

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 : Wings

Model Name : W6

Family Model : N/A

Report No. : STR190802001008E

FCC ID : 2ATQIW6

Prepared for

Wings Mobile Telecom SL

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TEST RESULT CERTIFICATION**Applicant's name**.....: Wings Mobile Telecom SL

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Manufacturer's Name.....: HK REXSO COM TECH CO., LIMITEDAddress.....: UNIT 04, 7/F BRIGHT WAY TOWER NO 33 MONG KOK RD KL ,
HONGKONG**Product description**

Product name.....: Smart Phone

Trademark.....: Wings

Model Name.....: W6

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.....: Aug. 07, 2019 ~ Aug. 13, 2019

Date of Issue.....: Oct. 26, 2019

Test Result.....: **Pass**Prepared By
(Test Engineer): 
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(Lab Manager): 
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※ ※ Revision History ※ ※

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Rev.1.0	Initial Test Report Release	Oct. 26, 2019	Cheng Jiawen

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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 W6 are as follows.

Band	Max Reported SAR Value(W/kg)			
	1-g Head	1-g Body-Worn (Separation distance of 10mm)	1-g Hotspot (Separation distance of 10mm)	Max Simultaneous Tx
GSM 850	0.382	0.595	0.595	1.250
GSM 1900	0.077	0.927	1.155	
WCDMA Band 2	0.408	0.691	0.691	
WCDMA Band 4	0.493	1.128	1.128	
WCDMA Band 5	0.180	0.324	0.324	
LTE Band 4	0.039	0.379	0.640	
LTE Band 5	0.250	0.463	0.463	
LTE Band 7	0.146	0.640	0.640	
LTE Band 41	0.098	0.296	0.296	
WLAN 2.4G	0.055	0.121	0.121	
WLAN 5.2G	0.144	0.138	0.138	
WLAN 5.8G	0.110	0.139	0.139	
Bluetooth	0.163	0.116	0.116	

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	Wings
Model Name	W6
Family Model	N/A
FCC ID	2ATQIW6
Device Phase	Identical Prototype
Exposure Category	General population / Uncontrolled environment
Antenna	Internal Antenna
Battery Information	DC 3.85V, 3250mAh, 12.5Wh
Device Operating Configurations	
Supporting Mode(s)	GSM 850/1900, WCDMA Band 2/4/5, LTE Band 4/5/7/41,

	WLAN 2.4G/5.2G/5.8G, Bluetooth		
Test Modulation	GSM(GMSK/8PSK), 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 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620-2690
	LTE Band 41	2555-2655	
	WLAN 2.4G	2412-2462	
	WLAN 5.2G	5180-5240	
	WLAN 5.8G	5745-5825	
	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
EDGE 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 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 41)		
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)		
	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)
40265-40740-41215(LTE Band 41 BW=5MHz)
40290-40740-41190(LTE Band 41 BW=10MHz)
40315-40740-41165(LTE Band 41 BW=15MHz)
40340-40740-41140(LTE Band 41 BW=20MHz)
1-3-6-9-11(WLAN 2.4G)
36-38-40-46-48(WLAN 5.2G)
149-151-157-159-165(WLAN 5.8G)

1.4. Test specification(s)

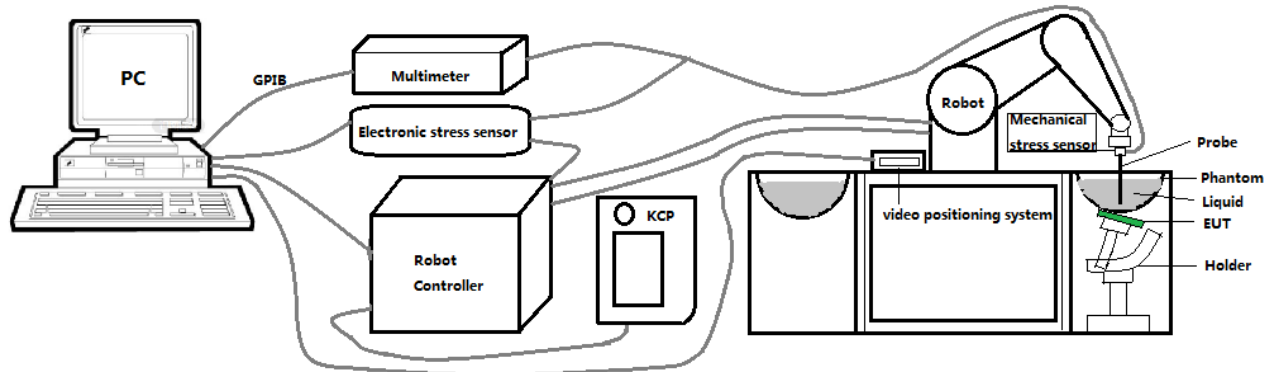
FCC 47 CFR Part 2(2.1093)
ANSI/IEEE C95.1-1992
IEEE Std 1528-2013
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz
KDB 865664 D02 RF Exposure Reporting
KDB 447498 D01 General RF Exposure Guidance
KDB 248227 D01 802.11 Wi-Fi SAR
KDB 941225 D01 3G SAR Procedures
KDB 941225 D05 SAR for LTE Devices
KDB 941225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

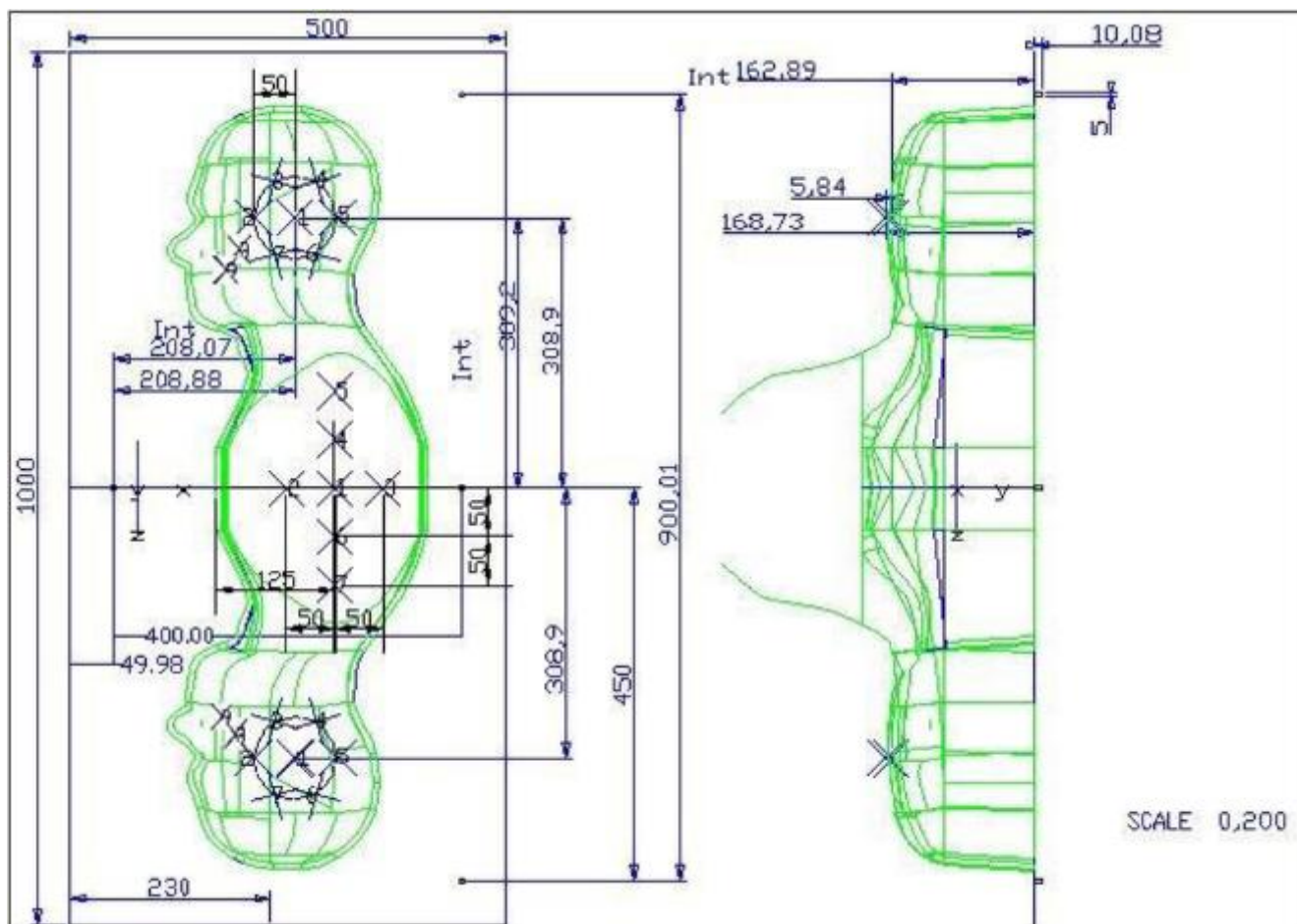
Photo of SAM phantom SN 16/15 SAM119



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 $\pm$ 0.2 mm	27 liters	Length:1000 mm Width:500 mm Height:200 mm	Gelcoat with fiberglass	3.4	0.02

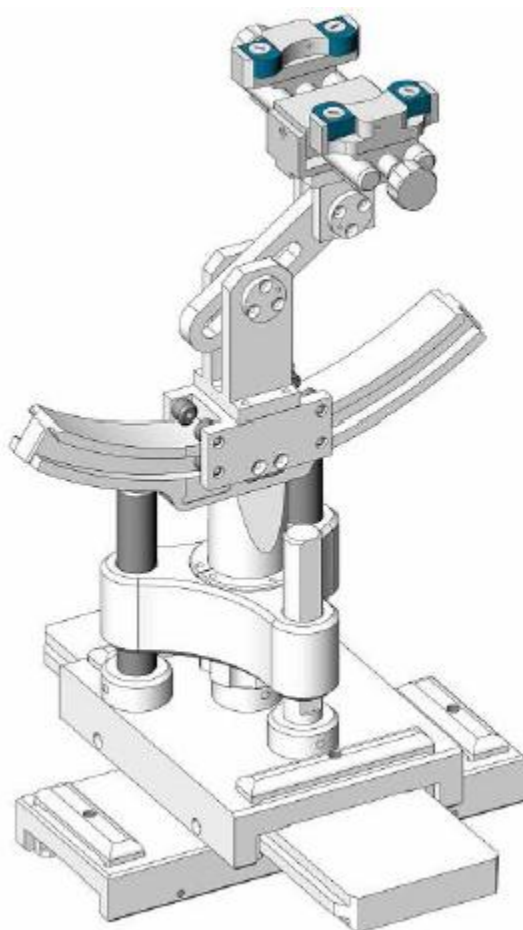


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

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

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	Sep. 17, 2018	Sep. 16, 2019
☐	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	Oct. 08, 2018	Oct. 07, 2019
☒	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.

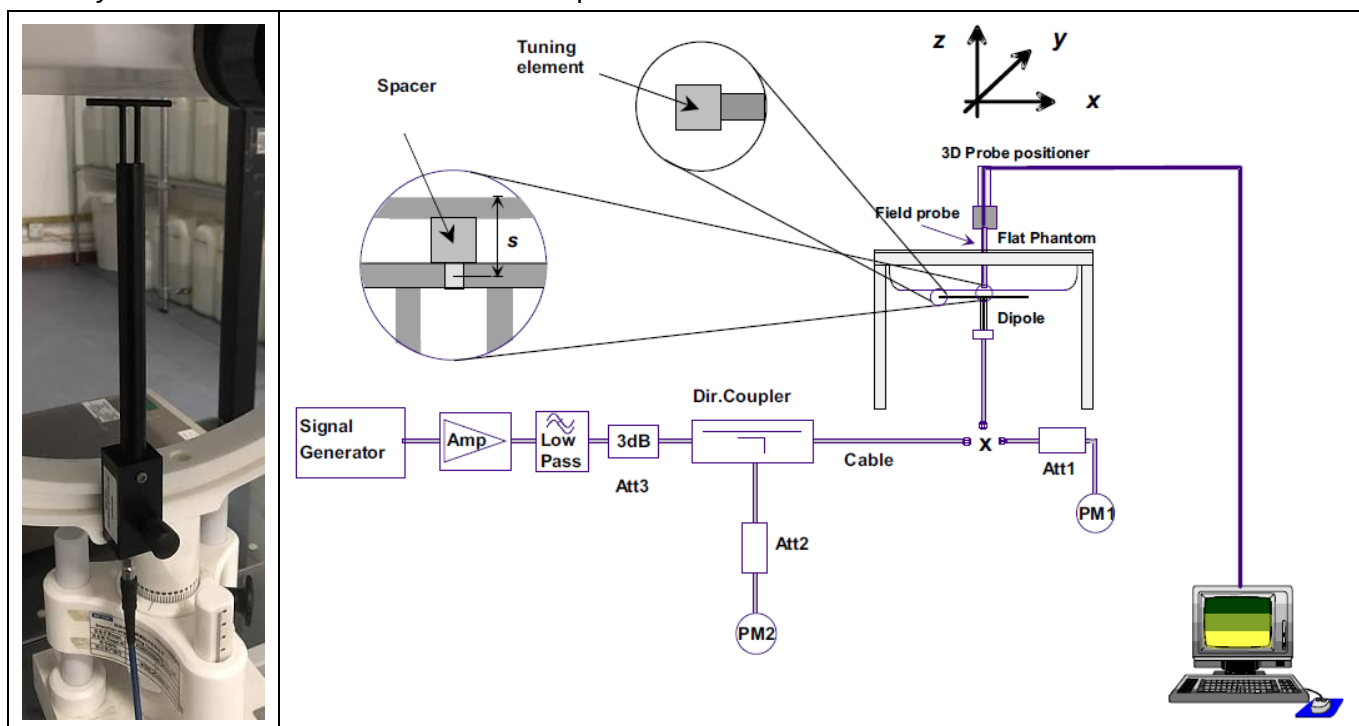
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		ϵ_r ($\pm 5\%$)	σ (S/m) ($\pm 5\%$)	ϵ_r	σ (S/m)		
Head 850	835	41.50 (39.43~43.58)	0.90 (0.86~0.95)	40.71	0.93	21.3 °C	Aug. 13, 2019
Body 850	835	55.20 (52.44~57.96)	0.97 (0.92~1.02)	54.43	1.01	21.3 °C	Aug. 13, 2019
Head 1800	1800	40.00 (38.00~42.00)	1.40 (1.33~1.47)	39.11	1.42	21.3 °C	Aug. 11, 2019
Body 1800	1800	53.30 (50.64~55.97)	1.52 (1.44~1.60)	53.44	1.56	21.3 °C	Aug. 12, 2019
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	41.04	1.45	21.2 °C	Aug. 10, 2019
Body 1900	1900	53.30 (50.64~55.97)	1.52 (1.44~1.60)	52.75	1.57	21.2 °C	Aug. 10, 2019
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	39.07	1.87	21.4 °C	Aug. 07, 2019
Body 2450	2450	52.70 (50.07~55.34)	1.95 (1.85~2.05)	52.26	2.03	21.3 °C	Aug. 08, 2019
Head 2600	2600	39.01 (37.06~40.96)	1.96 (1.86~2.06)	38.34	2.04	21.3 °C	Aug. 09, 2019
Body 2600	2600	52.51 (49.88~55.14)	2.16 (2.05~2.27)	52.62	2.22	21.2 °C	Aug. 10, 2019
Head 5000	5200	36.00 (34.20~37.80)	4.66 (4.43~4.89)	35.63	4.69	21.3 °C	Aug. 08, 2019
Body 5000	5200	49.00 (46.55~51.45)	5.30 (5.04~5.57)	48.55	5.32	21.3 °C	Aug. 08, 2019
Head 5000	5800	35.30 (33.54~37.07)	5.27 (5.01~5.53)	34.55	5.26	21.2 °C	Aug. 09, 2019
Body 5000	5800	48.20 (45.79~50.61)	6.00 (5.70~6.30)	48.24	6.11	21.2 °C	Aug. 09, 2019

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)		
835MHz Head	9.55 (8.60~10.51)	6.10 (5.49~6.71)	9.48	6.14	21.3 °C	Aug. 13, 2019
835MHz Body	9.83 (8.85~10.81)	6.45 (5.81~7.10)	9.24	6.42	21.3 °C	Aug. 13, 2019
1800MHz Head	38.11 (34.30~41.92)	20.05 (18.05~22.06)	38.64	20.51	21.3 °C	Aug. 11, 2019
1800MHz Body	38.13 (34.32~41.94)	20.65 (18.59~22.72)	36.45	20.84	21.3 °C	Aug. 12, 2019
1900MHz Head	38.92 (35.03~42.81)	20.09 (18.08~22.10)	38.77	21.21	21.2 °C	Aug. 10, 2019
1900MHz Body	39.02 (35.12~42.92)	20.57 (18.51~22.63)	37.94	21.08	21.2 °C	Aug. 10, 2019
2450MHz Head	53.76 (48.38~59.14)	24.12 (21.71~26.53)	51.65	23.35	21.4 °C	Aug. 07, 2019
2450MHz Body	52.90 (47.61~58.19)	24.09 (21.68~26.50)	49.75	23.53	21.3 °C	Aug. 08, 2019
2600MHz Head	55.60 (50.04~61.16)	24.60 (22.14~27.06)	54.69	23.84	21.3 °C	Aug. 09, 2019
2600MHz Body	52.49 (47.24~57.74)	23.74 (21.37~26.11)	51.82	24.39	21.2 °C	Aug. 10, 2019
5200MHz Head	160.94 (144.85~177.03)	55.97 (50.37~61.57)	158.46	55.59	21.3 °C	Aug. 08, 2019
5200MHz Body	156.85 (141.17~172.54)	55.20 (49.68~60.72)	155.37	54.82	21.3 °C	Aug. 08, 2019
5800MHz Head	184.13 (165.72~202.54)	62.74 (56.47~69.01)	180.92	62.34	21.2 °C	Aug. 09, 2019
5800MHz Body	169.30 (152.37~186.23)	58.49 (52.64~64.34)	165.33	59.12	21.2 °C	Aug. 09, 2019

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.

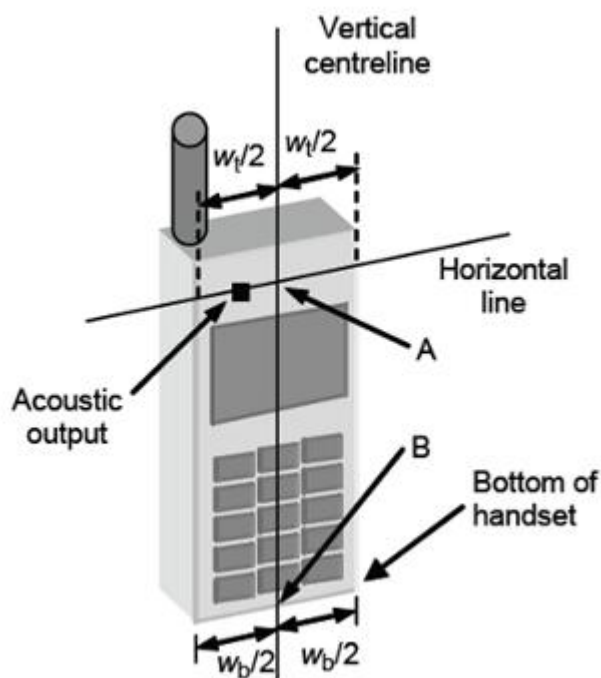


Fig 6.2.1 Handset vertical and horizontal reference lines—"fixed case"

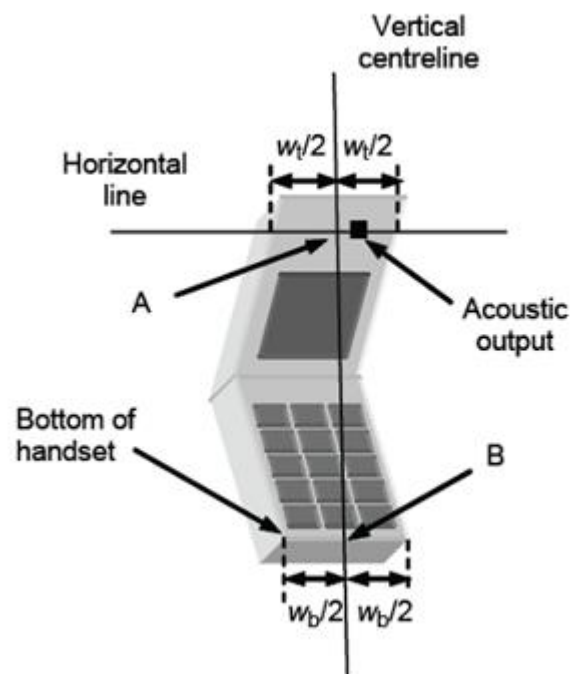


Fig 6.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

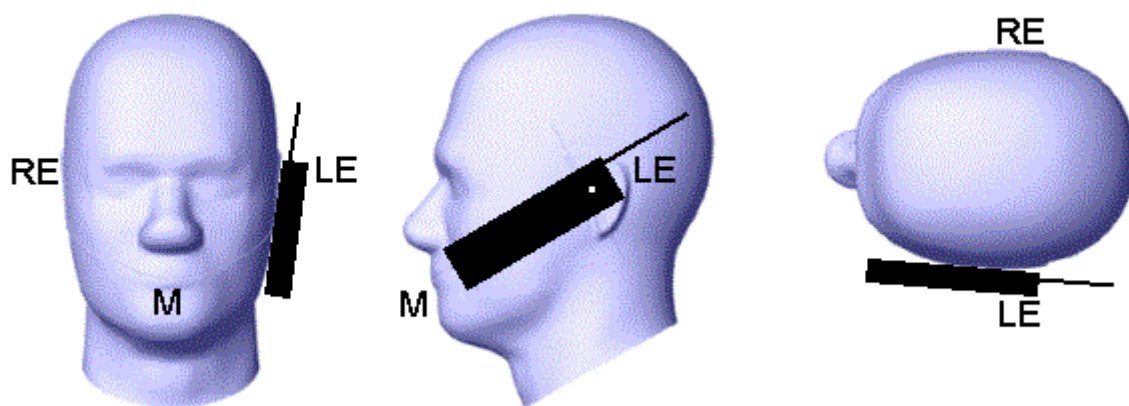


Fig 6.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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.

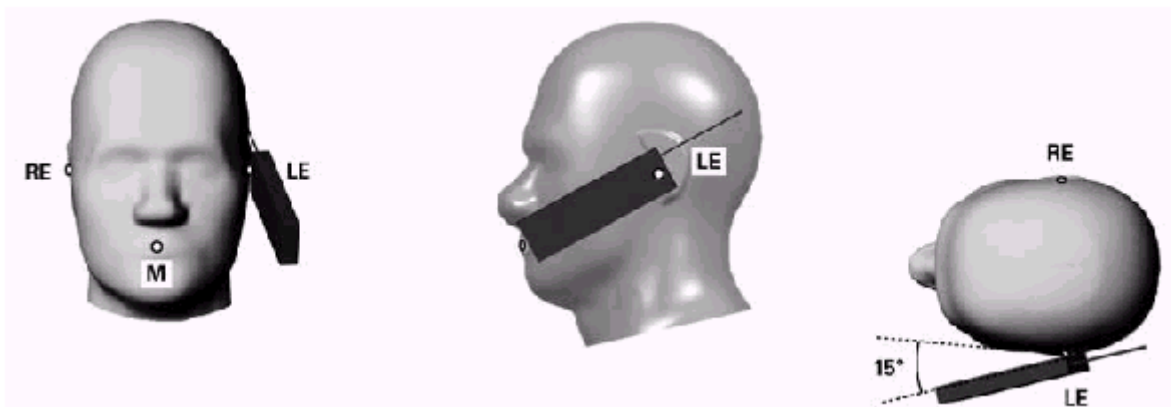


Figure 6.3.1 – Tilt position of the wireless device on the left side of SAM

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.

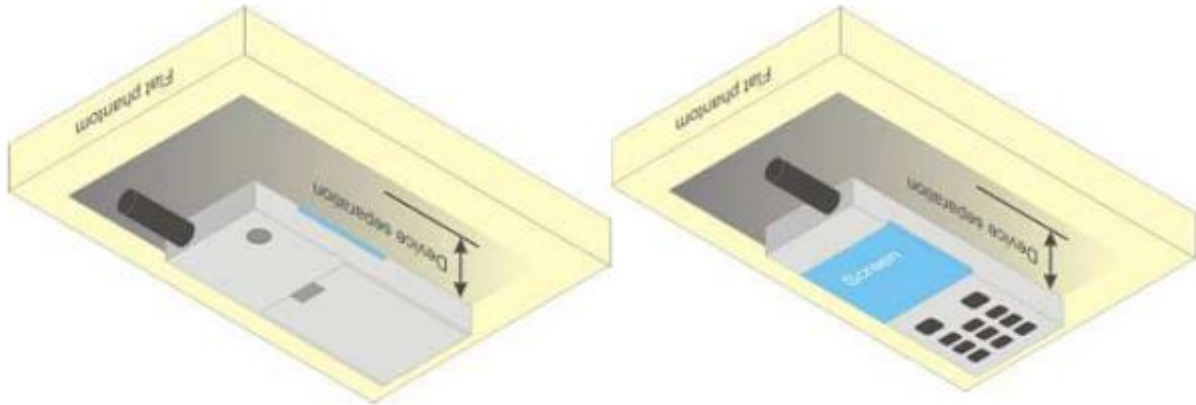


Figure 6.4.1 – Test positions for body-worn devices

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)	34.00	32.87	33.18	33.14	24.97	23.84	24.15	24.11
GPRS(GMSK, 1 TS)	34.00	32.89	33.19	33.16	24.97	23.86	24.16	24.13
GPRS(GMSK, 2 TS)	33.00	31.89	32.13	32.12	26.98	25.87	26.11	26.10
GPRS(GMSK, 3 TS)	31.00	29.77	30.01	30.01	26.74	25.51	25.75	25.75
GPRS(GMSK, 4 TS)	29.00	28.58	28.81	28.82	25.99	25.57	25.80	25.81
EDGE(8PSK, 1 TS)	28.00	27.27	27.02	27.40	18.97	18.24	17.99	18.37
EDGE(8PSK, 2 TS)	27.00	26.51	26.21	26.48	20.98	20.49	20.19	20.46
EDGE(8PSK, 3 TS)	25.00	24.65	24.42	24.64	20.74	20.39	20.16	20.38
EDGE(8PSK, 4 TS)	24.00	23.43	23.13	23.43	20.99	20.42	20.12	20.42
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)	30.00	29.45	29.43	29.40	20.97	20.42	20.40	20.37
GPRS(GMSK, 1 TS)	30.00	29.49	29.45	29.43	20.97	20.46	20.42	20.40
GPRS(GMSK, 2 TS)	29.00	28.26	28.18	28.16	22.98	22.24	22.16	22.14
GPRS(GMSK, 3 TS)	26.00	25.71	25.60	25.61	21.74	21.45	21.34	21.35
GPRS(GMSK, 4 TS)	25.00	24.51	24.42	24.40	21.99	21.50	21.41	21.39
EDGE(8PSK, 1 TS)	27.00	26.17	26.50	26.38	17.97	17.14	17.47	17.35
EDGE(8PSK, 2 TS)	26.00	25.02	25.50	25.42	19.98	19.00	19.48	19.40
EDGE(8PSK, 3 TS)	24.00	22.96	23.35	23.25	19.74	18.70	19.09	18.99
EDGE(8PSK, 4 TS)	23.00	21.67	22.10	22.00	19.99	18.66	19.09	18.99

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	24.00	23.06	23.14	23.17
HSDPA Subtest-1	23.00	22.15	22.20	22.21
HSDPA Subtest-2	22.00	21.19	21.55	21.47
HSDPA Subtest-3	21.00	20.52	20.73	20.60
HSDPA Subtest-4	21.00	20.64	20.66	20.68
HSUPA Subtest-1	22.00	21.62	21.82	21.83
HSUPA Subtest-2	23.00	22.02	22.08	22.16
HSUPA Subtest-3	21.00	21.00	20.95	20.61
HSUPA Subtest-4	23.00	22.11	22.23	22.21
HSUPA Subtest-5	22.00	21.18	21.27	21.48
Band	WCDMA Band 4			
Tx Channel	Tune-up	1312	1413	1513
Frequency (MHz)		1712.4	1732.6	1752.6
RMC 12.2Kbps	23.00	22.76	22.72	22.65
HSDPA Subtest-1	22.00	21.82	21.74	21.67
HSDPA Subtest-2	22.00	21.15	20.97	21.07
HSDPA Subtest-3	21.00	20.23	20.33	20.12
HSDPA Subtest-4	21.00	20.38	20.05	19.93
HSUPA Subtest-1	22.00	21.41	21.46	21.25
HSUPA Subtest-2	22.00	21.75	21.66	21.64
HSUPA Subtest-3	21.00	20.42	20.54	20.47
HSUPA Subtest-4	22.00	21.82	21.78	21.69
HSUPA Subtest-5	22.00	21.02	20.85	20.79
Band	WCDMA Band 5			
Tx Channel	Tune-up	4132	4182	4233
Frequency (MHz)		826.4	836.4	846.6
RMC 12.2Kbps	24.00	24.00	23.87	23.70
HSDPA Subtest-1	24.00	23.06	22.91	22.70
HSDPA Subtest-2	23.00	22.47	22.41	21.93
HSDPA Subtest-3	22.00	21.41	21.66	21.16
HSDPA Subtest-4	22.00	21.40	21.66	21.36
HSUPA Subtest-1	23.00	22.62	22.64	22.23
HSUPA Subtest-2	23.00	22.94	22.73	22.56
HSUPA Subtest-3	22.00	21.90	21.77	21.50
HSUPA Subtest-4	24.00	23.07	22.89	22.73
HSUPA Subtest-5	23.00	22.34	21.88	21.66

7.3. LTE Conducted Power

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	24.00	23.92	23.70	23.73
			1	2	24.00	24.00	23.86	23.88
			1	5	24.00	23.90	23.70	23.71
			3	0	24.00	23.82	23.78	23.70
			3	1	24.00	23.86	23.77	23.73
			3	2	24.00	23.84	23.76	23.67
		16QAM	6	0	23.00	22.80	22.75	22.73
			1	0	23.00	22.77	22.80	22.40
			1	2	23.00	22.90	22.90	22.60
			1	5	23.00	22.76	22.80	22.44
			3	0	23.00	22.87	22.89	22.74
			3	1	23.00	22.86	22.89	22.78
			3	2	23.00	22.82	22.84	22.75
			6	0	22.00	21.91	21.86	21.82
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	24.00	23.85	23.76	23.69
			1	7	24.00	24.00	23.94	23.91
			1	14	24.00	23.73	23.79	23.79
			8	0	23.00	22.80	22.73	22.74
			8	4	23.00	22.81	22.79	22.76
			8	7	23.00	22.74	22.74	22.71
			15	0	23.00	22.73	22.69	22.63
		16QAM	1	0	24.00	23.04	22.85	22.48
			1	7	24.00	23.30	23.08	22.77
			1	14	24.00	23.02	22.78	22.45
			8	0	22.00	21.78	21.73	21.63
			8	4	22.00	21.82	21.78	21.67
			8	7	22.00	21.75	21.71	21.67
			15	0	22.00	21.73	21.67	21.69
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	24.00	23.74	23.69	23.55
			1	12	24.00	23.90	24.00	23.85
			1	24	24.00	23.65	23.72	23.58
			12	0	23.00	22.76	22.71	22.51
			12	6	23.00	22.78	22.79	22.44
			12	11	23.00	22.68	22.74	22.32
			25	0	23.00	22.72	22.70	22.17
		16QAM	1	0	24.00	23.01	22.86	22.29
			1	12	24.00	23.39	23.18	22.61
			1	24	24.00	22.99	22.81	22.26
			12	0	22.00	21.73	21.64	21.13
			12	6	22.00	21.74	21.72	21.23
			12	11	22.00	21.66	21.63	21.19
			25	0	22.00	21.71	21.71	21.15
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band 4	10MHz	QPSK	1	0	24.00	23.51	23.21	23.15
			1	24	24.00	23.46	23.40	23.26
			1	49	24.00	23.20	23.20	23.19
			25	0	23.00	22.31	22.21	22.21
			25	12	23.00	22.26	22.26	22.16
			25	24	23.00	22.31	22.26	22.23
			50	0	23.00	22.30	22.24	22.19
		16QAM	1	0	23.00	22.54	22.33	21.87
			1	24	23.00	22.72	22.46	22.08
			1	49	23.00	22.59	22.25	21.93
			25	0	22.00	21.35	21.22	21.20
			25	12	22.00	21.26	21.25	21.13
			25	24	22.00	21.32	21.26	21.23
			50	0	22.00	21.28	21.25	21.12
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	15MHz	QPSK	1	0	24.00	23.24	23.25	23.16
			1	37	24.00	23.60	23.55	23.40

4			1	74	24.00	23.17	23.16	23.11
			36	0	23.00	22.39	22.30	22.39
			36	18	23.00	22.36	22.35	22.29
			36	37	23.00	22.39	22.33	22.32
			75	0	23.00	22.42	22.29	22.31
		16QAM	1	0	23.00	22.53	22.39	22.18
			1	37	23.00	22.83	22.51	22.42
			1	74	23.00	22.57	22.17	22.19
			36	0	22.00	21.34	21.23	21.24
			36	18	22.00	21.31	21.34	21.16
			36	37	22.00	21.36	21.30	21.15
			75	0	22.00	21.37	21.24	21.27
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	24.00	23.19	23.15	23.23
			1	49	24.00	23.33	23.41	23.36
			1	99	24.00	23.15	23.10	23.16
			50	0	23.00	22.23	22.12	22.26
			50	24	23.00	22.31	22.24	22.17
			50	49	23.00	22.45	22.17	22.08
			100	0	23.00	22.31	22.12	22.22
		16QAM	1	0	23.00	22.42	22.38	22.26
			1	49	23.00	22.60	22.49	22.41
			1	99	23.00	22.44	22.19	22.28
			50	0	22.00	21.26	21.05	21.26
			50	24	22.00	21.32	21.22	21.16
			50	49	22.00	21.44	21.13	21.11
			100	0	22.00	21.34	21.13	21.19

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	25.00	24.82	24.87	24.54
			1	2	25.00	24.91	25.00	24.63
			1	5	25.00	24.79	24.83	24.51
			3	0	25.00	24.78	24.85	24.48
			3	1	25.00	24.81	24.83	24.51

			3	2	25.00	24.76	24.82	24.47
			6	0	24.00	23.83	23.84	23.64
		16QAM	1	0	24.00	23.49	23.84	23.54
			1	2	24.00	23.64	23.95	23.64
			1	5	24.00	23.54	23.81	23.52
			3	0	24.00	23.80	23.92	23.58
			3	1	24.00	23.84	23.92	23.60
			3	2	24.00	23.87	23.87	23.53
			6	0	23.00	22.94	22.94	22.63
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	25.00	24.82	24.72	24.60
			1	7	25.00	24.94	24.98	24.91
			1	14	25.00	24.72	24.82	24.60
			8	0	24.00	23.78	23.81	23.59
			8	4	24.00	23.80	23.88	23.65
			8	7	24.00	23.79	23.83	23.60
			15	0	24.00	23.71	23.79	23.53
		16QAM	1	0	25.00	24.04	23.91	23.35
			1	7	25.00	24.46	24.15	23.60
			1	14	25.00	24.10	23.84	23.20
			8	0	23.00	22.75	22.74	22.46
			8	4	23.00	22.79	22.84	22.53
			8	7	23.00	22.78	22.75	22.47
			15	0	23.00	22.77	22.72	22.52
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	25.00	24.68	24.66	24.50
			1	12	25.00	24.94	24.98	24.84
			1	24	25.00	24.71	24.69	24.46
			12	0	24.00	23.76	23.76	23.59
			12	6	24.00	23.83	23.82	23.60
			12	11	24.00	23.78	23.77	23.52
			25	0	24.00	23.80	23.80	23.56
		16QAM	1	0	25.00	24.02	23.94	23.69
			1	12	25.00	24.45	24.38	23.91

			1	24	25.00	24.12	23.87	23.51
			12	0	23.00	22.72	22.67	22.58
			12	6	23.00	22.82	22.74	22.59
			12	11	23.00	22.71	22.68	22.48
			25	0	23.00	22.76	22.78	22.49
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	25.00	24.71	24.74	24.73
			1	24	25.00	24.85	24.88	24.68
			1	49	25.00	24.75	24.73	24.56
			25	0	24.00	23.85	23.78	23.81
			25	12	24.00	23.80	23.73	23.61
			25	24	24.00	23.87	23.74	23.60
			50	0	24.00	23.84	23.74	23.68
		16QAM	1	0	25.00	23.97	23.91	23.44
			1	24	25.00	24.23	23.98	23.46
			1	49	25.00	24.12	23.71	23.21
			25	0	23.00	22.86	22.72	22.74
			25	12	23.00	22.83	22.72	22.61
			25	24	23.00	22.90	22.69	22.58
			50	0	23.00	22.87	22.72	22.61

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	23.00	21.72	21.60	21.66
			1	12	23.00	22.12	22.15	22.25
			1	24	23.00	21.75	21.61	21.79
			12	0	21.00	20.82	20.83	20.77
			12	6	21.00	20.86	20.83	20.74
			12	11	21.00	20.77	20.69	20.66
			25	0	21.00	20.83	20.76	20.66
		16QAM	1	0	22.00	20.89	20.87	20.89
			1	12	22.00	21.32	21.15	21.23
			1	24	22.00	20.90	20.82	20.91
			12	0	20.00	19.75	19.87	19.69
			12	6	20.00	19.82	19.89	19.67

			12	11	20.00	19.71	19.71	19.53
			25	0	20.00	19.83	19.78	19.62
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	22.00	21.78	21.69	21.83
			1	24	22.00	21.99	21.88	21.94
			1	49	22.00	21.82	21.82	21.96
			25	0	21.00	20.86	20.92	20.80
			25	12	21.00	20.76	20.83	20.72
			25	24	21.00	20.89	20.74	20.54
			50	0	21.00	20.87	20.87	20.67
		16QAM	1	0	22.00	20.99	20.80	20.44
			1	24	22.00	21.11	20.92	20.51
			1	49	22.00	21.02	20.80	20.43
			25	0	20.00	19.91	19.97	19.74
			25	12	20.00	19.82	19.83	19.65
			25	24	20.00	19.93	19.77	19.51
			50	0	20.00	19.90	19.92	19.64
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20825/2507.5	21100/2535	21375/2562.5
LTE Band 7	15MHz	QPSK	1	0	23.00	21.74	21.65	21.79
			1	37	23.00	22.21	22.08	22.07
			1	74	23.00	21.73	21.83	21.83
			36	0	21.00	20.99	20.95	20.94
			36	18	21.00	20.92	20.91	20.94
			36	37	21.00	21.00	20.84	20.79
			75	0	21.00	20.92	20.91	20.78
		16QAM	1	0	22.00	20.98	20.80	20.72
			1	37	22.00	21.19	21.14	20.91
			1	74	22.00	20.92	20.71	20.68
			36	0	20.00	19.90	19.98	19.67
			36	18	20.00	19.90	19.87	19.75
			36	37	20.00	19.92	19.81	19.58
			75	0	20.00	19.95	19.89	19.65
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	23.00	21.74	21.57	21.93
			1	49	23.00	22.04	21.89	22.08
			1	99	23.00	21.66	21.87	21.84
			50	0	21.00	20.77	20.97	20.45
			50	24	21.00	20.81	20.81	20.63
			50	49	21.00	20.96	20.63	20.42
			100	0	21.00	20.86	20.80	20.47
		16QAM	1	0	22.00	20.86	20.73	20.71
			1	49	22.00	21.06	20.92	20.88
			1	99	22.00	20.85	20.70	20.66
			50	0	21.00	19.86	19.96	19.47
			50	24	21.00	19.87	19.85	19.61
			50	49	21.00	20.03	19.68	19.45
			100	0	20.00	19.86	19.83	19.40

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		40265/2557.5	40740/2605	41215/2652.5
LTE Band 41	5MHz	QPSK	1	0	24.00	23.38	23.32	23.12
			1	12	24.00	23.34	23.32	23.08
			1	24	24.00	23.22	23.38	22.94
			12	0	24.00	23.35	23.49	23.09
			12	6	24.00	23.44	23.48	23.15
			12	11	24.00	23.39	23.42	23.07
			25	0	24.00	23.29	23.36	23.01
		16QAM	1	0	23.00	22.02	22.16	21.98
			1	12	23.00	22.04	22.12	21.90
			1	24	23.00	22.07	22.16	21.91
			12	0	22.00	21.22	21.51	21.19
			12	6	22.00	21.30	21.59	21.11
			12	11	22.00	21.30	21.52	21.15
			25	0	22.00	21.58	21.52	21.28
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		40290/2560	40740/2605	41190/2650
LTE	10MHz	QPSK	1	0	24.00	23.67	23.37	23.00

Band 41			1	24	24.00	23.65	23.35	22.89
			1	49	24.00	23.62	23.30	22.86
			25	0	24.00	23.58	23.38	23.00
			25	12	24.00	23.53	23.37	22.96
			25	24	24.00	23.53	23.31	22.93
			50	0	24.00	23.54	23.43	22.97
		16QAM	1	0	24.00	23.39	22.08	22.35
			1	24	24.00	23.38	22.06	22.27
			1	49	24.00	23.38	22.09	22.25
			25	0	22.00	21.70	21.45	21.14
			25	12	22.00	21.80	21.50	21.16
			25	24	22.00	21.81	21.49	21.13
			50	0	22.00	21.48	21.47	21.10
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		40315/2562.5	40740/2605	41165/2647.5
LTE Band 41	15MHz	QPSK	1	0	24.00	23.45	23.39	23.30
			1	37	24.00	23.45	23.43	23.08
			1	74	24.00	23.43	23.36	23.09
			36	0	24.00	23.48	23.34	23.04
			36	18	24.00	23.53	23.45	23.01
			36	37	24.00	23.42	23.42	22.97
			75	0	24.00	23.53	23.35	23.06
		16QAM	1	0	24.00	23.44	22.06	22.42
			1	37	24.00	23.34	22.14	22.32
			1	74	24.00	23.38	22.12	22.30
			36	0	22.00	21.64	21.43	21.24
			36	18	22.00	21.65	21.44	21.15
			36	37	22.00	21.55	21.39	21.13
			75	0	22.00	21.67	21.47	21.20
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		40340/2565	40740/2605	41140/2645
LTE Band 41	20MHz	QPSK	1	0	24.00	23.25	23.68	23.05
			1	49	24.00	23.22	23.69	22.96
			1	99	24.00	23.23	23.59	22.81
			50	0	24.00	23.38	23.33	23.12
			50	24	24.00	23.41	23.44	23.06

			50	49	24.00	23.32	23.46	22.97
			100	0	24.00	23.44	23.42	23.10
		16QAM	1	0	23.00	22.11	22.13	22.19
			1	49	23.00	22.04	22.05	21.45
			1	99	23.00	22.07	22.07	21.82
			50	0	22.00	21.55	21.34	21.22
			50	24	22.00	21.52	21.35	21.13
			50	49	22.00	21.53	21.37	21.07
			100	0	22.00	21.45	21.54	21.23

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	16.50	15.95
	6	2437	16.50	16.16
	11	2462	16.50	16.35
802.11g	1	2412	15.50	13.59
	6	2437	15.50	13.63
	11	2462	15.50	15.23
802.11n HT20	1	2412	15.50	13.53
	6	2437	15.50	13.65
	11	2462	15.50	15.04
802.11n HT40	3	2422	16.50	15.92
	6	2437	16.50	16.07
	9	2452	16.50	15.92

NOTE: Power measurement results of WLAN 2.4G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	36	5180	10.00	9.14
	40	5200	10.00	9.37
	48	5240	10.00	9.71
802.11n HT20	36	5180	12.50	12.47
	40	5200	12.50	12.02
	48	5240	12.50	11.33
802.11n HT40	38	5190	12.50	11.56
	46	5230	12.50	12.11
802.11ac VHT20	36	5180	6.50	5.72
	40	5200	6.50	5.95
	48	5240	6.50	6.28

802.11ac	38	5190	10.00	9.78
VHT40	46	5230	10.00	9.37

NOTE: Power measurement results of WLAN 5.2G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	149	5745	11.50	9.85
	157	5785	11.50	9.92
	165	5825	11.50	11.43
802.11n HT20	149	5745	11.50	11.37
	157	5785	11.50	9.72
	165	5825	11.50	9.53
802.11n HT40	151	5755	13.00	12.88
	159	5795	13.00	12.70
802.11ac VHT20	149	5745	8.00	7.53
	157	5785	8.00	7.54
	165	5825	8.00	6.96
802.11ac VHT40	151	5755	11.00	10.66
	159	5795	11.00	10.43

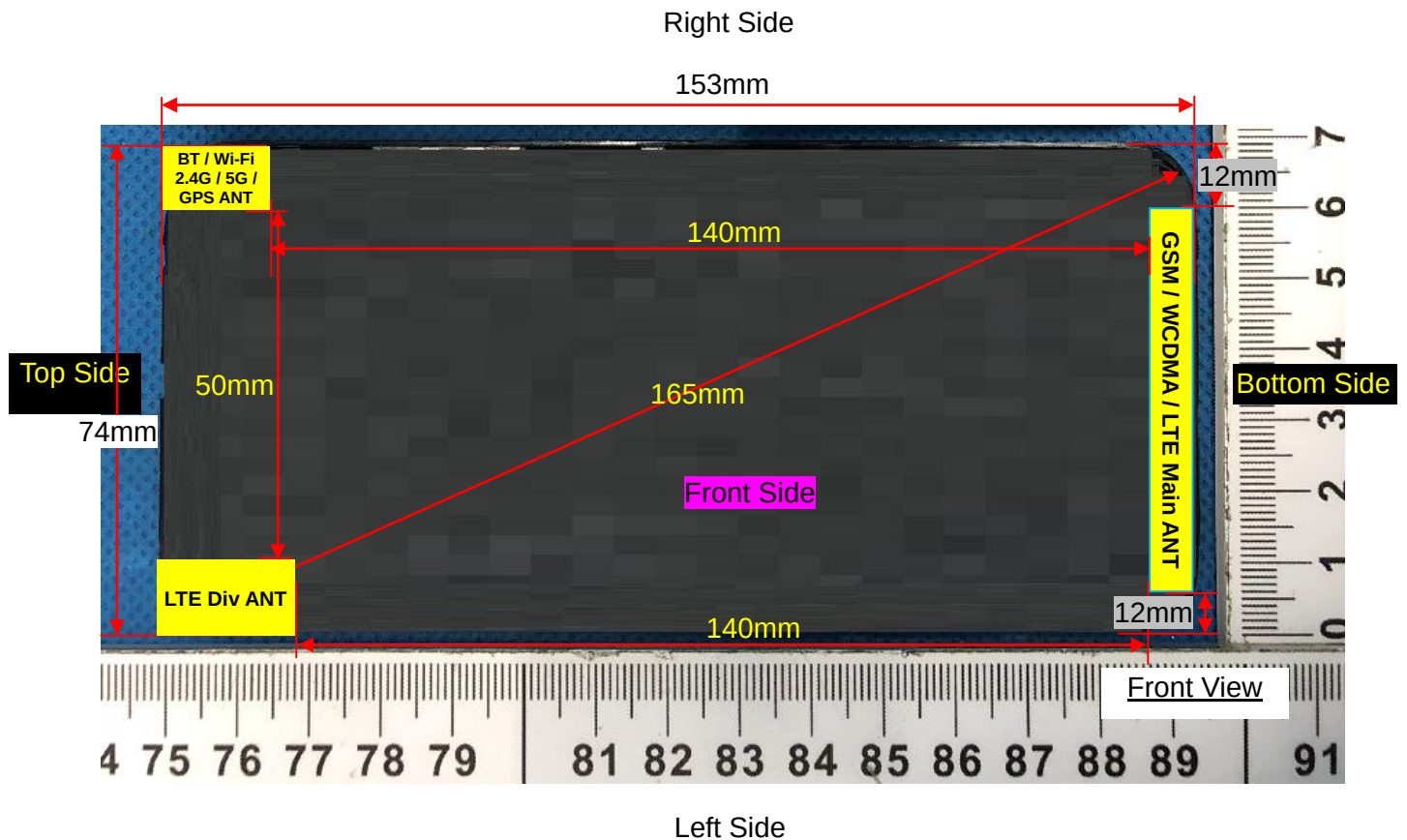
NOTE: Power measurement results of WLAN 5.8G.

7.4.2. Output Power Results Of Bluetooth

BR+EDR	Output Power (dBm)				
	Channel	Tune-up	Data Rates		
			1M	2M	3M
	0CH	8.000	7.589	7.244	7.348
	39CH	11.000	10.557	10.285	10.199
	78CH	11.000	10.201	9.985	9.902

BLE	Channel	Tune-up	Output Power (dBm)
	0CH	5.000	4.545
	19CH	7.000	6.712
	39CH	6.000	5.266

8. Antenna Location



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. SAR Results

9.1. SAR measurement results

9.1.1. 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				
Left Cheek	189/836.4	GPRS(GMSK 2TS)	0.313	0.238	3.27	32.13	33.00	0.382
Left Tilt 15 Degree	189/836.4	GPRS(GMSK 2TS)	0.127	0.096	-0.91	32.13	33.00	0.155
Right Cheek	189/836.4	GPRS(GMSK 2TS)	0.310	0.236	1.40	32.13	33.00	0.379
Right Tilt 15 Degree	189/836.4	GPRS(GMSK 2TS)	0.125	0.095	-4.44	32.13	33.00	0.153

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 2TS)	0.245	0.181	1.85	32.13	33.00	0.299
Back Side	189/836.4	GPRS(GMSK 2TS)	0.487	0.352	0.67	32.13	33.00	0.595

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 2TS)	0.245	0.181	1.85	32.13	33.00	0.299
Back Side	189/836.4	GPRS(GMSK 2TS)	0.487	0.352	0.67	32.13	33.00	0.595
Left Side	189/836.4	GPRS(GMSK 2TS)	0.307	0.224	-3.49	32.13	33.00	0.375
Right Side	189/836.4	GPRS(GMSK 2TS)	0.266	0.195	2.11	32.13	33.00	0.325
Bottom Side	189/836.4	GPRS(GMSK 2TS)	0.328	0.234	-3.61	32.13	33.00	0.401

NOTE: Hotspot SAR test results of GSM850

9.1.2. 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				
Left Cheek	661/1880	GPRS(GMSK 2TS)	0.064	0.043	4.30	28.18	29.00	0.077
Left Tilt 15 Degree	661/1880	GPRS(GMSK 2TS)	0.028	0.020	-2.45	28.18	29.00	0.034
Right Cheek	661/1880	GPRS(GMSK 2TS)	0.060	0.040	-4.71	28.18	29.00	0.072
Right Tilt 15 Degree	661/1880	GPRS(GMSK 2TS)	0.026	0.018	2.17	28.18	29.00	0.031

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 2TS)	0.337	0.172	0.78	28.18	29.00	0.407
Back Side	661/1880	GPRS(GMSK 2TS)	0.724	0.358	0.47	28.18	29.00	0.874
Back Side	512/1850.2	GPRS(GMSK 2TS)	0.782	0.378	0.03	28.26	29.00	0.927
Back Side	810/1909.8	GPRS(GMSK 2TS)	0.747	0.368	0.01	28.16	29.00	0.906

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 2TS)	0.337	0.172	0.78	28.18	29.00	0.407
Back Side	661/1880	GPRS(GMSK 2TS)	0.724	0.358	0.47	28.18	29.00	0.874
Left Side	661/1880	GPRS(GMSK 2TS)	0.418	0.210	-2.31	28.18	29.00	0.505
Right Side	661/1880	GPRS(GMSK 2TS)	0.552	0.274	-2.93	28.18	29.00	0.667
Bottom Side	661/1880	GPRS(GMSK 2TS)	0.953	0.668	-1.71	28.18	29.00	1.151
Back Side	512/1850.2	GPRS(GMSK 2TS)	0.782	0.378	0.03	28.26	29.00	0.927

Back Side	810/1909.8	GPRS(GMSK 2TS)	0.747	0.368	0.01	28.16	29.00	0.906
Bottom Side	512/1850.2	GPRS(GMSK 2TS)	0.974	0.680	1.55	28.26	29.00	1.155
Bottom Side Repeated	512/1850.2	GPRS(GMSK 2TS)	0.972	0.679	1.74	28.26	29.00	1.153
Bottom Side	810/1909.8	GPRS(GMSK 2TS)	0.927	0.651	0.94	28.16	29.00	1.125

NOTE: Hotspot SAR test results of GSM1900

9.1.3. 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				
Left Cheek	9400/1880	RMC12.2K	0.335	0.203	-0.52	23.14	24.00	0.408
Left Tilt 15 Degree	9400/1880	RMC12.2K	0.166	0.101	1.62	23.14	24.00	0.202
Right Cheek	9400/1880	RMC12.2K	0.321	0.194	4.03	23.14	24.00	0.391
Right Tilt 15 Degree	9400/1880	RMC12.2K	0.158	0.095	1.63	23.14	24.00	0.193

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	0.361	0.218	1.05	23.14	24.00	0.440
Back Side	9400/1880	RMC12.2K	0.567	0.343	-0.72	23.14	24.00	0.691

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	0.361	0.218	1.05	23.14	24.00	0.440
Back Side	9400/1880	RMC12.2K	0.567	0.343	-0.72	23.14	24.00	0.691
Left Side	9400/1880	RMC12.2K	0.350	0.211	1.61	23.14	24.00	0.427
Right Side	9400/1880	RMC12.2K	0.320	0.193	4.88	23.14	24.00	0.390
Bottom Side	9400/1880	RMC12.2K	0.312	0.188	1.64	23.14	24.00	0.380

NOTE: Hotspot SAR test results of WCDMA Band 2

9.1.4. SAR measurement Result of WCDMA Band 4

Test Position of Head	Test channel	Test Mode	SAR Value (W/kg)	Power Drift	Conducted power	Tune-up power	Scaled SAR 1g
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	/Freq.		1g	10g	(±5%)	(dBm)	(dBm)	(W/Kg)
Left Cheek	1413/1732.6	RMC12.2K	0.462	0.299	-2.67	22.72	23.00	0.493
Left Tilt 15 Degree	1413/1732.6	RMC12.2K	0.233	0.151	-0.66	22.72	23.00	0.249
Right Cheek	1413/1732.6	RMC12.2K	0.410	0.265	-3.91	22.72	23.00	0.437
Right Tilt 15 Degree	1413/1732.6	RMC12.2K	0.228	0.143	-4.90	22.72	23.00	0.243

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	0.653	0.375	1.20	22.72	23.00	0.696
Back Side	1413/1732.6	RMC12.2K	1.058	0.604	1.30	22.72	23.00	1.128
Back Side Repeated	1413/1732.6	RMC12.2K	1.034	0.593	-1.55	22.72	23.00	1.103
Back Side	1312/1712.4	RMC12.2K	0.774	0.443	-3.09	22.76	23.00	0.818
Back Side	1513/1752.6	RMC12.2K	0.651	0.321	3.20	22.65	23.00	0.706

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	0.653	0.375	1.20	22.72	23.00	0.696
Back Side	1413/1732.6	RMC12.2K	1.058	0.604	1.30	22.72	23.00	1.128
Back Side Repeated	1413/1732.6	RMC12.2K	1.034	0.593	-1.55	22.72	23.00	1.103
Left Side	1413/1732.6	RMC12.2K	0.502	0.285	-2.63	22.72	23.00	0.535
Right Side	1413/1732.6	RMC12.2K	0.501	0.284	-2.22	22.72	23.00	0.534
Bottom Side	1413/1732.6	RMC12.2K	0.687	0.394	1.78	22.72	23.00	0.733
Back Side	1312/1712.4	RMC12.2K	0.774	0.443	-3.09	22.76	23.00	0.818
Back Side	1513/1752.6	RMC12.2K	0.651	0.321	3.20	22.65	23.00	0.706

NOTE: Hotspot SAR test results of WCDMA Band 4

9.1.5. 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				
Left Cheek	4182/836.4	RMC12.2K	0.175	0.136	1.51	23.87	24.00	0.180
Left Tilt 15	4182/836.4	RMC12.2K	0.045	0.034	1.85	23.87	24.00	0.046

NOTE: Head SAR test results of WCDMA Band 5

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

NOTE: Hotspot SAR test results 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				
1RB								
Left Cheek	20175/1732.5	20M QPSK(1,49)	0.034	0.028	0.77	23.41	24.00	0.039
Left Tilt 15 Degree	20175/1732.5	20M QPSK(1,49)	0.016	0.013	-4.41	23.41	24.00	0.018
Right Cheek	20175/1732.5	20M QPSK(1,49)	0.031	0.026	-3.48	23.41	24.00	0.036
Right Tilt 15 Degree	20175/1732.5	20M QPSK(1,49)	0.015	0.011	-3.83	23.41	24.00	0.017
50%RB								

Left Cheek	20175/1732.5	1.4M QPSK(3,1)	0.028	0.025	4.96	23.77	24.00	0.030
Left Tilt 15 Degree	20175/1732.5	1.4M QPSK(3,1)	0.012	0.010	-1.68	23.77	24.00	0.013
Right Cheek	20175/1732.5	1.4M QPSK(3,1)	0.026	0.024	-4.36	23.77	24.00	0.027
Right Tilt 15 Degree	20175/1732.5	1.4M QPSK(3,1)	0.011	0.009	1.93	23.77	24.00	0.012

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(1,49)	0.331	0.182	-4.36	23.41	24.00	0.379
Back Side	20175/1732.5	20M QPSK(1,49)	0.309	0.173	-1.72	23.41	24.00	0.354
50%RB								
Front Side	20175/1732.5	1.4M QPSK(3,1)	0.290	0.160	3.49	23.77	24.00	0.306
Back Side	20175/1732.5	1.4M QPSK(3,1)	0.267	0.152	0.36	23.77	24.00	0.282

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%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	20175/1732.5	20M QPSK(1,49)	0.331	0.182	-4.36	23.41	24.00	0.379
Back Side	20175/1732.5	20M QPSK(1,49)	0.309	0.173	-1.72	23.41	24.00	0.354
Left Side	20175/1732.5	20M QPSK(1,49)	0.428	0.228	3.03	23.41	24.00	0.490
Right Side	20175/1732.5	20M QPSK(1,49)	0.364	0.201	3.33	23.41	24.00	0.417

Bottom Side	20175/1732.5	20M QPSK(1,49)	0.559	0.299	-1.47	23.41	24.00	0.640
50%RB								
Front Side	20175/1732.5	1.4M QPSK(3,1)	0.290	0.160	3.49	23.77	24.00	0.306
Back Side	20175/1732.5	1.4M QPSK(3,1)	0.267	0.152	0.36	23.77	24.00	0.282
Left Side	20175/1732.5	1.4M QPSK(3,1)	0.388	0.204	1.44	23.77	24.00	0.409
Right Side	20175/1732.5	1.4M QPSK(3,1)	0.318	0.175	-0.83	23.77	24.00	0.335
Bottom Side	20175/1732.5	1.4M QPSK(3,1)	0.510	0.273	-1.87	23.77	24.00	0.538

NOTE: Hotspot SAR test results of LTE Band 4

9.1.7. 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				
1RB								
Left Cheek	20525/836.5	10M QPSK(1,24)	0.243	0.189	1.49	24.88	25.00	0.250
Left Tilt 15 Degree	20525/836.5	10M QPSK(1,24)	0.162	0.125	-3.48	24.88	25.00	0.167
Right Cheek	20525/836.5	10M QPSK(1,24)	0.241	0.188	-3.39	24.88	25.00	0.248
Right Tilt 15 Degree	20525/836.5	10M QPSK(1,24)	0.160	0.124	-0.14	24.88	25.00	0.164
50%RB								
Left Cheek	20525/836.5	1.4M QPSK(3,0)	0.228	0.177	-2.33	24.85	25.00	0.236
Left Tilt 15 Degree	20525/836.5	1.4M QPSK(3,0)	0.140	0.109	4.14	24.85	25.00	0.145
Right Cheek	20525/836.5	1.4M QPSK(3,0)	0.224	0.175	-2.51	24.85	25.00	0.232
Right Tilt	20525/836.5	1.4M QPSK(3,0)	0.139	0.108	-2.72	24.85	25.00	0.144

15 Degree								
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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(1,24)	0.408	0.301	2.50	24.88	25.00	0.419
Back Side	20525/836.5	10M QPSK(1,24)	0.450	0.333	0.25	24.88	25.00	0.463
50%RB								
Front Side	20525/836.5	1.4M QPSK(3,0)	0.375	0.275	0.75	24.85	25.00	0.388
Back Side	20525/836.5	1.4M QPSK(3,0)	0.417	0.312	-0.99	24.85	25.00	0.432

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(1,24)	0.408	0.301	2.50	24.88	25.00	0.419
Back Side	20525/836.5	10M QPSK(1,24)	0.450	0.333	0.25	24.88	25.00	0.463
Left Side	20525/836.5	10M QPSK(1,24)	0.342	0.255	-3.38	24.88	25.00	0.352
Right Side	20525/836.5	10M QPSK(1,24)	0.274	0.202	4.83	24.88	25.00	0.282
Bottom Side	20525/836.5	10M QPSK(1,24)	0.381	0.286	0.84	24.88	25.00	0.392
50%RB								
Front Side	20525/836.5	1.4M QPSK(3,0)	0.375	0.275	0.75	24.85	25.00	0.388
Back Side	20525/836.5	1.4M QPSK(3,0)	0.417	0.312	-0.99	24.85	25.00	0.432
Left Side	20525/836.5	1.4M QPSK(3,0)	0.310	0.231	2.37	24.85	25.00	0.321
Right	20525/836.5	1.4M QPSK(3,0)	0.245	0.182	3.30	24.85	25.00	0.254

Side								
Bottom Side	20525/836.5	1.4M QPSK(3,0)	0.352	0.262	-0.29	24.85	25.00	0.364

NOTE: Hotspot SAR test results of LTE Band 5

9.1.8. 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				
1RB								
Left Cheek	21100/2535	20M QPSK(1,49)	0.113	0.069	2.39	21.89	23.00	0.146
Left Tilt 15 Degree	21100/2535	20M QPSK(1,49)	0.058	0.035	3.94	21.89	23.00	0.075
Right Cheek	21100/2535	20M QPSK(1,49)	0.088	0.058	-2.97	21.89	23.00	0.114
Right Tilt 15 Degree	21100/2535	20M QPSK(1,49)	0.041	0.029	2.89	21.89	23.00	0.053
50%RB								
Left Cheek	21100/2535	20M QPSK(50,0)	0.066	0.049	-4.42	20.97	21.00	0.066
Left Tilt 15 Degree	21100/2535	20M QPSK(50,0)	0.030	0.018	-3.62	20.97	21.00	0.030
Right Cheek	21100/2535	20M QPSK(50,0)	0.051	0.038	-0.99	20.97	21.00	0.051
Right Tilt 15 Degree	21100/2535	20M QPSK(50,0)	0.028	0.019	-2.60	20.97	21.00	0.028

NOTE: Head SAR test results of LTE Band 7

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	21100/2535	20M QPSK(1,49)	0.366	0.180	-3.14	21.89	23.00	0.473
Back Side	21100/2535	20M QPSK(1,49)	0.496	0.251	-2.09	21.89	23.00	0.640
50%RB								
Front Side	21100/2535	20M QPSK(50,0)	0.240	0.126	-1.06	20.97	21.00	0.242
Back Side	21100/2535	20M QPSK(50,0)	0.345	0.177	-2.30	20.97	21.00	0.347

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%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)
			1g	10g				
1RB								
Front Side	21100/2535	20M QPSK(1,49)	0.366	0.180	-3.14	21.89	23.00	0.473
Back Side	21100/2535	20M QPSK(1,49)	0.496	0.251	-2.09	21.89	23.00	0.640
Left Side	21100/2535	20M QPSK(1,49)	0.351	0.171	-3.79	21.89	23.00	0.453
Right Side	21100/2535	20M QPSK(1,49)	0.322	0.165	-3.14	21.89	23.00	0.416
Bottom Side	21100/2535	20M QPSK(1,49)	0.294	0.149	3.39	21.89	23.00	0.380
50%RB								
Front Side	21100/2535	20M QPSK(50,0)	0.240	0.126	-1.06	20.97	21.00	0.242
Back Side	21100/2535	20M QPSK(50,0)	0.345	0.177	-2.30	20.97	21.00	0.347
Left Side	21100/2535	20M QPSK(50,0)	0.230	0.118	-1.38	20.97	21.00	0.232
Right Side	21100/2535	20M QPSK(50,0)	0.210	0.103	-3.19	20.97	21.00	0.211
Bottom Side	21100/2535	20M QPSK(50,0)	0.241	0.123	-0.84	20.97	21.00	0.243

NOTE: Hotspot SAR test results of LTE Band 7

9.1.9. SAR measurement Result of LTE Band 41

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				
1RB								
Left Cheek	40740/2605	20M QPSK(1,49)	0.091	0.057	-0.41	23.69	24.00	0.098
Left Tilt 15 Degree	40740/2605	20M QPSK(1,49)	0.051	0.049	2.21	23.69	24.00	0.055
Right Cheek	40740/2605	20M QPSK(1,49)	0.074	0.044	0.42	23.69	24.00	0.079
Right Tilt 15 Degree	40740/2605	20M QPSK(1,49)	0.037	0.022	3.16	23.69	24.00	0.040
50%RB								
Left Cheek	40740/2605	20M QPSK(50,49)	0.071	0.045	-0.82	23.46	24.00	0.080
Left Tilt 15 Degree	40740/2605	20M QPSK(50,49)	0.034	0.023	2.71	23.46	24.00	0.039
Right Cheek	40740/2605	20M QPSK(50,49)	0.055	0.035	-0.45	23.46	24.00	0.062
Right Tilt 15 Degree	40740/2605	20M QPSK(50,49)	0.024	0.017	-1.61	23.46	24.00	0.027

NOTE: Head SAR test results of LTE Band 41

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	40740/2605	20M QPSK(1,49)	0.251	0.125	-3.14	23.69	24.00	0.270
Back Side	40740/2605	20M QPSK(1,49)	0.276	0.139	-1.90	23.69	24.00	0.296
50%RB								
Front Side	40740/2605	20M QPSK(50,49)	0.197	0.092	-4.44	23.46	24.00	0.223
Back Side	40740/2605	20M	0.200	0.109	0.67	23.46	24.00	0.226

QPSK(50,49)

NOTE: Body-Worn SAR test results of LTE Band 41

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	40740/2605	20M QPSK(1,49)	0.251	0.125	-3.14	23.69	24.00	0.270
Back Side	40740/2605	20M QPSK(1,49)	0.276	0.139	-1.90	23.69	24.00	0.296
Left Side	40740/2605	20M QPSK(1,49)	0.233	0.111	2.57	23.69	24.00	0.250
Right Side	40740/2605	20M QPSK(1,49)	0.210	0.107	-0.63	23.69	24.00	0.226
Bottom Side	40740/2605	20M QPSK(1,49)	0.189	0.096	-0.29	23.69	24.00	0.203
50%RB								
Front Side	40740/2605	20M QPSK(50,49)	0.197	0.092	-4.44	23.46	24.00	0.223
Back Side	40740/2605	20M QPSK(50,49)	0.200	0.109	0.67	23.46	24.00	0.226
Left Side	40740/2605	20M QPSK(50,49)	0.171	0.083	-0.41	23.46	24.00	0.194
Right Side	40740/2605	20M QPSK(50,49)	0.141	0.074	3.13	23.46	24.00	0.160
Bottom Side	40740/2605	20M QPSK(50,49)	0.121	0.064	-0.36	23.46	24.00	0.137

NOTE: Hotspot SAR test results of LTE Band 41

9.1.10. 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				
Left Cheek	6/2437	802.11 b	0.051	0.032	-0.09	16.16	16.50	0.055
Left Tilt 15 Degree	6/2437	802.11 b	0.028	0.019	4.48	16.16	16.50	0.030

Right Cheek	6/2437	802.11 b	0.049	0.031	-0.65	16.16	16.50	0.053
Right Tilt 15 Degree	6/2437	802.11 b	0.025	0.016	-2.02	16.16	16.50	0.027

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	0.072	0.034	0.35	16.16	16.50	0.078
Back Side	6/2437	802.11 b	0.112	0.055	-1.07	16.16	16.50	0.121

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	0.072	0.034	0.35	16.16	16.50	0.078
Back Side	6/2437	802.11 b	0.112	0.055	-1.07	16.16	16.50	0.121
Right Side	6/2437	802.11 b	0.056	0.025	-3.86	16.16	16.50	0.061
Top Side	6/2437	802.11 b	0.091	0.048	4.17	16.16	16.50	0.098

NOTE: Hotspot SAR test results of WLAN 2.4G

9.1.11. SAR measurement Result of WLAN 5.2G

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				
Left Cheek	40/5200	802.11n HT20	0.126	0.070	4.98	12.02	12.50	0.141
Left Tilt 15 Degree	40/5200	802.11n HT20	0.052	0.030	2.68	12.02	12.50	0.058
Right Cheek	40/5200	802.11n HT20	0.129	0.072	0.43	12.02	12.50	0.144
Right Tilt 15 Degree	40/5200	802.11n HT20	0.057	0.034	-0.21	12.02	12.50	0.064

NOTE: Head SAR test results of WLAN 5.2G

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	40/5200	802.11n HT20	0.124	0.074	-1.13	12.02	12.50	0.138

Back Side	40/5200	802.11n HT20	0.050	0.032	4.41	12.02	12.50	0.056
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NOTE: Body-Worn SAR test results of WLAN 5.2G

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	40/5200	802.11n HT20	0.124	0.074	-1.13	12.02	12.50	0.138
Back Side	40/5200	802.11n HT20	0.050	0.032	4.41	12.02	12.50	0.056
Right Side	40/5200	802.11n HT20	0.082	0.051	-0.57	12.02	12.50	0.092
Top Side	40/5200	802.11n HT20	0.063	0.037	0.82	12.02	12.50	0.070

NOTE: Hotspot SAR test results of WLAN 5.2G

9.1.12. SAR measurement Result of WLAN 5.8G

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				
Left Cheek	151/5755	802.11n HT40	0.105	0.069	4.89	12.88	13.00	0.108
Left Tilt 15 Degree	151/5755	802.11n HT40	0.064	0.024	2.76	12.88	13.00	0.066
Right Cheek	151/5755	802.11n HT40	0.107	0.070	-3.07	12.88	13.00	0.110
Right Tilt 15 Degree	151/5755	802.11n HT40	0.067	0.028	-1.72	12.88	13.00	0.069

NOTE: Head SAR test results of WLAN 5.8G

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	151/5755	802.11n HT40	0.135	0.090	4.51	12.88	13.00	0.139
Back Side	151/5755	802.11n HT40	0.094	0.065	-0.21	12.88	13.00	0.097

NOTE: Body-Worn SAR test results of WLAN 5.8G

Test Position of Hotspot with	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				

10mm								
Front Side	151/5755	802.11n HT40	0.135	0.090	4.51	12.88	13.00	0.139
Back Side	151/5755	802.11n HT40	0.094	0.065	-0.21	12.88	13.00	0.097
Right Side	151/5755	802.11n HT40	0.052	0.032	4.41	12.88	13.00	0.053
Top Side	151/5755	802.11n HT40	0.063	0.044	-0.57	12.88	13.00	0.065

NOTE: Hotspot SAR test results of WLAN 5.8G

9.1.13. SAR measurement Result of Bluetooth

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				
Left Cheek	39/2441	BR+EDR (1DH5)	0.147	0.087	-0.31	10.557	11.000	0.163
Left Tilt 15 Degree	39/2441	BR+EDR (1DH5)	0.062	0.042	3.21	10.557	11.000	0.069
Right Cheek	39/2441	BR+EDR (1DH5)	0.128	0.071	0.14	10.557	11.000	0.142
Right Tilt 15 Degree	39/2441	BR+EDR (1DH5)	0.053	0.040	1.23	10.557	11.000	0.059

NOTE: Head SAR test results of Bluetooth

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	39/2441	BR+EDR (1DH5)	0.056	0.025	2.54	10.557	11.000	0.062
Back Side	39/2441	BR+EDR (1DH5)	0.105	0.063	-0.89	10.557	11.000	0.116

NOTE: Body-Worn SAR test results of Bluetooth

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	39/2441	BR+EDR	0.056	0.025	2.54	10.557	11.000	0.062

		(1DH5)						
Back Side	39/2441	BR+EDR (1DH5)	0.105	0.063	-0.89	10.557	11.000	0.116
Right Side	39/2441	BR+EDR (1DH5)	0.062	0.030	1.20	10.557	11.000	0.069
Top Side	39/2441	BR+EDR (1DH5)	0.042	0.021	0.36	10.557	11.000	0.047

NOTE: Hotspot SAR test results of Bluetooth

9.2. SAR Summation Scenario

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

- 1) Scalar SAR summation $< 1.6\text{W/kg}$.
- 2) $\text{SPLSR} = (\text{SAR}_1 + \text{SAR}_2)^{1.5} / (\text{min. separation distance, mm})$, 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 $\text{SPLSR} \leq 0.04$, 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	0.382	0.055	0.438	N/A	N/A
	Left Tilt 15 Degree	0.155	0.030	0.185	N/A	N/A
	Right Cheek	0.379	0.053	0.432	N/A	N/A
	Right Tilt 15 Degree	0.153	0.027	0.180	N/A	N/A
Body-Worn	Front Side	0.299	0.078	0.377	N/A	N/A
	Back Side	0.595	0.121	0.716	N/A	N/A
Hotspot	Front Side	0.299	0.078	0.377	N/A	N/A
	Back Side	0.595	0.121	0.716	N/A	N/A
	Left Side	0.375	N/A	0.375	N/A	N/A
	Right Side	0.325	0.061	0.386	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.401	N/A	0.401	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	0.077	0.055	0.132	N/A	N/A
	Left Tilt 15 Degree	0.034	0.030	0.064	N/A	N/A
	Right Cheek	0.072	0.053	0.125	N/A	N/A
	Right Tilt 15 Degree	0.031	0.027	0.058	N/A	N/A

Body-Worn	Front Side	0.407	0.078	0.485	N/A	N/A
	Back Side	0.927	0.121	1.048	N/A	N/A
Hotspot	Front Side	0.407	0.078	0.485	N/A	N/A
	Back Side	0.927	0.121	1.048	N/A	N/A
	Left Side	0.505	N/A	0.505	N/A	N/A
	Right Side	0.667	0.061	0.727	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	1.155	N/A	1.155	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	0.408	0.055	0.464	N/A	N/A
	Left Tilt 15 Degree	0.202	0.030	0.233	N/A	N/A
	Right Cheek	0.391	0.053	0.444	N/A	N/A
	Right Tilt 15 Degree	0.193	0.027	0.220	N/A	N/A
Body-Worn	Front Side	0.440	0.078	0.518	N/A	N/A
	Back Side	0.691	0.121	0.812	N/A	N/A
Hotspot	Front Side	0.440	0.078	0.518	N/A	N/A
	Back Side	0.691	0.121	0.812	N/A	N/A
	Left Side	0.427	N/A	0.427	N/A	N/A
	Right Side	0.390	0.061	0.451	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.380	N/A	0.380	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	0.493	0.055	0.548	N/A	N/A
	Left Tilt 15 Degree	0.249	0.030	0.279	N/A	N/A
	Right Cheek	0.437	0.053	0.490	N/A	N/A
	Right Tilt 15 Degree	0.243	0.027	0.270	N/A	N/A
Body-Worn	Front Side	0.696	0.078	0.774	N/A	N/A
	Back Side	1.128	0.121	1.250	N/A	N/A
Hotspot	Front Side	0.696	0.078	0.774	N/A	N/A
	Back Side	1.128	0.121	1.250	N/A	N/A
	Left Side	0.535	N/A	0.535	N/A	N/A
	Right Side	0.534	0.061	0.595	N/A	N/A

	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.733	N/A	0.733	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	0.180	0.055	0.235	N/A	N/A
	Left Tilt 15 Degree	0.046	0.030	0.077	N/A	N/A
	Right Cheek	0.178	0.053	0.231	N/A	N/A
	Right Tilt 15 Degree	0.045	0.027	0.072	N/A	N/A
Body-Worn	Front Side	0.207	0.078	0.285	N/A	N/A
	Back Side	0.324	0.121	0.445	N/A	N/A
Hotspot	Front Side	0.207	0.078	0.285	N/A	N/A
	Back Side	0.324	0.121	0.445	N/A	N/A
	Left Side	0.262	N/A	0.262	N/A	N/A
	Right Side	0.284	0.061	0.345	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.297	N/A	0.297	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 4	WLAN 2.4G			
Head	Left Cheek	0.039	0.055	0.094	N/A	N/A
	Left Tilt 15 Degree	0.018	0.030	0.049	N/A	N/A
	Right Cheek	0.036	0.053	0.089	N/A	N/A
	Right Tilt 15 Degree	0.017	0.027	0.044	N/A	N/A
Body-Worn	Front Side	0.379	0.078	0.457	N/A	N/A
	Back Side	0.354	0.121	0.475	N/A	N/A
Hotspot	Front Side	0.379	0.078	0.457	N/A	N/A
	Back Side	0.354	0.121	0.475	N/A	N/A
	Left Side	0.490	N/A	0.490	N/A	N/A
	Right Side	0.417	0.061	0.478	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.640	N/A	0.640	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	0.250	0.055	0.305	N/A	N/A

	Left Tilt 15 Degree	0.167	0.030	0.197	N/A	N/A
	Right Cheek	0.248	0.053	0.301	N/A	N/A
	Right Tilt 15 Degree	0.164	0.027	0.192	N/A	N/A
Body-Worn	Front Side	0.419	0.078	0.497	N/A	N/A
	Back Side	0.463	0.121	0.584	N/A	N/A
Hotspot	Front Side	0.419	0.078	0.497	N/A	N/A
	Back Side	0.463	0.121	0.584	N/A	N/A
	Left Side	0.352	N/A	0.352	N/A	N/A
	Right Side	0.282	0.061	0.342	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.392	N/A	0.392	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	0.146	0.055	0.201	N/A	N/A
	Left Tilt 15 Degree	0.075	0.030	0.105	N/A	N/A
	Right Cheek	0.114	0.053	0.167	N/A	N/A
	Right Tilt 15 Degree	0.053	0.027	0.080	N/A	N/A
Body-Worn	Front Side	0.473	0.078	0.550	N/A	N/A
	Back Side	0.640	0.121	0.762	N/A	N/A
Hotspot	Front Side	0.473	0.078	0.550	N/A	N/A
	Back Side	0.640	0.121	0.762	N/A	N/A
	Left Side	0.453	N/A	0.453	N/A	N/A
	Right Side	0.416	0.061	0.476	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.380	N/A	0.380	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 41	WLAN 2.4G			
Head	Left Cheek	0.098	0.055	0.153	N/A	N/A
	Left Tilt 15 Degree	0.055	0.030	0.085	N/A	N/A
	Right Cheek	0.079	0.053	0.132	N/A	N/A
	Right Tilt 15 Degree	0.040	0.027	0.067	N/A	N/A
Body-Worn	Front Side	0.270	0.078	0.347	N/A	N/A
	Back Side	0.296	0.121	0.418	N/A	N/A

Hotspot	Front Side	0.270	0.078	0.347	N/A	N/A
	Back Side	0.296	0.121	0.418	N/A	N/A
	Left Side	0.250	N/A	0.250	N/A	N/A
	Right Side	0.226	0.061	0.286	N/A	N/A
	Top Side	N/A	0.098	0.098	N/A	N/A
	Bottom Side	0.203	N/A	0.203	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 41 and WLAN 2.4G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 850	Bluetooth			
Head	Left Cheek	0.382	0.163	0.545	N/A	N/A
	Left Tilt 15 Degree	0.155	0.069	0.224	N/A	N/A
	Right Cheek	0.379	0.142	0.521	N/A	N/A
	Right Tilt 15 Degree	0.153	0.059	0.211	N/A	N/A
Body-Worn	Front Side	0.299	0.062	0.361	N/A	N/A
	Back Side	0.595	0.116	0.711	N/A	N/A
Hotspot	Front Side	0.299	0.062	0.361	N/A	N/A
	Back Side	0.595	0.116	0.711	N/A	N/A
	Left Side	0.375	N/A	0.375	N/A	N/A
	Right Side	0.325	0.069	0.394	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.401	N/A	0.401	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	0.077	0.163	0.240	N/A	N/A
	Left Tilt 15 Degree	0.034	0.069	0.102	N/A	N/A
	Right Cheek	0.072	0.142	0.214	N/A	N/A
	Right Tilt 15 Degree	0.031	0.059	0.090	N/A	N/A
Body-Worn	Front Side	0.407	0.062	0.469	N/A	N/A
	Back Side	0.927	0.116	1.044	N/A	N/A
Hotspot	Front Side	0.407	0.062	0.469	N/A	N/A
	Back Side	0.927	0.116	1.044	N/A	N/A
	Left Side	0.505	N/A	0.505	N/A	N/A
	Right Side	0.667	0.069	0.735	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	1.155	N/A	1.155	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	0.408	0.163	0.571	N/A	N/A
	Left Tilt 15 Degree	0.202	0.069	0.271	N/A	N/A
	Right Cheek	0.391	0.142	0.533	N/A	N/A
	Right Tilt 15 Degree	0.193	0.059	0.251	N/A	N/A
Body-Worn	Front Side	0.440	0.062	0.502	N/A	N/A
	Back Side	0.691	0.116	0.807	N/A	N/A
Hotspot	Front Side	0.440	0.062	0.502	N/A	N/A
	Back Side	0.691	0.116	0.807	N/A	N/A
	Left Side	0.427	N/A	0.427	N/A	N/A
	Right Side	0.390	0.069	0.459	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.380	N/A	0.380	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	0.493	0.163	0.656	N/A	N/A
	Left Tilt 15 Degree	0.249	0.069	0.317	N/A	N/A
	Right Cheek	0.437	0.142	0.579	N/A	N/A
	Right Tilt 15 Degree	0.243	0.059	0.302	N/A	N/A
Body-Worn	Front Side	0.696	0.062	0.759	N/A	N/A
	Back Side	1.128	0.116	1.245	N/A	N/A
Hotspot	Front Side	0.696	0.062	0.759	N/A	N/A
	Back Side	1.128	0.116	1.245	N/A	N/A
	Left Side	0.535	N/A	0.535	N/A	N/A
	Right Side	0.534	0.069	0.603	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.733	N/A	0.733	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	0.180	0.163	0.343	N/A	N/A
	Left Tilt 15	0.046	0.069	0.115	N/A	N/A

	Degree					
	Right Cheek	0.178	0.142	0.320	N/A	N/A
	Right Tilt 15 Degree	0.045	0.059	0.104	N/A	N/A
Body-Worn	Front Side	0.207	0.062	0.269	N/A	N/A
	Back Side	0.324	0.116	0.440	N/A	N/A
Hotspot	Front Side	0.207	0.062	0.269	N/A	N/A
	Back Side	0.324	0.116	0.440	N/A	N/A
	Left Side	0.262	N/A	0.262	N/A	N/A
	Right Side	0.284	0.069	0.353	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.297	N/A	0.297	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 4	Bluetooth			
Head	Left Cheek	0.039	0.163	0.202	N/A	N/A
	Left Tilt 15 Degree	0.018	0.069	0.087	N/A	N/A
	Right Cheek	0.036	0.142	0.177	N/A	N/A
	Right Tilt 15 Degree	0.017	0.059	0.076	N/A	N/A
Body-Worn	Front Side	0.379	0.062	0.441	N/A	N/A
	Back Side	0.354	0.116	0.470	N/A	N/A
Hotspot	Front Side	0.379	0.062	0.441	N/A	N/A
	Back Side	0.354	0.116	0.470	N/A	N/A
	Left Side	0.490	N/A	0.490	N/A	N/A
	Right Side	0.417	0.069	0.486	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.640	N/A	0.640	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	0.250	0.163	0.413	N/A	N/A
	Left Tilt 15 Degree	0.167	0.069	0.235	N/A	N/A
	Right Cheek	0.248	0.142	0.389	N/A	N/A
	Right Tilt 15 Degree	0.164	0.059	0.223	N/A	N/A
Body-Worn	Front Side	0.419	0.062	0.481	N/A	N/A
	Back Side	0.463	0.116	0.579	N/A	N/A
Hotspot	Front Side	0.419	0.062	0.481	N/A	N/A
	Back Side	0.463	0.116	0.579	N/A	N/A

	Left Side	0.352	N/A	0.352	N/A	N/A
	Right Side	0.282	0.069	0.350	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.392	N/A	0.392	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	0.146	0.163	0.309	N/A	N/A
	Left Tilt 15 Degree	0.075	0.069	0.144	N/A	N/A
	Right Cheek	0.114	0.142	0.255	N/A	N/A
	Right Tilt 15 Degree	0.053	0.059	0.112	N/A	N/A
Body-Worn	Front Side	0.473	0.062	0.535	N/A	N/A
	Back Side	0.640	0.116	0.757	N/A	N/A
Hotspot	Front Side	0.473	0.062	0.535	N/A	N/A
	Back Side	0.640	0.116	0.757	N/A	N/A
	Left Side	0.453	N/A	0.453	N/A	N/A
	Right Side	0.416	0.069	0.484	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.380	N/A	0.380	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 (W/Kg)	SPLSR	Remark
		LTE Band 41	Bluetooth			
Head	Left Cheek	0.098	0.163	0.261	N/A	N/A
	Left Tilt 15 Degree	0.055	0.069	0.123	N/A	N/A
	Right Cheek	0.079	0.142	0.221	N/A	N/A
	Right Tilt 15 Degree	0.040	0.059	0.098	N/A	N/A
Body-Worn	Front Side	0.270	0.062	0.332	N/A	N/A
	Back Side	0.296	0.116	0.413	N/A	N/A
Hotspot	Front Side	0.270	0.062	0.332	N/A	N/A
	Back Side	0.296	0.116	0.413	N/A	N/A
	Left Side	0.250	N/A	0.250	N/A	N/A
	Right Side	0.226	0.069	0.294	N/A	N/A
	Top Side	N/A	0.047	0.047	N/A	N/A
	Bottom Side	0.203	N/A	0.203	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 41 and Bluetooth.

Test Position	Scaled SAR _{MAX}		Σ 1-g SAR	SPLSR	Remark
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		GSM 850	WLAN 5.2G	(W/Kg)		
Head	Left Cheek	0.382	0.141	0.523	N/A	N/A
	Left Tilt 15 Degree	0.155	0.058	0.213	N/A	N/A
	Right Cheek	0.379	0.144	0.523	N/A	N/A
	Right Tilt 15 Degree	0.153	0.064	0.216	N/A	N/A
Body-Worn	Front Side	0.299	0.138	0.438	N/A	N/A
	Back Side	0.595	0.056	0.651	N/A	N/A
Hotspot	Front Side	0.299	0.138	0.438	N/A	N/A
	Back Side	0.595	0.056	0.651	N/A	N/A
	Left Side	0.375	N/A	0.375	N/A	N/A
	Right Side	0.325	0.092	0.417	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	0.401	N/A	0.401	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM850 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 1900	WLAN 5.2G			
Head	Left Cheek	0.077	0.141	0.218	N/A	N/A
	Left Tilt 15 Degree	0.034	0.058	0.092	N/A	N/A
	Right Cheek	0.072	0.144	0.217	N/A	N/A
	Right Tilt 15 Degree	0.031	0.064	0.095	N/A	N/A
Body-Worn	Front Side	0.407	0.138	0.546	N/A	N/A
	Back Side	0.927	0.056	0.983	N/A	N/A
Hotspot	Front Side	0.407	0.138	0.546	N/A	N/A
	Back Side	0.927	0.056	0.983	N/A	N/A
	Left Side	0.505	N/A	0.505	N/A	N/A
	Right Side	0.667	0.092	0.758	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	1.155	N/A	1.155	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM1900 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 2	WLAN 5.2G			
Head	Left Cheek	0.408	0.141	0.549	N/A	N/A
	Left Tilt 15 Degree	0.202	0.058	0.260	N/A	N/A
	Right Cheek	0.391	0.144	0.535	N/A	N/A
	Right Tilt 15 Degree	0.193	0.064	0.256	N/A	N/A
Body-Worn	Front Side	0.440	0.138	0.579	N/A	N/A

	Back Side	0.691	0.056	0.747	N/A	N/A
Hotspot	Front Side	0.440	0.138	0.579	N/A	N/A
	Back Side	0.691	0.056	0.747	N/A	N/A
	Left Side	0.427	N/A	0.427	N/A	N/A
	Right Side	0.390	0.092	0.482	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	0.380	N/A	0.380	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 2 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 4	WLAN 5.2G			
Head	Left Cheek	0.493	0.141	0.633	N/A	N/A
	Left Tilt 15 Degree	0.249	0.058	0.307	N/A	N/A
	Right Cheek	0.437	0.144	0.581	N/A	N/A
	Right Tilt 15 Degree	0.243	0.064	0.307	N/A	N/A
Body-Worn	Front Side	0.696	0.138	0.835	N/A	N/A
	Back Side	1.128	0.056	1.184	N/A	N/A
Hotspot	Front Side	0.696	0.138	0.835	N/A	N/A
	Back Side	1.128	0.056	1.184	N/A	N/A
	Left Side	0.535	N/A	0.535	N/A	N/A
	Right Side	0.534	0.092	0.626	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	0.733	N/A	0.733	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 4 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 5	WLAN 5.2G			
Head	Left Cheek	0.180	0.141	0.321	N/A	N/A
	Left Tilt 15 Degree	0.046	0.058	0.104	N/A	N/A
	Right Cheek	0.178	0.144	0.322	N/A	N/A
	Right Tilt 15 Degree	0.045	0.064	0.109	N/A	N/A
Body-Worn	Front Side	0.207	0.138	0.346	N/A	N/A
	Back Side	0.324	0.056	0.379	N/A	N/A
Hotspot	Front Side	0.207	0.138	0.346	N/A	N/A
	Back Side	0.324	0.056	0.379	N/A	N/A
	Left Side	0.262	N/A	0.262	N/A	N/A
	Right Side	0.284	0.092	0.376	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A

	Bottom Side	0.297	N/A	0.297	N/A	N/A
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NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 5 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 4	WLAN 5.2G			
Head	Left Cheek	0.039	0.141	0.180	N/A	N/A
	Left Tilt 15 Degree	0.018	0.058	0.076	N/A	N/A
	Right Cheek	0.036	0.144	0.180	N/A	N/A
	Right Tilt 15 Degree	0.017	0.064	0.081	N/A	N/A
Body-Worn	Front Side	0.379	0.138	0.518	N/A	N/A
	Back Side	0.354	0.056	0.410	N/A	N/A
Hotspot	Front Side	0.379	0.138	0.518	N/A	N/A
	Back Side	0.354	0.056	0.410	N/A	N/A
	Left Side	0.490	N/A	0.490	N/A	N/A
	Right Side	0.417	0.092	0.509	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	0.640	N/A	0.640	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 4 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 5	WLAN 5.2G			
Head	Left Cheek	0.250	0.141	0.391	N/A	N/A
	Left Tilt 15 Degree	0.167	0.058	0.225	N/A	N/A
	Right Cheek	0.248	0.144	0.392	N/A	N/A
	Right Tilt 15 Degree	0.164	0.064	0.228	N/A	N/A
Body-Worn	Front Side	0.419	0.138	0.558	N/A	N/A
	Back Side	0.463	0.056	0.518	N/A	N/A
Hotspot	Front Side	0.419	0.138	0.558	N/A	N/A
	Back Side	0.463	0.056	0.518	N/A	N/A
	Left Side	0.352	N/A	0.352	N/A	N/A
	Right Side	0.282	0.092	0.373	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	0.392	N/A	0.392	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 5 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 7	WLAN 5.2G			
Head	Left Cheek	0.146	0.141	0.287	N/A	N/A
	Left Tilt 15 Degree	0.075	0.058	0.133	N/A	N/A

	Right Cheek	0.114	0.144	0.258	N/A	N/A
	Right Tilt 15 Degree	0.053	0.064	0.117	N/A	N/A
Body-Worn	Front Side	0.473	0.138	0.611	N/A	N/A
	Back Side	0.640	0.056	0.696	N/A	N/A
Hotspot	Front Side	0.473	0.138	0.611	N/A	N/A
	Back Side	0.640	0.056	0.696	N/A	N/A
	Left Side	0.453	N/A	0.453	N/A	N/A
	Right Side	0.416	0.092	0.507	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	0.380	N/A	0.380	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 7 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 41	WLAN 5.2G			
Head	Left Cheek	0.098	0.141	0.238	N/A	N/A
	Left Tilt 15 Degree	0.055	0.058	0.113	N/A	N/A
	Right Cheek	0.079	0.144	0.224	N/A	N/A
	Right Tilt 15 Degree	0.040	0.064	0.103	N/A	N/A
Body-Worn	Front Side	0.270	0.138	0.408	N/A	N/A
	Back Side	0.296	0.056	0.352	N/A	N/A
Hotspot	Front Side	0.270	0.138	0.408	N/A	N/A
	Back Side	0.296	0.056	0.352	N/A	N/A
	Left Side	0.250	N/A	0.250	N/A	N/A
	Right Side	0.226	0.092	0.317	N/A	N/A
	Top Side	N/A	0.070	0.070	N/A	N/A
	Bottom Side	0.203	N/A	0.203	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 41 and WLAN 5.2G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 850	WLAN 5.8G			
Head	Left Cheek	0.382	0.108	0.490	N/A	N/A
	Left Tilt 15 Degree	0.155	0.066	0.221	N/A	N/A
	Right Cheek	0.379	0.110	0.489	N/A	N/A
	Right Tilt 15 Degree	0.153	0.069	0.222	N/A	N/A
Body-Worn	Front Side	0.299	0.139	0.438	N/A	N/A
	Back Side	0.595	0.097	0.692	N/A	N/A
Hotspot	Front Side	0.299	0.139	0.438	N/A	N/A

	Back Side	0.595	0.097	0.692	N/A	N/A
	Left Side	0.375	N/A	0.375	N/A	N/A
	Right Side	0.325	0.053	0.378	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.401	N/A	0.401	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM850 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		GSM 1900	WLAN 5.8G			
Head	Left Cheek	0.077	0.108	0.185	N/A	N/A
	Left Tilt 15 Degree	0.034	0.066	0.100	N/A	N/A
	Right Cheek	0.072	0.110	0.182	N/A	N/A
	Right Tilt 15 Degree	0.031	0.069	0.100	N/A	N/A
Body-Worn	Front Side	0.407	0.139	0.546	N/A	N/A
	Back Side	0.927	0.097	1.024	N/A	N/A
Hotspot	Front Side	0.407	0.139	0.546	N/A	N/A
	Back Side	0.927	0.097	1.024	N/A	N/A
	Left Side	0.505	N/A	0.505	N/A	N/A
	Right Side	0.667	0.053	0.720	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	1.155	N/A	1.155	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of GSM1900 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 2	WLAN 5.8G			
Head	Left Cheek	0.408	0.108	0.516	N/A	N/A
	Left Tilt 15 Degree	0.202	0.066	0.268	N/A	N/A
	Right Cheek	0.391	0.110	0.501	N/A	N/A
	Right Tilt 15 Degree	0.193	0.069	0.261	N/A	N/A
Body-Worn	Front Side	0.440	0.139	0.579	N/A	N/A
	Back Side	0.691	0.097	0.788	N/A	N/A
Hotspot	Front Side	0.440	0.139	0.579	N/A	N/A
	Back Side	0.691	0.097	0.788	N/A	N/A
	Left Side	0.427	N/A	0.427	N/A	N/A
	Right Side	0.390	0.053	0.444	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.380	N/A	0.380	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 2 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 4	WLAN 5.8G			
Head	Left Cheek	0.493	0.108	0.601	N/A	N/A
	Left Tilt 15 Degree	0.249	0.066	0.314	N/A	N/A
	Right Cheek	0.437	0.110	0.547	N/A	N/A
	Right Tilt 15 Degree	0.243	0.069	0.312	N/A	N/A
Body-Worn	Front Side	0.696	0.139	0.835	N/A	N/A
	Back Side	1.128	0.097	1.225	N/A	N/A
Hotspot	Front Side	0.696	0.139	0.835	N/A	N/A
	Back Side	1.128	0.097	1.225	N/A	N/A
	Left Side	0.535	N/A	0.535	N/A	N/A
	Right Side	0.534	0.053	0.588	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.733	N/A	0.733	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 4 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WCDMA Band 5	WLAN 5.8G			
Head	Left Cheek	0.180	0.108	0.288	N/A	N/A
	Left Tilt 15 Degree	0.046	0.066	0.112	N/A	N/A
	Right Cheek	0.178	0.110	0.288	N/A	N/A
	Right Tilt 15 Degree	0.045	0.069	0.114	N/A	N/A
Body-Worn	Front Side	0.207	0.139	0.346	N/A	N/A
	Back Side	0.324	0.097	0.420	N/A	N/A
Hotspot	Front Side	0.207	0.139	0.346	N/A	N/A
	Back Side	0.324	0.097	0.420	N/A	N/A
	Left Side	0.262	N/A	0.262	N/A	N/A
	Right Side	0.284	0.053	0.338	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.297	N/A	0.297	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of WCDMA Band 5 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 4	WLAN 5.8G			
Head	Left Cheek	0.039	0.108	0.147	N/A	N/A
	Left Tilt 15 Degree	0.018	0.066	0.084	N/A	N/A
	Right Cheek	0.036	0.110	0.146	N/A	N/A

	Right Tilt 15 Degree	0.017	0.069	0.086	N/A	N/A
Body-Worn	Front Side	0.379	0.139	0.518	N/A	N/A
	Back Side	0.354	0.097	0.451	N/A	N/A
Hotspot	Front Side	0.379	0.139	0.518	N/A	N/A
	Back Side	0.354	0.097	0.451	N/A	N/A
	Left Side	0.490	N/A	0.490	N/A	N/A
	Right Side	0.417	0.053	0.470	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.640	N/A	0.640	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 4 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 5	WLAN 5.8G			
Head	Left Cheek	0.250	0.108	0.358	N/A	N/A
	Left Tilt 15 Degree	0.167	0.066	0.232	N/A	N/A
	Right Cheek	0.248	0.110	0.358	N/A	N/A
	Right Tilt 15 Degree	0.164	0.069	0.233	N/A	N/A
Body-Worn	Front Side	0.419	0.139	0.558	N/A	N/A
	Back Side	0.463	0.097	0.559	N/A	N/A
Hotspot	Front Side	0.419	0.139	0.558	N/A	N/A
	Back Side	0.463	0.097	0.559	N/A	N/A
	Left Side	0.352	N/A	0.352	N/A	N/A
	Right Side	0.282	0.053	0.335	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.392	N/A	0.392	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 5 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 7	WLAN 5.8G			
Head	Left Cheek	0.146	0.108	0.254	N/A	N/A
	Left Tilt 15 Degree	0.075	0.066	0.141	N/A	N/A
	Right Cheek	0.114	0.110	0.224	N/A	N/A
	Right Tilt 15 Degree	0.053	0.069	0.122	N/A	N/A
Body-Worn	Front Side	0.473	0.139	0.611	N/A	N/A
	Back Side	0.640	0.097	0.737	N/A	N/A
Hotspot	Front Side	0.473	0.139	0.611	N/A	N/A
	Back Side	0.640	0.097	0.737	N/A	N/A
	Left Side	0.453	N/A	0.453	N/A	N/A
	Right Side	0.416	0.053	0.469	N/A	N/A

	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.380	N/A	0.380	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 7 and WLAN 5.8G.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 41	WLAN 5.8G			
Head	Left Cheek	0.098	0.108	0.206	N/A	N/A
	Left Tilt 15 Degree	0.055	0.066	0.121	N/A	N/A
	Right Cheek	0.079	0.110	0.189	N/A	N/A
	Right Tilt 15 Degree	0.040	0.069	0.109	N/A	N/A
Body-Worn	Front Side	0.270	0.139	0.408	N/A	N/A
	Back Side	0.296	0.097	0.393	N/A	N/A
Hotspot	Front Side	0.270	0.139	0.408	N/A	N/A
	Back Side	0.296	0.097	0.393	N/A	N/A
	Left Side	0.250	N/A	0.250	N/A	N/A
	Right Side	0.226	0.053	0.279	N/A	N/A
	Top Side	N/A	0.065	0.065	N/A	N/A
	Bottom Side	0.203	N/A	0.203	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 41 and WLAN 5.8G.

10. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

11. Appendix B. System Check Plots

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MEASUREMENT 1

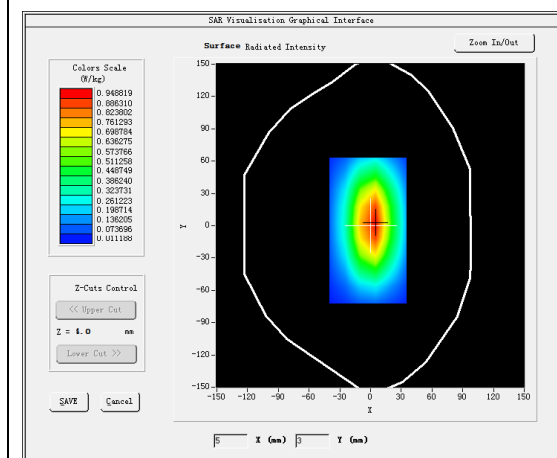
A. Experimental conditions.

<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>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

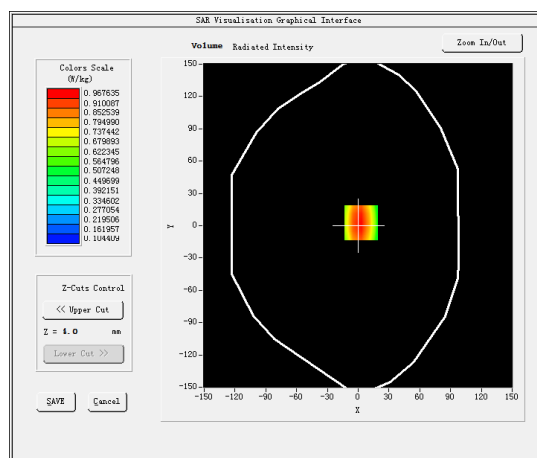
B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.705413
Relative permittivity (imaginary part)	20.041284
Conductivity (S/m)	0.932846
Variation (%)	-2.110000

SURFACE SAR



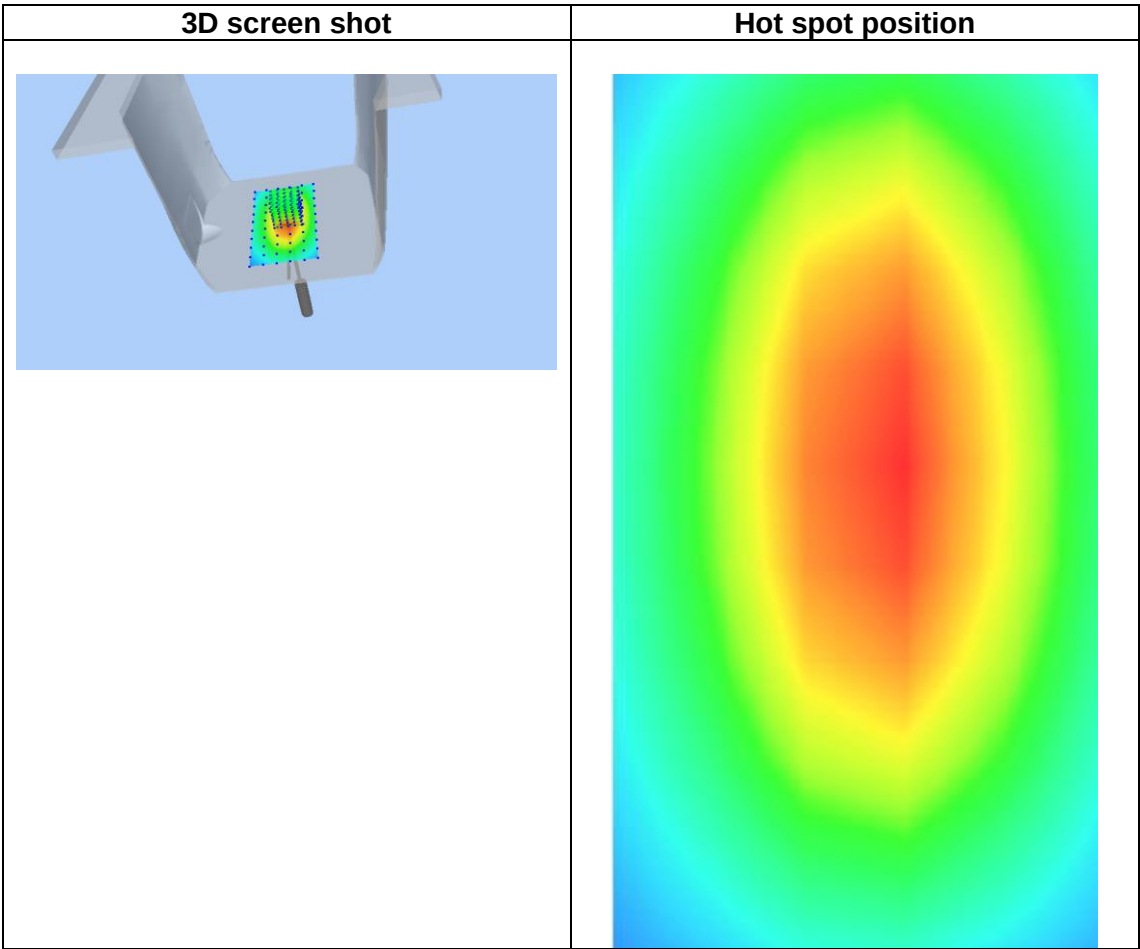
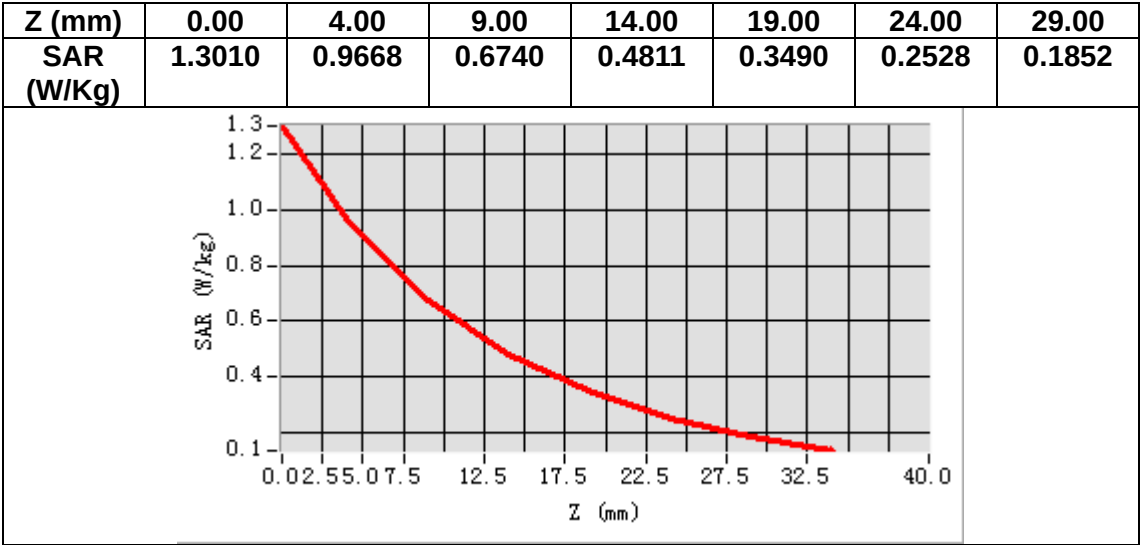
VOLUME SAR



Maximum location: X=3.00, Y=3.00

SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.614003
SAR 1g (W/Kg)	0.947835



MEASUREMENT 2

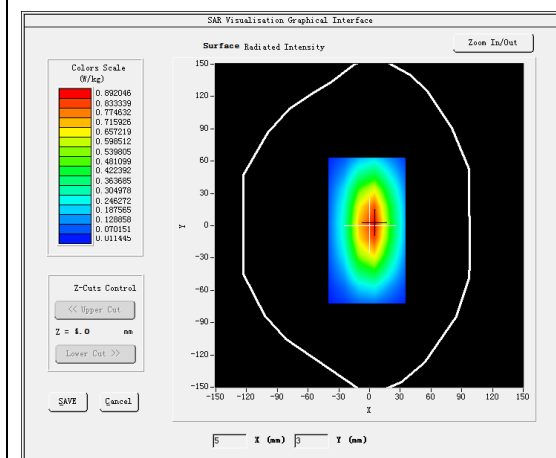
A. Experimental conditions.

<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>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

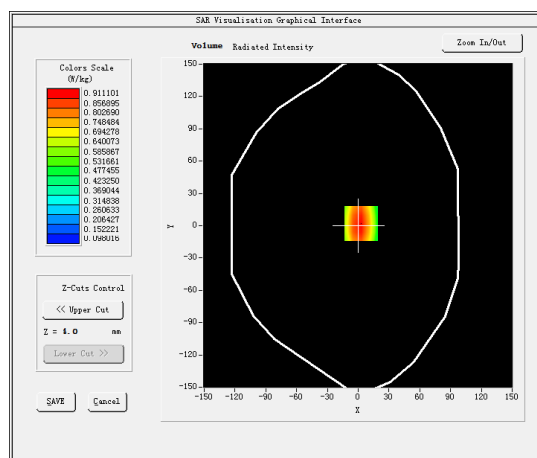
B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative permittivity (real part)	54.432145
Relative permittivity (imaginary part)	21.882942
Conductivity (S/m)	1.012461
Variation (%)	-1.820000

SURFACE SAR



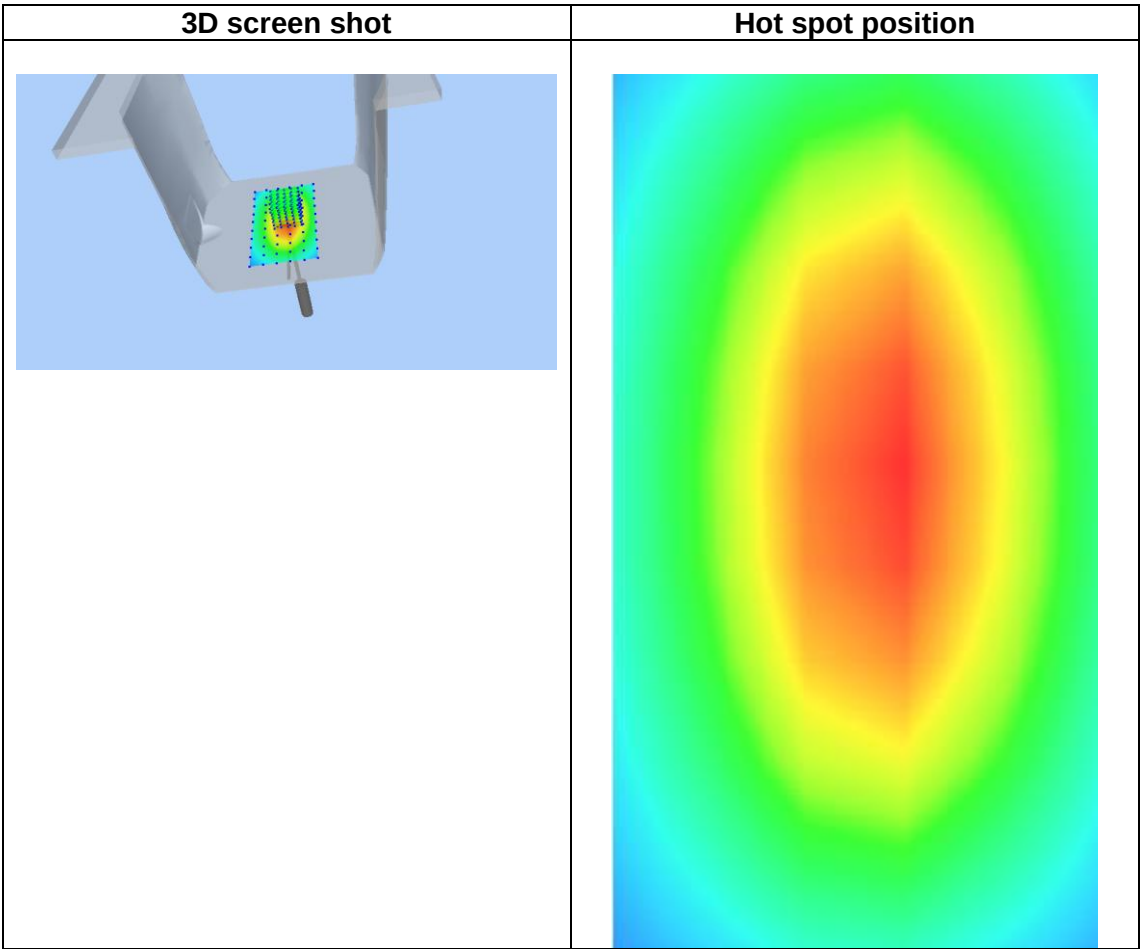
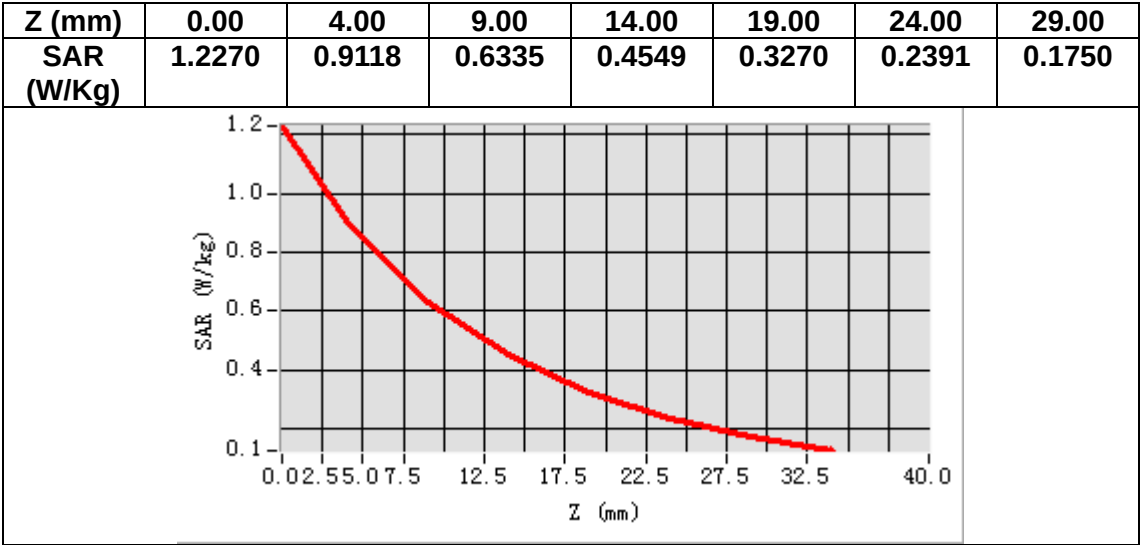
VOLUME SAR



Maximum location: X=3.00, Y=2.00

SAR Peak: 1.23 W/kg

SAR 10g (W/Kg)	0.642135
SAR 1g (W/Kg)	0.923584



MEASUREMENT 3

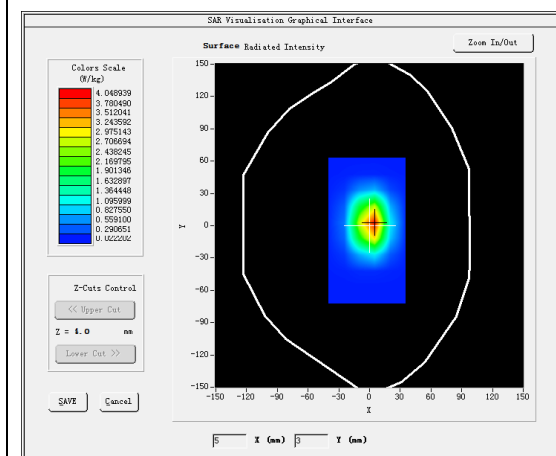
A. Experimental conditions.

<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>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

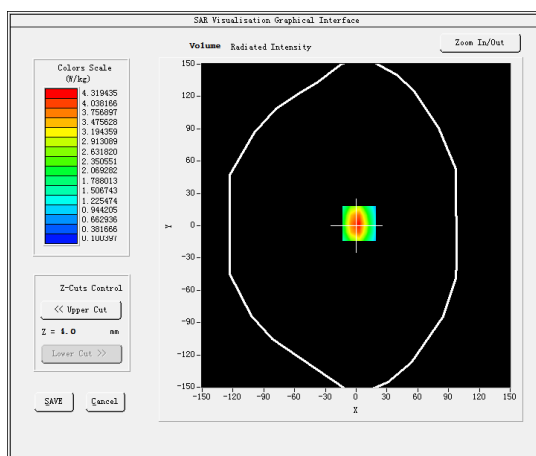
B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative permittivity (real part)	39.109438
Relative permittivity (imaginary part)	14.207418
Conductivity (S/m)	1.420724
Variation (%)	-2.130000

SURFACE SAR



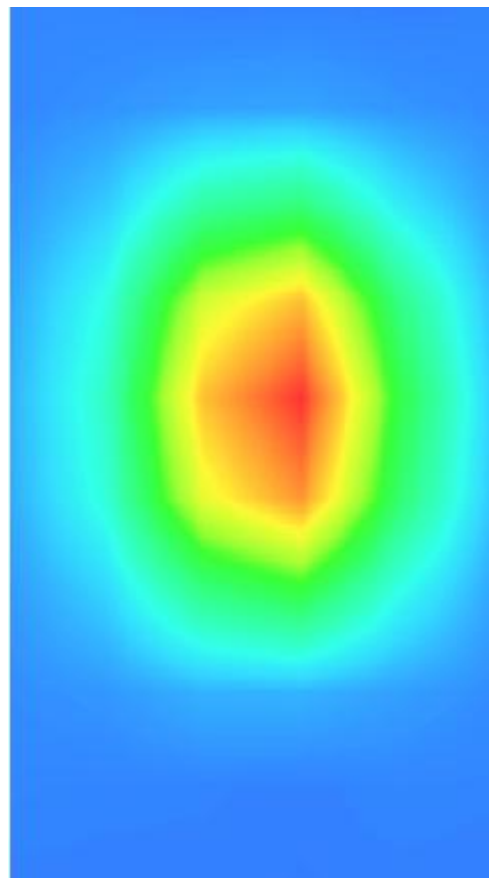
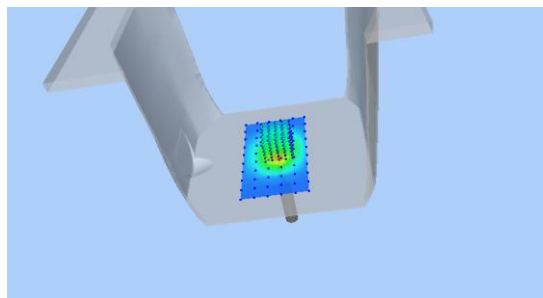
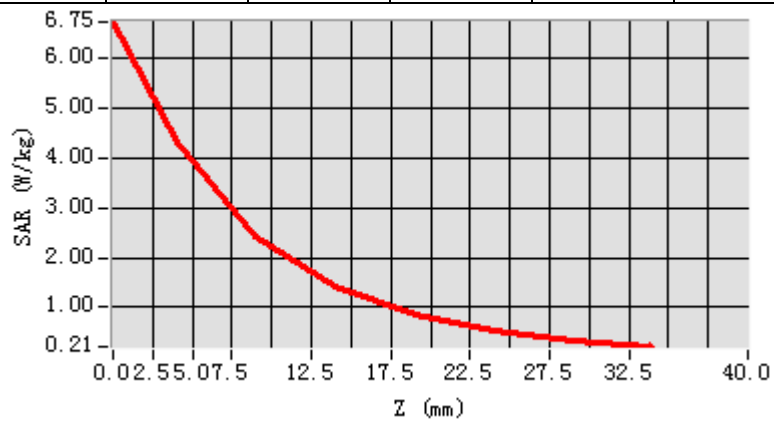
VOLUME SAR



Maximum location: X=3.00, Y=2.00

SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	2.051492
SAR 1g (W/Kg)	3.864125



MEASUREMENT 4

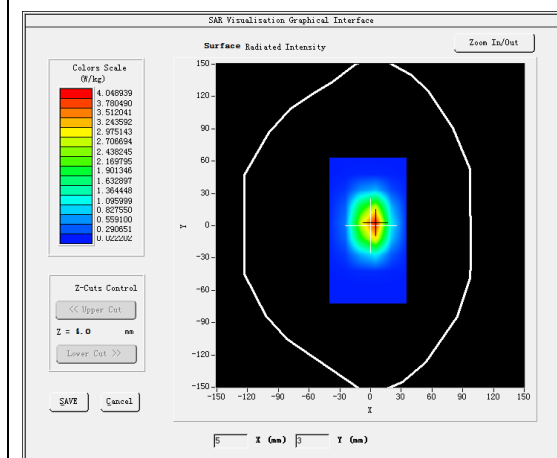
A. Experimental conditions.

<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>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

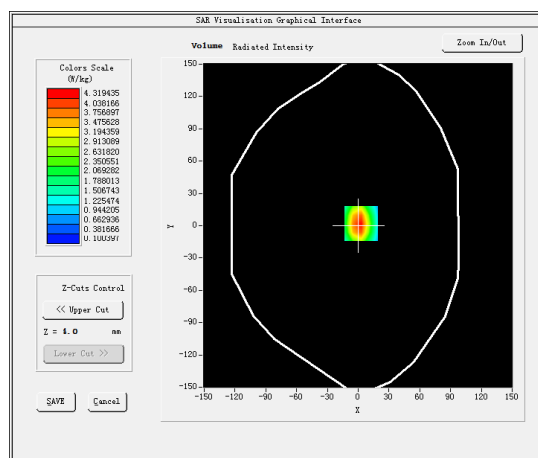
B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative permittivity (real part)	53.436528
Relative permittivity (imaginary part)	15.648452
Conductivity (S/m)	1.560612
Variation (%)	1.520000

SURFACE SAR



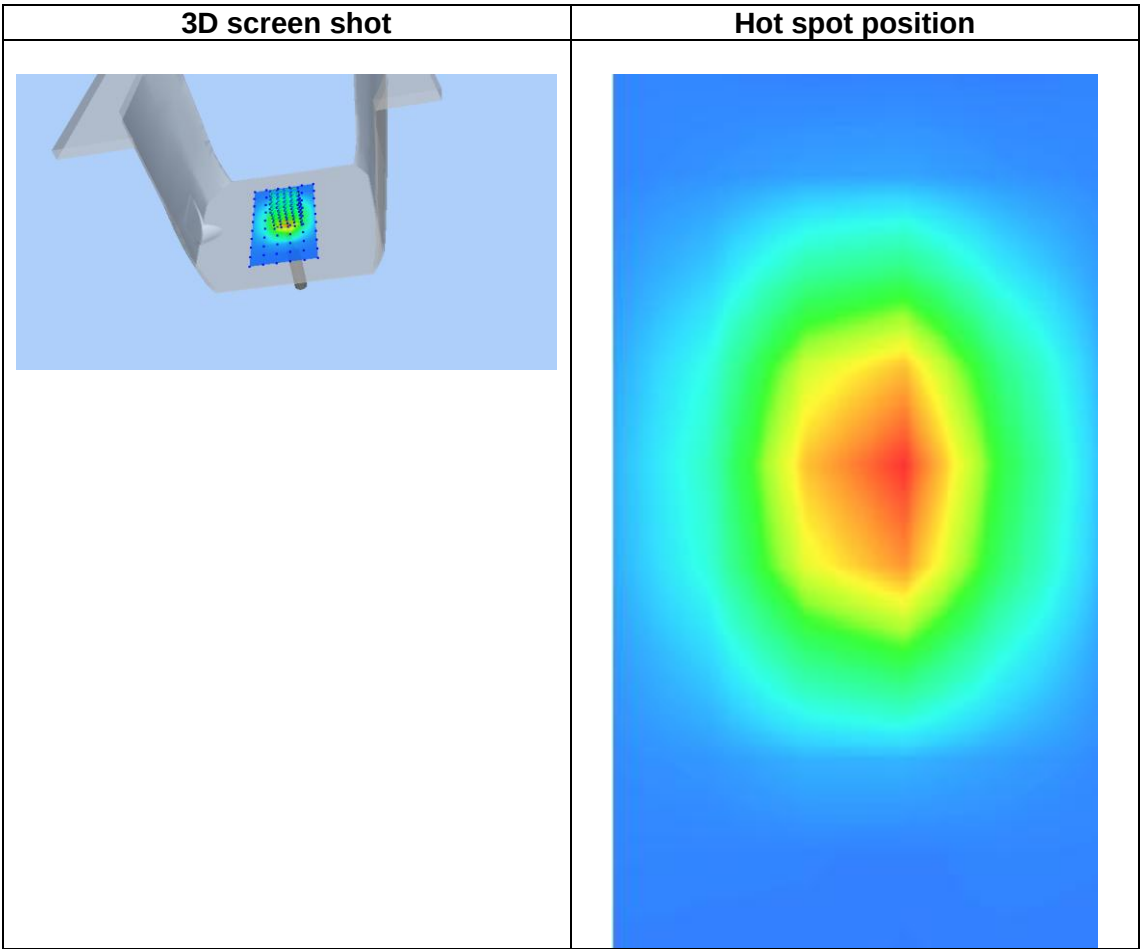
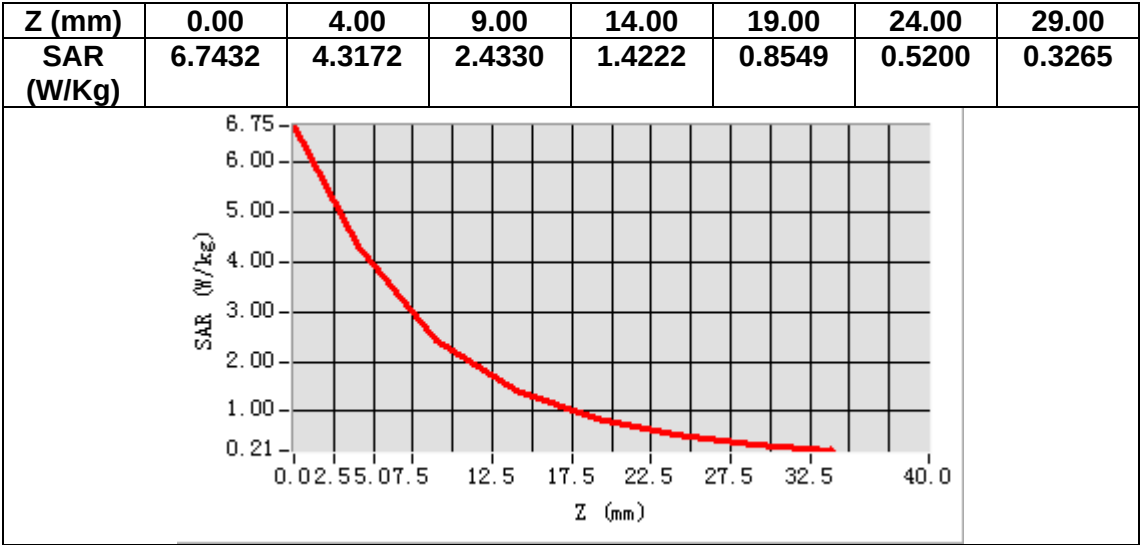
VOLUME SAR



Maximum location: X=3.00, Y=2.00

SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	2.083649
SAR 1g (W/Kg)	3.644528



MEASUREMENT 5

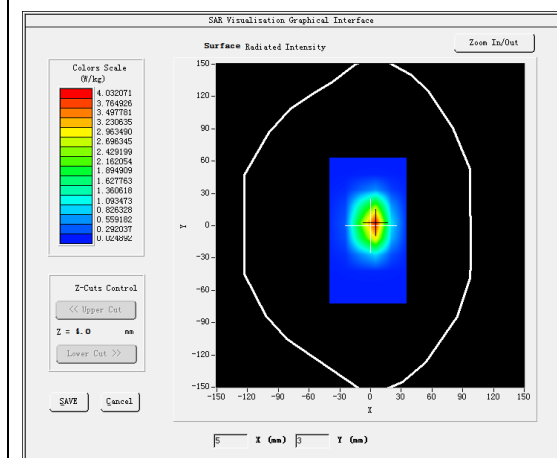
A. Experimental conditions.

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>

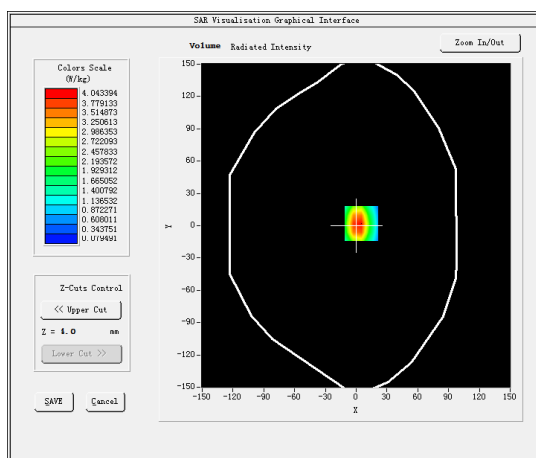
B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	41.039548
Relative permittivity (imaginary part)	13.740174
Conductivity (S/m)	1.446821
Variation (%)	-3.540000

SURFACE SAR



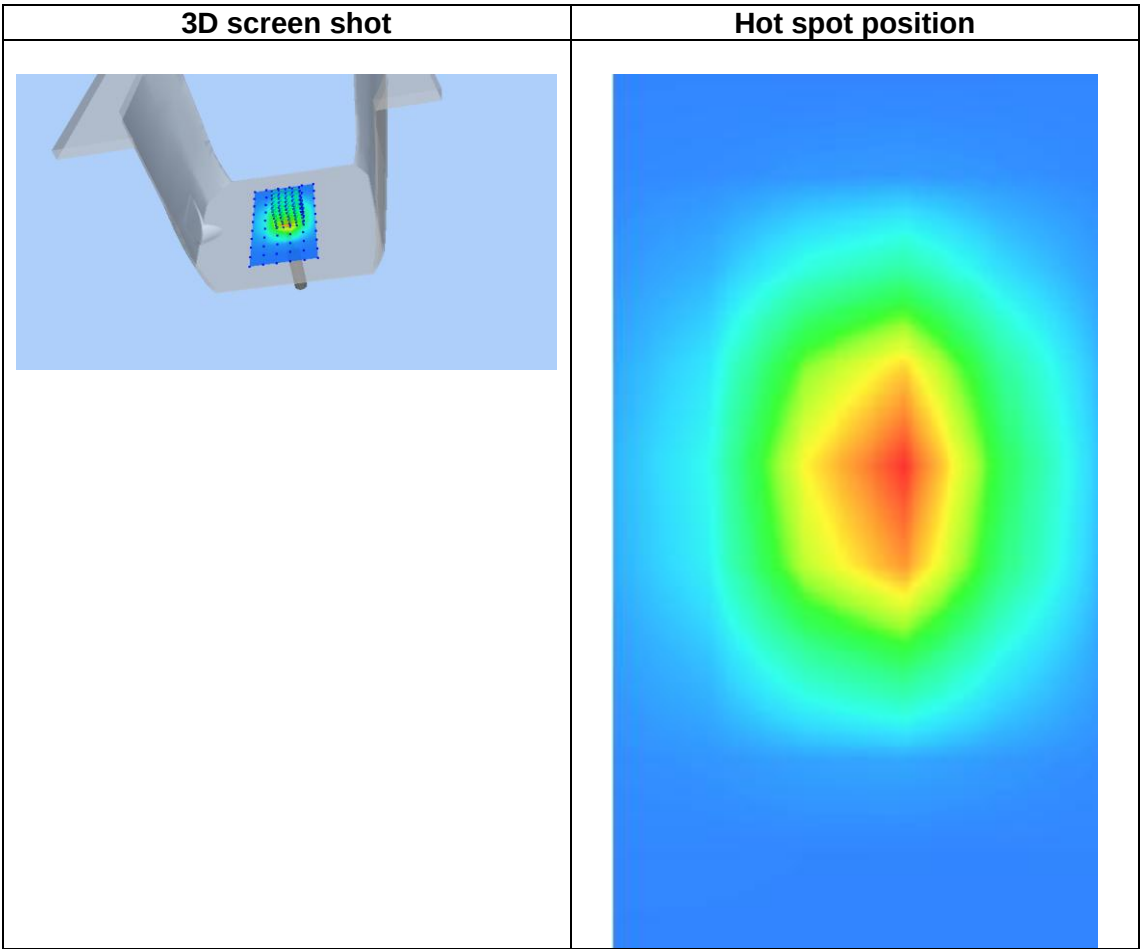
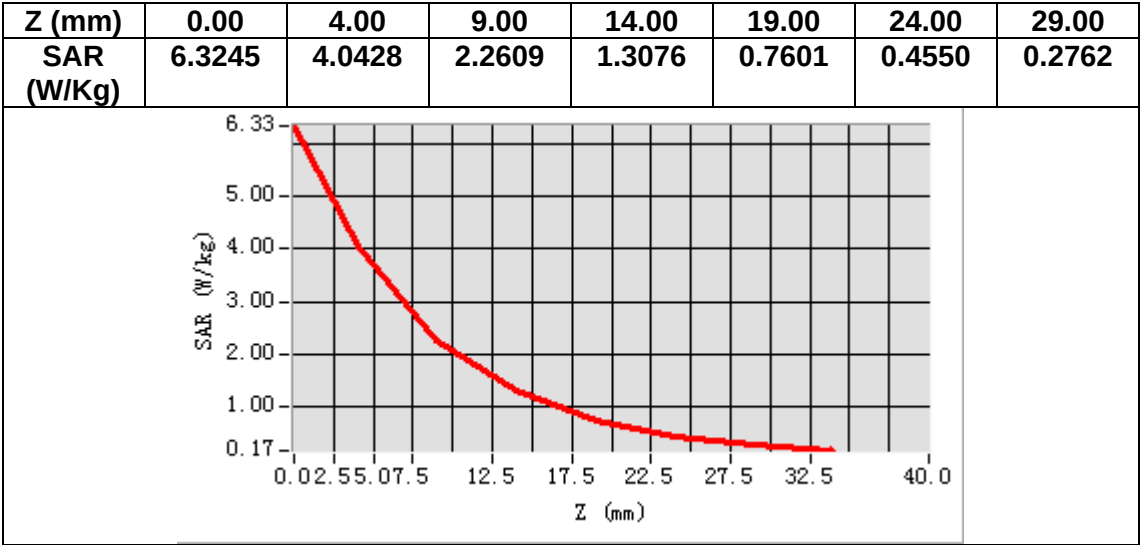
VOLUME SAR



Maximum location: X=5.00, Y=2.00

SAR Peak: 6.70 W/kg

SAR 10g (W/Kg)	2.121348
SAR 1g (W/Kg)	3.877429



MEASUREMENT 6

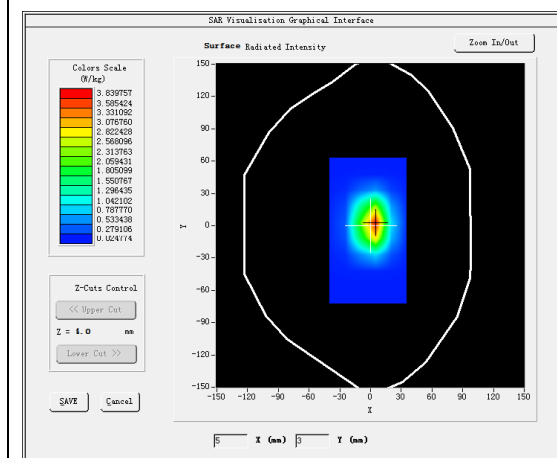
A. Experimental conditions.

<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>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

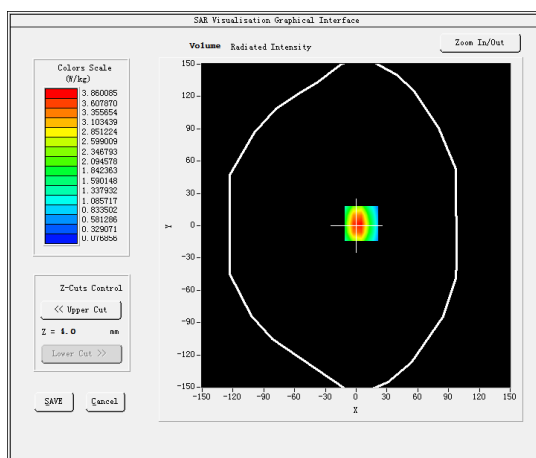
B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	52.753126
Relative permittivity (imaginary part)	14.882146
Conductivity (S/m)	1.573241
Variation (%)	2.650000

SURFACE SAR



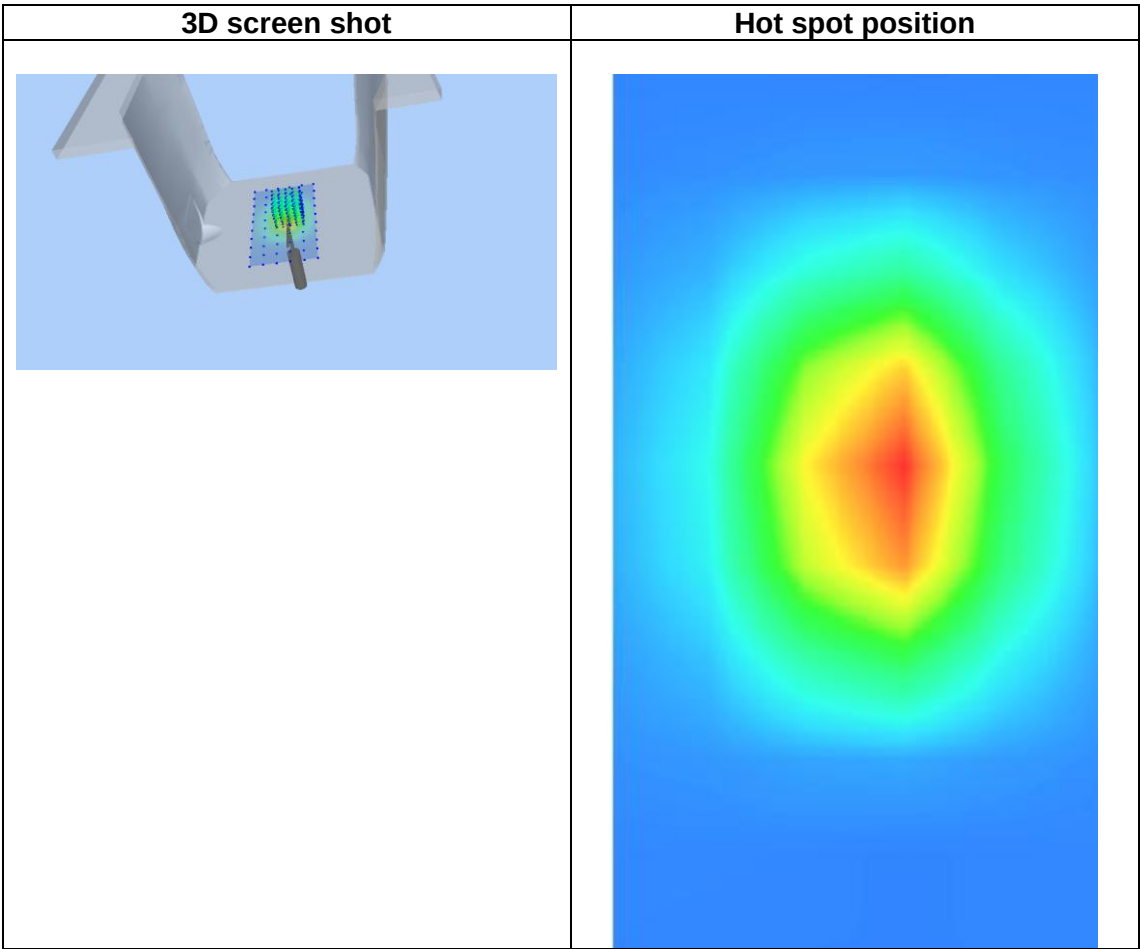
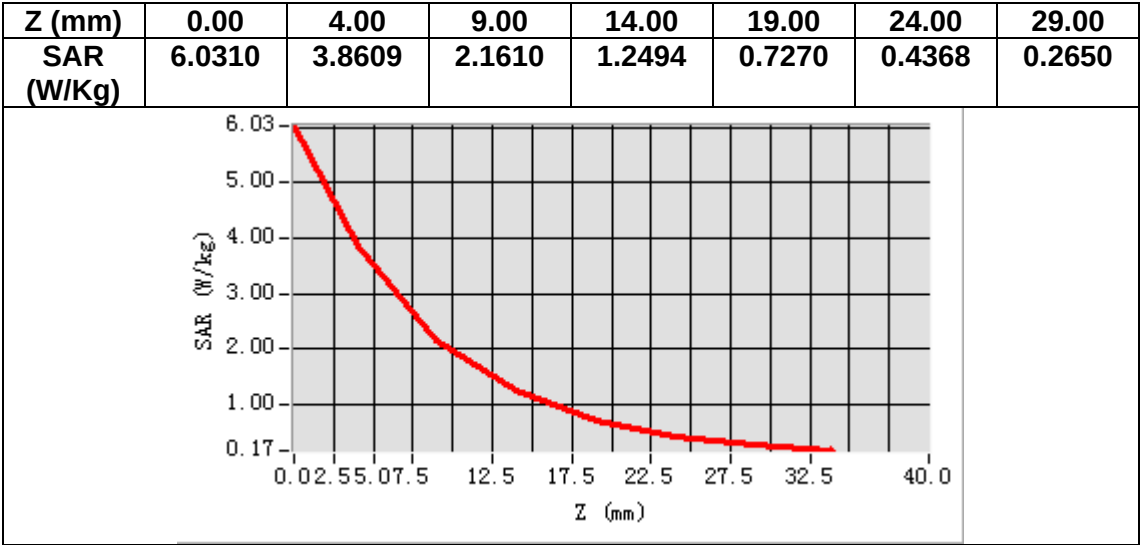
VOLUME SAR



Maximum location: X=5.00, Y=2.00

SAR Peak: 6.39 W/kg

SAR 10g (W/Kg)	2.107842
SAR 1g (W/Kg)	3.793648



MEASUREMENT 7

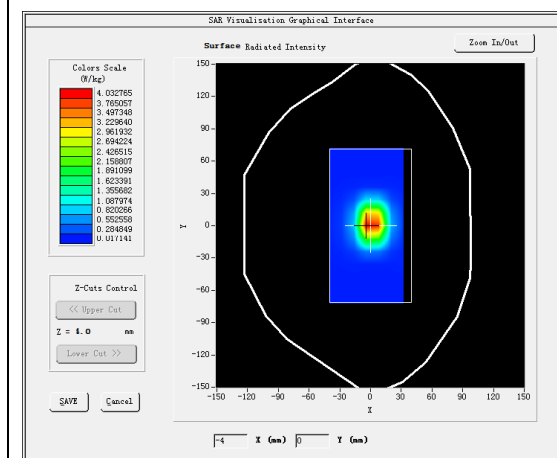
A. Experimental conditions.

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>CW2450</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>

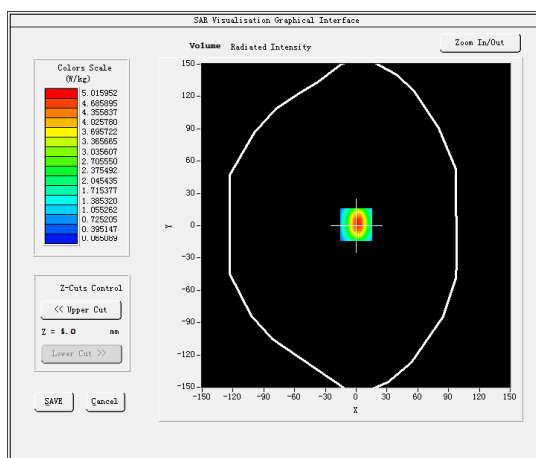
B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative permittivity (real part)	39.070542
Relative permittivity (imaginary part)	13.735217
Conductivity (S/m)	1.872846
Variation (%)	-1.220000

SURFACE SAR



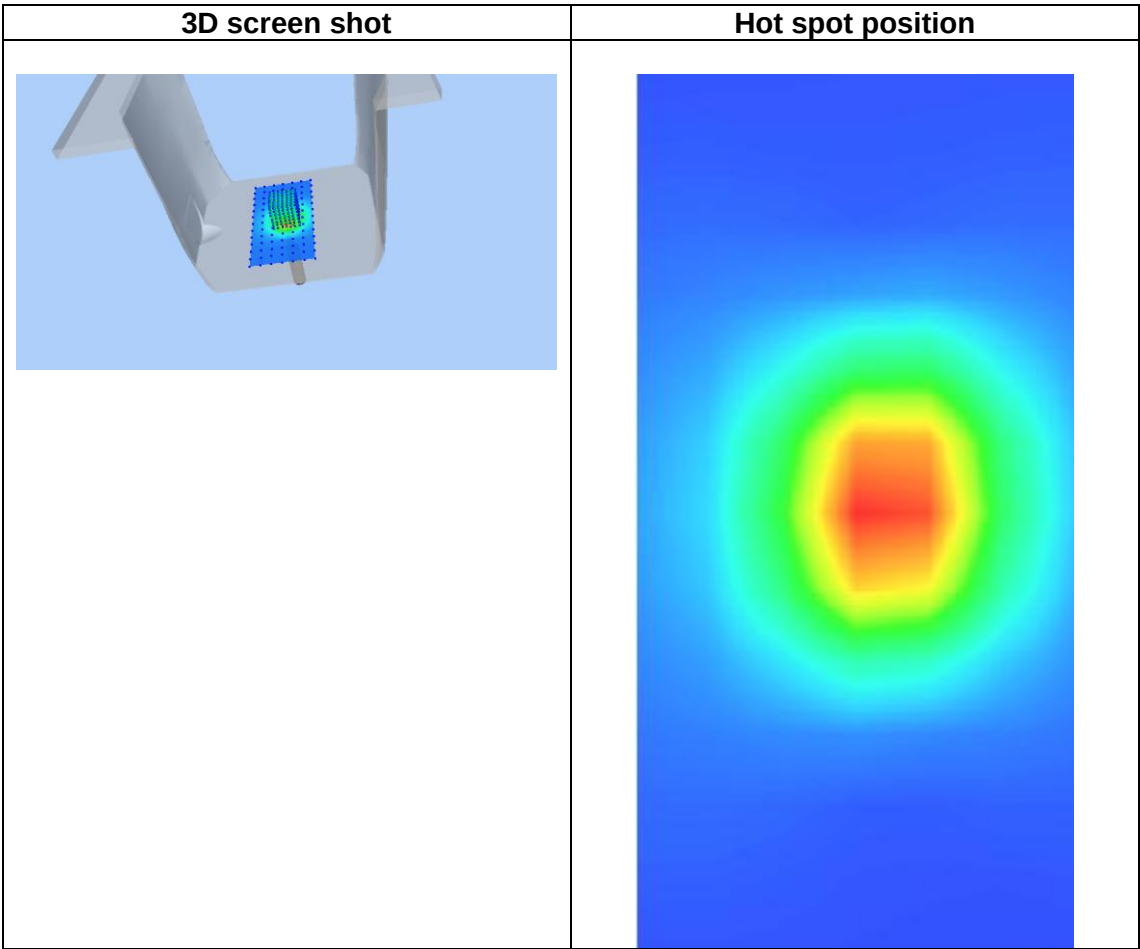
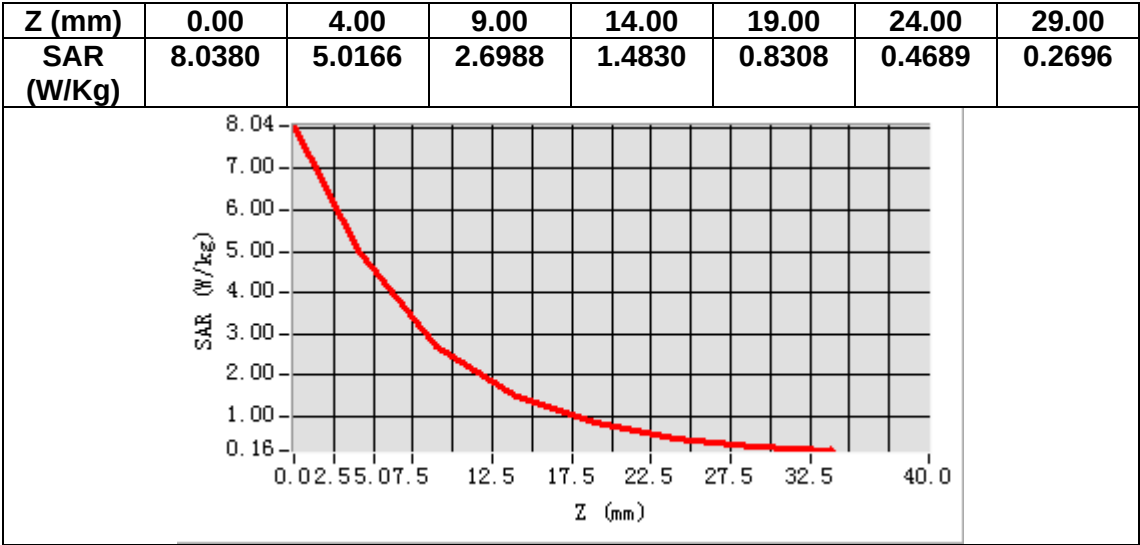
VOLUME SAR



Maximum location: X=0.00, Y=1.00

SAR Peak: 8.14 W/kg

SAR 10g (W/Kg)	2.335187
SAR 1g (W/Kg)	5.165238



MEASUREMENT 8

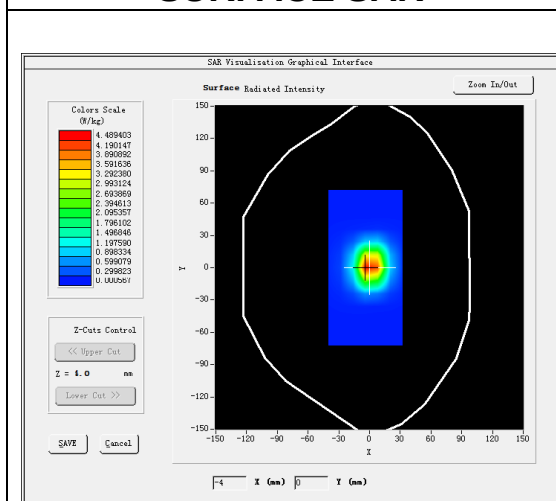
A. Experimental conditions.

<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>

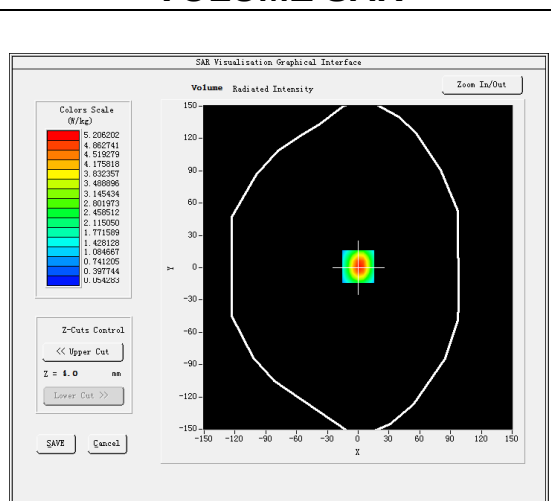
B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative permittivity (real part)	52.261284
Relative permittivity (imaginary part)	14.891528
Conductivity (S/m)	2.029436
Variation (%)	-2.810000

SURFACE SAR



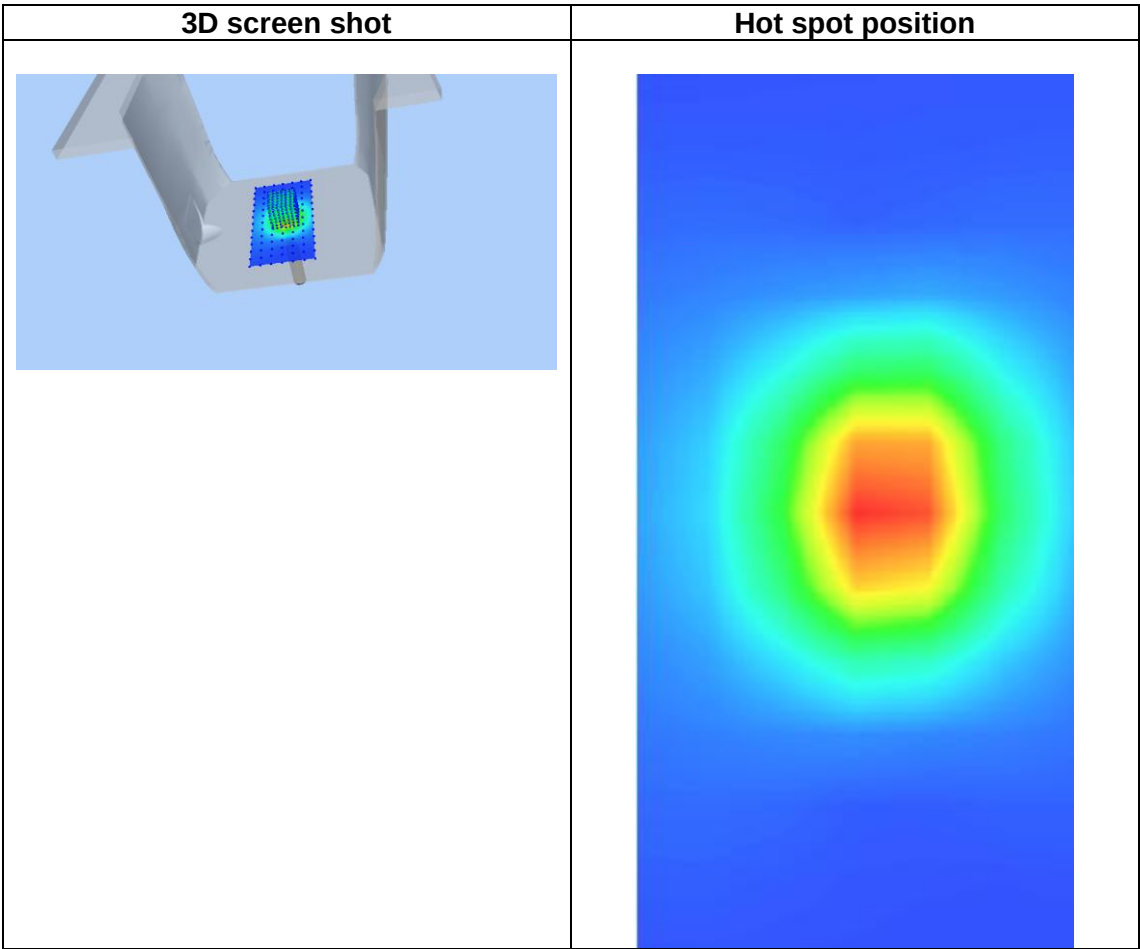
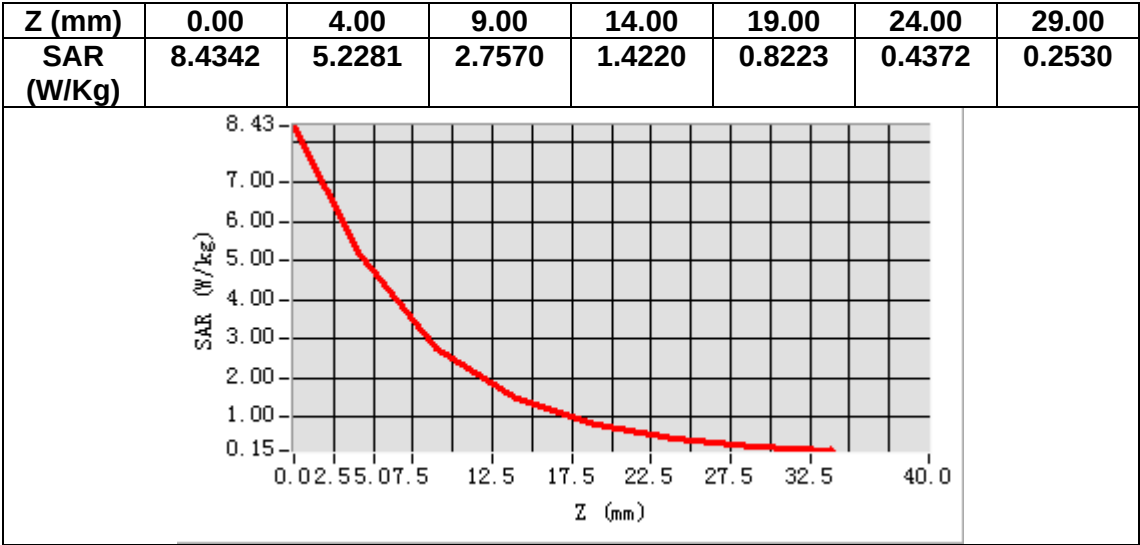
VOLUME SAR



Maximum location: X=0.00, Y=1.00

SAR Peak: 8.46 W/kg

SAR 10g (W/Kg)	2.353428
SAR 1g (W/Kg)	4.974695



MEASUREMENT 9

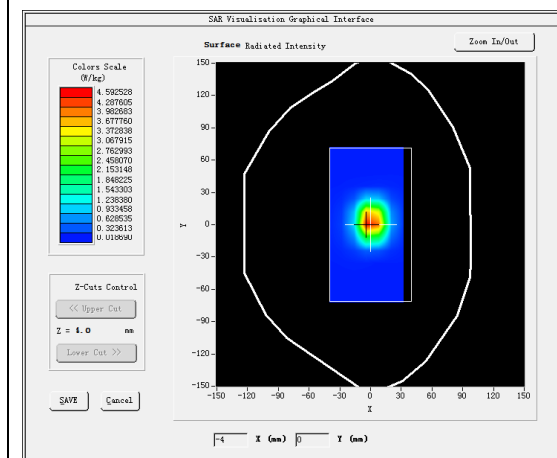
A. Experimental conditions.

<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>CW2600</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

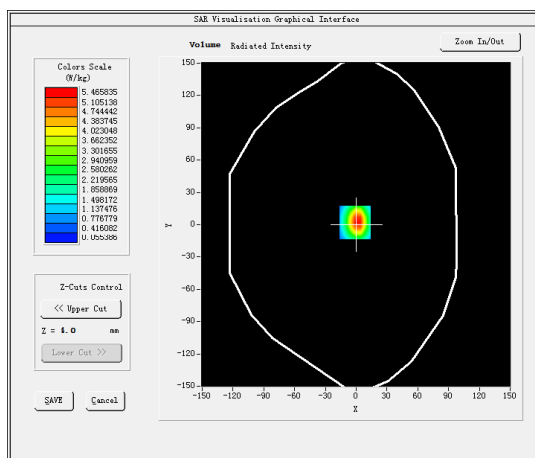
B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative permittivity (real part)	38.342641
Relative permittivity (imaginary part)	14.124512
Conductivity (S/m)	2.038052
Variation (%)	-1.940000

SURFACE SAR



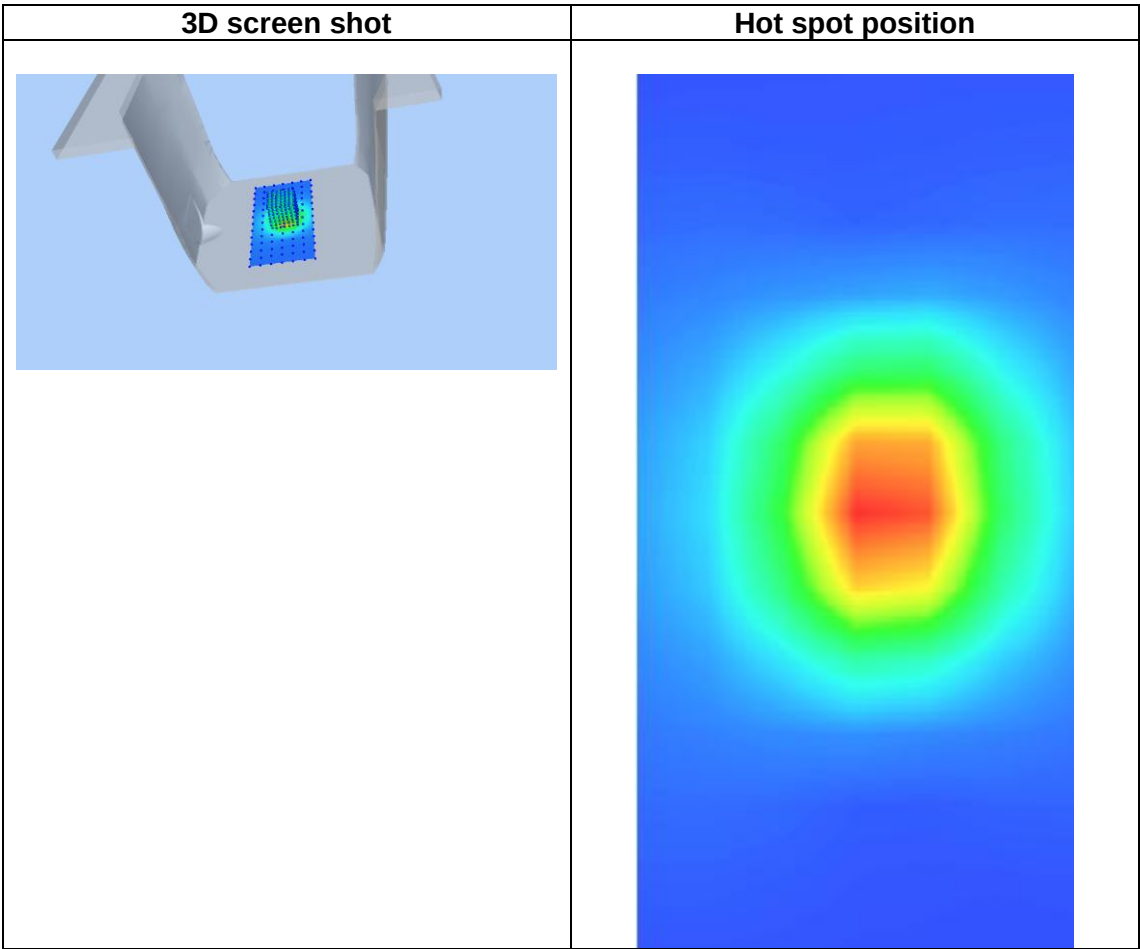
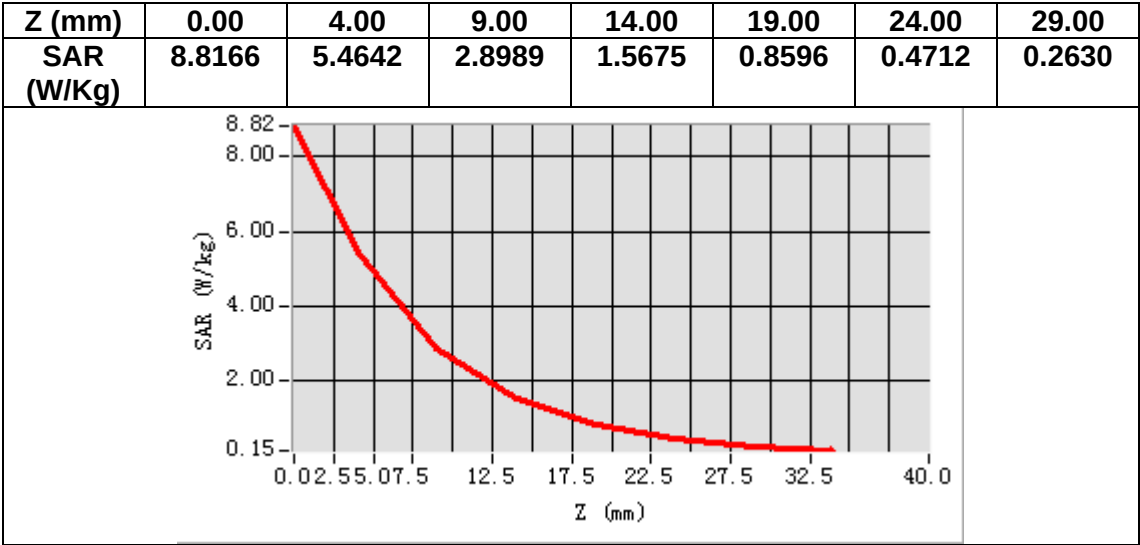
VOLUME SAR



Maximum location: X=-1.00, Y=2.00

SAR Peak: 9.07 W/kg

SAR 10g (W/Kg)	2.384126
SAR 1g (W/Kg)	5.469238



MEASUREMENT 10

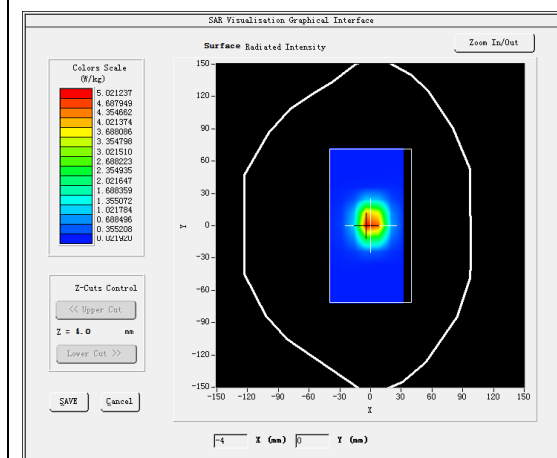
A. Experimental conditions.

<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>CW2600</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

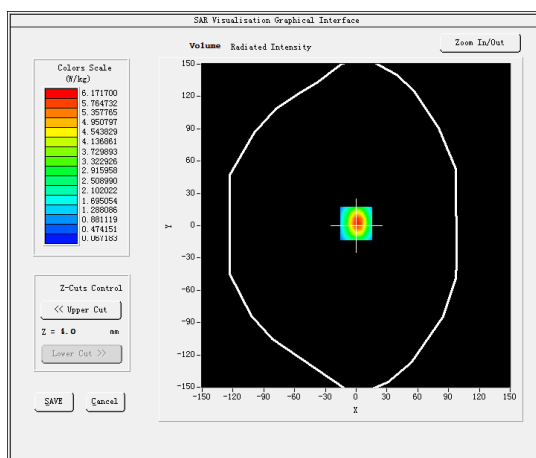
B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative permittivity (real part)	52.619527
Relative permittivity (imaginary part)	15.386193
Conductivity (S/m)	2.221428
Variation (%)	-2.430000

SURFACE SAR



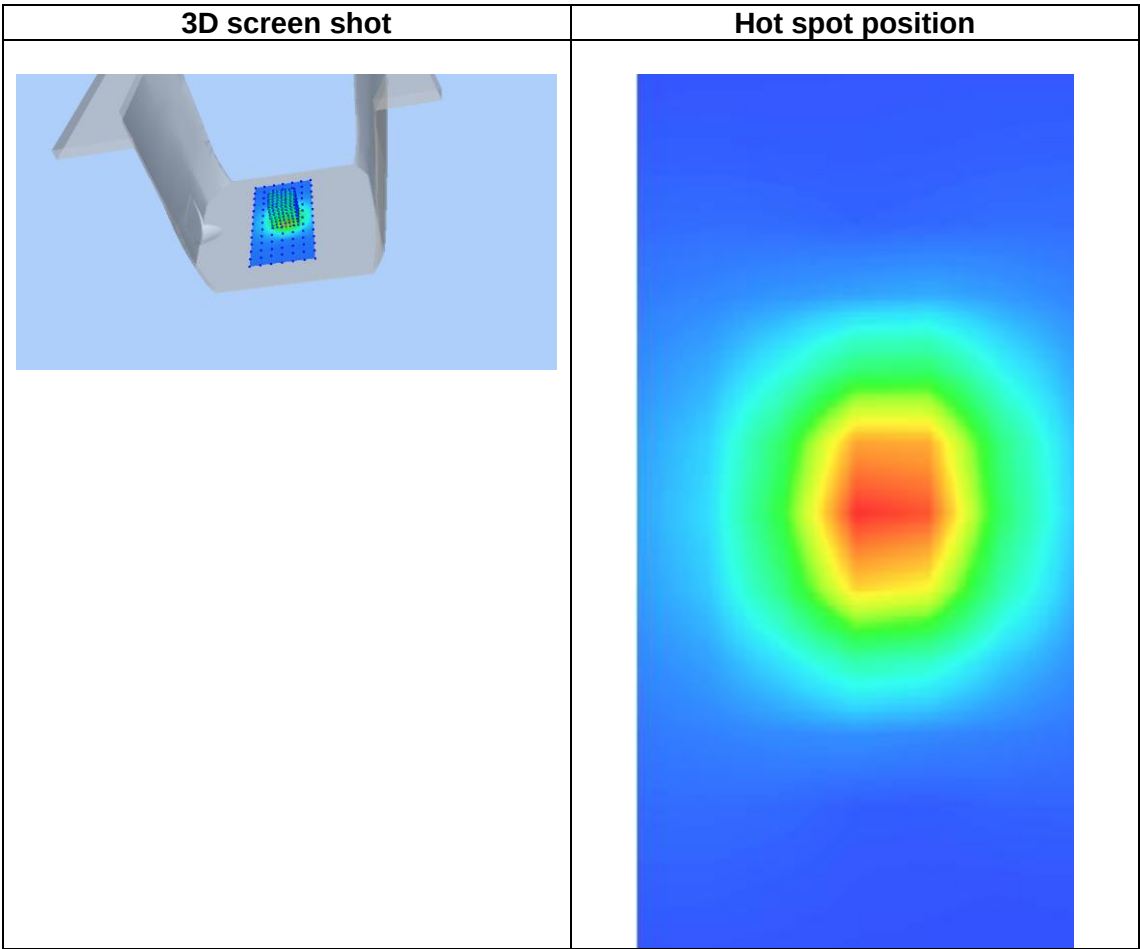
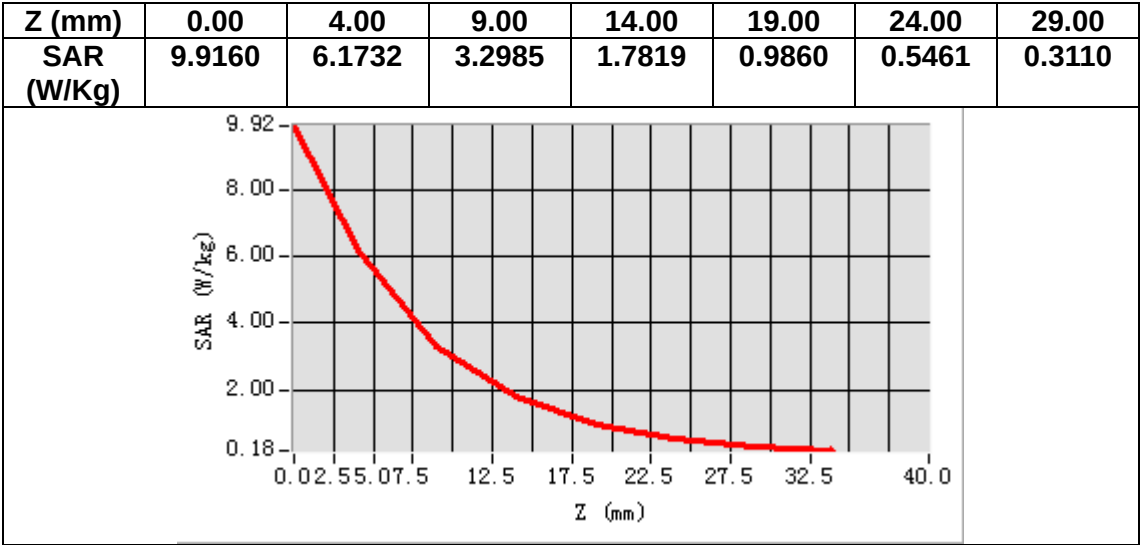
VOLUME SAR



Maximum location: X=0.00, Y=2.00

SAR Peak: 9.99 W/kg

SAR 10g (W/Kg)	2.439284
SAR 1g (W/Kg)	5.181697



MEASUREMENT 11

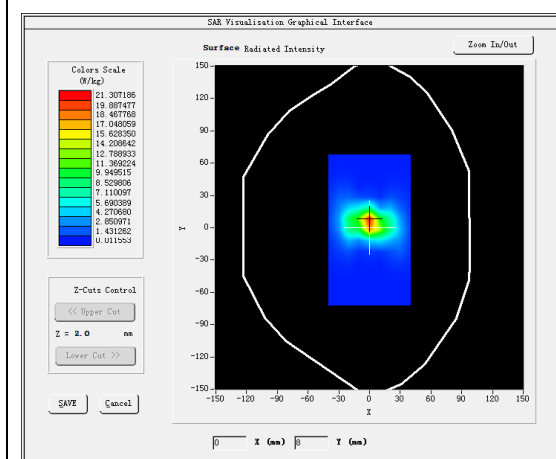
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW5200</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

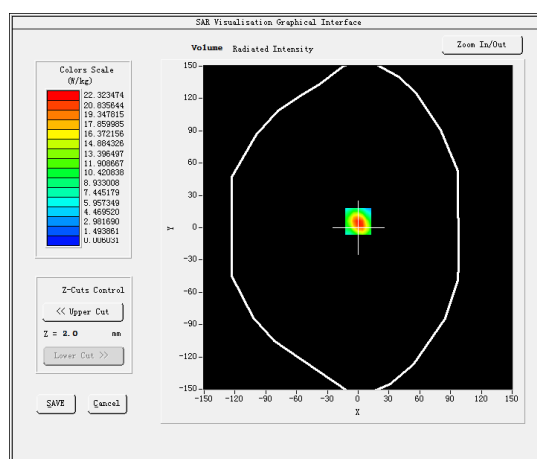
B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative permittivity (real part)	35.629462
Relative permittivity (imaginary part)	16.221687
Conductivity (S/m)	4.689462
Variation (%)	-2.340000

SURFACE SAR



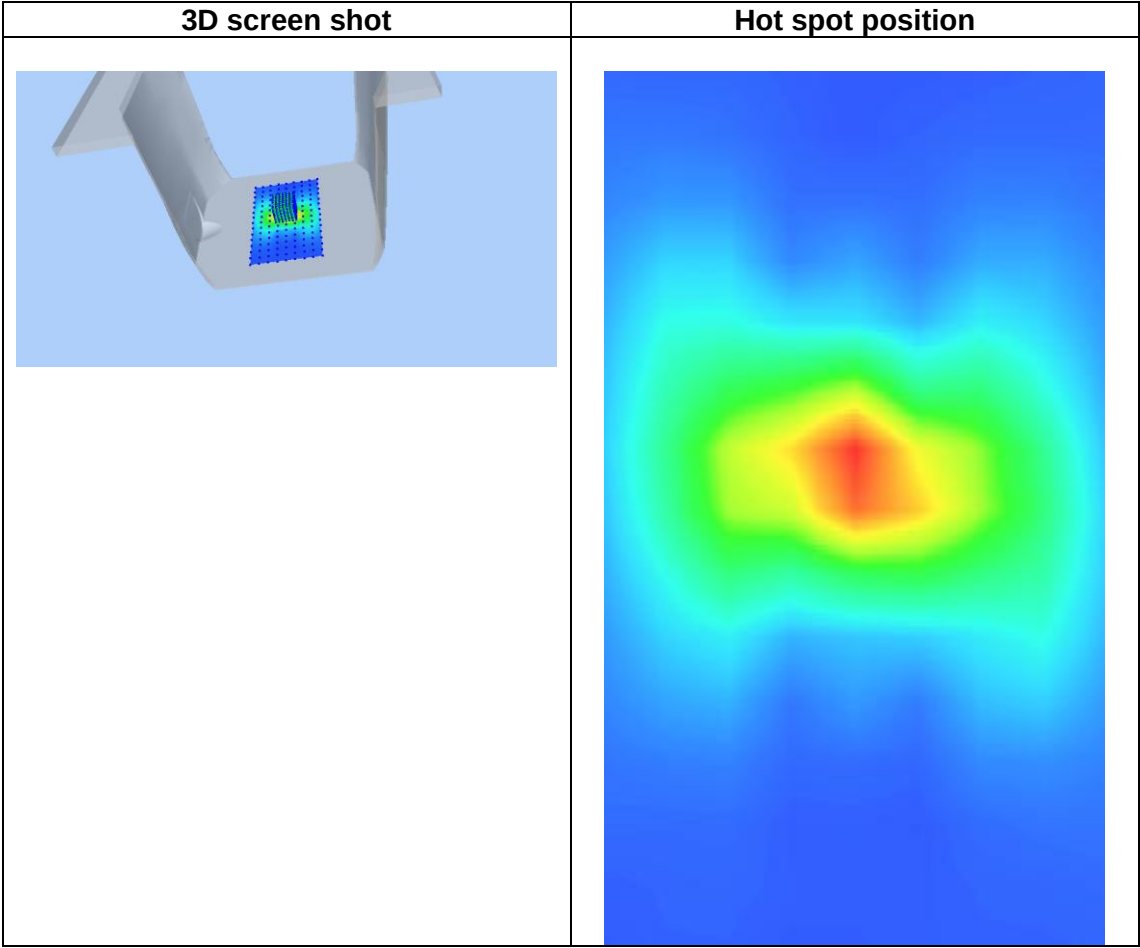
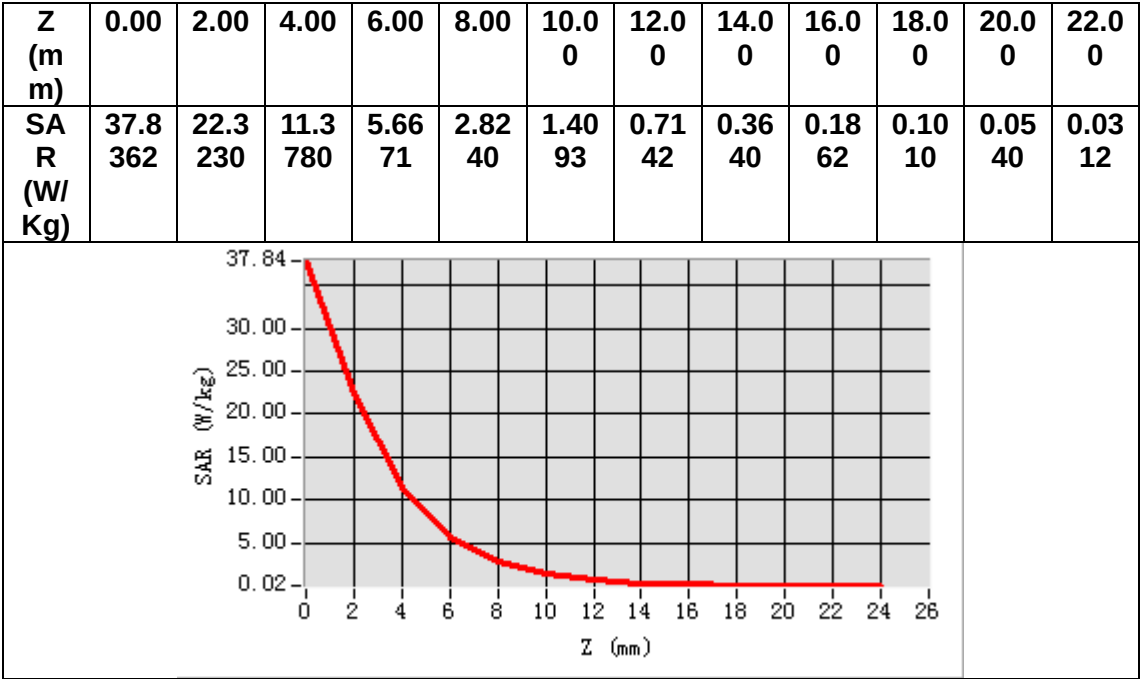
VOLUME SAR



Maximum location: X=0.00, Y=6.00

SAR Peak: 40.06 W/kg

SAR 10g (W/Kg)	5.559127
SAR 1g (W/Kg)	15.845962



MEASUREMENT 12

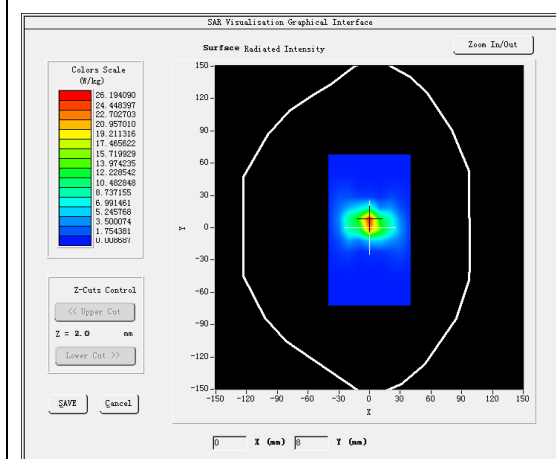
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW5200</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

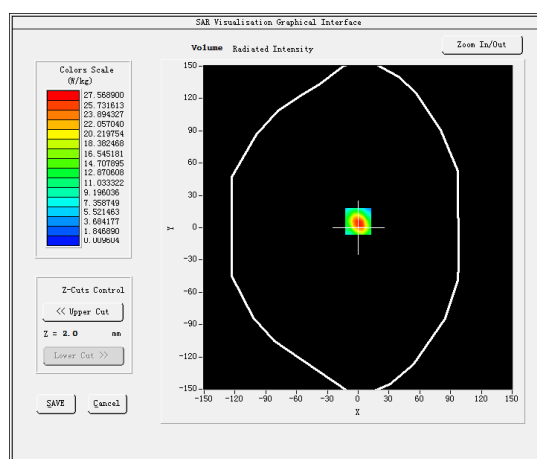
B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative permittivity (real part)	48.552943
Relative permittivity (imaginary part)	18.431648
Conductivity (S/m)	5.318864
Variation (%)	1.920000

SURFACE SAR



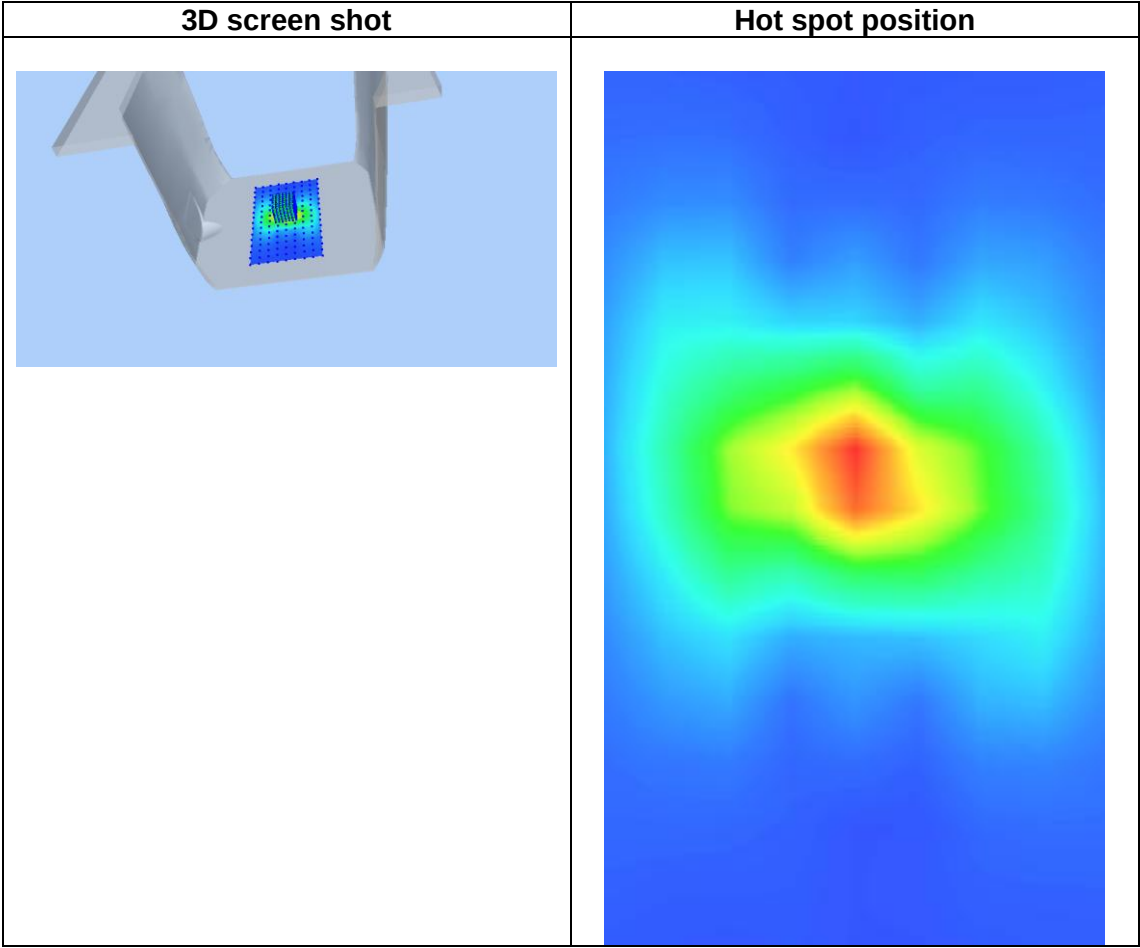
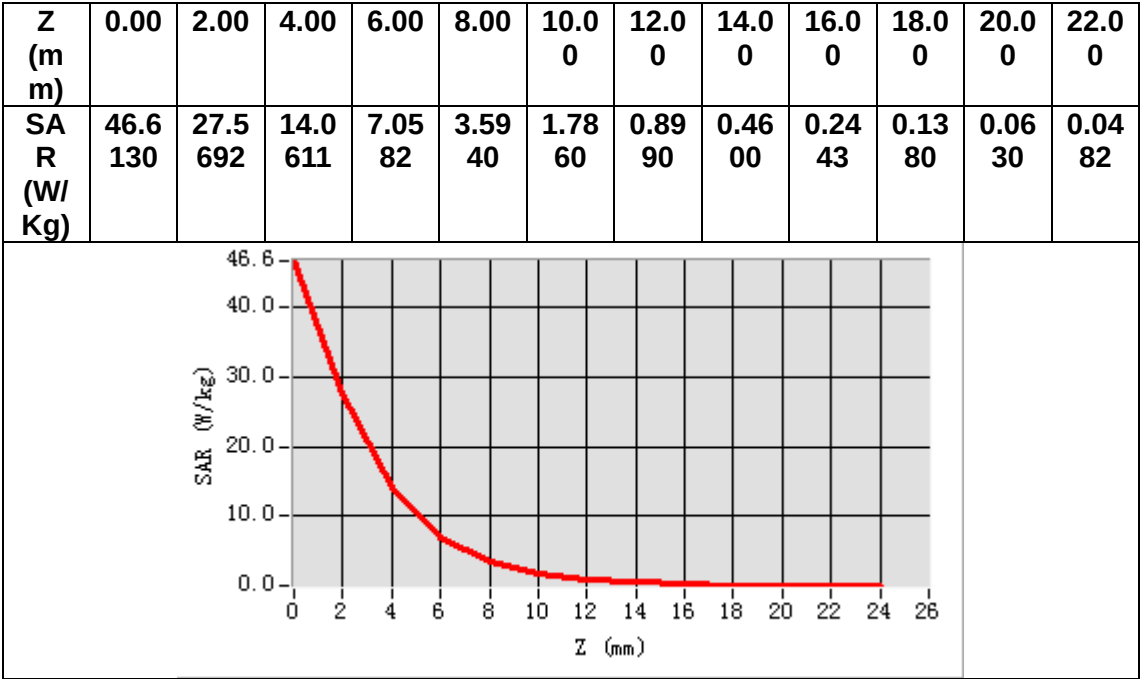
VOLUME SAR



Maximum location: X=0.00, Y=6.00

SAR Peak: 49.61 W/kg

SAR 10g (W/Kg)	5.482161
SAR 1g (W/Kg)	15.536942



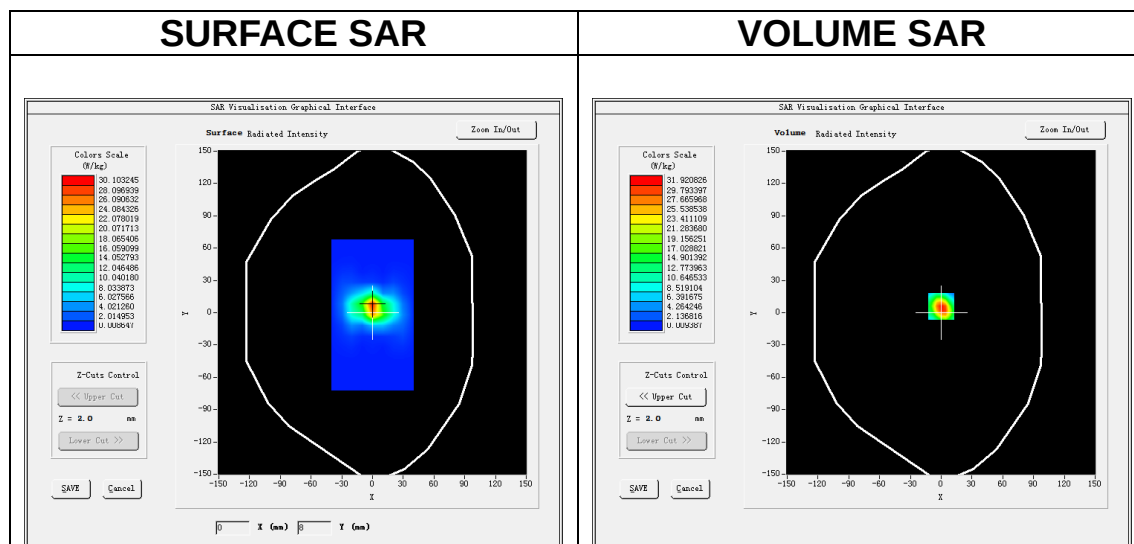
MEASUREMENT 13

A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW5800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

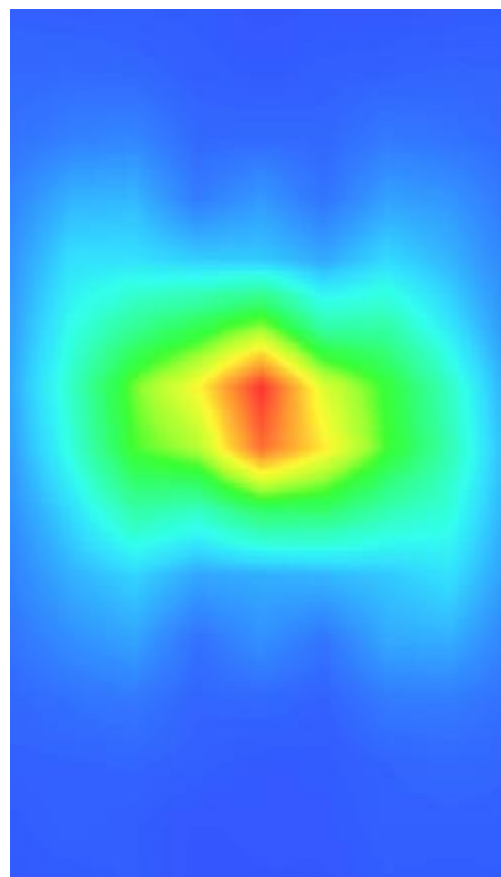
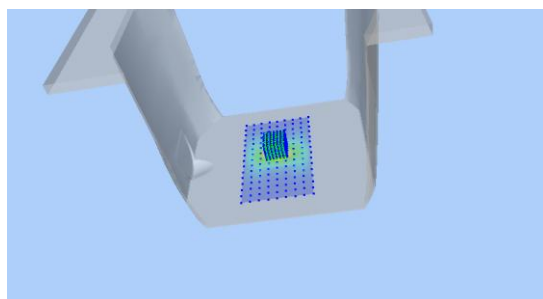
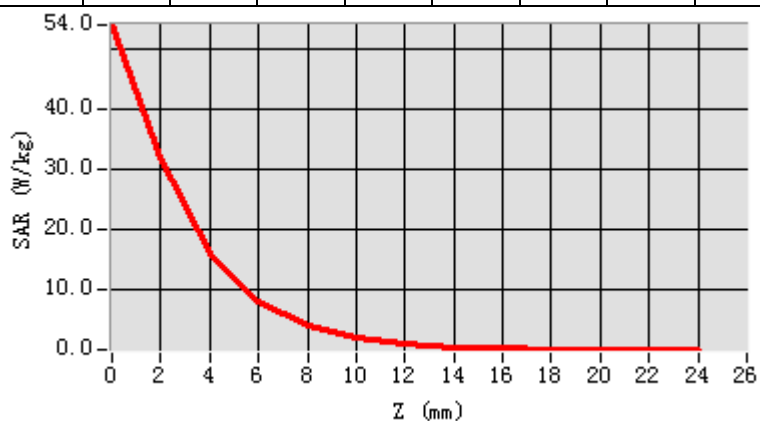
Frequency (MHz)	5800.000000
Relative permittivity (real part)	34.553648
Relative permittivity (imaginary part)	16.306524
Conductivity (S/m)	5.263184
Variation (%)	-0.810000



Maximum location: X=0.00, Y=6.00

SAR Peak: 57.37 W/kg

SAR 10g (W/Kg)	6.233694
SAR 1g (W/Kg)	18.092163



MEASUREMENT 14

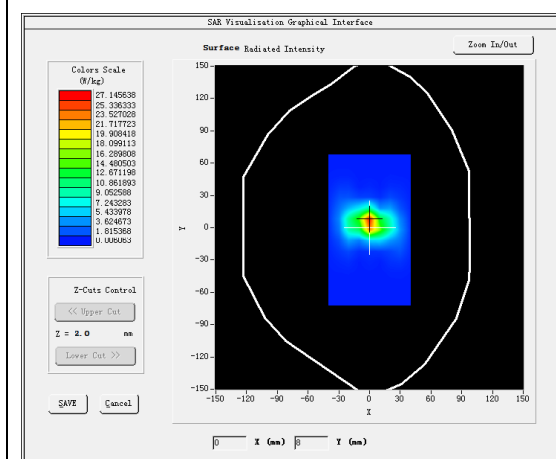
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW5800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

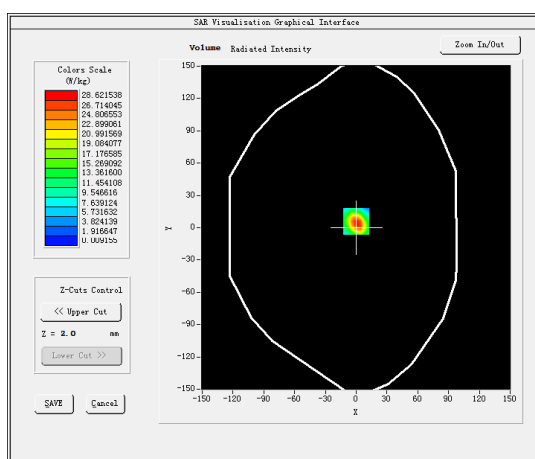
B. SAR Measurement Results

Frequency (MHz)	5800.000000
Relative permittivity (real part)	48.236492
Relative permittivity (imaginary part)	18.953628
Conductivity (S/m)	6.108246
Variation (%)	-1.240000

SURFACE SAR



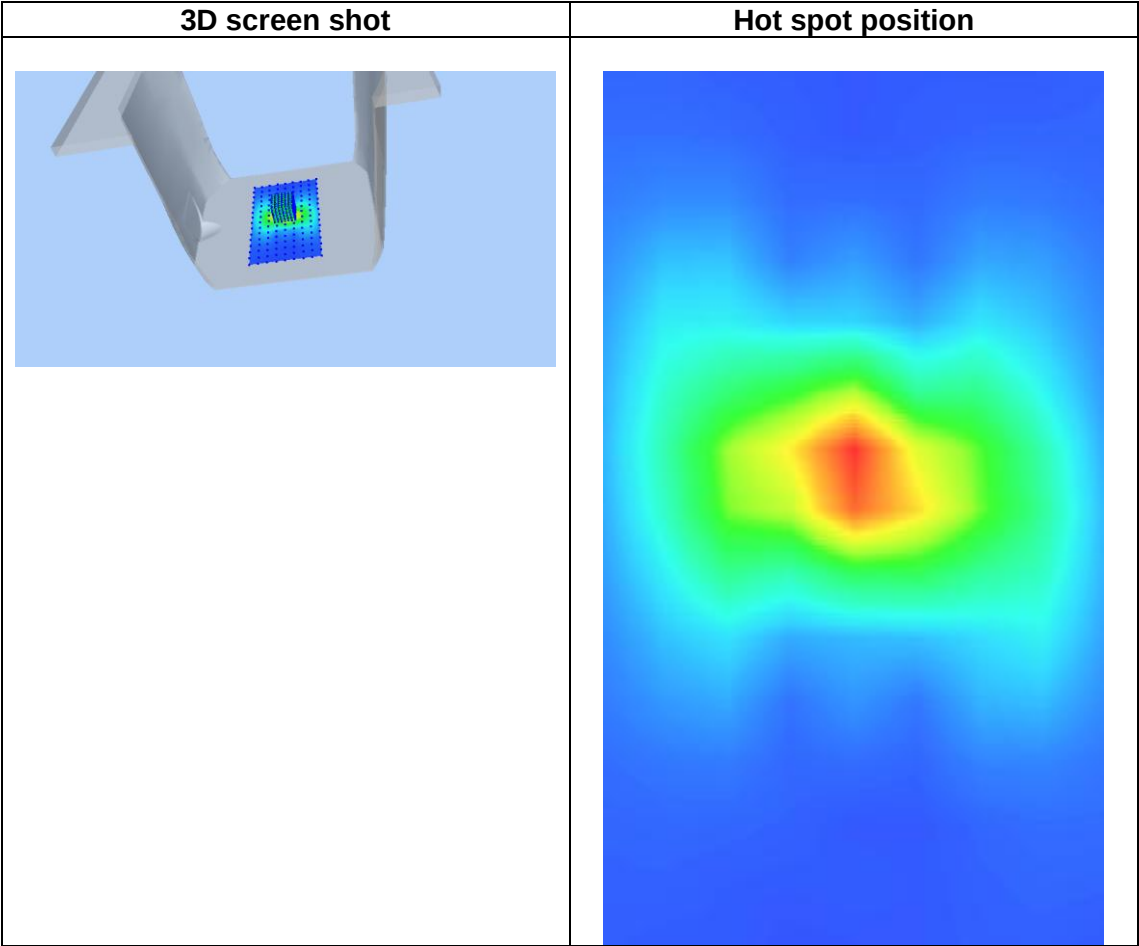
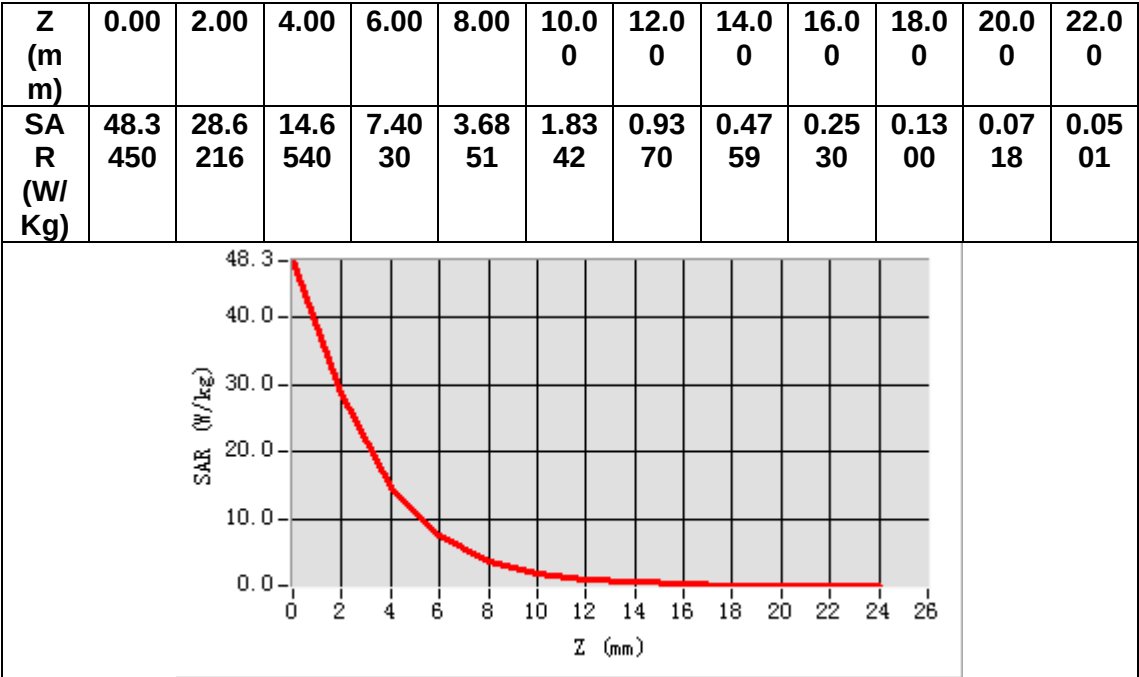
VOLUME SAR



Maximum location: X=0.00, Y=6.00

SAR Peak: 51.30 W/kg

SAR 10g (W/Kg)	5.912227
SAR 1g (W/Kg)	16.533162



12. Appendix C. Plots of High SAR Measurement

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MEASUREMENT 26 LTE Band 41 Body

MEASUREMENT 1

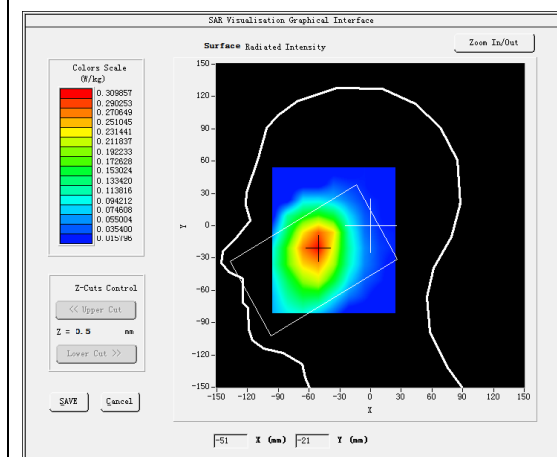
A. Experimental conditions.

<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: 4.0)</u>

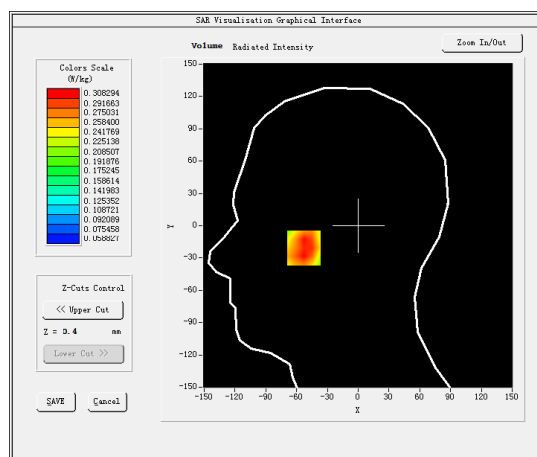
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	40.620960
Relative permittivity (imaginary part)	20.061541
Conductivity (S/m)	0.932193
Variation (%)	3.270000

SURFACE SAR



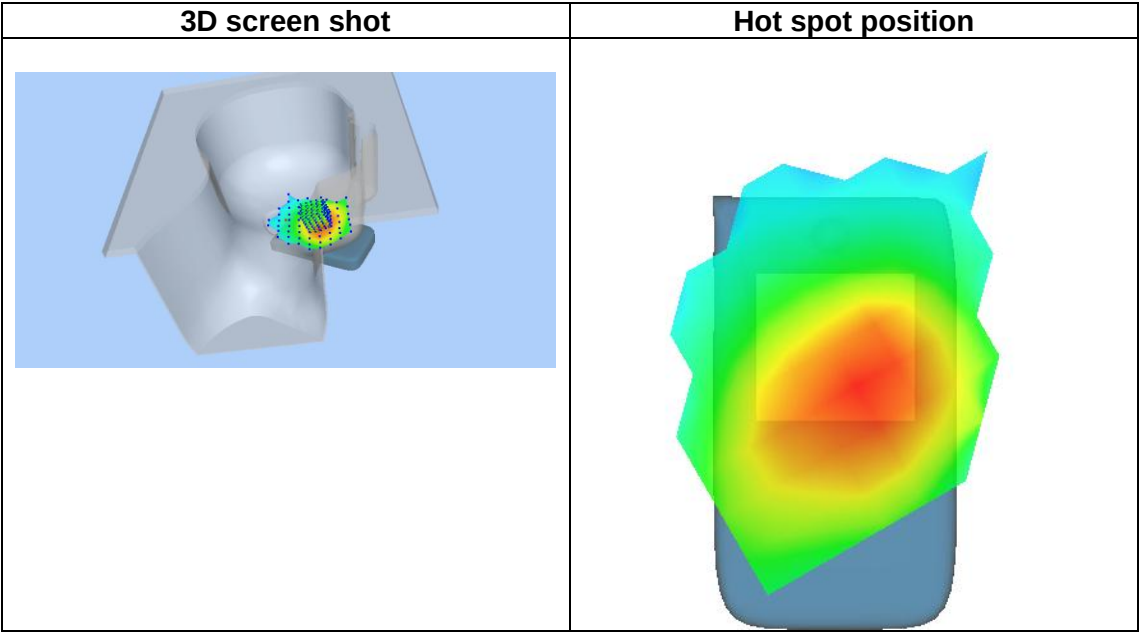
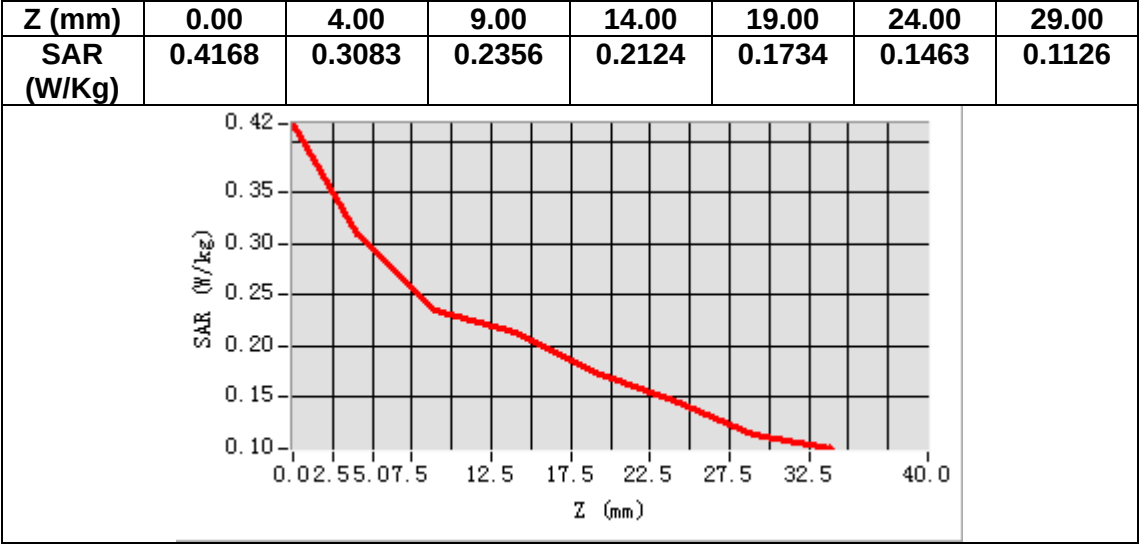
VOLUME SAR



Maximum location: X=-53.00, Y=-20.00

SAR Peak: 0.41 W/kg

SAR 10g (W/Kg)	0.237641
SAR 1g (W/Kg)	0.312750



MEASUREMENT 2

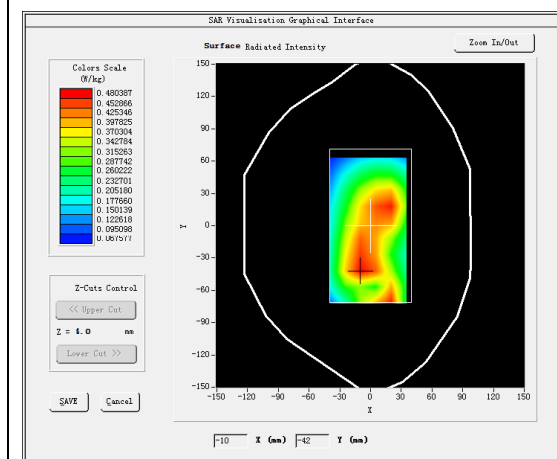
A. Experimental conditions.

<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>Body</u>
<u>Band</u>	<u>GSM850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 4.0)</u>

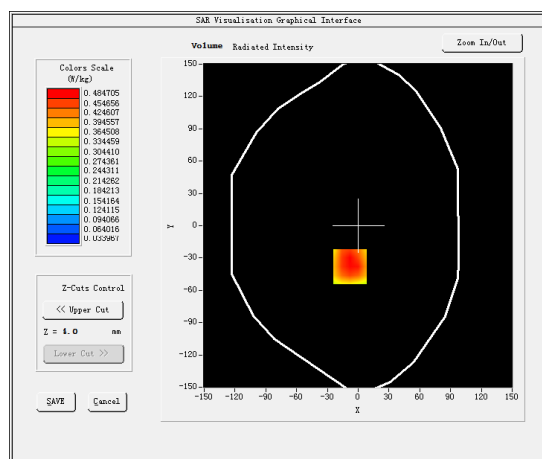
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	54.439579
Relative permittivity (imaginary part)	21.862740
Conductivity (S/m)	1.015889
Variation (%)	0.670000

SURFACE SAR



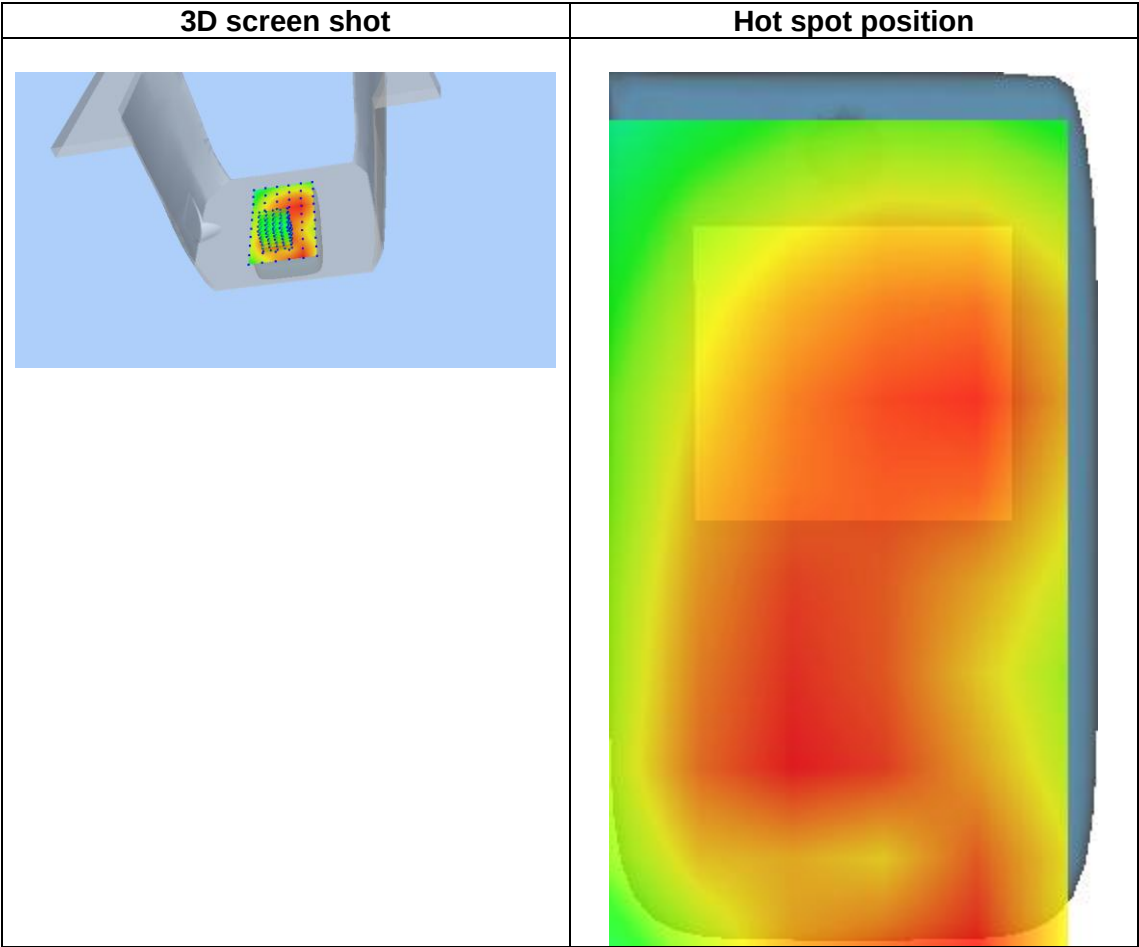
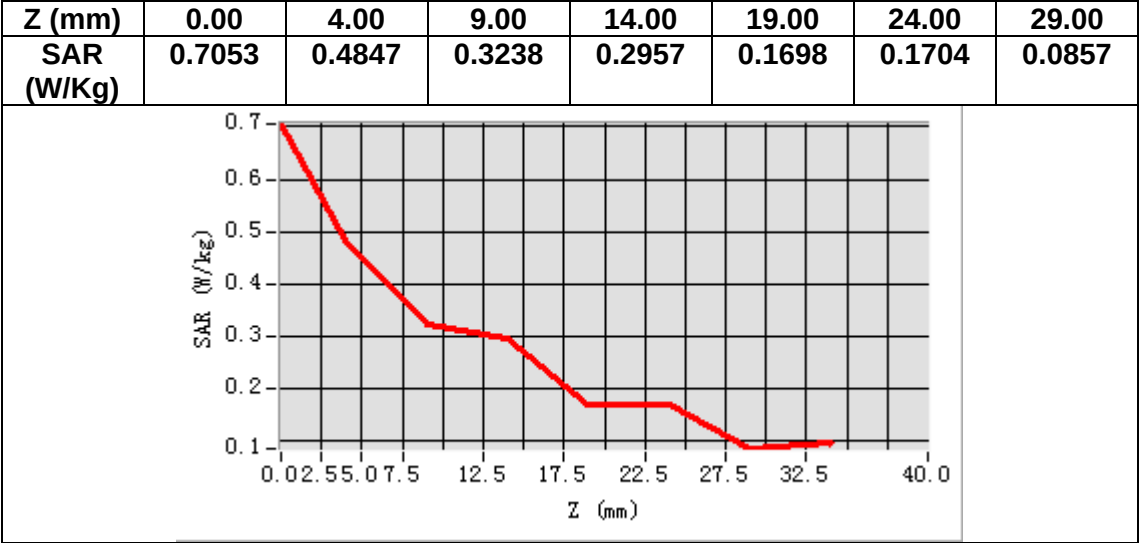
VOLUME SAR



Maximum location: X=-8.00, Y=-38.00

SAR Peak: 0.62 W/kg

SAR 10g (W/Kg)	0.351784
SAR 1g (W/Kg)	0.486795



MEASUREMENT 3

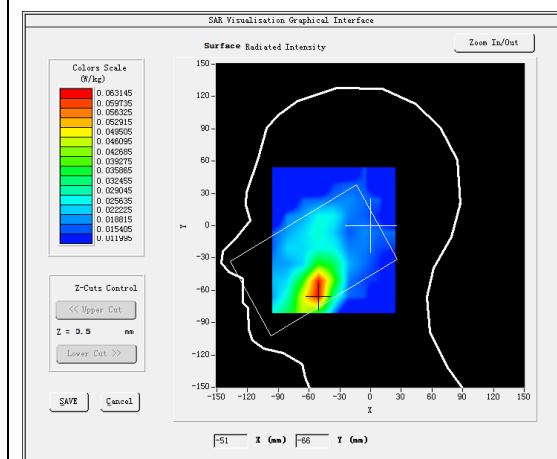
A. Experimental conditions.

<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>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: 4.0)</u>

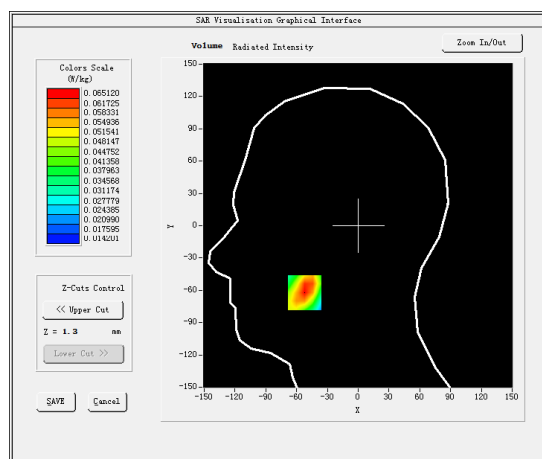
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.078201
Relative permittivity (imaginary part)	13.684300
Conductivity (S/m)	1.429249
Variation (%)	4.300000

SURFACE SAR



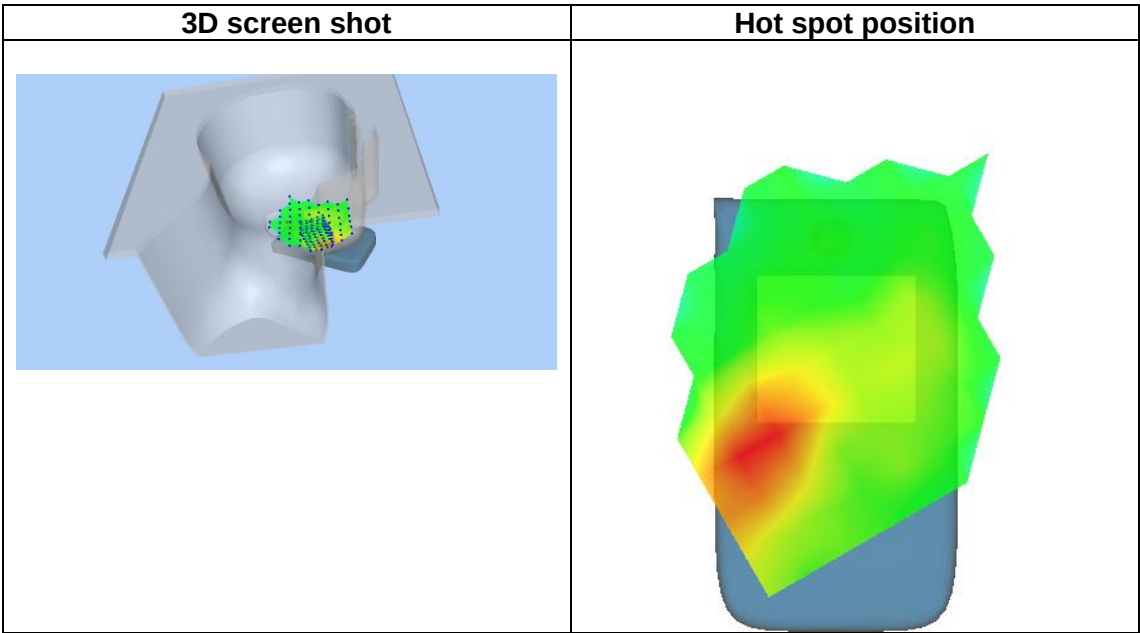
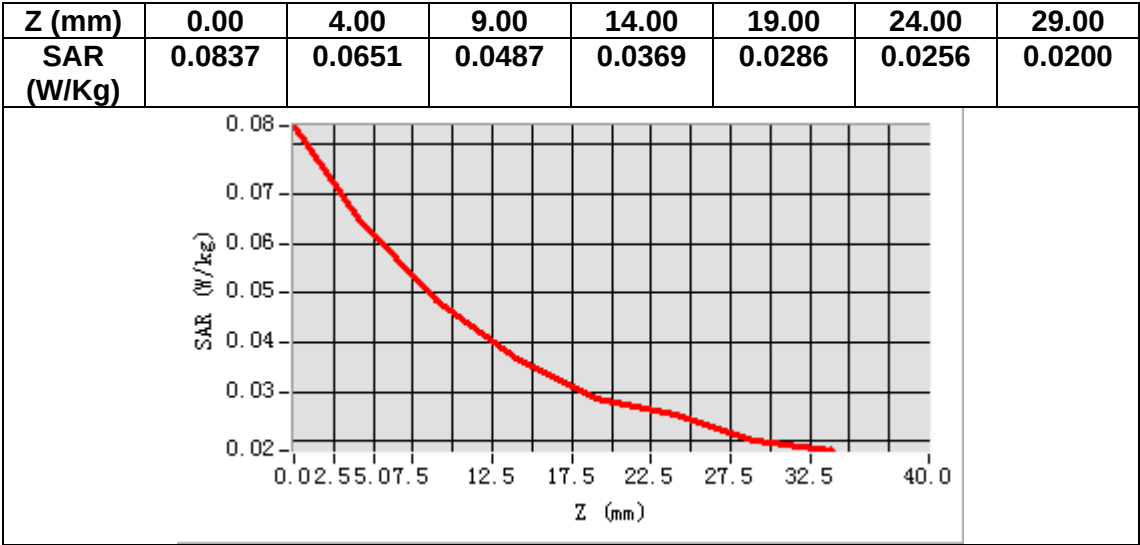
VOLUME SAR



Maximum location: X=-52.00, Y=-62.00

SAR Peak: 0.10 W/kg

SAR 10g (W/Kg)	0.042716
SAR 1g (W/Kg)	0.064013



MEASUREMENT 4

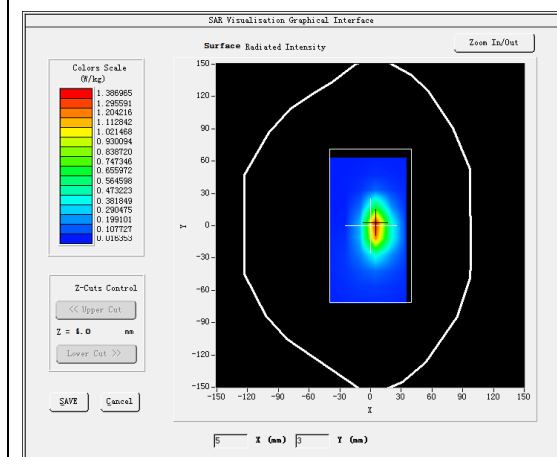
A. Experimental conditions.

<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>Body</u>
<u>Band</u>	<u>GSM1900</u>
<u>Channels</u>	<u>Low</u>
<u>Signal</u>	<u>TDMA (Crest factor: 4.0)</u>

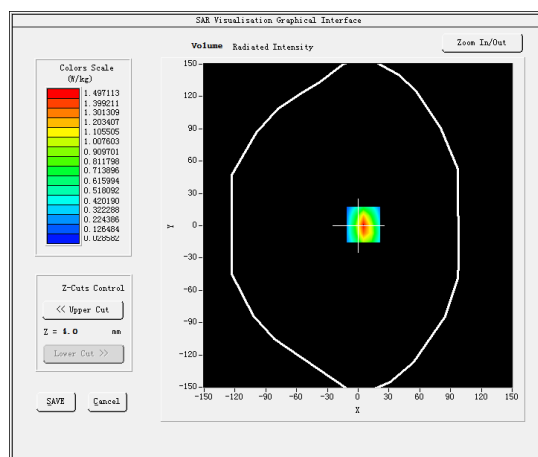
B. SAR Measurement Results

Frequency (MHz)	1850.200000
Relative permittivity (real part)	52.938881
Relative permittivity (imaginary part)	15.023980
Conductivity (S/m)	1.544298
Variation (%)	1.550000

SURFACE SAR



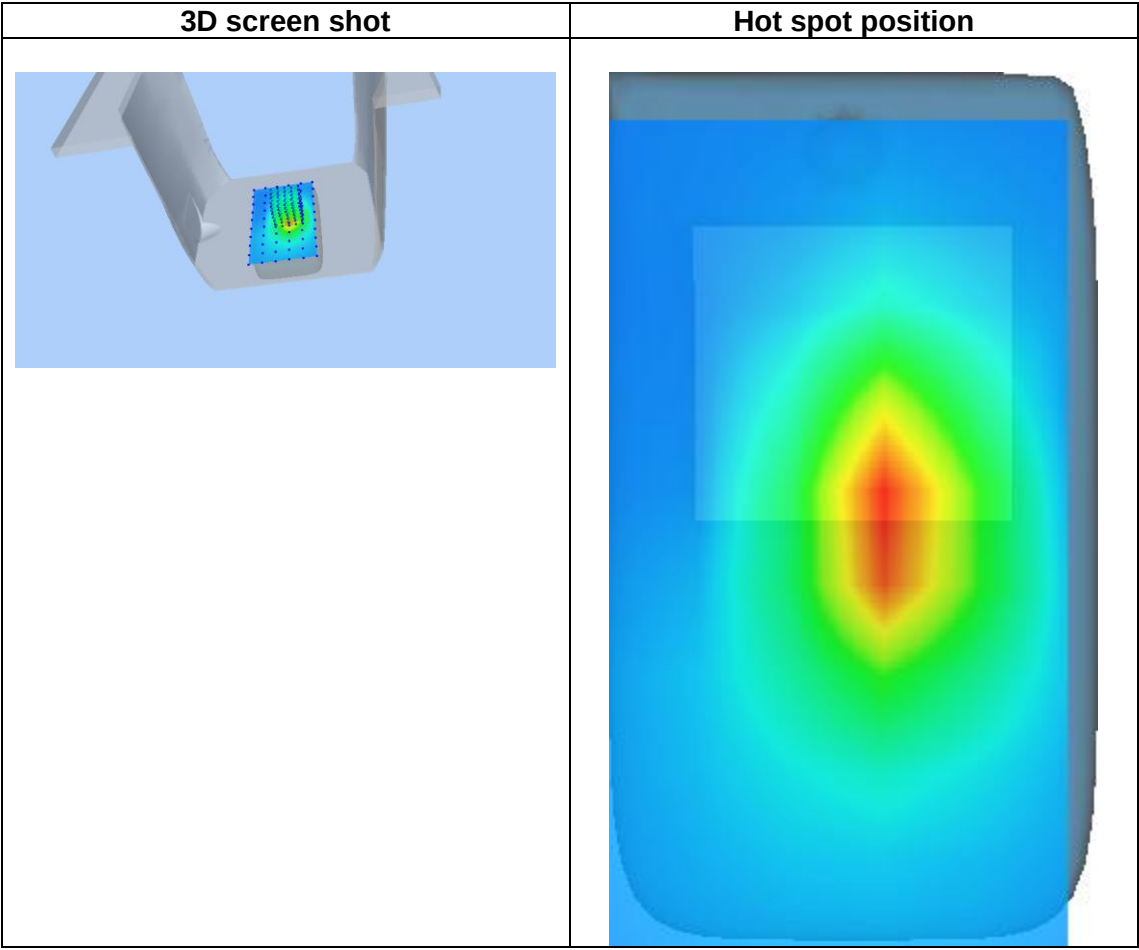
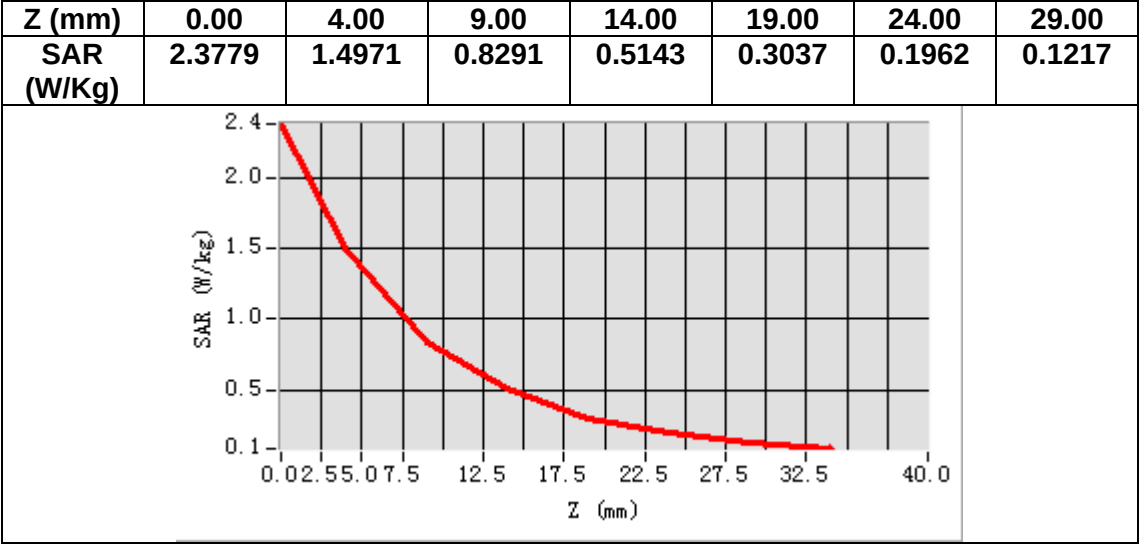
VOLUME SAR



Maximum location: X=5.00, Y=1.00

SAR Peak: 2.35 W/kg

SAR 10g (W/Kg)	0.679863
SAR 1g (W/Kg)	0.974113



MEASUREMENT 5

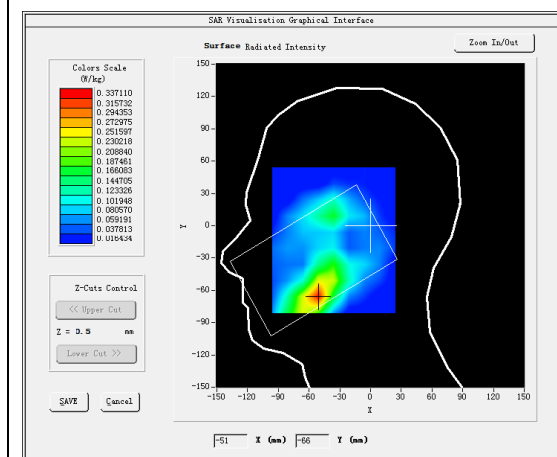
A. Experimental conditions.

<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>Band2 WCDMA1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

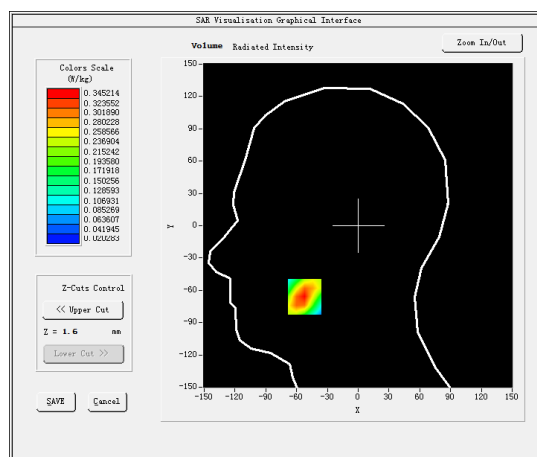
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.078201
Relative permittivity (imaginary part)	13.684300
Conductivity (S/m)	1.429249
Variation (%)	-0.520000

SURFACE SAR



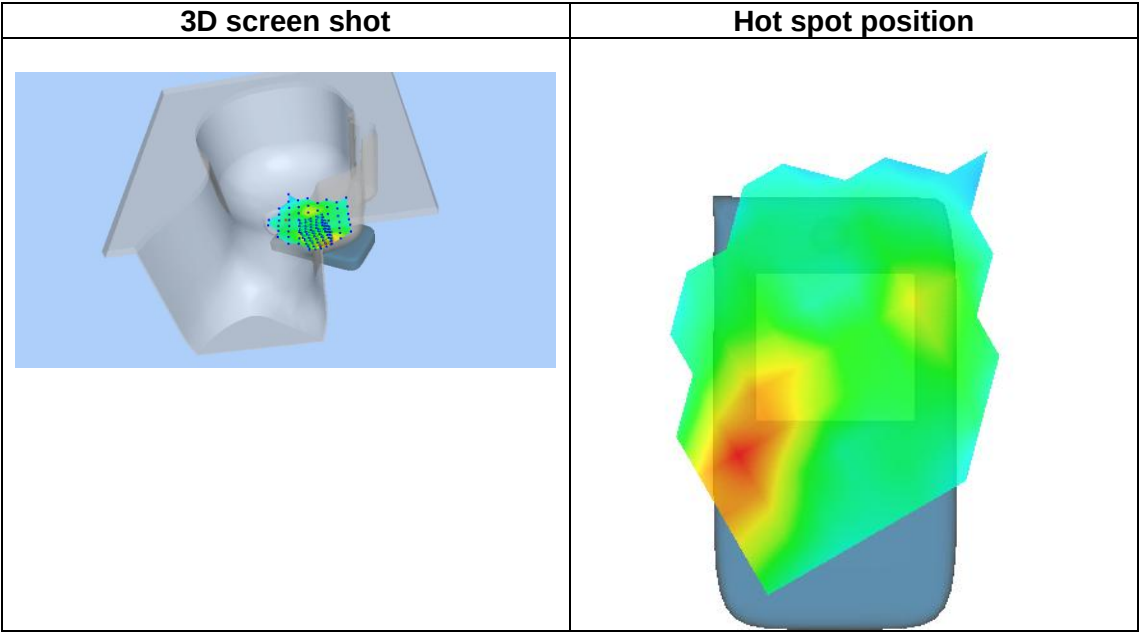
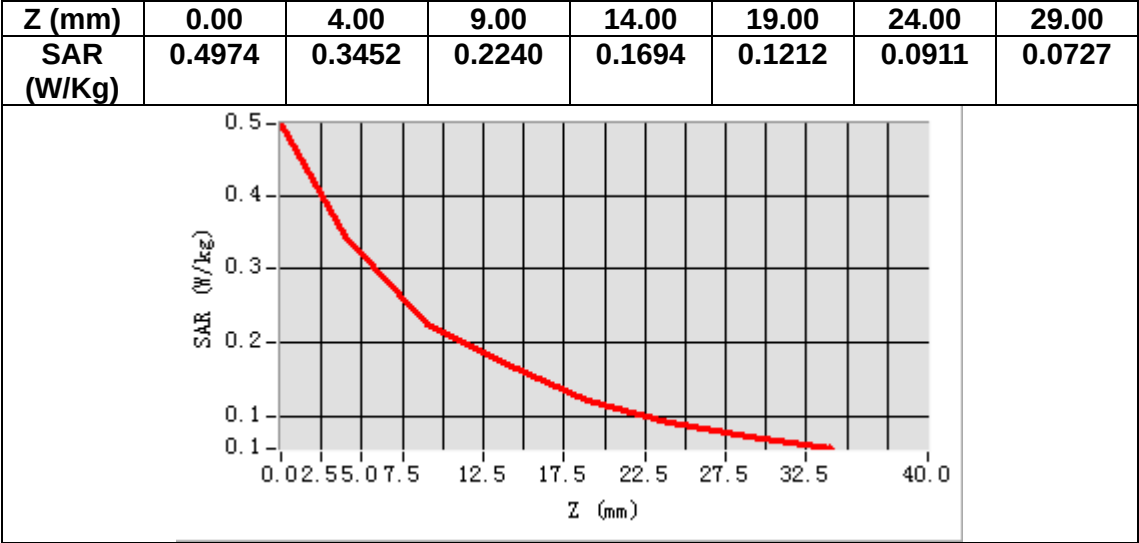
VOLUME SAR



Maximum location: X=-52.00, Y=-66.00

SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.203344
SAR 1g (W/Kg)	0.334939



MEASUREMENT 6

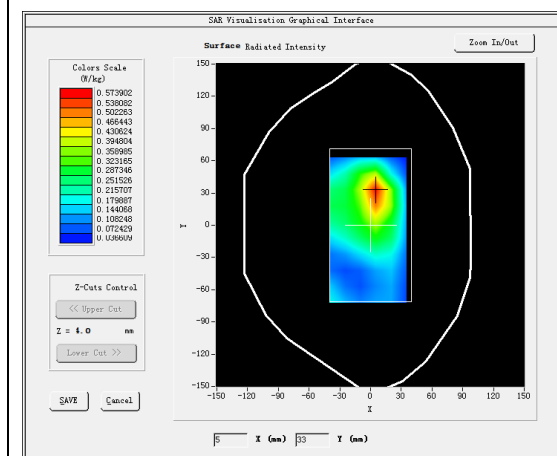
A. Experimental conditions.

<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>Band2 WCDMA1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

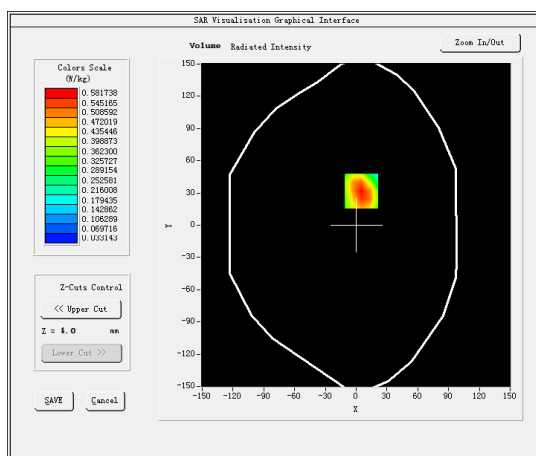
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	52.828899
Relative permittivity (imaginary part)	14.967700
Conductivity (S/m)	1.563293
Variation (%)	-0.720000

SURFACE SAR



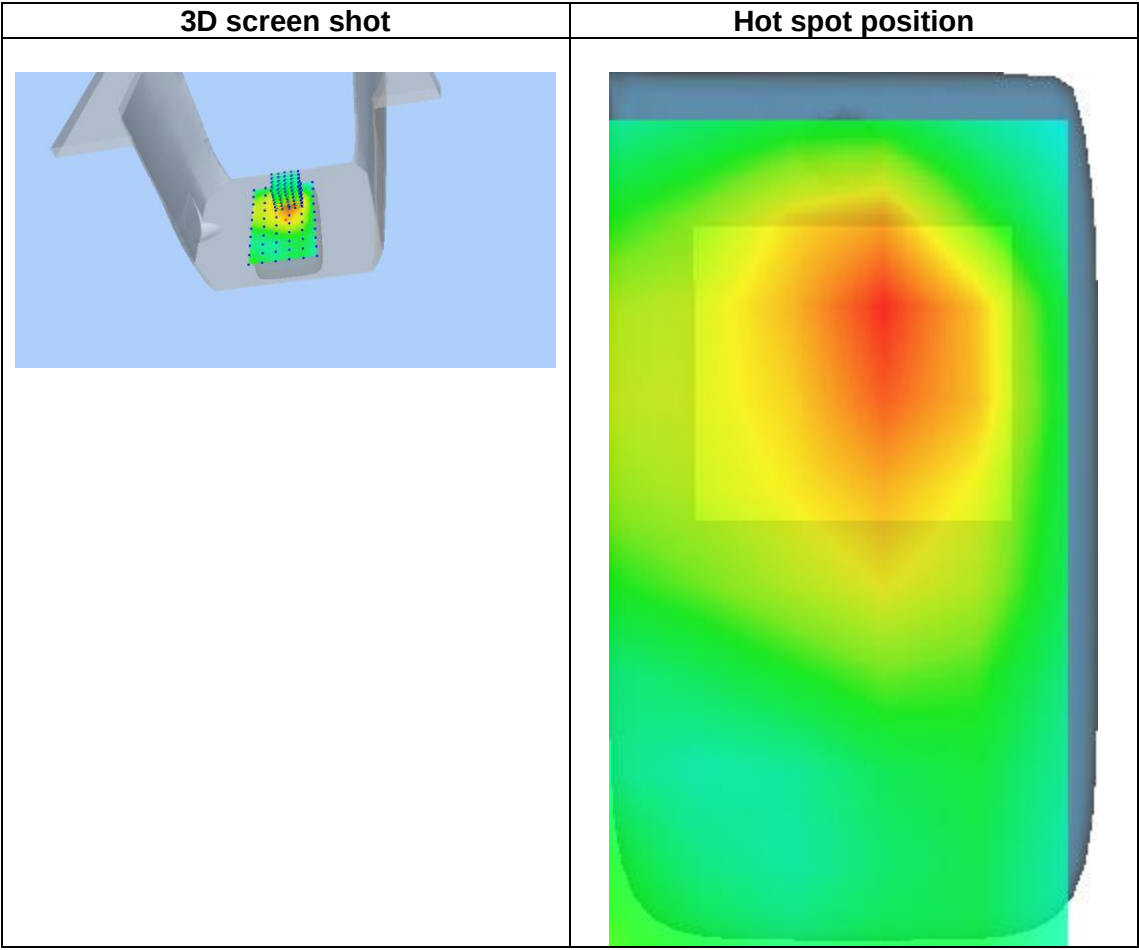
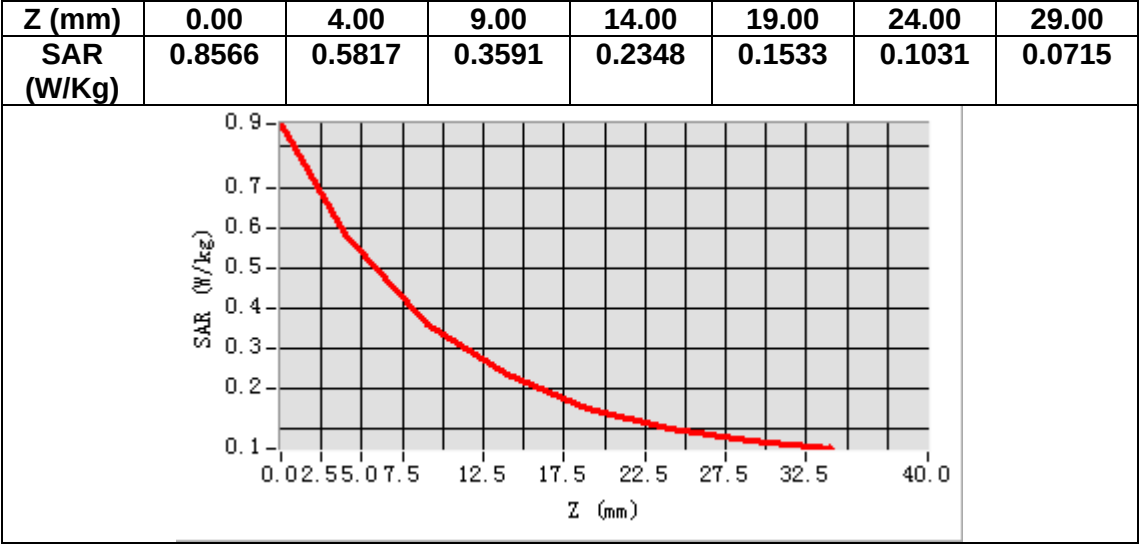
VOLUME SAR



Maximum location: X=5.00, Y=32.00

SAR Peak: 0.86 W/kg

SAR 10g (W/Kg)	0.342624
SAR 1g (W/Kg)	0.567255



MEASUREMENT 7

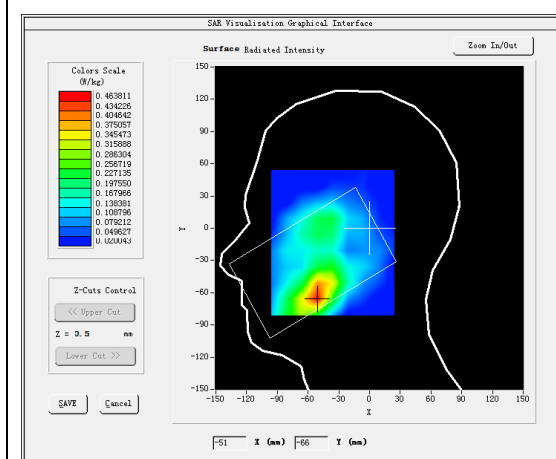
A. Experimental conditions.

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

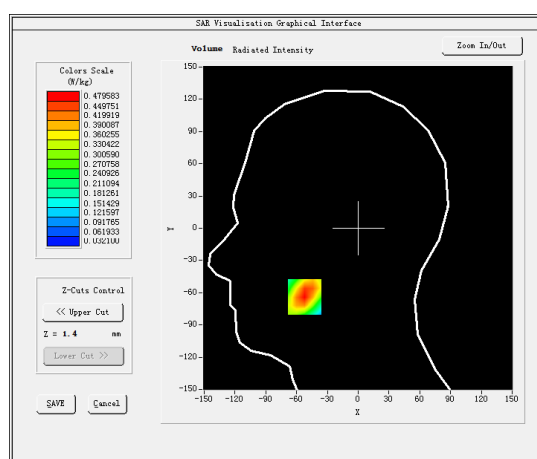
B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	39.567390
Relative permittivity (imaginary part)	14.165742
Conductivity (S/m)	1.363059
Variation (%)	-2.670000

SURFACE SAR



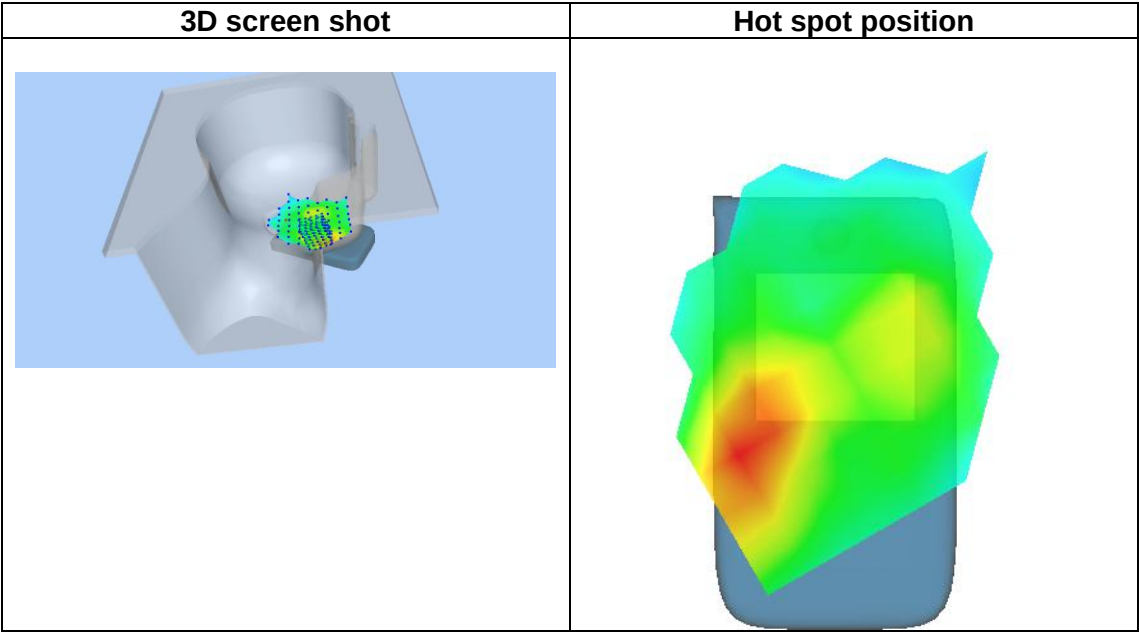
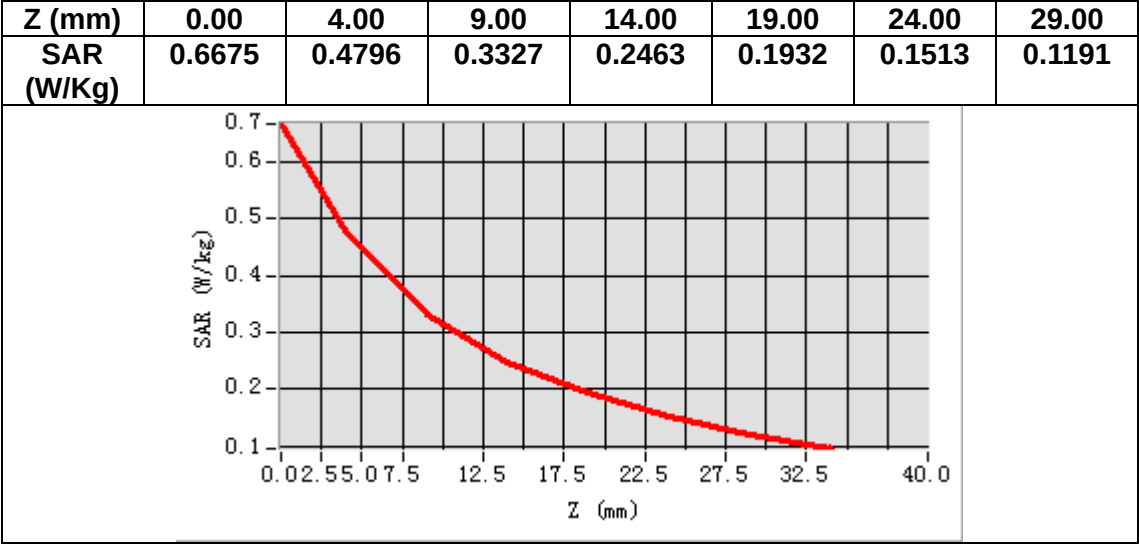
VOLUME SAR



Maximum location: X=-52.00, Y=-64.00

SAR Peak: 0.67 W/kg

SAR 10g (W/Kg)	0.299022
SAR 1g (W/Kg)	0.461645



MEASUREMENT 8

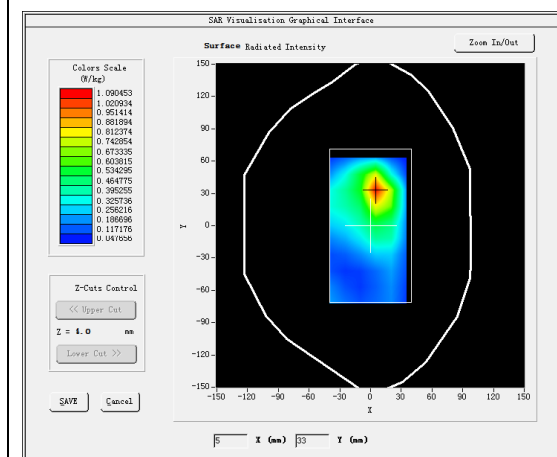
A. Experimental conditions.

<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>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>

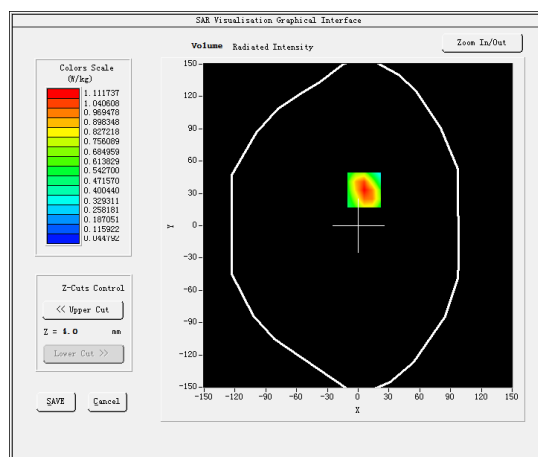
B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	53.447390
Relative permittivity (imaginary part)	15.655742
Conductivity (S/m)	1.563059
Variation (%)	1.300000

SURFACE SAR



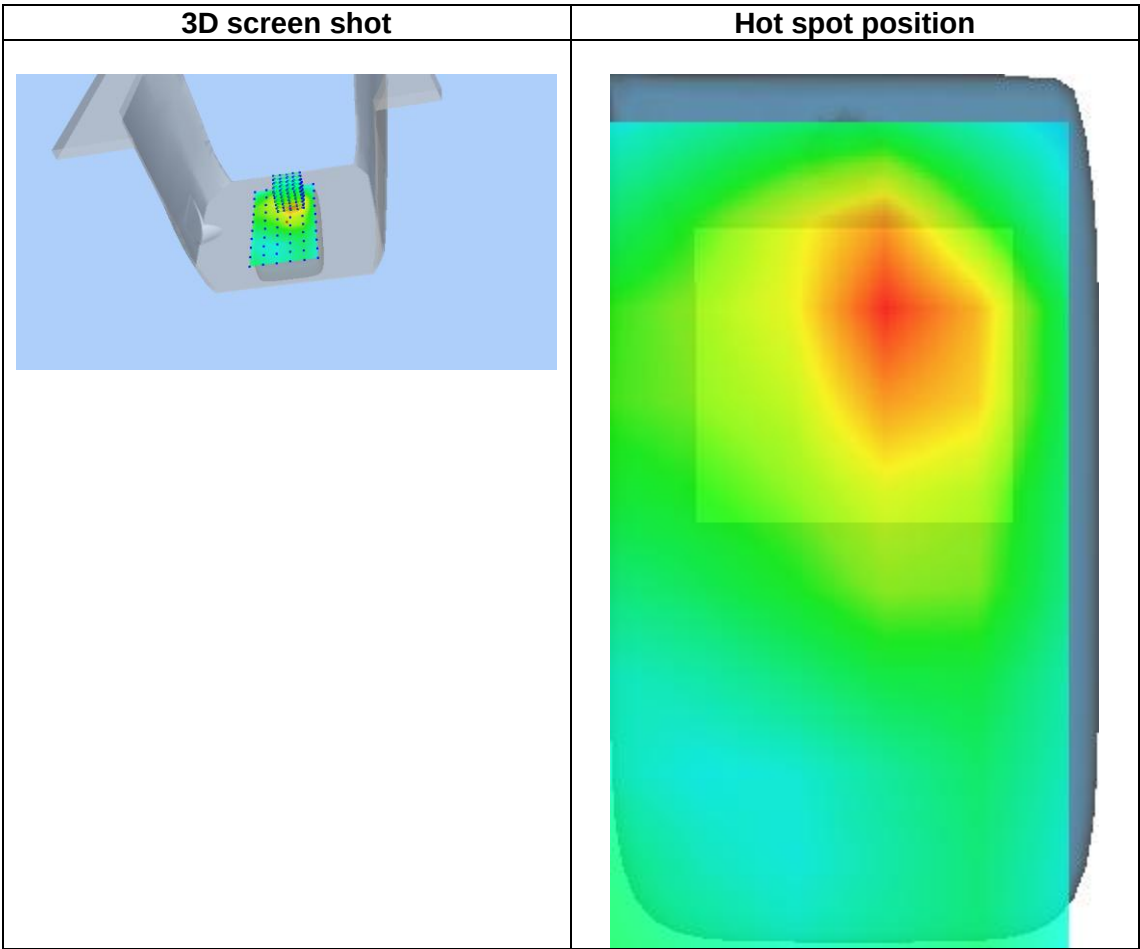
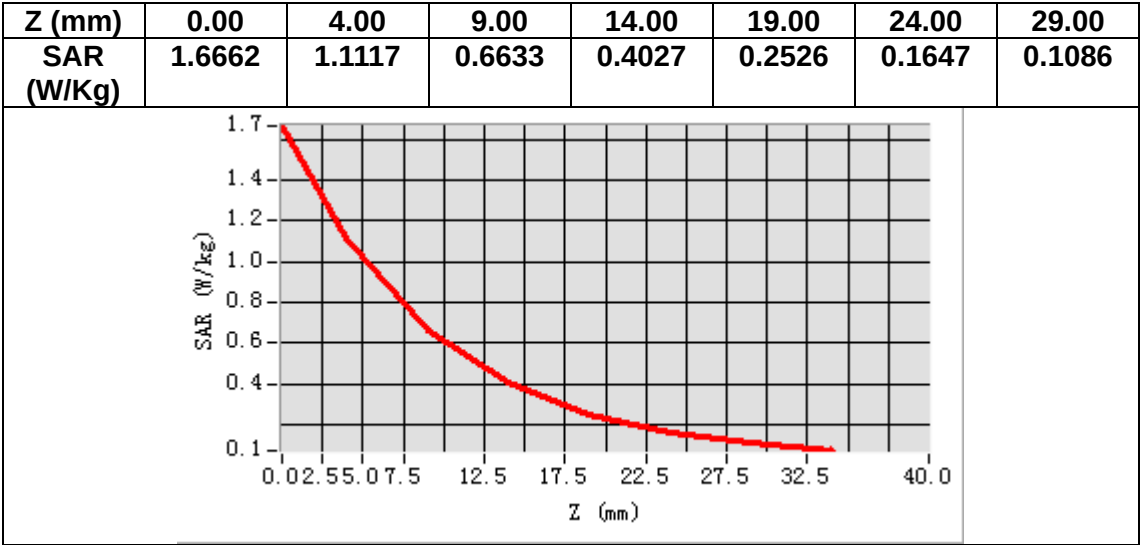
VOLUME SAR



Maximum location: X=6.00, Y=33.00

SAR Peak: 1.72 W/kg

SAR 10g (W/Kg)	0.604459
SAR 1g (W/Kg)	1.057957



MEASUREMENT 9

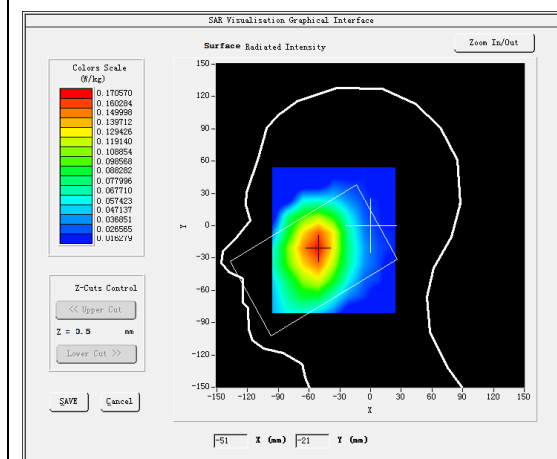
A. Experimental conditions.

<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>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>

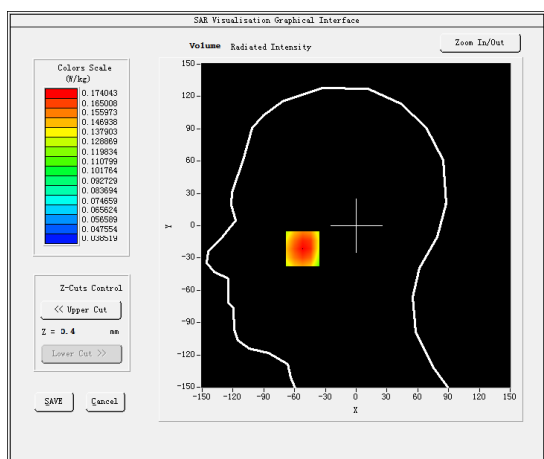
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	40.620960
Relative permittivity (imaginary part)	20.061541
Conductivity (S/m)	0.932193
Variation (%)	1.510000

SURFACE SAR



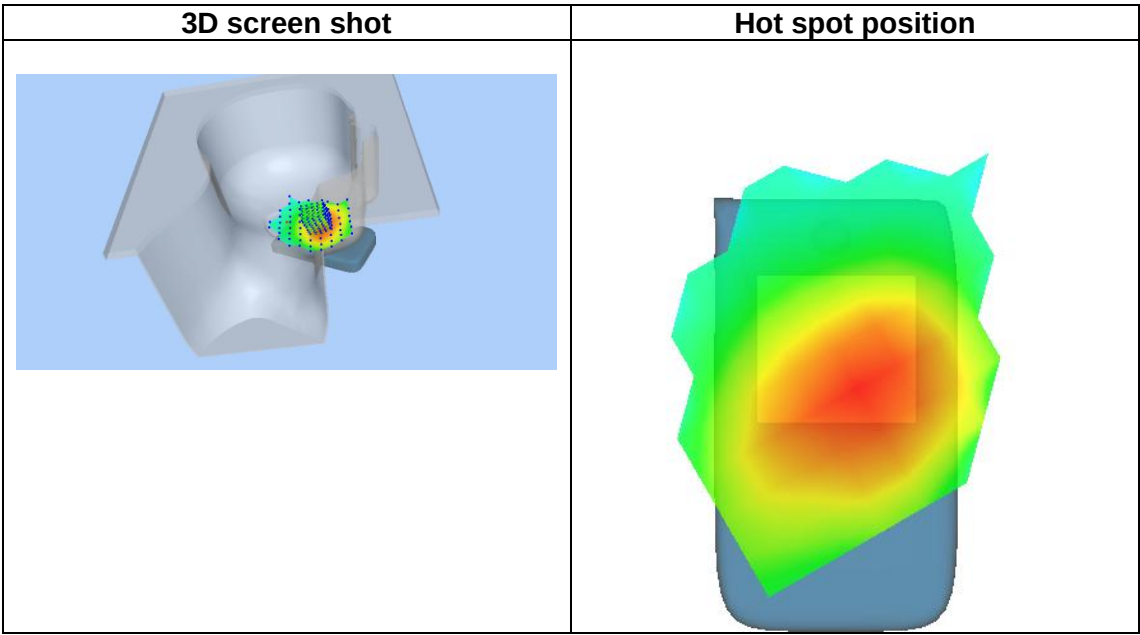
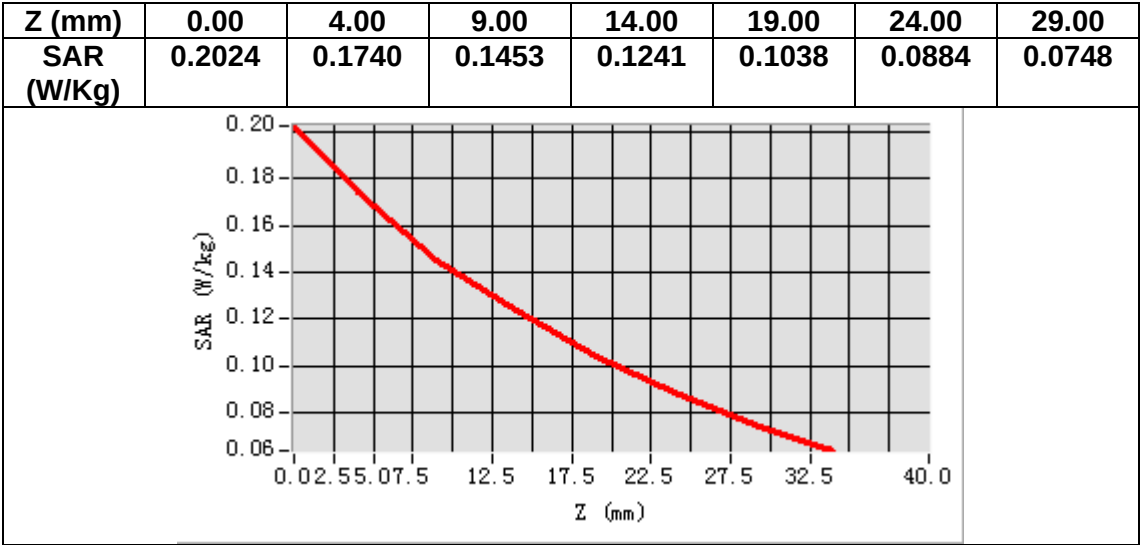
VOLUME SAR



Maximum location: X=-52.00, Y=-21.00

SAR Peak: 0.21 W/kg

SAR 10g (W/Kg)	0.136255
SAR 1g (W/Kg)	0.174957



MEASUREMENT 10

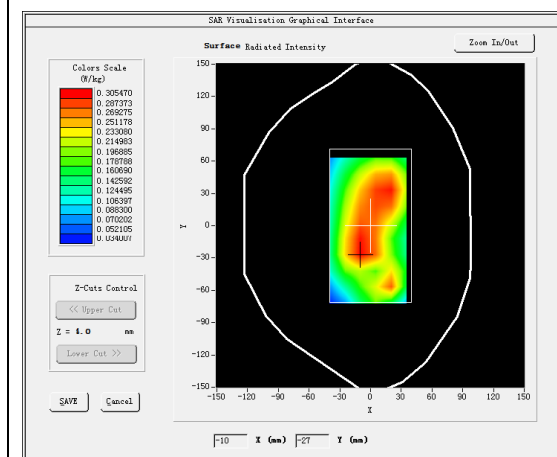
A. Experimental conditions.

<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>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>

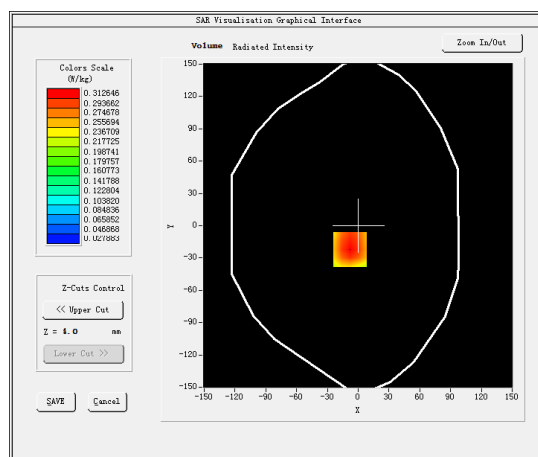
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	54.439579
Relative permittivity (imaginary part)	21.862740
Conductivity (S/m)	1.015889
Variation (%)	0.130000

SURFACE SAR



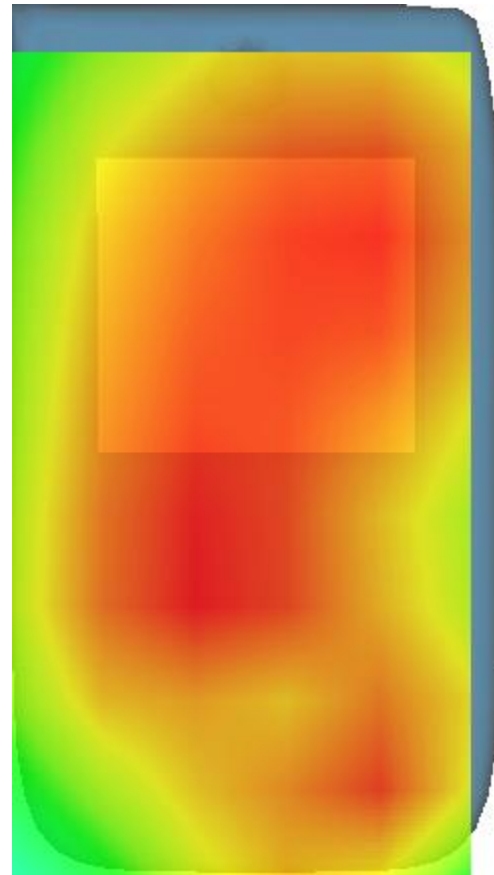
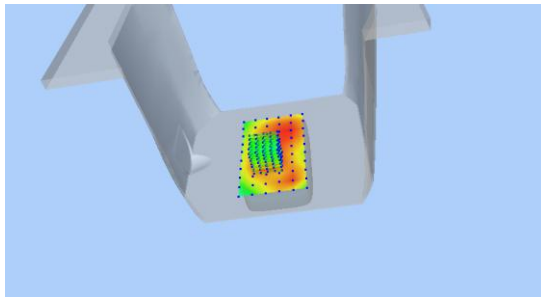
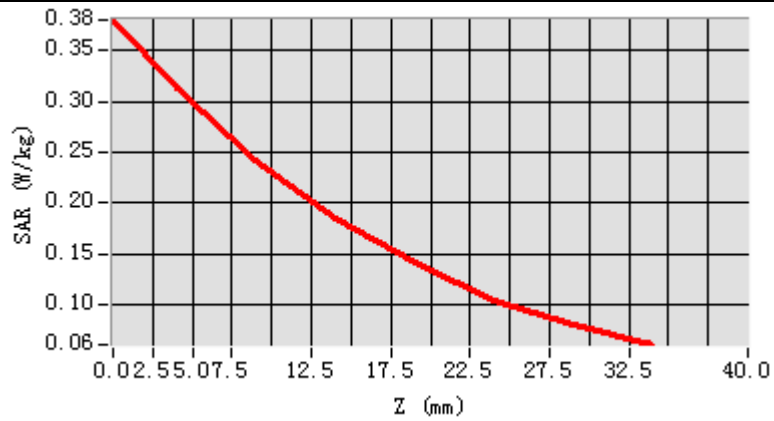
VOLUME SAR



Maximum location: X=-8.00, Y=-22.00

SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.229795
SAR 1g (W/Kg)	0.313827



MEASUREMENT 11

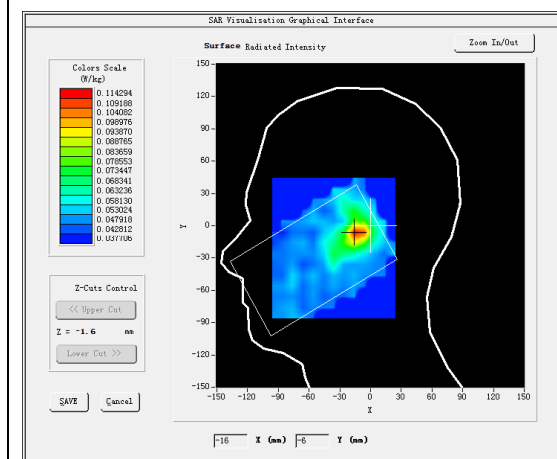
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Right head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>IEEE 802.11a U-NII</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11a (Crest factor: 1.0)</u>

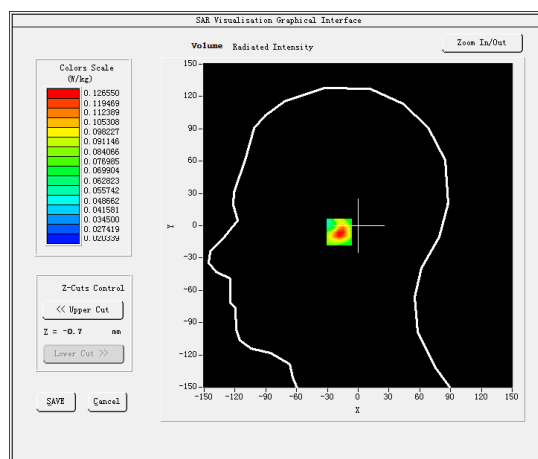
B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative permittivity (real part)	35.632980
Relative permittivity (imaginary part)	16.221619
Conductivity (S/m)	4.686246
Variation (%)	0.430000

SURFACE SAR



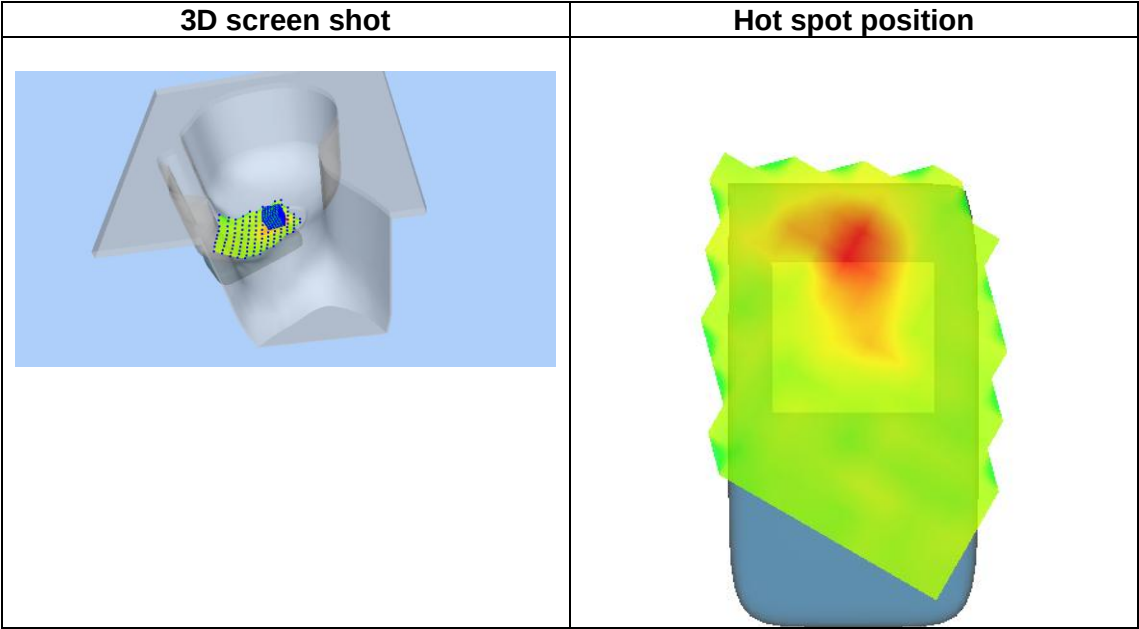
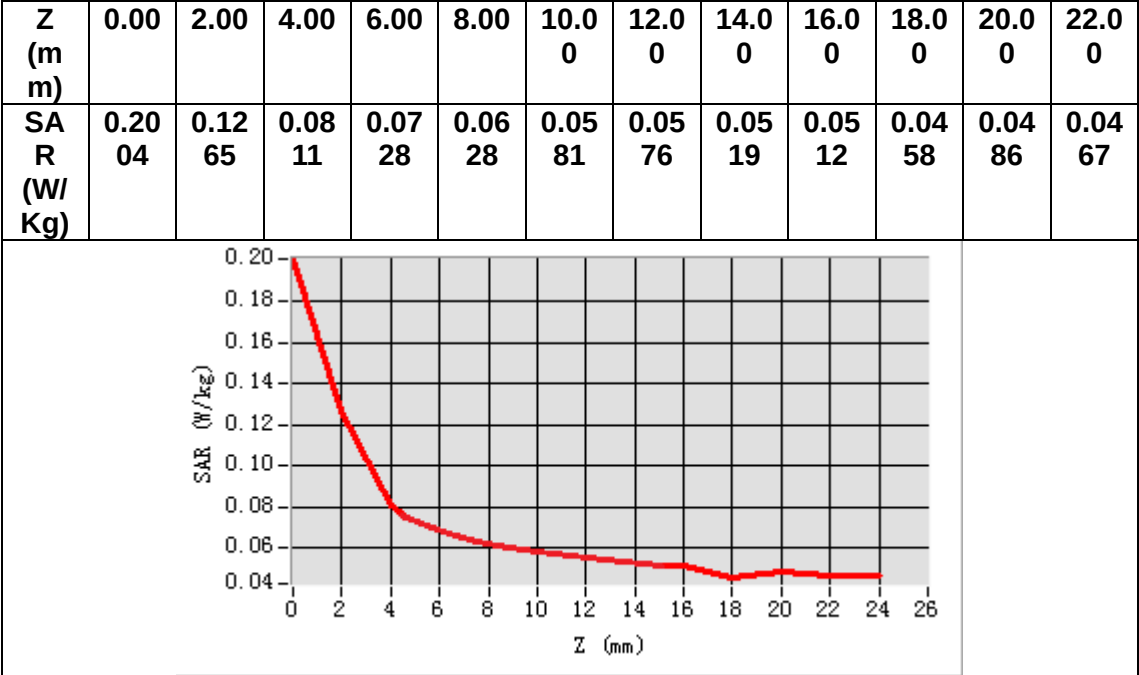
VOLUME SAR



Maximum location: X=-13.00, Y=-6.00

SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	0.072040
SAR 1g (W/Kg)	0.128816



MEASUREMENT 12

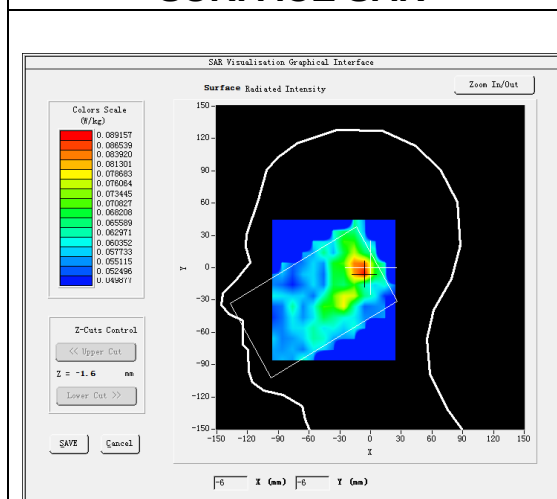
A. Experimental conditions.

Area Scan	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
ZoomScan	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
Phantom	<u>Right head</u>
Device Position	<u>Cheek</u>
Band	<u>IEEE 802.11a U-NII</u>
Channels	<u>Middle</u>
Signal	<u>IEEE802.11a (Crest factor: 1.0)</u>

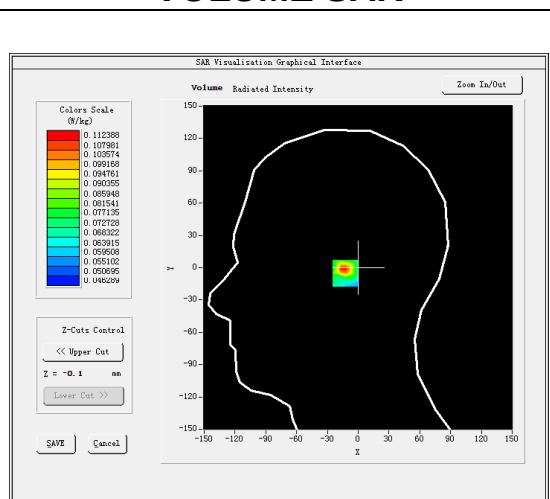
B. SAR Measurement Results

Frequency (MHz)	5785.000000
Relative permittivity (real part)	34.624786
Relative permittivity (imaginary part)	16.185266
Conductivity (S/m)	5.201765
Variation (%)	-3.070000

SURFACE SAR



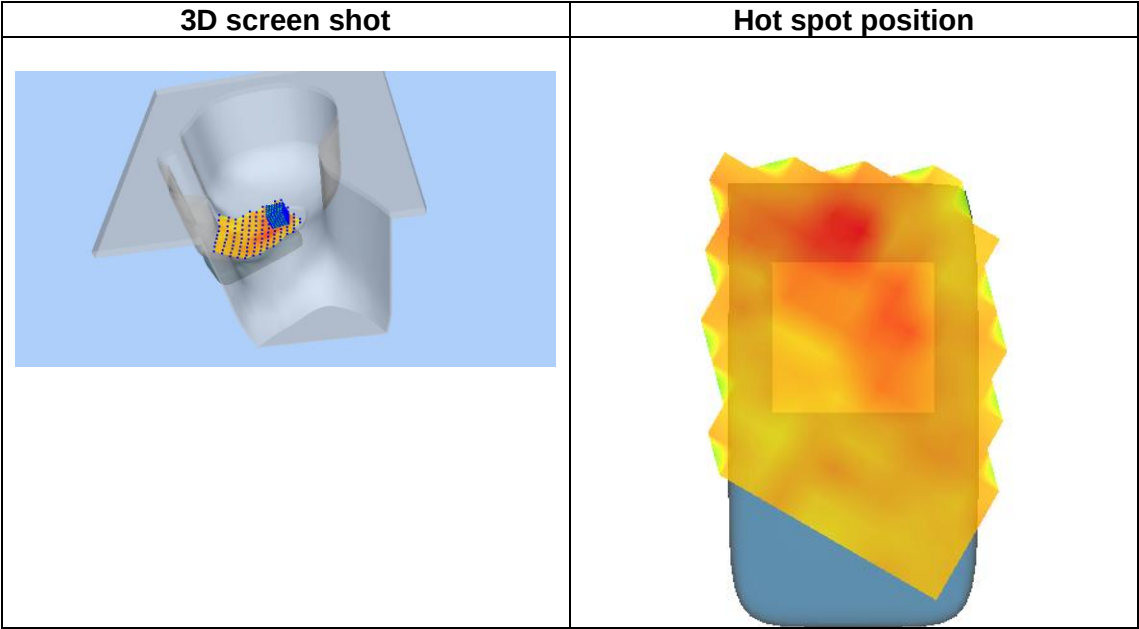
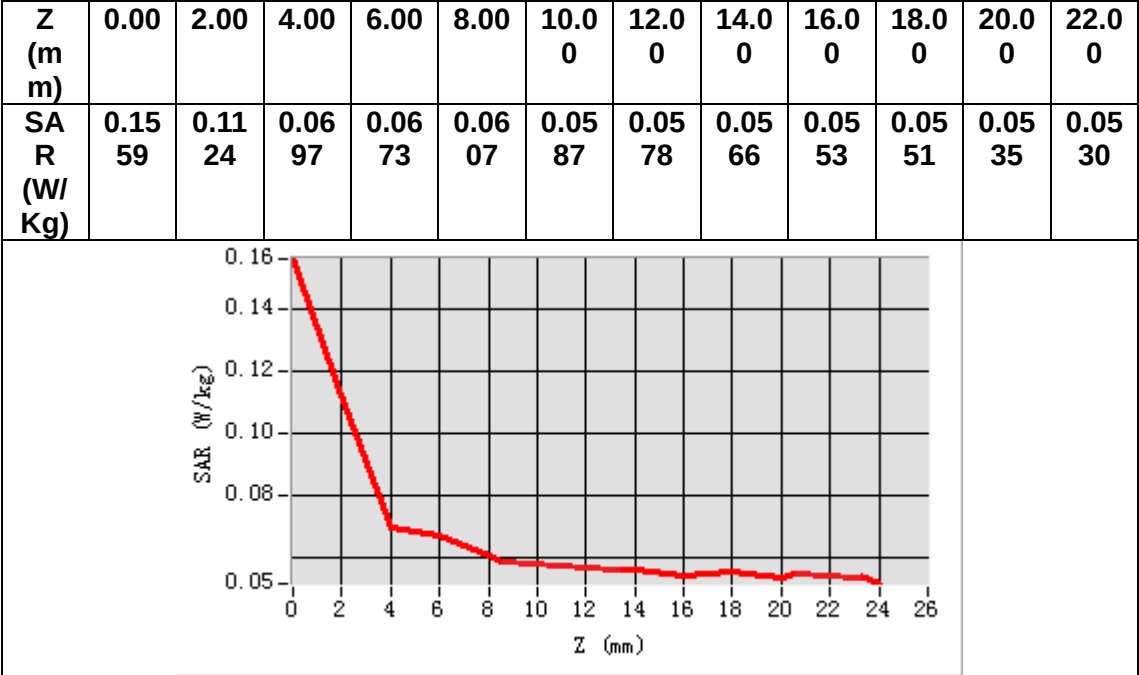
VOLUME SAR



Maximum location: X=-7.00, Y=-5.00

SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.070101
SAR 1g (W/Kg)	0.107443



MEASUREMENT 13

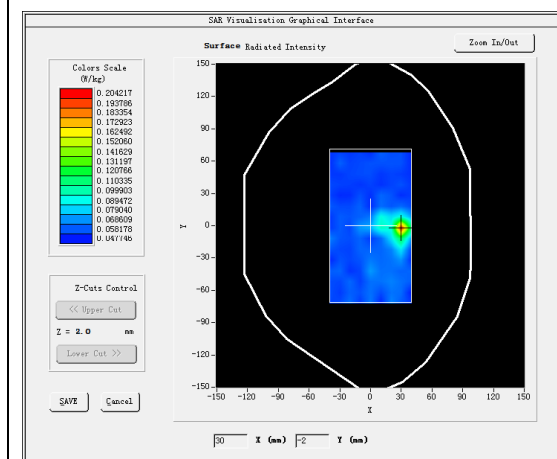
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11a U-NII</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11a (Crest factor: 1.0)</u>

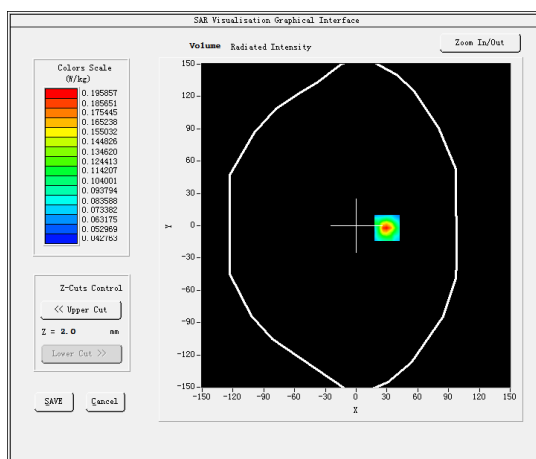
B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative permittivity (real part)	49.549538
Relative permittivity (imaginary part)	18.425508
Conductivity (S/m)	5.322925
Variation (%)	-1.130000

SURFACE SAR



VOLUME SAR

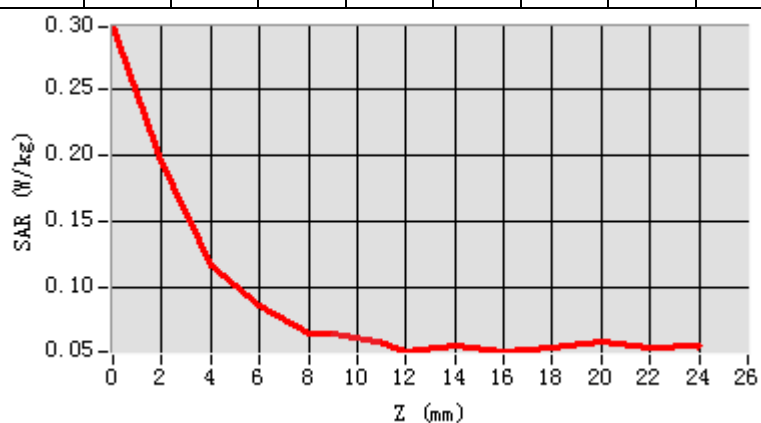


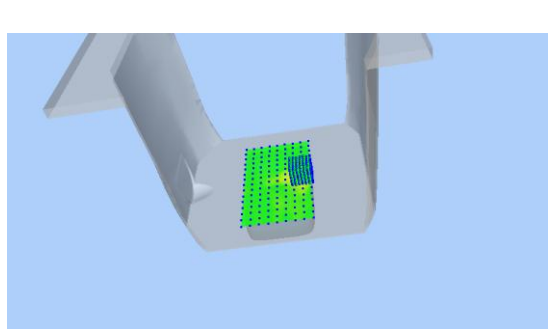
Maximum location: X=30.00, Y=-2.00

SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.074024
SAR 1g (W/Kg)	0.124218

Z (m m)	0.00	2.00	4.00	6.00	8.00	10.0 0	12.0 0	14.0 0	16.0 0	18.0 0	20.0 0	22.0 0
SA R (W/ Kg)	0.29 77	0.19 59	0.11 74	0.08 58	0.06 59	0.06 21	0.05 18	0.05 59	0.05 15	0.05 49	0.05 85	0.05 52



3D screen shot	Hot spot position
 A 3D perspective view of a robotic arm, specifically the gripper and wrist area. A grid of small, colored dots (green, yellow, and blue) is overlaid on the gripper's surface, representing a sensor array or a point cloud. The background is a solid light blue.	 A heatmap visualization of the gripper area shown in the 3D screenshot. The color scale ranges from green (low intensity) to red (high intensity). A prominent red hot spot is visible on the right side of the gripper, indicating a high-intensity region. The rest of the gripper and the surrounding area are mostly green.

MEASUREMENT 14

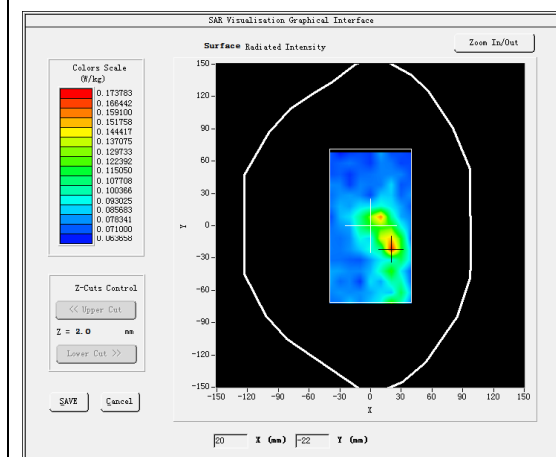
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11a U-NII</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11a (Crest factor: 1.0)</u>

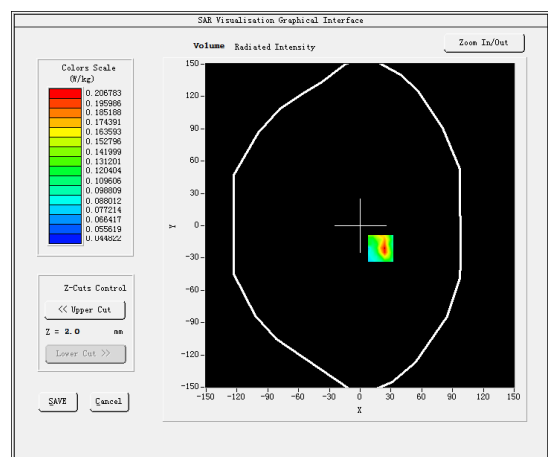
B. SAR Measurement Results

Frequency (MHz)	5785.000000
Relative permittivity (real part)	48.318703
Relative permittivity (imaginary part)	18.826765
Conductivity (S/m)	6.050713
Variation (%)	4.510000

SURFACE SAR



VOLUME SAR

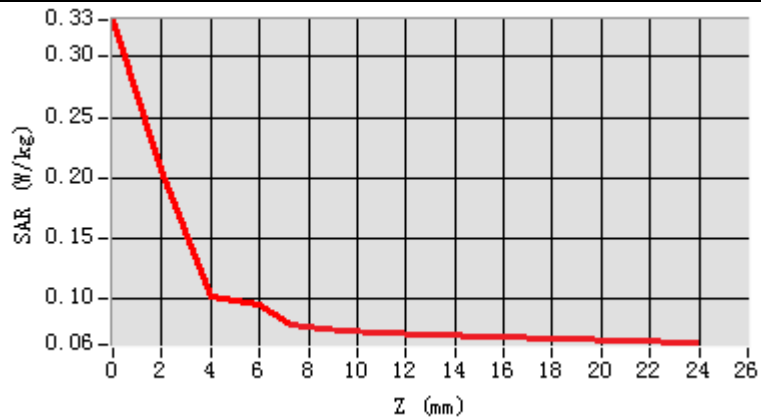


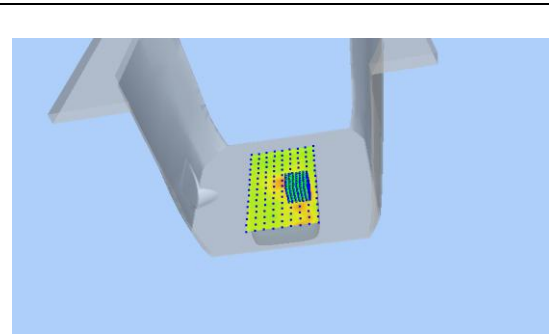
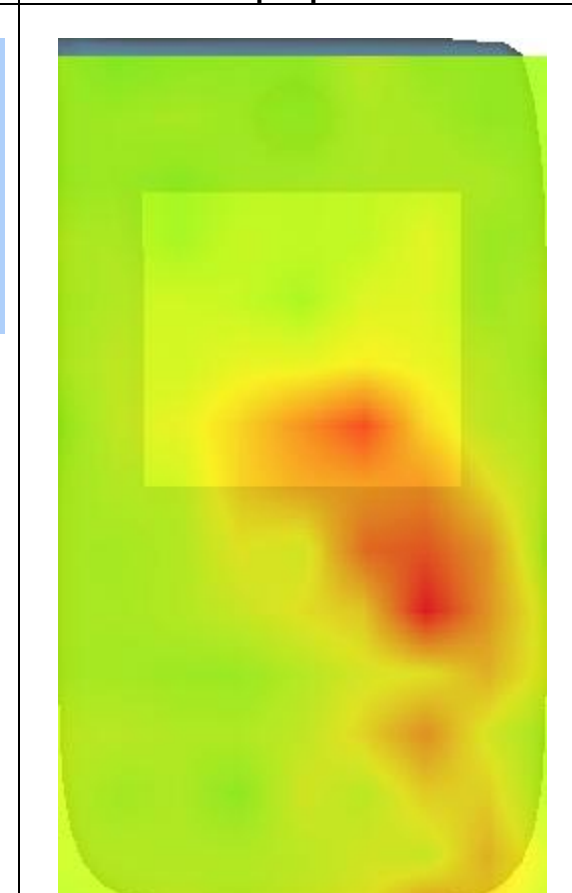
Maximum location: X=20.00, Y=-21.00

SAR Peak: 0.34 W/kg

SAR 10g (W/Kg)	0.090014
SAR 1g (W/Kg)	0.135128

Z (m m)	0.00	2.00	4.00	6.00	8.00	10.0 0	12.0 0	14.0 0	16.0 0	18.0 0	20.0 0	22.0 0
SA R (W/ Kg)	0.33 05	0.20 68	0.10 10	0.09 53	0.08 03	0.07 85	0.07 61	0.07 52	0.06 68	0.06 46	0.06 27	0.06 10



3D screen shot	Hot spot position
 A 3D perspective view of a robotic arm's gripper. The gripper is light gray and has a rectangular sensor array mounted on its palm. The sensor array consists of a grid of small, colored dots (yellow, green, and blue) on a dark background. The background is a solid light blue.	 A heatmap visualization showing the spatial distribution of hot spots. The background is a solid light green. A large, irregularly shaped region in the lower right quadrant is colored in shades of yellow and orange, indicating a high concentration of hot spots. Within this region, there are several distinct, darker orange and red spots, representing the most intense hot spots. A smaller, less intense yellowish region is visible in the upper left quadrant.

MEASUREMENT 15

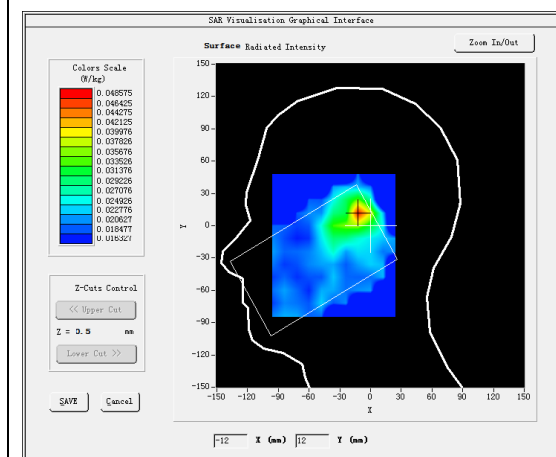
A. Experimental conditions.

<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>

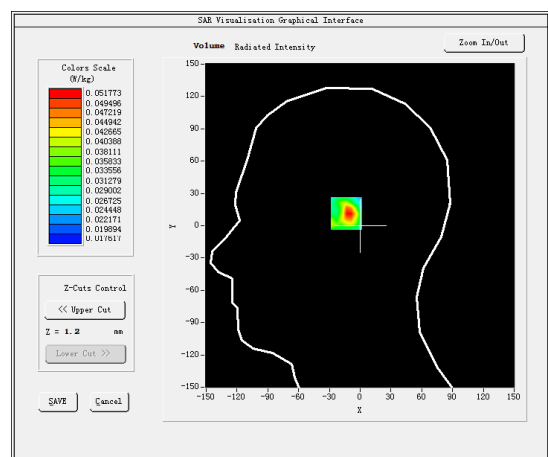
B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.120998
Relative permittivity (imaginary part)	13.660300
Conductivity (S/m)	1.849453
Variation (%)	-0.090000

SURFACE SAR



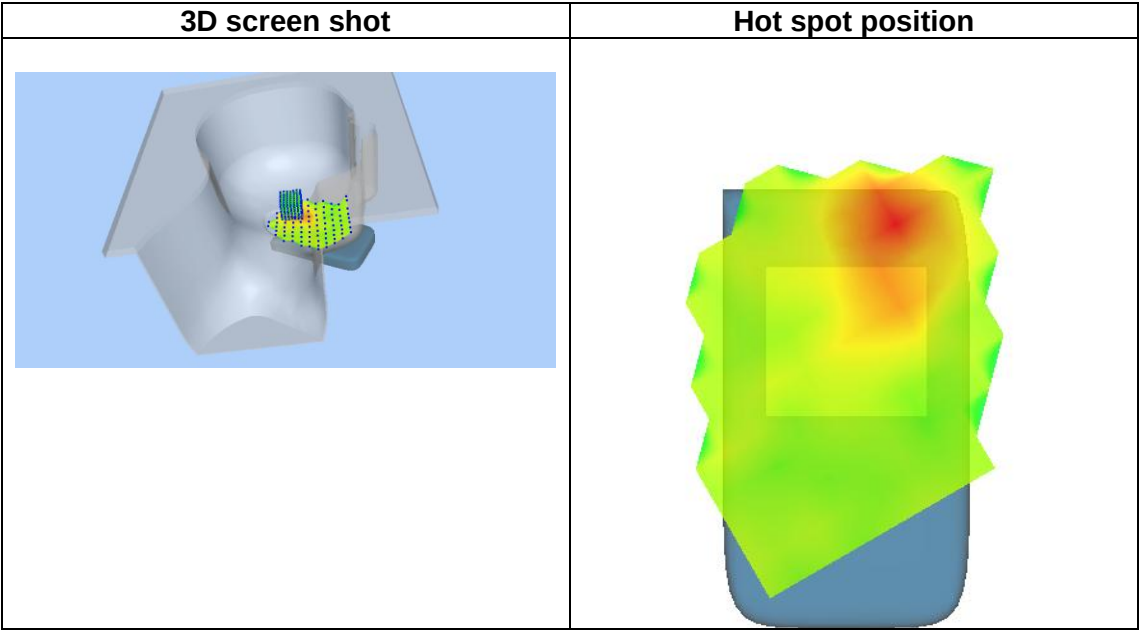
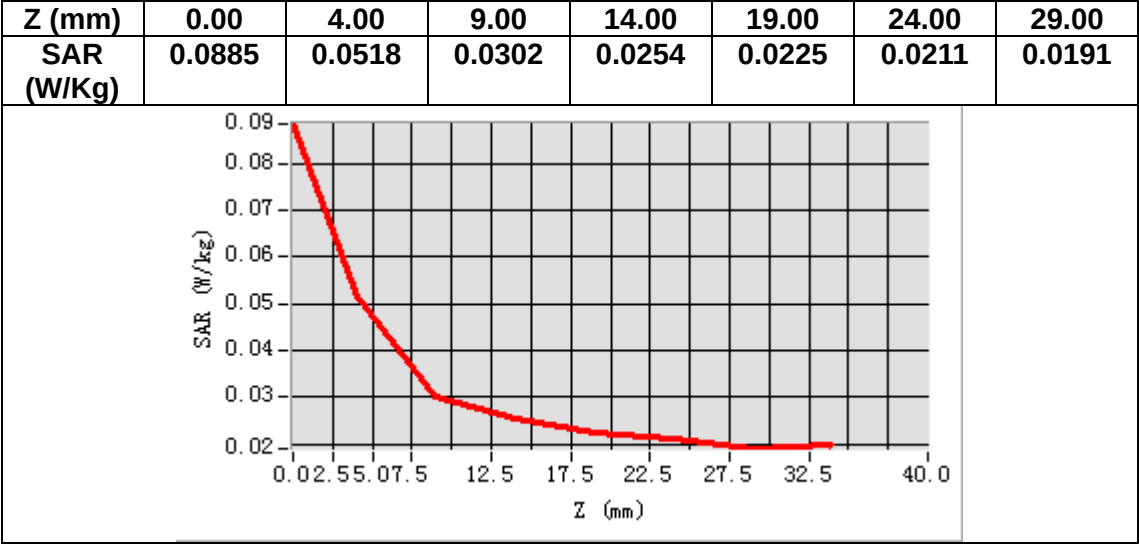
VOLUME SAR



Maximum location: X=-11.00, Y=12.00

SAR Peak: 0.09 W/kg

SAR 10g (W/Kg)	0.032200
SAR 1g (W/Kg)	0.050964



MEASUREMENT 16

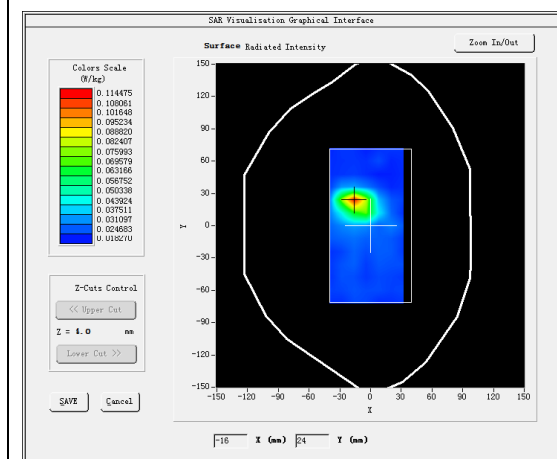
A. Experimental conditions.

<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>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>

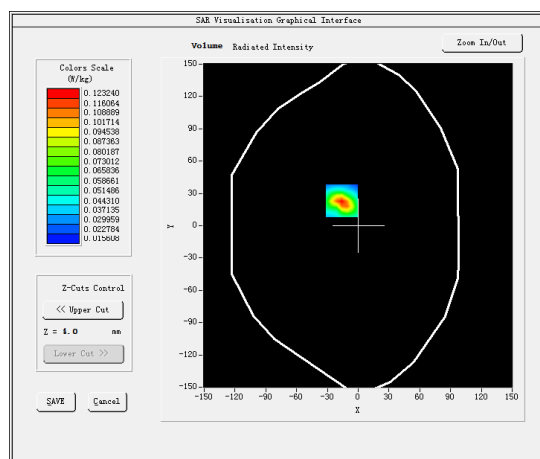
B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative permittivity (real part)	52.321602
Relative permittivity (imaginary part)	14.845620
Conductivity (S/m)	2.009932
Variation (%)	-1.070000

SURFACE SAR



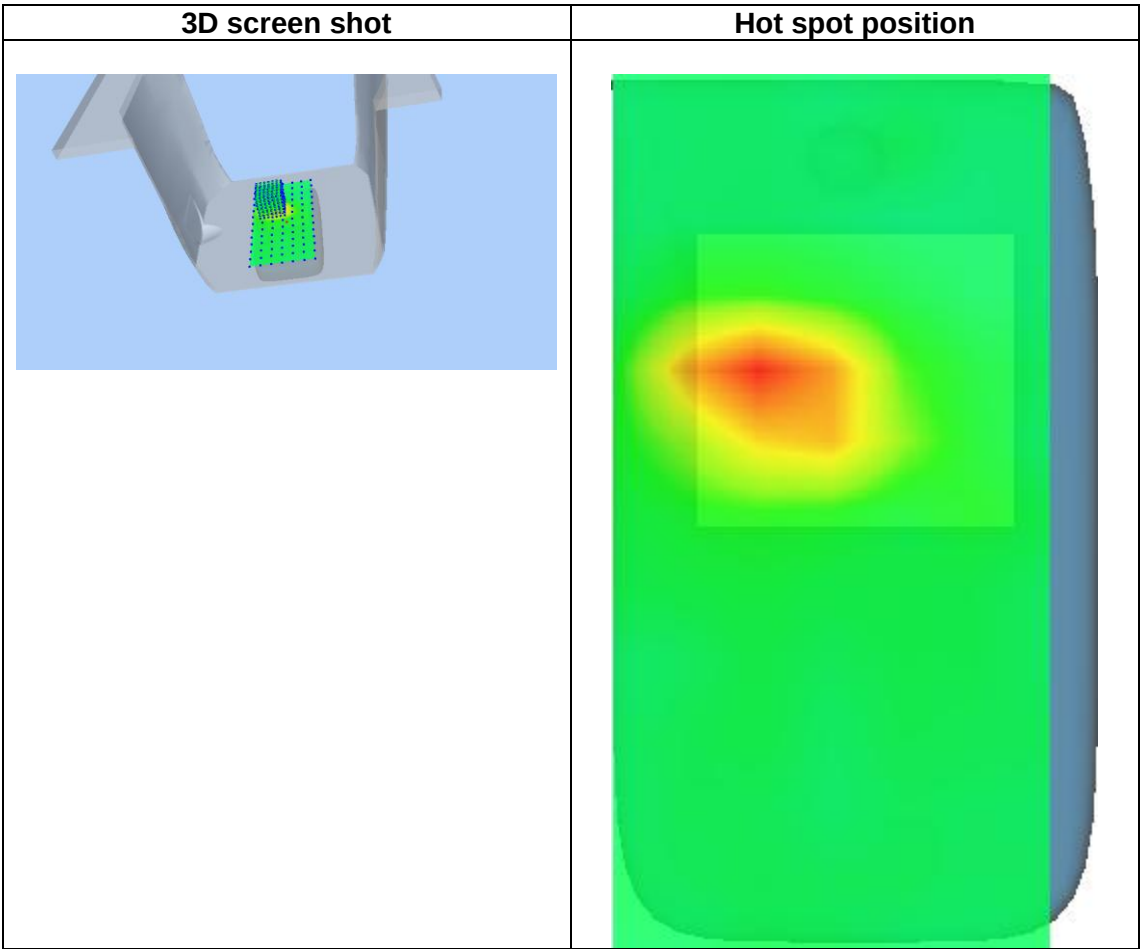
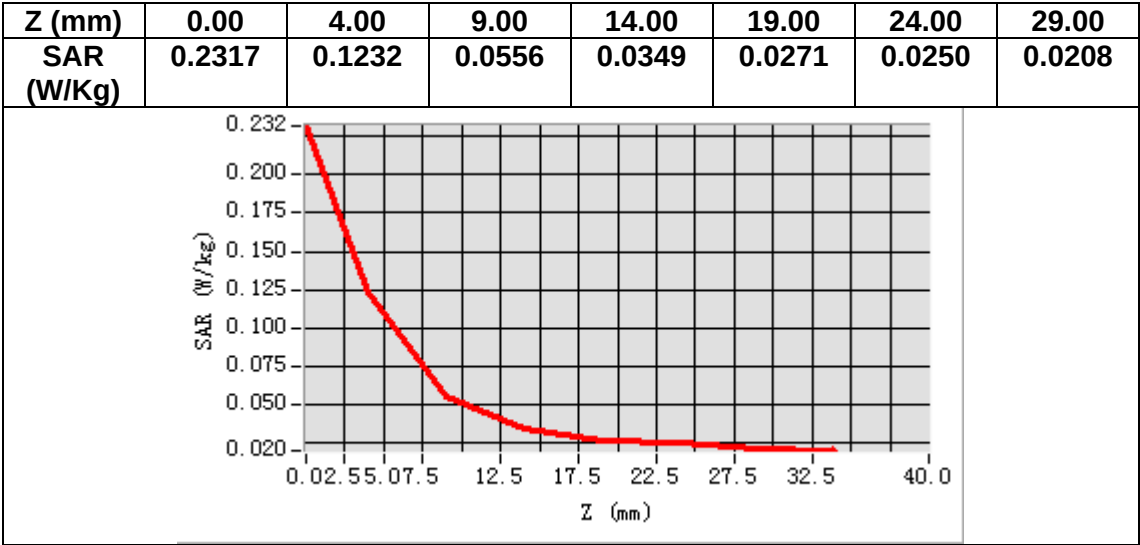
VOLUME SAR



Maximum location: X=-16.00, Y=23.00

SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.055056
SAR 1g (W/Kg)	0.112444



MEASUREMENT 17

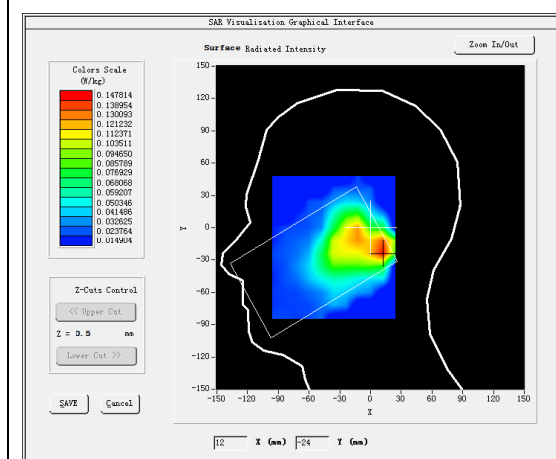
A. Experimental conditions.

<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>Bluetooth</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>Bluetooth (Crest factor: 1.3)</u>

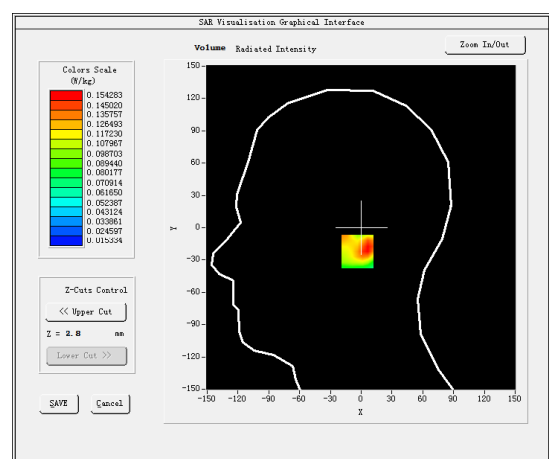
B. SAR Measurement Results

Frequency (MHz)	2441.000000
Relative permittivity (real part)	39.090998
Relative permittivity (imaginary part)	13.713321
Conductivity (S/m)	1.859679
Variation (%)	-0.310000

SURFACE SAR



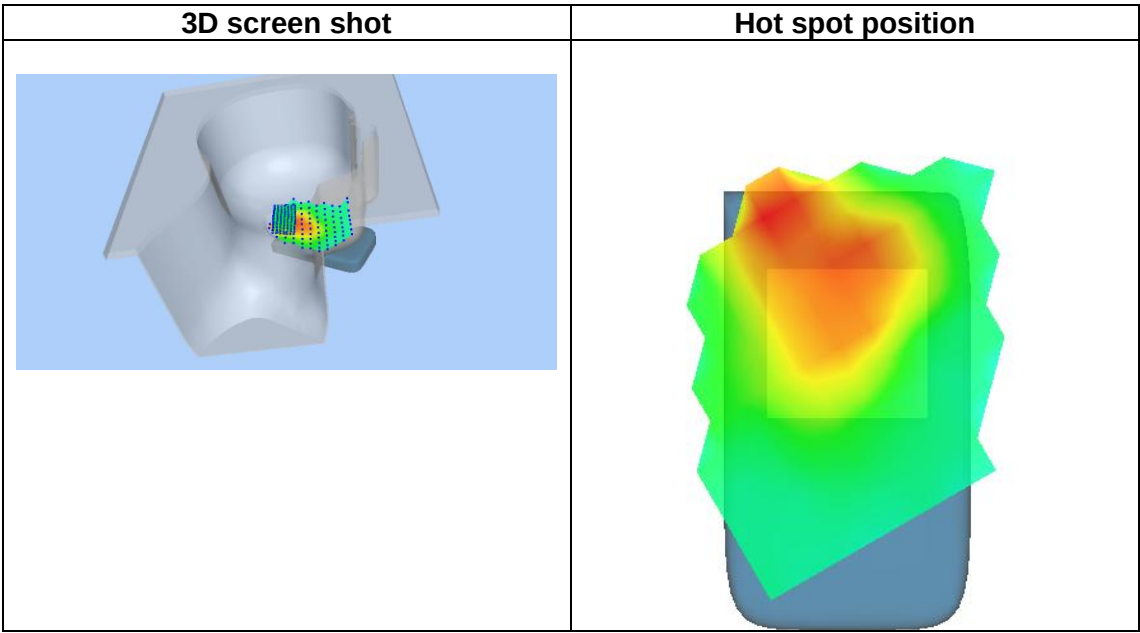
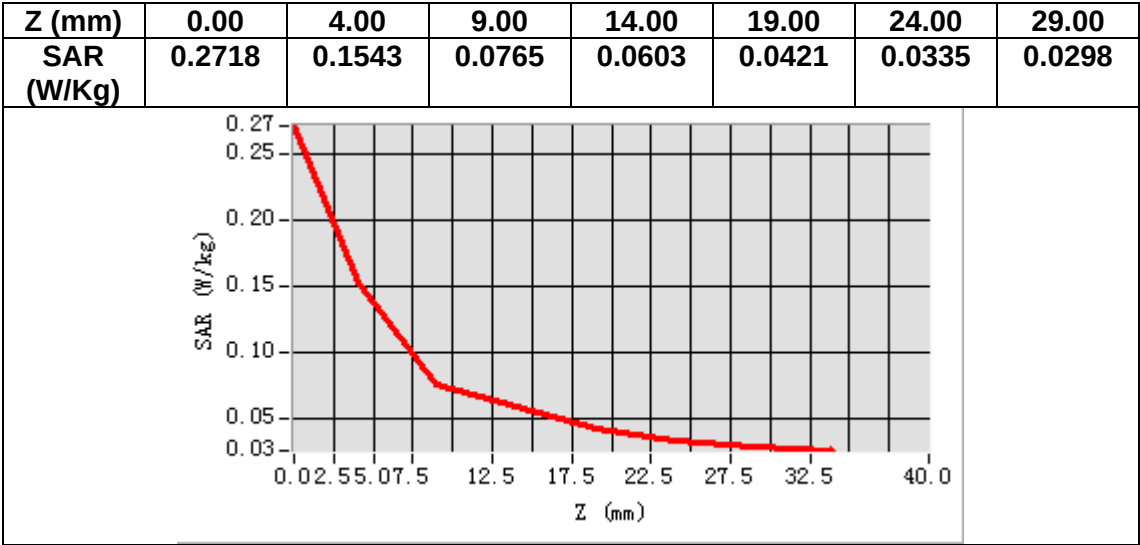
VOLUME SAR



Maximum location: X=3.00, Y=-22.00

SAR Peak: 0.24 W/kg

SAR 10g (W/Kg)	0.086579
SAR 1g (W/Kg)	0.146749



MEASUREMENT 18

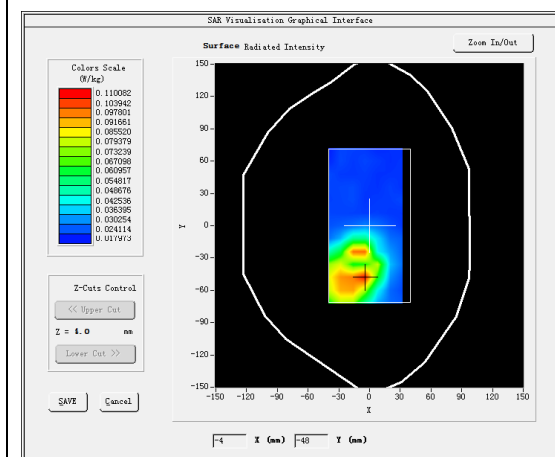
A. Experimental conditions.

<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>Bluetooth</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>Bluetooth (Crest factor: 1.3)</u>

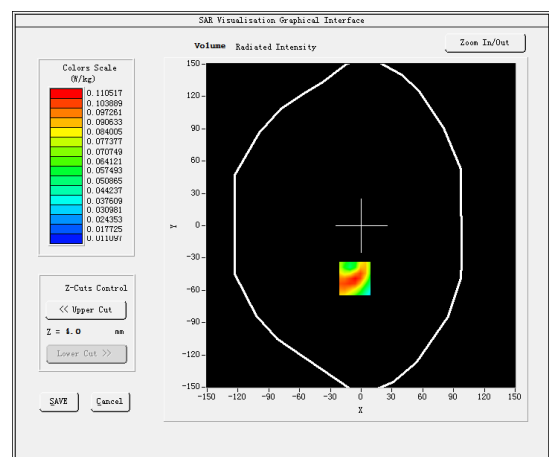
B. SAR Measurement Results

Frequency (MHz)	2441.000000
Relative permittivity (real part)	52.281635
Relative permittivity (imaginary part)	14.853206
Conductivity (S/m)	2.014260
Variation (%)	-0.890000

SURFACE SAR



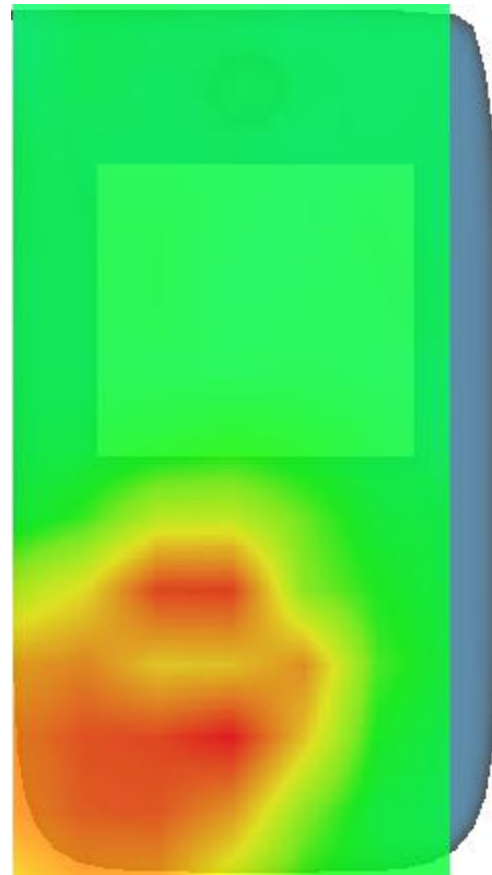
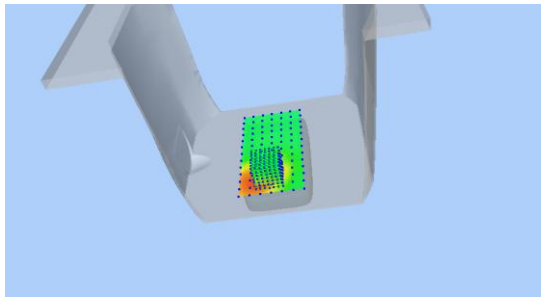
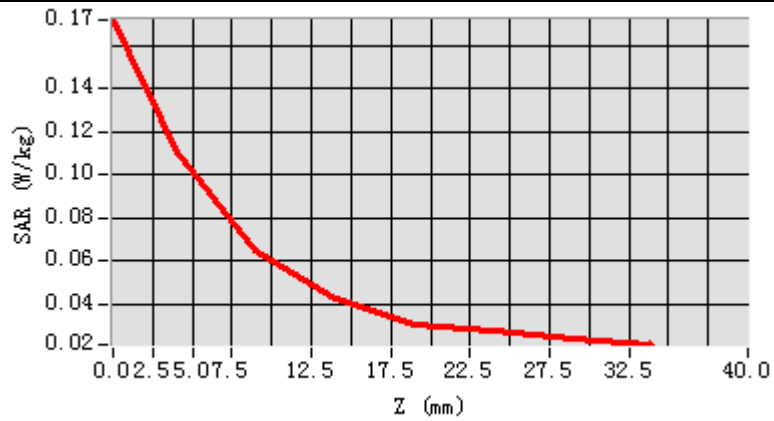
VOLUME SAR



Maximum location: X=-6.00, Y=-49.00

SAR Peak: 0.17 W/kg

SAR 10g (W/Kg)	0.062517
SAR 1g (W/Kg)	0.105101



MEASUREMENT 19

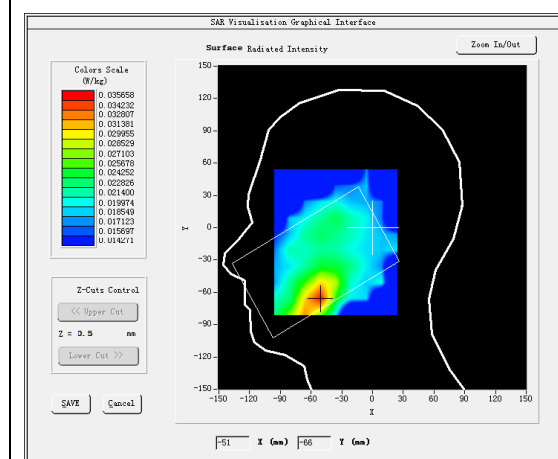
A. Experimental conditions.

<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 4</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

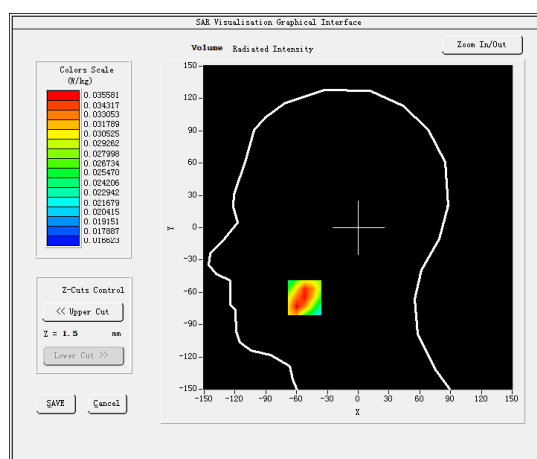
B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative permittivity (real part)	39.575291
Relative permittivity (imaginary part)	14.150592
Conductivity (S/m)	1.361994
Variation (%)	0.770000

SURFACE SAR



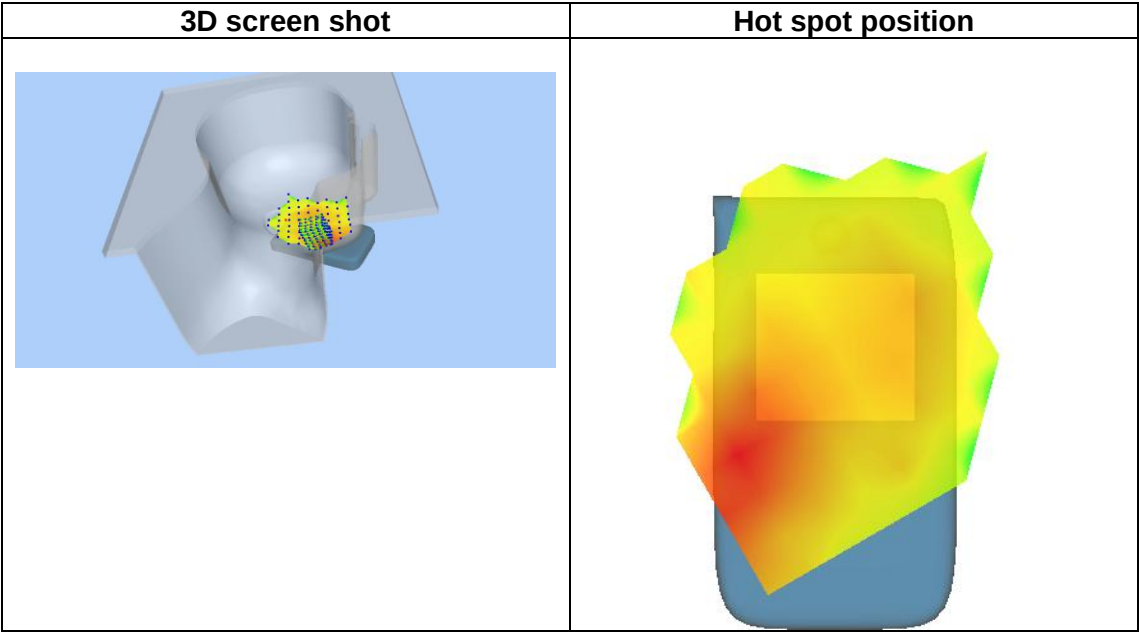
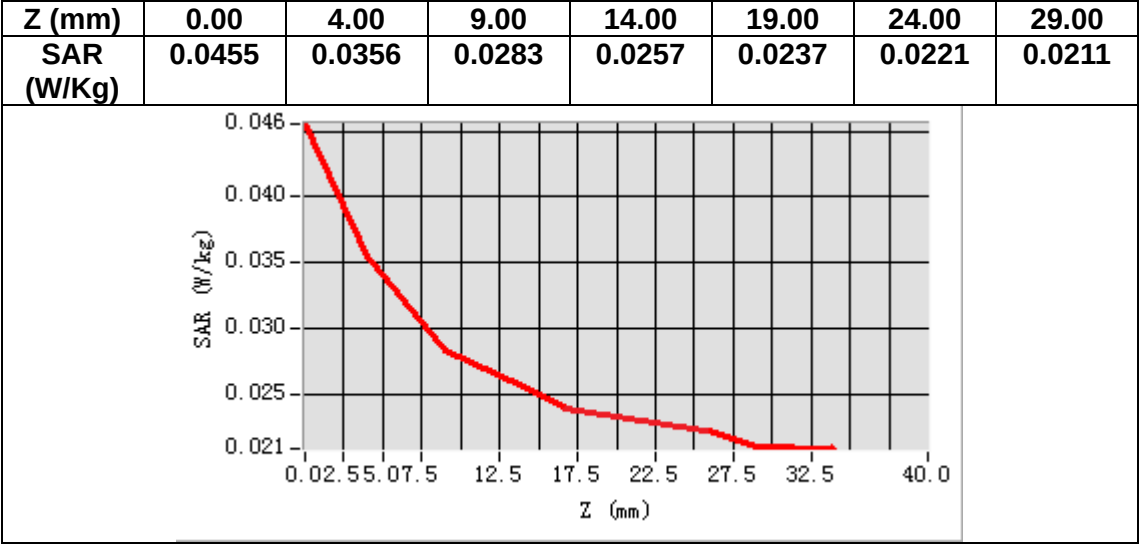
VOLUME SAR



Maximum location: X=-52.00, Y=-65.00

SAR Peak: 0.04 W/kg

SAR 10g (W/Kg)	0.027820
SAR 1g (W/Kg)	0.034323



MEASUREMENT 20

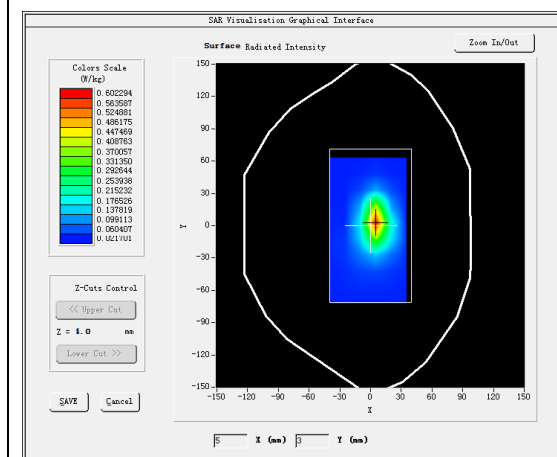
A. Experimental conditions.

<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>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>

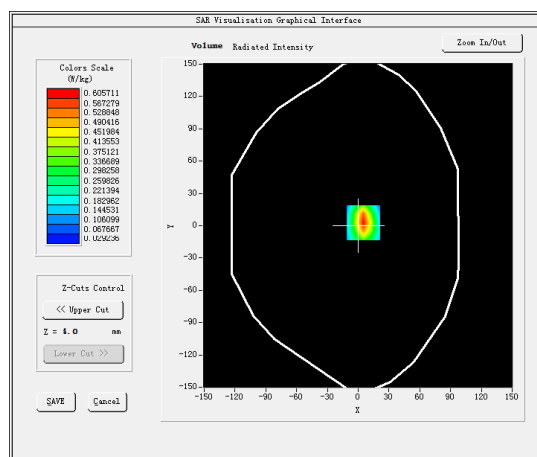
B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative permittivity (real part)	53.823364
Relative permittivity (imaginary part)	15.673220
Conductivity (S/m)	1.508547
Variation (%)	-1.470000

SURFACE SAR



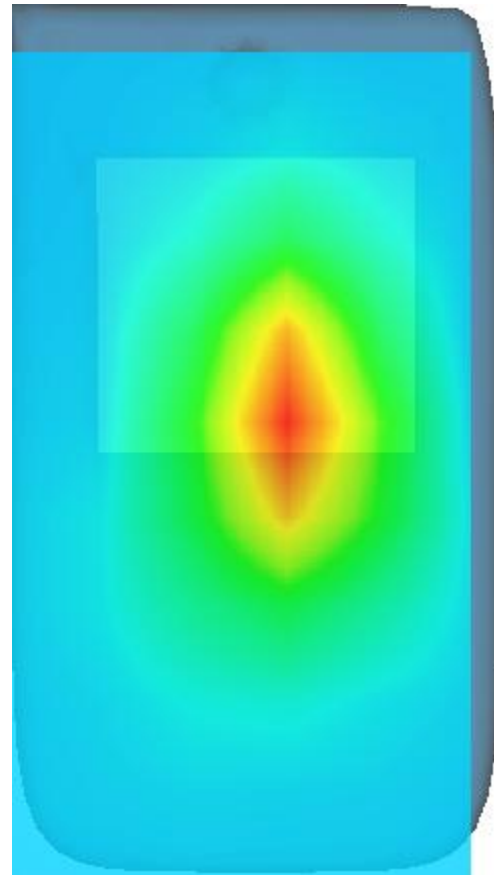
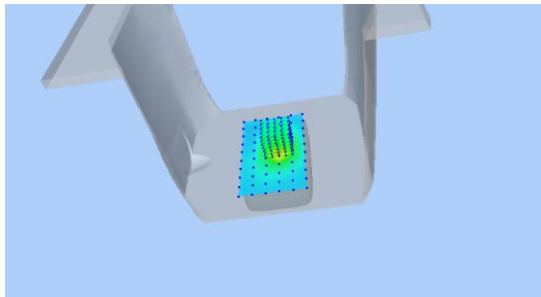
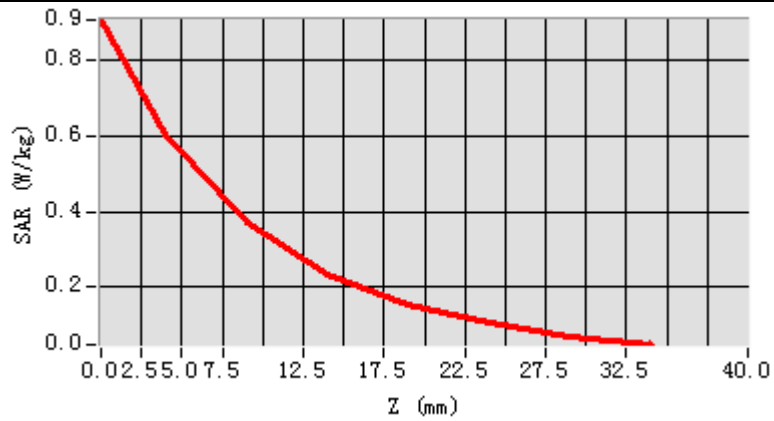
VOLUME SAR



Maximum location: X=5.00, Y=3.00

SAR Peak: 0.90 W/kg

SAR 10g (W/Kg)	0.298998
SAR 1g (W/Kg)	0.558756



MEASUREMENT 21

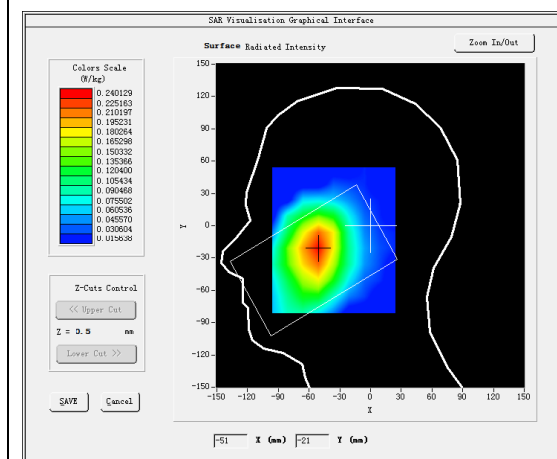
A. Experimental conditions.

<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>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>

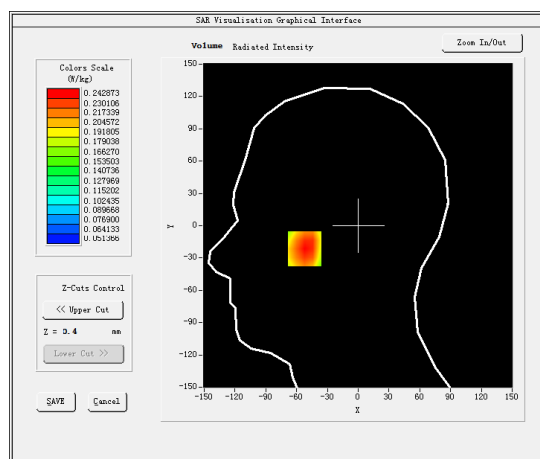
B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative permittivity (real part)	40.623550
Relative permittivity (imaginary part)	20.060200
Conductivity (S/m)	0.932242
Variation (%)	1.490000

SURFACE SAR



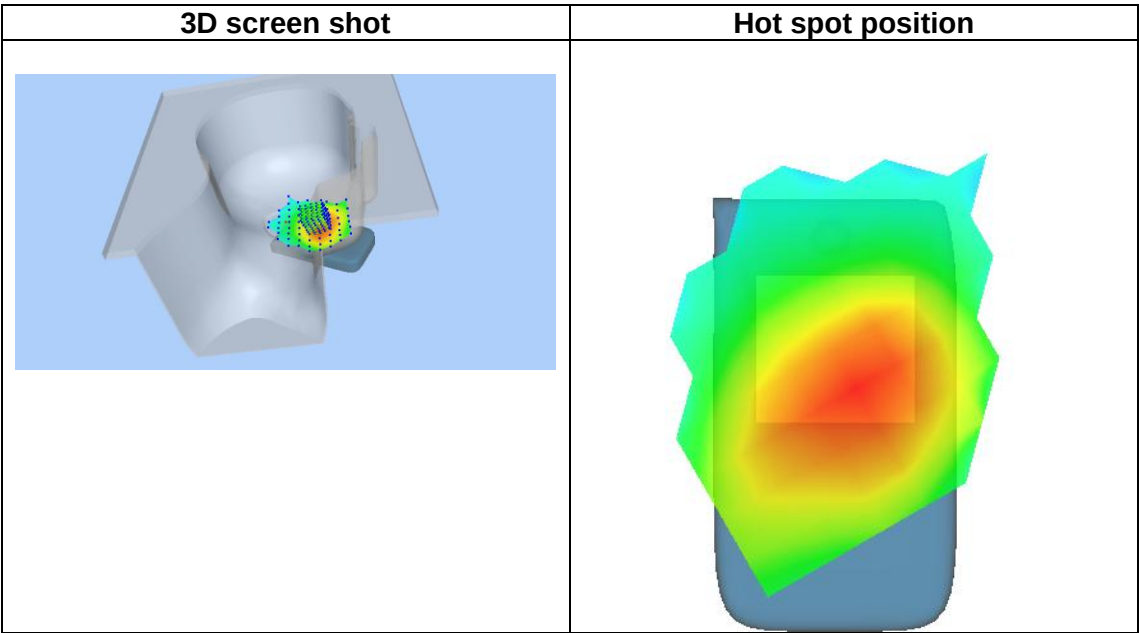
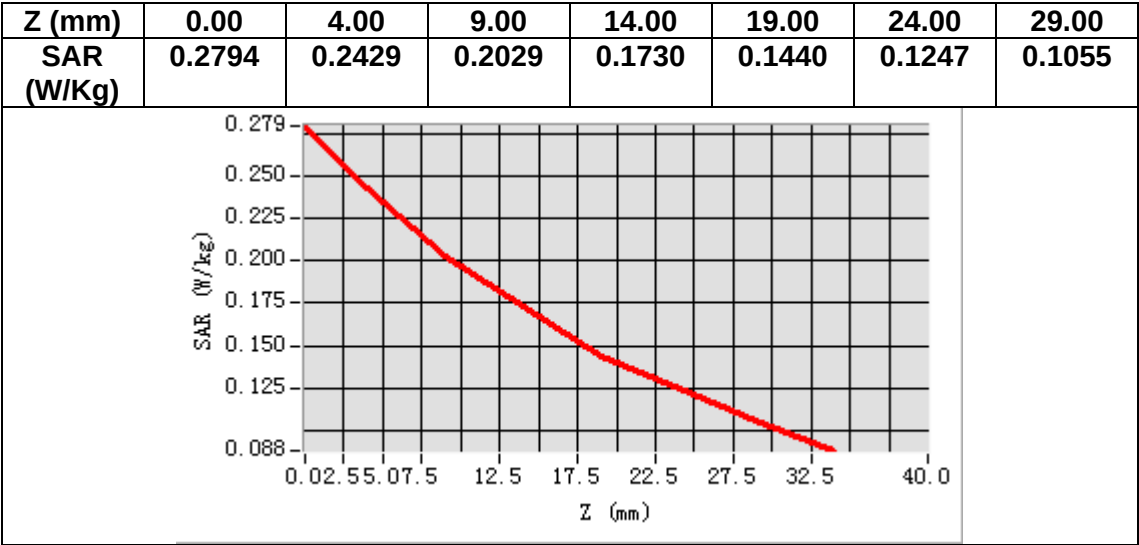
VOLUME SAR



Maximum location: X=-52.00, Y=-21.00

SAR Peak: 0.29 W/kg

SAR 10g (W/Kg)	0.189040
SAR 1g (W/Kg)	0.243336



MEASUREMENT 22

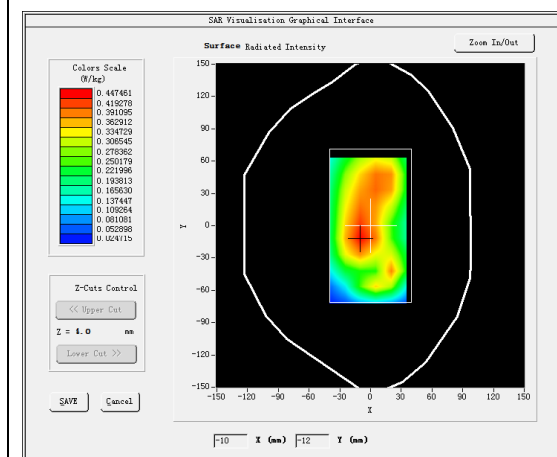
A. Experimental conditions.

<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>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>

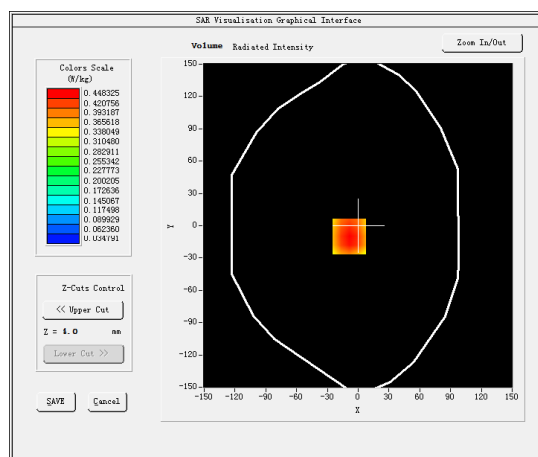
B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative permittivity (real part)	54.443501
Relative permittivity (imaginary part)	21.857000
Conductivity (S/m)	1.015743
Variation (%)	0.250000

SURFACE SAR



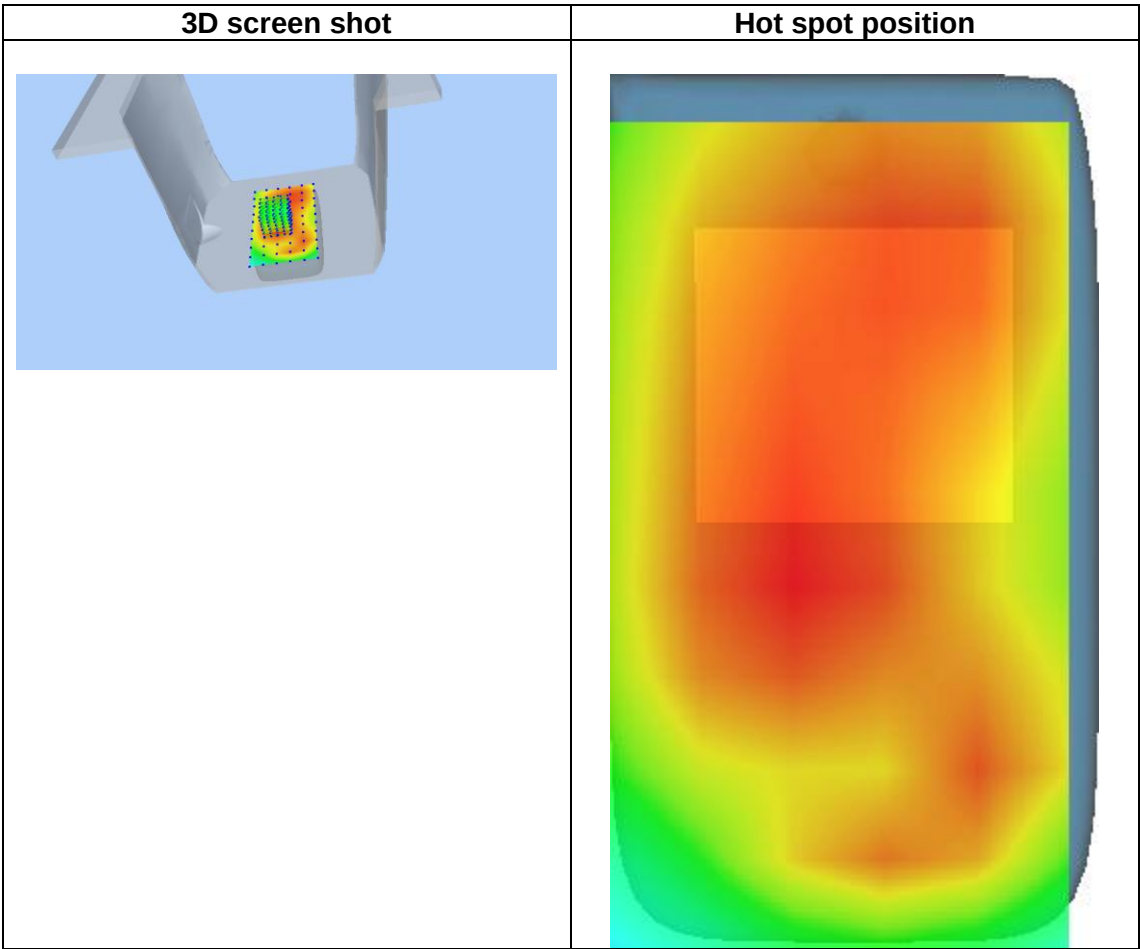
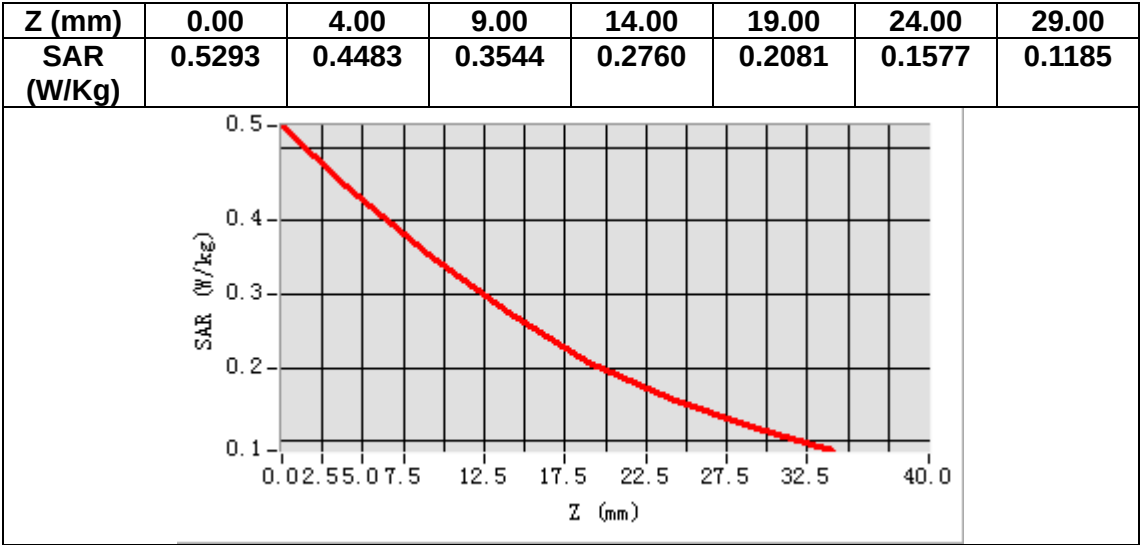
VOLUME SAR



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

SAR Peak: 0.55 W/kg

SAR 10g (W/Kg)	0.333265
SAR 1g (W/Kg)	0.450428



MEASUREMENT 23

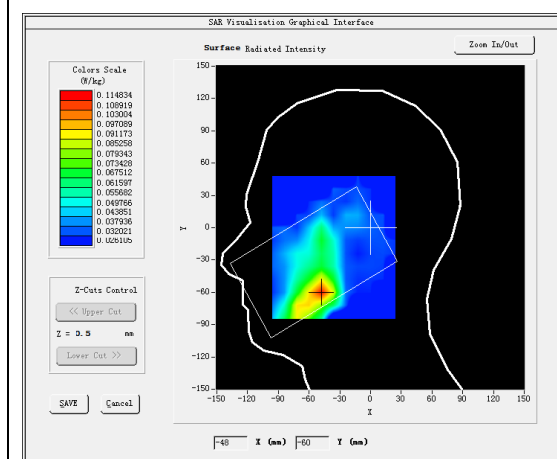
A. Experimental conditions.

<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>

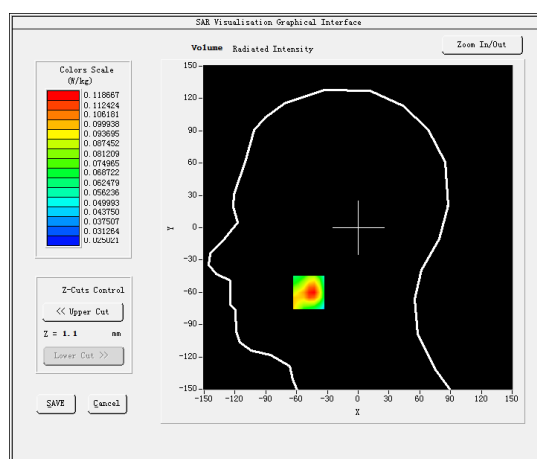
B. SAR Measurement Results

Frequency (MHz)	2535.000000
Relative permittivity (real part)	38.675488
Relative permittivity (imaginary part)	13.991160
Conductivity (S/m)	1.970422
Variation (%)	2.390000

SURFACE SAR



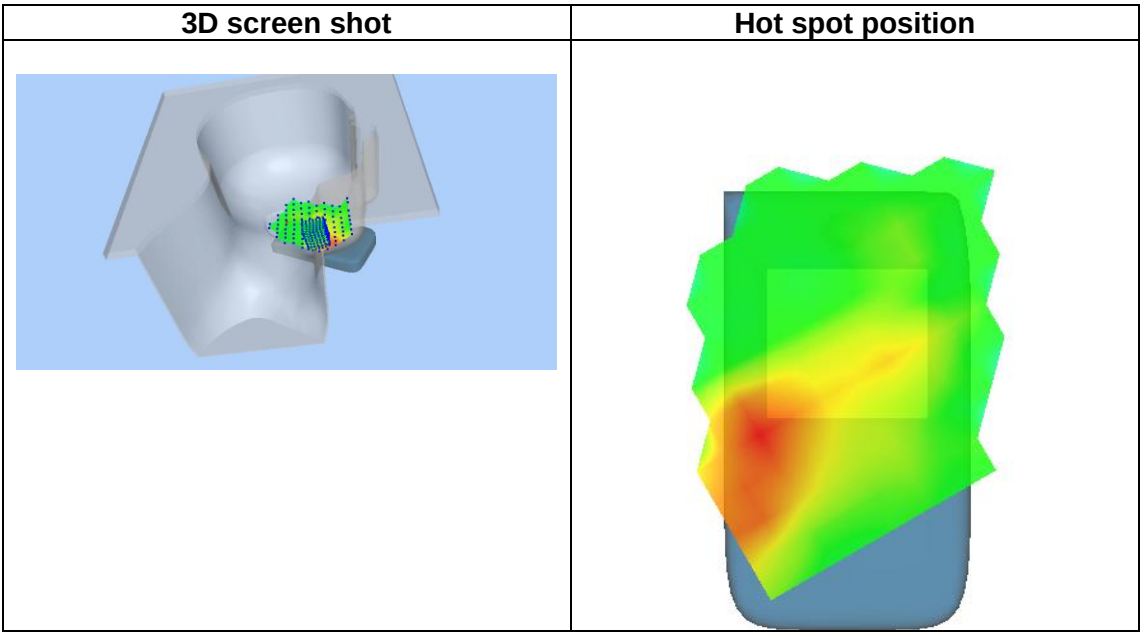
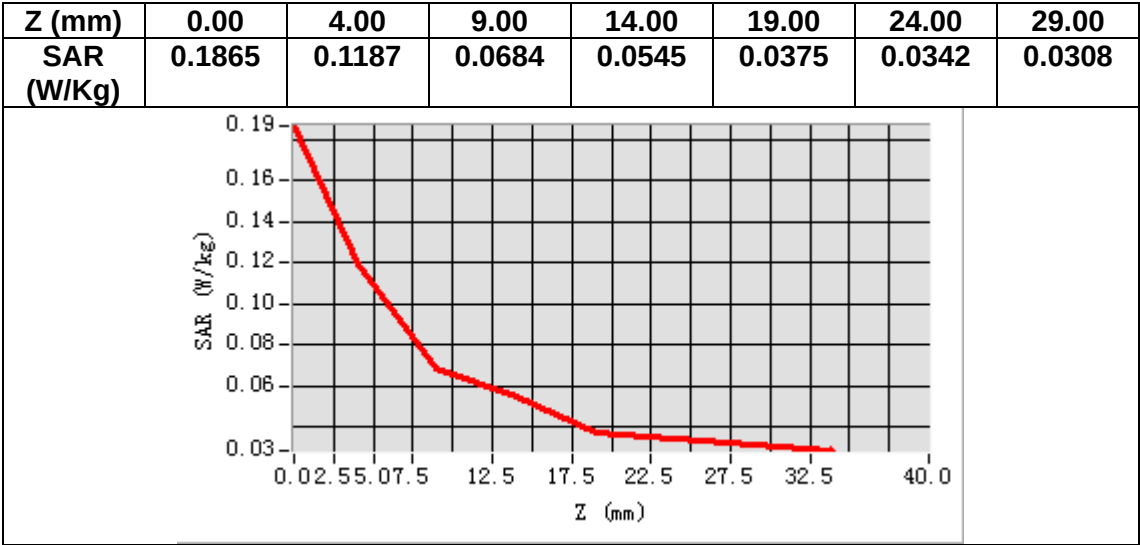
VOLUME SAR



Maximum location: X=-48.00, Y=-60.00

SAR Peak: 0.17 W/kg

SAR 10g (W/Kg)	0.068686
SAR 1g (W/Kg)	0.112721



MEASUREMENT 24

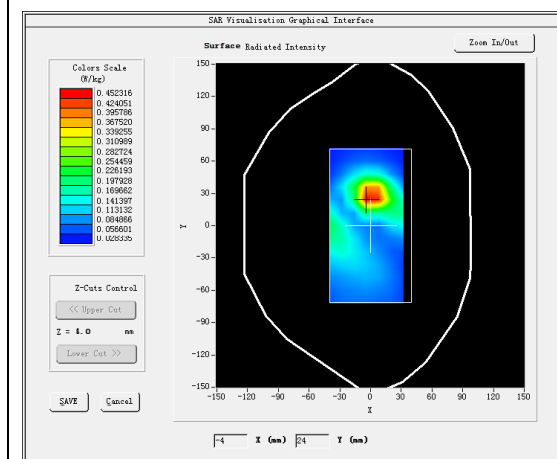
A. Experimental conditions.

<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>

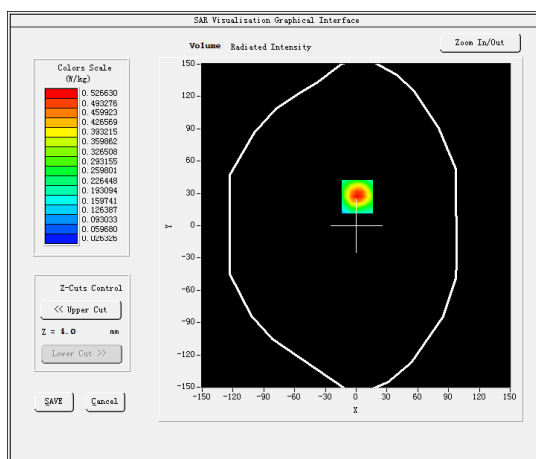
B. SAR Measurement Results

Frequency (MHz)	2535.000000
Relative permittivity (real part)	52.956947
Relative permittivity (imaginary part)	15.257840
Conductivity (S/m)	2.148812
Variation (%)	-2.090000

SURFACE SAR



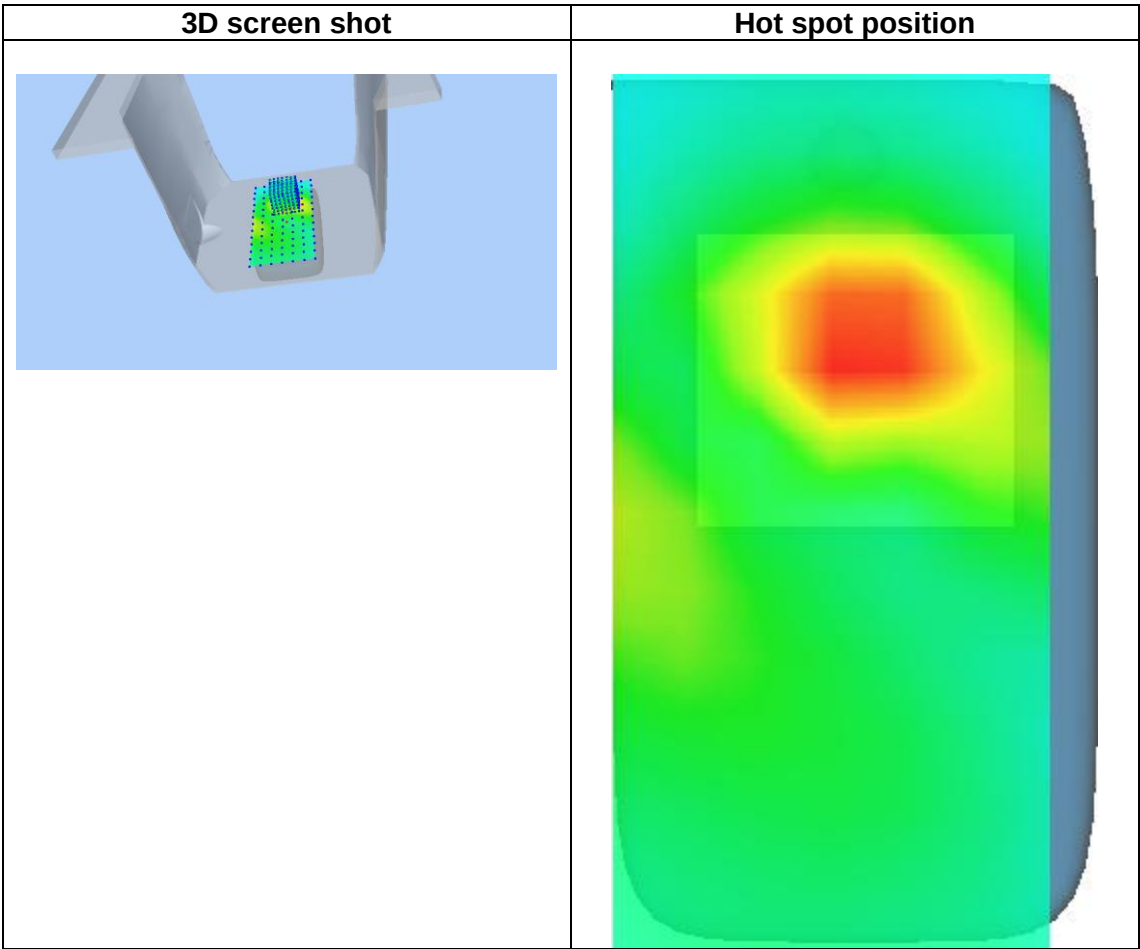
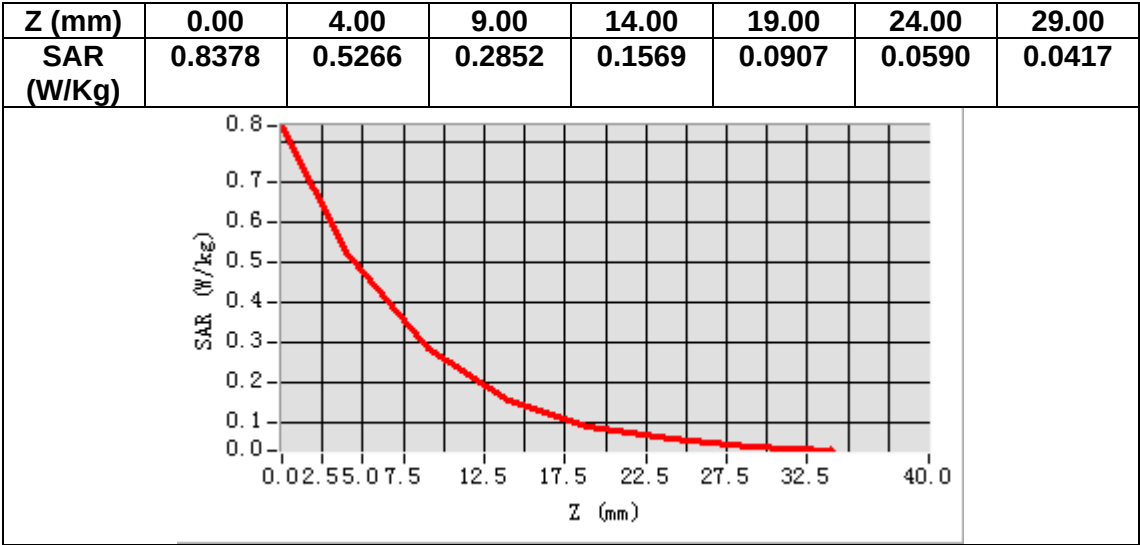
VOLUME SAR



Maximum location: X=1.00, Y=27.00

SAR Peak: 0.84 W/kg

SAR 10g (W/Kg)	0.250970
SAR 1g (W/Kg)	0.495877



MEASUREMENT 25

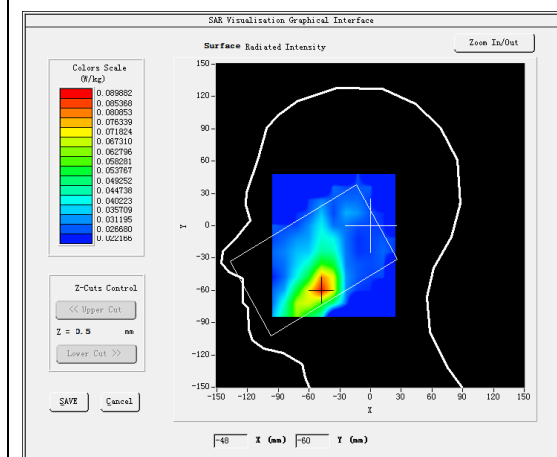
A. Experimental conditions.

<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 41</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.6)</u>

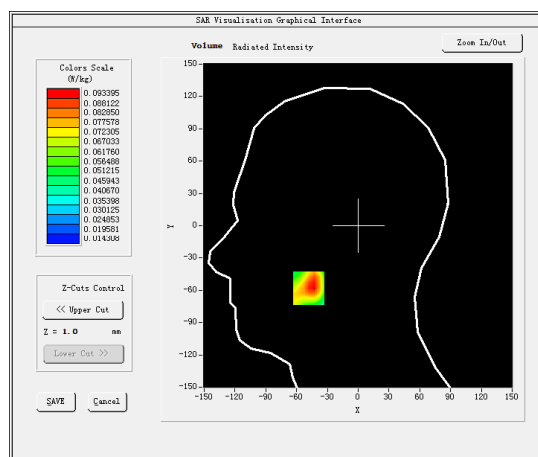
B. SAR Measurement Results

Frequency (MHz)	2605.000000
Relative permittivity (real part)	38.308647
Relative permittivity (imaginary part)	14.154760
Conductivity (S/m)	2.039072
Variation (%)	-0.410000

SURFACE SAR



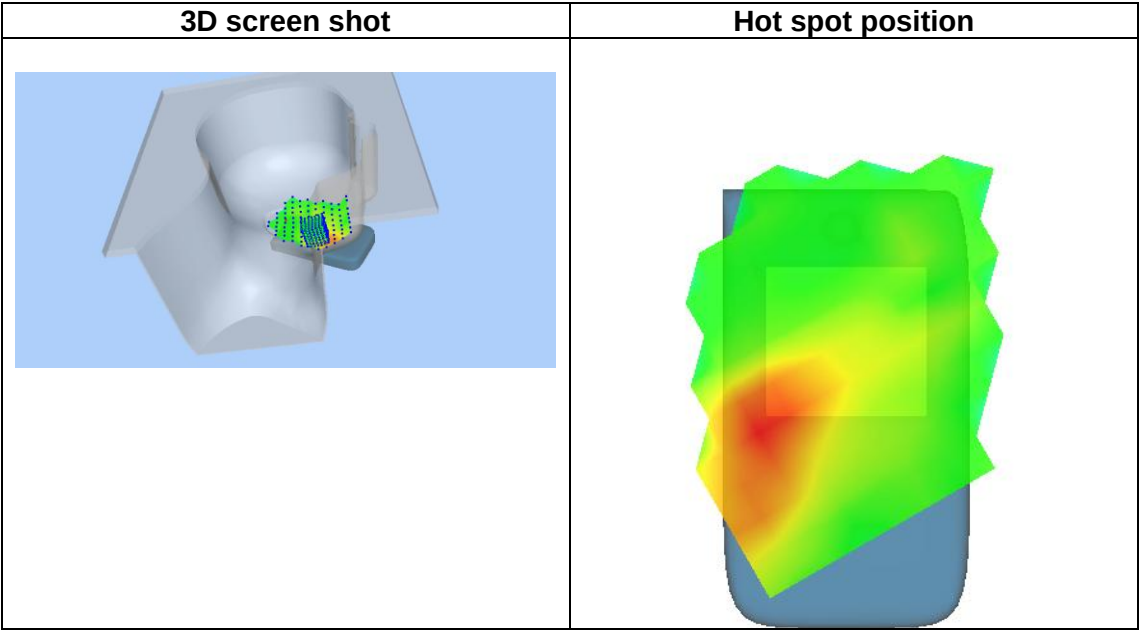
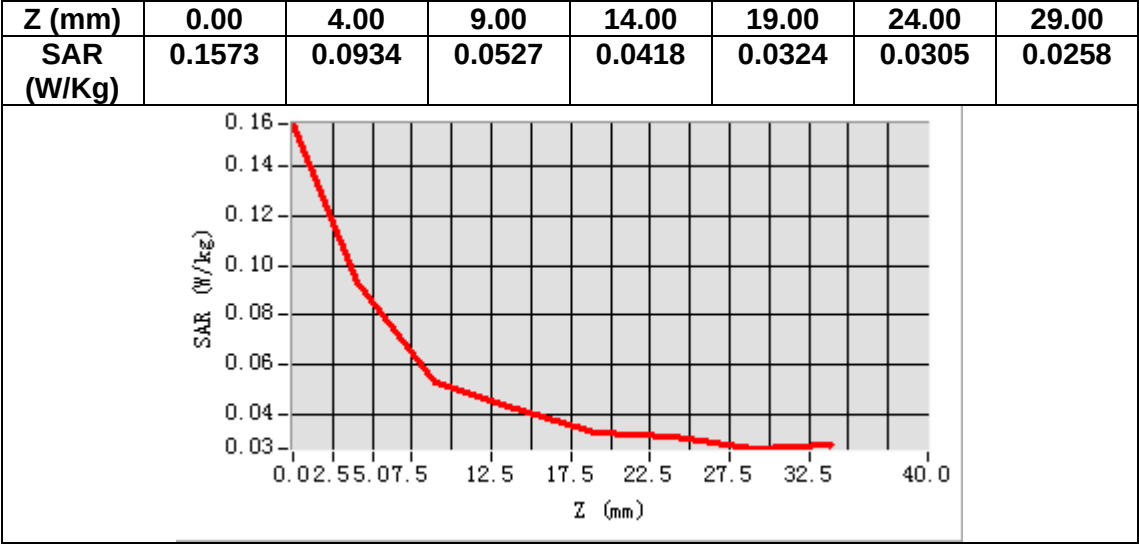
VOLUME SAR



Maximum location: X=-48.00, Y=-58.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.056805
SAR 1g (W/Kg)	0.090615



MEASUREMENT 26

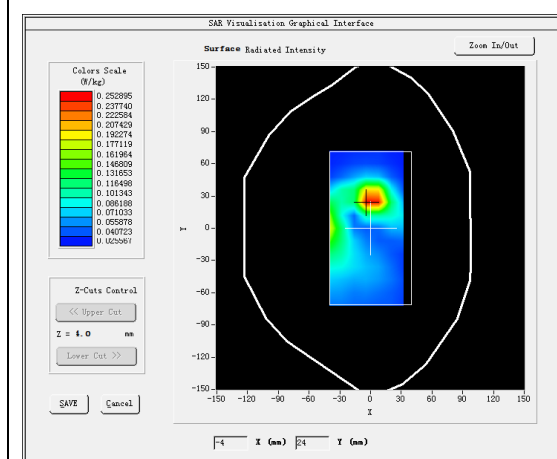
A. Experimental conditions.

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>Body</u>
Band	<u>LTE band 41</u>
Channels	<u>Middle</u>
Signal	<u>LTE (Crest factor: 1.6)</u>

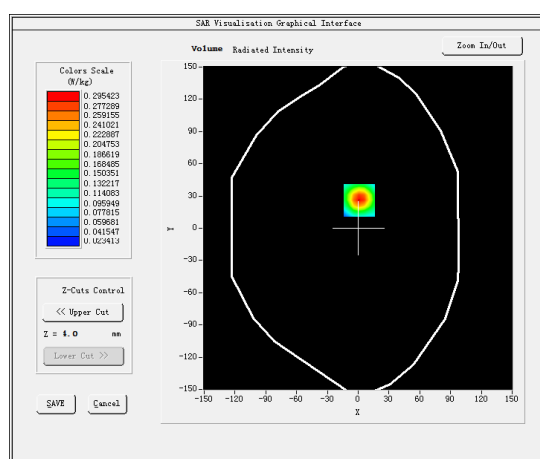
B. SAR Measurement Results

Frequency (MHz)	2605.000000
Relative permittivity (real part)	52.604465
Relative permittivity (imaginary part)	15.421440
Conductivity (S/m)	2.221544
Variation (%)	-1.900000

SURFACE SAR



VOLUME SAR



Maximum location: X=1.00, Y=26.00

SAR Peak: 0.48 W/kg

SAR 10g (W/Kg)	0.138677
SAR 1g (W/Kg)	0.276310

