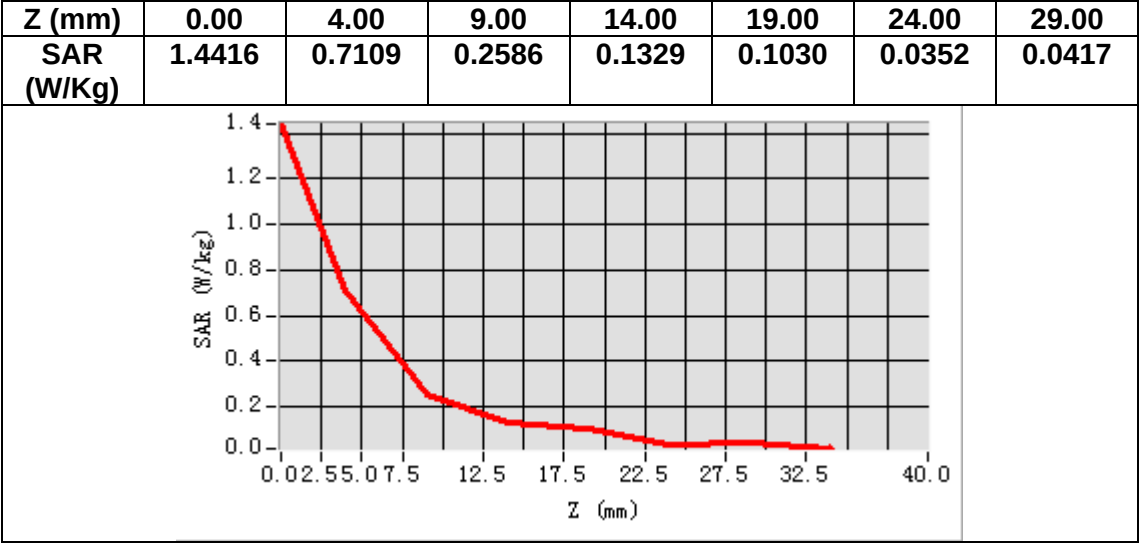
VOLUME SAR



Maximum location: X=-77.00, Y=-36.00

SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.334386
SAR 1g (W/Kg)	0.672633



MEASUREMENT 5

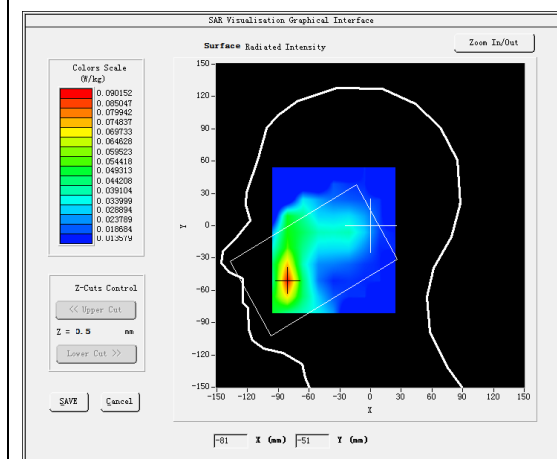
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>GSM1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 2.7)</u>

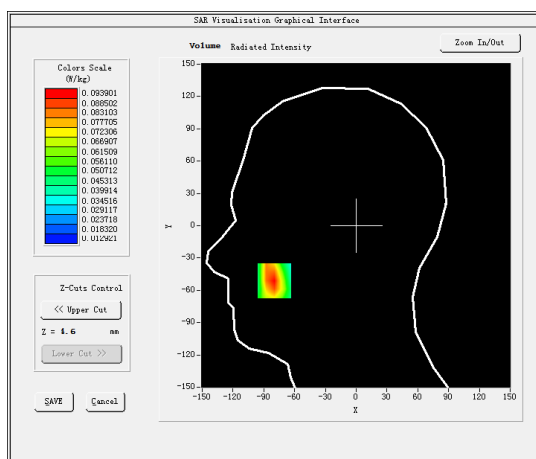
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.957001
Relative permittivity (imaginary part)	13.290200
Conductivity (S/m)	1.388088
Variation (%)	0.140000

SURFACE SAR



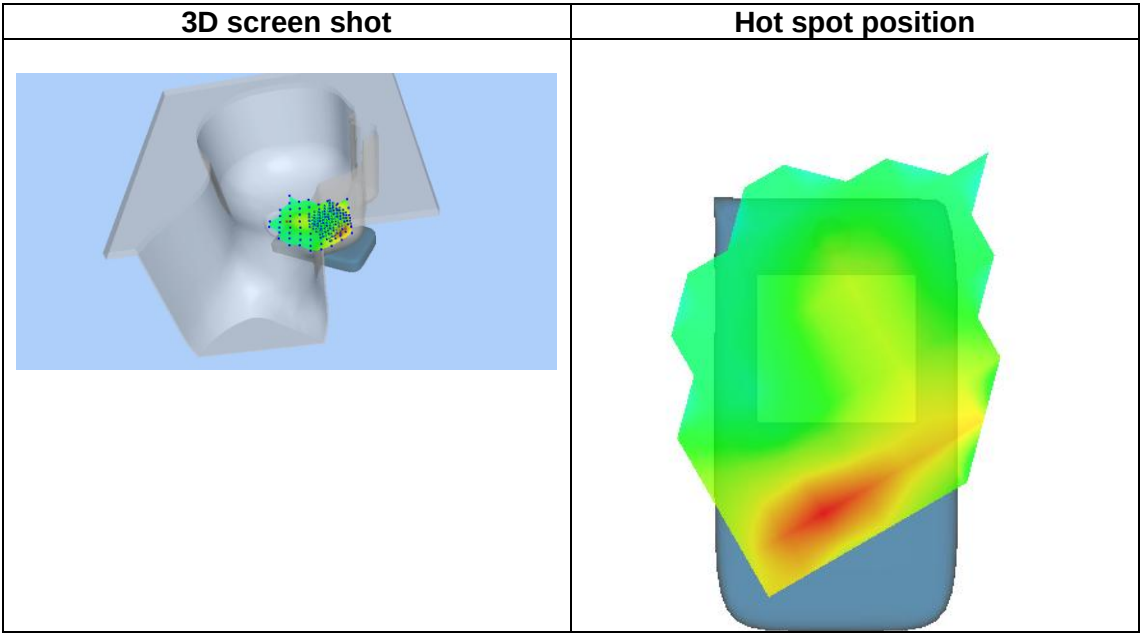
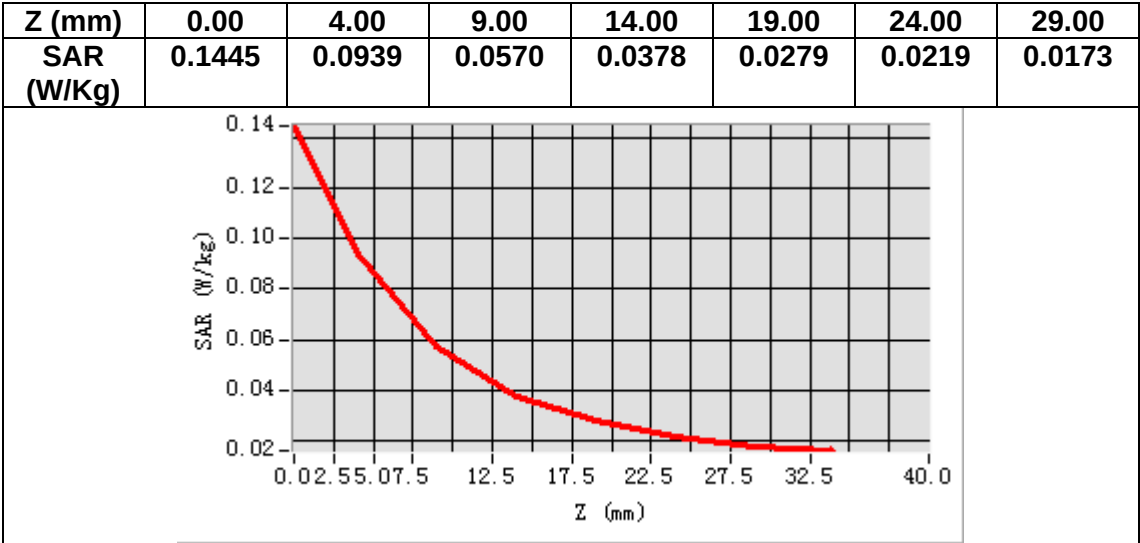
VOLUME SAR



Maximum location: X=-80.00, Y=-51.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.055740
SAR 1g (W/Kg)	0.091386



MEASUREMENT 6

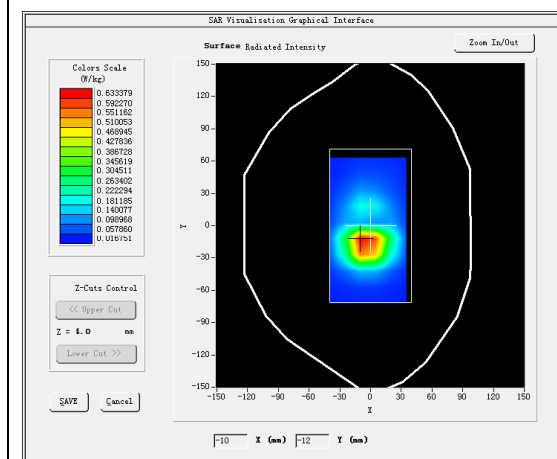
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>GSM1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 2.7)</u>

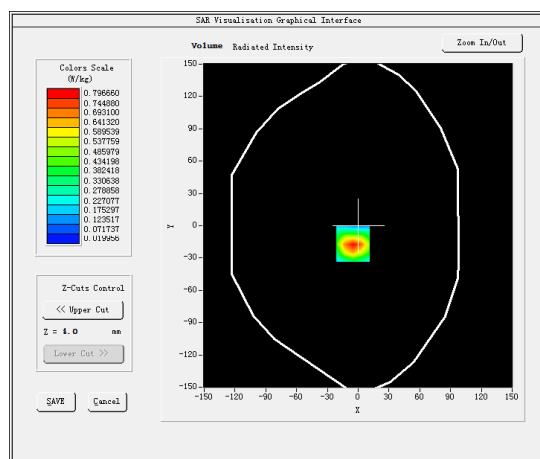
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	54.283901
Relative permittivity (imaginary part)	14.597700
Conductivity (S/m)	1.524649
Variation (%)	3.480000

SURFACE SAR



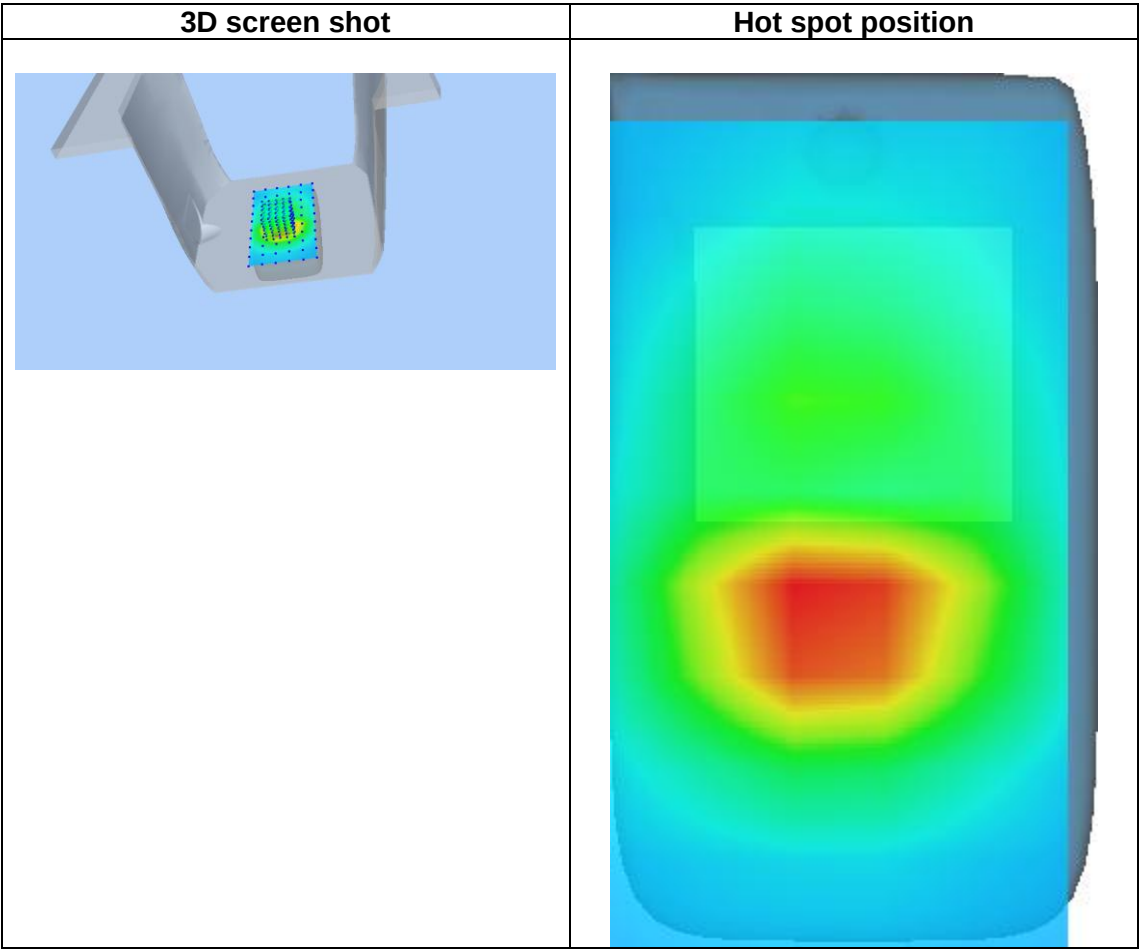
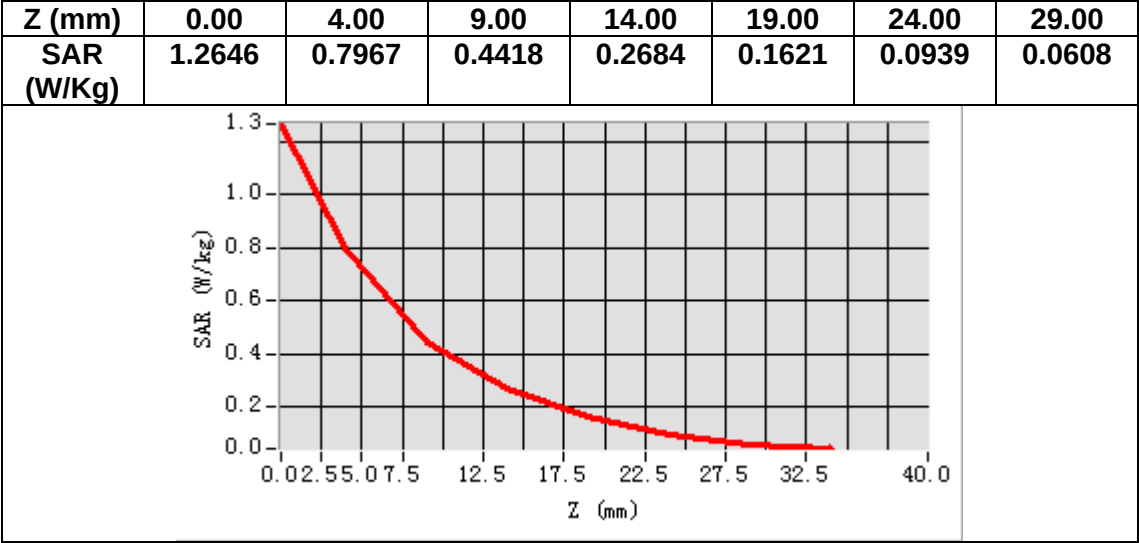
VOLUME SAR



Maximum location: X=-5.00, Y=-17.00

SAR Peak: 1.25 W/kg

SAR 10g (W/Kg)	0.388764
SAR 1g (W/Kg)	0.749954



MEASUREMENT 7

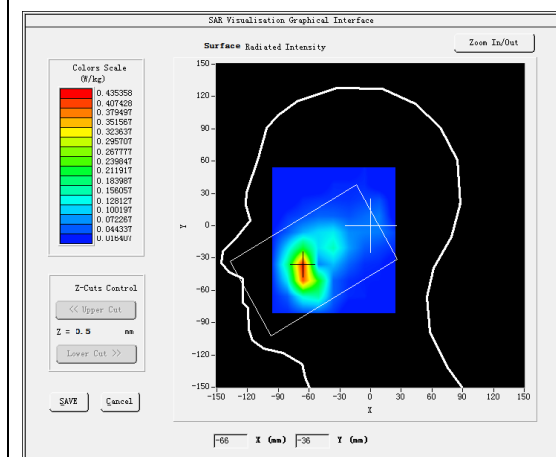
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>Band2 WCDMA1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

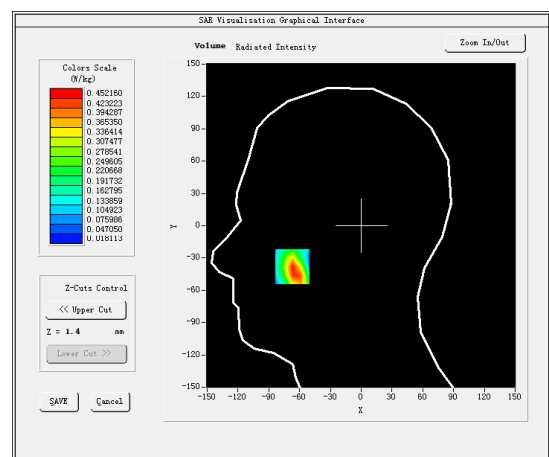
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.957001
Relative permittivity (imaginary part)	13.290200
Conductivity (S/m)	1.388088
Variation (%)	-1.430000

SURFACE SAR



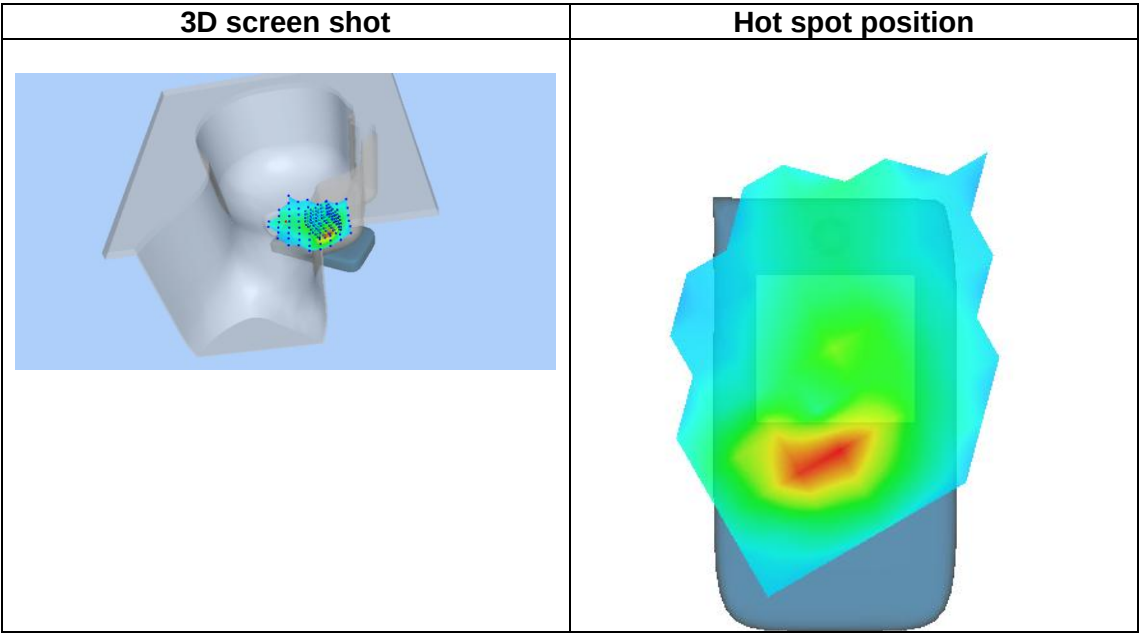
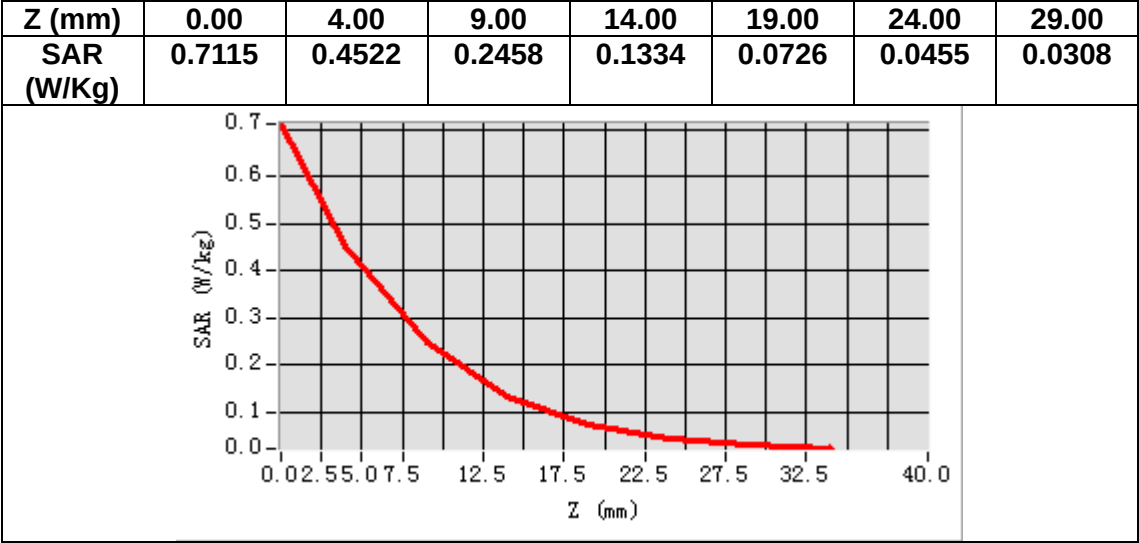
VOLUME SAR



Maximum location: X=-67.00, Y=-38.00

SAR Peak: 0.78 W/kg

SAR 10g (W/Kg)	0.222656
SAR 1g (W/Kg)	0.438259



MEASUREMENT 8

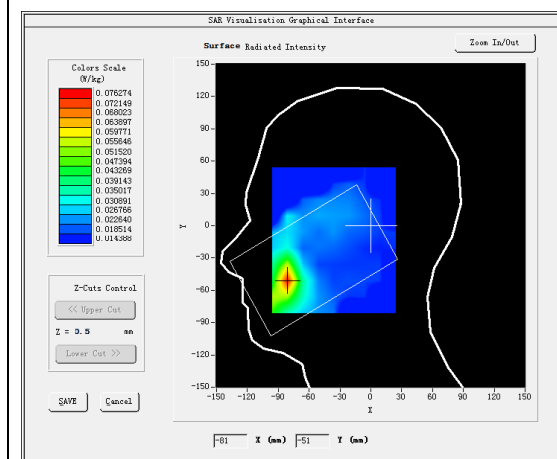
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>Band2 WCDMA1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

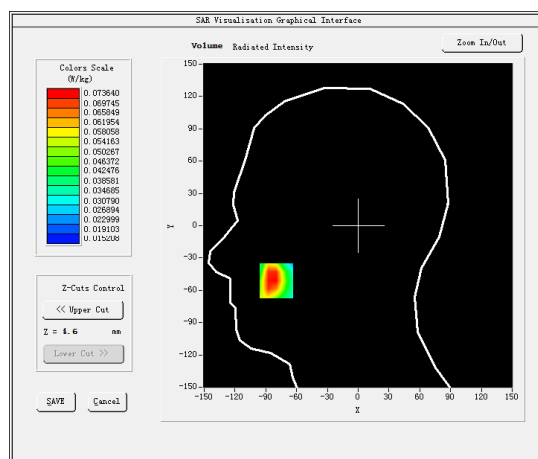
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.957001
Relative permittivity (imaginary part)	13.290200
Conductivity (S/m)	1.388088
Variation (%)	-4.000000

SURFACE SAR



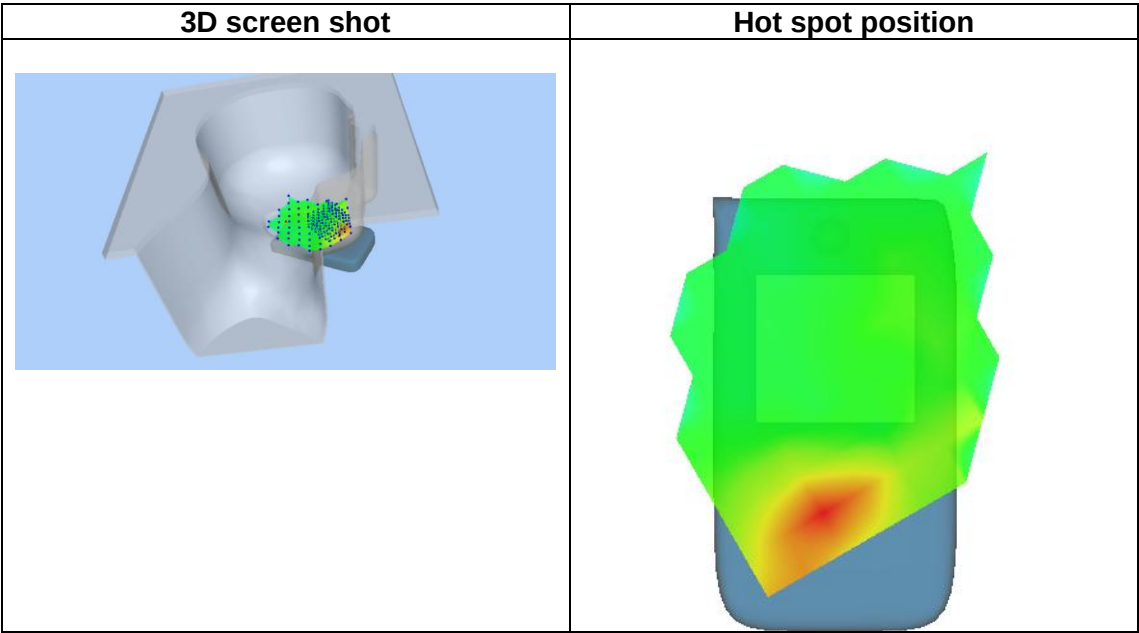
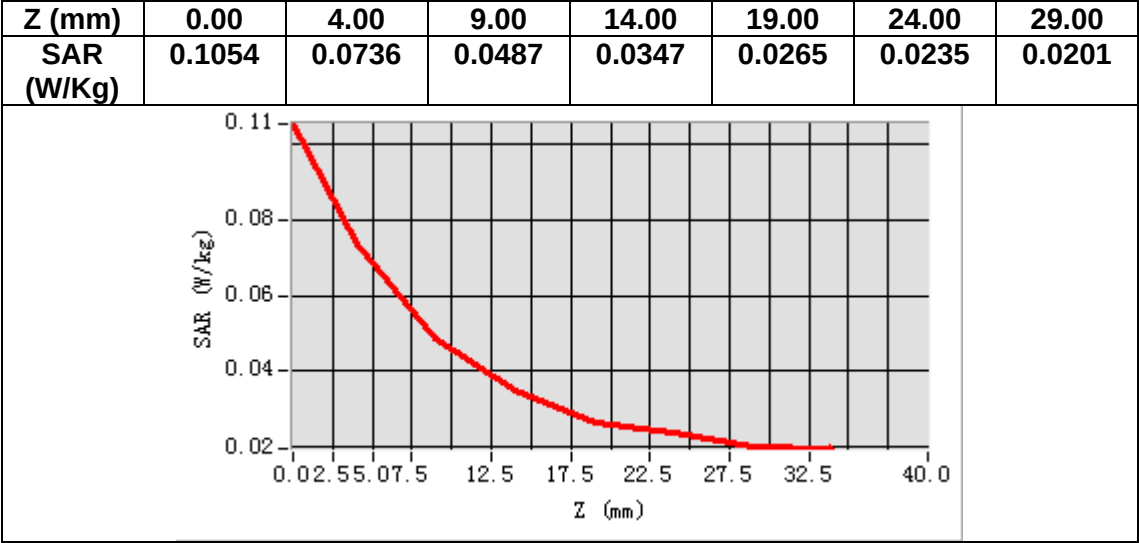
VOLUME SAR



Maximum location: X=-80.00, Y=-51.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.047168
SAR 1g (W/Kg)	0.073712



MEASUREMENT 9

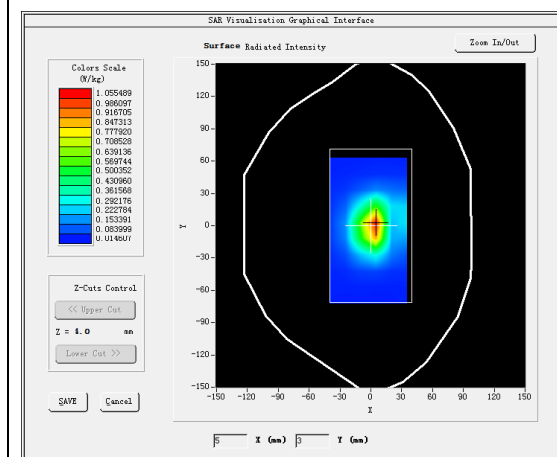
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band2 WCDMA1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

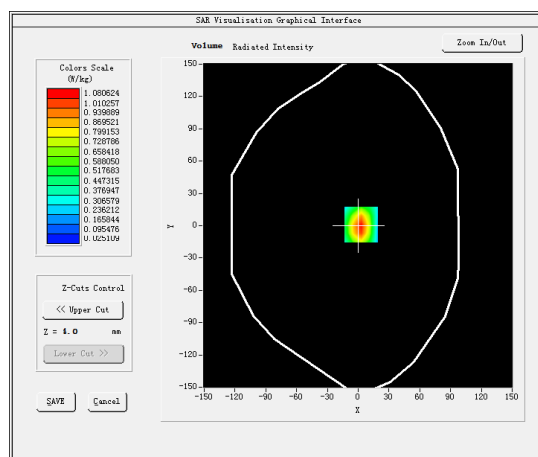
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	54.283901
Relative permittivity (imaginary part)	14.597700
Conductivity (S/m)	1.524649
Variation (%)	-0.890000

SURFACE SAR



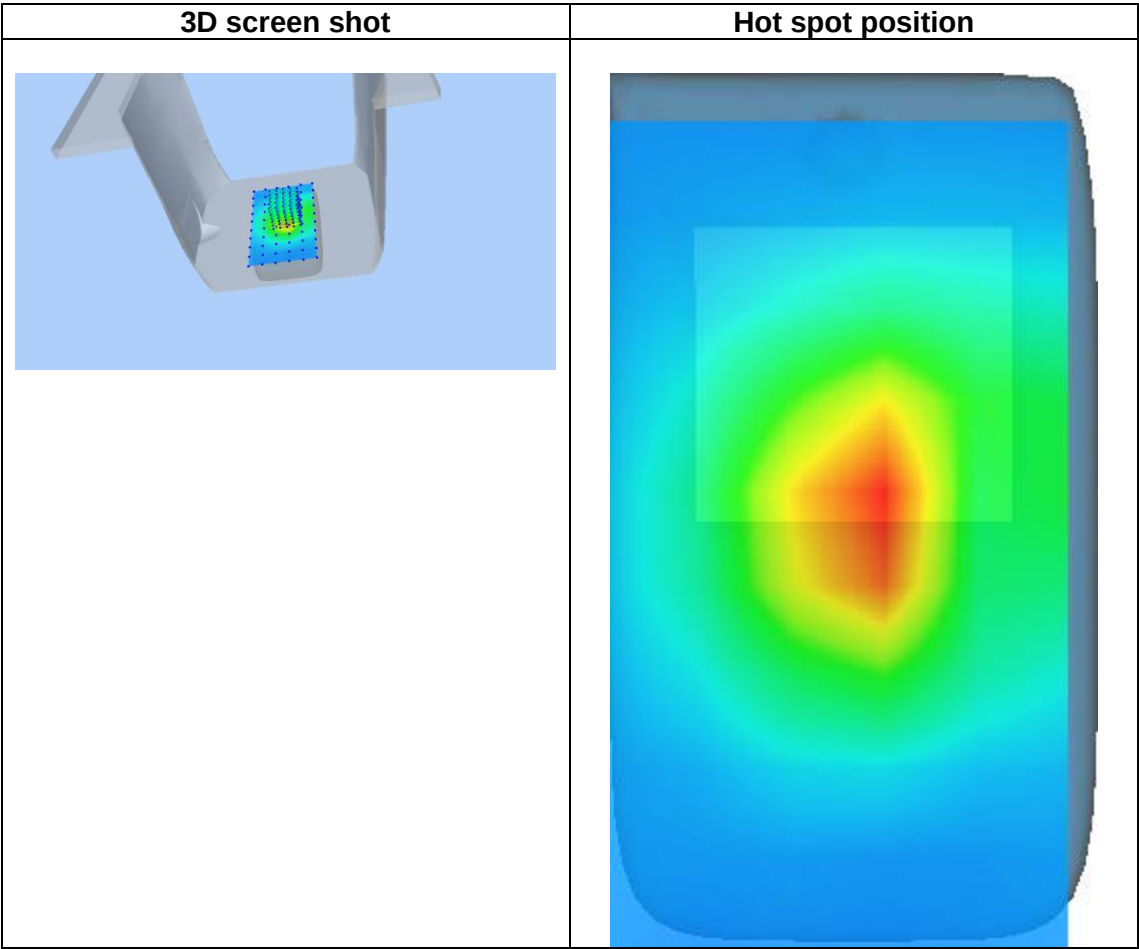
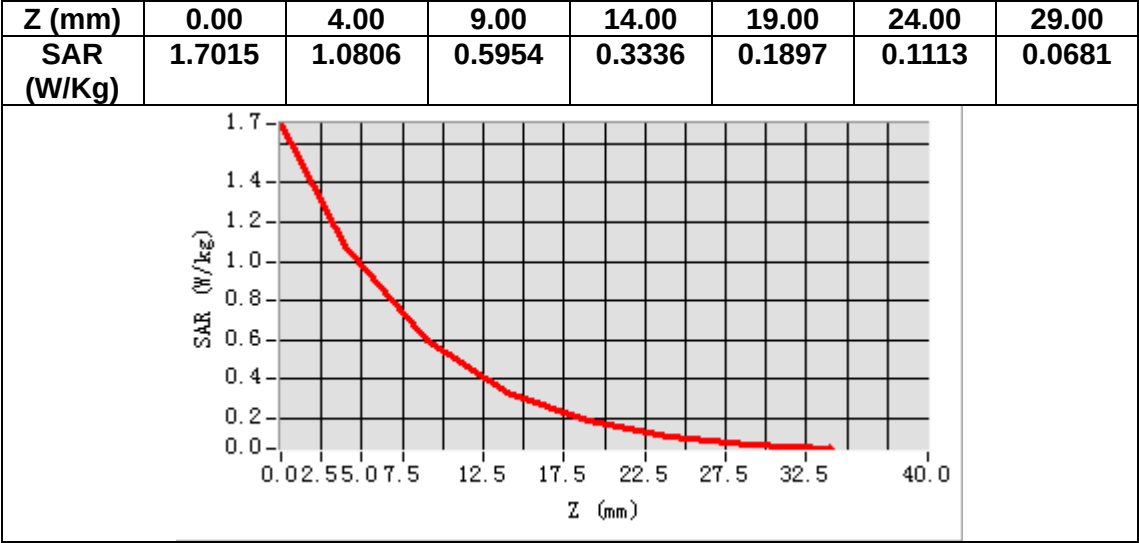
VOLUME SAR



Maximum location: X=3.00, Y=1.00

SAR Peak: 1.71 W/kg

SAR 10g (W/Kg)	0.521279
SAR 1g (W/Kg)	1.014521



MEASUREMENT 10

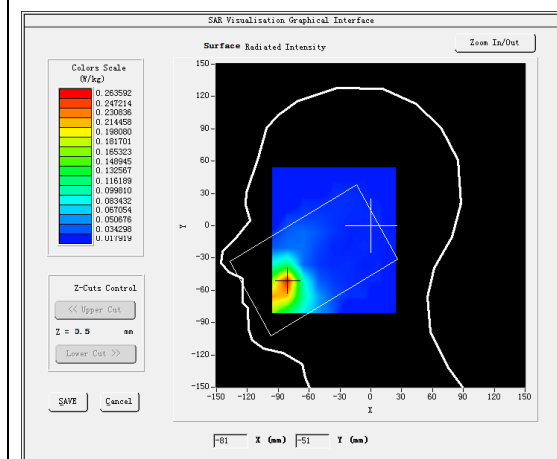
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>Band4 WCDMA1700</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

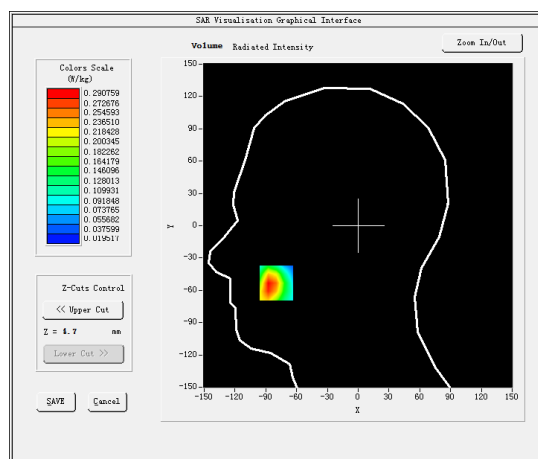
B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	38.997391
Relative permittivity (imaginary part)	13.805742
Conductivity (S/m)	1.328419
Variation (%)	-1.730000

SURFACE SAR



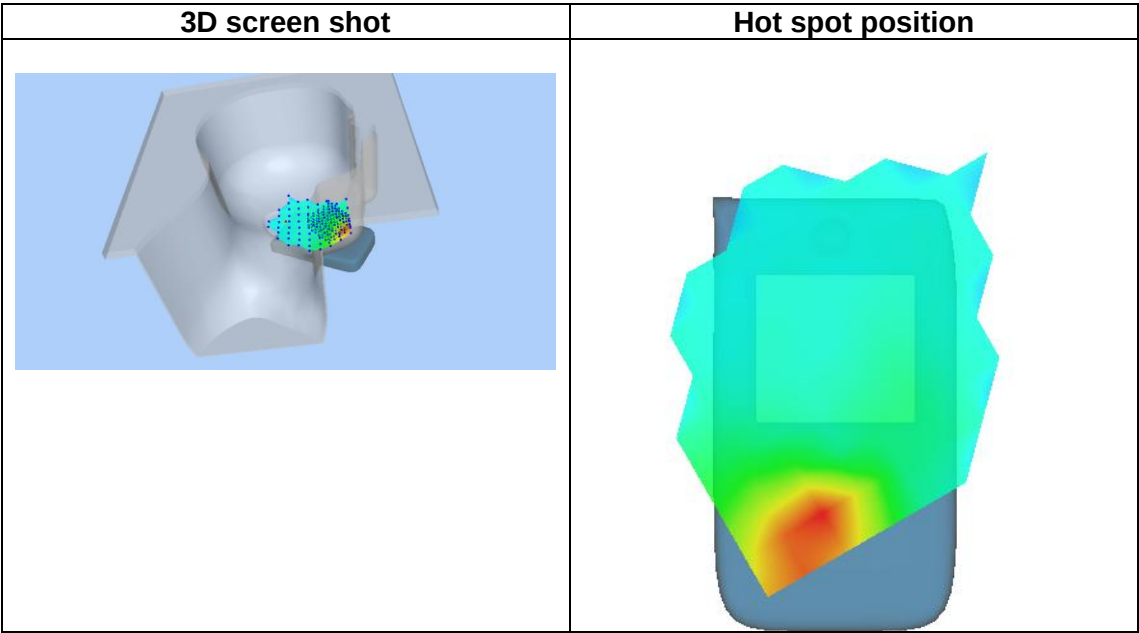
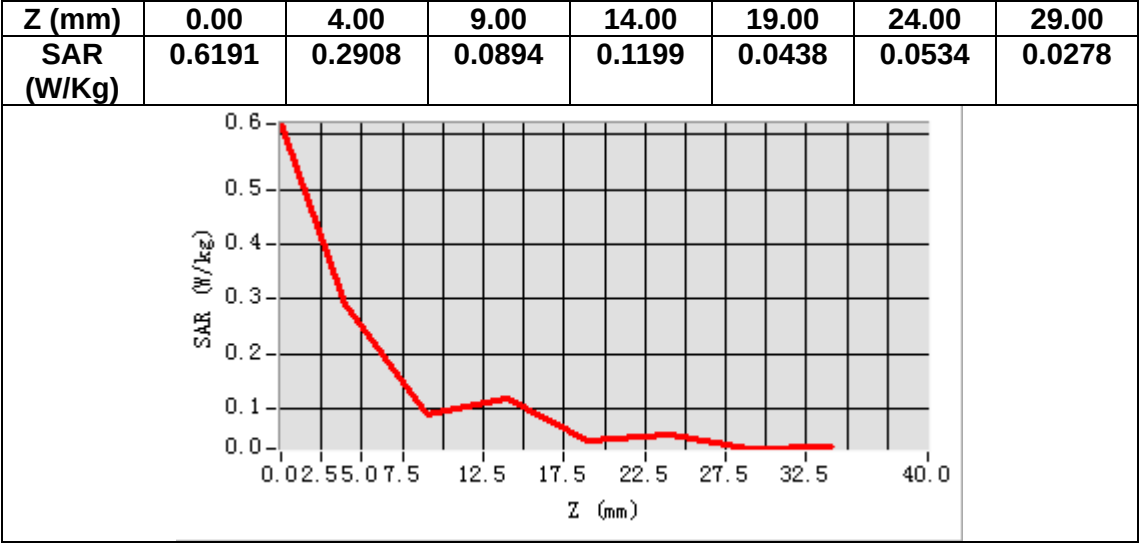
VOLUME SAR



Maximum location: X=-80.00, Y=-53.00

SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	0.160858
SAR 1g (W/Kg)	0.283706



MEASUREMENT 11

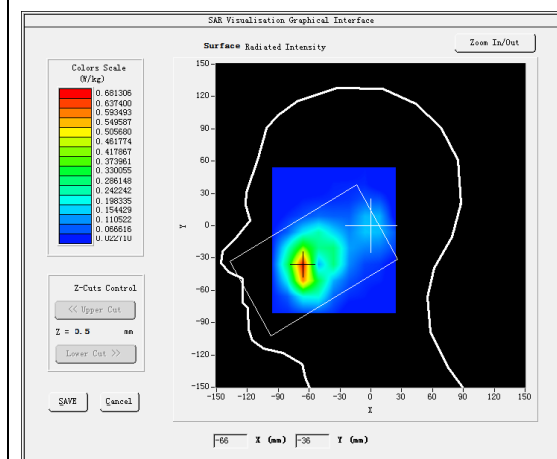
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>Band4 WCDMA1700</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

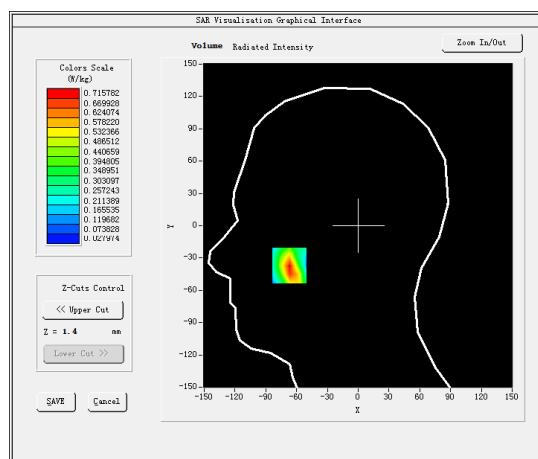
B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	38.997391
Relative permittivity (imaginary part)	13.805742
Conductivity (S/m)	1.328419
Variation (%)	-4.110000

SURFACE SAR



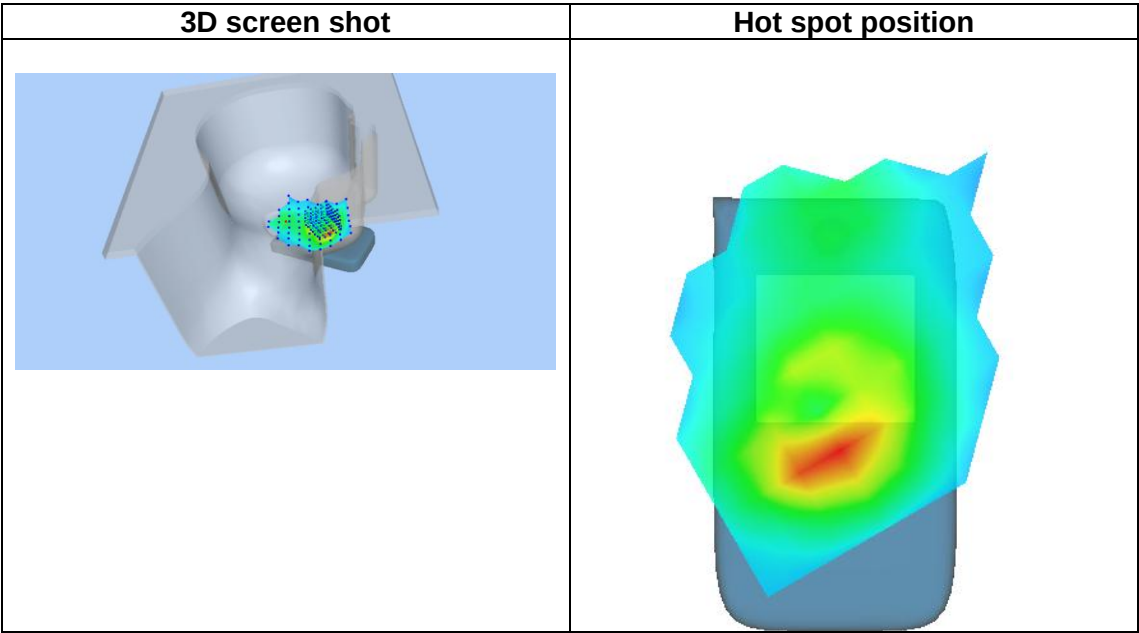
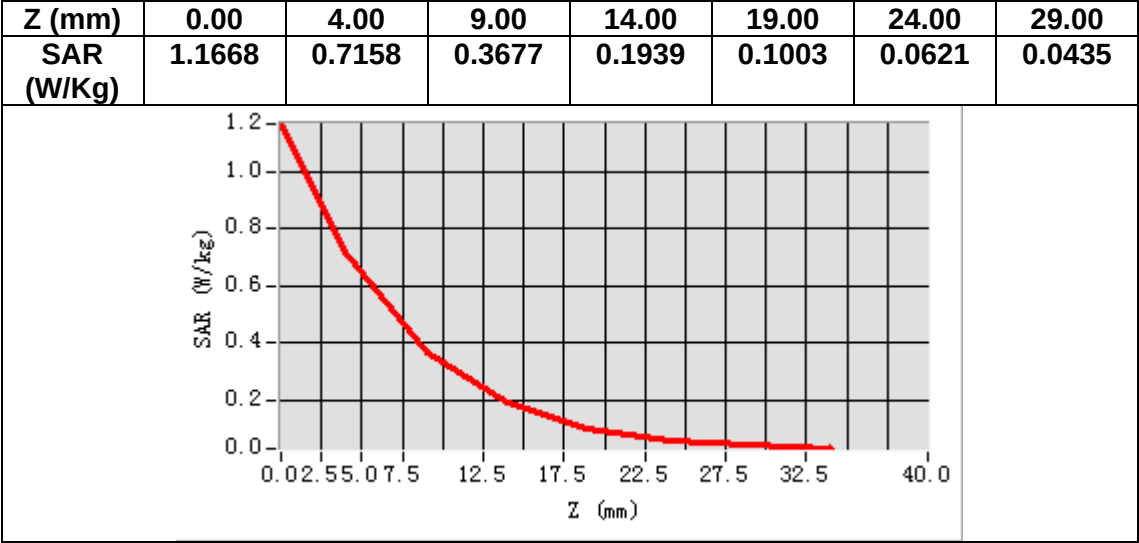
VOLUME SAR



Maximum location: X=-67.00, Y=-37.00

SAR Peak: 1.17 W/kg

SAR 10g (W/Kg)	0.348929
SAR 1g (W/Kg)	0.670693



MEASUREMENT 12

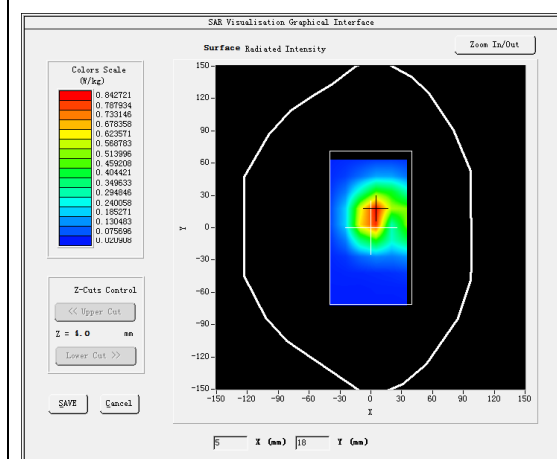
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band4 WCDMA1700</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

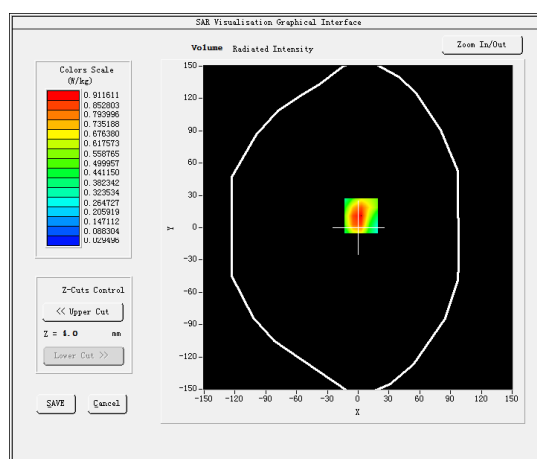
B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	54.441166
Relative permittivity (imaginary part)	15.186370
Conductivity (S/m)	1.461266
Variation (%)	-4.410000

SURFACE SAR



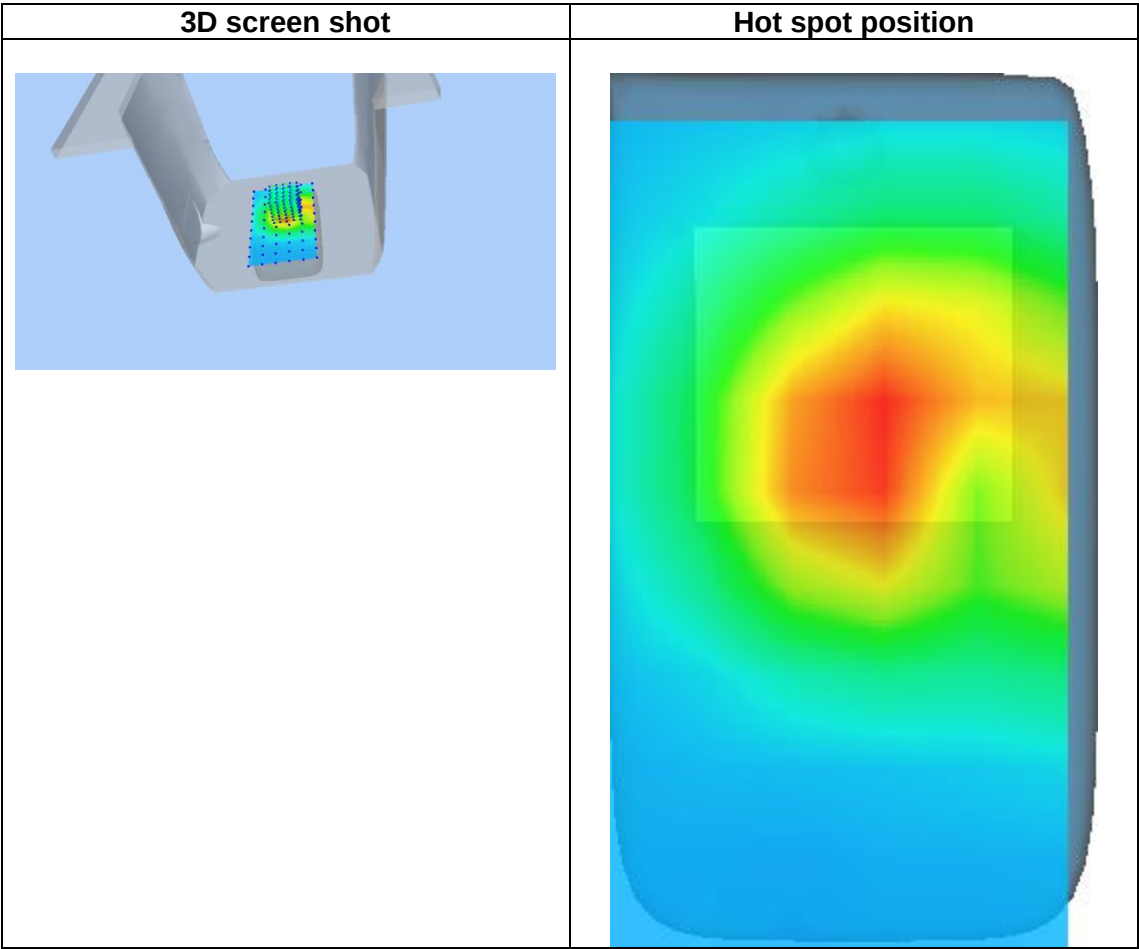
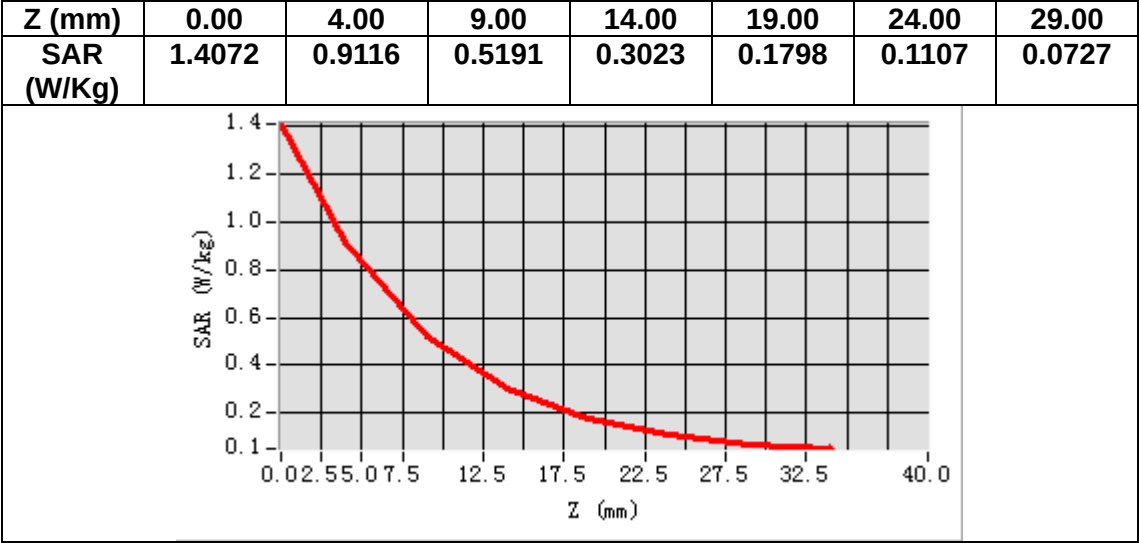
VOLUME SAR



Maximum location: X=3.00, Y=11.00

SAR Peak: 1.43 W/kg

SAR 10g (W/Kg)	0.480005
SAR 1g (W/Kg)	0.882122



MEASUREMENT 13

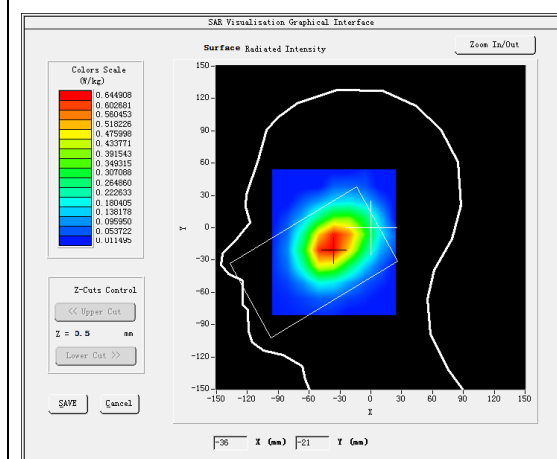
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>Band5 WCDMA850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

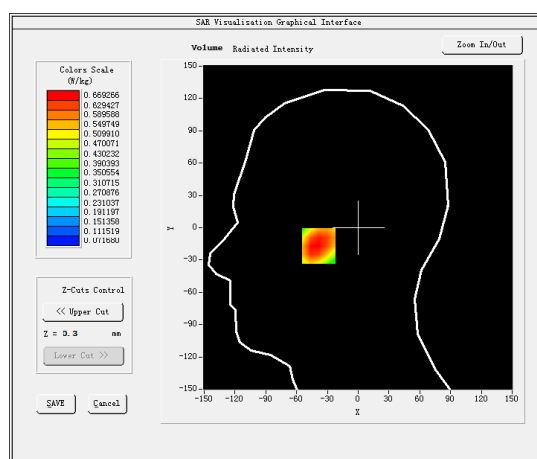
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	40.650959
Relative permittivity (imaginary part)	19.991541
Conductivity (S/m)	0.928940
Variation (%)	-1.420000

SURFACE SAR



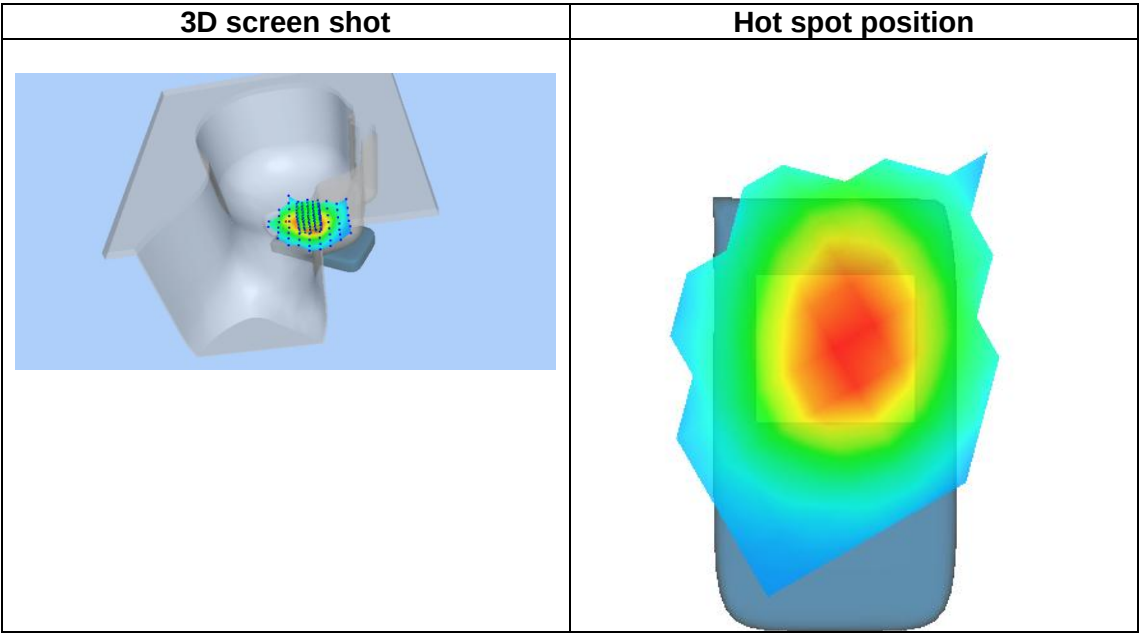
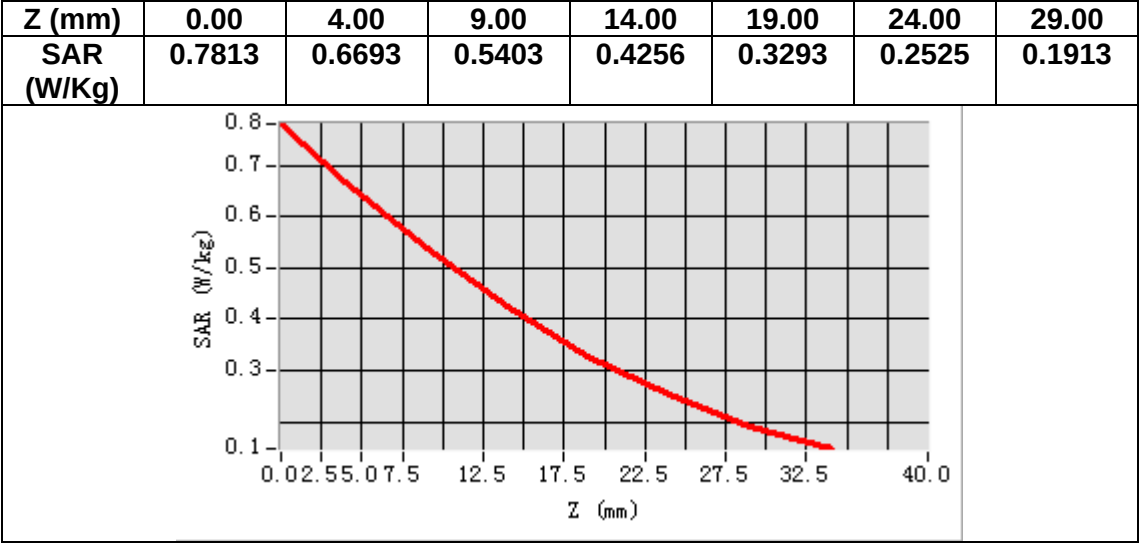
VOLUME SAR



Maximum location: X=-38.00, Y=-17.00

SAR Peak: 0.82 W/kg

SAR 10g (W/Kg)	0.487551
SAR 1g (W/Kg)	0.672338



MEASUREMENT 14

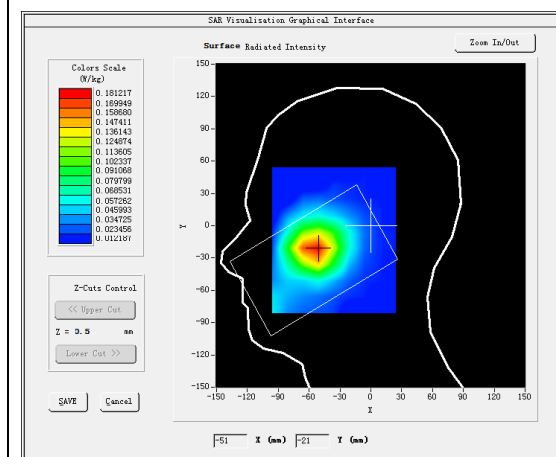
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>Band5 WCDMA850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

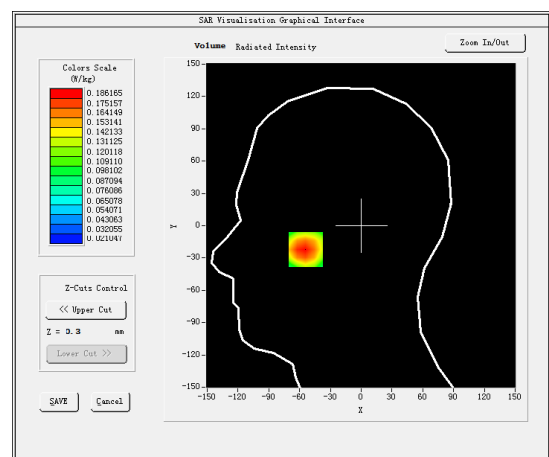
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	40.650959
Relative permittivity (imaginary part)	19.991541
Conductivity (S/m)	0.928940
Variation (%)	2.540000

SURFACE SAR



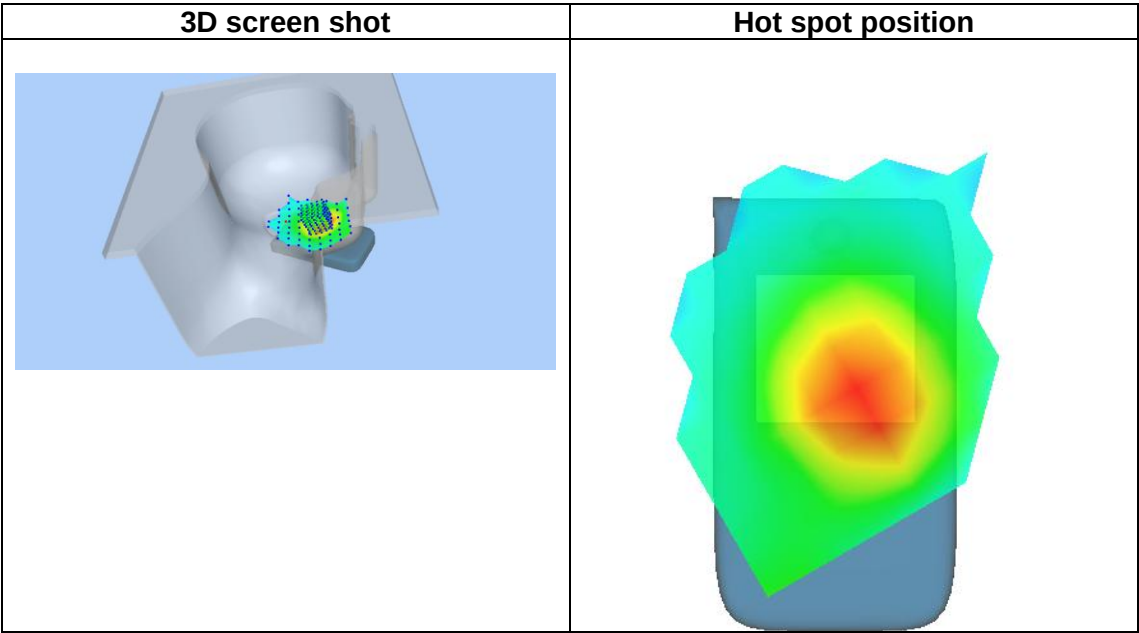
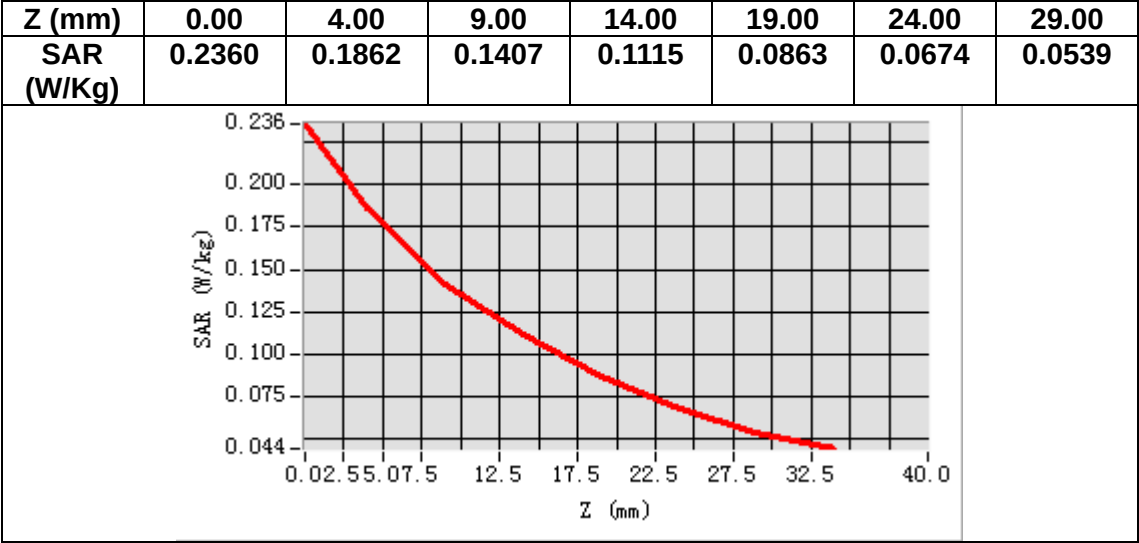
VOLUME SAR



Maximum location: X=-54.00, Y=-22.00

SAR Peak: 0.24 W/kg

SAR 10g (W/Kg)	0.129191
SAR 1g (W/Kg)	0.184599



MEASUREMENT 15

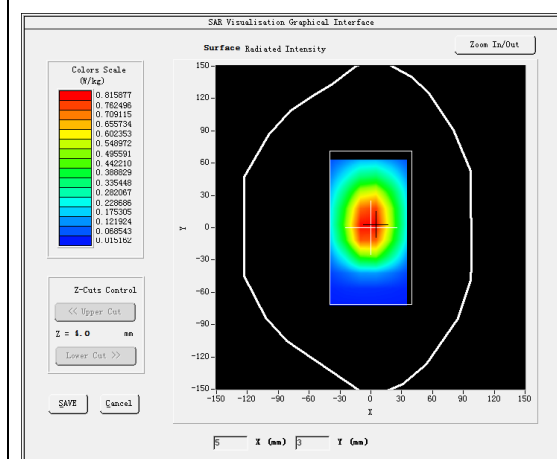
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band5 WCDMA850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

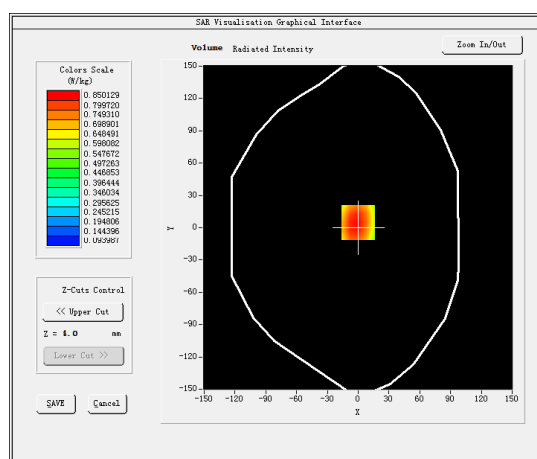
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	54.479580
Relative permittivity (imaginary part)	21.192739
Conductivity (S/m)	0.984756
Variation (%)	-1.400000

SURFACE SAR



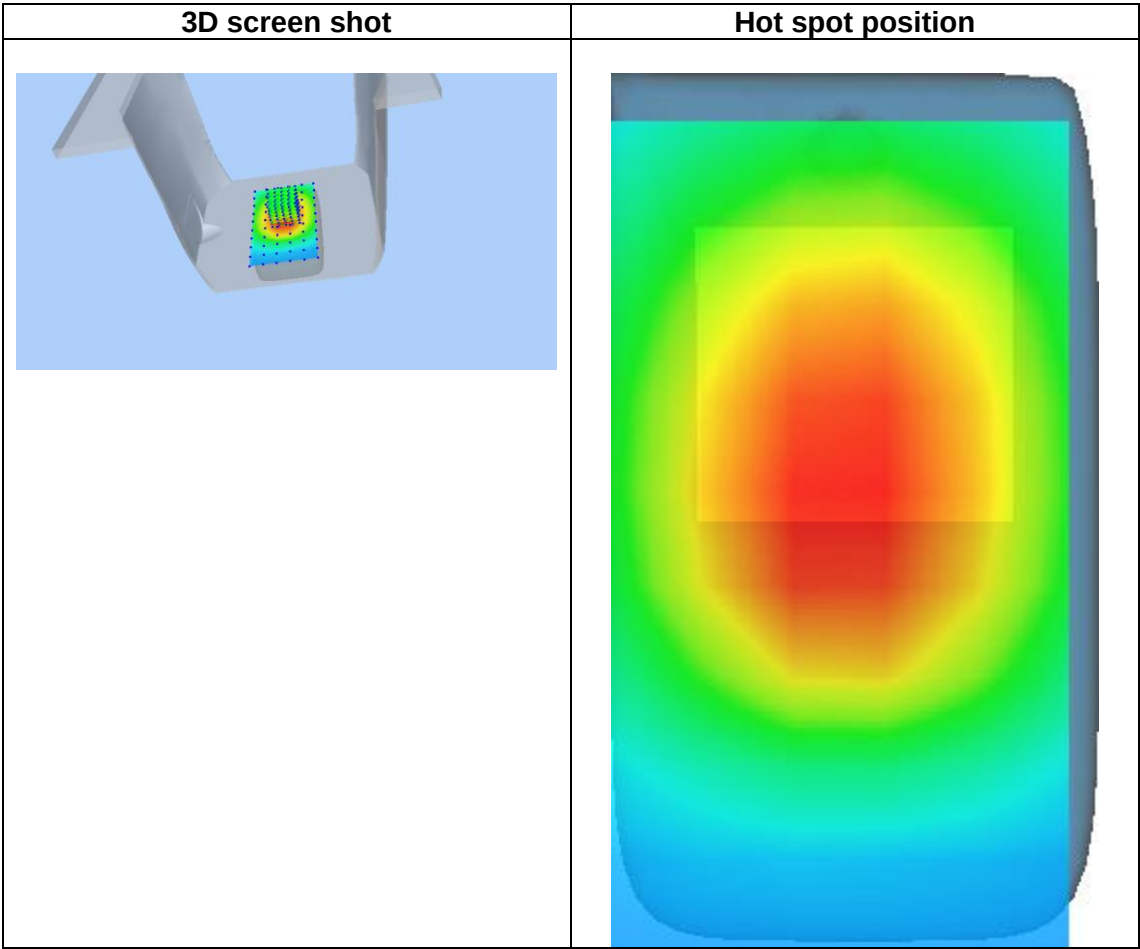
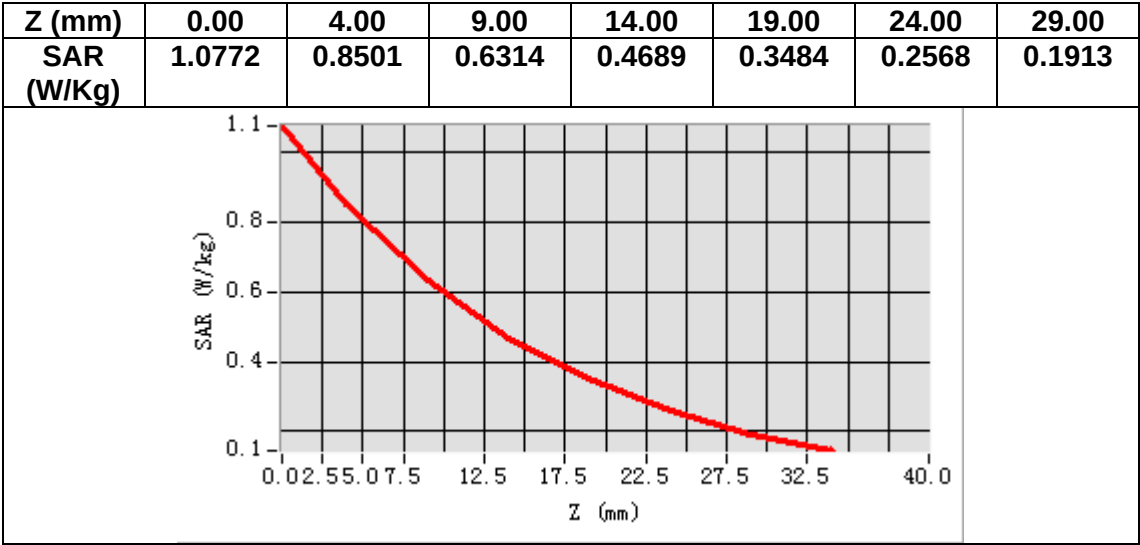
VOLUME SAR



Maximum location: X=0.00, Y=5.00

SAR Peak: 1.10 W/kg

SAR 10g (W/Kg)	0.586276
SAR 1g (W/Kg)	0.835805



MEASUREMENT 16

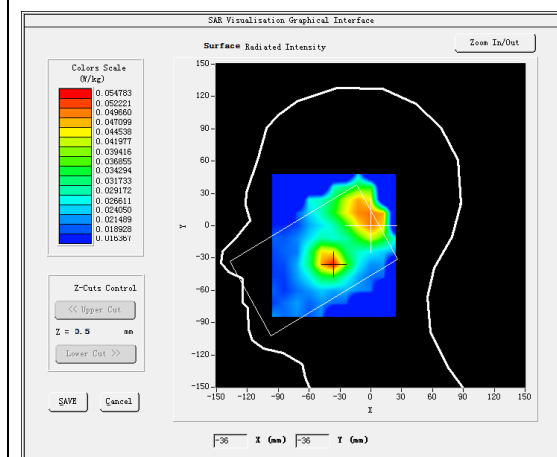
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>IEEE 802.11b ISM</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11b (Crest factor: 1.0)</u>

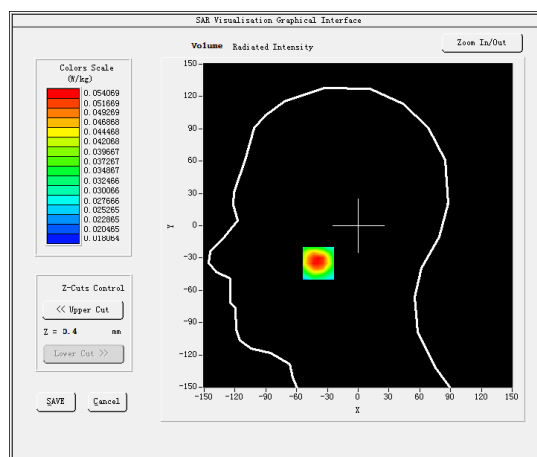
B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative permittivity (real part)	38.498001
Relative permittivity (imaginary part)	13.520300
Conductivity (S/m)	1.830498
Variation (%)	0.160000

SURFACE SAR



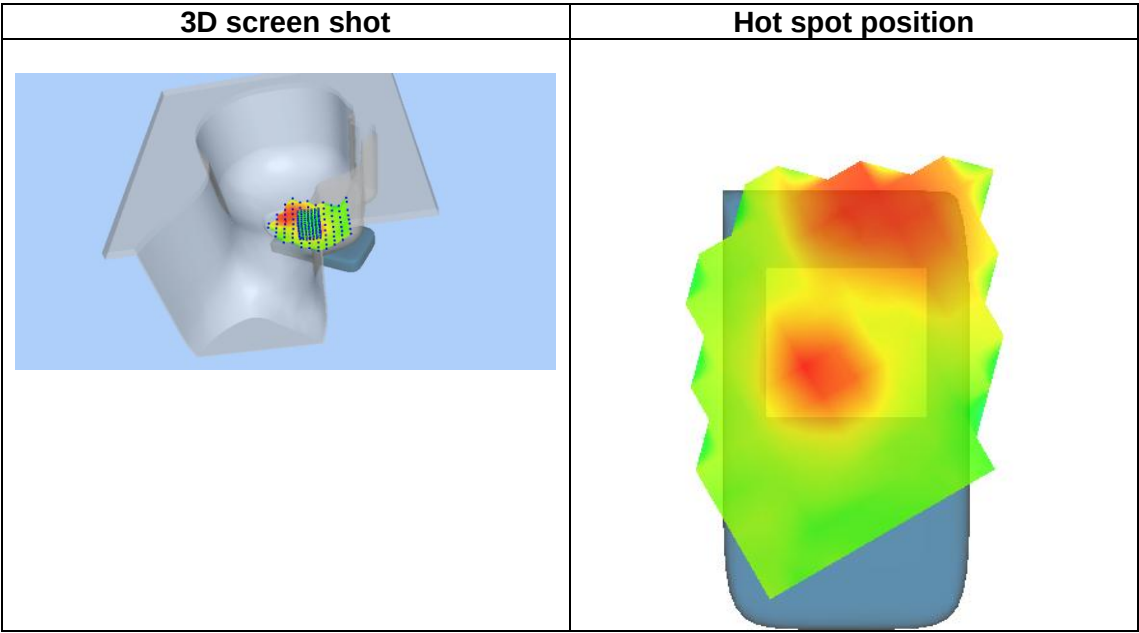
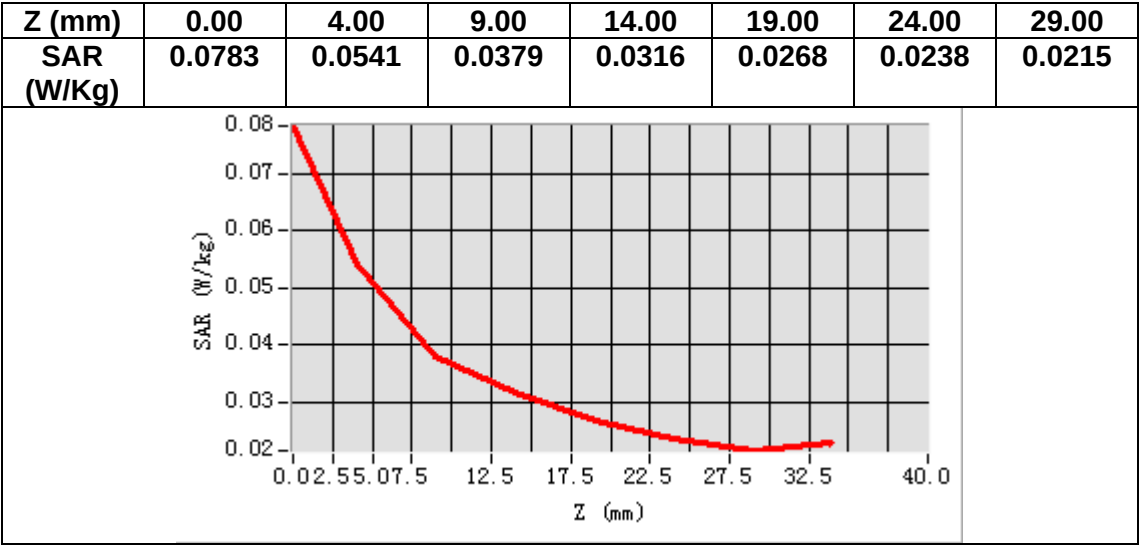
VOLUME SAR



Maximum location: X=-37.00, Y=-35.00

SAR Peak: 0.07 W/kg

SAR 10g (W/Kg)	0.037278
SAR 1g (W/Kg)	0.053665



MEASUREMENT 17

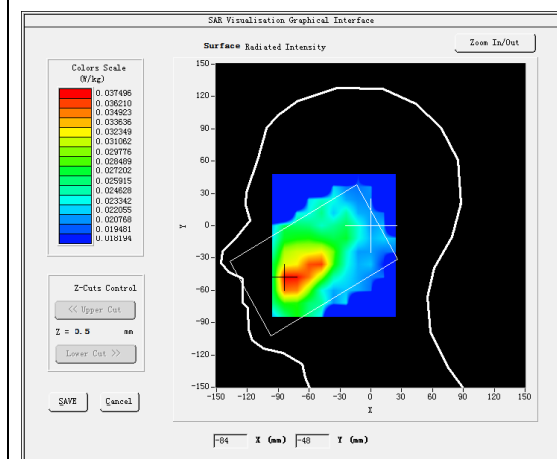
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>IEEE 802.11b ISM</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11b (Crest factor: 1.0)</u>

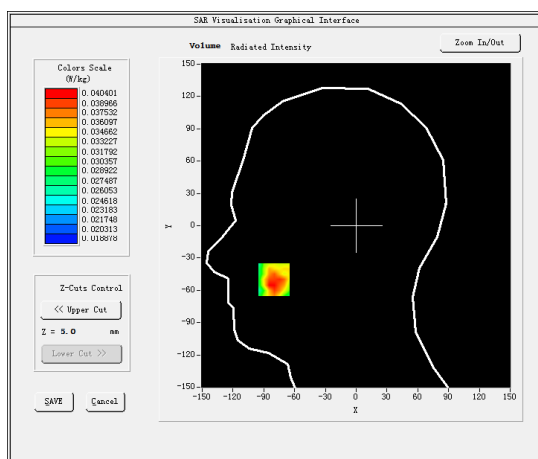
B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative permittivity (real part)	38.498001
Relative permittivity (imaginary part)	13.520300
Conductivity (S/m)	1.830498
Variation (%)	3.090000

SURFACE SAR



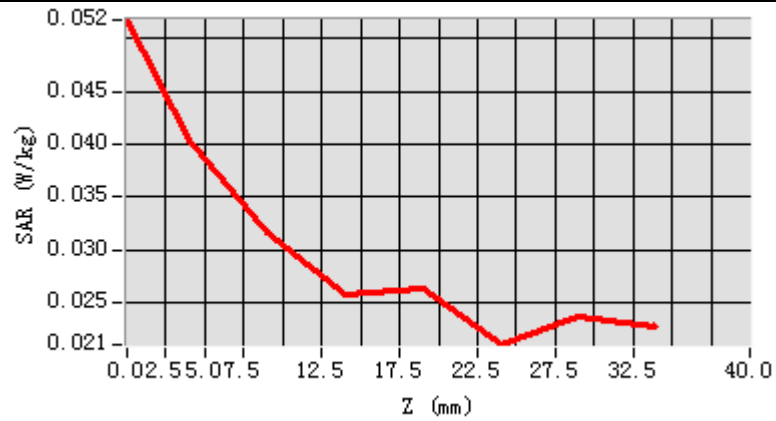
VOLUME SAR

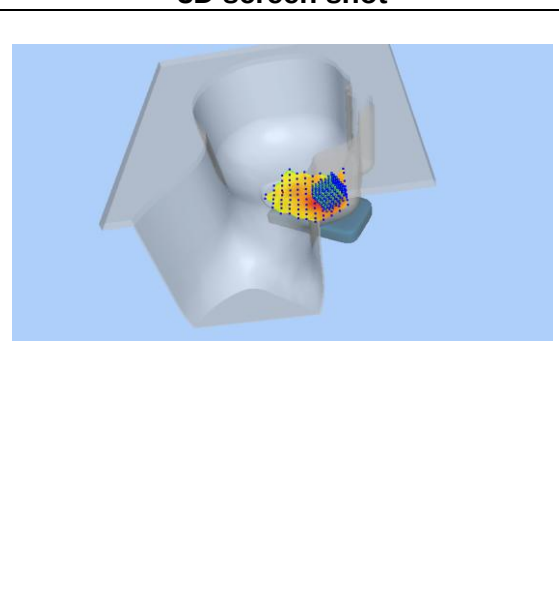
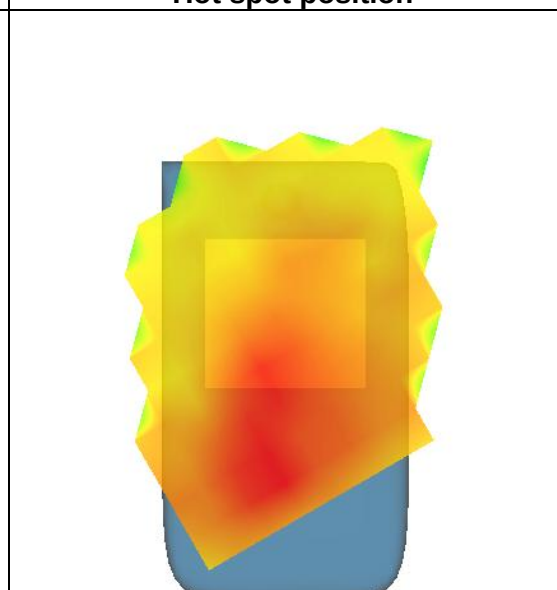


Maximum location: X=-80.00, Y=-50.00

SAR Peak: 0.06 W/kg

SAR 10g (W/Kg)	0.031732
SAR 1g (W/Kg)	0.041361



3D screen shot	Hot spot position
 A 3D rendering of a hand model, likely a prosthetic or a specific anatomical model, shown in a light blue color. The hand is positioned with the palm facing upwards. A cluster of small, multi-colored dots (yellow, orange, red, and blue) is concentrated on the back of the hand, near the wrist area, indicating a specific region of interest or a 'hot spot'.	 A visualization of the 'hot spot position' overlaid on a 3D model of a hand. The hot spot is represented by a large, irregular, multi-colored area (yellow, orange, red, and blue) that covers a significant portion of the back of the hand and wrist. The colors indicate varying intensities, with red being the most intense and yellow being the least. The hot spot is positioned over the area where the 3D screen shot identified the cluster of dots.

MEASUREMENT 18

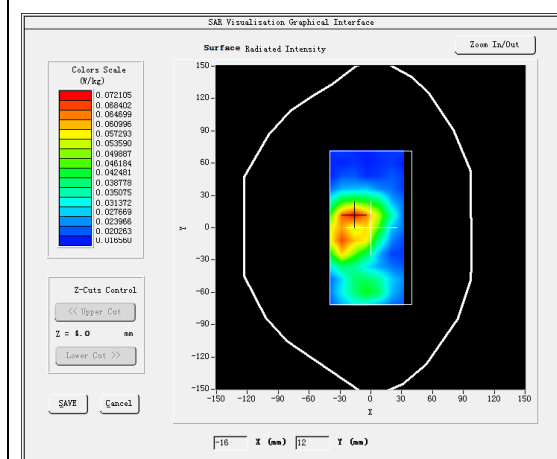
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11b ISM</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11b (Crest factor: 1.0)</u>

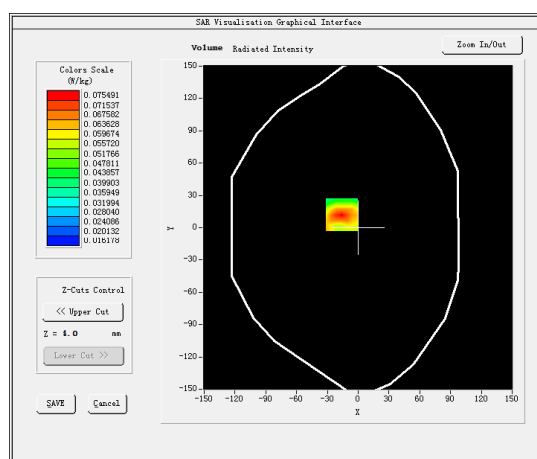
B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.603699
Relative permittivity (imaginary part)	13.934400
Conductivity (S/m)	1.886563
Variation (%)	-1.710000

SURFACE SAR



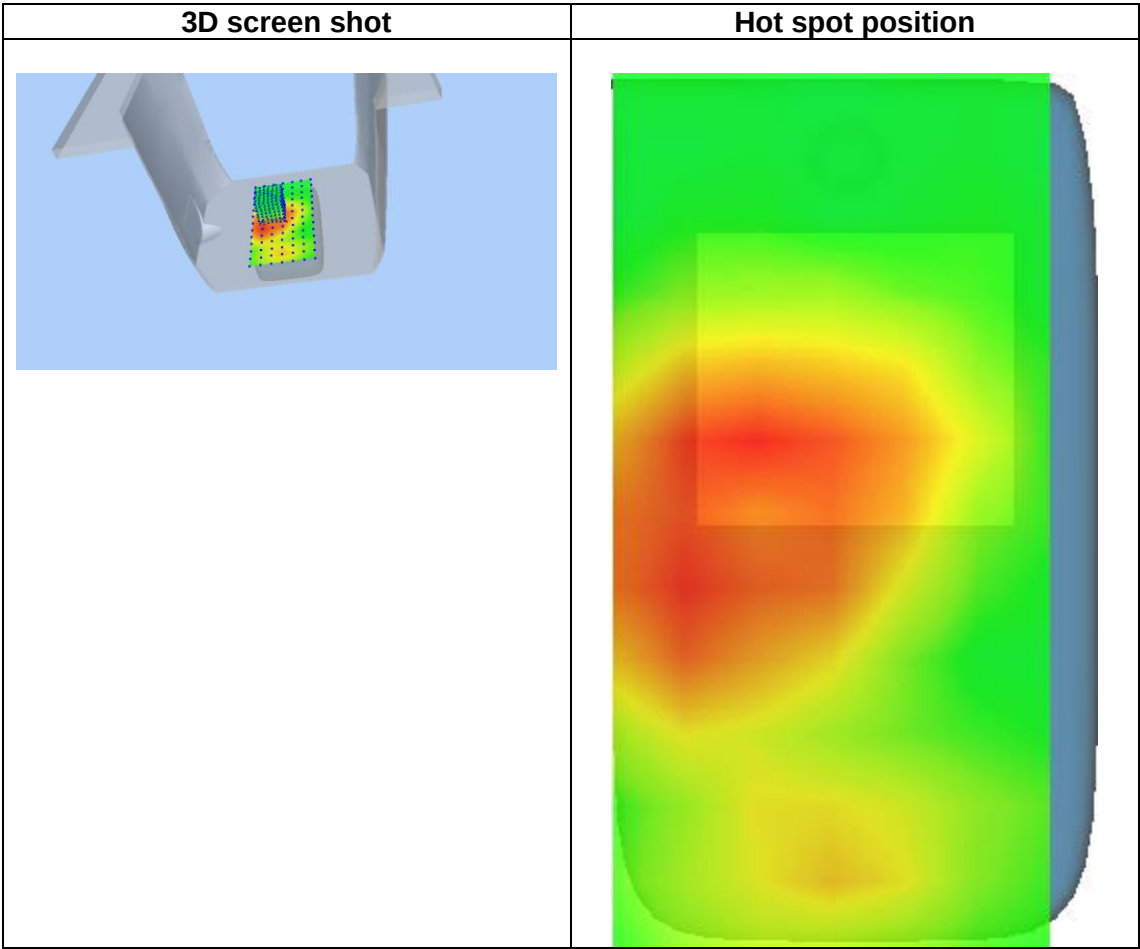
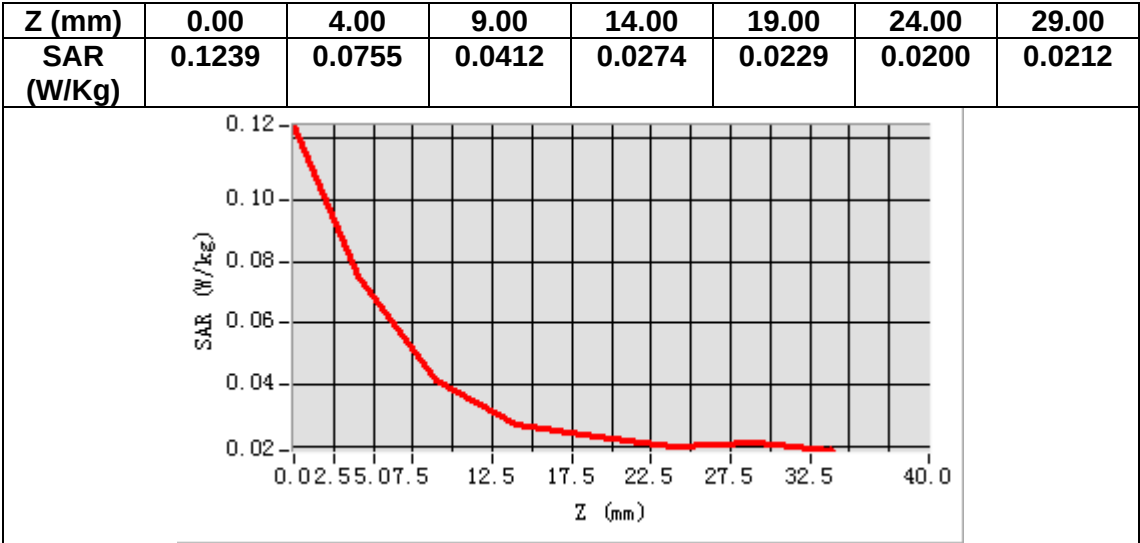
VOLUME SAR



Maximum location: X=-16.00, Y=12.00

SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.043525
SAR 1g (W/Kg)	0.071138



MEASUREMENT 19

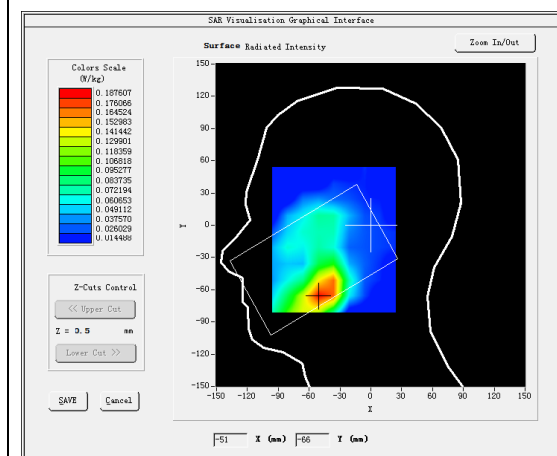
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 2</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

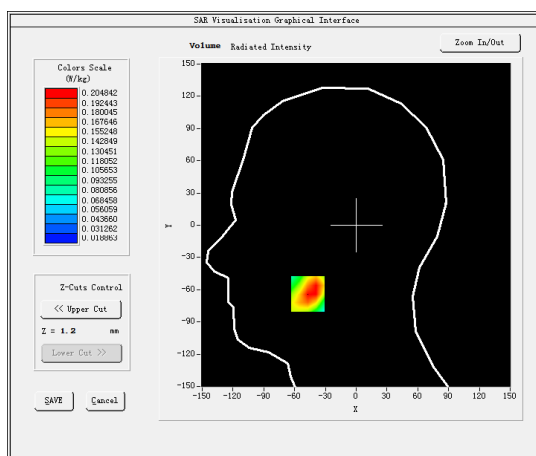
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.957001
Relative permittivity (imaginary part)	13.290200
Conductivity (S/m)	1.388088
Variation (%)	-0.590000

SURFACE SAR



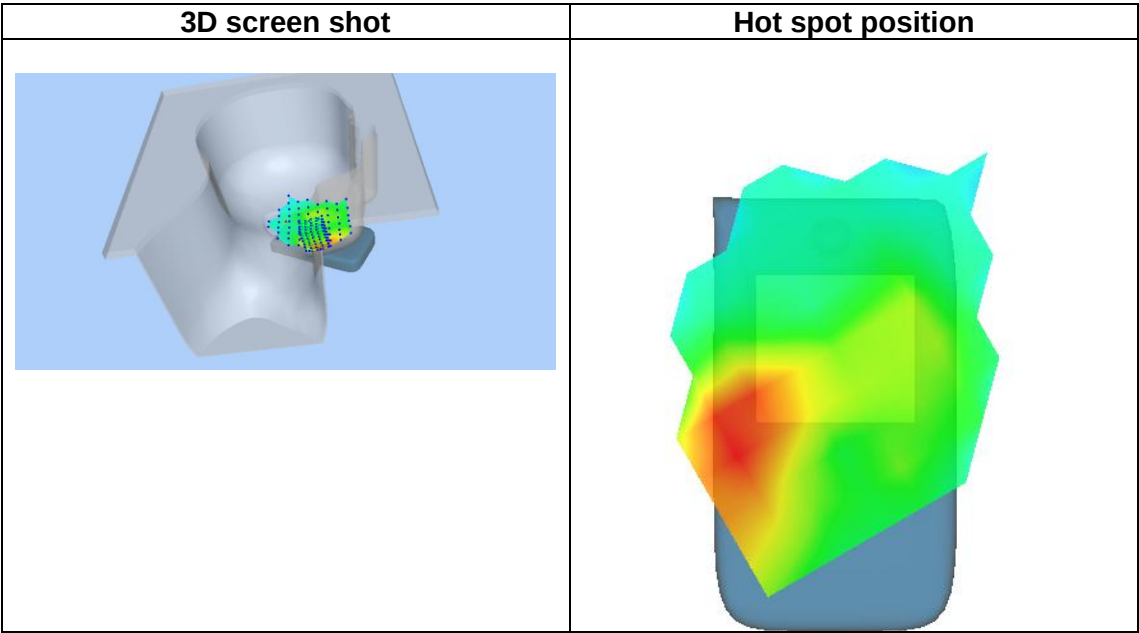
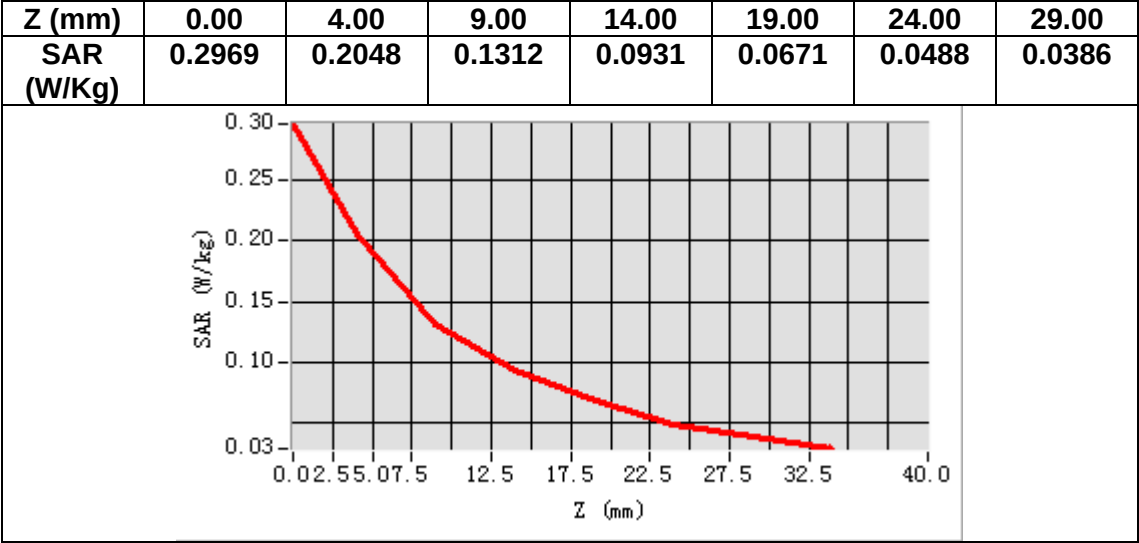
VOLUME SAR



Maximum location: X=-47.00, Y=-64.00

SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.121830
SAR 1g (W/Kg)	0.203096



MEASUREMENT 20

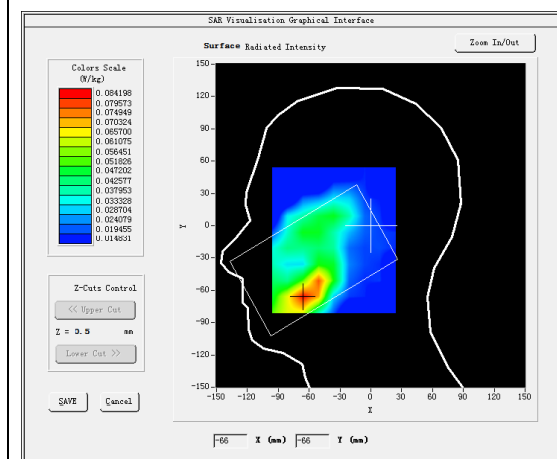
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 2</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

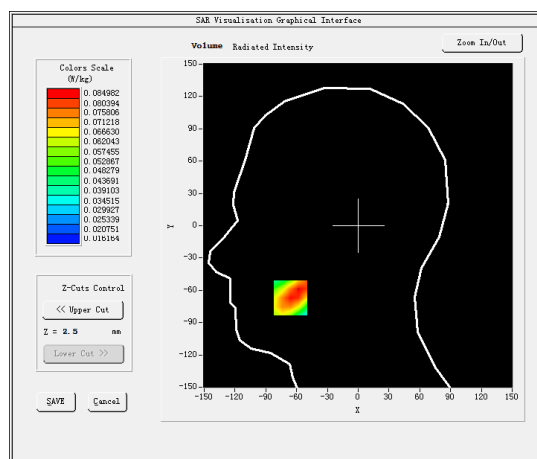
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.957001
Relative permittivity (imaginary part)	13.290200
Conductivity (S/m)	1.388088
Variation (%)	-0.190000

SURFACE SAR



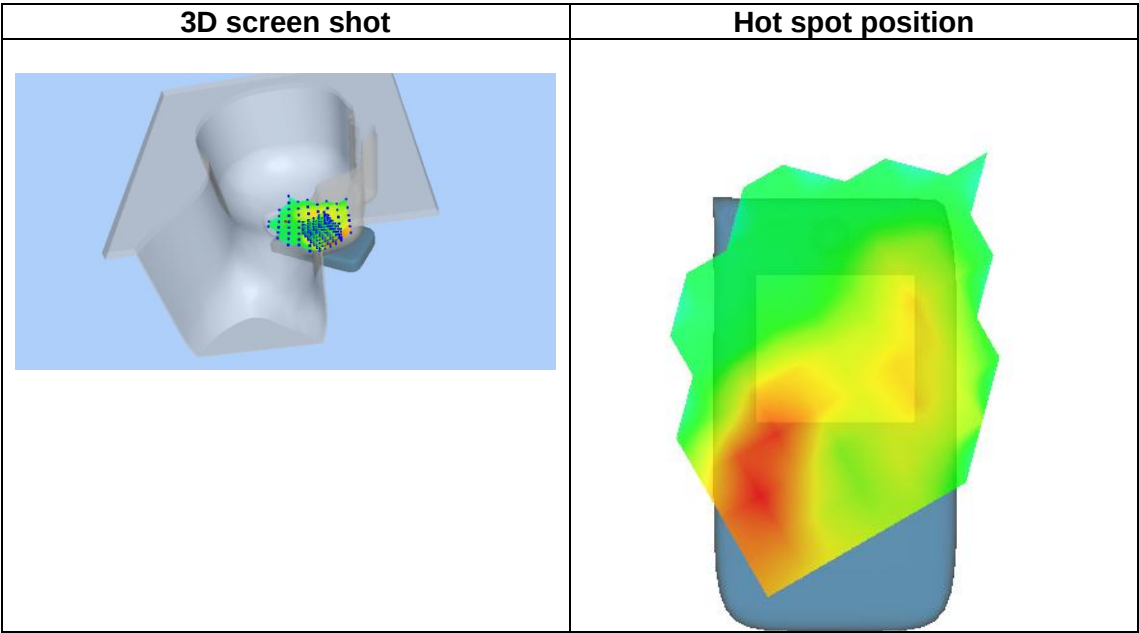
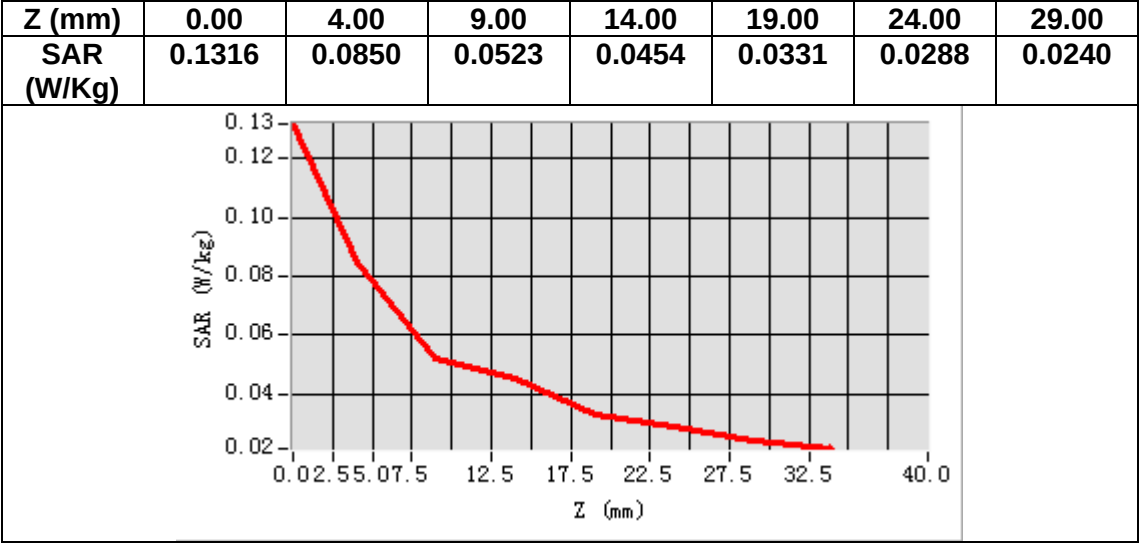
VOLUME SAR



Maximum location: X=-66.00, Y=-67.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.056234
SAR 1g (W/Kg)	0.083305



MEASUREMENT 21

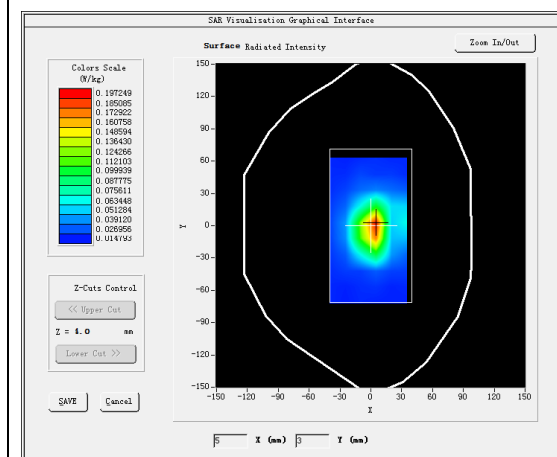
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 2</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

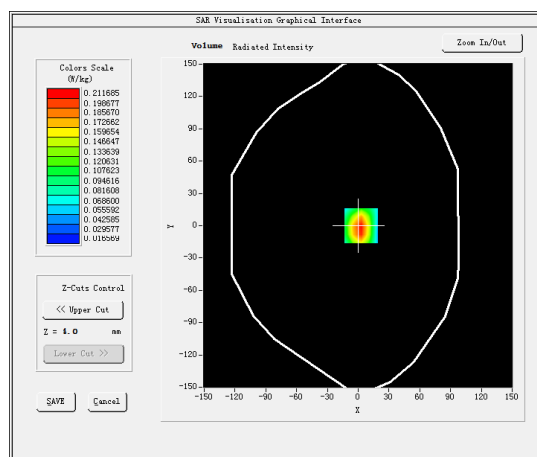
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	54.290951
Relative permittivity (imaginary part)	14.606150
Conductivity (S/m)	1.525125
Variation (%)	-0.980000

SURFACE SAR



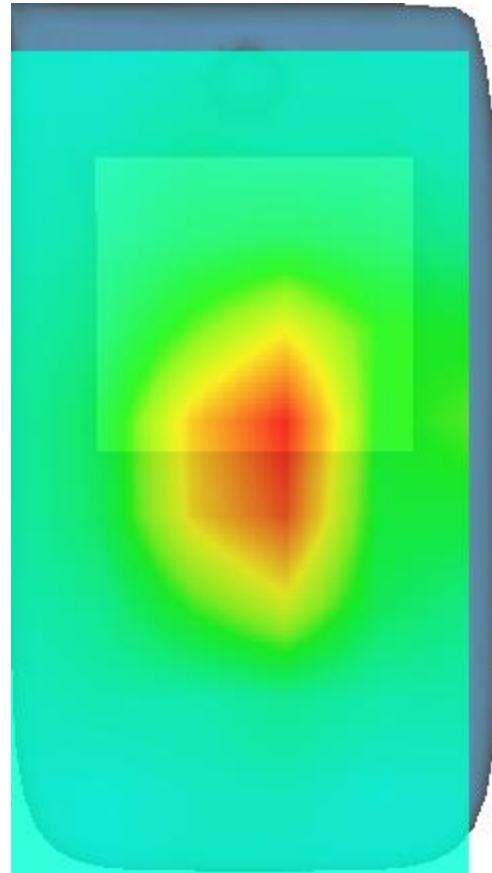
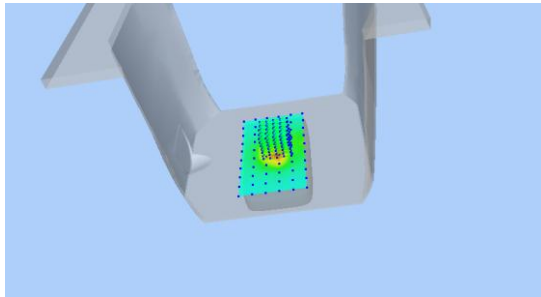
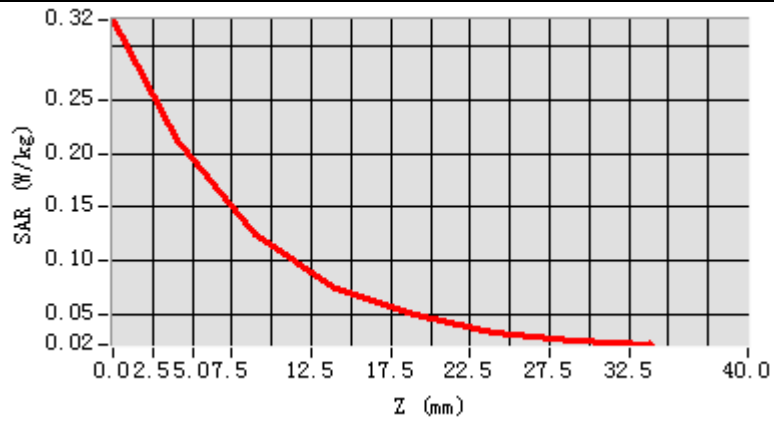
VOLUME SAR



Maximum location: X=3.00, Y=0.00

SAR Peak: 0.33 W/kg

SAR 10g (W/Kg)	0.110289
SAR 1g (W/Kg)	0.201137



MEASUREMENT 22

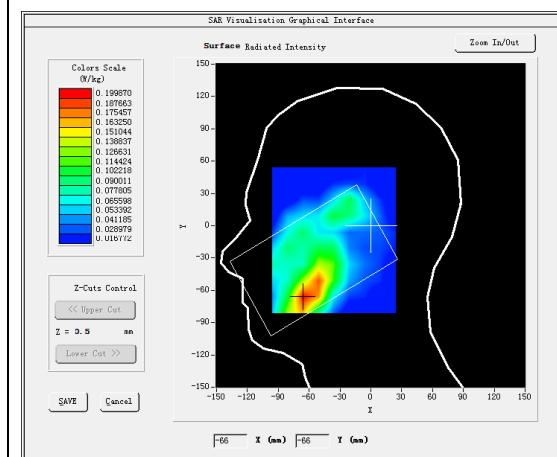
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 4</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

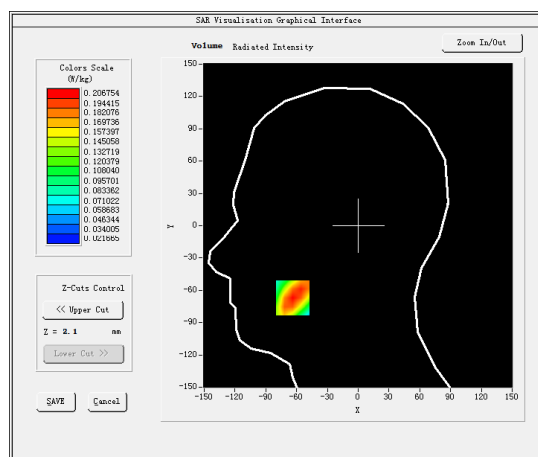
B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative permittivity (real part)	38.795292
Relative permittivity (imaginary part)	14.010592
Conductivity (S/m)	1.348519
Variation (%)	-2.220000

SURFACE SAR



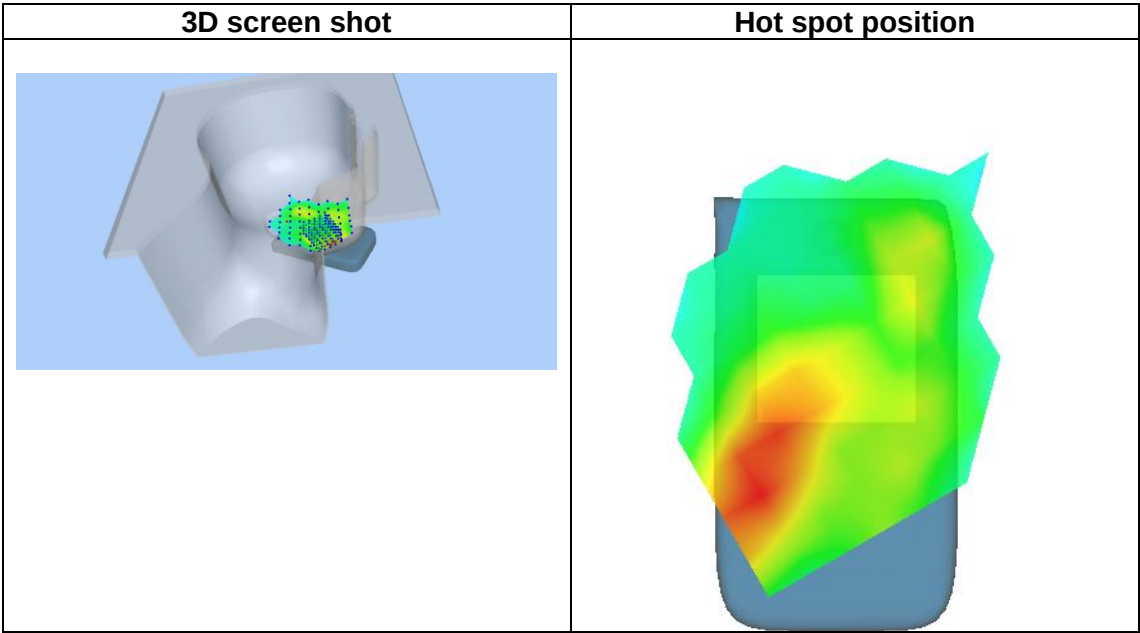
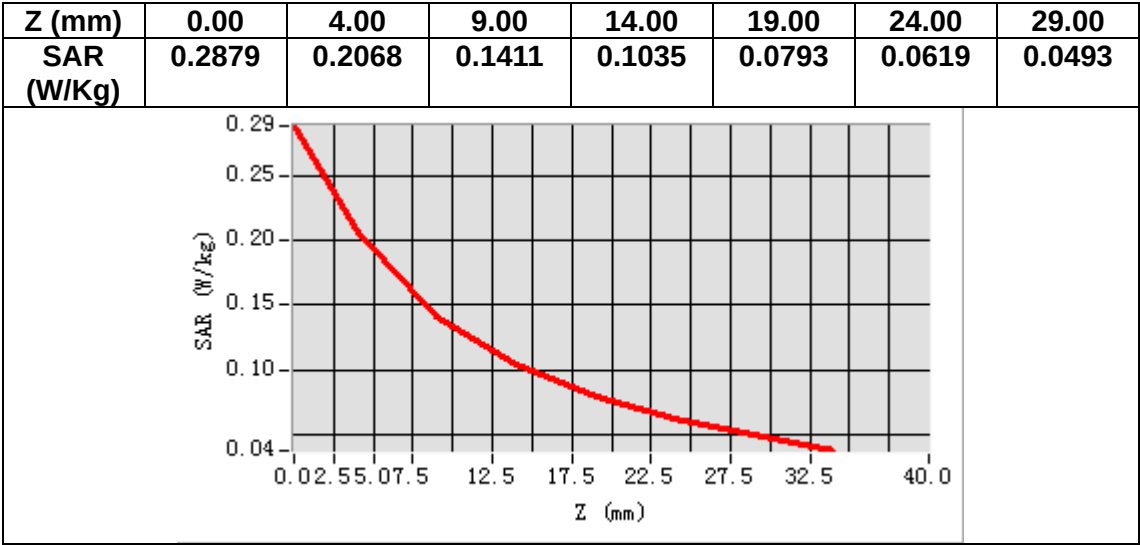
VOLUME SAR



Maximum location: X=-64.00, Y=-67.00

SAR Peak: 0.29 W/kg

SAR 10g (W/Kg)	0.130272
SAR 1g (W/Kg)	0.201172

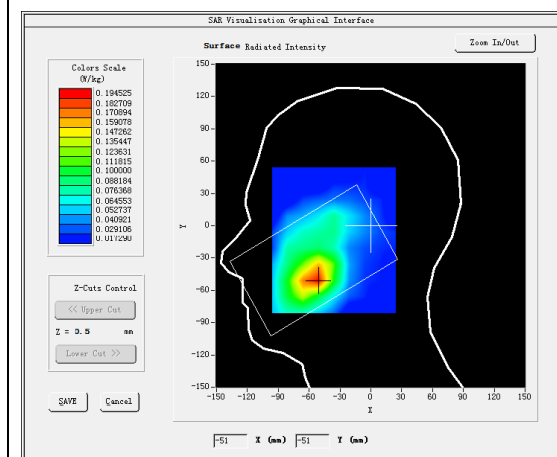
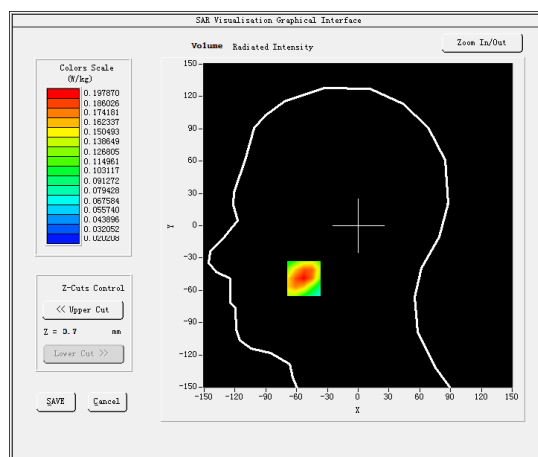


MEASUREMENT 23**A. Experimental conditions.**

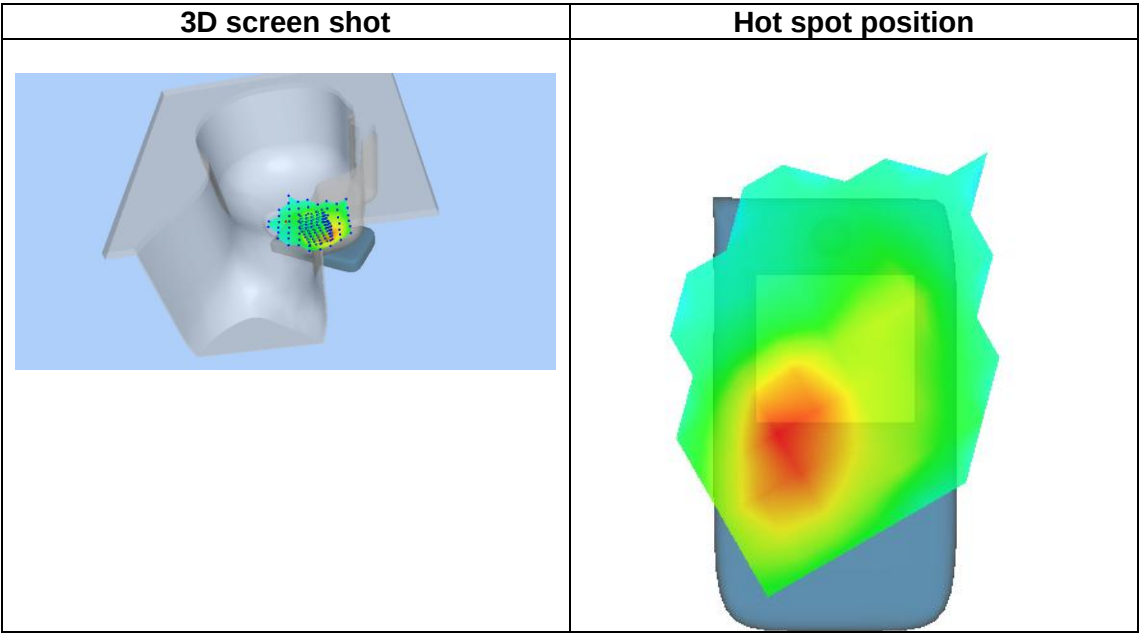
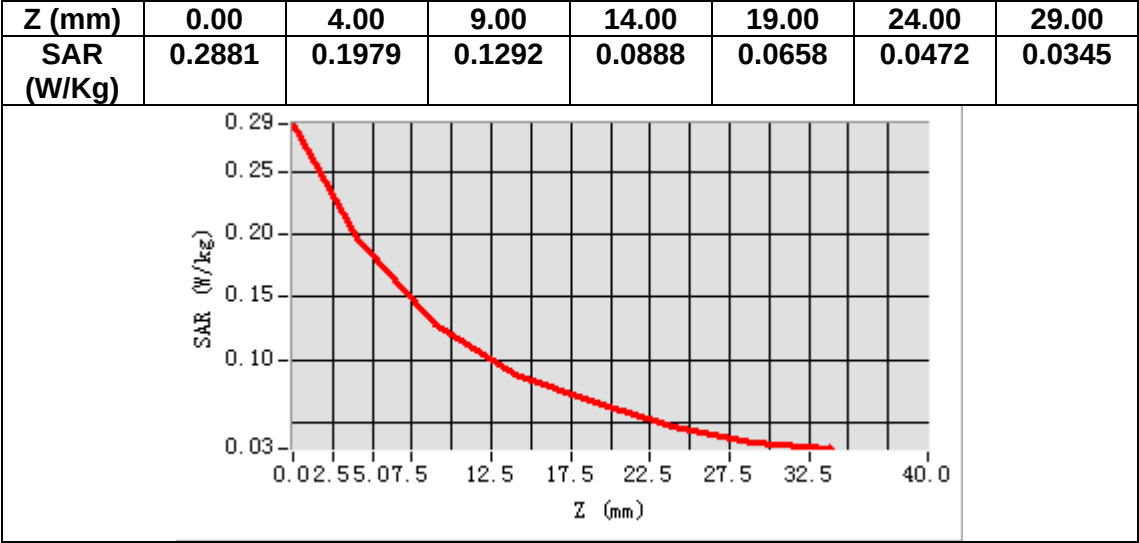
<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 4</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative permittivity (real part)	38.795292
Relative permittivity (imaginary part)	14.010592
Conductivity (S/m)	1.348519
Variation (%)	2.150000

SURFACE SAR**VOLUME SAR****Maximum location: X=-53.00, Y=-49.00****SAR Peak: 0.29 W/kg**

SAR 10g (W/Kg)	0.118587
SAR 1g (W/Kg)	0.190748



MEASUREMENT 24

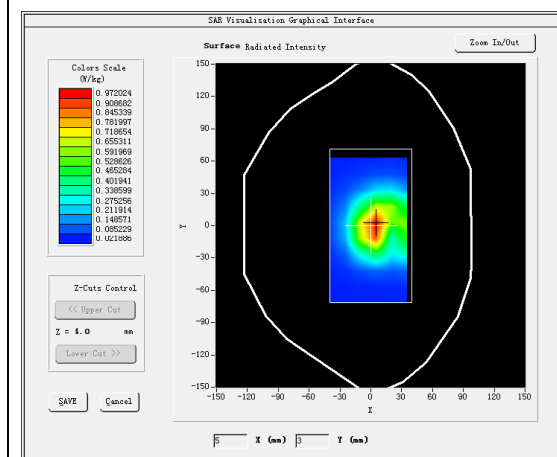
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 4</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

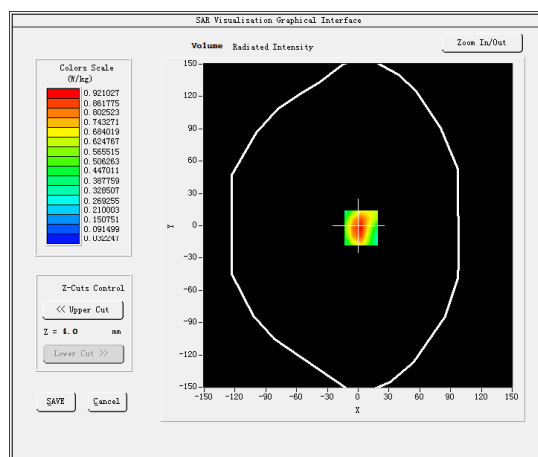
B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative permittivity (real part)	54.428368
Relative permittivity (imaginary part)	15.168220
Conductivity (S/m)	1.459941
Variation (%)	-1.920000

SURFACE SAR



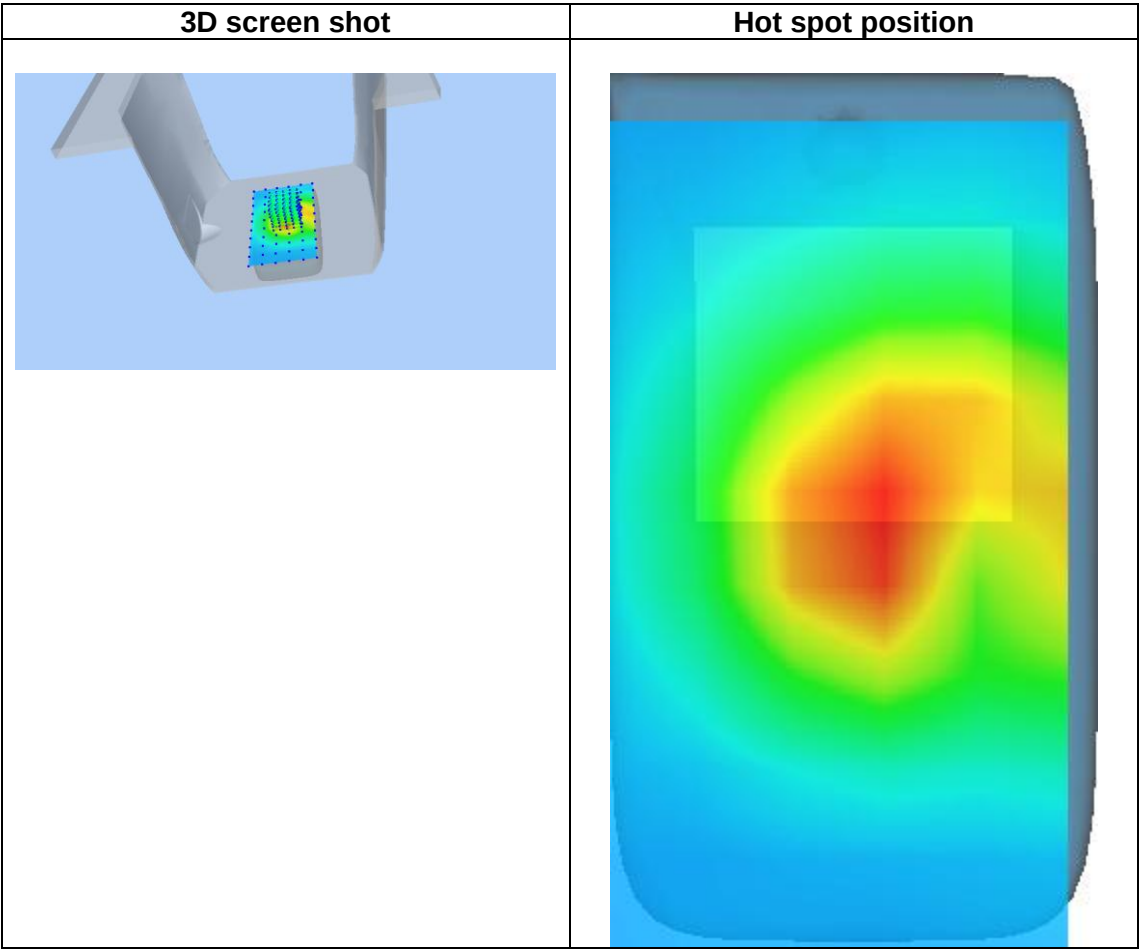
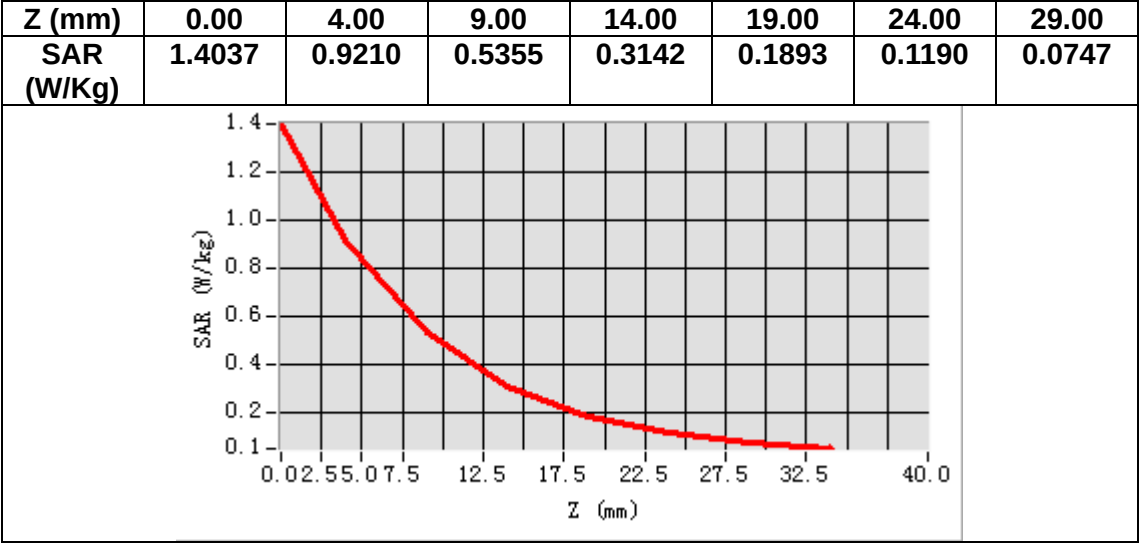
VOLUME SAR



Maximum location: X=3.00, Y=-2.00

SAR Peak: 1.41 W/kg

SAR 10g (W/Kg)	0.487781
SAR 1g (W/Kg)	0.879293



MEASUREMENT 25

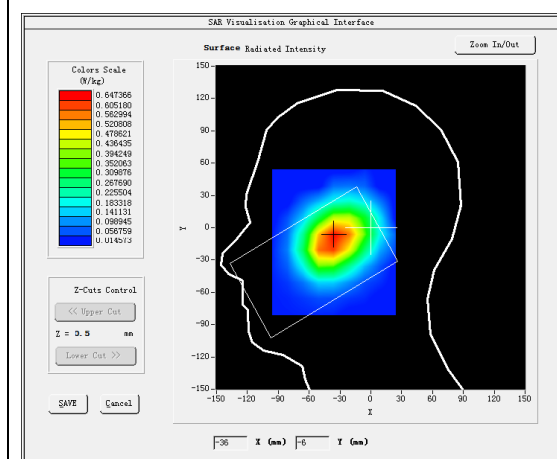
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 5</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

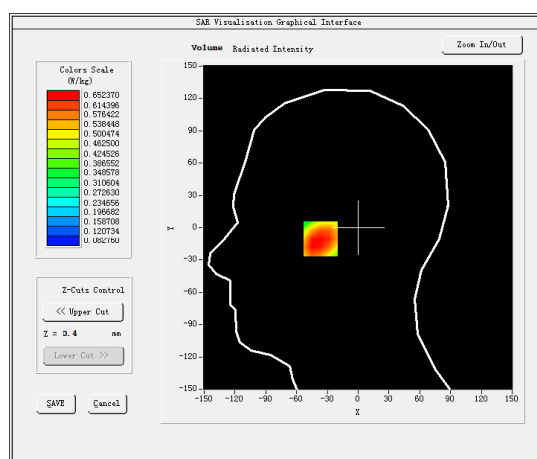
B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative permittivity (real part)	40.653549
Relative permittivity (imaginary part)	19.990200
Conductivity (S/m)	0.928989
Variation (%)	-0.420000

SURFACE SAR



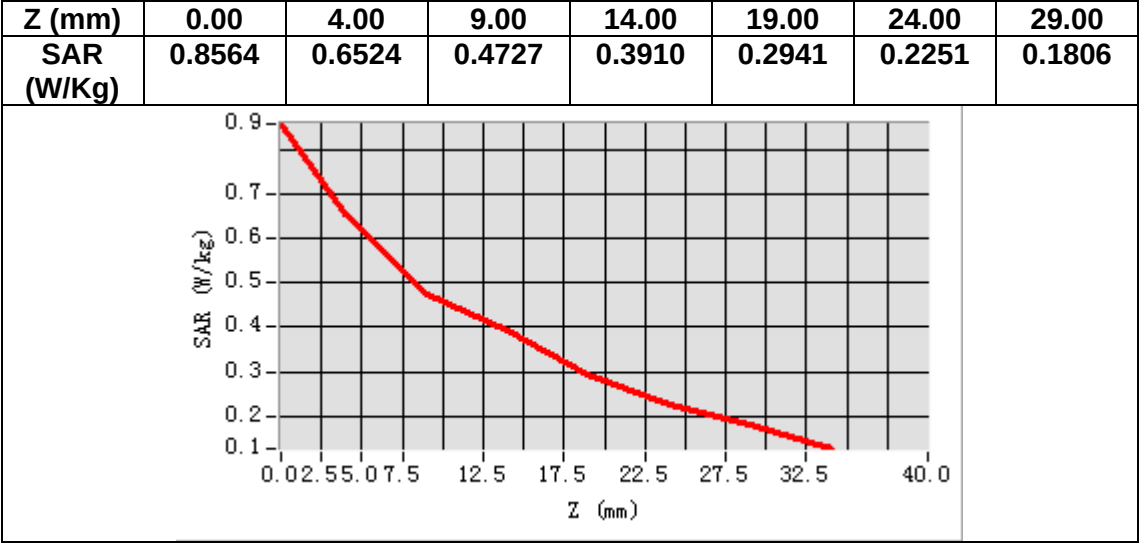
VOLUME SAR



Maximum location: X=-36.00, Y=-9.00

SAR Peak: 0.81 W/kg

SAR 10g (W/Kg)	0.480826
SAR 1g (W/Kg)	0.659472



MEASUREMENT 26

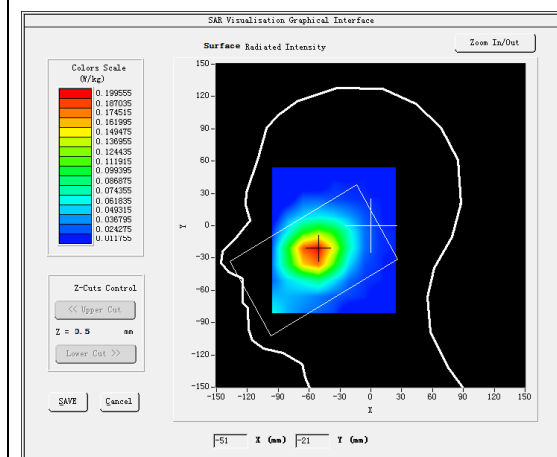
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 5</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

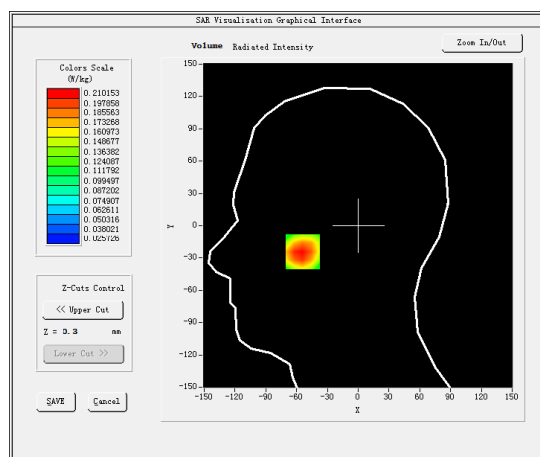
B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative permittivity (real part)	40.653549
Relative permittivity (imaginary part)	19.990200
Conductivity (S/m)	0.928989
Variation (%)	4.840000

SURFACE SAR



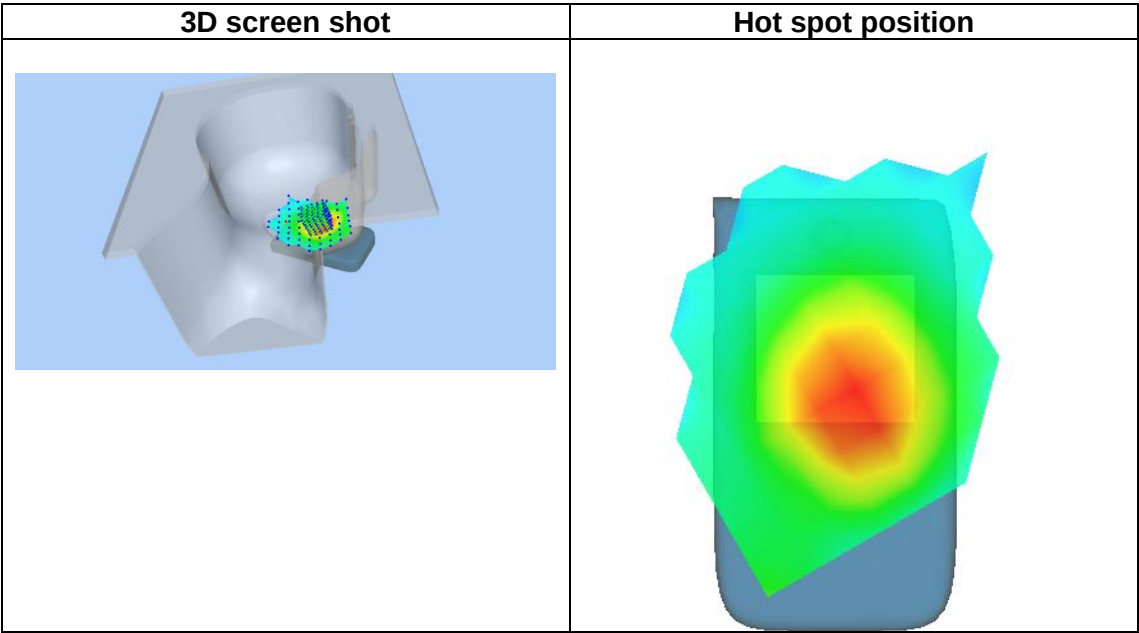
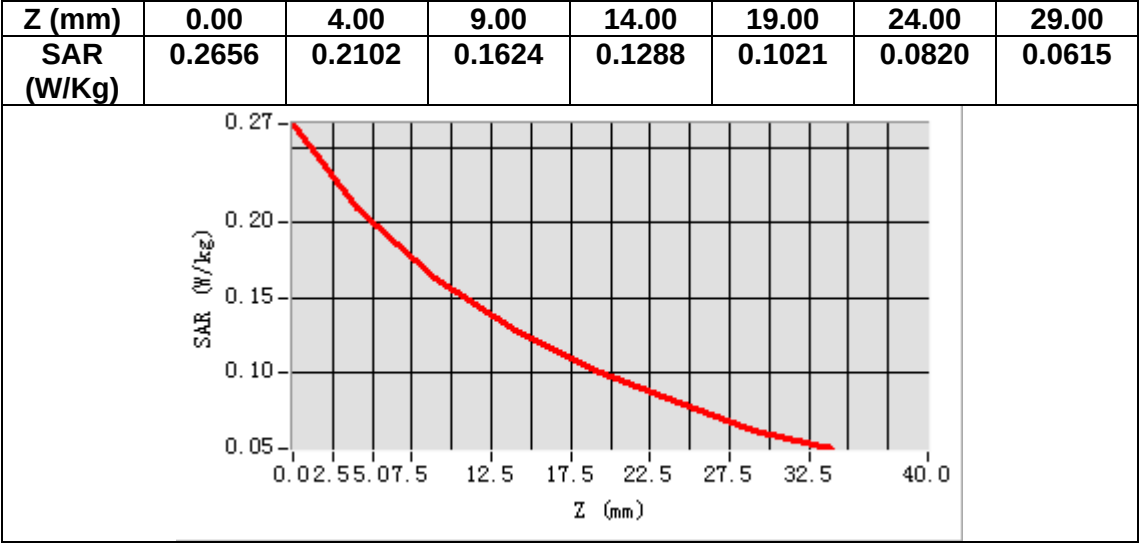
VOLUME SAR



Maximum location: X=-54.00, Y=-24.00

SAR Peak: 0.27 W/kg

SAR 10g (W/Kg)	0.148799
SAR 1g (W/Kg)	0.210931



MEASUREMENT 27

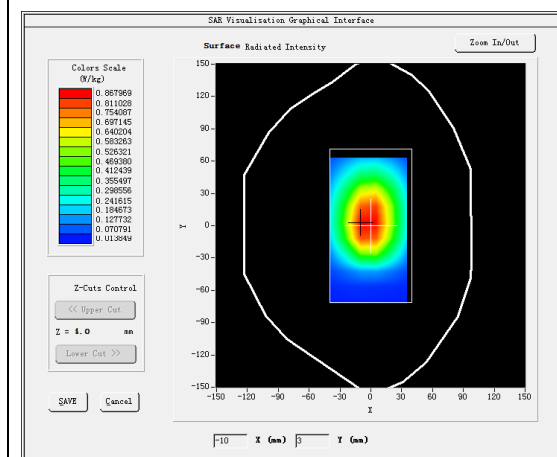
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 5</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

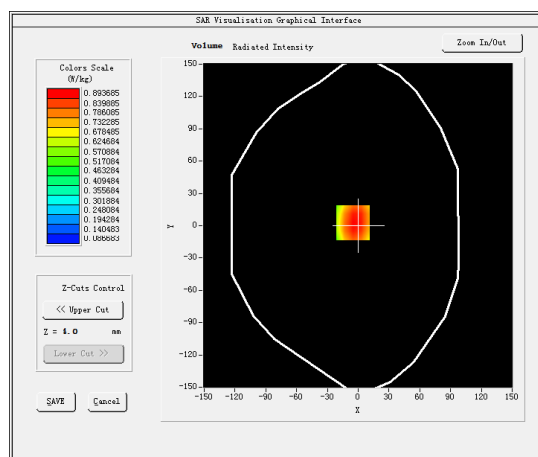
B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative permittivity (real part)	54.483501
Relative permittivity (imaginary part)	21.187000
Conductivity (S/m)	0.984607
Variation (%)	-4.160000

SURFACE SAR



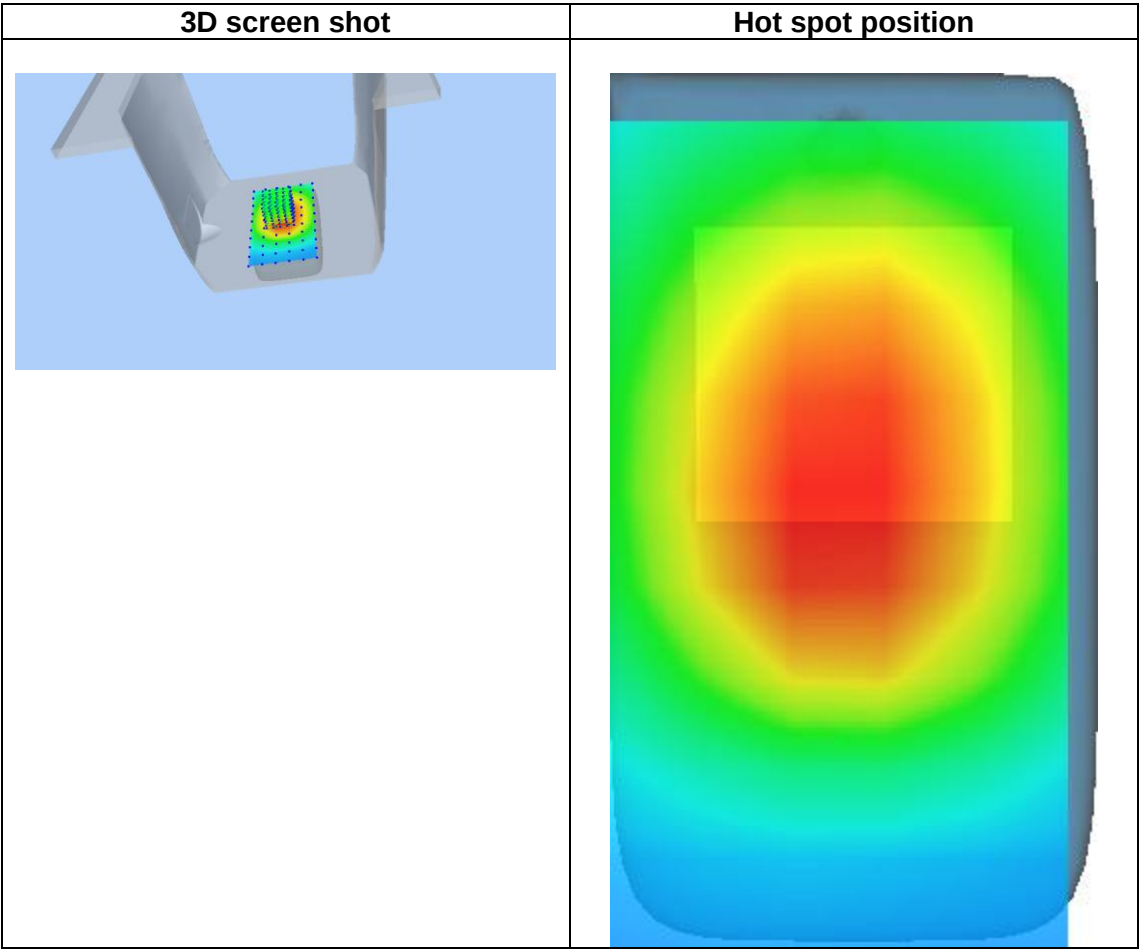
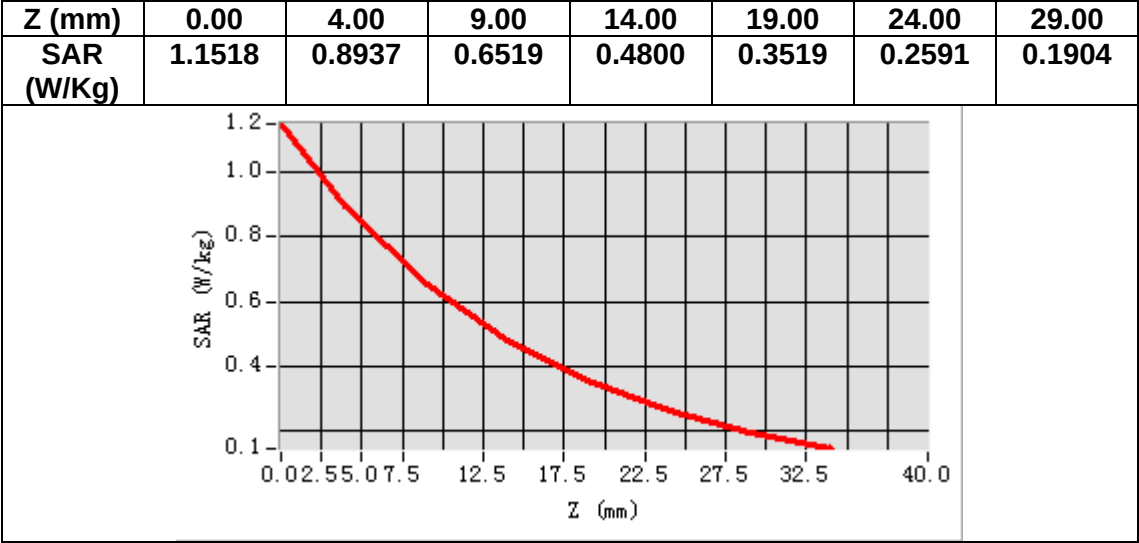
VOLUME SAR



Maximum location: X=-5.00, Y=3.00

SAR Peak: 1.16 W/kg

SAR 10g (W/Kg)	0.615870
SAR 1g (W/Kg)	0.879112



MEASUREMENT 28

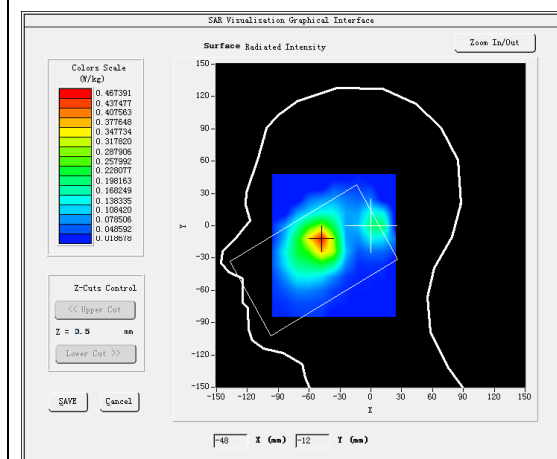
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 7</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

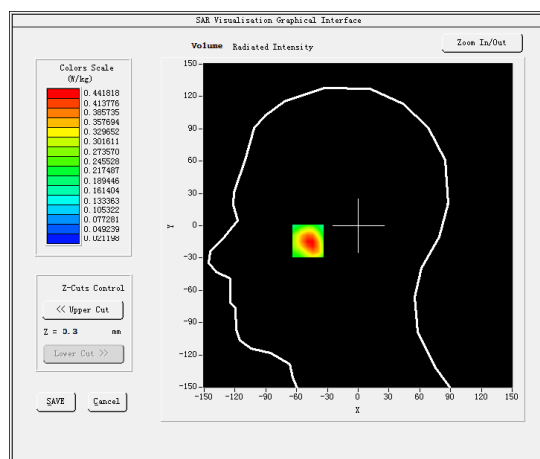
B. SAR Measurement Results

Frequency (MHz)	2535.000000
Relative permittivity (real part)	38.372486
Relative permittivity (imaginary part)	13.911160
Conductivity (S/m)	1.959155
Variation (%)	-4.790000

SURFACE SAR



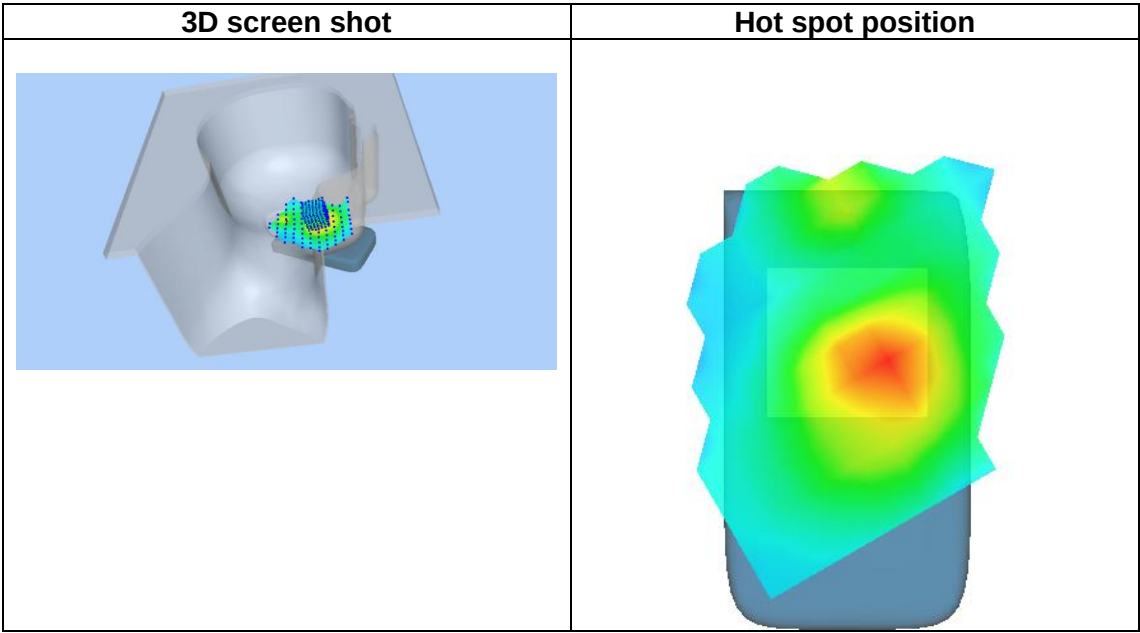
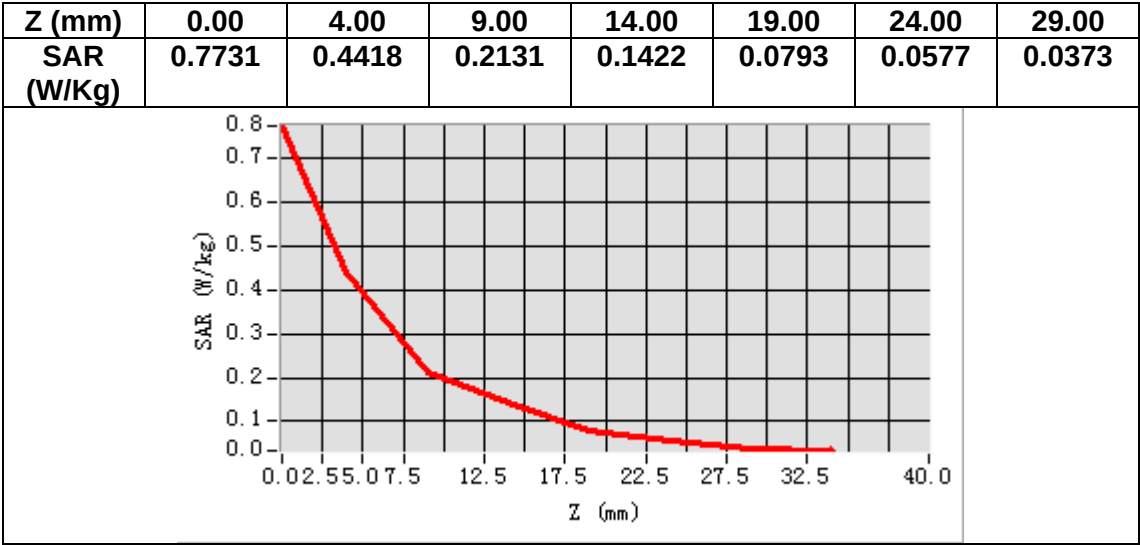
VOLUME SAR



Maximum location: X=-49.00, Y=-13.00

SAR Peak: 0.71 W/kg

SAR 10g (W/Kg)	0.226338
SAR 1g (W/Kg)	0.429105



MEASUREMENT 29

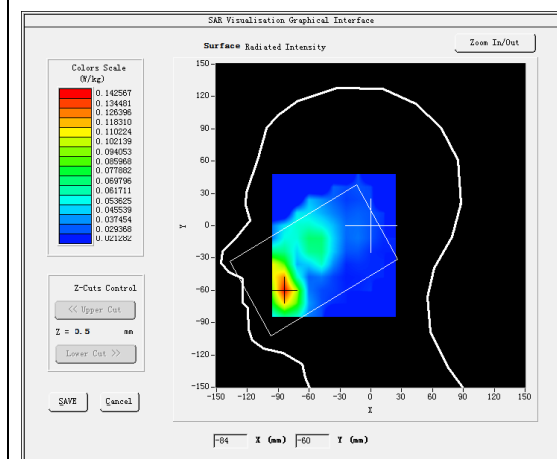
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 7</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

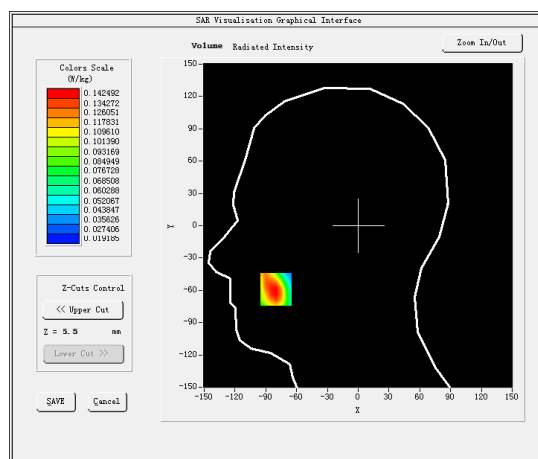
B. SAR Measurement Results

Frequency (MHz)	2535.000000
Relative permittivity (real part)	38.372486
Relative permittivity (imaginary part)	13.911160
Conductivity (S/m)	1.959155
Variation (%)	-4.430000

SURFACE SAR



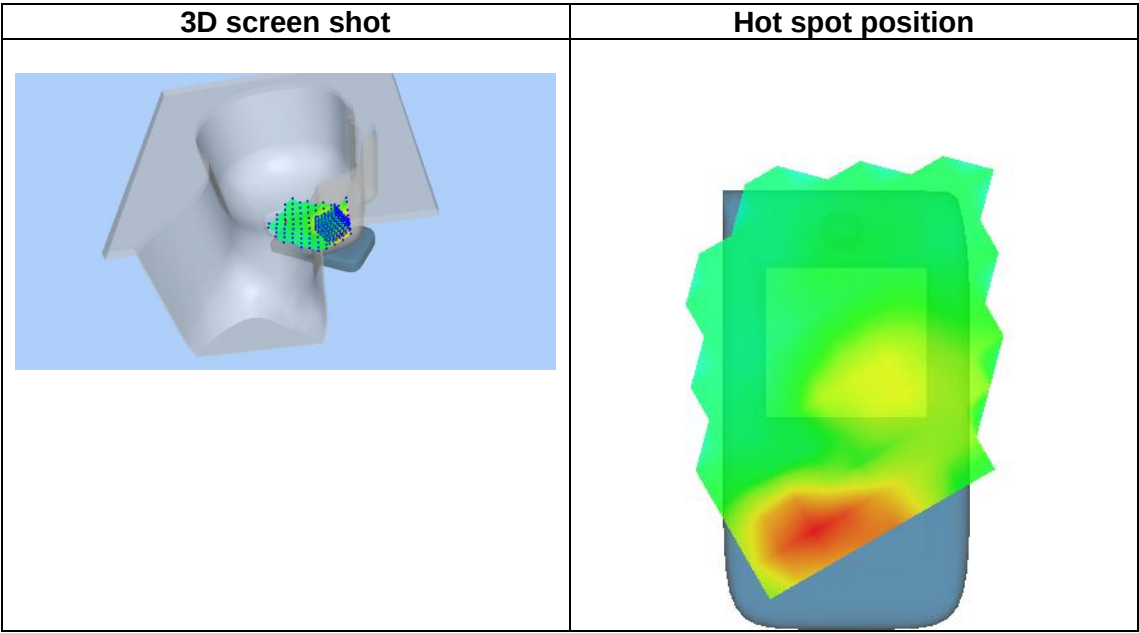
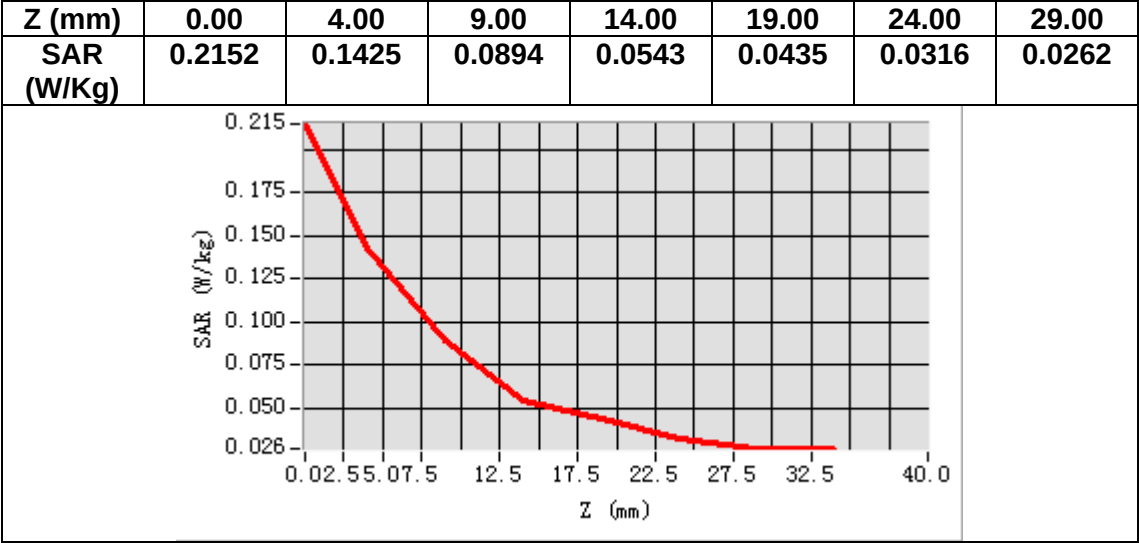
VOLUME SAR



Maximum location: X=-80.00, Y=-59.00

SAR Peak: 0.22 W/kg

SAR 10g (W/Kg)	0.084616
SAR 1g (W/Kg)	0.139528



MEASUREMENT 30

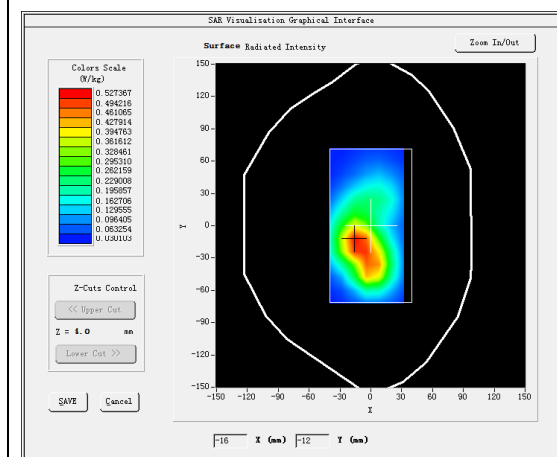
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 7</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

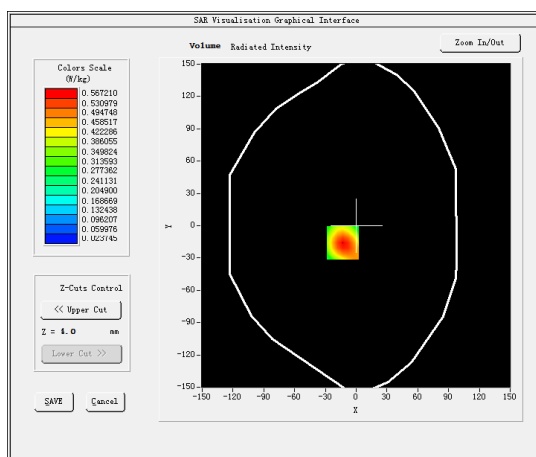
B. SAR Measurement Results

Frequency (MHz)	2535.000000
Relative permittivity (real part)	53.136948
Relative permittivity (imaginary part)	15.227840
Conductivity (S/m)	2.144587
Variation (%)	0.110000

SURFACE SAR



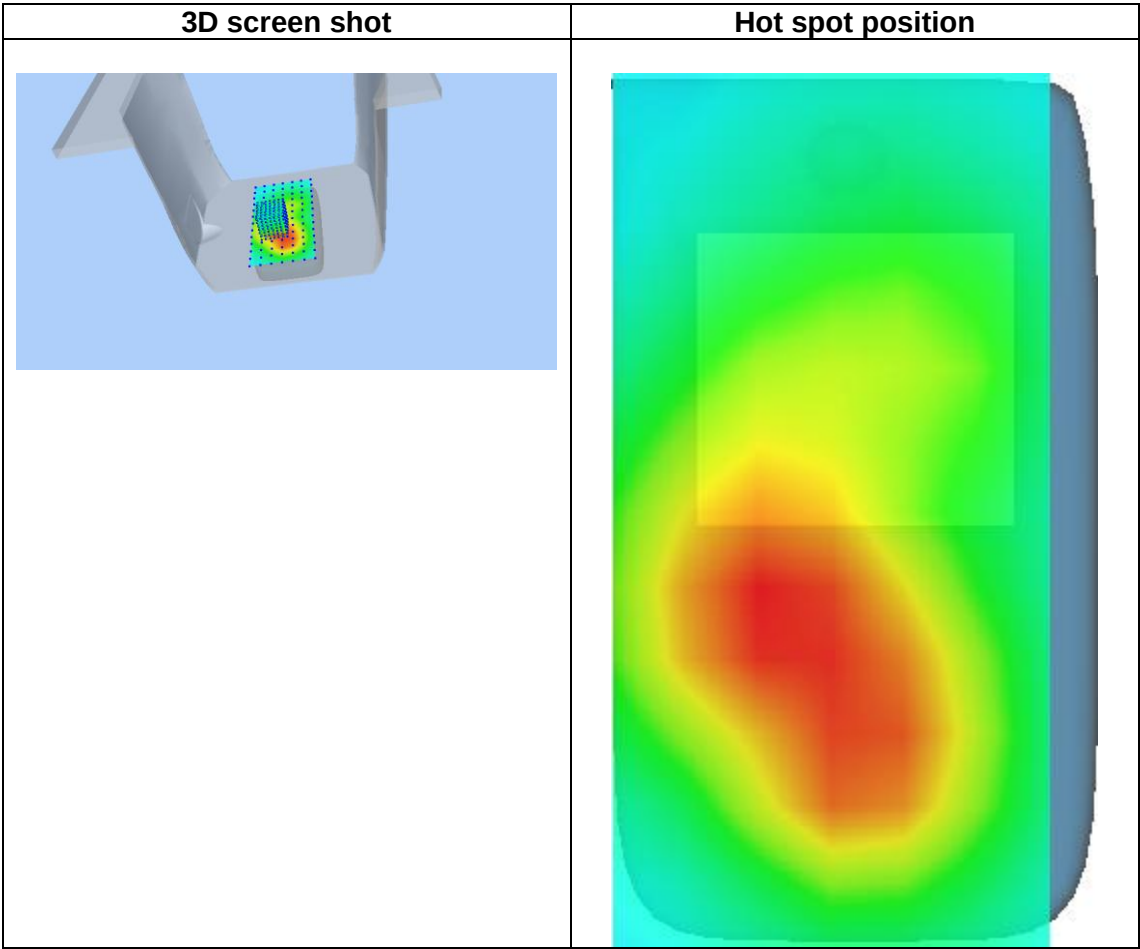
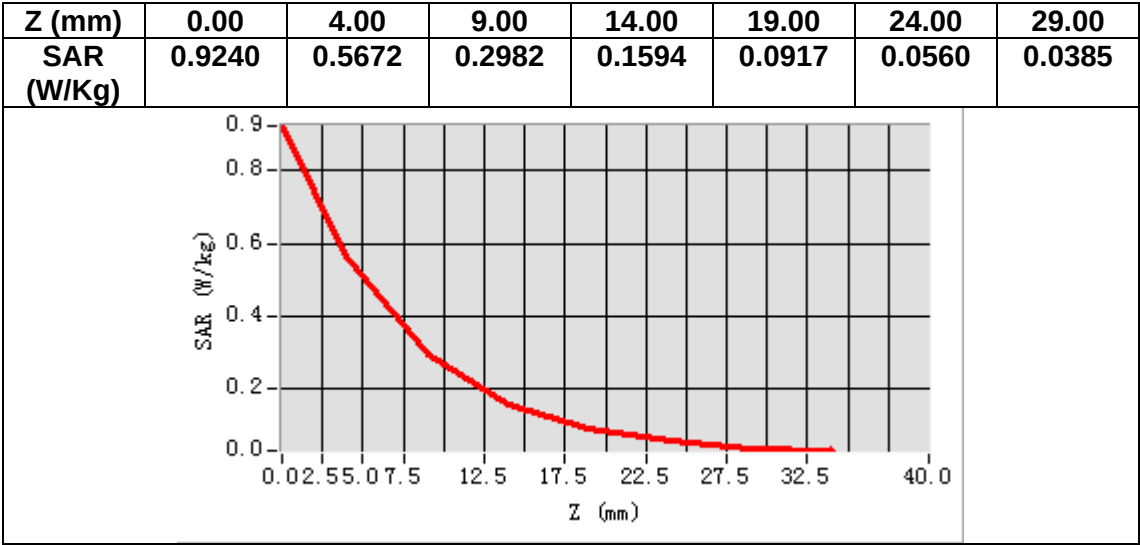
VOLUME SAR



Maximum location: X=-13.00, Y=-16.00

SAR Peak: 0.92 W/kg

SAR 10g (W/Kg)	0.293548
SAR 1g (W/Kg)	0.547196



MEASUREMENT 31

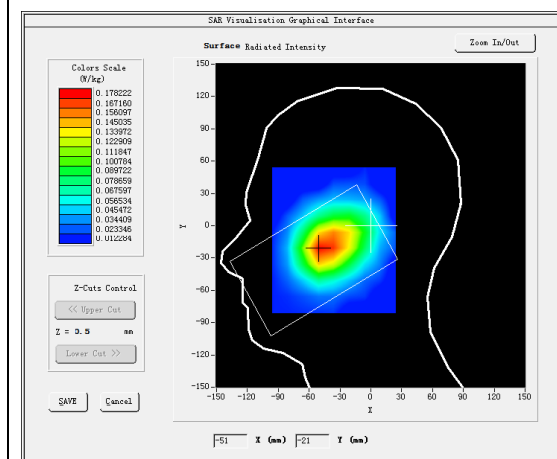
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 12</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

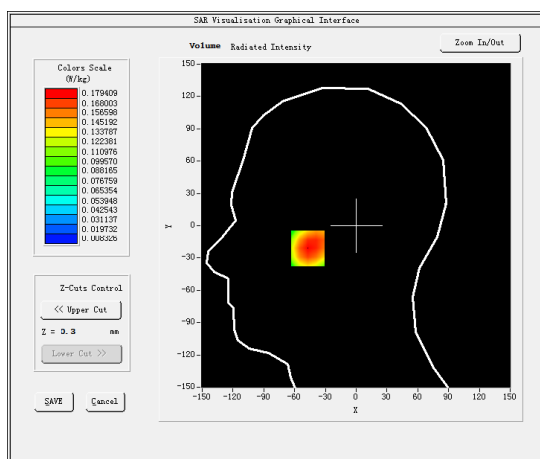
B. SAR Measurement Results

Frequency (MHz)	707.500000
Relative permittivity (real part)	42.037960
Relative permittivity (imaginary part)	22.117779
Conductivity (S/m)	0.869352
Variation (%)	-1.529999

SURFACE SAR



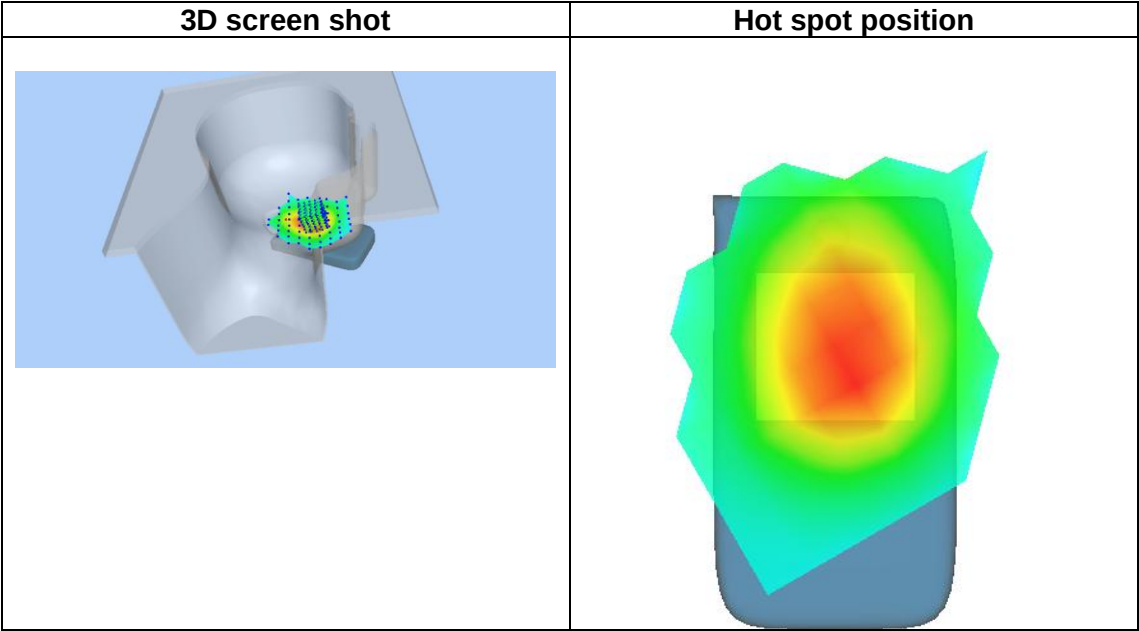
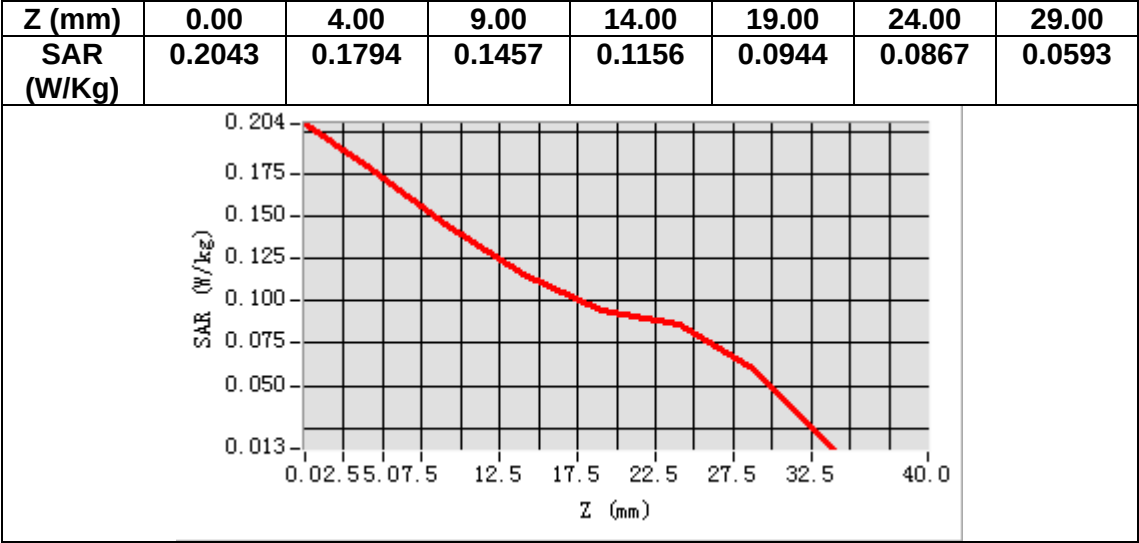
VOLUME SAR



Maximum location: X=-47.00, Y=-21.00

SAR Peak: 0.21 W/kg

SAR 10g (W/Kg)	0.130098
SAR 1g (W/Kg)	0.167182



MEASUREMENT 32

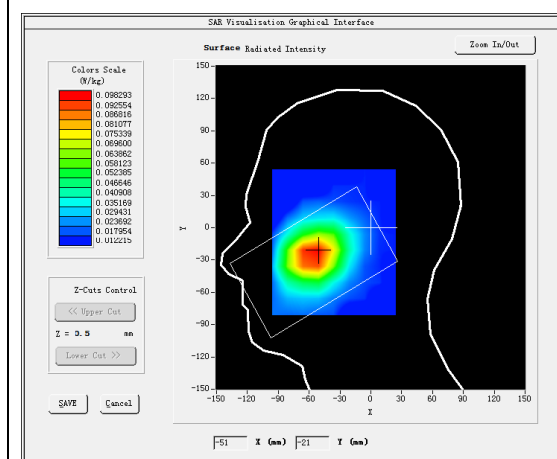
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 12</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

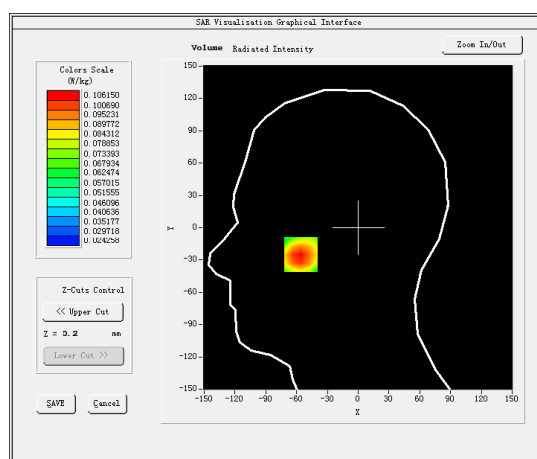
B. SAR Measurement Results

Frequency (MHz)	707.500000
Relative permittivity (real part)	42.037960
Relative permittivity (imaginary part)	22.117779
Conductivity (S/m)	0.869352
Variation (%)	2.540000

SURFACE SAR



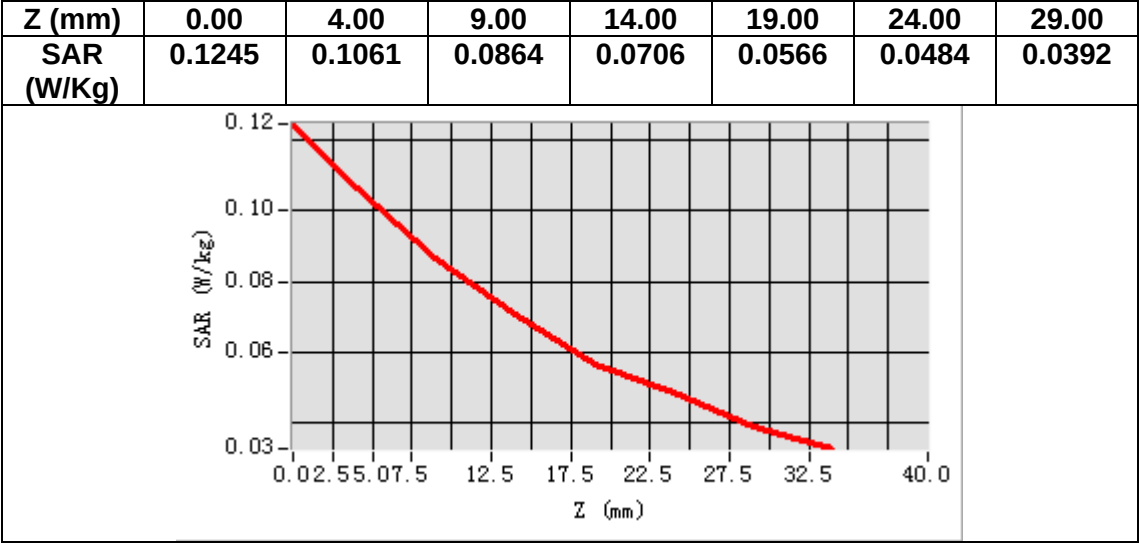
VOLUME SAR



Maximum location: X=-56.00, Y=-25.00

SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.077057
SAR 1g (W/Kg)	0.102926



MEASUREMENT 33

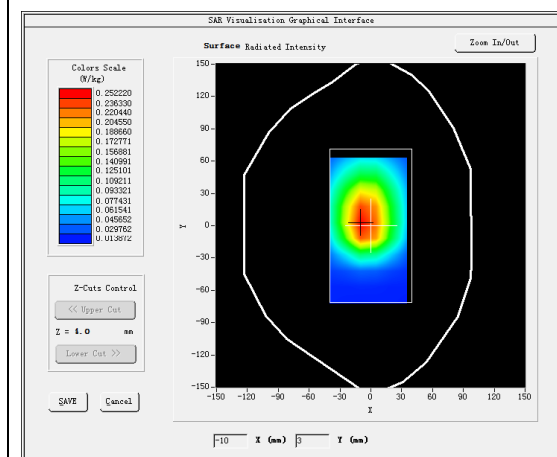
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 12</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

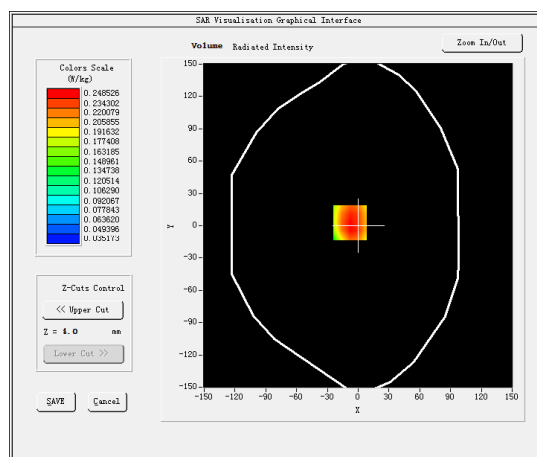
B. SAR Measurement Results

Frequency (MHz)	707.500000
Relative permittivity (real part)	55.957958
Relative permittivity (imaginary part)	23.541300
Conductivity (S/m)	0.925304
Variation (%)	-4.640000

SURFACE SAR



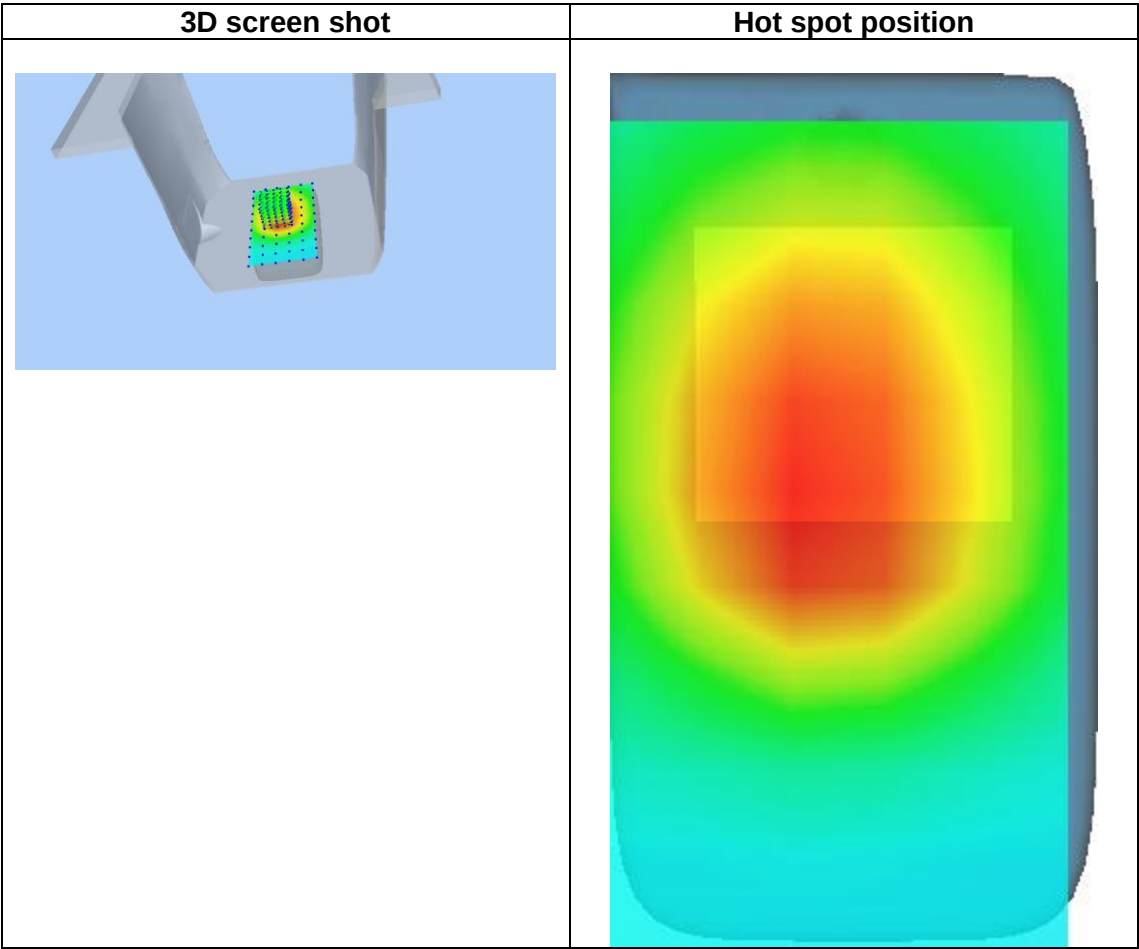
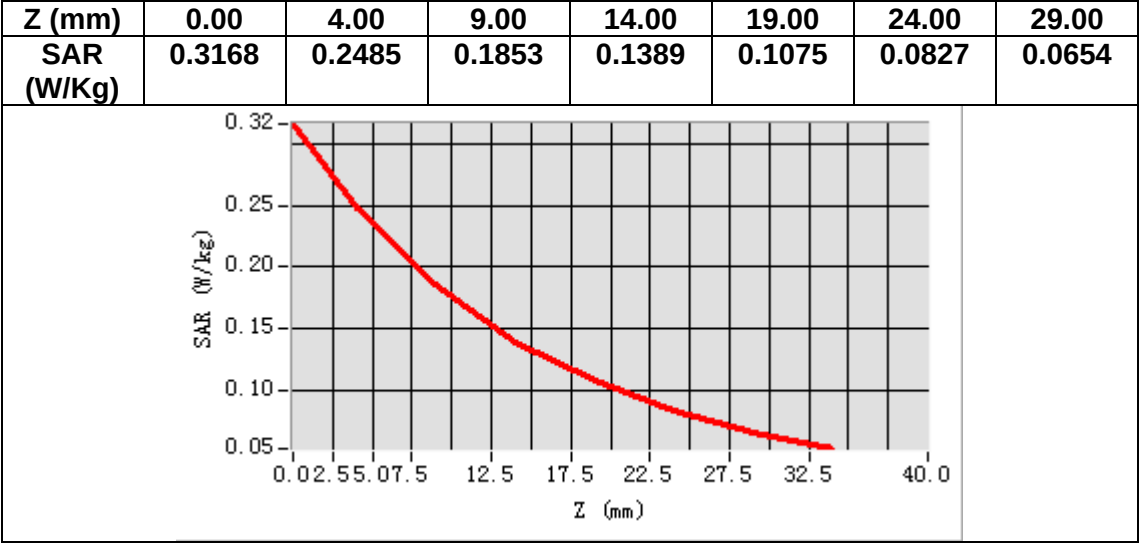
VOLUME SAR



Maximum location: X=-8.00, Y=3.00

SAR Peak: 0.33 W/kg

SAR 10g (W/Kg)	0.173800
SAR 1g (W/Kg)	0.242280



MEASUREMENT 34

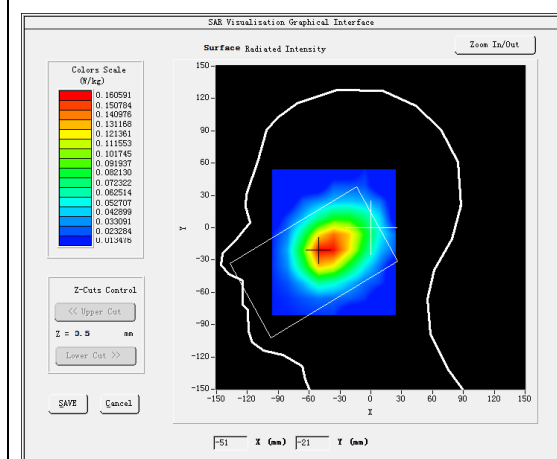
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 17</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

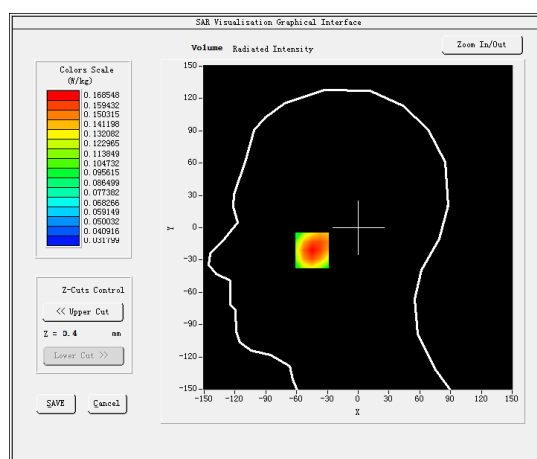
B. SAR Measurement Results

Frequency (MHz)	710.000000
Relative permittivity (real part)	42.016708
Relative permittivity (imaginary part)	22.146179
Conductivity (S/m)	0.873544
Variation (%)	1.430000

SURFACE SAR



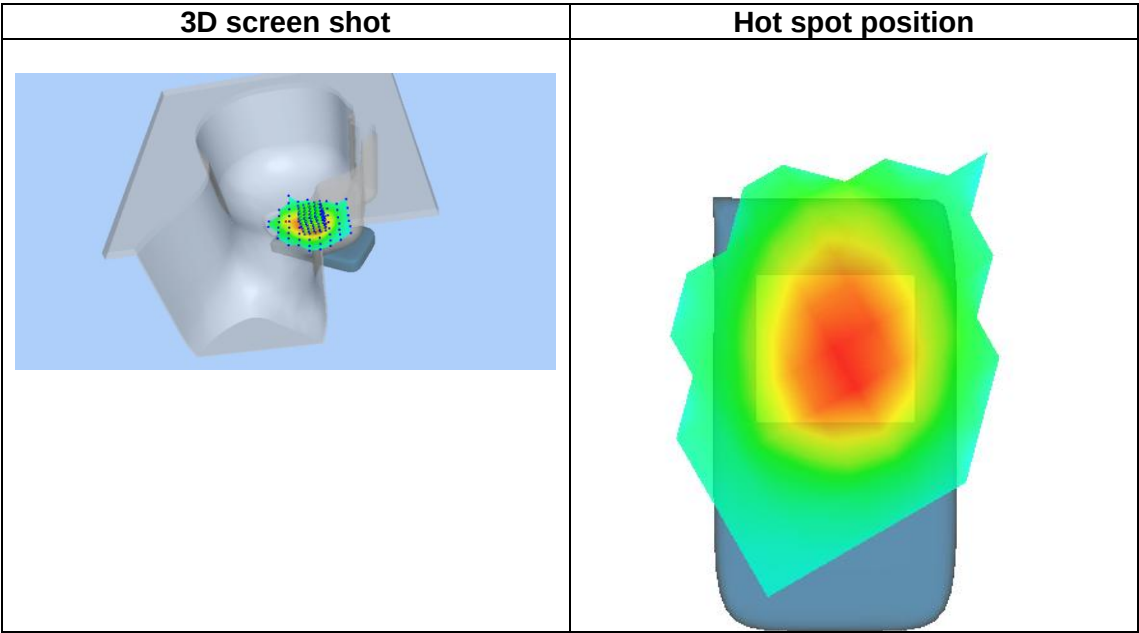
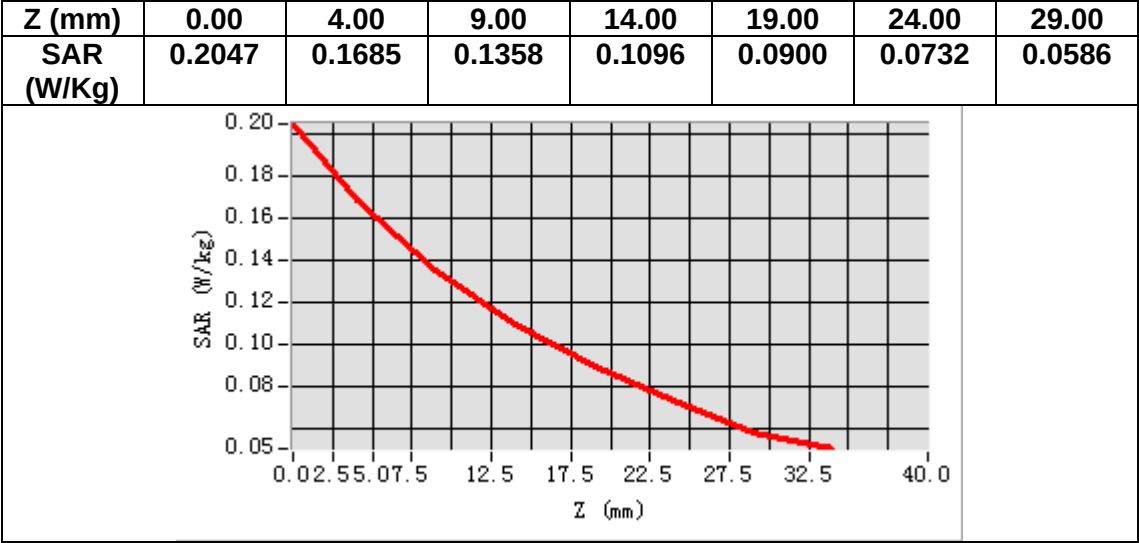
VOLUME SAR



Maximum location: X=-45.00, Y=-21.00

SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.123747
SAR 1g (W/Kg)	0.163405



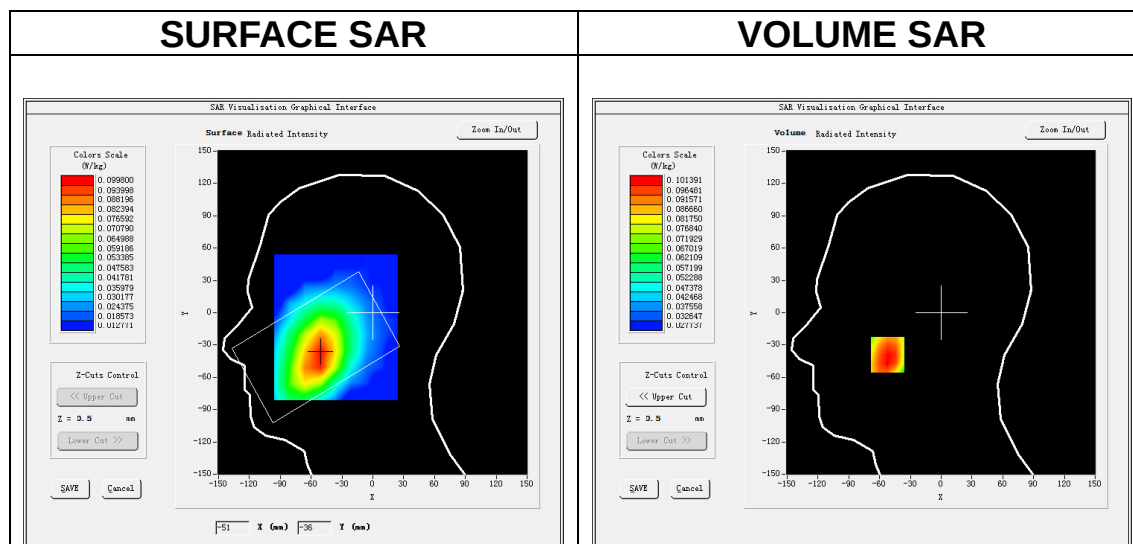
MEASUREMENT 35

A. Experimental conditions.

<u>Area Scan</u>	dx=15mm dy=15mm, h= 5.00 mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm
<u>Phantom</u>	Left head
<u>Device Position</u>	Cheek
<u>Band</u>	LTE band 17
<u>Channels</u>	Middle
<u>Signal</u>	LTE (Crest factor: 1.0)

B. SAR Measurement Results

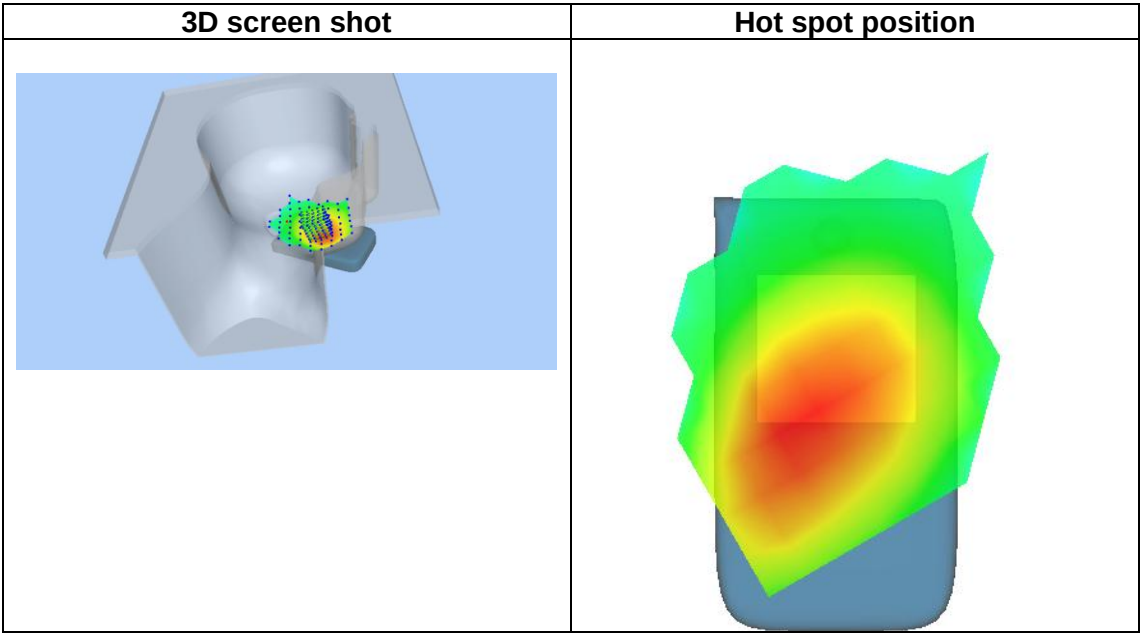
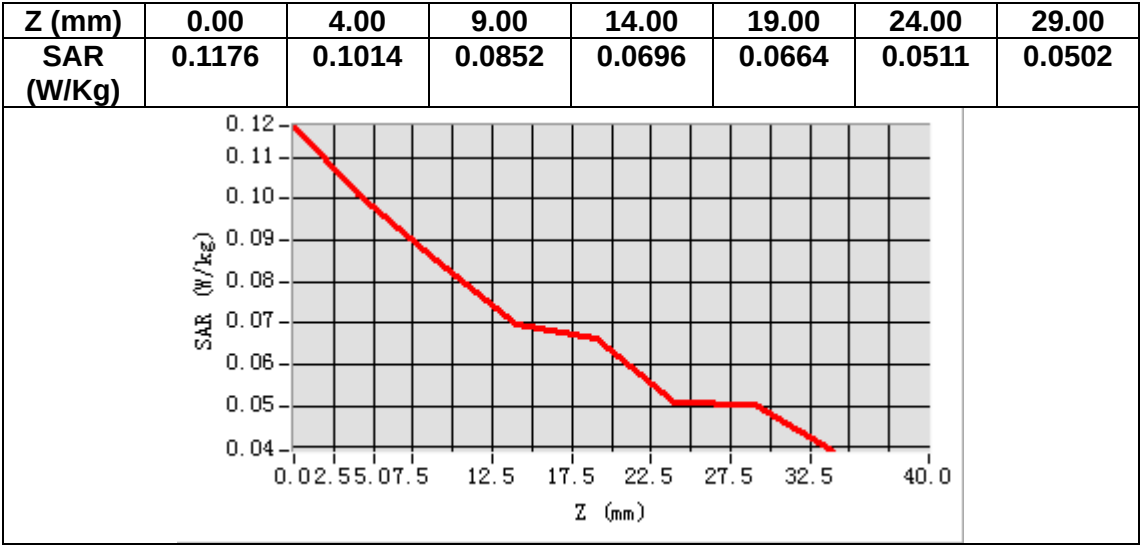
Frequency (MHz)	710.000000
Relative permittivity (real part)	42.016708
Relative permittivity (imaginary part)	22.146179
Conductivity (S/m)	0.873544
Variation (%)	3.190000



Maximum location: X=-52.00, Y=-39.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.080470
SAR 1g (W/Kg)	0.100364



MEASUREMENT 36

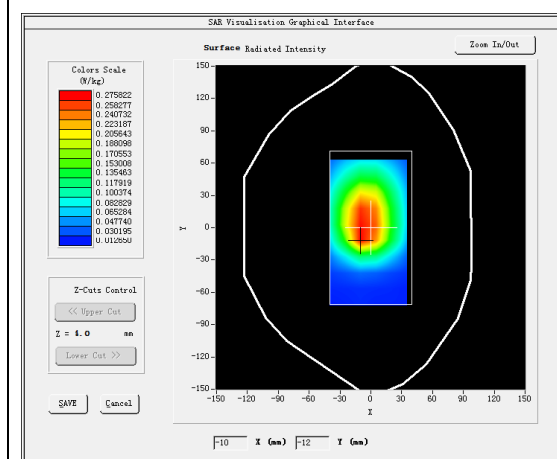
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 17</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

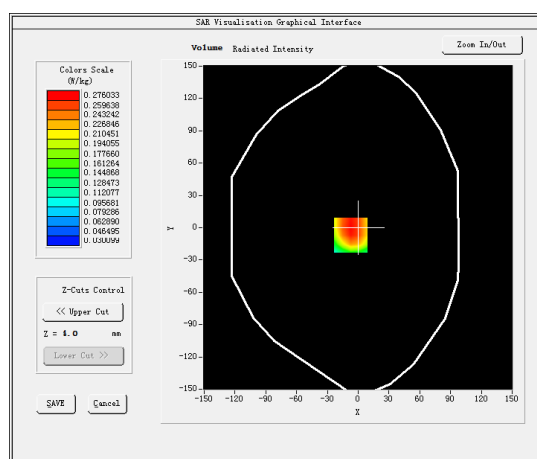
B. SAR Measurement Results

Frequency (MHz)	710.000000
Relative permittivity (real part)	55.936710
Relative permittivity (imaginary part)	23.560499
Conductivity (S/m)	0.929331
Variation (%)	-0.520000

SURFACE SAR



VOLUME SAR

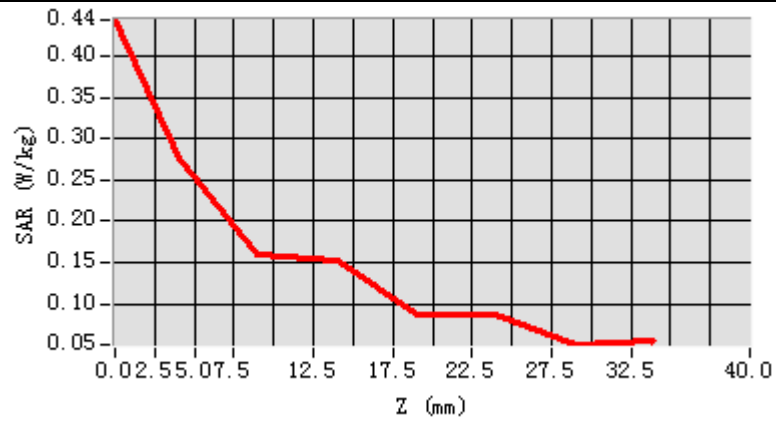


Maximum location: X=-7.00, Y=-7.00

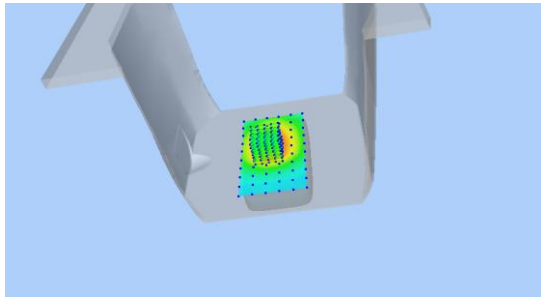
SAR Peak: 0.36 W/kg

SAR 10g (W/Kg)	0.186829
SAR 1g (W/Kg)	0.266635

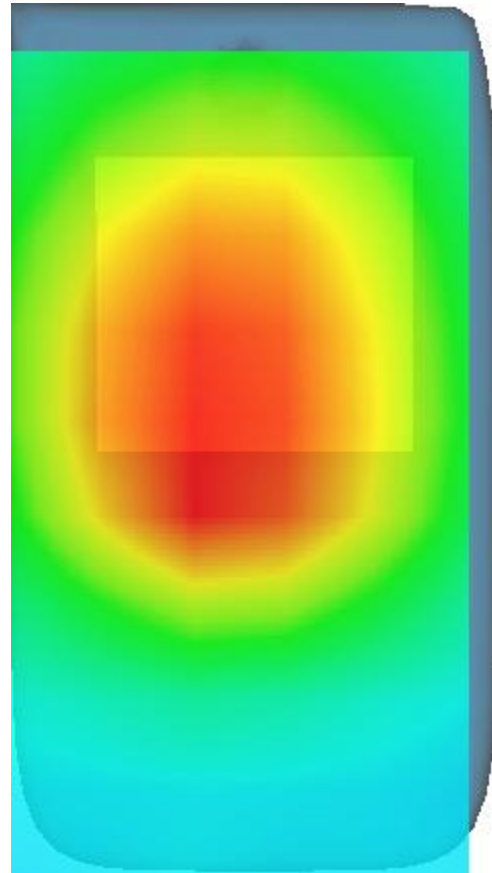
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4436	0.2760	0.1611	0.1531	0.0864	0.0878	0.0509



3D screen shot



Hot spot position



MEASUREMENT 37

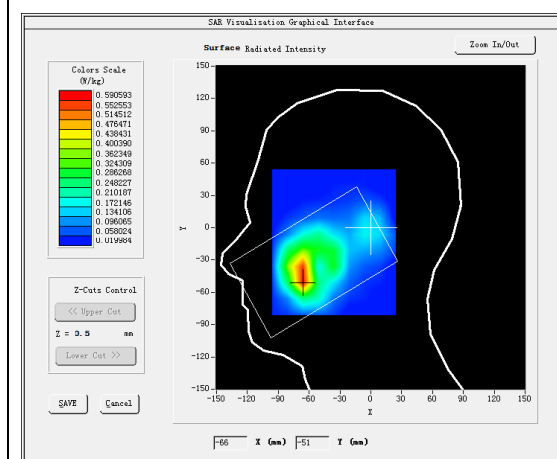
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 66</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

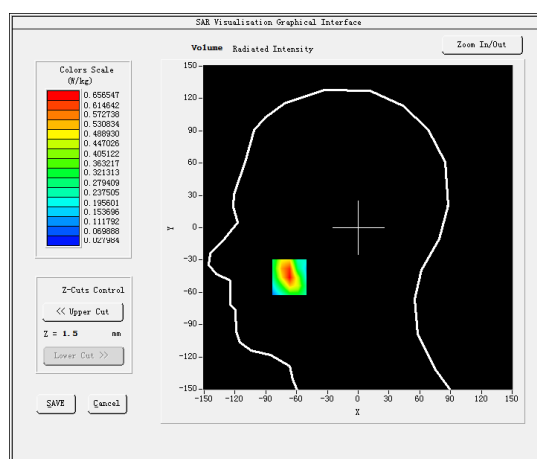
B. SAR Measurement Results

Frequency (MHz)	1745.000000
Relative permittivity (real part)	38.913490
Relative permittivity (imaginary part)	13.798142
Conductivity (S/m)	1.337653
Variation (%)	-1.290000

SURFACE SAR



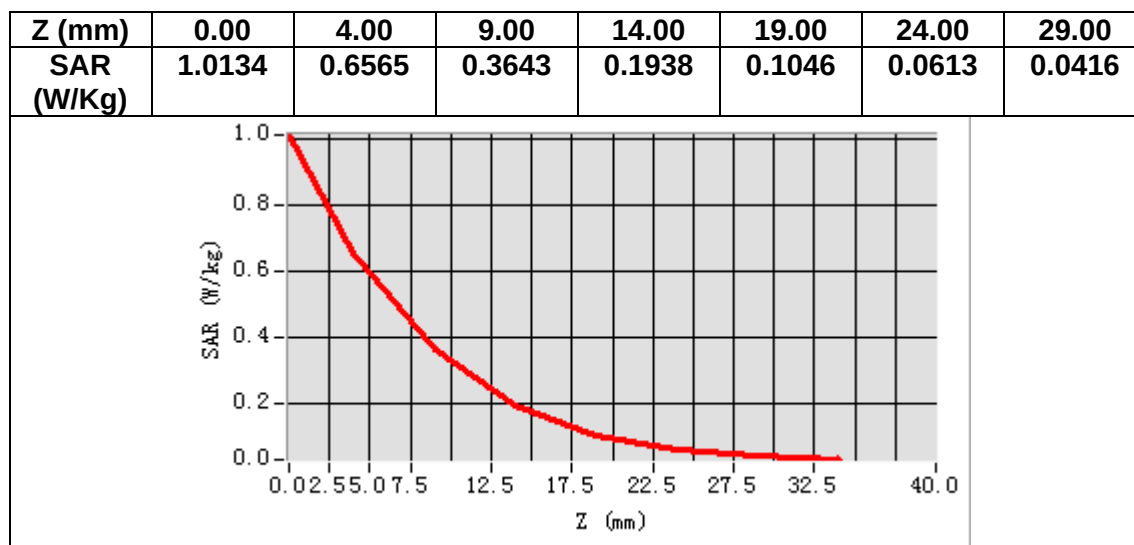
VOLUME SAR

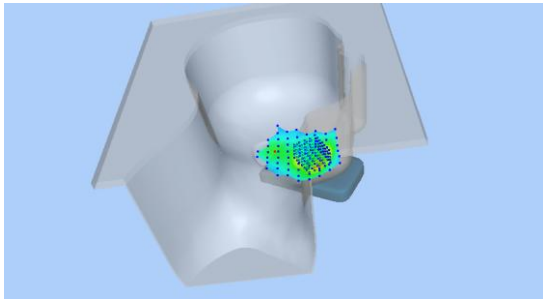
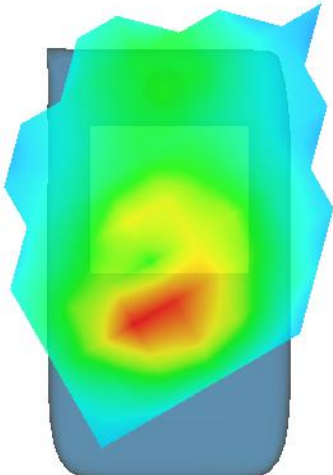


Maximum location: X=-67.00, Y=-46.00

SAR Peak: 1.07 W/kg

SAR 10g (W/Kg)	0.326881
SAR 1g (W/Kg)	0.616632



3D screen shot	Hot spot position
 A 3D visualization of a human head model. A cluster of small, multi-colored dots (blue, green, yellow, red) is located on the right side of the head, representing the hot spot area. The head is shown in a light blue color against a white background.	 A 3D visualization of a human head model. A large, irregular, multi-colored area (blue, green, yellow, red) is located on the right side of the head, representing the hot spot area. The head is shown in a light blue color against a white background.

MEASUREMENT 38

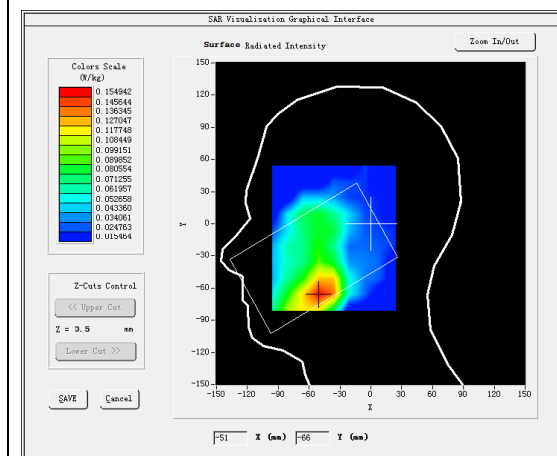
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>LTE band 66</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

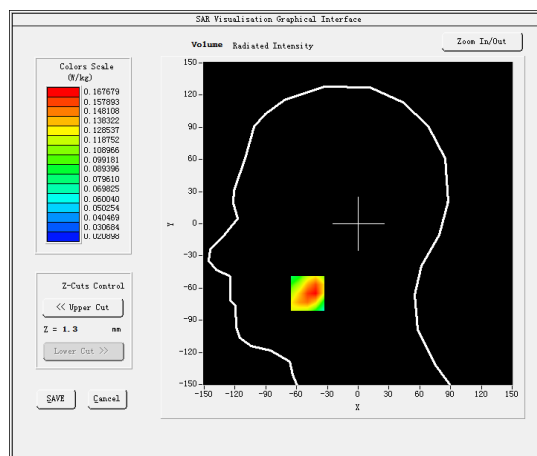
B. SAR Measurement Results

Frequency (MHz)	1745.000000
Relative permittivity (real part)	38.913490
Relative permittivity (imaginary part)	13.798142
Conductivity (S/m)	1.337653
Variation (%)	-0.280000

SURFACE SAR



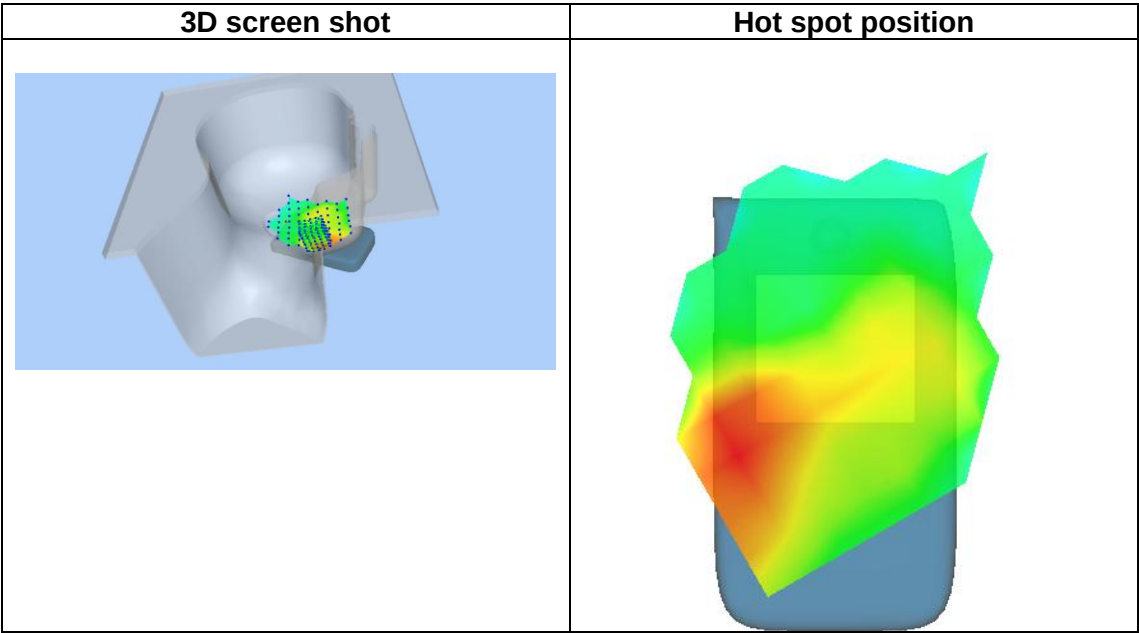
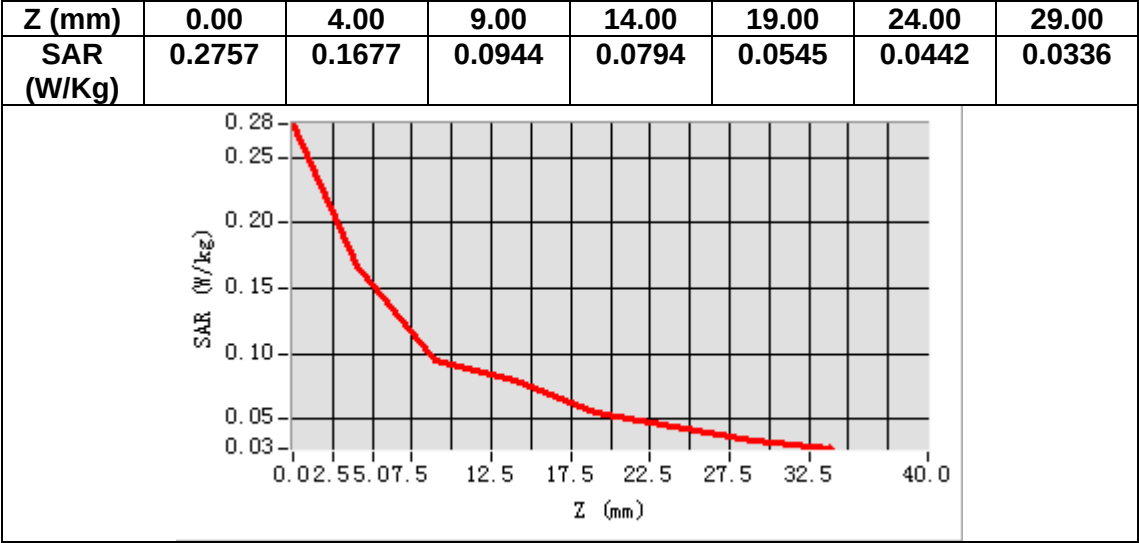
VOLUME SAR



Maximum location: X=-49.00, Y=-65.00

SAR Peak: 0.24 W/kg

SAR 10g (W/Kg)	0.101830
SAR 1g (W/Kg)	0.160986



MEASUREMENT 39

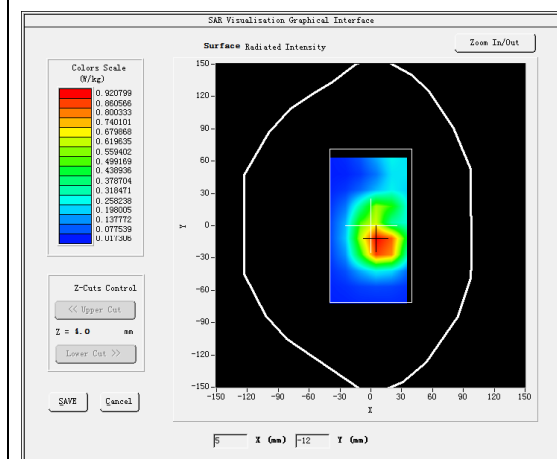
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 66</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

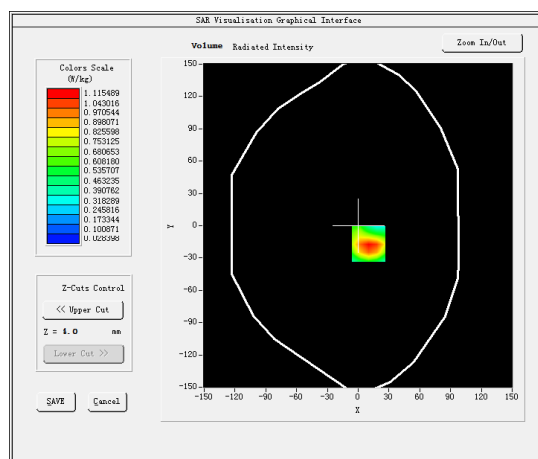
B. SAR Measurement Results

Frequency (MHz)	1745.000000
Relative permittivity (real part)	54.356266
Relative permittivity (imaginary part)	15.157170
Conductivity (S/m)	1.469403
Variation (%)	-4.790000

SURFACE SAR



VOLUME SAR



Maximum location: X=10.00, Y=-17.00

SAR Peak: 1.72 W/kg

SAR 10g (W/Kg)	0.579886
SAR 1g (W/Kg)	1.067624

